The Corporation of the City of Temiskaming Shores

Regular Meeting of Council

Tuesday, July 9, 2024 – Immediately following the Committee of the Whole Meeting

City Hall – Council Chambers – 325 Farr Drive

Agenda

1. **Land Acknowledgement**

2. **Call to Order**

3. **Roll Call**

4. **Review of Revisions or Deletions to Agenda**

5. **Approval of Agenda**

   Draft Resolution
   Moved by: Councillor
   Seconded by: Councillor

   Be it resolved that City Council approves the agenda as printed / amended.

6. **Disclosure of Pecuniary Interest and General Nature**

7. Public Meetings pursuant to the Planning Act, Municipal Act and other Statutes

None

8. Review and Adoption of Council Minutes

Draft Resolution
Moved by: Councillor
Seconded by: Councillor

Be it resolved that City Council approves the following minutes as printed:

a) Committee of the Whole Meeting – June 4, 2024; and

b) Regular Council Meeting– June 18, 2024.

9. Presentations / Delegations

a) Brigid Wilkinson, Executive Director with Temiskaming Foundation

Re: New School Nutrition Fund

b) Brittany Clarke, Municipal Program Manager with Food Cycle Science Corporation

Re: Results of FoodCycler Pilot Program

10. Correspondence/ Communications

a) Chris Gallagher, member of Community Hospice Care Working Committee

Re: New local group committed to finding strategies to challenges and barriers to end of life care in the Temiskaming Shores area

Reference: Received for Information

b) AMO's Canada Community-Building Fund (CCBF) Team

Re: Funding Agreement for the Renewed Canada Community-Building Fund, 2024-2034

Reference: Agreement presented under Section 15 – By-laws

c) Dr. Glenn Corneil, Acting Medical Officer - Timiskaming Health Unit and Dr. Lianne Catton, Medical Officer of Health and Chief Executive Officer Porcupine Health Unit

Re: Merger update related to the governance model of the proposed merged local public health agency: Northeastern Public Health / Santé publique du Nord-Est.

Reference: Received for Information

d) Timiskaming Health Unit

Re: Letter of Support regarding the potential closure of the Public Health Ontario Laboratory in Timmins.

Reference: Received for Information

e) Timiskaming Health Unit

Re: Audited Financial Statements as of December 13, 2023

Reference: Received for Information

f) Timiskaming Drug and Alcohol Strategy (TDAS)

Re: Letter regarding strengthening Alcohol Policy in Northern Ontario to protect public health and Report to the Community

Reference: Received for information

Draft Resolution
Moved by: Councillor
Seconded by: Councillor

Be it resolved that Council for the City of Temiskaming Shores agrees to deal with Communications Items 10 a) though f) in accordance with agenda references.

11. Committees of Council – Community and Regional

Draft Resolution
Moved by: Councillor
Seconded by: Councillor

Be it resolved that the following minutes be accepted for information:

a) Minutes from the Temiskaming Shores Public Library Board meeting on April 24, 2024; and

b) Minutes from the Timiskaming Health Unit Bord of Health meeting held on May 1, 2024.

12. Reports by Members of Council

13. Notice of Motions

14. New Business

None

15. By-Laws

Draft Resolution
Moved by: Councillor
Seconded by: Councillor

Be it resolved that:

By-law No. 2024-077	Being a By-law to authorize entering into a Municipal Funding Administrative Agreement with The Association of Municipalities of Ontario (AMO) for the administration of the Canada Community-Building Fund
By-law No. 2024-078	Being a by-law to adopt in principle, the Temiskaming Shores Downtown Transportation Study Report
By-law No. 2024-079	Being a by-law to amend By-law No. 2022-107 as amended, to authorize the entering into an agreement with Enterprise Fleet Management for light-duty fleet management services, expertise and strategic planning for the City of Temiskaming Shores - Additional six (6) vehicles leases for 2025
By-law No. 2024-080	Being a by-law to amend By-law No. 2015-128 to establish a system for the Collection and Disposal of Garbage, Recyclables and other refuse – Amended Tipping Fees
By-law No. 2024-081	Being a by-law to enter into a Lease Agreement with Smitty's Canteen / Michael Smith for the operation of the Shelley Herbert Shea Memorial Arena concession and pro shop from September 1, 2024, to April 30, 2027
By-law No. 2024-082	Being a by-law to enter into a Lease Agreements for the use of rooms within the Don Shepherdson Memorial Arena and the Shelley Herbert-Shea Memorial Arena
By-law No. 2024-083	Being a by-law to authorize the execution of an agreement with other municipalities for the cost sharing sum for the joint operation and maintenance of a fire department communications system
By-law No. 2024-084	Being a by-law to authorize the Sale of Land of vacant land on Albert Street, described as Part 1 and Part 2 on Plan 54R-6433 to Investissements Philippe Duguay Inc.
By-law No. 2024-085	Being a by-law to authorize the Sale of Land of vacant land on Albert Street, described as Part 3 and Part 4 on Plan 54R-6433 to Investissements Philippe Duguay Inc.

By-law No. 2024-086	Being a by-law to authorize the annual insurance premium payment for Municipal Insurance and Risk Management Services with Marsh brokered by MIS Municipal Insurance Services for July 1, 2024 to June 30, 2025
By-law No. 2024-087	Being a by-law to authorize an agreement with 360 Engineering and Environmental Consulting Ltd. for the implementation of an Asset Retirement Obligation Program
By-law No. 2024-088	Being a by-law to appoint a Municipal Law Enforcement Officer for the purpose of enforcing the City's Animal Control By-law and Noise By-law as it relates to Animal Care and Control Services – Sidney Plante

be hereby introduced and given first, second and third and final reading, be signed by the Mayor and Clerk and the corporate seal affixed thereto.

16. Schedule of Council Meetings

a) Committee of the Whole Meeting – August 13, 2024 starting at 3:00 p.m.

b) Regular Council Meeting – August 13, 2024 starting immediately after the Committee of the Whole Meeting

17. Question and Answer Period

18. Closed Session

Draft Resolution
Moved by: Councillor
Seconded by: Councillor

Be it resolved that Council agrees to convene in Closed Session at _____ p.m. to discuss the following matters:

a) Adoption of the June 18, 2024 Closed Session Minutes;

b) Under Section 239(2)(e) of the Municipal Act, 2001 – Litigation or potential litigation – Insurance Claims Update; and

c) Under Section 239(2)(d) of the Municipal Act, 2001 – Labour relations / employee negotiations – City Manager Recruitment Process Update.

19. Confirming By-law

Draft Resolution
Moved by: Councillor
Seconded by: Councillor

Be it resolved that By-law No. **2024-089** being a by-law to confirm certain proceedings of Council of The Corporation of the City of Temiskaming Shores for its Committee of the Whole Meeting held on July 9, 2024, and for its Regular meeting held on July 9, 2024, be hereby introduced and given first, second, third and final reading; and be signed by the Mayor and Clerk and the Corporate Seal affixed thereto.

20. Adjournment

Draft Resolution
Moved by: Councillor
Seconded by: Councillor

Be it resolved that Council hereby adjourns its meeting at _____ p.m.

The Corporation of the City of Temiskaming Shores

Committee of the Whole

Tuesday, June 4, 2024 – 3:00 p.m.

City Hall – Council Chambers – 325 Farr Drive

Minutes

1. Land Acknowledgement

We acknowledge that we live, work, and gather on the traditional and unceded Territory of the Algonquin People, specifically the Timiskaming First Nation.

We recognize the presence of the Timiskaming First Nation in our community since time immemorial and honour their long history of welcoming many Nations to this beautiful territory and uphold and uplift their voice and values.

2. Call to Order

The meeting was called to order by Mayor Laferriere at 3:00 p.m.

3. Roll Call

Council:	Mayor Jeff Laferriere; Councillors Melanie Ducharme, Jesse Foley (virtual), Nadia Pelletier-Lavigne, Danny Whalen, and Mark Wilson
Present:	Amy Vickery, City Manager Logan Belanger, Municipal Clerk Shelly Zubyck, Director of Corporate Services Mathew Bahm, Director of Recreation James Franks, Economic Development Officer Steve Langford, Fire Chief Brad Hearn, Information Systems & Technology Steve Burnett, Manager of Environmental Services Mitch McCrank, Manager of Transportation Services Stephanie Levielle, Treasurer
Regrets:	Councillor Ian Graydon

Media:	1
Delegates:	N/A
Members of the Public:	N/A

4. Review of Revisions or Deletions to the Agenda

None

5. Approval of the Agenda

Resolution No. 2024-214
Moved by: Councillor Whalen
Seconded by: Councillor Foley

Be it resolved that City Council approves the agenda as printed.

Carried

6. Disclosure of Pecuniary Interest and General Nature

None

7. Public Meetings Pursuant to the Planning Act, Municipal Act, and Other Statutes

None

8. Public Works

a) Delegations/Communications

None

b) Administrative Reports

1. **Memo No. 018-2024-PW – Environmental Services Operations Update**

Resolution No. 2024-215
Moved by: Councillor Wilson
Seconded by: Councillor Ducharme

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Memo No. 018-2024-PW, regarding the Environmental Services Update for information purposes.

Carried

2. **Memo No. 019-2024-PW –Transportation Department Update**

Resolution No. 2024-216
Moved by: Councillor Pelletier-Lavigne
Seconded by: Councillor Whalen

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Memo No. 019-2024-PW, regarding the Transportation Services Update for information purposes.

Carried

3. **Memo No. 020-2024-PW – Funding Application under the Green Municipal Fund - Growing Canada's Community Canopies (GCCC) Program**

Resolution No. 2024-217
Moved by: Councillor Ducharme
Seconded by: Councillor Wilson

Whereas, The Corporation of the City of Temiskaming Shores has an interest to increase the tree canopy in municipal spaces, including the Haileybury and New Liskeard Downtown Cores, Algonquin Beach Park and Farr Park.

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Memo No. 020-2024-PW;

That Council directs staff to apply to the funding opportunity from the Green Municipal Fund's (GMF) Growing Canada's Community Canopies (GCCC) initiative; and

Further that The City of Temiskaming Shores also recognizes that the lifetime contribution from the Growing Canada's Community Canopies initiative will not exceed $10 million for tree planting within our municipality, inclusive of a maximum contribution of $1 million for infrastructure activity costs, and that if approved this project will be counted towards that limit.

Carried

4. **Administrative Report No. PW-015-2024 – Street Light Projects Award**

Resolution No. 2024-218
Moved by: Councillor Pelletier-Lavigne
Seconded by: Councillor Foley

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Administrative Report No. PW-015-2024;

That Council approves the award of the contract to Miller Maintenance for the installation of street light projects, as detailed in Request for Quotation and Post Tender Addendum, PW-RFQ-002-2024 for a total upset limit of $78,800 plus applicable taxes; and

That Council directs Staff to proceed with procurement of the materials, understanding that lead times are significant, and prepare the necessary by-law to confirm the agreement at the June 18, 2024, Regular Council Meeting.

Carried

5. **Administrative Report No. PW-016-2024 – Haileybury Water Treatment Plant – Filter #3 Rehabilitation**

Resolution No. 2024-219
Moved by: Councillor Whalen
Seconded by: Councillor Ducharme

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Administrative Report No. PW-016-2024; and

That Council directs staff to prepare the necessary By-law to enter into an agreement with Continental Carbon Group Inc. for the rehabilitation of filter #3 at the Haileybury Water Treatment Plant, in the amount of $ 410,280 plus applicable taxes, for consideration at the June 18, 2024 Regular Council Meeting.

Carried

6. **Administrative Report No. PW-017-2024 – Dymond Industrial Phase 1 Road Rehab– Tender Award**

Resolution No. 2024-220
Moved by: Councillor Wilson
Seconded by: Councillor Ducharme

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Administrative Report No. PW-017-2024; and

That Council directs staff to prepare the necessary by-law to enter into an agreement with Miller Paving Limited for the Dymond Industrial Phase 1 Road Rehabilitation, in the amount of $700,730 plus applicable taxes, for consideration at the June 18, 2024 Regular Council meeting.

Carried

c) New Business

None

9. Recreation Services

a) Delegations/Communications

None

b) Administrative Reports

1. **Memo No. 013-2024-RS – Federation of Canadian Municipalities - Municipal Fleet Electrification Grant**

Resolution No. 2024-221
Moved by: Councillor Ducharme
Seconded by: Councillor Foley

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Memo No. 013-2024-RS; and

That Council directs staff to prepare and submit a funding application to the Green Municipal Fund - Municipal Fleet Electrification Study Grant, in the amount of $60,000.

Carried

2. **Memo No. 014-2024-RS – Active Transportation Plan Progress Update**

Resolution No. 2024-222
Moved by: Councillor Pelletier-Lavigne
Seconded by: Councillor Whalen

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Memo No. 014-2024-RS, titled Active Transportation Plan Progress Update, for information purposes.

Carried

c) New Business

None

10. Fire Services

a) Delegations/Communications

None

b) Administrative Reports

1. Fire Activity Report – May 2024

Resolution No. 2024-223
Moved by: Councillor Wilson
Seconded by: Councillor Ducharme

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of the Fire Activity Report for the month of May 2024, for information purposes.

Carried

c) New Business

None

11. Corporate Services

a) Delegations/Communications

None

b) Administrative Reports

1. Economic Development Projects Update 2024

Resolution No. 2024-224
Moved by: Councillor Pelletier-Lavigne
Seconded by: Councillor Foley

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of the Economic Development Projects Update – 2024, for information purposes.

Carried

2. Memo No. 021-2024-CS – Amend Fees By-law No. 2012-039 – Death Registrations

Resolution No. 2024-225
Moved by: Councillor Ducharme
Seconded by: Councillor Foley

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Memo No. 021-2024-CS, and

That Council directs staff to prepare the necessary by law to amend Schedule A – Administration Corporate Services of By-law No. 2012-039, being a by-law to adopt Schedules of Departmental User fees and Service Charges for the City of Temiskaming Shores, to increase the Death Registration fee (for deaths occurring outside of Temiskaming Shores) to $30.00, for consideration at the June 18, 2024 Regular Council Meeting.

Carried

3. Administrative Report No. CS-019-2024 – Zoning By-law Amendment Application No. ZBA-2024-02: 468 Georgina Avenue (Houghton)

Resolution No. 2024-226
Moved by: Councillor Pelletier-Lavigne
Seconded by: Councillor Whalen

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Administrative Report No. CS-019-2024;

That Council directs staff to amend the provisions of the City of Temiskaming Shores Zoning By-law 2017-154 to rezone the subject land (468 Georgina Avenue) from General Commercial – Haileybury (C1A) to General Commercial – Haileybury Exception (C1A-1) to allow for a self-storage facility as a permitted use; and

That Council directs staff to prepare the necessary by-law to amend the City of Temiskaming Shores Zoning By-law 2017-154 for consideration at the June 18, 2024 Regular Council meeting.

Carried

4. Administrative Report No. CS-020-2024 – Agreement with the Timiskaming Health Unit regarding Municipal Community Safety and Well-Being Plan (CSWB)

Resolution No. 2024-227
Moved by: Councillor Wilson
Seconded by: Councillor Ducharme

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Administrative Report No. CS-020-2024;

That Council authorize the Mayor and Clerk to execute a Memorandum of Agreement between The Corporation of the City of Temiskaming Shores and the Timiskaming Health Unit (THU) as described in Section 7.0 Statement of Work for the period of August 1, 2024, to August 31, 2026;

That Council approve the 2024 supplemental contribution for September 1 – December 31, 2024, in the amount of $14,372.50 to be withdrawn from the Working Capital Reserve for the continued implementation of Timiskaming District CSWB Plan; and

That Council approve the 2025-2026 contribution in the sum of $54,615.50 from the Health & Social Services Budget for implementation of the Timiskaming District CSWB Plan up to the termination date of August 31, 2026.

Carried

5. Administrative Report No. CS-021-2024 – Sale of Municipal Property: Portion of Unopened Road Allowance Nineth Street and Portion of Two Lanes

Resolution No. 2024-228
Moved by: Councillor Whalen
Seconded by: Councillor Pelletier-Lavigne

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Administrative Report No. CS-021-2024;

That Council directs staff to continue with the disposition of municipal road allowances, being:

a. Lane between eight and ninth streets and north of Lakeview Avenue, described as Part 1 on Plan 54R-6423, and

b. All of Ninth Street North of Lakeview Avenue, described as Part 2 on Plan 54R-6423;

in accordance with By-law No. 2015-160; and

That Council directs staff to prepare the necessary by-laws to Stop and Close the above-described road allowances, and to enter into an Offer of Purchase and Sale Agreement between the City of Temiskaming Shores as Vendor, and Matthew Krul and Nerissa Doy as Purchaser, for the above-described road allowances, in the amount of $1,500 plus taxes (if applicable) plus all associated costs (legal, registration, survey, administration, etc.), in accordance with By-law No. 2015-160, for consideration at the June 18, 2024 Regular Council meeting.

Carried

6. Administrative Report No. CS-022-2024 – FedNor Funding for Northern Ontario Mining Showcase at MINExpo 2024

Resolution No. 2024-229
Moved by: Councillor Wilson
Seconded by: Councillor Foley

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Administrative Report No. CS-022-2024; and

That Council directs staff to prepare the necessary by-law to enter a funding agreement with FedNor for the Northern Ontario Mining Showcase at the MINExpo, for consideration at the June 18, 2024 Regular Council meeting.

Carried

c) New Business

None

12. Schedule of Council Meetings

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a) Regular Council Meeting – June 18, 2024 starting at 6:00 p.m.

b) Committee of the Whole Meeting – July 9, 2024 starting at 3:00 p.m.

c) Regular Council Meeting – July 9, 2024 starting immediately after the Committee of the Whole Meeting

13. Closed Session

Resolution No. 2024-230
Moved by: Councillor Whalen
Seconded by: Councillor Foley

Be it resolved that Council agrees to convene in Closed Session at 4:17 p.m. to discuss the following matters:

a) *Section 239(2)(b) of the* Municipal Act, 2001 – Personal matter (identifiable individual) – Staffing Update; and

b) Section 239(2)(a) of *the* Municipal Act, 2001 – Security of the Property of the Municipality – Rockin' On Canada Day Event.

Carried

Resolution No. 2024-231
Moved by: Councillor Wilson
Seconded by: Councillor Ducharme

Be it resolved that Council agrees to rise with report from Closed Session at 4:52 p.m.

Carried

Matters from Closed Session

***Section 239(2)(b) of the* Municipal Act, 2001 – Personal matter (identifiable individual) – Staffing Update**

Resolution No. 2024-232
Moved by: Councillor Whalen
Seconded by: Councillor Pelletier-Lavigne

Be it resolved that Council directs staff to prepare the necessary by-law to appoint Gabriel Tasse as Building Inspector for the City of Temiskaming Shores, in addition to his appointments as Fence Viewer, Livestock Valuer, and Municipal Law Enforcement Officer for the City, for Council consideration at the June 18, 2024 regular meeting.

Carried

Section 239(2)(a) of *the* Municipal Act, 2001 – Security of the Property of the Municipality – Rockin' On Canada Day Event

Council provided direction to staff.

14. Adjournment

Resolution No. 2024-233
Moved by: Councillor Ducharme
Seconded by: Councillor Wilson

Be it resolved that Council hereby adjourns its meeting at 4:54 p.m.

Carried

Mayor

Clerk

The Corporation of the City of Temiskaming Shores

Regular Meeting of Council

Tuesday, June 18, 2024 – 6:00 p.m.

City Hall – Council Chambers – 325 Farr Drive

Minutes

1. Land Acknowledgement

We acknowledge that we live, work, and gather on the traditional and unceded Territory of the Algonquin People, specifically the Timiskaming First Nation.

We recognize the presence of the Timiskaming First Nation in our community since time immemorial and honour their long history of welcoming many Nations to this beautiful territory and uphold and uplift their voice and values.

2. Call to Order

The meeting was called to order by Mayor Laferriere at 6:00 p.m.

3. Roll Call

Council:	Mayor Jeff Laferriere; Councillors Melanie Ducharme (virtual), Jesse Foley, Ian Graydon, Nadia Pelletier-Lavigne, and Danny Whalen (virtual),
Present:	Amy Vickery, City Manager Logan Belanger, Municipal Clerk Shelly Zubyck, Director of Corporate Services Mathew Bahm, Director of Recreation James Franks, Economic Development Officer Steve Langford, Fire Chief Brad Hearn, Information Systems & Technology Steve Burnett, Manager of Environmental Services Mitch McCrank, Manager of Transportation Services Stephanie Levielle, Treasurer
Regrets:	Councillor Mark Wilson

Media:	2
Delegates:	Andre Brock, Temiskaming Shores & Area Chamber of Commerce
Members of the Public:	6

4. Review of Revisions or Deletions to Agenda

None

5. Approval of Agenda

Resolution No. 2024-234
Moved by: Councillor Whalen
Seconded by: Councillor Ducharme

Be it resolved that City Council approves the agenda as printed.

Carried

6. Disclosure of Pecuniary Interest and General Nature

None

7. Public Meetings pursuant to the Planning Act, Municipal Act and other Statutes

None

8. Review and Adoption of Council Minutes

Resolution No. 2024-235
Moved by: Councillor Pelletier-Lavigne
Seconded by: Councillor Graydon

Be it resolved that City Council approves the following minutes as printed:

a) Regular Council Meeting – May 21, 2024; and

b) Committee of the Whole Meeting – June 4, 2024.

Carried

9. Presentations / Delegations

a) Andre Brock, Executive Director – Temiskaming Shores & Area Chamber of Commerce

Re: Addressing Vacant Buildings in New Liskeard and Haileybury: An Economic and Social Perspective

Mr. Andre Brock, Executive Director with the Temiskaming Shores & Area Chamber of Commerce (TSACC) provided a presentation to Council, utilizing PowerPoint, to address vacant buildings in the Temiskaming Shores downtown cores, as well as offered proposed actionable solutions. A supporting report including a comprehensive analysis was also distributed to members of Council and staff.

Mr. Brock began by outlining the reason for TSACC tackling this issue were due to concerns received from their membership, public safety and growth, and potential businesses unsure where to go, or what properties are available. City by-laws were reviewed, along with other municipal by-laws and policies. Photographs of vacant buildings in the New Liskeard and Haileybury downtown cores were shown and were mapped to identify their locations, as well as colour coded for level of concern. Mr. Brock provided a high-level overview of the report, including the impact vacant buildings have on communities and identified key stakeholders ranging from business owners to local government and community organizations, while emphasizing the varied concerns regarding homelessness, safety, and the economic and environmental health of the downtown areas. Addressing vacancies has an economic impact such as increased property values, tax revenues, job creation, public safety, along with the stimulation of the local economy.

Solutions/ recommendations were reviewed, including incentivizing the use of vacant buildings, streamlining processes, and reevaluating tax incentives to encourage redevelopment of these properties, while incorporating both short- and long-term strategies. Strategies included review of various municipal polices in comparison to other municipalities that are managing vacant buildings and redevelopment initiatives, and examples were provided. The presentation concluded with renderings on what building could become if the proposed initiatives were implemented.

Mayor Laferriere thanked Mr. Brock for the presentation and advised that the report and presentation materials will be referred to staff for review.

10. Correspondence/ Communications

a) Township of Harley

Re: Resolution of Support - Asset Retirement Obligations (PS 3280), 2024-05-17

Reference: Received for Information

b) Timiskaming Health Unit

Re: Report to the Board of Health – Q1 Report – January to March 2024

Reference: Received for Information

c) Heidi Bredenholler-Prasad, Vice President and Chief Customer Officer – Enbridge Gas Inc.

Re: Update - Keeping Energy Costs Down Act, May 2024

Reference: Received for Information

d) Federation of Northern Ontario Municipalities (FONOM)

Re: Letter of Support - Keeping Energy Costs Down Act, 2024-05-22

Reference: Received for Information

e) Amberly Spilman, Deputy Clerk - Town of Kirkland Lake

Re: Resolution of Support – Shared Resources, 2024-05-21

Reference: Received for information

f) District of Timiskaming Social Services Administration Board (DTSSAB)

Re: DTSSAB Quarterly Report, Q1 2024 January 1st to March 31st and Ending Chronic Homelessness in Ontario

Reference: Received for information

g) Alice Mercier, Clerk - Town of Cochrane

Re: Resolution of Support – Operational Budget Funding, 2024-05-24

Reference: Received for information

h) Alice Mercier, Clerk - Town of Cochrane

Re: Resolution of Support – Increase Ontario Community Infrastructure Fund, 2024-05-24

Reference: Received for information

i) Hugo Rivet, Committee Member – North on Tap

Re: Request for Funding Support for the North on Tap Family Night, 2024-05-31

Reference: Referred to staff for Report to Council

j) Timiskaming Health Unit

Re: Porcupine Health Unit (PHU) and the Timiskaming Health Unit (THU) Merger Community Update, 2024-06-03

Reference: Received for Information

k) Earlton-Timiskaming Regional Airport Authority (ETRAA)

Re: Financials April 2024

Reference: Received for information

l) Dr. Glenn Corneil, Acting Medical Officer - Timiskaming Health Unit

Re: Smoke- and Vape-Free Fall Fair Event, 2024-06-12

Reference: Received for information

Resolution No. 2024-236
Moved by: Councillor Foley
Seconded by: Councillor Graydon

Be it resolved that Council for the City of Temiskaming Shores agrees to deal with Communications Items 10 a) though l) in accordance with agenda references.

Carried

11. Committees of Council – Community and Regional

Resolution No. 2024-237
Moved by: Councillor Graydon
Seconded by: Councillor Foley

Be it resolved that the following minutes be accepted for information:

a) Minutes from the Earlton-Timiskaming Regional Airport Authority (ETRAA); and

b) Minutes from the Timiskaming Health Unit Bord of Health meeting held on April 3, 2024.

Carried

12. Reports by Members of Council

None

13. Notice of Motions

None

14. New Business

a) Prince Edward County - Resolution of Support - A call to action to meet the deadline of an Accessible Ontario by 2025 (Correspondence from the May 21, 2024 Regular Council Meeting

Resolution No. 2024-238
Moved by: Councillor Graydon
Seconded by: Councillor Pelletier-Lavigne

Whereas Council for the County of Prince Edward adopted a resolution regarding a call to action to meet the deadline of an Accessible Ontario by 2025, at their regular meeting on March 26, 2024; and

Whereas the Accessibility for Ontarians with Disabilities Act (AODA) is ground-breaking legislation, created to help people with disabilities fully participate in society, bring them to the table in crafting regulations, and build mechanisms to enforce standards; and

Whereas Rich Donovan, an expert in accessibility, was appointed as the Independent Reviewer of the Act in 2022, and in his 2023 legislative review declared a crisis as a necessary catalyst to get Ontario back on track for accessibility; and

Whereas at least 2.9 million Ontarians currently live with a disability, representing at least 22% of the consumer base and the workforce, but due to barriers, Ontarians with disabilities are too often falling short of their full potential; and

Whereas the AODA aims to develop, implement and enforce standards related to goods, services, accommodation, employment and buildings before Jan. 1, 2025, and municipalities, as the level of government closest to the people are at the front lines, developing, implementing and enforcing these standards without meaningful guidance on its implementation and/or enforcement by the Province; and

Whereas people with disabilities and advocates note the slow pace of current and previous Ontario governments in implementing the AODA, and there are growing concerns there will be no renewed push to keep accessibility issues at the forefront after 2025.

Be it resolved that Council for the City of Temiskaming Shores supports Prince Edward County on their call to action on the part of the Provincial Government to urgently:

a) create a "Municipal Accessibility Fund" for municipalities to develop, implement and enforce AODA standards related to goods, services, accommodation, employment and buildings. Such a fund could be

modeled after the Canada Community-Building Fund or the Ontario Cannabis Legalization Implementation Fund on a per household basis; and

b) to commit to working with municipalities to implement the Donovan Review immediate crisis recommendations; and

Further that a copy of this resolution be sent to the Premier of Ontario, the Minister of Seniors and Accessibility, the Minister of Children, Community, and Social Services, the Minister of Health, the Minister of Municipal Affairs and Housing, the Federation of Canadian Municipalities, the Association of Municipalities of Ontario, and Prince Edward County.

Carried

b) Memo No. 015-2024-RS – Recreation Operations Update

Resolution No. 2024-239
Moved by: Councillor Whalen
Seconded by: Councillor Ducharme

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Memo No. 015-2024-RS, regarding the Recreation Operations Update for the month of June for information purposes.

Carried

c) Administrative Report No. PPP-006-2024 – Appointment of Junior Firefighter

Resolution No. 2024-240
Moved by: Councillor Foley
Seconded by: Councillor Graydon

Be it resolved that Council for the City of Temiskaming Shores acknowledges receipt of Administrative Report No. PPP-006-2024; and

That Council hereby appoints Tanner Phaneuf a Junior Firefighter to the Temiskaming Shores Fire Department in accordance with the Recruitment and Retention Program.

Carried

15. By-Laws

Resolution No. 2024-241
Moved by: Councillor Graydon
Seconded by: Councillor Pelletier-Lavigne

Be it resolved that:

By-law No. 2024-063	Being a by-law to enter into an agreement with Miller Maintenance for the supply and installation of street light projects in the City of Temiskaming Shores
By-law No. 2024-064	Being a by-law to enter into an agreement with Continental Carbon Group Inc. for the Haileybury Water Treatment Plant Filter No. 3 Rehabilitation
By-law No. 2024-065	Being a by-law to enter into an agreement with Miller Paving Limited for the Dymond Industrial Road Rehabilitation – Phase 1
By-law No. 2024-066	Being a by-law to amend By-law No. 2012-039, a by-law to adopt Schedules of Departmental User Fees and Services for the City of Temiskaming Shores (Corporate Services – Administration Fees)
By-law No. 2024-067	Being a by-law to enact a Zoning by-law Amendment to rezone the subject land from General Commercial – Haileybury (C1A) to General Commercial – Haileybury Exception (C1A-1) to allow for a self storage facility as a permitted use: 468 Georgina Avenue
By-law No. 2024-068	Being a by-law to enter into a Memorandum of Agreement between the City of Temiskaming Shores and the Timiskaming Health Unit for the purpose of implementing the Community Safety and Well-Being Plan
By-law No. 2024-069	Being a by-law to Stop up and Close a Highway – Lane between eight and ninth streets and north of Lakeview Avenue, described as Part 1 on Plan 54R-6423
By-law No. 2024-070	Being a by-law to Stop up and Close a Highway – All of Ninth Street North of Lakeview Avenue, described as Part 2 on Plan 54R-6423

By-law No. 2024-071	Being a by-law to authorize the Sale of Land for the Lane between eight and ninth streets and north of Lakeview Avenue, described as Part 1 on Plan 54R-6423 to Matthew Krul and Nerissa Doy
By-law No. 2024-072	Being a by-law to authorize the Sale of Land for all of Ninth Street North of Lakeview Avenue, described as Part 2 on Plan 54R-6423to Matthew Krul and Nerissa Doy
By-law No. 2024-073	Being a by-law to enter into an agreement with the Federal Economic Development Agency for Northern Ontario as represented by the Minister of Indigenous Services and Minister responsible for the Federal Economic Development Agency for Northern Ontario, for the Northern Ontario Mining Showcase (NOMS) at the MinExpo International – September 25-27, 2024 (Project No. 852-515336)
By-law No. 2024-074	Being a by-law to enter into an agreement with the Township of Coleman for the acceptance and disposal of Household Hazardous Waste at the City of Temiskaming Shores annual Collection event
By-law No. 2024-075	Being a by-law to appoint a Building Inspector – Gabriel Tasse

be hereby introduced and given first, second and third and final reading, be signed by the Mayor and Clerk and the corporate seal affixed thereto.

Carried

16. Schedule of Council Meetings

a) Committee of the Whole – July 9, 2024 starting at 3:00 p.m.

b) Regular Council Meeting – July 9, 2024 starting immediately after Committee of the Whole Meeting

17. Question and Answer Period

None

18. Closed Session

Resolution No. 2024-242
Moved by: Councillor Graydon
Seconded by: Councillor Foley

Be it resolved that Council agrees to convene in Closed Session at 7:05 p.m. to discuss the following matters:

a) Adoption of the May 21, 2024 and June 4, 2024 Closed Session Minutes; and

b) Under Section 239(2)(b) of the Municipal Act, 2001 – Personal matter (identifiable individual) – Staffing Update.

Carried

Resolution No. 2024-243
Moved by: Councillor Foley
Seconded by: Councillor Whalen

Be it resolved that Council agrees to rise with report from Closed Session at 7:22 p.m.

Carried

Matters from Closed Session

Adoption of the May 21, 2024 and June 4, 2024 Closed Session Minutes

Resolution No. 2024-244
Moved by: Councillor Graydon
Seconded by: Councillor Pelletier-Lavigne

Be it resolved that Council approves the following as printed:

a) Closed Session Minutes from the May 21, 2024 Regular Council meeting, and the Closed Session Minutes from the June 4, 2024 Committee of the Whole meeting.

Carried

Under Section 239(2)(b) of the Municipal Act, 2001 – Personal matter (identifiable individual) – Staffing Update

Staff provided Council with an update, and Council provided Staff with direction.

19. Confirming By-law

Resolution No. 2024-245
Moved by: Councillor Foley
Seconded by: Councillor Whalen

Be it resolved that By-law No. **2024-076** being a by-law to confirm certain proceedings of Council of The Corporation of the City of Temiskaming Shores for its Committee of the Whole Meeting held on June 4, 2024, and for its Regular meeting held on June 18, 2024, be hereby introduced and given first, second, third and final reading; and be signed by the Mayor and Clerk and the Corporate Seal affixed thereto.

Carried

20. Adjournment

Resolution No. 2024-246
Moved by: Councillor Foley
Seconded by: Councillor Graydon

Be it resolved that Council hereby adjourns its meeting at 7:24 p.m.

Carried

Mayor

Clerk

May 2024

Introducing the new
School Nutrition Fund

This endowment fund has been established through the Temiskaming Foundation, who have also generously provided our first funding commitment.

Our Vision

Our vision is to create a more equitable learning environment for all students by ensuring students' basic nutritional needs are met, reducing stigma related to socio-economic status and food insecurities, and to provide these services in a way that maintains students' dignity.

Our Mission

Our mission is to provide a reliable, yearly grant to school nutrition programs in our area. We would also like to raise awareness about food insecurity in our community, as well as to build lasting community partnerships to better meet the needs of our students.

We Welcome Your Support

To donate to the School Nutrition Fund, please visit https://www.canadahelps.org/en/charities/temiskaming-foundation. Choose "2. School Nutrition Fund" from the drop down menu. You may also use the QR code below which will bring you directly to the donation page. We deeply appreciate your support.

How the Fund Works

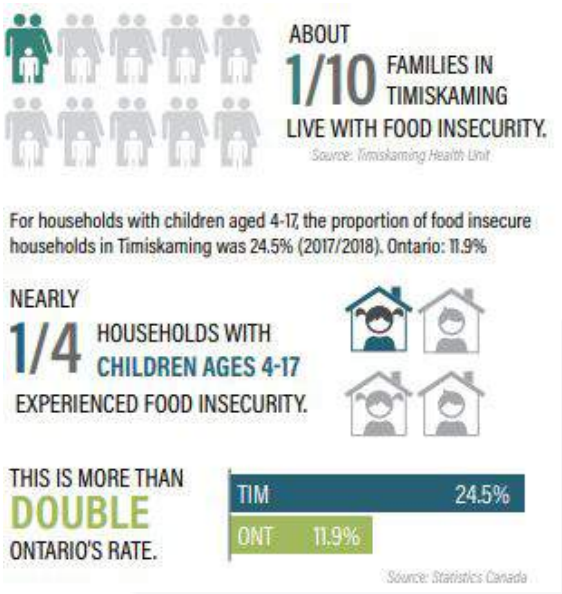
Until 2025, we will raise awareness about the fund and host fundraisers to help it grow without accepting any grant requests. As the fund becomes better established, 5% annually will be allocated to schools in our area (from Cobalt to Kirkland Lake). Our goal, over time, is to reach $1,000,000. This would mean $50,000 could be accessed by schools on a yearly basis to help fund nutrition programs. This would provide a reliable, much needed, source of support that would always be available.

Our Kids Need Help: Food Insecurity in our Community

In 2021, the Temiskaming Foundation released Vital Signs, its evidence-based report related to community wellness indicators in the District of Timiskaming. The report noted that food insecurity is a significant problem in our area. More specifically, food insecurity affected 1 in 10 families in Timiskaming, and for households with children aged 4-17, the proportion of food insecure households in Timiskaming was 24.5% (2017/2018) compared with a provincial average of 11.9%. Nearly 1 in 4 households with children 4-17 experienced food insecurity, more than double Ontario's rate. In 2016, 20.3% of children aged 0-17 were in low-income homes. (2021: p. 36 & 37)

While many people understand food insecurity as a lack of food, Temiskaming Shores' Community Safety and Well-Being Plan, emphasizes a broader definition that includes the quality of food accessible to some families. According to the CSWBP, food insecurity

> *"refers to inadequate or insecure access to food due to financial constraints. Food security is not only concerned with adequate quantities of food, but also with quality of food available and accessible. This is important because food insecurity is not only associated with malnutrition as it relates to insufficient caloric intake but also as it relates to the higher intake of energy-dense, nutrient-poor foods, which are often also more affordable."* (CSWBP, 2022: p. 20)



Similarly, in their recent announcement related to a National School Food Program, The Canadian Government emphasized that rising food costs are making it difficult for families to "put enough good, healthy food on the table." Importantly, research suggests that food insecurity is related to an increased risk for several long-term physical and mental health conditions such as obesity, asthma, and depression. Food insecurity also impacts a child's ability to succeed in school and can render existing medical conditions more difficult to manage. According to the Government:

> *"Evidence shows that school meal programs act as social equalizers. They are also part of a comprehensive approach to equity and support for children and their families. Their benefits include:*
> - *reducing hunger, food insecurity, and health inequities;*
> - *supporting students' attendance, academic outcomes, and achievement;*
> - *supporting families by reducing food costs and the time required to prepare school lunches; and,*
> - *supporting local farmers, local economies, as well as sustainable food systems and practices.*

https://www.pm.gc.ca/en/news/news-releases/2024/04/01/national-school-food-program-set-kids-success#:~:text=The%20Prime%20Minister%2C%20Justin%20Trudeau,by%20existing%20school%20food%20programs

This evidence compels us to act, to reduce inequalities and ensure healthier, more successful outcomes for our students.

What Schools are Doing to Address Food Insecurity

Temiskaming District Secondary School

TDSS operates several nutrition programs. Our Child and Youth Worker, Katie Vinette, manages a breakfast program that operates 4 days a week. She follows Canada's Food Guide to ensure students begin their day with healthy snacks. This program is accessible to all of TDSS' 573 students.

Alongside the breakfast program, Carla Palangio oversees a Full Plate initiative and the Clothes Closet. The Full Plate program is funded through community donations and supplies the main office with snacks for students who need them throughout the day. It also allocates money to David Craig, who plans, shops, and cooks with his class to provide about 30 hot meals per week for students in the school. These are often eaten within a couple of days and we would like to see his budget increased.

Elementary students at TDSS are also able to access healthy snacks through the Northern Fruit and Veggie Program. This is a government funded initiative that supplies students with fresh fruit and veggies on a weekly basis. Finally, this year a food pantry was created in the Grade 7/8 hall. The purpose of this service is to ensure our elementary students have regular access to both snack and lunch items when needed. All food pantry items have been donated by generous community members..

St. Patrick Catholic School

At St. Patrick Catholic School, students benefit from a breakfast program that operates 5 days a week. They also receive healthy snacks through the Northern Fruit and Veggie Program. These programs would not be possible without the leadership of Wendy Dupuis, and the help of education staff who volunteer their time to prepare and serve food.

Kerns and Elk Lake Public Schools

Kerns Public School runs a "grab and go" style breakfast/snack program five days a week. Students are provided with healthy snack options. In addition to the "grab and go" style program, Elk Lake Public School provides 2 hot breakfast options each week. These programs are partially funded by The Red Cross, the Northern Fruit and Vegetable Initiative and community donations.

Kerns Public School also provides access to their Clothing Closet, where students and families can find clothing options at no charge. The Clothing Closet is supported by local families and community members who donate their gently used clothing.

These are just some of the 22 schools in the Timiskaming District offering school nutrition programs that need our support!

Ways You Can Help

1. **Speak up!** Talk to your friends, family and community members about the new School Nutrition Fund and the need to support our students who face food insecurity.

2. **Share on social media.** Share this information booklet or other resources about food insecurity, the Temiskaming Foundation, and/or local fundraisers on social media. Help raise awareness, end stigma, and recruit help for upcoming projects.

3. **Volunteer.** Contact a school in your area to see how you can donate your skills or volunteer your time. Many school nutrition programs would not be possible without the help of community volunteers.

4. **Donate.** Make a donation through the Foundation's CanadaHelps page. https://www.canadahelps.org/en/charities/temiskaming-foundation

5. **Contact the Temiskaming Foundation to learn how to:**

- ❏ host a fundraiser online through CanadaHelps
- ❏ donate securities for additional tax benefits
- ❏ organize a fundraiser in your community

Accessing the Fund for your School

In 2025, investment income will be allocated to the fund, in proportion to the fund balance on December 31, 2024. This will create a spendable balance available for 2025. Every donation grows the fund, which then in turn increases the investment income generated.

Grant applications will then be available through the Temiskaming Foundation. It is important to note that ***all*** *schools in the District of Timiskaming who apply for funding will be approved*. To ensure an equitable distribution, funding will be based on a dollar amount per student. Our sole request is that each school who accesses the Fund will also contribute to it by organizing a yearly fundraiser. By working together as a caring community, we are sure we can reach our goals!

Our Story

Kelly Howard runs the school Nutrition Program at New Liskeard Public School. Earlier this year, the program did not receive a large grant that it had relied on in the past. Kelly wanted to establish a reliable source of funding for nutrition programs in our area and thought the Temiskaming Foundation would be the perfect partner in this endeavour.

Trish Desjardins has recently created a food pantry for Grade 7 & 8 students at Timiskaming District Secondary School. This pantry runs alongside other nutrition programs at the school. Trish is working to create a nutritional committee at the school, and to access further funding to broaden services in response to increasing food insecurities.

Brigid Wilkinson is the Executive Director of the Temiskaming Foundation. The Foundation is proud to support the School Nutrition Fund, committing to hosting several fundraisers to celebrate its 30th Anniversary, and working to build a legacy that will feed the children of the District of Timiskaming for the next thirty years and beyond.

For further information about the School Nutrition Fund, please contact us!

Kelly Howard	Trish Desjardins	Brigid Wilkinson
Kelly.Howard@dsb1.ca	Patricia.Desjardins@dsb1.ca	ttf@temiskamingfoundation.ca

Prepared by
Trish Desjardins

With contributions from
Brigid Wilkinson &
Lisa Taylor

Edited by
Amanda St. Jean

TTF

THE TEMISKAMING FOUNDATION

The Temiskaming Foundation

City of Temiskaming Shores

Council Presentation

July 9, 2024

Who we are

- The Temiskaming Foundation (originally the Tri-Town Foundation) was founded in 1994 by a group of local businessmen, inspired by similar foundations in the United States. They reasoned that a local foundation would allow local residents to donate to the community with the assurance that funds would be directed to where they were most needed.
- By 2002 there were 33 funds with a total exceeding $1,000.000.00, granting out $42,000 to 2001

Fast Forward to 2023

+ Assets at year-end	$11,232,518
+ Donations Received	$902,931
+ Grants made	$678,511
+ Over 150 individual funds	

What is a community foundation?

- A community foundation is a locally run foundation that builds and manages endowment funds to support charitable activities in a specific region.
- Endowment funds invest donations received to generate revenue to support charitable activities
- In general, our policies dictate that the principal of our individual funds is not touched, ensuring the generation of revenue for generations to come

Board of Directors

Chris Oslund – President

Rebecca Hunt – Vice-President

Lynne Bernier – Treasurer

Michelle Sowinski – Secretary

Samara Alexander - Director

Matt Bahm – Director

Helene Culhane – Director

Jo-Anne Farmer – Director

Danielle Girard - Director

Peter Graydon - Director

Johanna Paradis – Director

Bonnie Sackrider - Director

Laurie Wilson - Director

Staff

Executive Director

Brigid Wilkinson

Strategic Initiatives Intern* this position is supported by NOHFC

Kevin Carino

Investment Manager

Mike Downs

Connor, Clark & Lunn

Types of Funds

- Community Fund
  - Named funds within the Community Fund that support grants to the community, decided by committee
    - E.g. Peter & Eileen Ramsay Fund
- Scholarship Funds
  - Funds that are founded by individuals or organizations to grant scholarships
    - E.g. Rotary Club of Haileybury Fund
- Donor Advised Funds
  - Funds that are founded by individuals or organizations who direct the revenue
    - E.g. One Foot Forward

Types of Funds (cont'd)

- Restricted Funds
  - Funds that are founded by an individual or organization that designates a recipient charity
    - E.g. Herbert C. Sweetnam Memorial Fund
- Agency Funds
  - Funds that are founded by a particular organization to fund that organization
    - E.g. Temiskaming Art Gallery Fund

Canada Revenue Agency

- Disbursement Quota
  - 5% of assets of Foundation granted each year

- Anti-Directed Giving
  - A charity may lose its charitable status if it accepts a donation specifically directed towards a non-qualified donee

City of Temiskaming Shores & By-Law #2010-15

- Prior to 2022, community foundations were not permitted to grant directly to non-qualified donees.
- Flow-through granting examples:
  - Temiskaming Shores Seniors Housing Corporation
  - Small Pond Entertainers
  - Tri-Town Ski Village
  - Tri Town Lacrosse
  - Zack's Crib
  - Haileybury Legion, Branch 54

School Nutrition Fund/fond d'alimentation saine pour les élèves

- Launched in 2024
- Will support nutrition programs in the twenty-two (22) schools in the Timiskaming District
- Currently engaged in awareness building and fundraising
  - CanadaHelps Campaign page: https://www.canadahelps.org/en/charities/temiskaming-foundation/campaign/school-nutrition-fund
- Grants will begin in 2025

Vital Signs update

- In 2013, TTF released its first Vital Signs report – a single topic report focused on agriculture and food insecurity in Temiskaming
- In 2021, TTF published its first comprehensive Vital Signs report, following a series of "Vital conversations", consultation with local agencies and a community survey
- In 2023, received approval for funding for an NOHFC internship
- In 2024, coordinating with CSWB to update the report, focusing on 4 of the 12 original topic areas
- Plan to update 4 topics each year, followed by a complete update incorporating the next round of Census data

Vital Signs Survey

- The Vital Signs survey has been released and is available on our website: www.Temiskamingfoundation.ca/vitalsigns
- English and French
- Hard copies have been distributed to public libraries throughout the District
- Deadline to complete is August 31st

Vital Signs Report timeline

+July-August: survey

+July-August: analysis of Census and Planet Youth data

+September: analysis of survey data

+October: preparation of the report & translation

+November: release of the report

Thank you!

+www.temiskamingfoundation.ca

+705-647-1055

+ttf@temiskamingfoundation.ca

+61 Whitewood Avenue

PO Box 1084

New Liskeard, ON P0J 1P0

FoodCycler™

On-Site Organics Diversion Program

Prepared for:
City of Temiskaming Shores
July 9, 2024

Presented by:
Food Cycle Science
Brittany Clarke

About Us: Food Cycle Science

- Canadian company based out of Ottawa, Ontario
- 100% focused on Food Waste Diversion Solutions
- Official Canoe Procurement Group of Canada approved supplier
- Recent Awards include:
  - Finalists in Impact Canada's Food Waste Reduction Challenge
  - Deloitte Fast 50 CleanTech award winners (2021-2024)
  - #108 on Globe & Mail's Canada's Top Growing Companies for 2023

FOODCYCLE SCIENCE

Trusted Canadian Solution

From Coast to Coast to Coast

One Hundred and Fifty Canadian Municipal Partners ... and counting!

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Pilot Program Recap

- With support from Impact Canada's Food Waste Reduction Challenge, a pilot program was run in Temiskaming Shores that included 154 participating households.

- Net cost to the Municipality was $15,400 + Shipping + HST

- Program ran from February to May 2024
  - Usage was tracked for 12 weeks to calculate total waste diversion.
  - Participants completed a survey to provide data and feedback.

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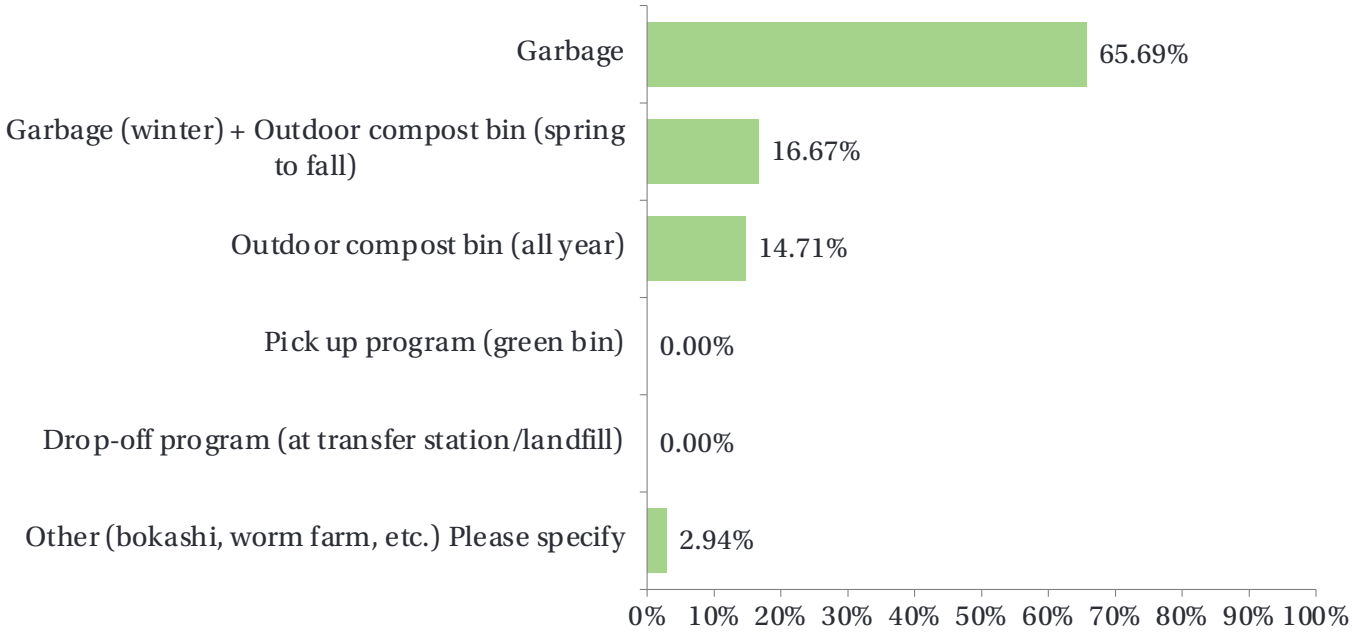
Pilot Program Results

109 responses collected out of 154 participants (70%)

- How important is greenhouse gas reduction to you? 9/10
- How important is waste reduction to you? 9/10
- Where does your food waste currently go?



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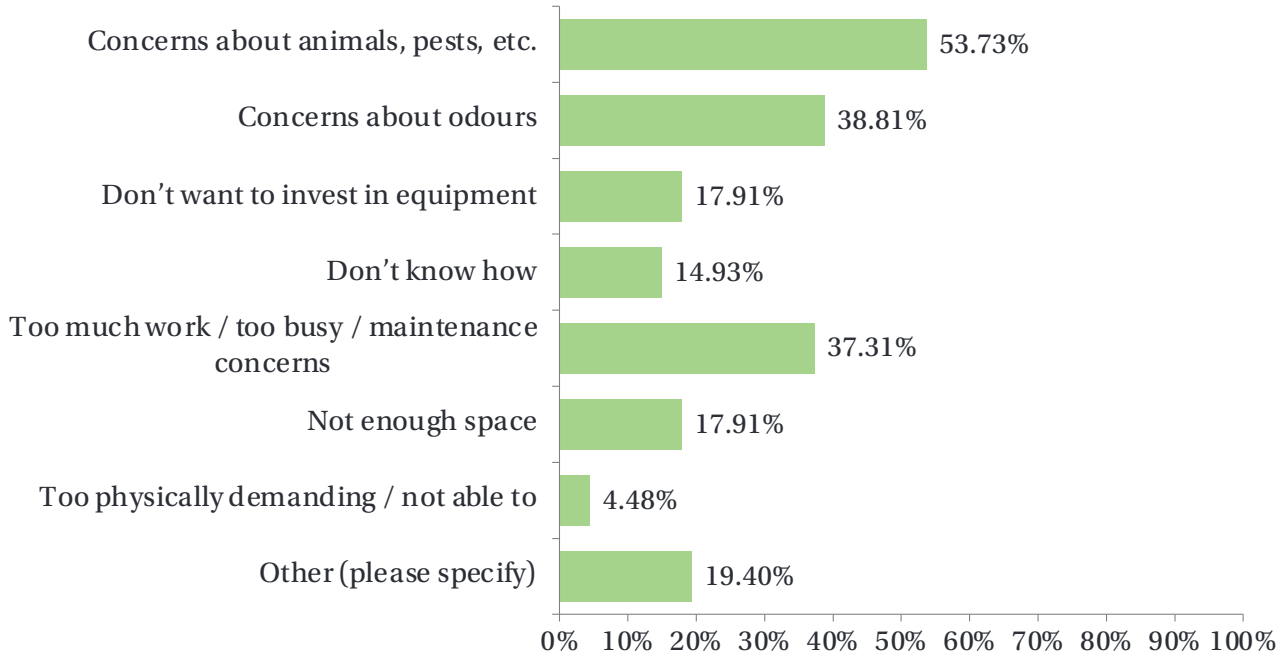
Pilot Program Results

Why don't you compost?



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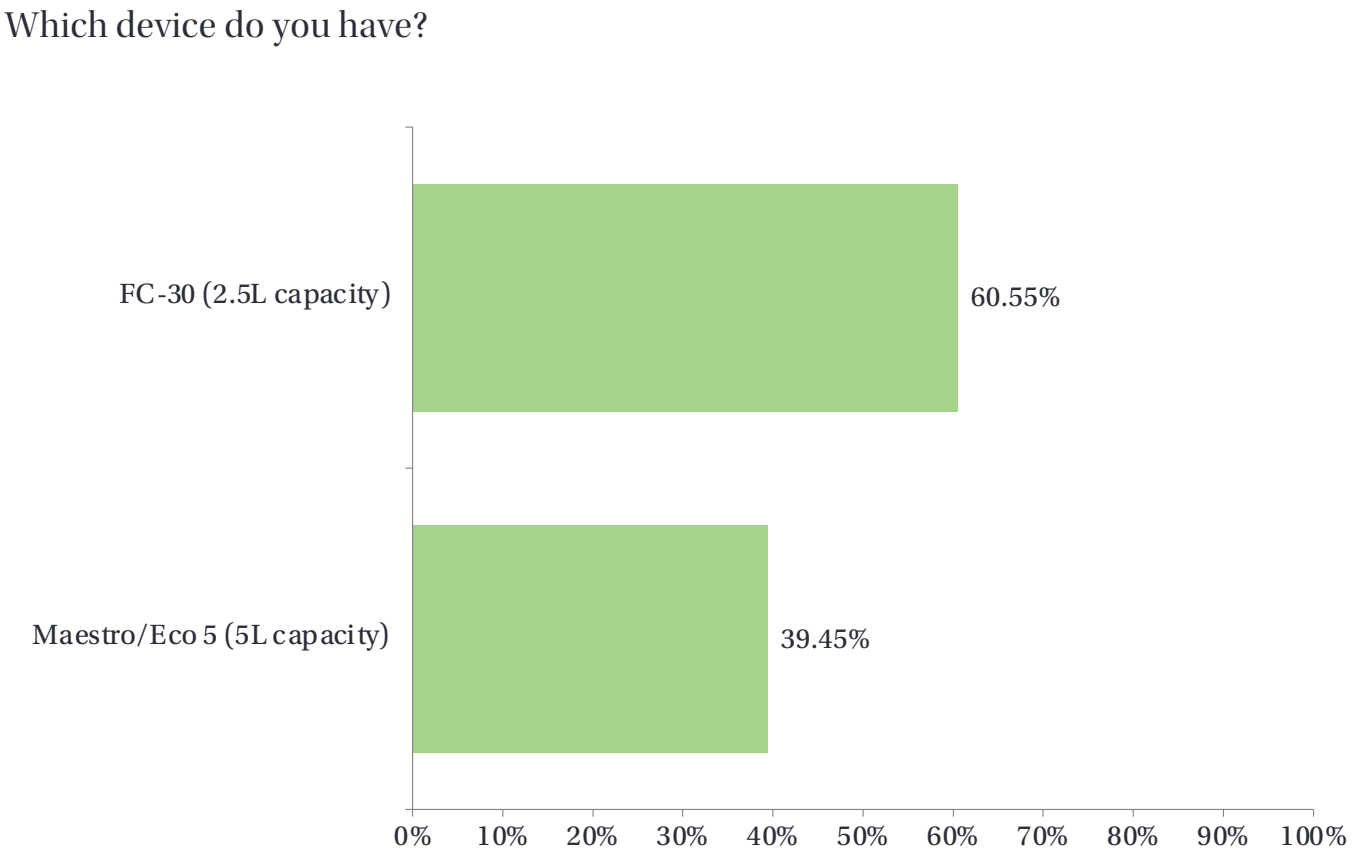
Pilot Program Results



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Pilot Program Results

- Average of **3.66 cycles/week** for FC-30
- Average of **3.51 cycles/week** for Maestro/Eco 5
  - Equivalent to **~259 kg/year/household**
  - Total of **40 metric tonnes (MT)** of food waste diverted from landfill/year from the 154 FoodCyclers in use

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Pilot Program Results

- 154 FoodCyclers in Temiskaming will divert **52 MT CO2 equivalents** per year, the equivalent to carbon sequestered by **60.7 acres** of forest each year!

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Pilot Program Results

Residents reported generating 0.72 fewer standard garbage bags per week, a reduction of 37.4 garbage bags per household per year being trucked to local landfills!

"Excellent product. It significantly reduced our food waste in the garbage which in turn made for less odours in the kitchen. I am looking forward to the summer without having food waste in the bin outside for 2 weeks and the smell/bugs that come with that."

"Innovative idea . I really like it. The amount of garbage that was reduced was definitely impressive."

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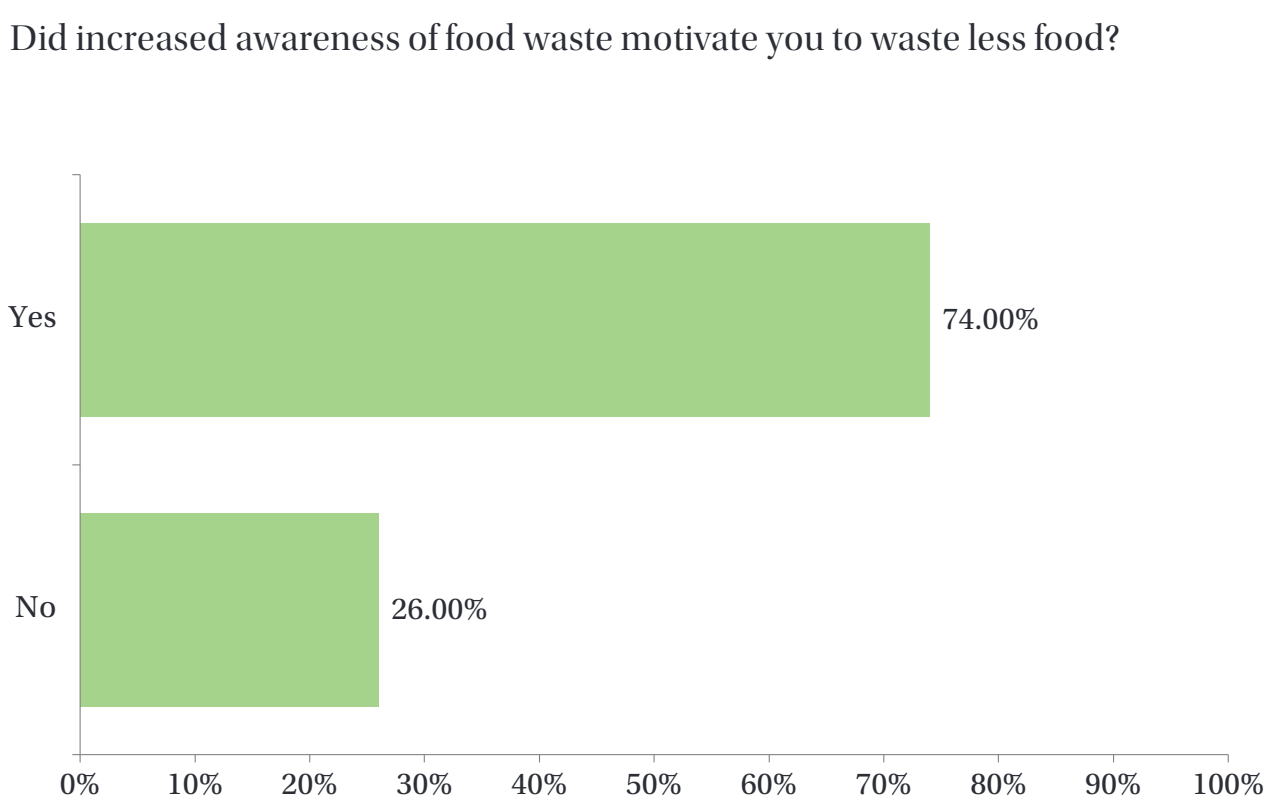
Pilot Program Results



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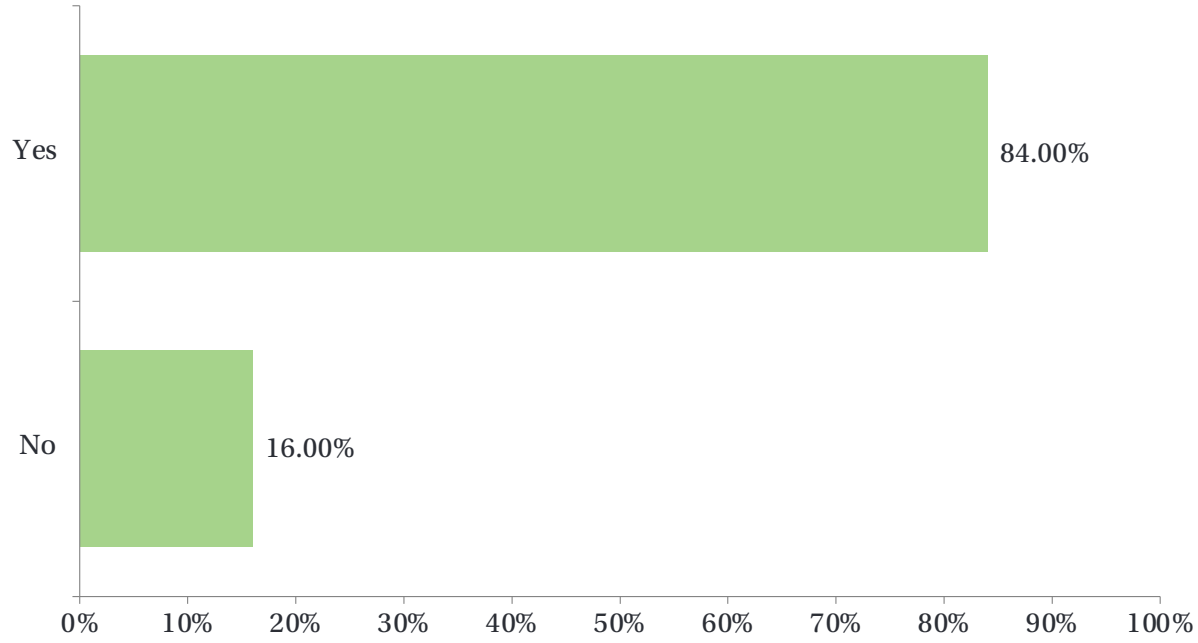
Pilot Program Results

If the municipality continued to offer a FoodCycler to residents at no or low cost as part of a diversion program, do you think your friends / neighbours in the community would participate?



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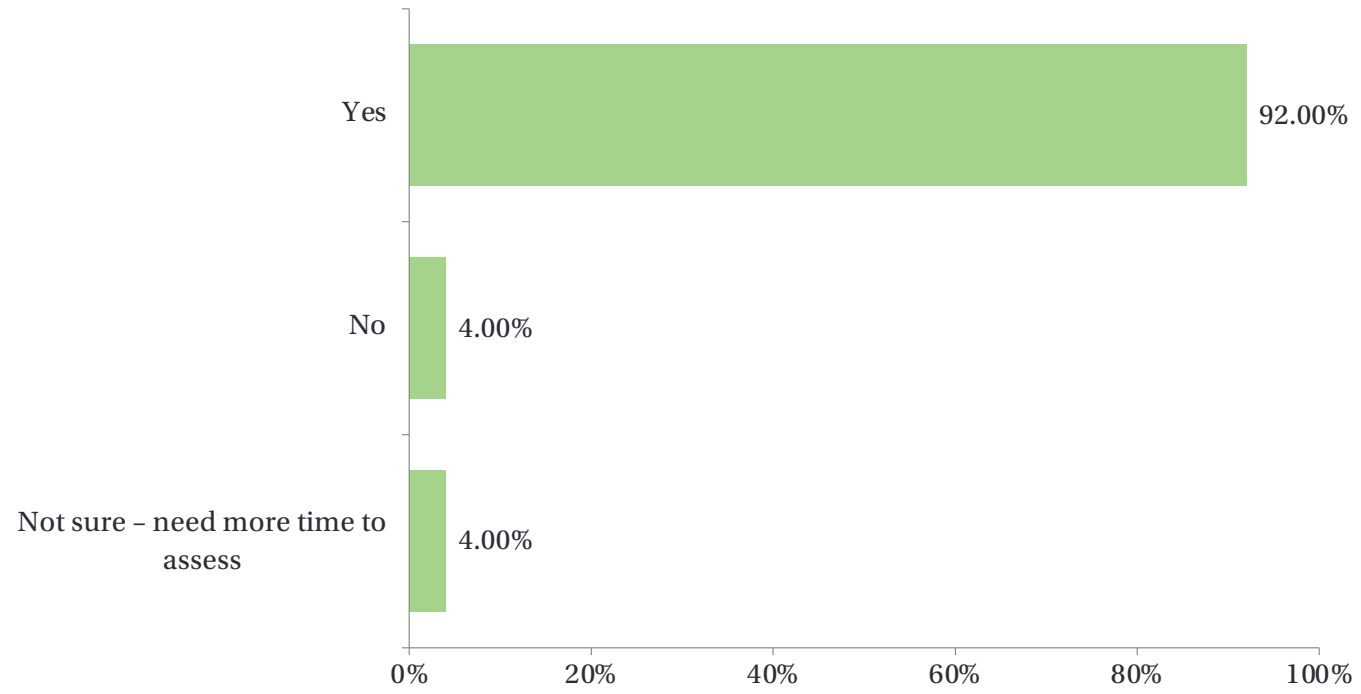
Pilot Program Results

Would you recommend the FoodCycler to others?



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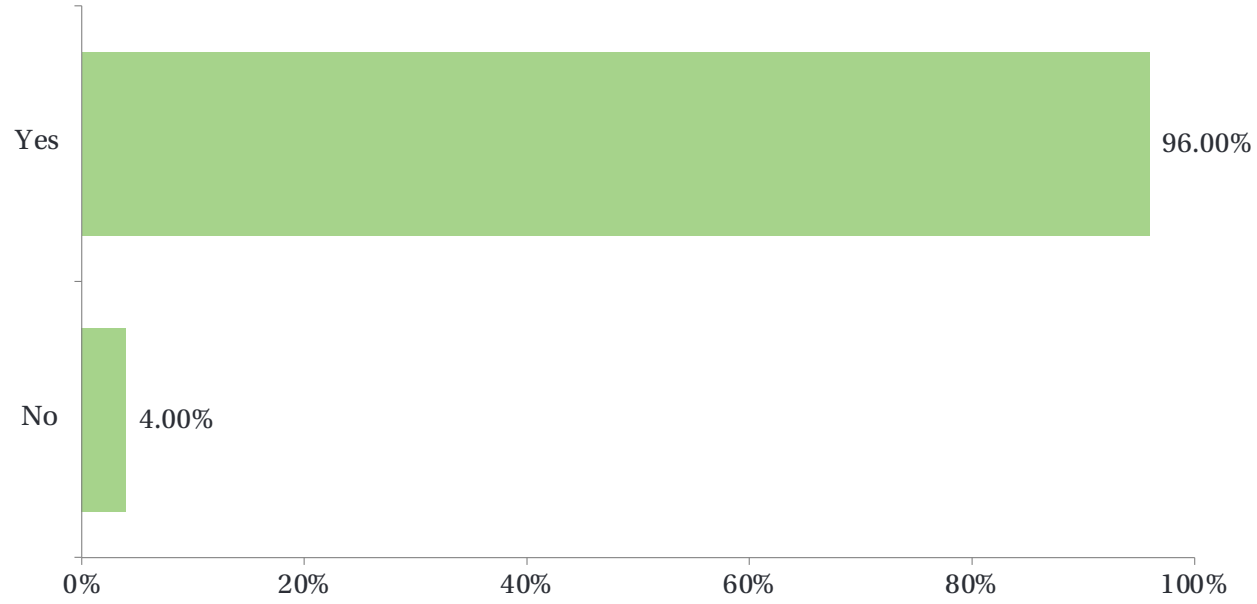
Pilot Program Results

Will you continue using the FoodCycler after this pilot?



"The benefits of using the FoodCycler are really apparent. We have less waste, there are less odours in the garbage bin, and I worry less about animals looking for an easy meal."

"I feel so much happier not throwing out food waste in the garbage. I feel like I can make a difference in a small way!"

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Pilot Program Results

Please rate the overall pilot project experience out of 5 stars.

Average rating: 4.7/5 Stars

- 1 Star = 1%
- 2 Stars = 0%
- 3 Stars = 0%
- 4 Stars = 21%
- 5 Stars = 78%

"An affordable alternative to green bins with fewer issues with frozen compost bins and attracting critters such as bears."

"This is a great program for municipalities that do not currently have a compost pickup program. It's a great way to have residents used to composting and feel like they are part of the climate change movement."

"Great initiative. Producing less waste is an important part of caring for your community."

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Pilot Participant Comments

"Coming from a city that uses green bins, I am hopeful that we here will adopt some sort of composting/food waste program/collection for the community."

"I think it was a great program. Previously I composted, but my bin is not in an ideal location. Through the municipal presentation and the information provided with the FoodCycler, I learned about the danger of inefficient composting - that problematic gases can be created if composting is not in ideal conditions. Now I don't have to worry about that and can use my FoodCycler and add to my garden. Thank you for engaging in this pilot program."

"I had been looking for composter, but found the price prohibitive (Lomi, e.g.) and without knowing how well it would work or if it was suitable for me, was not a risk I wanted to take. This pilot was perfect as the price was worth giving it a chance. Greenhouse emissions/food waste have been a concern of mine for long time, so I was excited about the opportunity and am very happy with the end results. Now if we could all learn to stop buying too much food in the first place, that would help too."

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Pilot Participant Comments

“This product prevented a surprising amount of food waste from going to the landfill. I did not expect it to be that much. It really shows us how much food waste our household produces. As far as usage we found that salad with some dressing took a long time. I would not recommend putting in wet salad. The size of the bin is great, any larger and mold would grow on food waste before having enough for a cycle. Running it every other day works for us if the bin is not full. When using the resulting by-product, using it at more that 10% by-product to 90% soil in pots will result in mold growth. Overall, it is a great product that works well, is quiet, efficient and definitely worth the investment. Thank you.”

“Ultimately, we love having the FoodCycler and will continue to use it but would not have paid the full cost of the unit up front if it wasn't for the program. We also would have liked more information on running it after the program, like where and when to purchase the additional filters and charcoal. Overall though we're very happy to have had a chance to participate and hope this program becomes available to more people in the community. Thank you!”

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Recap and Next Steps

Recap

- **40 MT** of food waste diverted from landfill/year from the 154 FoodCyclers in the pilot program
- Residents reported a reduction of **0.72 bags per week which equals 37.4 bags/resident/per year** of food waste diverted from landfills.
- **96%** of participants will continue using the FoodCycler

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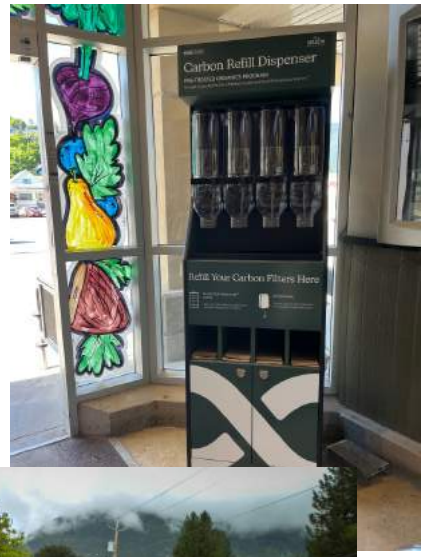
Scaling Real Change

Nelson, British Columbia (5000 homes)

Citywide Pre-treated Organics Program program including:

- Free bulk carbon refill station in local Safeway grocery store
- Full warranty and local repair program
- Convenient, animal-proof soil amendment drop off locations
- Accessories sold by local businesses
- E-waste recycling programs established locally
- Resident education – guides, information sessions, and how-to videos



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British Columbia

B.C. community expands home composting pilot project to divert more food waste from landfills

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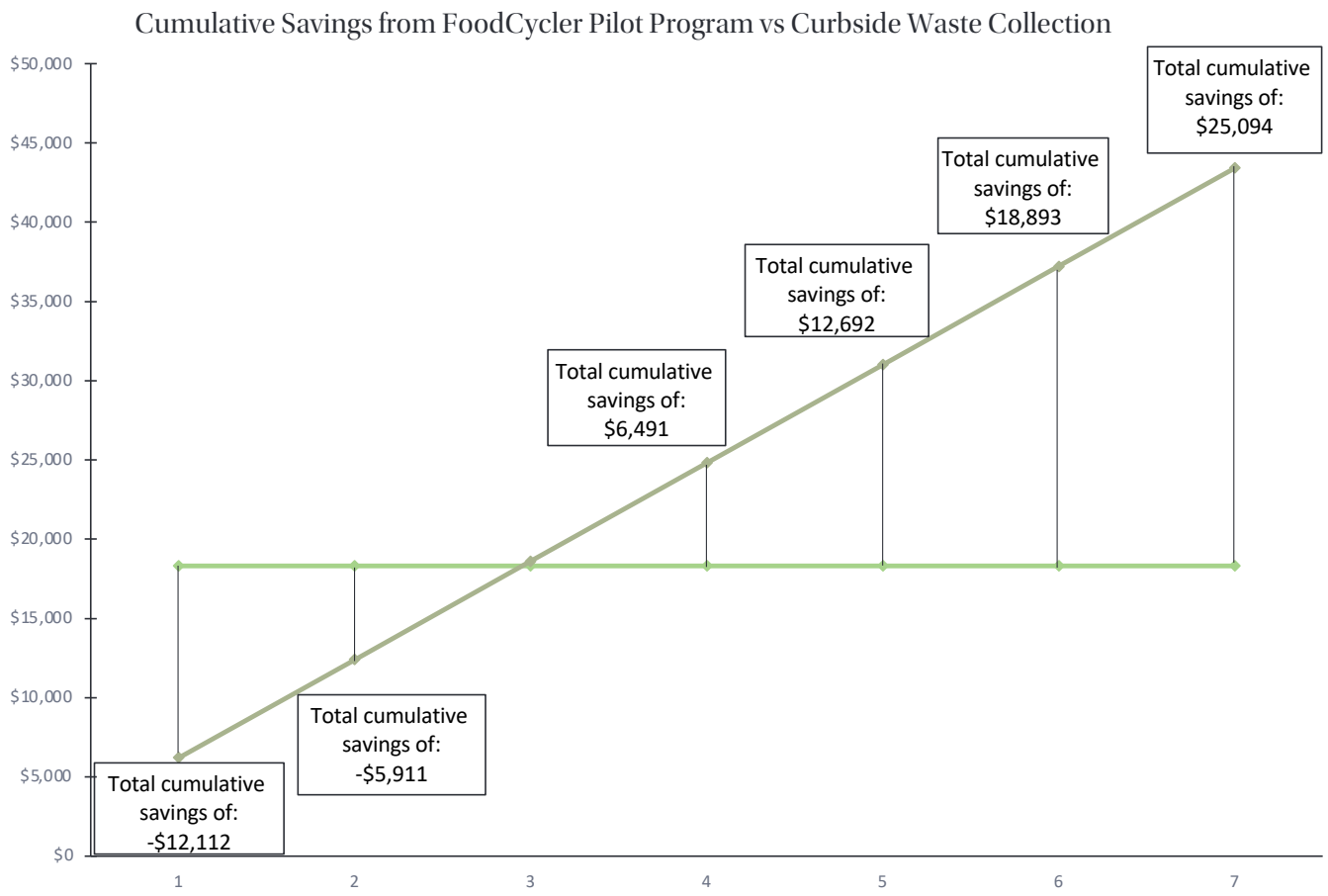
Food for Thought



FOODCYCLE SCIENCE

Next Steps

FoodCycler as an Organic Waste Diversion Solution

- Life Cycle Analysis
  - Our new Emissions Calculator Tool is available at no extra cost to our implementation partners
- New Technology
  - In addition to the two models currently available to municipal residents we are launching the new Eco 3 model this summer
- Feasibility Report
  - We are developing a toolkit to provide municipalities with the economics of implementing community wide FoodCyclers vs. landfill and curbside green bin programs

FOODCYCLE SCIENCE

FOODCYCLE SCIENCE

Thank you!

Any Questions?

Brittany Clarke
Municipal Program Manager
Email: brittanyclarke@foodcycler.com
Phone: 613-889-0102

COMMUNITY HOSPICE CARE WORKING COMMITTEE

May 21, 2024

Temiskaming Shores Municipal Council

P.O. Box 2050, Haileybury, ON P0J 1K0

Dear Mayor Laferriere and Council,

On behalf of the newly-formed Community Hospice Care Committee, it is my pleasure to inform you that we are a local group committed to finding strategies that will address the challenges and barriers to end-of-life care in the Temiskaming Shores area.

Our group is comprised of local home support organizations and private citizens working in cooperation with existing facilities such as the Temiskaming Hospital and local retirement and long-term care homes.

It is our belief that, with us all working as a team, this area could become a model of excellence for end-of-life care in Ontario.

At our first meeting in March 2024, we identified a number of regional concerns and deficiencies including but not limited to: lack of supplies, insufficient number of volunteers, lack of caregiver support, insufficient number of PSWs, inadequate provincial funding, and more. These barriers prevent people from dying with dignity in their homes or in a residential hospice setting.

As our committee works to achieve our goals by finding innovative and fresh approaches to these issues, we hope that we can rely on Council's support and we look forward to any opportunities to work with you.

Sincerely,

Chris Gallagher

Chris Gallagher

Chris Gallagher | Tel: ([redacted] | Email: [redacted]

Logan Belanger

To: Amy Vickery
Subject: RE: Funding Agreement for the Renewed Canada Community-Building Fund, 2024-2034

From: AMO's CCBF Team <ccbf@amo.on.ca>
Sent: Friday, June 14, 2024 11:29 AM
To: Kelly Conlin <kconlin@temiskamingshores.ca>; Amy Vickery <avickery@temiskamingshores.ca>; Stephanie Leveille <sleveille@temiskamingshores.ca>
Subject: Funding Agreement for the Renewed Canada Community-Building Fund, 2024-2034

Hi Kelly Conlin, Amy Vickery-Menard and Stephanie Leveille,

We are pleased to submit to you the renewed 10-year Municipal Funding Agreement (MFA) for the administration of the Canada Community-Building Fund (CCBF). This is made possible due to the renewal of the Administrative Agreement found here.

Actions required
As soon as possible, please:

1. Pass a municipal by-law authorizing the MFA;
2. Have the appropriate officers sign the MFA (section 18, page 15); and
3. Submit the signed MFA and by-law to ccbf@amo.on.ca.

CCBF funds will not be distributed to your community until these three actions have been completed.

Webinar
We will provide a webinar to go over the agreement and answer any questions you might have. The session will be recorded. The webinar will be offered at two times:

- 11:00 a.m. to 12:00 p.m. on Tuesday, June 18th; and
- 1:00 p.m. to 2:00 p.m. on Wednesday, June 19th.

Please forward the registration link to anyone from your municipality involved in the administration of the CCBF.

Changes to the MFA - requirements around housing
The CCBF will continue to provide predictable funding – without a need for application – to be invested into priority infrastructure projects.

The Government of Canada previously committed to tie federal infrastructure funding to actions that increase the housing supply where it makes sense to do so. Under the CCBF's renewed agreement, single-tier and lower-tier municipalities with a 2021 Census population of 30,000 or more must complete a Housing Needs Assessment by March 2025. Other municipalities with housing pressures are encouraged to develop one.

AMO is here to help. We have been working with Infrastructure Canada to streamline the data requirements. More information will be provided shortly.

Allocations
Allocations for the 2024-2028 period were shared in 2023 and can be found here.

Agreement in final form
Please note that as with previous agreements, the form and content of this Agreement are not subject to negotiation. Any changes - other than the inclusion of signatures - are null and void.

If you have any questions or need clarification, please do not hesitate to reach out to this email address and a member of AMO's CCBF team will get back to you as soon as possible.

Sincerely,
AMO's CCBF Team
ccbf@amo.on.ca
www.buildingcommunities.ca

June 25, 2024

Dear Mayors, First Nation Chiefs and Councils,

The Porcupine Health Unit and Timiskaming Health Unit are pleased to provide a merger update specifically related to the governance model of the proposed merged local public health agency: Northeastern Public Health / Santé publique du Nord-Est.[1]

Identifying the governance model of the new proposed Board of Health has involved meaningful engagement and discussions with the current Boards of Health of both agencies, with support and guidance from the Board of Health Merger working group. Based on discussions and feedback that has occurred, amendments to the proposed Board make-up have been made throughout this process resulting in a model that we believe balances the needs of all communities, that best reflects the uniqueness of the new district, and that will best support effective delivery of public health planning and delivery. Both the Porcupine (2024-05-23) and Timiskaming (2024-06-12) Boards of Health have carried motions approving the governance model outlined on page 3.

The Board of Health Merger working group was formed to support the creation of the governance model for the new entity and is comprised of an equal number of Board of Health members from both Health Units. They are committed to making decisions in the best interests of strengthening public health programs and services for the newly created northeastern region. They are tasked with determining recommendations on items such as the transitional framework, structure, membership, policies, and bylaws that will govern the new Board of Health. Such recommendations will create the operating framework for the new Board which will assume responsibility on the date determined by provincial legislation - January 1, 2025.

There were many considerations taken into account when working through the process of developing and refining the governance model for the new Board of Health:

- A combination of geographical and population-based considerations.
- Municipalities are encouraged to consider public health skills and interest in their appointments (municipalities can appoint a community member outside of elected officials).
- A mechanism to ensure Indigenous, Francophone, and newcomer representation (under the current HPPA, these would not be separate, additional positions but built into appointee representation).

[1] Note: This is the name that has been submitted in the *Voluntary Merger Proposal Business Case* to the Ministry of Health, however, it does require approval from both the Ministry and the Provincial Government.

- A Board membership size that facilitates efficient governance and that reflects best practice.[2]
- Communities to be grouped in a way that ensures representation from both rural and small/medium population centers.
- A position on the new Board of Health for the most remote part of the region.

The merged local public health agency will have a combined total of 38 obligatory municipalities. Similar to all Health Units in Northern Ontario, municipalities are clustered together to accommodate the requirements in the Health Protection and Promotion Act (HPPA) which outlines a maximum of 13 municipal members of each board of health.[3] The Board of Health Merger working group will be looking at creating policies and recommendations to support municipalities in developing processes to ensure each municipality in each cluster has an opportunity to represent their municipality and cluster on the Board of Health.

Board of Health governance is just one of many planning pathways involved in the massive and complex undertaking of this merger process. Much work is being done supporting all integration pathways, including corporate, workforce, programs and services, and community. We will keep you informed as milestones are met in the merger to strengthen public health.

Please direct any questions or comments to your respective Board of Health Chair, or to *Rachelle Côté (THU)* or *Lori McCord (PHU)*.

Yours in Health Protection and Health Promotion,

Dr. Lianne Catton
Medical Officer of Health and Chief Executive Officer
Porcupine Health Unit

Dr. Glenn Corneil
Acting Medical Officer of Health/Chief Executive Officer
Timiskaming Health Unit

[2] Public Health within an Integrated Health System - Report of the Minister's Expert Panel on Public Health. June 9, 2017.
[3] Health Protection and Promotion Act. R.S.O. 1990, CHAPTER H.7 s. 48. Consolidation Period: From December 4, 2023 to the e-Laws currency date.

Porcupine Health Unit • Bureau de santé | Services de santé du TIMISKAMING Health Unit

Board of Health Composition
for Northeastern Public Health / Santé publique du Nord-Est[4]

Municipality	Current Health Unit Area	Municipal Appointees (13)
City of Timmins	Porcupine Health Unit	3
Temiskaming Shores	Timiskaming Health Unit	2
Kapuskasing	Porcupine Health Unit	1
Kirkland Lake	Timiskaming Health Unit	1
Cochrane, Smooth Rock Falls	Porcupine Health Unit	1
Rural North Hearst, Mattice Val Cote, Moonbeam, Val Rita Harty, Opasatika, Fauquier-Strickland, Hornepayne	Porcupine Health Unit	1
Rural Central - North Iroquois Falls, Black River Matheson	Porcupine Health Unit	1
Rural Central - South Larder Lake, McGarry, Gauthier, Matachewan, Charlton & Dack, Englehart, Chamberlain, Evanturel, James	Timiskaming Health Unit	1
Rural South Armstrong, Brethour, Casey, Cobalt, Coleman, Harley, Harris, Hilliard, Hudson, Kerns, Latchford, Temagami, Thornloe	Timiskaming Health Unit	1
Rural Far North Moosonee (James Bay and Hudson Bay region)	Porcupine Health Unit	1

[4] Note: This is the name that has been submitted in the Voluntary Merger Proposal Business Case to the Ministry of Health, however, it does require approval from both the Ministry and the Provincial Government.

Services de santé du TIMISKAMING Health Unit
Enhancing your health in so many ways.

Head Office:
247 Whitewood Avenue, Unit 43
PO Box 1090
New Liskeard, ON P0J 1P0
Tel.: 705-647-4305 Fax: 705-647-5779

Branch Offices:
Englehart Tel.: 705-544-2221 Fax: 705-544-8698
Kirkland Lake Tel.: 705-567-9355 Fax: 705-567-5476

www.timiskaminghu.com

June 2024

The Honourable Sylvia Jones
Deputy Premier, Minister of Health
Delivered via email: sylvia.jones@pc.ola.org

Dear Minister Jones:

Re: Public Health Ontario Laboratory Closure - Timmins

On June 12, 2024, at a regular meeting of the Board for the Timiskaming Health Unit, the Board considered the correspondence from Porcupine Health Unit, regarding the potential closing of the Public Health Ontario Laboratory in Timmins.

The following motion was passed:
WHEREAS the Timiskaming Health Unit Board of Health recognizes the importance of access to diagnostic services for many community members across our vast region;

BE IT RESOLVED THAT the Timiskaming Health Unit Board of Health endorse the correspondence from Porcupine Health Unit and urge the government to further consider other opportunities before closing the Timmins public Health Laboratory site ; and

FURTHER THAT a copy of the letter of support be sent to the Minister of Health, PHO President/CEO, Premier of Ontario, Chief Medical of Health, and the Ontario Boards of Health.

We appreciate your attention to this important public health concern.

Sincerely,

Stacy Wight

Stacy Wight, Board of Health Chair

Copy to:
Dr. Michael Sherar, President and Chief Executive Officer Public Health Ontario
Doug Ford, Premier of Ontario
Board of Health for the Porcupine Health Unit Member Municipalities
Dr. Kieran Moore, Chief Medical Officer of Health and Assistant Deputy Minister, Public Health Ontario
George Pirie, Member of Provincial Parliament - Timmins,
Guy Bourgoin, Member of Provincial Parliament – Mushkegowuk – James Bay
John Vanthof, Member of Provincial Parliament – Timiskaming-Cochrane
Charlie Angus, Member of Parliament, Timmins – James Bay
Association of Local Public Health Agencies (alPHa), Ontario Boards of Health

Porcupine
Health Unit • Bureau de santé

May 24, 2024

The Honourable Sylvia Jones
Minister of Health
College Park, 5th Floor
777 Bay Street
Toronto, ON M7A 2J3

Dear Minister Jones,

Re: Provincial Laboratory Closure

At its meeting on April 25, 2024, the Board of Health for the Porcupine Health Unit passed the following motion:

> **That** the Board of Health for the Porcupine Health Unit directs the Board Chair and MOH/CEO to write a letter on behalf of the Board highlighting concerns regarding the Public Health Ontario Provincial lab closure in Timmins; and,
>
> **Furthermore,** that the letter be circulated to the member municipalities seeking support.

We are extremely concerned about the potential closing of the Public Health Ontario Laboratory in Timmins, as recommended in the December 2023 Auditor General of Ontario report *Value-for Money Audit: Public Health Ontario*. Closing the Timmins Public Health Laboratory will compromise our region's access to diagnostic services, the PHU's critical response time in addressing potential public health crises, as well as well water testing for many community members across our vast region.

The local Public Health Ontario Laboratory team in Timmins is a key public health partner in the timely detection and monitoring of diseases of public health significance for the region. The services provided by the Timmins Public Health Laboratory were instrumental in expediting COVID-19 testing during the pandemic and remain central to outbreak investigations and essential public health work. The team consistently demonstrates professionalism and dedication to ensuring reliable and efficient access to diagnostic testing and results, supporting a large complex region already facing significant health inequities.

Local access to laboratory services is essential in preventing the spread of infectious diseases and promoting public health. The Porcupine Health Unit (PHU) is the largest geographic health unit in the province, at over 270 thousand square kilometers, and the Timmins lab is the local lab for many municipalities and First Nation communities, some of which are a 5 hours drive, and some accessible by plane or train only. With a population

facing poorer health status than provincial average in many indicators, and as such many are at risk of poor outcomes from infectious diseases. With transportation time to even our local lab in Timmins inevitable for some communities, any further delays can have significant impacts on the health and well-being of the population. Consideration of the unique needs of rural and northern communities and the ever-increasing challenges in accessing services to support health in these areas will only be exacerbated if access to timely laboratory services are removed. Recent and ongoing history of large and complex outbreaks, including but not limited to COVID-19; blastomycosis, tuberculosis, demonstrate the need for local laboratory support. The Public Health Laboratory team in Timmins understands this context and is a critical public health partner in promoting and protecting the health of the region.

The Public Health Laboratory in Timmins plays a critical role in ensuring safe drinking water for many across the vast PHU region, providing access to private well water testing for community members, and small drinking water systems. The PHU region is geographically large at 274 thousand square kilometers, remote, and sparsely populated with many not serviced by municipal water treatment facilities. Accessible and timely water testing is integral to ensuring safe drinking water for our population, and in meeting the accountabilities of the Ontario Public Health Standards.

The Timmins Public Health Laboratory plays a crucial role in supporting public health, health care providers and institutions, patients, families and communities with their diagnostic services and their loss would leave a significant gap. If recommendations to close the Timmins location are followed, the next closest Public Health Ontario Laboratory location is Sudbury, at a distance of 293 kilometers from Timmins, and that much farther for other communities. Highway closures for accidents and inclement weather are all too common in the North and already impact transportation for timely access to testing, any further travel required will continue to impact response times to protect and promote the health and safety of the PHU population.

The Board of Health respectfully urge careful consideration before adopting recommendations to close the Timmins Public Health Laboratory site, which is critical to supporting our health care and public health teams in safeguarding the health and promoting the well-being of our community members. We would be pleased to contribute to collaborations exploring opportunities to continued operations of the essential facility, recognizing metrics and solutions need to be different in the north in assessing the impacts of such immense changes.

Thank you for your time and consideration. We look forward to any engagement opportunity to continue to prioritize the health of our complex region.

Sincerely,

Michelle Boileau
Board of Health Chair

Dr. Lianne Catton
Medical Officer of Health/Chief Executive Officer

Cc: Dr. Michael Sherar, President and Chief Executive Officer Public Health Ontario
Doug Ford, Premier of Ontario
Board of Health for the Porcupine Health Unit Member Municipalities
Dr. Kieran Moore, Chief Medical Officer of Health and Assistant Deputy Minister, Public Health Ontario
George Pirie, Member of Provincial Parliament - Timmins,
Guy Bourgoin, Member of Provincial Parliament – Mushkegowuk – James Bay
John Vanthof, Member of Provincial Parliament – Timiskaming-Cochrane
Charlie Angus, Member of Parliament, Timmins – James Bay
Association of Local Public Health Agencies (alPHa), Ontario Boards of Health

TIMISKAMING HEALTH UNIT

AUDITED FINANCIAL STATEMENTS

DECEMBER 31, 2023

TIMISKAMING HEALTH UNIT

INDEX TO FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2023

MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

The accompanying financial statements of the Timiskaming Health Unit are the responsibility of the Timiskaming Health Unit's management and have been prepared in compliance with legislation, and in accordance with generally accepted accounting principles for local governments established by the Public Sector Accounting Board of The Chartered Professional Accountants of Canada. A summary of the significant accounting policies are described in Note 2 to the financial statements. The preparation of financial statements necessarily involves the use of estimates based on management's judgment, particularly when transactions affecting the current accounting period cannot be finalized with certainty until future periods.

The Timiskaming Health Unit's management maintains a system of internal controls designed to provide reasonable assurance that assets are safeguarded, transactions are properly authorized and recorded in compliance with legislative and regulatory requirements, and reliable financial information is available on a timely basis for preparation of the financial statements. These systems are monitored and evaluated by Management.

The Board and/or the audit committee meets with Management and the external auditors to review the financial statements and discuss any significant financial reporting or internal control matters prior to their approval of the financial statements.

The financial statements have been audited by Kemp Elliott & Blair LLP, independent external auditors appointed by the Timiskaming Health Unit. The accompanying Independent Auditors' Report outlines their responsibilities, the scope of their examination and their opinion on the Timiskaming Health Unit's financial statements.

DocuSigned by:

Chairperson

DocuSigned by:

Director of Operations

Kemp Elliott & Blair L.L.P.

TERRY L. ELLIOTT, CPA, CA
STEVEN M. ACLAND, CPA, CA
DANIELLE GIRARD, CPA, CA
LOUISE LABONTE, MBA, CPA, CA

CHARTERED PROFESSIONAL ACCOUNTANTS
8 ARMSTRONG ST., P.O. BOX 1468
NEW LISKEARD, ON P0J 1P0

TEL. 705-647-8174
FAX 705-647-7644
EMAIL
admin@kebnl.ca

INDEPENDENT AUDITORS' REPORT

To the Members of the Board of Health of the Timiskaming Health Unit

Opinion
We have audited the financial statements of Timiskaming Health Unit, which comprise the statement of financial position as at December 31, 2023 and the statements of operations, change in net financial assets and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of Timiskaming Health Unit as at December 31, 2023, and the results of its operations, change in net financial assets and cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Basis for Opinion
We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the *Auditors' Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of Timiskaming Health Unit in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Financial Statements
Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing Timiskaming Health Unit's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate Timiskaming Health Unit or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing Timiskaming Health Unit's financial reporting process.

Auditors' Responsibilities for the Audit of the Financial Statements
Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements. As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Timiskaming Health Unit's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on Timiskaming Health Unit's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause Timiskaming Health Unit to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Kemp Elliott & Blair LLP

Kemp Elliott & Blair LLP
Chartered Professional Accountants
Licensed Public Accountants

New Liskeard, Ontario
June 12, 2024

TIMISKAMING HEALTH UNIT

STATEMENT OF FINANCIAL POSITION

AS AT DECEMBER 31, 2023

	2023	2022
FINANCIAL ASSETS		
Cash – note 6	$ 505,445	$ 1,137,855
Accounts receivable – note 7	468,246	346,967
Due from Province of Ontario – note 10	1,108,411	339,212
	2,082,102	1,824,034
LIABILITIES		
Accounts payable and accrued liabilities – note 8	467,559	475,676
Due to Province of Ontario – note 10	783,305	698,342
Deferred revenue – note 9	78,869	141,128
Retirement benefit liability – note 12	393,956	380,986
	1,723,689	1,696,132
Commitments – note 11		
NET FINANCIAL ASSETS	358,413	127,902
NON-FINANCIAL ASSETS		
Tangible capital assets – note 16	41,804	60,694
Prepaid expenses	108,997	111,064
	150,801	171,758
ACCUMULATED SURPLUS – note 13	$ 509,214	$ 299,660

Approved on behalf of the Board:

DocuSigned by:
Chairperson

DocuSigned by:
Director of Corporate Services

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

STATEMENT OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Mandatory Programs (Sch 1)	Other Programs (Sch 2 - Sch 15)	Actual 2023	Budget 2023	Actual 2022
REVENUES					
Province of Ontario	$ 3,963,839	$ 535,910	$ 4,499,749	$ 4,426,102	$ 4,422,287
Province of Ontario - One-time	-	1,532,976	1,532,976	1,411,391	1,933,465
Province of Ontario – Mitigation	600,500	-	600,500	600,502	600,500
Municipalities	1,509,195	37,725	1,546,920	1,509,183	1,437,289
Public Health Canada	-	-	-	50,000	140,208
Sundry revenue	-	13,249	13,249	-	164,847
Offset revenue	93,285	5,442	98,727	40,000	72,721
Interest	46,391	-	46,391	-	24,317
Total revenues	6,213,210	2,125,302	8,338,512	8,037,178	8,795,634
EXPENDITURES					
Salaries and wages	3,315,603	1,169,591	4,485,194	4,545,692	4,767,494
Fringe benefits	995,360	240,008	1,235,368	1,161,933	1,145,106
Fees for service	497,023	485,453	982,476	709,888	1,073,895
Travel	61,173	23,122	84,295	102,210	90,750
Materials and supplies	365,460	66,200	431,660	323,047	520,430
Administrative	286,820	86,479	373,299	414,318	336,312
Rent and utilities	481,013	-	481,013	470,650	502,761
Amortization	29,361	-	29,361	-	29,796
	6,031,813	2,070,853	8,102,666	7,727,738	8,466,544
Allocated to other programs	(66,161)	-	(66,161)	(66,164)	(42,681)
Total expenditures	5,965,652	2,070,853	8,036,505	7,661,574	8,423,863
Annual surplus before provincial settlements	247,558	54,449	302,007	375,604	371,771
Provincial settlements	-	92,453	92,453	-	252,586
Annual surplus (deficit)	$ 247,558	$ (38,004)	209,554	375,604	119,185
Accumulated surplus, beginning of year			299,660	299,660	182,363
Change in accounting estimate - note 15			-	-	(1,888)
Accumulated surplus, end of year – note 13			$ 509,214	$ 675,264	$ 299,660

The accompanying notes form an integral part of these financial statements

TIMISKAMING HEALTH UNIT

STATEMENT OF CHANGE IN NET FINANCIAL ASSETS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
Annual surplus	$ 209,554	$ 375,604	$ 119,185
Acquisition of tangible capital assets	(10,471)	-	(16,914)
Amortization of tangible capital assets	29,361	-	29,796
	18,890	-	12,882
Consumption (acquisition) of prepaid expenses	2,067	-	(16,074)
Increase in net financial assets	230,511	375,604	115,993
Net financial assets, beginning of year	127,902	127,902	13,797
Change in accounting estimate – note 15	-	-	(1,888)
Net financial assets, end of year	$ 358,413	$ 503,506	$ 127,902

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

STATEMENT OF CASH FLOWS

FOR THE YEAR ENDED DECEMBER 31, 2023

	2023	2022
Operating activities		
Annual surplus	$ 209,554	$ 119,185
Change in accounting estimate	-	(1,888)
Charges not affecting cash -		
Amortization	29,361	29,796
	238,915	147,093
Net change in non-cash working capital items –		
Accounts receivable	(121,279)	(65,373)
Due from Province of Ontario	(769,199)	(194,033)
Prepaid expenses	2,067	(16,074)
Accounts payable and accrued liabilities	(8,117)	(202,864)
Due to Province of Ontario	84,963	159,011
Deferred revenue	(62,259)	(291,019)
Retirement benefit liability	12,970	10,526
	(860,854)	(599,826)
Cash used for operating activities	(621,939)	(452,733)
Capital activities		
Acquisition of tangible capital assets	(10,471)	(16,914)
Cash used for capital activities	(10,471)	(16,914)
Decrease in cash	(632,410)	(469,647)
Cash, beginning of year	1,137,855	1,607,502
Cash, end of year	$ 505,445	$ 1,137,855
Represented by		
Cash	$ 505,445	$ 1,137,855

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2023

1. **Nature of operations**

The Timiskaming Health Unit offers public health services to the District of Timiskaming through a variety of programs. There are full-time offices in Kirkland Lake, Temiskaming Shores, and Englehart, Ontario.

In April 2019, the Province announced a plan to restructure the existing 35 Public Health Units to 10 Regional Health Units. Under this plan, it is expected that the Timiskaming Health Unit will amalgamate with six other Health Units in Region 9. While it was expected that this restructuring should have taken place within the following three years, it does not provide a specific deadline for the achievement of the amalgamation. Since then, the Boards for Timiskaming Health Unit and Porcupine Health Unit have voluntarily agreed to merge effective January 1, 2025.

2. **Significant accounting policies**

The financial statements of the Timiskaming Health Unit ("the Health Unit") are the representations of management and have been prepared in accordance with Canadian generally accepted accounting principles as recommended by the Public Sector Accounting Board ("PSAB") of the Chartered Professional Accountants of Canada. The more significant of the accounting policies are summarized below.

(a) **Non-financial assets**

Non-financial assets are not available to discharge existing liabilities and are held for use in the provision of services. They have useful lives extending beyond the current year and are not intended for sale in the ordinary course of operations. The change in non-financial assets during the year, together with the annual surplus (deficit), provides the Change in Net Financial Assets for the year.

(b) **Tangible capital assets**

Tangible capital assets are recorded at cost, which includes all amounts that are directly attributable to acquisition, construction, development or betterment of the asset. The cost, less residual value, of the tangible capital assets are amortized on a straight line basis over their estimated useful lives as follows:

Furniture and equipment	5 years
Leasehold improvements	5 years

Only one-half the normal rate of amortization is taken in the year of acquisition.

The Health Unit has a capitalization threshold of $5,000. Individual assets of lesser value may be capitalized if they are pooled, or because, collectively, they have significant value, or for operational purposes.

(c) **Government transfers**

Government transfers are recognized in the financial statements as revenues in the period in which events giving rise to the transfer occur, providing the transfers are authorized, any eligibility criteria have been met, and reasonable estimates of the amounts can be made.

TIMISKAMING HEALTH UNIT

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2023

2. **Significant accounting policies (continued)**

(d) **Measurement uncertainty**

The preparation of financial statements in conformity with Canadian generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenditures during the year. Such estimates include provisions for amounts owed to the Province of Ontario, pay equity and union contract settlements, employee future benefits and various other accrued liabilities, and determination of tangible capital assets historical cost, estimated useful life and related amortization. Actual results could differ from these estimates.

(e) **Revenue recognition**

The programs administered by the Health Unit are funded primarily by the Province of Ontario in accordance with budget arrangements established by the Ministry of Health and Long-Term Care and the Ministry of Children, Community and Social Services. Operating grants are recorded as revenue in the period to which they relate. Grants approved but not received at the end of an accounting period are accrued. Where a portion of a grant relates to a future period, it is deferred and recognized in that subsequent period. Any excess of program funding over recoverable expenditures is due to the Province of Ontario.

The programs are also funded by twenty-four municipalities from the District of Timiskaming. Contributions for the year were calculated based on the approved cost apportionment formula applied to the Health Unit's budget for the year. Any excess or deficiency of the municipalities' contributions in the year over their respective share of the Health Unit's expenditures is apportioned among the municipalities in the same proportion as the original contributions.

(f) **Retirement and other employee future benefits**

The Health Unit provides defined retirement and other future benefits to specified employee groups. These benefits include pension, life insurance and health care benefits, and long-term disability benefits. The Health Unit has adopted the following policies with respect to accounting for these employee benefits:

(i) The costs of self-insured retirement and other employee future benefit plans are actuarially determined using management's best estimate of salary escalation, insurance and health care costs trends, disability recovery rates, long term inflation rates and discount rates.

For self-insured retirement and other employee future benefits that vest or accumulate over the periods of service provided by employees, such as life insurance and health care benefits for retirees, the cost is actuarially determined using the projected benefits method prorated on service. Under this method, the benefit costs are recognized over the expected average service life of the employee group. Any actuarial gains and losses related to the past service of employees are amortized over the expected average remaining service life of the employee group.

For those self-insured benefit obligations that arise from specific events that occur from time to time, such as obligations for long term disability and life insurance and health care benefits for those on disability leave, the cost is recognized immediately in the period the events occur. Any actuarial gains and losses that are related to these benefits are recognized immediately in the period they arise.

TIMISKAMING HEALTH UNIT

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2023

2. (f) **Retirement and other employee future benefits (continued)**

(ii) The costs of multi-employer defined pension plan benefits, such as the Ontario Municipal Employees Retirement System ("OMERS") pensions, are the employer's contributions due to the plan in the period.

(iii) The costs of insured benefits are the employer's portion of insurance premiums owed for coverage of employees during the period.

(g) **Financial instruments**

(i) **Fair value of financial instruments**

The Health Unit's financial instruments consist of cash, accounts receivable, accounts payable and accrued liabilities, deferred revenue and amounts due from (to) the Province of Ontario. Unless otherwise noted, it is management's opinion that the Health Unit is not exposed to significant interest or currency risks arising from these financial instruments. The carrying values of the Health Unit's financial instruments approximate their fair values unless otherwise noted.

(ii) **Credit risk**

The Health Unit does not have significant exposure to any individual or party. A large portion of the Health Unit's receivables are due from other levels of government and other Health Unit programs. No allowance for doubtful accounts has been established as at December 31, 2023 as management feels all receivables will be collected.

3. **Programs administered by the Health Unit**

These financial statements do not reflect any revenues or expenditures of the Land Control Program, Healthy Babies/Healthy Children Program, and Stay on Your Feet Program, all of which are administered by the Health Unit. Each program is funded separately and reported upon in separate financial statements.

4. **Self-funded leave plan**

Under the self-funded leave plan, employees have the opportunity to be paid 80% of their salaries over four years. The remaining 20% is accumulated in a bank account to cover 80% of their salaries in the fifth year when they take a year leave of absence. The cash and related liability have been included with cash and accounts payable and accrued liabilities on the Statement of Financial Position.

5. **Interest**

In 2023, interest earned on the surplus account amounted to $27,648 (2022 $9,351). This amount is included in interest revenue reported on the Statement of Operations.

6. **Operating line loan agreement**

The Health Unit has entered into an operating line loan agreement with its financial institution. The credit limit for this agreement is $300,000. Interest is calculated at prime plus 1%. This operating line is utilized from time to time to cover temporary cash shortfalls that may occur during the year.

As at December 31, 2023, the outstanding balance of the operating line was $nil (2022 $nil).

TIMISKAMING HEALTH UNIT

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2023

7. **Accounts receivable**

	2023	2022
Due from associated programs	$ 263,095	$ 80,541
GST/HST receivable	168,054	212,783
Municipalities	6,565	-
Due from Public Health Canada	-	50,000
Sundry	30,532	3,643
	$ 468,246	$ 346,967

8. **Accounts payable and accrued liabilities**

	2023	2022
Trade payables and accrued liabilities	$ 467,559	$ 459,189
Due to DTSSAB	-	16,487
	$ 467,559	$ 475,676

9. **Deferred revenue**

	December 31 2022	Funds Received	Revenue Earned	December 31 2023
DTSSAB Covid-19 Isolation Supports	$ 14,430	$ -	$ -	$ 14,430
DTSSAB Covid-19 Digital Divide	6,309	-	6,309	-
DTSSAB Healthy Growth	-	16,487	-	16,487
Healthy Kids Community Coalition	2,500	-	-	2,500
MTO Safe Winter Driving	120	-	-	120
Tobacco Free Timiskaming Coalition	1,075	-	-	1,075
Prevent Alcohol & Risk Related Trauma in Youth program	1,293	-	-	1,293
Bike Exchange Program	2,222	3,000	4,505	717
RNAO YMHAC	-	7,000	6,940	60
Aids Committee of North Bay & Area	-	11,357	2,869	8,488
Community Safety and Well-being	-	47,550	37,725	9,825
Infection Prevention and Control Hub - One-time	97,825	322,500	401,767	18,558
School-Focused Nurses Initiative - One-time	15,354	-	15,354	-
Township of Charlton/Dack 2024 funding	-	5,316	-	5,316
	$ 141,128	$ 413,210	$ 475,469	$ 78,869

TIMISKAMING HEALTH UNIT

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2023

10. **Due from (to) Province of Ontario**

	Previous years	Current year	2023 Total	2022 Total
Due from Province of Ontario				
Ontario Seniors Dental Care	$ (25,544)	$ 222,740	$ 197,196	$ 89,456
Covid-19 General program – One-time	85,920	383,787	469,707	90,591
Covid-19 Vaccine program – One-time	14,696	426,774	441,470	135,427
Temporary Retention Incentive for Nurses	38	-	38	18,994
Needle Exchange/Drug Strategy – One-time	-	-	-	4,744
	75,110	1,033,301	1,108,411	339,212
Due to Province of Ontario				
Mandatory Programs	(382,962)	21,090	(361,872)	(369,362)
Northern Fruit and Vegetable	(605)	-	(605)	(605)
Smoke Free Ontario – One-time	(6,487)	-	(6,487)	(6,487)
Early Years and Childcare Service	(59,920)	-	(59,920)	(59,920)
Infection Prevention and Control Hub – One-time	(231,923)	(86,288)	(318,211)	(231,923)
Case and Contact Management Solutions – One-time	(3,919)	-	(3,919)	(3,919)
Ontario Seniors Dental Care Capital – One-time	(13,080)	-	(13,080)	(13,080)
School-Focused Nurses Initiative – One-time	(2,561)	(6,165)	(8,726)	(2,561)
Unorganized Territories	(10,485)	-	(10,485)	(10,485)
	(711,942)	(71,363)	(783,305)	(698,342)
Total Due from (to) Province of Ontario	$ (636,832)	$ 961,938	$ 325,106	$ (359,130)

The Mandatory Programs are funded 70% by the Ministry of Health and Long-Term Care (“the MOHLTC”) and 30% by the member municipalities while the One-time, Northern Fruit and Vegetable, Ontario Seniors Dental Care and Unorganized Territories programs are funded 100% by the MOHLTC. The Early Years and Childcare Service is funded 100% by the Ministry of Children, Community and Social Services (“the MCCSS”).

The previous year’s balances outstanding represent amounts owed or receivable for settlements in previous years which have not yet been processed by the MOHLTC and/or the MCCSS. Provincial funding is subject to historical audit by the Province of Ontario.

TIMISKAMING HEALTH UNIT

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2023

11. **Commitments**

Leases

The offices of the Health Unit are located in various leased premises. Minimum annual lease payments of approximately $275,365 (excluding HST) are required with various expiry dates.

Information Technology

The Health Unit has entered into a five-year Information Technology agreement for $7,000 (excluding HST) per month starting in June 2015. The agreement includes server, desktop/notebook, printer and network support, as well as a help desk application and consulting services on IT policies and purchases. The agreement includes an annual percentage increase of 4% per year and allows the Health Unit to terminate the agreement with a one year written notice or one year payment. As of June 1, 2020, the agreement has continued in force on a month-to-month basis.

Financial Services

The Health Unit entered into a five-year Financial Services agreement based on an hourly rate beginning April 1, 2013 with a provision for an increase in the hourly rate based on the 2014 Cost of Living Rate effective April 1, 2015. This agreement may be terminated at any time by mutual agreement of the parties, after March 31, 2018 with 90 days' notice, or upon default by either party. As of April 1, 2018, the agreement continued in force on a month-to-month basis and was terminated on February 28, 2023.

12. **Retirement and other employee future benefits**

(a) **Retirement and other employee future benefit liabilities**

	2023	2022
Accrued employee future benefit obligations	$ 415,794	$ 403,062
Unamortized actuarial losses	(21,838)	(22,076)
Employee future benefit liability	$ 393,956	$ 380,986

(b) **Retirement and other employee future benefit expenses**

	2023	2022
Current year benefit cost	$ 30,248	$ 29,018
Amortization of actuarial gains and losses	238	231
Interest on accrued benefit obligation	13,094	12,726
Employee future benefits expenses [1]	$ 43,580	$ 41,975

1 Excluding pension contributions to the Ontario Municipal Employees Retirement System (OMERS), a multi-employer pension plan, described below.

(c) **Retirement benefits**

(i) Ontario Municipal Employees Retirement System

All permanent employees of the Health Unit are eligible to be members of the Ontario Municipal Employees Retirement System (OMERS), a multi-employer pension plan. The plan provides defined pension benefits to employees based on their length of service and rates of pay. The Health Unit contributions equal the employee contributions to the plan. During the year ended December 31, 2023, the Health Unit contributed $453,167 (2022 $409,089) to the plan. As this is a multi-employer pension plan, these contributions are the Health Unit's pension benefit expenses. No pension liability for this type of plan is included in the Health Unit's financial statements. As of December 31, 2023, OMERS has a funding deficit of $4.2 billion (2022 $6.7 billion) and Net Assets Available for Benefits of $128.8 billion (2022 $124.4 billion).

TIMISKAMING HEALTH UNIT

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2023

12. **Retirement and other employee future benefits - continued**

(c) **Retirement benefits - continued**

(ii) Retirement Life Insurance and Health Care Benefits

The Health Unit continues to provide life insurance and health care benefits to certain employee groups after retirement until the members reach 65 years of age. The Health Unit provides these benefits through an unfunded defined benefit plan. The benefit costs and liabilities to this plan are included in the Health Unit's financial statements.

(d) **Assumptions**

The accrued benefit obligations for employee future benefit plans as at December 31, 2023 are based on actuarial valuations for accounting purposes as at December 31, 2023. These actuarial valuations were based on assumptions about future events. The economic assumptions used in these valuations are the Health Unit's best estimates of expected rates of:

	2023	2022
Inflation	1.75%	1.75%
Wage and salary escalation	2.75%	2.75%
Insurance and health care cost escalation	5.0834% for 2023 decreasing to 4.7501% for 2024 and decreasing to 3.75% in 2027	5.4167% for 2022 decreasing to 5.0834% in 2023 and decreasing to 3.75% in 2027
Dental Care Cost escalation	3.75%	3.75%
Discount on accrued benefit obligations	3.25%	3.25%

13. **Accumulated surplus**

The accumulated surplus is made up of the following:

	2023	2022
Net financial assets		
Operational surplus	$ 358,413	$ 127,902
Non-financial assets		
Investment in tangible capital assets	41,804	60,694
Prepaid expenses	108,997	111,064
	150,801	171,758
Accumulated surplus	$ 509,214	$ 299,660

14. **Economic dependence**

The continuation of this organization is dependent on funding received from the Ministry of Health and Long-Term Care, the Ministry of Children, Community and Social Services and the funding municipalities.

15. **Comparative information**

Certain amounts in the prior year financial statements have been restated for comparative purposes to conform with the presentation in the current year's financial statements.

TIMISKAMING HEALTH UNIT

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2023

16. **Schedule of tangible capital assets**

	Opening Cost	Additions	Ending Cost	Opening Accumulated Amortization	Current Amortization	Ending Accumulated Amortization	Net 2023	Net 2022
Furniture and equipment	$1,002,023	$ 10,471	$1,012,494	$ 941,329	$ 29,361	$ 970,690	$ 41,804	$ 60,694
Leasehold Improvements	560,770	-	560,770	560,770	-	560,770	-	-
	$1,562,793	$ 10,471	$1,573,264	$ 1,502,099	$ 29,361	$ 1,531,460	$ 41,804	$ 60,694

SCHEDULE 1

TIMISKAMING HEALTH UNIT

MANDATORY PROGRAMS

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Province of Ontario	$ 3,963,839	$ 3,909,402	$ 3,918,815
Province of Ontario – Mitigation	600,500	600,502	600,500
Municipalities (Sch. 1, pg. 20)	1,509,195	1,509,183	1,437,289
Offset revenue	93,285	40,000	68,303
Interest	46,391	-	24,317
Total revenues	6,213,210	6,059,087	6,049,224
EXPENDITURES			
Salaries and wages	3,315,603	3,218,354	3,290,419
Fringe benefits	995,360	882,064	866,457
Fees for service	497,023	473,688	557,923
Travel	61,173	63,183	44,299
Materials and supplies	365,460	254,438	362,455
Administrative	286,820	323,145	264,332
Rent and utilities	481,013	470,650	502,761
Amortization	29,361	-	29,796
	6,031,813	5,685,522	5,918,442
Allocated to other programs	(66,161)	(66,164)	(42,681)
Total expenditures	5,965,652	5,619,358	5,875,761
Annual surplus	$ 247,558	$ 439,729	$ 173,463

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

MANDATORY PROGRAMS

SCHEDULE OF EXPENDITURES

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
SALARIES AND WAGES			
Nursing	$ 934,728	$ 857,015	$ 743,095
Administration	1,224,442	1,235,732	1,413,223
Inspection	212,949	218,341	257,107
Medical officer	27,275	27,300	25,200
Dental	160,052	156,803	149,634
Health promoter	428,861	381,436	443,971
Nutritionist	79,824	95,249	105,264
Tobacco enforcement officer	78,187	77,040	76,861
Epidemiologist	169,285	169,438	76,064
	$ 3,315,603	$ 3,218,354	$ 3,290,419
FRINGE BENEFITS			
Pension	$ 526,907	$ 472,844	$ 470,409
Employment insurance	65,982	56,696	50,563
EHT	67,470	71,273	62,628
WSIB	31,335	30,796	14,652
Group life and health guard	188,236	152,527	171,045
Long-term disability	76,588	97,928	69,230
Other	38,842	-	27,930
	$ 995,360	$ 882,064	$ 866,457
FEES FOR SERVICE			
Legal and audit fees	$ 51,562	$ 61,250	$ 120,283
Board fees	14,730	12,000	9,810
Consultants	427,022	396,438	405,412
Dental	-	-	17,482
Web fees	3,709	4,000	4,936
	$ 497,023	$ 473,688	$ 557,923

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

MANDATORY PROGRAMS

SCHEDULE OF EXPENDITURES (CONT'D)

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
TRAVEL			
Infectious diseases	$ 19,320	$ 18,500	$ 9,086
Family health	16,174	12,933	14,393
Administration	5,728	7,250	5,867
Board	5,301	2,000	585
Chronic disease and injury prevention	9,503	11,500	10,621
Inspection	5,147	11,000	3,747
	$ 61,173	$ 63,183	$ 44,299
MATERIALS AND SUPPLIES			
Family health	$ 232,627	$ 149,038	$ 215,166
Infectious diseases	81,369	69,000	80,875
Chronic disease and injury prevention	36,114	32,900	48,872
Foundational standards	9,198	-	7,322
Inspection	6,152	3,500	10,220
	$ 365,460	$ 254,438	$ 362,455
ADMINISTRATIVE			
Telephone	$ 32,991	$ 35,500	$ 33,949
Office supplies	22,467	20,000	28,060
Staff recruitment	-	-	174
Professional development	21,490	37,770	28,411
Insurance	61,286	64,000	49,013
Equipment rental	19,856	22,000	20,227
Postage	3,848	4,000	3,935
Courier express	3,015	3,000	1,856
Advertising and promotion	80,578	96,675	52,776
Association fees	8,007	10,000	14,245
Website/database maintenance	13,705	14,000	13,131
Bank charges	4,600	3,200	3,481
Miscellaneous	14,977	13,000	15,074
	$ 286,820	$ 323,145	$ 264,332

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

MANDATORY PROGRAMS

SCHEDULE OF EXPENDITURES (CONT'D)

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
RENT AND UTILITIES			
NEW LISKEARD			
Rent	$ 213,164	$ 211,800	$ 239,011
Utilities	50,016	50,000	50,905
Janitor and supplies	51,837	44,000	49,107
Office maintenance	15,972	6,000	9,351
	330,989	311,800	348,374
KIRKLAND LAKE			
Rent	87,632	90,000	82,377
Utilities	18,873	20,000	17,688
Janitor and supplies	24,750	28,000	23,730
Office maintenance	4,802	5,000	14,111
	136,057	143,000	137,906
ENGLEHART			
Rent	12,033	13,500	14,394
Utilities	31	-	-
Janitor and supplies	1,903	2,100	2,087
Office maintenance	-	250	-
	13,967	15,850	16,481
	$ 481,013	$ 470,650	$ 502,761
ALLOCATED COSTS			
March year-end programs	$ 1,988	$ 1,988	$ 1,988
Land Control Program	-	-	-
Other programs	64,173	64,176	40,693
	$ 66,161	$ 66,164	$ 42,681

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

MANDATORY PROGRAMS

SCHEDULE OF MUNICIPAL REVENUES

FOR THE YEAR ENDED DECEMBER 31, 2023

	2023	2022
Temiskaming Shores	$ 520,572	$ 486,662
Kirkland Lake	385,131	375,050
Englehart	74,204	70,346
Armstrong	57,755	53,036
Cobalt	54,933	54,609
Temagami	48,929	42,719
Larder Lake	40,704	37,417
McGarry	33,500	32,229
Coleman	31,699	30,889
Charlton/Dack	30,378	28,616
Harley	24,555	27,042
Harris	25,035	25,702
Evanturel	24,134	21,972
Hudson	24,915	22,321
James	19,872	19,640
Casey	19,392	20,340
Latchford	19,212	16,959
Kerns	15,970	14,978
Matachewan	16,510	15,794
Chamberlain	15,850	15,619
Hilliard	10,626	10,257
Gauthier	6,304	6,293
Brethour	5,113	5,070
Thornloe	3,902	3,729
	$ 1,509,195	$ 1,437,289

The accompanying notes form an integral part of these financial statements.

SCHEDULE 2

TIMISKAMING HEALTH UNIT

UNORGANIZED TERRITORIES PROGRAM

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Province of Ontario	$ 165,900	$ 165,900	$ 165,900
EXPENDITURES			
Salaries and wages	90,418	90,007	66,352
Fringe benefits	20,295	21,029	21,362
Travel	4,101	2,915	4,065
Materials and supplies	29,005	30,558	35,087
Administrative	21,391	21,391	18,679
Total expenditures	165,210	165,900	145,545
Annual surplus	$ 690	$ -	$ 20,355

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

ONTARIO SENIORS DENTAL CARE PROGRAM

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Province of Ontario	$ 370,010	$ 350,800	$ 337,572
Province of Ontario – One-time	263,240	-	114,215
Offset revenue	5,442	-	4,418
Total revenues	638,692	350,800	456,205
EXPENDITURES			
Salaries and wages	110,650	142,272	55,352
Fringe benefits	28,485	35,119	24,386
Travel	3,734	2,500	3,217
Fees for service	444,367	180,000	346,612
Materials and supplies	4,646	4,000	4,624
Administrative	46,810	49,782	22,014
Total expenditures	638,692	413,673	456,205
Annual surplus (deficit)	$ -	$ (62,873)	$ -

The accompanying notes form an integral part of these financial statements.

SCHEDULE 4

TIMISKAMING HEALTH UNIT

COVID-19 INFECTION PREVENTION AND CONTROL HUB PROGRAM

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Province of Ontario	$ 401,767	$ 322,500	$ 556,530
EXPENDITURES			
Salaries and wages	251,048	236,799	264,832
Fringe benefits	62,350	59,538	63,761
Travel	899	2,612	60
Materials and supplies	1,182	1,051	4,139
Total expenditures	315,479	300,000	332,792
Annual surplus before provincial settlement	86,288	22,500	223,738
Provincial settlement	86,288	-	223,738
Annual surplus	$ -	$ 22,500	$ -

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

COVID-19 GENERAL AND EXTRAORDINARY COSTS PROGRAMS

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Province of Ontario – One-time	$ 383,787	$ 408,643	$ 249,600
EXPENDITURES			
Salaries and wages	310,503	332,972	263,323
Fringe benefits	56,142	54,671	46,794
Travel	2,212	1,000	162
Materials and supplies	12,315	15,000	20,596
Administrative	2,615	5,000	76
Total expenditures	383,787	408,643	330,951
Annual surplus (deficit)	$ -	$ -	$ (81,351)

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

COVID-19 SCHOOL-FOCUSED NURSES INITIATIVE PROGRAM

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Province of Ontario – One-time	$ 165,354	$ 150,000	$ 309,684
EXPENDITURES			
Salaries and wages	136,113	136,173	226,945
Fringe benefits	28,577	33,827	53,891
Total expenditures	164,690	170,000	280,836
Annual surplus (deficit) before provincial settlement	664	(20,000)	28,848
Provincial settlement	6,165	-	28,848
Annual surplus (deficit)	$ (5,501)	$ (20,000)	$ -

The accompanying notes form an integral part of these financial statements.

SCHEDULE 7

TIMISKAMING HEALTH UNIT

COVID-19 VACCINE PROGRAM

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Province of Ontario – One-time	$ 318,828	$ 530,248	$ 559,727
EXPENDITURES			
Salaries and wages	210,407	343,615	300,140
Fringe benefits	34,820	67,433	40,452
Fees for service	27,549	56,200	137,217
Travel	12,027	30,000	38,823
Materials and supplies	19,052	18,000	21,126
Administrative	15,663	15,000	21,969
Total expenditures	319,518	530,248	559,727
Annual surplus (deficit)	$ (690)	$ -	$ -

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

TEMPORARY RETENTION INCENTIVE FOR NURSES

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Province of Ontario – One-time	$ -	$ -	$ 110,344
EXPENDITURES			
Salaries and wages	-	-	100,788
Fringe benefits	-	-	9,556
Total expenditures	-	-	110,344
Annual surplus	$ -	$ -	$ -

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

NEEDLE EXCHANGE / DRUG STRATEGY PROGRAM

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Province of Ontario – One-time	$ -	$ -	$ 19,000
Public Health Canada	-	50,000	140,208
Total revenues	-	50,000	159,208
EXPENDITURES			
Salaries and wages	29,238	45,500	142,537
Fringe benefits	3,165	8,252	13,149
Fees for service	100	-	2,133
Materials and supplies	-	-	-
Administrative	-	-	1,389
Total expenditures	32,503	53,752	159,208
Annual surplus (deficit)	$ (32,503)	$ (3,752)	$ -

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

ONTARIO SENIORS DENTAL CARE PROGRAM - CAPITAL

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Province of Ontario – One-time	$ -	$ -	$ 14,365
EXPENDITURES			
Fees for service	-	-	14,365
Annual surplus	$ -	$ -	$ -

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

YOUTH MENTAL HEALTH AND ADDICTION CHAMPION

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Province of Ontario – One-time	$ 6,940	$ -	$ 3,000
EXPENDITURES			
Fees for service	6,940	-	3,000
Annual surplus	$ -	$ -	$ -

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

COVID-19 RELATED PROJECTS

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Sundry	$ -	$ -	$ 2,227
EXPENDITURES			
Materials and supplies	-	-	2,227
Annual surplus	$ -	$ -	$ -

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

ONTARIO ACTIVE SCHOOL TRAVEL PROGRAM

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Sundry revenue	$ -	$ -	$ 49,892
EXPENDITURES			
Salaries and wages	-	-	21,553
Fringe benefits	-	-	2,220
Fees for service	-	-	12,645
Travel	-	-	124
Materials and supplies	-	-	637
Administrative	-	-	5,995
Total expenditures	-	-	43,174
Annual surplus	$ -	$ -	$ 6,718

The accompanying notes form an integral part of these financial statements.

TIMISKAMING HEALTH UNIT

COMMUNITY SAFETY AND WELL-BEING

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Municipalities	$ 37,725	$ -	$ -
EXPENDITURES			
Salaries and wages	31,214	-	-
Fringe benefits	6,174	-	-
Fees for service	188	-	-
Travel	149	-	-
Total expenditures	37,725	-	-
Annual surplus	$ -	$ -	$ -

The accompanying notes form an integral part of these financial statements.

SCHEDULE 15

TIMISKAMING HEALTH UNIT

DIGITAL DIVIDE PROGRAM

SCHEDULE OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2023	Budget 2023	Actual 2022
REVENUES			
Sundry revenue	$ 6,309	$ -	$ 109,728
EXPENDITURES			
Salaries and wages	-	-	35,253
Fringe benefits	-	-	3,078
Fees for service	6,309	-	-
Materials and supplies	-	-	69,539
Administrative	-	-	1,858
Total expenditures	6,309	-	109,728
Annual surplus	$ -	$ -	$ -

The accompanying notes form an integral part of these financial statements.

TIMISKAMING
DRUG AND ALCOHOL STRATEGY
STRATÉGIE CONTRE LES DROGUES ET
L'ALCOOL DU TIMISKAMING

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www.tdas.ca
tdas@timiskaminghu.com

June 17, 2024

Minister Peter Bethlenfalvy, Ministry of Finance
Minister Sylvia Jones, Minister of Health

Sent by email to: peter.bethlenfalvy@ontario.ca and sylvia.jones@ontario.ca

Re: Strengthening Alcohol Policy in Northern Ontario to Protect Public Health

Dear Minister Bethlenfalvy and Minister Jones,

On behalf of the Timiskaming Drug and Alcohol Strategy (TDAS), we are sharing our recommendations regarding the government's recent announcement to increase alcohol availability and sales distribution across the province by October this year.

TDAS represents a collaboration of over 20 local health and social agencies, municipal institutions, and indigenous and community organizations in our district in Northeastern Ontario. Our steering committee acknowledges the public health concerns associated with increased alcohol accessibility and affordability, and the need to consider the health and wellbeing of Ontarians alongside the economic benefits the new policy may bring.

Based on research data, we would like to propose the following policy measures to mitigate the adverse effects of alcohol consumption:

1. **Regulate Retail Density**: Strictly regulate any expansion from current alcohol retail density, especially in low Socio-Economic Status (SES) areas where alcohol-related harms are more prevalent.

2. **Enforce Sales Regulations**: Promote awareness, enforce regulations, and invest in enforcement mechanisms of alcohol sale time and ID criteria, to lessen high-risk, or under-age drinking.

3. **Strengthen Pricing Policies**: Implement minimum pricing and adjust taxation to discourage excessive, or heavy consumption, especially in low SES areas.

4. **Consider the Costs:** Carefully review the estimated economic benefits and potential costs and harms of any retail expansion.

5. **Health in All Policies**: Integrate public health considerations into all government policies, and to adopt evidence-based policy making.

Our recommendations are inspired by our local data from Public Health Ontario (PHO) and research conducted by Canadian Alcohol Policy Evaluation (CAPE) in Ontario. CAPE's latest report indicates that in 2020, Ontario had an alcohol-net-revenue of $5.162 billion against a net cost of $7.109 billion from alcohol-related harms, leading to a net deficit of $1.947 billion, or a loss of $0.34 per standard drink sold (2023).

We acknowledge the government's effort in providing additional funding of $10 million over five years to the Ministry of Health to support social responsibility. However, these figures from CAPE's study reflect the broader economic and social cost, including health and social services, lost productivity, criminal justice, assistance programs, and workers' compensation.

In their resolution, the Association of Local Public Health Agencies (alPHa) highlighted the well-established association between easy access to alcohol and an increase in consumption and damage (Barbor et al., 2010), and that alcohol is causally related to over 65 medical conditions, and nearly half of all deaths attributed to alcohol are from both unintentional, e.g., drowning, burns, poisoning, falls; and intentional injuries, e.g., acts of violence (WHO, 2012).

Additionally, the link between trauma and the development of mental health and substance use disorders is well established. Alcohol use has been implicated in intimate partner violence (Sontate, 2021), child abuse/neglect (Falon et al., 2024), sexual and physical assaults (Abbey et al., 2024; Gateley et al., 2017), and motor vehicle collisions, unintended injuries, and other traumatic experiences that negatively impact our communities (MTO, 2023; Paradis et al., 2023).

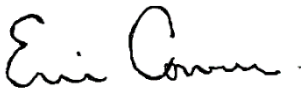
Alcohol-related harms are not experienced equally and contribute to health inequities. Although individuals from lower sociodemographic backgrounds consume alcohol at lower levels, this group tends to experience alcohol-related harms at higher rates (CIHI, 2017). Due to intergenerational trauma resulting from colonial practices and racist policies, Indigenous people are especially vulnerable to the harms of alcohol (Toombs et al., 2023).

Moreover, a significant portion of the Ontario population has already exceeded the low-risk drinking guidelines (23.4%) or engages in hazardous or harmful drinking (15.6%). In Timiskaming alone, there were 133 cases of hospitalization in 2021 that were entirely attributed to alcohol, a rate higher than any health unit area in Southern Ontario, which is concerning given our district's small and sporadic population (CAMH, 2022; PHO, 2023).

Northern Ontario, including Timiskaming, is among the most affected areas in the province by alcohol harms. We would like to suggest that the government to undertake a comprehensive review of the current alcohol policies considering these findings. A scrupulous, evidence-informed approach is necessary to protect our community's well-being and to align with the government's commitment to the health of Ontarians as well as their economic gains.

We sincerely appreciate your attention to our recommendations and look forward to your support in enacting meaningful policy changes to address the challenges posed by the harms of substance and alcohol use.

Sincerely,



Erin Cowan
TDAS Co-Chair

Angèle Desormeau
TDAS Co-Chair

cc.
Hon. John Vanthof, MPP, Timiskaming – Cochrane
Hon. Doug Ford, Premier of Ontario
Hon. Greg Rickford, Minister of Indigenous Affairs and Minister of Northern Development
Hon. Doug Downey, Attorney General of Ontario
Hon. Michael Tibollo, Associate Minister of Mental Health and Addictions
Hon. Michael Parsa, Minister of Children, Community and Social Services
Hon. Prabmeet Singh Sarkaria, Minister of Transportation
Hon. Michael S. Kerzner, Solicitor General of Ontario
Dr. Kieran Moore-Chief Medical Officer of Health and Assistant Deputy Minister
Dr. Charles Gardner, President, Association of Local Public Health Agencies
Drug Strategy Network of Ontario
Ontario Boards of Health
Mayor/ Reeves, Timiskaming Health Unit Constituent Municipalities

Reference

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More about TDAS

Launched in 2022, the Timiskaming Drug and Alcohol Strategy (TDAS) is supported by over 20 local organizations and agencies working together to reduce the impact of substance use. We build collective impact through a common agenda, shared measurement, mutually reinforcing activities, and continuous communications among community partners and the backbone agency.

TDAS operates under the leadership of a multisectoral Steering Committee and is supported by four working groups, which correspond to our four-pillar approach to substance use: Prevention, Harm Reduction, Treatment, and Community Safety.

We recognize the complex nature of substance use and its impacts on individuals, families, and the wider community. To learn more about our progress in the past year and priorities in 2024, please consult our latest Report to the Community.

TIMISKAMING
DRUG AND ALCOHOL STRATEGY
STRATÉGIE CONTRE LES DROGUES ET
L'ALCOOL DU TIMISKAMING

Report to the Community

March 2024

Timiskaming Drug and Alcohol Strategy and partners on the International Overdose Awareness Day event. Photos taken by Timiskaming Health Unit staff (August 2023).

About this report

Launched in 2022, the Timiskaming Drug and Alcohol Strategy (TDAS) is supported by over 20 local organizations and agencies working together to reduce the impact of substance use in Timiskaming. As we continue to work toward this common goal, this report shares progress and future directions.

While high-risk substance use continues to impact the health of people in Timiskaming, to collaboratively address the underlying causes is essential for meaningful change. TDAS is actively forging cross-sector partnerships and engaging with those who have first-hand experience of drug use. TDAS is working to make changes in Timiskaming that support health and safety, for everyone.

We invite you to learn more about substance use as a health issue, our local situation, services, and policies; and most importantly, to reaffirm your awareness and support for this work in the future.

Table of Contents

Message from the chairs

We are pleased to present this progress report for the Timiskaming Drug and Alcohol Strategy. As co-chairs, we reflect on a year filled with dedicated efforts and collaborative achievements.

This report provides an overview of the strategy, including its governance structure and guiding principles, its performance, and how it contributes to our commitment to the community. We have made significant progress in addressing substance use harms, focusing on enhancing collaboration, increasing capacity, and improving engagement and awareness across sectors under the leadership of four pillar working groups.

Looking ahead to 2024, we outline our priorities, emphasizing the need for continuous adaptation and responsiveness to the evolving needs of our community. We also highlight the vital work of our People with Lived and Living Experience Committee, which ensures the strategy stays relevant – a strategy that is "by Timiskaming, and for Timiskaming".

We extend our gratitude to all members and our community for their steadfast support and participation. As we continue this vital work, we call for your ongoing support and investment to further our impact on the health and quality of life in the district. Only with your support can we make impactful and long-lasting changes.

Erin Cowan
Director of Strategic Services and Chief Nursing Officer
Timiskaming Health Unit

Angèle Desormeau
Director of Addiction and Housing Services
CMHA Cochrane Timiskaming

The members of the Timiskaming Drug and Alcohol Strategy (TDAS) acknowledge that our work occurs within the Robinson-Huron Treaty, Treaty 9, and unceded Indigenous territory, specifically within the traditional territories of Beaverhouse, Matachewan, Temagami, and Timiskaming First Nations. Today these lands encompass communities with enduring presence of Algonquin, Anishnabai, Ojibwe, Cree, and Métis Peoples. We offer our gratitude for their shaping and strengthening of our community, province, and country, and affirm our collective responsibility and commitment to work toward reconciliation.

We are mindful of those with lived or living experience of substance use and addiction, their individual and collective experiences, and those who have lost their lives as a result. We recognize the expertise of those with lived or living experience, whose insights are invaluable in our efforts to improve the quality and impact of services and resources related to substance use and addiction and reduce the harms that result from it.

TDAS
SDAT

Members

The Strategy membership consists of over 20 community organizations and people with lived and living experience. Among member organizations, the sectors represented include:

- Child and Family Health Services
- Hospitals
- Family Health Teams
- People With Lived Experience
- Justice Services
- Indigenous Services
- Municipalities
- Social Services
- Mental Health and Addictions Treatment Services
- Public Health
- Police
- School Boards
- Community Organizations

The Strategy

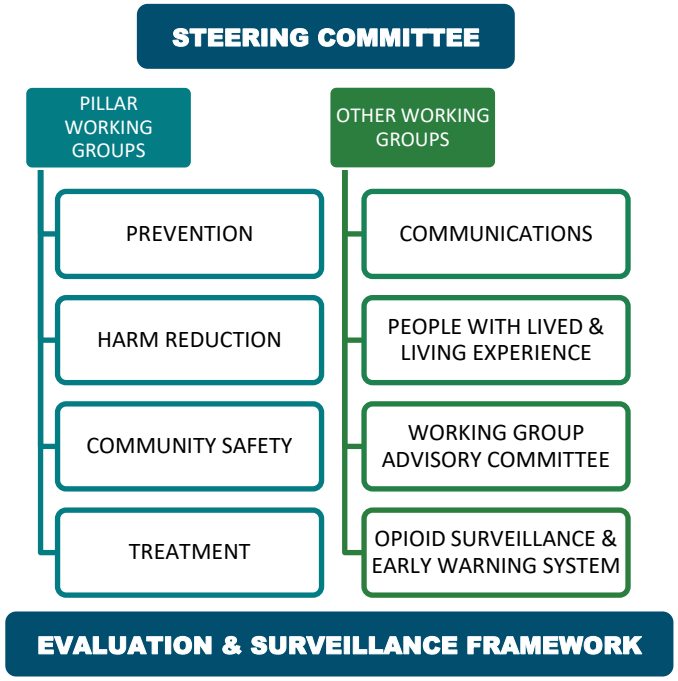
The Timiskaming Drug and Alcohol Strategy (TDAS) was launched as a collective response to the challenges of substance use in our community. With Timiskaming Health Unit (THU) as the host organization, we recognize the complex nature of substance use and its impacts on individuals, families, and the wider community. We represent a concerted effort to bring about meaningful change.

Structure

TDAS operates under the leadership of a multi-sectoral Steering Committee and is supported by four working groups, which correspond to our four-pillar approach to substance use:

Prevention, **Harm Reduction**, **Treatment**, and **Community Safety**.

An advisory group consisting of People With Lived and Living Experience (PWLLE) of substance use actively participates in the work of each pillar group. They meet monthly to review progress and inform the steering committee of their expertise. A communication working group also supports the strategy and other project working groups form as needed.



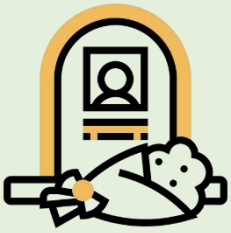
Guiding Principles

TDAS SDAT

Trauma and violence-informed	Evidence-informed	Collaborative	Equity and accessibility
Locally relevant	Cultural sensitivity, safety, and competence	Reconciliation aware	
Inclusive of people with lived and living experience of substance use, including family and friends.			
The five conditions for Collective Impact and Collective Impact Practices:			
A common agenda,	shared measurement systems,	mutually reinforcing activities,	continuous communication,	and a backbone support organization.

Our Current Situation

In Timiskaming, high-risk substance use and its consequences continue to impact community health, safety, and well-being. The latest local data indicate dire health and social impacts, with many indicators showing significantly higher rates of harm compared to the rest of Ontario.



Deaths

7

Opioid-related deaths in 2022 which is up from 4 in 2021.

> 3x

Higher death rate related to methamphetamine than Ontario.

Hospitalization

40

Opioid-related ED visits in 2021 which is the highest it has ever been.

74%

Higher rates of hospitalization entirely attributed to alcohol than Ontario.

High-risk use

70%

Higher rates of cannabis-related ED visits than Ontario.

>1 in 2

People in Timiskaming exceeded the Low-Risk Alcohol Drinking Guideline, which is significantly more than Ontario.

Further details provided in Appendix: Data and Reference.

In addition

In 2020, the rate of substance use during pregnancy in Timiskaming was 4 times higher than Ontario. This rate has been higher than the Ontario average since 2012.

Based on community surveys, we know:

- Addiction is one of the most critical issues in Timiskaming.
- Stigma is a common barrier to accessing healthcare.
- Addiction or substance use is one of the most common reasons for losing housing.

The community's approach

Building upon our public consultation and using evidence-informed practices, our vision is a community where risk factors of substance use harms are reduced, and the overall health and quality of life of all residents are enhanced through promoting protective factors.

Over the last year, we have focused on the four pillars to address gaps and explore new opportunities. In the following section, we proudly present the details of accomplishments from each pillar group.

Further details provided in Appendix: Data and Reference.

Progress from the Prevention Pillar

In September 2023, the Timiskaming Health Unit signed an agreement with the Planet Youth Guidance Program, officially launching Planet Youth Timiskaming. This marked the beginning of a 5-year journey based on the Icelandic Prevention Model, a world-renowned, community-based prevention approach aimed at improving youth well- being and reducing drug and alcohol use.

In the following months, Planet Youth Timiskaming established a steering committee that includes school boards, Indigenous partners, municipalities, and local agencies. The program completed its first survey among Grade 10 and 11 students across the district, achieving an impressive 83% response rate. This approach empowers communities to use local data to understand and address the root causes of early substance use.

The pillar working group compiled an inventory of prevention programs and activities in our district, such as PreVenture and Planet Youth Timiskaming, to enhance resource integration, system mapping, and knowledge sharing. Under the guidance of pillar partners, the Timiskaming Health Unit launched communications campaigns on youth vaping, alcohol use and health, and lower-risk cannabis use.

Prevention

The Prevention pillar focuses on preventing high-risk substance use by preventing or delaying its onset, particularly among youth, through addressing its root causes and strengthening protective factors within the broader context of the social determinants of health across the lifespan.

Prevention Priorities for 2024

Collaboration

- To complete the local prevention service inventory and share results.
- To continue to improve data collection and sharing among local partners.
- To collaborate with Timiskaming's Community Safety and Wellbeing Plan.
- To plan and ensure Planet Youth Timiskaming program sustainability.

Build Solutions

- To continue identifying and putting new interventions into practice.
- To educate and to build the knowledge of parents and carers, school staff, and the public on substance use.
- Continue enhancing engagement with local youth.
- To increase access to peer support for substance use, including relapse prevention.

Advocacy

- To advocate for healthier alcohol, tobacco, vape, and cannabis policies.
- To advocate for income security.

TDAS SDAT

Progress from the Harm Reduction Pillar

In 2023, the harm reduction pillar focused on enhancing access to and awareness of local services available to support substance use health. These services are summarized in a directory on the TDAS website which includes Indigenous-based services, justice support, treatment services, peer support, among others. In addition, the pillar supported the launch of an Opioid Early Warning Surveillance System (OEWSS) dashboard for Timiskaming and played a significant role in developing a referral pathway tool to help service providers make timely connections.

The newly formed Timiskaming Substance Use Health Knowledge Network, a local community of practice for service providers, occurs bi-monthly with a formal presentation and discussion session. Three Knowledge Network meetings were held in 2023, covering rapid access addiction medicine, safer supply practice in Ottawa, as well as harm reduction and treatment practice in the North Bay area.

Reducing stigma is also a major focus within harm reduction efforts. TDAS organized and sponsored three virtual learning sessions to help reduce stigma among service providers. Around 80 participants attended the workshop sessions delivered by Community Addictions Peer Support Association (CAPSA), with positive feedback.

Other initiatives of the pillar include signing on for Our Healthbox, a vending machine-type unit that dispenses free harm reduction supplies and functions as a point of interaction with health services; starting the development of an outreach harm reduction services model; and piloting a take-home drug testing kit program.

Harm Reduction

The Harm Reduction pillar aims to reduce the harmful effects of substance use without demanding abstinence. The pillar works towards decreasing stigma around substance use, ensuring easy access to support, and facilitating timely connections to health and social services.

Harm Reduction Priorities for 2024

Collaboration

- To explore the local application of safe consumption and safe supply.
- To increase access to peer support and other group offerings.
- To enhance data collection among harm reduction service providers.

Build Solutions

- To complete and circulate the service providers' referral pathway and build a public-facing service map.
- To continue increasing the capacity of harm reduction sites and the number of safe disposable sites.

Advocacy

- To increase the awareness of stigma toward substance use in healthcare, media, and the public.

TDAS SDAT

Progress from the Treatment Pillar

In 2023, the Treatment pillar facilitated capacity-building among service providers to address trauma and substance use. This included promoting trauma-informed approach training with an Indigenous perspective. The training, led by Dr. Marsh from the Northern Ontario School of Medicine, was attended by organizations across the district.

Collaborating with the harm reduction pillar, a knowledge network was established to facilitate the exchange of best practices and knowledge for prescribers. The network hosted several guest speakers, including Leslie Edwards, the nurse practitioner responsible for Rapid Access Addiction Medicine (RAAM) at CMHA, and Marlene Haines, PhD Candidate at the University of Ottawa. The network also welcomed the North Bay AIDS Committee who leads harm reduction practices in the region.

Moreover, the treatment pillar strengthened relationships among service providers such as CMHA, Blanche River Health, Family Health Teams, and the newly welcomed Northeastern Recovery Centre. This pillar also supported the development of a clinical referral pathway tool, a cross-sectoral flowchart that guides frontline workers to make timely and accurate referrals across local services.

Informed by the treatment pillar, CMHA applied for the Ontario Models of Care Innovation Fund, which would allow for day/ evening treatment across the CMHA Cochrane-Timiskaming service area. Additional proposals have been submitted through Substance Use and Addictions Program 2023, including a mobile community withdrawal management program, which would provide accessible and flexible treatment; and a Peer Support Worker program, which would operate the SMART Recovery group to offer peer-based guidance and provide career opportunities for people with lived experience.

Treatment

The Treatment pillar is focused on supporting innovative approaches to treatment and recovery, promoting, and ensuring accessible and equitable treatment services and supports, increasing the understanding and application of trauma-informed approaches that integrate mental health care, and reducing stigma associated with substance-use treatment.

Treatment Priorities for 2024

Collaboration

- Continue to expand and strengthen membership.
- To develop an overdose protocol tailored to the district of Timiskaming.
- To complete and expand the treatment referral pathway tool.

Build Solutions

- Continue to support and expand residential recovery options, prioritizing withdrawal management services.
- Securing funding to expand local treatment availability such as Sublocade programs.
- Subject to funding, to develop programs for day/evening treatment, community withdrawal management, and SMART Recovery Peer Support.

Advocacy

- Advocating with local service providers to ensure policies support people who use substances.
- Broadening Rapid Access Addiction Medicine (RAAM) services, to increase the local capacity and availability beyond CMHA.

TDAS SDAT

Progress from the Community Safety Pillar

Since September 2023, the Community Safety pillar has grown to include expert representatives from various sectors including law enforcement, justice, probation, victim services, and health and social services, as well as people with lived and living experience.

The working group has been conducting system mapping to assess gaps and opportunities within the continuum of social justice and health systems, while setting objectives and inventorying available services.

Thanks to this work, the TDAS website service directory has been broadened to include justice support resources. This directory can help people involved with the justice system to access mental health and addiction services and legal support. It also offers potential opportunities for diversion and link victims of crime to timely support.

Furthermore, the mandate of this pillar aligns with the Timiskaming Community Safety and Well Being Plan (CSWB), which facilitates resource integration across municipalities with priorities addressing community safety, health and wellbeing, housing, and other protective factors of substance use.

Community Safety

The Community Safety pillar focuses on developing and strengthening a coordinated approach between enforcement, justice, and health and social services, reducing the presence of illicit substances in the community, and enhancing overall community safety measures.

Community Safety Priorities for 2024

Collaboration

- Continue to expand pillar membership.
- To explore alignment with the Timiskaming Community Safety and Wellbeing Plan.

Build Solutions

- To build a mapped inventory of existing justice support, diversion, and social service programs.
- To identify and address service bottlenecks and gaps.
- To enhance communications and data sharing among key agencies and municipalities.

Advocacy

- To explore opportunities for decriminalization and justice diversion.

TDAS SDAT

Substance Use Harm is significant in Timiskaming, when compared to provincial average.

- The rates[*†] of opioid-related deaths have continued to increase from 3.0 in 2017 to 21.3 in 2022. In 2022, opioid-related deaths were the highest they have ever been with 7‡ occurring (PHO, 2023a).
- The rates of deaths related methamphetamines in Timiskaming have continued to increase from 4.0 in 2018 to 26.3[‡] in 2022, more than 3 times the Ontario's average of 6.2 (PHO, 2023b).
- The rates of opioid-related ED visits were the highest they have ever been in 2021 at 121.4, with 40 cases occurring (PHO, 2023a).
- The rate of hospitalizations for conditions entirely attributed to alcohol in 2021 was 73.9% higher than the provincial rate (PHO, 2023d).
- The rates of ED visits of all cannabis related harms were 66.9% higher than the provincial average (203.5 and 121.9 respectively), and the rates of ED visits for cannabis-related mental health conditions were 71.1% higher (185.1 and 108.2 respectively) in 2021 (PHO, 2023c).
- 53% of Timiskaming residents exceeded the Low-Risk Alcohol Drinking Guideline in 2019-20, which is significantly higher than the provincial average (PHO, 2023e).
- The rate of women who use substances during their pregnancy has remained higher than Ontario's rate since 2012. In 2020, 4% of pregnant women in Timiskaming report using substances in comparison to Ontario's 1% (THU, 2021).

*Age-standardized rates have been adjusted to the 2021 Canadian population; all rates are per 100,000 population.
†Monthly and quarterly rates have been annualized for comparability between different time periods.
‡Death data for 2022 should be considered as preliminary and is subject to change.

References

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Public Health Ontario. (2023b, October 30). Stimulant Harms Snapshot, PHU (2018 to 2023 Q1), Mortality From Methamphetamines. Retrieved December 4, 2023, from https://www.publichealthontario.ca/en/Data-and-Analysis/Substance-Use/Stimulant-Harms

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Timiskaming Health Unit. (2021). Reproductive, maternal, and child health in Timiskaming. Retrieved December 4, 2023, from https://www.timiskaminghu.com/websites/timiskaminghu.com/files/Health%20Stats/2021%20-%20Reproductive%20Maternal%20and%20Child%20Health%20in%20Timiskaming.pdf

TIMISKAMING
DRUG AND ALCOHOL STRATEGY
STRATÉGIE CONTRE LES DROGUES ET
L'ALCOOL DU TIMISKAMING

TDAS' collaborative efforts have led to early achievements, creating momentum in addressing substance use issues. Our joint endeavors have resulted in more substantial progress than could have been made individually.

As we move into 2024, TDAS will intensify its efforts to increase support for these initiatives in the district. We are dedicated to advancing these goals, ensuring sustained impact and further improvements to our community's health and well-being.

More Information

To learn more about the Timiskaming Drug and Alcohol Strategy, access resources and reports, drug toxicity alerts, and view data, please visit **www.tdas.ca**

Contact Us

Timiskaming Drug and Alcohol Strategy
247 Whitewood Ave, PO 1090, New Liskeard, ON
tdas@timiskaminghu.com
705-647-4305

Follow us on Facebook **@TimiskamingDrugAndAlcoholStrategy**

Temiskaming Shores Public Library Board

Meeting Minutes

Wednesday, April 24, 2024

7:00 p.m. in-person and via zoom

1. Call to Order

Meeting called to order by Library Board Chair Brigid Wilkinson at 7:04 p.m.

2. Welcome of new Library Board member, Jule Booth.

3. Roll Call

Present: Jule Booth, Erica Burkett, Sarah Bahm, Erin Little, Chair Brigid Wilkinson and Library CEO Rebecca Hunt in person. Nadia Pelletier-Lavigne and Thomas McLean via zoom.

Regrets: Joyce Elson, Melanie Ducharme

Members of the Public: 0

4. Adoption of the Agenda

Motion #2024-19

Moved by: Erica Burkett

Seconded by: Sarah Bahm

Be it resolved that the Temiskaming Shores Public Library Board accepts the April 24, 2024 agenda as presented.

Carried.

5. Declaration of conflict of interest: None

6. Adoption of the Minutes

Motion #2024-20

Moved by: Erica Burkett

Seconded by: Sarah Bahm

Be it resolved that the Temiskaming Shores Public Library Board approves the minutes of the meeting held on Wednesday, March 27, 2024 as amended.

Carried.

7. Business arising from Minutes:

a. Letter to organizations regarding homelessness. The Library CEO will send out a poll to select a meeting date and time, and will supply an agenda.

b. Re-Interment of Time Capsule. The Library CEO will contact the city to see about burying the Time Capsule in the rock garden in front of the library.

8. Correspondence: None.

9. Secretary–Treasurer's Report

Report, workplace inspection reports, monthly financial statement and Scotiabank Statements included in the trustees' information packet.

Library CEO's Report **April 17, 2024**

Building: Fire Safety checks are completed on a monthly basis and reported to the Fire Prevention Officer for the City. Workplace safety inspections are completed on a monthly basis by the Library's Health and Safety Representative.

CJTT Chats: The chats are scheduled for May 8, June 5, July 9, August 6, September 11, October 9, November 6, and December 11.

Code of Conduct/Behavioural Incident Report: I have created a minor incident report for staff to be able to track incidents which break our Patron Code of Conduct or are

behaviour issues, but that are not serious enough to fill out our regular incident report and bring to the board. This is to track repeat offenders for things like littering, foul language, noise, roughhousing, etc. We are reviewing the reports at weekly staff meetings to see if there are trends with particular patrons that need to be addressed—suspending privileges, verbal reminders, or other. The forms will be filed in a locked drawer that is accessible to staff members.

Committees:

Federation of Ontario Public Libraries: The Library CEO will be attending an in-person meeting on May 17.

Grants:

Francophone Community Grant Fund: The grant application was submitted and organizations should know if they are successful by early July.

Library Settlement Worker: All seems to be going well with Raghov. He is using the Study Room on Tuesday and Wednesdays and we have referred a few clients to him. The North Bay and District Multicultural Centre has asked that we bill them quarterly for printouts, so I will send an invoice in June.

Partnerships:

Shattered Psyche Travelling Showcase: The art display has changed again to showcase a different artist for the next few months.

Timiskaming Art Gallery: TAG has asked the library to partner in a display during the Murial Newton-White exhibition from May-July 2024. We will display some of her books and artwork in the Local History section on the lower level, and will have some activity booklets for youth made by TAG available as well.

Training for staff: I have purchased a one-year subscription to the Ryan Dowd training for library workers on homelessness. The training includes a series of webinars on subjects such as Backup, Kicked out, Fights, Police and Mental Illness. I am hoping this will help staff members feel more confident in their interactions with less fortunate members of our community.

Workplace Inspections: The First Aid training is still needed for one staff member and we hope to have it scheduled for early May. In the meantime we are scheduling to be sure we always have a staff member with first aid in the building while we are open.

Finances and Statistics

The Board reviewed the workplace inspection, financial and statistical reports, including the Scotiabank Statements as provided by the CEO.

Motion #2024-21

Moved by: Erin Little

Seconded by: Erica Burkett

Be it resolved that the Temiskaming Shores Public Library Board accepts the April 2024 Secretary-Treasurer's report, workplace inspection report and financial reports including Scotiabank statements.

Carried.

10. Committee Reports:

a. Finance Committee: Nothing to report.

b. Policy and Personnel Committee: Minutes of April 11 meeting.

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c. Strategic Planning Committee: Nothing to report.

d. Library Services Committee: Follow up DSB1.

11. New Business:

a. Strategic Plan update. For information.

b. Community Fridge MOU. Motion.

Motion #2024-22

Moved by: Nadia Pelletier-Lavigne

Seconded by: Thomas McLean

Be it resolved that the Temiskaming Shores Public Library Board agrees to continue the partnership with the City of Temiskaming Shores in providing a Community Fridge in the lobby of the library in accordance with the approved and signed Memorandum of Understanding.

Carried

12. Policy Review

a. Personnel Policies. Motion

Motion #2024-23

Moved by: Sarah Bahm

Seconded by: Thomas McLean

Be it resolved that the Temiskaming Shores Public Library Board accepts the Policy: Personnel policies Per-11 through Per-27 as amended by the Policy Committee.

Carried

13. Adjournment

Next meeting: Wednesday, May 22 at 7:00 at the library and zoom

Adjournment by Chair Brigid Wilkenson at 8:08 p.m.

_____
Chair –

MINUTES

Timiskaming Health Unit Board of Health

Regular Meeting held on May 1, 2024 at 6:30 PM

THU KL Boardroom / Microsoft Teams

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1. The meeting was called to order at 6:30 p.m.

2. **ROLL CALL**

Board of Health Members

Stacy Wight	Chair, Municipal Appointee of Kirkland Lake
Jesse Foley	Vice-Chair, Municipal Appointee for Temiskaming Shore *(video)*
Mark Wilson	Municipal Appointee for Temiskaming Shores *(video)*
Jeff Laferriere	Municipal Appointee for Temiskaming Shores *(video)*
Curtis Arthur	Provincial Appointee *(video)*
Carol Lowery	Municipal Appointee for Town of Cobalt, Town of Latchford, Municipality of Temagami, and Township of Coleman *(video)*
Paul Kelly	Municipal Appointee for Township of Larder Lake, McGarry & Gauthier
David Lowe	Provincial Appointee
Steve McIntyre	Municipal Appointee for Township of Armstrong, Hudson, James, Kerns & Matachewan *(video)*
Casey Owens	Municipal Appointee for Town of Kirkland Lake
Todd Steis	Provincial Appointee
Cathy Dwyer	Provincial Appointee *(video)*
Guy Godmaire	Municipal Representative for Township of Brethour, Harris, Harley & Casey, Village of Thornloe

Regrets

Vacant	Municipal Appointee for Township of Chamberlain, Charlton, Evanturel, Hilliard, Dack & Town of Englehart
Rachelle Cote	Executive Assistant

Timiskaming Health Unit Staff Members

Dr. Glenn Corneil	Acting Medical Officer of Health/CEO
Randy Winters	Director of Corporate and Protection Services
Erin Cowan	Director of Strategic Services and Health Promotion

3. **APPROVAL OF AGENDA**

MOTION #31R-2024

Moved by: Paul Kelly

Seconded by: Casey Owens

Be it resolved that the Board of Health adopts the agenda for its regular meeting held on May 1, 2024, as presented.

CARRIED

4. **DISCLOSURE OF PECUNIARY INTEREST AND GENERAL NATURE**

None.

5. **APPROVAL OF MINUTES**

MOTION #32R-2024

Moved by: David Lowe

Seconded by: Todd Steis

Be it resolved that the Board of Health approves the minutes of its regular meeting held on April 3, 2024, as presented.

CARRIED

6. **BUSINESS ARISING**

None noted.

7. **REPORTS OF MOH/CEO**

Dr. Corneil provided a summary of the local situation and other related updates.

8. **HUMAN RESOURCES & FINANCE UPDATE**

Randy Winters provided an update for information purposes.

9. **NEW BUSINESS**

a. **PHU-THU Merger Update**

Dr. Corneil provided the following update:

- Overview shared on merger documentation provided: risks/merger benefits. Available to use as a resource.
- PHU passed a resolution to relook at the board composition. The board discussed the provincial appointee role and the ministry requirement for every Board of Health to have provincial appointees. Also discussed the impact it would have on the governance if changes were to occur to the composition. Other board composition information is being gathered for the BOH working group to consider.
- Expecting more questions from the ministry regarding the merger budget application.

- All-staff communications continue to be issued monthly.
- All management staff are scheduled to meet in person on May 10, 2024.
- A virtual all-staff meeting is scheduled on June 17, 2024 and an all-staff meeting is scheduled on September 10, 2024.

b. **2024 Q1 Board Report**
The report was distributed for information purposes.

c. **Board Member Resignation**
Chair Wight informed the board of the recent resignation of the member representing Charlton/Dack, Town of Englehart, Chamberlain, Evanturel and Hilliard. Currently awaiting a replacement.

10. **CORRESPONDENCE**

MOTION #33R-2024
Moved by: Jeff Laferriere
Seconded by: Mark Wilson
Be it resolved the Board of Health acknowledges receipt of the correspondence for information purposes.

CARRIED

- Dr. Corneil provided some highlights of the Ontario's Chief Medical Officer of Health's 2023 Annual Report and how THU is using this resource in conjunction with the CSWB and TDAS initiatives.
- THU received an invite from Temiskaming Shores Public Library for a collaborative approach to homelessness in our community. A THU representative was scheduled to attend this meeting.

11. **IN-CAMERA**
None noted.

12. **RISE AND REPORT**
N/A

13. **DATES OF NEXT MEETINGS**
The next regular meeting will be held on June 12, 2024 at 6:30 pm in New Liskeard.

14. **ADJOURNMENT**

MOTION #34R-2024

Moved by: Carol Lowery

Seconded by: Curtis Arthur

Be it resolved that the Board of Health agrees to adjourn the regular meeting at 7:12 pm.

CARRIED

Stacy Wight, Board Chair

Randy Winters, Recorder

The Corporation of The City of Temiskaming Shores

By-Law No. 2024-077

Being a by-law to authorize entering into a Municipal Funding Administrative Agreement with The Association of Municipalities of Ontario (AMO) for the administration of the Canada Community-Building Fund

Whereas Section 9 of the Municipal Act, 2001, S.O. 2001, c. 25, as amended, provides that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act; and

Whereas the Government of Canada, the Government of Ontario, the Association of Municipalities of Ontario (AMO), and the City of Toronto are signatories to the Administrative Agreement on the Canada Community-Building Fund effective April 1, 2024 (the "Administrative Agreement"), which governs the transfer and use of the Canada Community-Building Fund ("CCBF") in Ontario; and

Whereas AMO is responsible for the administration of CCBF funding made available to all Municipalities in Ontario, except the City of Toronto, under the Administrative Agreement, and will therefore undertake (and require the Recipient to undertake) certain activities as set out in this Agreement; and

Whereas the Council of The Corporation of the City of Temiskaming Shores deems it desirable and necessary to enter into an Administrative Agreement with AMO to access CCBF funding.

Now Therefore Council of the Corporation of the City of Temiskaming Shores hereby enacts as follows:

1. That the Mayor and Clerk are hereby authorized to execute the Municipal Funding Administrative Agreement between The Association of Municipalities of Ontario and the Corporation of the City of Temiskaming Shores on behalf of the Corporation, attached hereto, forms part of this by-law.

2. That this by-law shall take force and effect upon the passage hereof.

Read a first, second and third time and finally passed this 9th, day of July, 2024.

Mayor

Clerk

Schedule “A” to

By-law No. 2024-077

Being a By-law to authorize entering into a Municipal Funding Administrative Agreement with The Association of Municipalities of Ontario (AMO) for the administration of the Canada Community-Building Fund

MUNICIPAL FUNDING AGREEMENT
ON THE CANADA COMMUNITY-BUILDING FUND

BETWEEN:

THE ASSOCIATION OF MUNICIPALITIES OF ONTARIO

(referred to herein as "**AMO**")

AND:

THE CITY OF TEMISKAMING SHORES

(a municipal corporation pursuant to the *Municipal Act, 2001*, referred to herein as the "**Recipient**")

WHEREAS the Government of Canada, the Government of Ontario, AMO, and the City of Toronto are signatories to the Administrative Agreement on the Canada Community-Building Fund effective April 1, 2024 (the "**Administrative Agreement**"), which governs the transfer and use of the Canada Community-Building Fund ("**CCBF**") in Ontario;

AND WHEREAS AMO is responsible for the administration of CCBF funding made available to all Municipalities in Ontario – except the City of Toronto – under the Administrative Agreement, and will therefore undertake (and require the Recipient to undertake) certain activities as set out in this Agreement;

AND WHEREAS the Recipient wishes to enter into this Agreement to access CCBF funding;

NOW THEREFORE the Parties agree as follows:

1. DEFINITIONS AND INTERPRETATIONS

1.1 **Definitions**. For the purposes of this Agreement, the following terms shall have the meanings ascribed to them below:

"Annual Report" means the duly completed report to be prepared and delivered to AMO as described in Section 6.1.

"Asset Management" is a principle/practice that includes planning processes, approaches, plans, or related documents that support an integrated lifecycle approach to the effective stewardship of infrastructure assets to maximize benefits and effectively manage risk.

"Canada" means the Government of Canada, as represented by the Minister of Housing, Infrastructure and Communities.

"Canada Community-Building Fund" or "CCBF" means the program established under section 161 of the *Keeping Canada's Economy and Jobs Growing Act*, S.C. 2011, c. 24 as amended by section 233 of the *Economic Action Plan 2013 Act, No. 1*, S.C. 2013, c. 33, as the Gas Tax Fund and renamed the Canada Community-Building Fund in section 199 of *Budget Implementation Act, 2021, No. 1*.

"Contract" means an agreement between the Recipient and a Third Party whereby the latter agrees to supply a product or service to an Eligible Project in return for financial consideration.

"Eligible Expenditure" means an expenditure described as eligible in Schedule B or deemed eligible by Canada in accordance with Section 4.2.

"Eligible Investment Category" means an investment category listed in Schedule A or deemed eligible by Canada in accordance with Section 3.2.

"Eligible Project" means a project that fits within an Eligible Investment Category.

"Event of Default" has the meaning given to it in Section 13.1 of this Agreement.

"Funds" mean the funds made available to the Recipient through the CCBF or any other source of funding as determined by Canada. Funds are made available pursuant to this Agreement and includes any interest earned on the said Funds. Funds transferred to another Municipality in accordance with Section 5.3 of this Agreement are to be treated as Funds by the Municipality to which the Funds are transferred; and Funds transferred to a non-municipal entity in accordance with Section 5.4 of this Agreement shall remain as Funds under this Agreement for all purposes and the Recipient shall continue to be bound by all provisions of this Agreement with respect to such transferred Funds.

"Housing Needs Assessment" or **"HNA"** means a report informed by data and research describing the current and future housing needs of a Municipality or community according to guidance provided by Canada.

"Ineligible Expenditures" means those expenditures described as ineligible in Schedule C or deemed ineligible by Canada in accordance with Section 4.2.

"Infrastructure" means tangible capital assets that are primarily for public use or benefit in Ontario – whether municipal or regional, and whether publicly or privately owned.

"Lower-Tier Municipality" means a Municipality that forms part of an Upper-Tier Municipality for municipal purposes, as defined under the *Municipal Act, 2001*, S.O. 2001, c. 25.

"Municipal Fiscal Year" means the period beginning January 1st of a year and ending December 31st of the same year.

"Municipality" and "Municipalities" means every municipality as defined under the *Municipal Act, 2001*, S.O. 2001, c. 25.

"Non-Municipal Transfer By-law" means a by-law passed by Council of the Recipient pursuant to Section 5.4 of this Agreement.

"Parties" means AMO and the Recipient.

"Prior Agreement" means the municipal funding agreement for the transfer of federal gas tax funds entered into by AMO and the Recipient, effective April 2014 and with an expiry date of March 31, 2024.

"Single-Tier Municipality" means a Municipality, other than an Upper-Tier Municipality, that does not form part of an Upper-Tier Municipality for municipal purposes, as defined under the *Municipal Act, 2001*, S.O. 2001 c. 25.

"Third Party" means any person or legal entity, other than the Parties to this Agreement, who participates in the implementation of an Eligible Project by means of a Contract.

"Transfer By-law" means a by-law passed by Council of the Recipient pursuant to Section 5.3 of this Agreement.

"Unspent Funds" means the amount reported as unspent by the Recipient as of December 31, 2023 in the Recipient's 2023 Annual Report (as defined under the Prior Agreement).

"Upper-Tier Municipality" means a Municipality of which two or more Lower-Tier Municipalities form part for municipal purposes, as defined under the *Municipal Act, 2001*, S.O. 2001 c. 25.

1.2 **Interpretations**

a) **"Agreement"** refers to this agreement as a whole, including the cover and execution pages and all of the schedules hereto, and all amendments made hereto in accordance with the provisions hereof.

b) The words "**herein**", "**hereof**" and "**hereunder**" and other words of similar import refer to this Agreement as a whole and not any particular schedule, article, section, paragraph or other subdivision of this Agreement.

c) The term "**including**" or "**includes**" means including or includes (as applicable) without limitation or restriction.

d) Any reference to a federal or provincial statute is to such statute and to the regulations made pursuant to such statute as such statute and regulations may at any time be amended or modified and in effect and to any statute or regulations that may be passed that have the effect of supplementing or superseding such statute or regulations.

2. TERM OF THE AGREEMENT

2.1 **Term**. Subject to any extension or termination of this Agreement or the survival of any of the provisions of this Agreement pursuant to the provisions contained herein, this Agreement shall come into effect as of April 1, 2024 up to and including March 31, 2034.

2.2 **Review**. This Agreement will be reviewed by AMO by June 30, 2027.

2.3 **Amendment**. This Agreement may be amended at any time in writing as agreed to by AMO and the Recipient.

2.4 **Notice**. Any of the Parties may terminate this Agreement on two (2) years written notice.

2.5 **Prior Agreement**. The Parties agree that the Prior Agreement, including Section 15.5 thereof, is hereby terminated. Notwithstanding the termination of the Prior Agreement, including Section 15.5, the reporting and indemnity obligations of the Recipient thereunder with respect to expended Funds governed by the Prior Agreement as set forth in Sections 5, 7, 10.3, 10.4 and 10.5 of the Prior Agreement shall survive the said termination**.**

3. ELIGIBLE PROJECTS

3.1 **Eligible Projects**. Eligible Projects are those that fit within an Eligible Investment Category. Eligible Investment Categories are listed in Schedule A.

3.2 **Discretion of Canada**. The eligibility of any investment category not listed in Schedule A is solely at the discretion of Canada.

3.3 **Recipient Fully Responsible**. The Recipient is fully responsible for the completion of each Eligible Project in accordance with Schedule A and Schedule B.

4. ELIGIBLE EXPENDITURES

4.1 **Eligible Expenditures and Ineligible Expenditures**. Eligible Expenditures are described in Schedule B. Ineligible Expenditures are described in Schedule C.

4.2 **Discretion of Canada**. The eligibility of any item not listed in Schedule B or Schedule C to this Agreement is solely at the discretion of Canada.

4.3 **Reasonable Access**. The Recipient shall allow AMO and Canada reasonable and timely access to all documentation, records and accounts and those of their respective agents or Third Parties related to the receipt, deposit and use of Funds and Unspent Funds, and any interest earned thereon, and all other relevant information and documentation requested by AMO or Canada or their respective designated representatives for the purposes of audit, evaluation, and ensuring compliance with this Agreement.

4.4 **Retention of Receipts**. The Recipient will keep proper and accurate accounts and records of all Eligible Projects including invoices and receipts for Eligible Expenditures for at least six (6) years after the completion of the project.

4.5 **Contracts**. The Recipient will award and manage all Contracts in accordance with its relevant policies and procedures and, if applicable, in accordance with any domestic or international trade agreements, and all other applicable laws. The Recipient will ensure any of its Contracts for the supply of services or materials to implement its responsibilities under this Agreement will be awarded in a way that is transparent, competitive, consistent with value for money principles and pursuant to its adopted procurement policy.

5. FUNDS

5.1 **Use of Funds**. The Recipient acknowledges and agrees the Funds are intended for and shall be used only for Eligible Expenditures in respect of Eligible Projects.

5.2 **Unspent Funds**. Any Unspent Funds, and any interest earned thereon, will be subject to the terms and conditions of this Agreement, and will no longer be governed by the terms and conditions of the Prior Agreement.

5.3 **Transfer of Funds to a Municipality**. Where a Recipient decides to allocate and transfer Funds to another Municipality (the "Transferee Municipality"):

a) The allocation and transfer shall be authorized by a Transfer By-law. The Transfer By-law shall be passed by the Recipient's council and submitted to AMO as soon thereafter as practicable. The Transfer By-law shall identify the Transferee Municipality and the amount of Funds the Transferee Municipality is to receive for the Municipal Fiscal Year(s) specified in the Transfer By-law.

b) The Recipient is still required to submit an Annual Report in accordance with Section 6.1 hereof with respect to the Funds transferred.

c) No transfer of Funds pursuant to this Section 5.3 shall be effected unless and until the Transferee Municipality has either (i) entered into an agreement with AMO on substantially the same terms as this Agreement, or (ii) has executed and delivered to AMO a written undertaking to assume all of the Recipient's obligations under this Agreement with respect to the Funds transferred, such as undertaking in a form satisfactory to AMO.

5.4 **Transfer of Funds to a Non-Municipal Entity**. Where a Recipient decides to support an Eligible Project undertaken by a non-municipal entity (whether a for profit, non-governmental, or not-for profit organization):

a) The provision of such support shall be authorized by a Transfer By-law (a "Non-Municipal Transfer By-law"). The Non-Municipal Transfer By-law shall be passed by the Recipient's council and submitted to AMO as soon as practicable thereafter. The Non-Municipal Transfer By-law shall identify the non-municipal entity, and the amount of Funds the non-municipal entity is to receive for that Eligible Project.

b) The Recipient shall continue to be bound by all the provisions of this Agreement notwithstanding any such transfer.

c) No transfer of Funds pursuant to this Section 5.4 shall be effected unless and until the non-municipal entity receiving the Funds has executed and delivered to AMO a written undertaking to assume all of the Recipient's obligations under this Agreement with respect to the Funds transferred, in a form exclusively satisfactory to AMO.

5.5 **Payout of Funds**. Subject to Sections 5.14 and 5.15, AMO will transfer Funds twice yearly, on or before the dates agreed upon by Canada and AMO.

5.6 **Deposit of Funds**. The Recipient will deposit the Funds in:

a) An interest-bearing bank account; or

b) An investment permitted under:

i. The Recipient's investment policy; and

ii. Provincial legislation and regulation.

5.7 **Interest Earnings and Investment Gains**. Interest earnings and investment gains will be:

- Proportionately allocated to the CCBF when applicable; and
- Applied to Eligible Expenditures for Eligible Projects.

5.8 **Funds Advanced**. Funds shall be spent (in accordance with Sections 3 and 4) or transferred (in accordance with Sections 5.3 or 5.4) within five (5) years after the end of the year in which Funds were received. Unexpended Funds shall not be retained beyond such five (5) year period without the documented consent of AMO. AMO reserves the right to declare that unexpended Funds after five (5) years become a debt to Canada which the Recipient will reimburse forthwith on demand to AMO for transmission to Canada.

5.9 **Expenditure of Funds**. The Recipient shall expend all Funds by December 31, 2038.

5.10 **HST**. The use of Funds is based on the net amount of harmonized sales tax to be paid by the Recipient net of any applicable tax rebates.

5.11 **Limit on Canada's Financial Commitments**. The Recipient may use Funds to pay up to one hundred percent (100%) of Eligible Expenditures of an Eligible Project.

5.12 **Federal Funds**. The Recipient agrees that any Funds received will be treated as "federal funds" for the purpose of other federal infrastructure programs.

5.13 **Stacking**. If the Recipient is receiving federal funds under other federal infrastructure programs in respect of an Eligible Project to which the Recipient wishes to apply Funds, the maximum federal contribution limitation set out in any other federal infrastructure program agreement made in respect of that Eligible Project shall continue to apply.

5.14 **Withholding Payment**. AMO may, in its exclusive discretion, withhold Funds where the Recipient is in default of compliance with any provisions of this Agreement.

5.15 **Insufficient Funds Provided by Canada**. Notwithstanding the provisions of Section 2, if Canada does not provide sufficient funds to continue the Funds for any Municipal

Fiscal Year during which this Agreement is in effect, AMO may immediately terminate this Agreement on written notice to the Recipient.

6. REPORTING REQUIREMENTS

6.1 **Annual Report**. The Recipient shall submit a report to AMO by April 30th each year, or as otherwise notified by AMO. The report shall be submitted in an electronic format deemed acceptable by AMO and shall contain the information described in Schedule D.

6.2 **Project List**. The Recipient shall ensure that projects are reported in advance of construction. Information required is as noted in Section 2.3 of Schedule E.

7. ASSET MANAGEMENT

7.1 **Implementation of Asset Management.** The Recipient will develop and implement an Asset Management plan, culture, and methodology in accordance with legislation and regulation established by the Government of Ontario (e.g., O. Reg. 588/17).

7.2 **Asset Data**. The Recipient will continue to improve data describing the condition of, long-term cost of, levels of service provided by, and risks associated with infrastructure assets.

8. HOUSING NEEDS ASSESSMENT

8.1 **Requirement**. While an HNA is encouraged for all Municipalities, the Recipient must complete a HNA if it had a population of 30,000 or more on the 2021 Census of Canada and is a Single-Tier Municipality or a Lower-Tier Municipality.

8.2 **Content of the HNA**. The Recipient will prepare the HNA in accordance with the guidance provided from time to time by Canada.

8.3 **Use of HNA**. The Recipient is expected to prioritize projects that support the growth of the housing supply. The HNA is to be used by Municipalities to prioritize, where possible, Infrastructure or capacity building projects that support increased housing supply where it makes sense to do so.

8.4 **Publication of the HNA**. The Recipient will publish the HNA on its website.

8.5 **HNA reporting requirements**. The Recipient will send to AMO by March 31, 2025, unless otherwise agreed upon:

a) A copy of any HNA it is required to complete in accordance with Section 8.1; and

b) The URL to the published HNA on the Recipient's website.

9. COMMUNICATIONS REQUIREMENTS

9.1 The Recipient will comply with all communication requirements outlined in Schedule E.

10. RECORDS AND AUDIT

10.1 **Accounting Principles**. All accounting terms not otherwise defined herein have the meanings assigned to them; all calculations will be made and all financial data to be submitted will be prepared in accordance with generally accepted accounting principles ("GAAP") in effect in Ontario. GAAP will include, without limitation, those principles approved or recommended for local governments from time to time by the Public Sector Accounting Board or the Chartered Professional Accountants of Canada or any successor institute, applied on a consistent basis.

10.2 **Separate Records**. The Recipient shall maintain separate records and documentation for the Funds and keep all records including invoices, statements, receipts, and vouchers in respect of Funds expended on Eligible Projects in accordance with the Recipient's municipal records retention by-law. Upon reasonable notice by AMO or Canada, the Recipient shall submit all records and documentation relating to the Funds for inspection or audit.

10.3 **External Auditor**. AMO or Canada may request, upon written notice to Recipient, an audit of Eligible Project(s) or Annual Report(s). AMO shall retain an external auditor to carry out an audit and ensure that any auditor who conducts an audit pursuant to this Agreement or otherwise, provides a copy of the audit report to the Recipient.

11. INSURANCE AND INDEMNITY

11.1 **Insurance**. The Recipient shall put in effect and maintain in full force and effect or cause to be put into effect and maintained for the term of this Agreement all the necessary insurance with respect to each Eligible Project, including any Eligible Projects with respect to which the Recipient has transferred Funds pursuant to Section 5 of this Agreement, that would be considered appropriate for a prudent Municipality undertaking similar Eligible Projects, including, where appropriate and without limitation, property, construction, and liability insurance, which insurance coverage shall identify Canada and AMO as additional insureds for the purposes of the Eligible Projects.

11.2 **Certificates of Insurance**. Throughout the term of this Agreement, the Recipient shall have a valid certificate of insurance that confirms compliance with the requirements

of Section 11.1. The Recipient shall produce such certificate of insurance on request, including as part of any AMO or Canada audit.

11.3 **AMO Not Liable**. In no event shall Canada or AMO be liable for:

- Any bodily injury, death or property damages to the Recipient, its employees, agents, or consultants or for any claim, demand or action by any Third Party against the Recipient, its employees, agents, or consultants, arising out of or in any way related to this Agreement; or

- Any incidental, indirect, special, or consequential damages, or any loss of use, revenue or profit to the Recipient, its employees, agents, or consultants arising out of any or in any way related to this Agreement.

11.4 **Recipient to Compensate Canada**. The Recipient will ensure that it will not, at any time, hold the Government of Canada, its officers, servants, employees or agents responsible for any claims or losses of any kind that the Recipient, Third Parties or any other person or entity may suffer in relation to any matter related to the Funds or an Eligible Project and that the Recipient will, at all times, compensate Canada, its officers, servants, employees and agents for any claims or losses of any kind that any of them may suffer in relation to any matter related to CCBF funding or an Eligible Project.

11.5 **Recipient to Indemnify AMO**. The Recipient hereby agrees to indemnify and hold harmless AMO, its officers, servants, employees or agents (each of which is called an "**Indemnitee**"), from and against all claims, losses, damages, liabilities and related expenses including the fees, charges and disbursements of any counsel for any Indemnitee incurred by any Indemnitee or asserted against any Indemnitee by whomsoever brought or prosecuted in any manner based upon, or occasioned by, any injury to persons, damage to or loss or destruction of property, economic loss or infringement of rights caused by or arising directly or indirectly from:

- The Funds;

- The Recipient's Eligible Projects, including the design, construction, operation, maintenance, and repair of any part or all of the Eligible Projects;

- The performance of this Agreement or the breach of any term or condition of this Agreement by the Recipient, its officers, servants, employees, and agents, or by a Third Party, its officers, servants, employees, or agents; and

- Any omission or other wilful or negligent act of the Recipient or Third Party and their respective officers, servants, employees, or agents.

12. TRANSFER AND OPERATION OF MUNICIPAL INFRASTRUCTURE

12.1 **Reinvestment**. The Recipient will invest into Eligible Projects, any revenue that is generated from the sale, lease, encumbrance, or other disposal of an asset resulting from an Eligible Project where such disposal takes place within five (5) years of the date of completion of the Eligible Project.

12.2 **Notice**. The Recipient shall notify AMO in writing 120 days in advance and at any time during the five (5) years following the date of completion of an Eligible Project if it is sold, leased, encumbered, or otherwise disposed of.

12.3 **Public Use**. The Recipient will ensure that Infrastructure resulting from any Eligible Project that is not sold, leased, encumbered, or otherwise disposed of, remains primarily for public use or benefit.

13. DEFAULT AND TERMINATION

13.1 **Event of Default**. AMO may declare in writing that an Event of Default has occurred when the Recipient has not complied with any condition, undertaking or term in this Agreement. AMO will not declare in writing that an Event of Default has occurred unless it has first consulted with the Recipient. For the purposes of this Agreement, each of the following events shall constitute an "Event of Default":

- Failure by the Recipient to deliver in a timely manner an Annual Report or respond to questionnaires or reports as required;
- Delivery of an Annual Report that discloses non-compliance with any condition, undertaking or material term in this Agreement;
- Failure by the Recipient to co-operate in an external audit undertaken by Canada, AMO or their agents;
- Delivery of an external audit report that discloses non-compliance with any condition, undertaking or term in this Agreement; and
- Failure by the Recipient to expend Funds in accordance with the terms of this Agreement, including Section 5.8.

13.2 **Waiver**. AMO may withdraw its notice of an Event of Default if the Recipient, within thirty (30) calendar days of receipt of the notice, either corrects the default or demonstrates, to the satisfaction of AMO in its sole discretion that it has taken such steps as are necessary to correct the default.

13.3 **Remedies on Default**. If AMO declares that an Event of Default has occurred under Section 13.1, after thirty (30) calendar days from the Recipient's receipt of the notice

of an Event of Default, it may immediately terminate this Agreement or suspend its obligation to pay the Funds. If AMO suspends payment, it may pay suspended Funds if AMO is satisfied that the default has been cured.

13.4 **Repayment of Funds**. If AMO declares that an Event of Default has not been cured to its exclusive satisfaction, AMO reserves the right to declare that prior payments of Funds become a debt to Canada which the Recipient will reimburse forthwith on demand to AMO for transmission to Canada.

14. CONFLICT OF INTEREST

14.1 **No Conflict of Interest**. The Recipient will ensure that no current member of the AMO Board of Directors and no current or former public servant or office holder to whom any post-employment, ethics and conflict of interest legislation, guidelines, codes or policies of Canada applies will derive direct benefit from the Funds, the Unspent Funds, and any interest earned thereon, unless the provision of receipt of such benefits is in compliance with such legislation, guidelines, policies or codes.

15. NOTICE

15.1 **Notice**. Any notice, information or document provided for under this Agreement will be effectively given if in writing and if delivered by hand, or overnight courier, mailed, postage or other charges prepaid, or sent by email to the addresses in Section 15.3. Any notice that is sent by hand or overnight courier service shall be deemed to have been given when received; any notice mailed shall be deemed to have been received on the eighth (8) calendar day following the day on which it was mailed; any notice sent by email shall be deemed to have been received on the sender's receipt of an acknowledgment from the intended recipient (such as by the "return receipt requested" function, as available, return email or other written acknowledgment), provided that in the case of a notice sent by email, if it is not given on a business day before 4:30 p.m. Eastern Standard Time, it shall be deemed to have been given at 8:30 a.m. on the next business day for the recipient.

15.2 **Representatives**. The individuals identified in Section 15.3 of this Agreement, in the first instance, act as AMO's or the Recipient's, as the case may be, representative for the purpose of implementing this Agreement.

15.3 **Addresses for Notice**. Further to Section 15.1 of this Agreement, notice can be given at the following addresses:

- If to AMO:

  Executive Director
  Canada Community-Building Fund Agreement
  Association of Municipalities of Ontario
  155 University Avenue, Suite 800
  Toronto, ON M5H 3B7

  Telephone: 416-971-9856
  Email: ccbf@amo.on.ca

- If to the Recipient:

  Treasurer
  The City of Temiskaming Shores
  P.O. Box 2050, 325 Farr Drive
  Haileybury, ON P0J 1K0

16. MISCELLANEOUS

16.1 **Counterpart Signature**. This Agreement may be signed (including by electronic signature) and delivered (including by facsimile transmission, by email in PDF or similar format or using an online contracting service designated by AMO) in counterparts, and each signed and delivered counterpart will be deemed an original and both counterparts will together constitute one and the same document.

16.2 **Severability**. If for any reason a provision of this Agreement that is not a fundamental term is found to be or becomes invalid or unenforceable, in whole or in part, it will be deemed to be severable and will be deleted from this Agreement, but all the other terms and conditions of this Agreement will continue to be valid and enforceable.

16.3 **Waiver**. AMO may waive any right in this Agreement only in writing, and any tolerance or indulgence demonstrated by AMO will not constitute waiver of rights in this Agreement. Unless a waiver is executed in writing, AMO will be entitled to seek any remedy that it may have under this Agreement or under the law.

16.4 **Governing Law**. This Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable in Ontario.

16.5 **Survival**. The Recipient agrees that the following sections and provisions of this Agreement shall extend for seven (7) years beyond the expiration or termination of this Agreement: Sections 4, 5.8, 5.9, 6.1, 11.4, 11.5, 12, 13.4 and 16.8.

16.6 **AMO, Canada and Recipient Independent**. The Recipient will ensure its actions do not establish or will not be deemed to establish a partnership, joint venture, principal-

agent relationship, or employer-employee relationship in any way or for any purpose whatsoever between Canada and the Recipient, between AMO and the Recipient, between Canada and a Third Party or between AMO and a Third Party.

16.7 **No Authority to Represent**. The Recipient will ensure that it does not represent itself, including in any agreement with a Third Party, as a partner, employee, or agent of Canada or AMO.

16.8 **Debts Due to AMO**. Any amount owed under this Agreement will constitute a debt due to AMO, which the Recipient will reimburse forthwith, on demand, to AMO.

16.9 **Priority**. In the event of a conflict, the part of this Agreement that precedes the signature of the Parties will take precedence over the Schedules.

16.10 **Complementarity.** The Recipient is to use the CCBF to complement, without replacing or displacing, other sources of funding for municipal infrastructure.

16.11 **Equity**. The Recipient is to consider Gender Based Analysis Plus ("**GBA+**") lenses when undertaking a project.

17. SCHEDULES

17.1 This Agreement, including:

Schedule A	Eligible Investment Categories
Schedule B	Eligible Expenditures
Schedule C	Ineligible Expenditures
Schedule D	The Annual Report
Schedule E	Communications Requirements

constitute the entire agreement between the Parties with respect to the subject matter contained in this Agreement and supersedes all prior oral or written representations and agreements.

18. SIGNATURES

IN WITNESS WHEREOF, AMO and the Recipient have respectively executed, and delivered this Agreement, effective April 1, 2024.

THE CITY OF TEMISKAMING SHORES

By: _____ _____

Name: Date
Title:

_____ _____

Name: Date
Title:

THE ASSOCIATION OF MUNICIPALITIES OF ONTARIO

By: _____ _____

Name: Date
Title: Executive Director

_____ _____

Witness: Date
Title:

SCHEDULE A:
ELIGIBLE INVESTMENT CATEGORIES

1. **Broadband connectivity** – investments in the construction, material enhancement, or renewal of infrastructure that provides internet access to residents, businesses, and/or institutions in Canadian communities.

2. **Brownfield redevelopment** – investments in the remediation or decontamination of a brownfield site within municipal boundaries – provided that the site is being redeveloped to construct a public park for municipal use, publicly owned social housing, or Infrastructure eligible under another investment category listed in this schedule.

3. **Capacity-building** – investments that strengthen the Recipient's ability to develop long-term planning practices as described in Schedule B, item 2.

4. **Community energy systems** – investments in the construction, material enhancement, or renewal of infrastructure that generates energy or increases energy efficiency.

5. **Cultural infrastructure** – investments in the construction, material enhancement, or renewal of infrastructure that supports the arts, humanities, or heritage.

6. **Drinking water** – investments in the construction, material enhancement, or renewal of infrastructure that supports drinking water conservation, collection, treatment, and distribution systems.

7. **Fire halls** – investments in the construction, material enhancement, or renewal of fire halls and fire station infrastructure.

8. **Local roads and bridges** – investments in the construction, material enhancement, or renewal of roads, bridges, tunnels, highways, and active transportation infrastructure.

9. **Public transit** – investments in the construction, material enhancement, or renewal of infrastructure that supports a shared passenger transport system that is available for public use.

10. **Recreational infrastructure** – investments in the construction, material enhancement, or renewal of recreational facilities or networks.

11. **Regional and local airports** – investments in the construction, material enhancement, or renewal of airport-related infrastructure (excluding infrastructure in the National Airports System).

12. **Resilience** – investments in the construction, material enhancement, or renewal of built and natural infrastructure assets and systems that protect and strengthen the resilience

of communities and withstand and sustain service in the face of climate change, natural disasters, and extreme weather events.

13. **Short-line rail** – investments in the construction, material enhancement, or renewal of railway-related infrastructure for carriage of passengers or freight.

14. **Short-sea shipping** – investments in the construction, material enhancement, or renewal of infrastructure related to the movement of cargo and passengers around the coast and on inland waterways, without directly crossing an ocean.

15. **Solid waste** – investments in the construction, material enhancement, or renewal of infrastructure that supports solid waste management systems (including the collection, diversion, and disposal of recyclables, compostable materials, and garbage).

16. **Sport infrastructure** – investments in the construction, material enhancement, or renewal of amateur sport infrastructure (facilities housing professional or semi-professional sports teams are ineligible).

17. **Tourism infrastructure** – investments in the construction, material enhancement, or renewal of infrastructure that attracts travelers for recreation, leisure, business, or other purposes.

18. **Wastewater** – investments in the construction, material enhancement, or renewal of infrastructure that supports wastewater and storm water collection, treatment, and management systems.

Note: Investments in health infrastructure (e.g., hospitals, long-term care facilities, convalescent centres, and senior centres) are not eligible.

SCHEDULE B:
ELIGIBLE EXPENDITURES

Eligible Expenditures will be limited to the following:

1. **Infrastructure investments** – expenditures associated with acquiring, planning, designing, constructing, or renovating a tangible capital asset and any related debt financing charges specifically identified with that asset.

2. **Capacity-building costs** – for projects eligible under the capacity-building category only, expenditures associated with the development and implementation of:

    - Capital investment plans, integrated community sustainability plans, integrated regional plans, housing needs assessments, or asset management plans;

    - Studies, strategies, systems, software, third-party assessments, plans, or training related to asset management;

    - Studies, strategies, systems, or plans related to housing or land use;

    - Studies, strategies, or plans related to the long-term management of infrastructure; and

    - Other initiatives that strengthen the Recipient's ability to improve local and regional planning.

3. **Joint communications and signage costs** – expenditures directly associated with joint federal communication activities and with federal project signage.

4. **Employee costs** – the costs of the Recipient's employees for projects eligible under the capacity-building category only – provided that the costs, on an annual basis, do not exceed the lesser of:

    - 40% of the Recipient's annual allocation (i.e., the amount of CCBF funding made available to the Recipient by AMO under Section 5.5 of this Agreement); or

    - $80,000.

SCHEDULE C:
INELIGIBLE EXPENDITURES

The following are deemed Ineligible Expenditures:

1. **Costs incurred before the Fund was established** – project expenditures incurred before April 1, 2005.

2. **Costs incurred before categories were eligible** – project expenditures incurred:

    - Before April 1, 2014 – under the broadband connectivity, brownfield redevelopment, cultural infrastructure, disaster mitigation (now resilience), recreational infrastructure, regional and local airports, short-line rail, short-sea shipping, sport infrastructure, and tourism infrastructure categories; and.

    - Before April 1, 2021 – under the fire halls category.

3. **Internal costs** – the Recipient's overhead costs (including salaries and other employment benefits), operating or administrative costs (related to planning, engineering, architecture, supervision, management, and other activities normally carried out by the Recipient's staff), and equipment leasing costs – except in accordance with Eligible Expenditures described in Schedule B.

4. **Rebated costs** – taxes for which the Recipient is eligible for a tax rebate and all other costs eligible for rebates.

5. **Land costs** – the purchase of land or any interest therein and related costs.

6. **Legal fees**.

7. **Routine repair or maintenance costs** – costs that do not result in the construction, material enhancement, or renewal of a tangible capital asset.

8. **Investments in health infrastructure** – costs associated with health infrastructure or assets (e.g., hospitals, long-term care facilities, convalescent centres, and senior centres).

9. **Investments in professional or semi-professional sports facilities** – costs associated with facilities used by professional or semi-professional sports teams.

SCHEDULE D:
ANNUAL REPORT

The Annual Report may include – but is not necessarily limited to – the following information pertaining to the previous fiscal year:

1. **Financial information** – and particularly:
    - Interest earnings and investment gains – in accordance with Section 5.7;
    - Proceeds from the disposal of assets – in accordance with Section 12.1;
    - Outgoing transfers – in accordance with Sections 5.3 and 5.4;
    - Incoming transfers – in accordance with Section 5.3; and
    - Amounts paid – in aggregate for Eligible Expenditures on each Eligible Project.
2. **Project information** – describing each Eligible Project that started, ended, or was ongoing in the reporting year.
3. **Results** – and particularly:
    - Expected outputs and outcomes for each ongoing Eligible Project;
    - Outputs generated and outcomes achieved for each Eligible Project that ended construction in the reporting year; and
    - Housing outcomes resulting from each Eligible Project that ended construction in the reporting year, and specifically:
        i. The number of housing units enabled, supported, or preserved; and
        ii. The number of affordable housing units enabled, supported, or preserved.
4. **Other information** – such as:
    - Progress made in the development and implementation of asset management plans and systems; and
    - The impact of the CCBF on housing pressures tied to infrastructure gaps, the housing supply, and housing affordability.

SCHEDULE E:
COMMUNICATIONS REQUIREMENTS

1. COMMUNICATIONS ACTIVITIES

1.1 **Scope**. The provisions of this Schedule apply to all communications activities related to any Funds and Eligible Projects.

1.2 **Definition**. Communications activities may include (but are not limited to) public or media events, news releases, reports, web articles, blogs, project signs, digital signs, publications, success stories and vignettes, photo compilations, videos, advertising campaigns, awareness campaigns, editorials, award programs, and multi-media products.

2. INFORMATION SHARING REQUIREMENTS

2.1 **Notification requirements**. The Recipient must report all active Eligible Projects to AMO in advance of construction each year. Reports must be submitted in an electronic format deemed acceptable by AMO.

2.2 **Active Eligible Projects**. Active Eligible Projects are those Eligible Projects that either begin in the current calendar year or are ongoing in the current calendar year.

2.3 **Information required**. The report must include, at a minimum, the name, category, description, expected outcomes, anticipated CCBF contribution, anticipated start date, and anticipated end date of each active Eligible Project.

3. PROJECT SIGNAGE REQUIREMENTS

3.1 **Installation requirements**. Unless otherwise approved by Canada, the Recipient must install a federal sign to recognize federal funding for each Eligible Project in accordance with design, content, and installation guidelines provided by Canada.

3.2 **Permanent signs, plaques, and markers**. Permanent signage, plaques, and markers recognizing municipal or provincial contributions to an Eligible Project must also recognize the federal contribution and must be approved by Canada.

3.3 **Responsibilities**. The Recipient is responsible for the production and installation of Eligible Project signage in accordance with Section 3 of this Schedule E, except as otherwise agreed upon.

3.4 **Reporting requirements**. The Recipient must inform AMO of signage installations in a manner determined by AMO.

4. DIGITAL COMMUNICATIONS REQUIREMENTS

4.1 **Social media**. AMO maintains accounts dedicated to the CCBF on several social media networks. The Recipient must @mention the relevant account when producing content that promotes or communicates progress on one or more Eligible Projects. AMO's CCBF-dedicated social media accounts are identified on www.buildingcommunities.ca.

4.2 **Websites and webpages**. Websites and webpages created to promote or communicate progress on one or more Eligible Projects must recognize federal funding using either:

a) A digital sign; or

b) The Canada wordmark and the following wording (as applicable):

i. "This project is funded in part by the Government of Canada"; or

ii. "This project is funded by the Government of Canada".

The Canada wordmark or digital sign must link to www.infrastructure.gc.ca. Guidelines describing how this recognition is to appear and language requirements are posted at http://www.infrastructure.gc.ca/pub/signage-panneaux/intro-eng.html.

5. REQUIREMENTS FOR MEDIA EVENTS AND ANNOUNCEMENTS

5.1 **Definitions**. Media events and announcements include, but are not limited to, news conferences, public announcements, and the issuing of news releases to communicate the funding of Eligible Projects or achievement of key milestones (such as groundbreaking ceremonies, grand openings, and completions).

5.2 **Authority**. Canada, AMO, or the Recipient may request a media event or announcement.

5.3 **Notification requirements**. Media events and announcements must not proceed without the prior knowledge and agreement of AMO, Canada, and the Recipient.

5.4 **Notice**. The requester of a media event or announcement must provide at least fifteen (15) business days' notice to other parties of their intention to undertake such an event or announcement. If communications are proposed through a news release with no supporting event, Canada additionally requires five (5) business days with the draft news release to secure approvals and confirm the federal representative's quote.

5.5 **Date and location**. Media events and announcements must take place at a date and location that is mutually agreed to by the Recipient, AMO and Canada.

5.6 **Representatives**. The Recipient, AMO, and Canada will have the opportunity to participate in media events and announcements through a designated representative. Each Party will choose its own designated representative.

5.7 **Responsibilities**. AMO and the Recipient are responsible for coordinating all onsite logistics for media events and announcements unless otherwise agreed on.

5.8 **No unreasonable delay**. The Recipient must not unreasonably delay media events and announcements.

5.9 **Precedence**. The conduct of all joint media events, announcements, and supporting communications materials (e.g., news releases, media advisories) will follow the Table of Precedence for Canada.

5.10 **Federal approval**. All joint communications material related to media events and announcements must be approved by Canada and recognize the funding of all contributors.

5.11 **Federal policies**. All joint communications material must reflect Canada's Policy on Official Languages and the Policy on Communications and Federal Identity.

5.12 **Equal visibility**. The Recipient, Canada, and AMO will have equal visibility in all communications activities.

6. PROGRAM COMMUNICATIONS

6.1 **Own communications activities**. The Recipient may include messaging in its own communications products and activities with regards to the use of Funds.

6.2 **Funding acknowledgements**. The Recipient must recognize the funding of all contributors when undertaking such activities.

7. OPERATIONAL COMMUNICATIONS

7.1 **Responsibilities**. The Recipient is solely responsible for operational communications with respect to the Eligible Projects, including but not limited to, calls for tender, construction, and public safety notices. Operational communications as described above are not subject to the federal official languages policy.

7.2 **Federal funding acknowledgement**. Operational communications should include, where appropriate, the following statement (as appropriate):

a) "This project is funded in part by the Government of Canada"; or

b) "This project is funded by the Government of Canada".

7.3 **Notification requirements**. The Recipient must share information promptly with AMO should significant emerging media or stakeholder issues relating to an Eligible Project arise. AMO will advise the Recipient, when appropriate, about media inquiries received concerning an Eligible Project.

8. COMMUNICATING SUCCESS STORIES

8.1 **Participation requirements**. The Recipient must work with Canada and AMO when asked to collaborate on communications activities – including, but not limited to, Eligible Project success stories (including positive impacts on housing), Eligible Project vignettes, and Eligible Project start-to-finish features.

9. ADVERTISING CAMPAIGNS

9.1 **Responsibilities**. The Recipient may, at its own cost, organize an advertising or public information campaign related to the use of the Funds or Eligible Projects, provided that the campaign respects the provisions of this Agreement.

9.2 **Notice**. The Recipient must inform Canada and AMO of its intention to organize a campaign no less than twenty-one (21) working days prior to the launch of the campaign.

The Corporation of the City of Temiskaming Shores

By-law No. 2024-078

Being a by-law to adopt in principle, the Temiskaming Shores Downtown Transportation Study report

Whereas under Section 8 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, the powers of a municipality shall be interpreted broadly to enable it to govern its affairs as it considers appropriate and to enhance the municipality's ability to respond to municipal issues; and

Whereas under Section 9 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act; and

Whereas under Section 10 (1) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a single-tier municipality may provide any service or thing that the municipality considers necessary or desirable for the public; and

Whereas Council considered Administrative Report No. PW-018-2024 at the July 9, 2024 Committee of the Whole meeting, and directed staff to prepare the necessary by-law to adopt in principle, the Temiskaming Shores Downtown Transportation Study report as printed, for consideration at the July 9, 2024, Regular Council meeting.

Now therefore the Council of The Corporation of the City of Temiskaming Shores enacts the following as a by-law:

1. That Council for the City of Temiskaming Shores hereby adopts adopt in principle, the Temiskaming Shores Downtown Transportation Study, attached hereto as Schedule "A" and forming part of this by-law.

2. That the Clerk of the City of Temiskaming Shores is hereby authorized to make any minor modifications or corrections of an administrative, numerical, grammatical, semantical or descriptive nature to the by-law and schedule, after its passage, where such modifications or corrections do not alter the intent of the by-law or its associated schedules.

Read a first, second and third time and finally passed this 9th day of July, 2024.

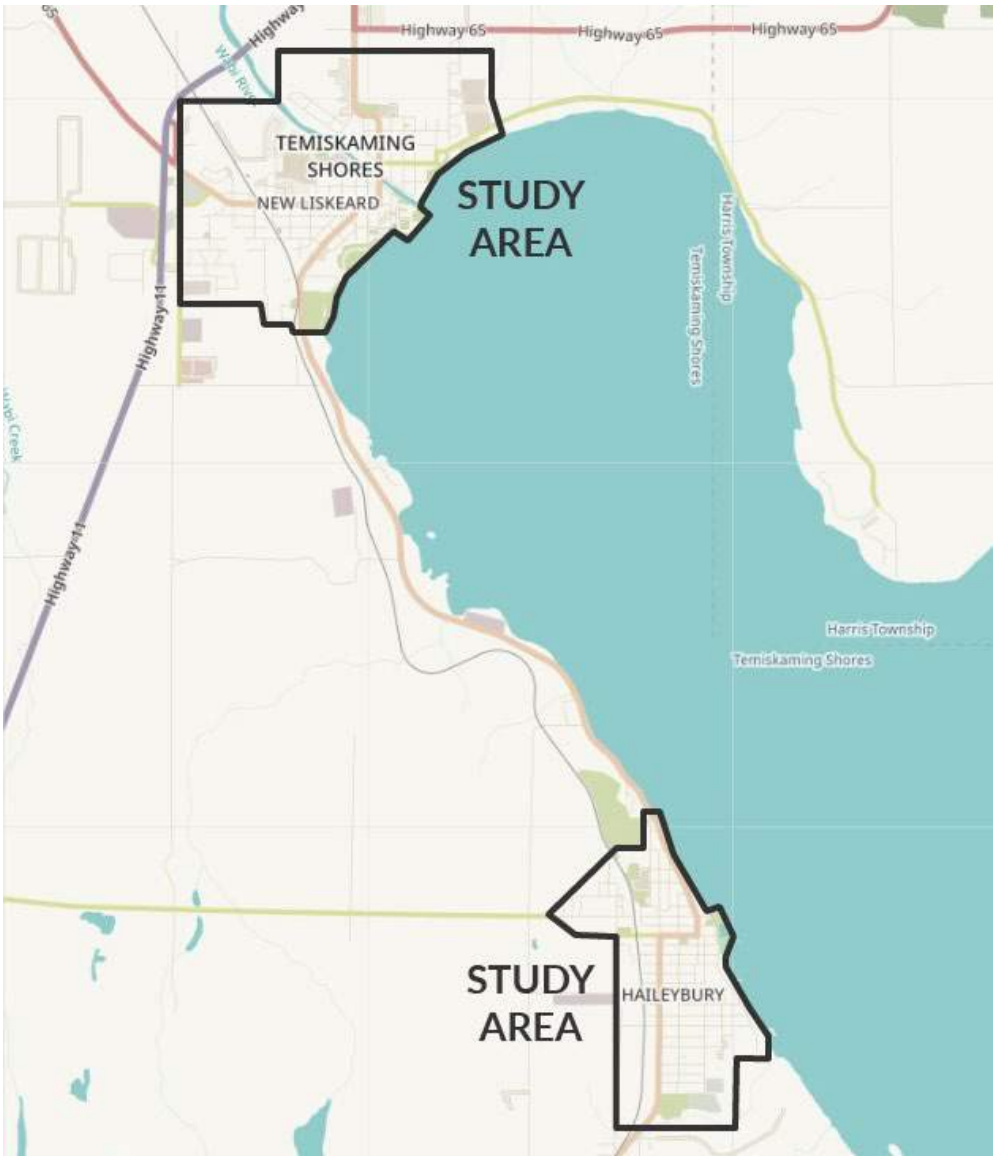
Mayor

Clerk

Schedule A to

By-law No. 2024-078

Being a by-law to adopt the Temiskaming Shores Downtown Transportation Study report



Mobility Plan Report

City of Temiskaming Shores Downtown Cores Transportation Study

Prepared: May 2024 — TYLin Contract #10777

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Appendix C Future Do-Nothing Scenario Synchro Reports

Appendix D Future Do-Nothing Scenario Signal Warrants

Appendix E Future Do-Nothing Scenario AWSC Warrants

Appendix F Existing Line-of-Sight Analysis

Appendix G Conceptual Design Roadway Linework

Appendix H Costing Framework

*(*All appendices can be found in standalone documents)*

Glossary of Terms:

Level of Service (LOS): A measure of the average vehicular delay at a road intersection. Ranging from LOS 'A' to LOS 'F'. LOS 'A' is the 'best' level of operation for an intersection representing little or no delay and generally free flow conditions where the general level of comfort and convenience experienced by motorists is excellent. At the other end of the spectrum LOS 'F' represents an at- and over-capacity condition usually associated with heavy congestion, and occasionally severe peak period delays and queuing. It should be noted that operations measured as LOS 'A' up to and including LOS 'E' are considered 'acceptable' in most urban (and in many rural) environments.

Complete Streets: A term to define streets which contain a multitude of safety, accessibility, and sustainable features. These types of streets allow all types of users with various mobility preferences and needs to easily traverse an area. Typical Complete Streets offer features such as wide sidewalks, cycle lanes, traffic calming features, planters, and street furnishing.

Capacity: A numerical quantity defining the maximum number of vehicles which can travel on the road during a unit of time.

Arterial Road: A type of road which connects traffic from access-controlled freeways/highway onto collector roads.

Collector Road: A type of road which connects arterial roads to local roads and services transition of traffic from major to minor flows.

Local Road: A type of road which connects traffic exciting collector roads towards their final destination; usually residential private properties.

Multi-Modal: A variety of modes of travel including vehicular, transit, cycling, walking, etc.

Active Transportation (AT): Any type of non-motorized travel. Including: walking and cycling.

Origin-Destination: Term used to define the type of travel between an origin point to the destination point. Often used as measure of the flow of traffic between start and end points.

Peak Hour: An hour-long period which observes the highest traffic flow during rush hour.

Right-of-Way (ROW): A general term to define the boundary of land, road, or property, usually in a strip, acquired for and/or utilized for transportation purposes.

Shared Use Path: A path which can be traversed on by various types of transportation modes.

Access Management: Techniques for managing traffic flow in efforts of reducing congestion, increasing safety, reducing pollution. Methods include limiting highway entry/exit ramps, use of traffic signals, implementation of local by-laws and policies, etc.

Transportation/Travel Demand Management (TDM): The application of multiple strategies and policies to increase the efficiency of transportation networks. Serves the goal of reducing travel demand, redistributing demand of periods of time and encouraging a balanced modal presence within a road network.

Signalized Intersection: refers to any road intersection with at least one traffic signal to control vehicular traffic flow.

Stop-controlled Intersection: refers to any road intersection with at least one stop sign to control vehicular traffic flow.

1 Introduction

The City of Temiskaming Shores (City) initiated a Transportation Study (Study) to assess the current transportation network and identify improvements to its two downtown cores in New Liskeard and Haileybury.

This document, which is being referred to as the Mobility Plan Report will be the City's blueprint for strategic transportation planning and direction for the future. It aims to establish an improved transportation system in the City to better serve residents, employers, employees, and visitors while accommodating all modes of transportation including public transit, commuter travel, commercial vehicles, and active transportation.

There is a unique opportunity through this study to create a real sense of place, a community where people choose to meet, dine, and stay for a while instead of driving through; a city where people can safely and pleasantly travel with two feet or two wheels.

Accordingly, the existing conditions section of this report documents a thorough review and assessment of the current transportation network, including traffic travel patterns, traffic analysis, travel demand, transit, active transportation, infrastructure conditions.

Thereafter, two phases for the development of transportation network improvements are presented and recommendations for improvements to the downtown cores of the City are described.

Finally, public and stakeholder engagement was a key tool used to develop transportation solutions. Consultation is typically conducted by transportation planning agencies in collaboration with relevant stakeholders, including local governments, transportation agencies, community organizations, and the public. Inclusion of opportunities for public input and engagement helped to ensure that the report accurately reflects the needs, concerns, and aspirations of the community. This Mobility Plan Report documents the public consultation that has been undertaken for this project.

2 Vision Statement

This Study will help give direction to create and improve opportunities to connect people to businesses and community spaces in the City of Temiskaming Shores by balancing the needs of all modes of transportation throughout the City. The Study followed a Complete Streets approach, as requested by the City, and a description of principles are described in Section 5. The goals of the Study included:

- Providing the best transportation service for all users;
- Accommodating land use and urban design;
- Incorporating Active Travel; and
- Providing implementation feasibility, estimated cost of construction and phasing strategy.

3 Methodology

This section of describes the guiding principles and approach that has been used to investigate deficiencies in the current transportation network and develop solutions for the downtown cores.

3.1 Road Safety Philosophy

The road safety philosophy for this report centers around Vision Zero. The Vision Zero approach focuses on enhancing safety for all road users through strategies such as speed reduction, educational initiatives, and law enforcement to encourage safer behavior on the roads. Originating in Sweden in 1997, this approach has gained global acceptance, being adopted by numerous cities worldwide. A fundamental tenet of Vision Zero is the recognition that human errors are inevitable, necessitating the design and operation of the transportation system to minimize the adverse consequences of such errors. This approach hinges on data-driven decision-making, aiming to establish a secure and inclusive transportation network that safeguards all users, with particular attention given to the most vulnerable individuals, such as pedestrians and cyclists.

3.2 Complete Streets Framework

A Complete Streets approach is a philosophy in transportation and urban planning aimed at designing streets and transportation networks that are safe, accessible, and inclusive for all users, regardless of their mode of travel, age, ability, or socioeconomic status. This approach emerged in response to decades of prioritizing streets for motorized vehicles, often neglecting the safety and needs of pedestrians, cyclists, and public transit users. In essence, Complete Streets are those that can be safely and comfortably utilized by all road users, irrespective of their mode of travel, age, physical ability, or the time of day; this principle is applicable to various street types and physical contexts (Transportation Association of Canada, 2015). The popularity of this approach has grown as a means to address challenges like traffic congestion, road safety, public health, and the demand for more sustainable and livable communities. The concept of Complete Streets is increasingly gaining technical, political, and public significance in Canadian communities (Transportation Association of Canada, 2015). For more information on the Complete Streets Framework, please see **Section 5**.

3.3 Transportation Network Analysis Methodology

3.3.1 Traffic

Based on consultation with the City, in additional to analyzing the existing (2023) traffic operations in the City, a 5-year horizon year of 2028, and a 20-year horizon year of 2043 were selected as study horizon years for traffic operations analysis. It consisted of the following evaluations:

- A review of the existing (2023) traffic operations of the study area network;
- A summary of traffic operations under the future 5-Year Horizon (2028) and 20-Year Horizon (2043) conditions;
- A review of Signal Warrants for all stop-controlled intersections for the future 5-Year Horizon (2028) and 20-Year Horizon (2043) conditions; and

- A review of All-Way-Stop-Control (AWSC) Warrants for Two-Way-Stop-Control (TWSC) intersections for the future 5-Year Horizon (2028) and 20-Year Horizon (2043) conditions.

Detailed information on the traffic operations analysis completed as part of developing this Mobility Plan report is documented in Section 6.2. In addition, the traffic analysis reports can be found in **Appendices A, C, D and E**.

3.3.2 Safety

The comprehensive examination of speed and collision data identified critical hotspots within the existing transportation network. This data-driven approach helped identify areas with heightened safety concerns, providing valuable insights for City staff and members of the public. By leveraging speed and collision data, it offered a systematic means of addressing safety issues, facilitating targeted interventions, and enhancing overall road safety. This approach ensured that safety considerations are not only prioritized but are also addressed with accuracy, promoting a safer and more secure transportation network for all users. A summary of the road safety data review is described in **Section 0**.

3.3.3 Active Transportation (AT)

The active transportation review focused on identifying missing links and enhancing the safety, accessibility, and connectivity of infrastructure. The methodology not only prioritizes safety but also considers the accessibility needs of diverse users, fostering a more inclusive and interconnected transportation system. A review of the City's existing AT network is documented in **Section 6.4**.

3.3.4 Parking

The methodology for parking revolved around ensuring accessibility for businesses and destinations, while carefully balancing the needs of all transportation modes within the public right-of-way (ROW). This approach involved a nuanced evaluation of parking requirements to support economic activities and cater to the diverse needs of various modes of transportation. Striking a balance was crucial, as it enables efficient parking solutions that contribute to the accessibility and vitality of businesses, while also accommodating the broader spectrum of transportation options within the public realm. It aims to optimize parking configurations to meet the demands of a dynamic urban environment, promoting a balanced coexistence of diverse transportation needs. A review of the City's existing parking conditions is documented in **Section 6.5**.

3.3.5 Transit

The methodology for public transit centers on identifying missing links, improving accessibility, enhancing connectivity, and bolstering the overall attractiveness of public transportation options. The focus on accessibility ensures that public transportation is readily available to a diverse range of users, promoting inclusivity and addressing the needs of various communities. Through this comprehensive approach, the analysis strived to create a more integrated and efficient public transit network that will encourage increased ridership and contribute to sustainable urban mobility in the City. Review of the existing transit network gaps and opportunities are summarized in **Section 6.6.**

4 Planning Policy Review

This section provides a summary of the various municipal and regional policies that have been reviewed to provide context and guide the development of this Mobility Plan Report. These include the City's Active Transportation Plan (2021), the Recreation Master Plan (2020), the Official Plan (2015), and the Province's Growth Plan for Northern Ontario (2011). Other documents also reviewed for this study include the City's Zoning By-Law, the Municipal Cultural Plan, and the Accessibility for Ontarians with Disabilities Act (AODA).

4.1 Active Transportation Plan (2021)

The City has a dedicated community interested in active transportation. In 2004, community members formed STATO (South Temiskaming Active Travel Organization). A year later the City approved a multi-use trail/linear park and a by-law to establish an Active Travel maintenance program for the City was adopted. Construction of the paved bike path began in 2008 and more than 21km have been completed.

The City created its first Active Transportation Plan in 2021 with the following vision statement:

"Active Transportation in Temiskaming Shores will be safe and accessible and contribute to a healthy, sustainable, and supportive community where people of all ages and abilities can participate."

To support the vision statement, the Active Transportation Plan lays out objectives that support achieving the vision:

- **Enhance Safety**: Ensure that all trips in Temiskaming Shores, regardless of travel choice, feel safe.
- **Improve Maintenance**: Ensure that existing infrastructure for active transportation is well maintained, providing a high level of service at all times of the year.
- **Create Connectivity**: Connect the City's major population centres and destinations and fill gaps in the City's existing networks.
- **Improve Transportation Equity**: Ensure that residents of all ages, abilities, and backgrounds can move safely and conveniently through the City using any transportation mode that they choose.
- **Raise Awareness**: Leverage the strong sense of community in the City of Temiskaming Shores to develop a culture of care around active transportation.

Main goals of the Active Transportation Plan include:

- Enhance connectivity between trail networks, sidewalks, and on-road cycling routes;
- Build on guidance and recommendations of existing plans, particularly the City's Recreation Master Plan;
- Broaden the approach to active transportation;
- Provide opportunities for residents and stakeholders to help shape the City's approach

to promoting active transportation;

- Strengthen the City's reputation as an ideal tourist destination, to create new economic opportunities for existing and prospective local businesses.

The Active Transportation Plan also provides a summary of the existing AT network which shows that the highest proportion of the AT network consists of off-road multi-use trails. Overall, there are 80 km of existing active transportation infrastructure, and the plan proposes an additional 57.2 km for the network (see **Table 4-1**).

Table 4-1: Summary of Existing and Proposed Active Transportation Network

Facility	Existing KM	Proposed KM	Total KM
Off-Road Multi-Use Trails	43.5	5.5	**49.0**
In-Boulevard Multi-Use Path	-	1.6	**1.6**
Buffered Bike Lane	-	3.7	**3.7**
Buffered Bike Lane or Two-Way on-Road Facility	-	1.4	**1.4**
Bike Lane	-	0.4	**0.4**
Buffered Paved Shoulder	-	6.6	**6.6**
Paved Shoulder	-	12.3	**12.3**
Sharrow Markings	0.1	1.1	**1.2**
Signed Route	-	8.0	**8.0**
Candidate Locations for Pilot Projects	-	0.2	**0.2**
Candidate Locations for Traffic Calming Measures	-	3.6	**3.6**
Pedestrian Bridge	-	0.1	**0.1**
Sidewalks	36.5	12.7	**49.2**
Total	**80.1**	**57.2**	**137.3**

Source: Active Transportation Plan, 2021

A public survey was conducted as part of the consultation for the Active Transportation Plan, and it concluded that the major barriers for people who wish to commute using a bicycle are speed and noise of vehicles and intersection safety. The plan lists the main barriers to using active transportation as follows:

- Lack of sidewalks or trails
- Conditions of sidewalks or trails
- Speed and noise of motor traffic
- Lack of dedicated on-street cycling facilities
- Intersection safety

Based on Stakeholder interviews, the Active Transportation Plan also identified common themes concerning active transportation and presented them in a "Strength-Weaknesses-Opportunities-Threats" (SWOT) analysis in **Table 4-2**:

Table 4-2: Stakeholder Interview SWOT Analysis Summary

Strengths	Weaknesses	Opportunities	Threats
Existing STATO Trail	Speeds on connecting corridors	Bike parking and beautification in downtown areas	Road widths may limit options, particularly on rural and olde roads
Strong history of local fundraising and funding applications	Rorke, Lakeshore, Whitewood, Armstrong	Multi-modal integration: more walk/bike/transit trips	Low revenue and financial capacity mean improvements are often reliant on grants and other funding streams
Encouragement and education efforts	Few All Ages and Abilities (AAA) routes for walking and cycling	Expand bike exchange into bike hub/bike rental	Many programs rely on volunteers - staff support may need to expand
Radio, newspaper, social media, bike festival, etc.	Lack of seating, shade & bike parking in downtown areas	Broaden BFCC mandate to focus on active transportation	
Supportive staff and local stakeholders	Crossing Lakeshore in Haileybury	Traffic calming and speed limit reductions	
Local parks provide good access to nature and trails	Wabi Bridge	Introduce wayfinding and signage to encourage new ridership	
Strong transit ridership	School connectivity to existing trails	Trail apps and updated information	
Winter maintenance of sidewalks	Lack of safe access to downtowns		
Existing work done by the committee			

Source: Active Transportation Plan, 2021

Residents were also able to make their opinions known through participating online in a Miro Board session. The comments from the New Liskeard residents stressed the importance of designing active transportation networks that better service local schools, local services, and institutions. In addition, comments mentioned improving the crossing over the Wabi River, considering road diets, and applying safe design practices that are inclusive of all ages. Comments from the residents of Haileybury stressed providing active transportation connections to Northern College Campus, prioritizing facilities and connections benefiting youth, and upgrading three-way stops to all-way stop controls.

4.2 The Recreation Master Plan (2020)

The City developed this policy document to identify the City's recreation requirements and assists Council and staff in determining future recreation service delivery, investment, and development. Investing in universal access to recreation is important because it strengthens a community. Enhancing recreation for all ages across the City supports the following positive community outcomes:

- Building life-long healthy and active habits;
- Generating opportunities for social connection;
- Supporting a sense of belonging and family well-being;
- Bringing diverse populations together;
- Establishing a sense of place;
- Promoting inclusivity and equity;
- Contributing to environmental stewardship and sustainability.

Creating a strong local recreation network provides many ancillary economic benefits as well:

- Retaining residents who feel an attachment to the community;
- Attracting new residents who desire a high quality of life;
- Capitalizing on a growing economic sector that creates jobs;
- Adding value to existing properties and new developments constructed close to recreation assets;
- Bringing visitors who are interested in recreation-related tourism; and,
- Drawing people to downtowns when facilities are clustered in the core.

4.3 Official Plan (2015)

4.3.1 Town Centres

As per the 2015 Official Plan (OP), main streets are the core of the communities of New Liskeard and Haileybury. They are areas that set the tone and create the identity and image of the community to its residents and to visitors. Each of the downtown cores has a different role. New Liskeard's town centre is the City's primary commercial area with an extensive variety of commercial uses intermixed with public service and residential uses. Haileybury's town centre serves a more localized market area with a limited scope of commercial services intermixed with institutional uses (i.e., courthouse, land registry office) and residential uses.

As per the OP, Town Centres will be recognized for their different roles. New Liskeard's town centre will be promoted and encouraged to be developed as the primary central commercial district in the city. Haileybury's town centre will be recognized for providing services to a local market within a largely residential setting.

The intent of the OP is to strengthen the role of New Liskeard's town centre as key to the economic health of the City through the following policies:

- New Liskeard's town centre will be sustained as the City's primary commercial area, characterized as an area of mixed-use development dominated by a full range of retail, service commercial uses, financial, professional, and personal service uses and upper storey commercial and residential uses. Large format retail stores will be strongly encouraged to locate in the town centre;
- Existing residential and other uses will also be permitted; however, new standalone residential uses will be discouraged;
- On the western perimeter of New Liskeard's town centre, on Whitewood Avenue, new retail format commercial uses will also be permitted as well as a mixed-use node of existing commercial, residential, and industrial uses along Rokeby, Scott, and Jaffray Streets, and Whitewood Avenue. Residential buildings may be converted to professional offices, personal service uses and small-scale commercial uses between Wellington, Paget and Scott Streets provided any impacts of conversions on abutting residential uses are addressed (for example parking and access);
- Haileybury's town centre will be developed as a local commercial centre where the scope of land uses will include retail, personal and service commercial uses, residential and public service uses. Residential uses will include standalone and upper storey dwellings;
- Community improvement will be used to help create vibrant town centres through initiatives and programs to rehabilitate infrastructure; incorporate an accessible street design; enhance streetscaping (for example benches, waste receptacles, pocket parks, landscaping, boulevard shade trees, pedestrian scale or heritage lighting, public art and murals, bicycle parking); refurbish commercial façades; retrofit upper storeys for residential intensification; facilitate affordable housing; improve signage; introduce gateways at entry points to the downtown; increase off-street parking; and bury overhead wiring. Council may use financial incentives for retrofitting brownfield sites, where applicable and to encourage improvements to private properties. Property standards will apply to sustain the building stock in good repair;
- Exemptions to parking standards may be permitted, where appropriate;
- Adaptive re-use of buildings will be encouraged. New street level residential uses will be prohibited on Whitewood Avenue and Armstrong Street between the Post Office and the bridge;
- The City will encourage accessibility improvements to all buildings in the town centre;
- Redevelopment and expansions to existing developed lands will be encouraged subject to available servicing, access, and an adequate lot size for the intended use; and,
- The character of the existing street profiles will be maintained with respect to building height, architectural compatibility, zero front and side yard setbacks, and width of sidewalks.

4.3.2 Urban Design Principles

Good urban design seeks to create a safe, functional, and attractive built environment. The City is committed to achieving a high standard of urban design through applying the following urban design principles in the review and approval of development applications. The following principles from the OP have been applied in developing this Mobility Pan Report.

- Create streets and public places that are safe, lively, and comfortable:
  - Design street lighting and site lighting for clarity of night-time visibility for pedestrians, cyclists, and motorists;
  - Create play areas and public places or common areas (for examples squares, patios, parkettes, speakers corner and other public gathering points and places) which provide opportunities for social interaction, public events, and recreation or leisure activities and which are clearly accessible to all users and visible with multiple entry and exit points;
  - Provide unobstructed sight lines along pedestrian and cyclist routes and motor vehicle access and exits;
  - Encourage mixed use activity areas to create 'busy' public spaces that permit casual surveillance or 'eyes-on-the-street';
  - Separate pedestrian, cycling, and motorized activities;
  - Create gateways to neighborhoods.
- Promote pedestrian friendly design:
  - Plan for convenient walking distances to transit and parks;
  - Create dedicated walkways and pathways/trails to link activity nodes (for example home-to-work);
  - Provide sidewalk linkages and crosswalks;
  - Ensure the street network accommodates all intended users to ensure they can interact and move safely;
  - Incorporate traffic calming elements to promote pedestrian and cyclist movement;
  - Provide adequate lighting and uniform coverage in parking areas and pedestrian walkways.

4.3.3 Transportation

In accordance with the Official Plan, the City will:

- Liaise with Ontario Ministry of Transportation (MTO) to designate and integrate cycle routes on provincial highways and linkages to the City's cycling routes.
- Control access, parking, truck routes, and traffic signalization as measures to ensure

efficient movement of traffic, transit, pedestrians, and cyclists. Traffic management studies may be required for development to assess traffic impacts and needed improvements (for example road widening, taper lanes, intersection improvements, traffic calming, signalization, crosswalks, and noise/vibration).

- Where practical, the design of new streets or redevelopment of existing streetscapes will include the integration of active travel facilities for pedestrians, cyclists, and public transit.
- In the design of the street network, preference will be given to a grid pattern wherever feasible, to provide for ease of movement within the community, to encourage walkability and to avoid cul-de-sacs except where environmental features or previous development patterns prevent through streets.
- Public transit services provide an environmentally and fiscally responsible alternative to the private automobile. The City will promote transit ridership through land use policies which increase the density of development and tailor the frequency, routing, and safe use of transit services to residential neighborhoods and employment areas.

4.4 Connecting the North (2020)

The Ministry of Transportation of Ontario (MTO) completed the "Connecting the North: A Draft Transportation Plan for Northern Ontario" (December 2020), which aims to build a better transportation network for Northern Ontario. The Plan includes six goals, which are:

1. Getting people moving and connecting communities
   - This includes widening Highway 69, improving intercommunity bus service, and making progress on the passenger rail service in the North.
2. Enabling economic opportunities
   - Supporting economic recovery, advancing eight rehabilitation projects in Northern Ontario to create jobs and stimulate local economies.
3. Keeping people safe and providing reliable transportation options
   - Working with the private sector, Indigenous communities, and organizations to raise awareness of human trafficking as well as investing in rehabilitated rest areas in the North.
4. Preparing for the future
   - Transform the transportation network with new and innovative technology.
5. Maintaining a sustainable transport system
   - Encouraging economic growth and protecting the environment. Ensure transportation infrastructure considers climate change impacts and risks.
6. Reliable travel options for remote and Far North communities
   - Supporting remote and northern airports, supporting Indigenous communities.

4.5 Growth Plan for Northern Ontario (2011)

This plan was developed by the Ontario Ministry of Northern Development, Mine and Forestry in 2011 provide guidelines to align provincial decision-making and investment for economic and population growth in Northern Ontario for then next 25-year.

Most residents and industries in Northern Ontario use the highway network as their primary means of daily travel. This first goal outlined in this plan noted continued investment in highways to get people where they need to go and support economic growth. It is important not only to connect Northern Ontario with other areas of the province and national and international destinations and markets, but also to ensure people and goods can move efficiently and safely throughout the North.

This Plan is in part an economic development plan, an infrastructure investment plan, a labour market plan, and a land-use plan. It is a plan that recognizes the interconnected contribution of people, communities, infrastructure, and the environment to a successful and sustainable economy. It is a plan that recognizes and builds upon the unique characteristics of Northern Ontario, including a bilingual workforce in many communities.

This Plan has been prepared under the *Places to Grow Act, 2005*, which sets out the following purposes:

- to enable decisions about growth to be made in ways that sustain a robust economy, build strong communities, and promote a healthy environment and a culture of conservation.
- to promote a rational and balanced approach to decisions about growth that builds on community priorities, strengths, and opportunities and makes efficient use of infrastructure.
- to enable planning for growth in a manner that reflects a broad geographical perspective and is integrated across natural and municipal boundaries; and,
- to ensure that a long-term vision and long-term goals guide decision-making about growth and provide for the co-ordination of growth policies among all levels of government.

The Province of Ontario will work with communities to prepare resources and tools to assist communities to participate in regional economic planning.

5 Complete Streets Framework

5.1 Background

A Complete Streets approach is a transportation and urban planning philosophy that seeks to design streets and transportation networks to be **safe, accessible, and accommodating for all users**, regardless of their mode of travel, age, ability, or socioeconomic status as depicted in **Figure 5-1** and further described in **Section 5.4**. This approach emerged as a reaction to decades of designing streets primarily for motorized vehicles, often neglecting the needs and safety of pedestrians, cyclists, and public transit users. The approach gained popularity to address issues such as traffic congestion, road safety, public health, and the desire for more sustainable and livable communities. The concept of Complete Streets is rapidly gaining technical, political, and public importance in Canadian communities (Transportation Association of Canada, 2015).

Figure 5-1: Complete Streets Components

Source: California Bicycle Coalition, 2019

When planning for Complete Streets, all of a municipality's street- and transportation-related policies need to be considered. Planners, designers, and municipalities must also consider how streets and roads should develop over time – a clear priority for the street or road should be defined. In addition, the integration of various municipal street- and transportation-related policies is critical to achieving a cohesive and sustainable framework. As highlighted in the "Complete Streets: Best Policy and Implementation Practices" guide by the Federal Highway Administration (FHWA), the comprehensive approach involves aligning Complete Streets policies with broader land use, economic development, and public health strategies. This integration ensures that transportation planning becomes an integral part of the municipality's overall vision for community development.

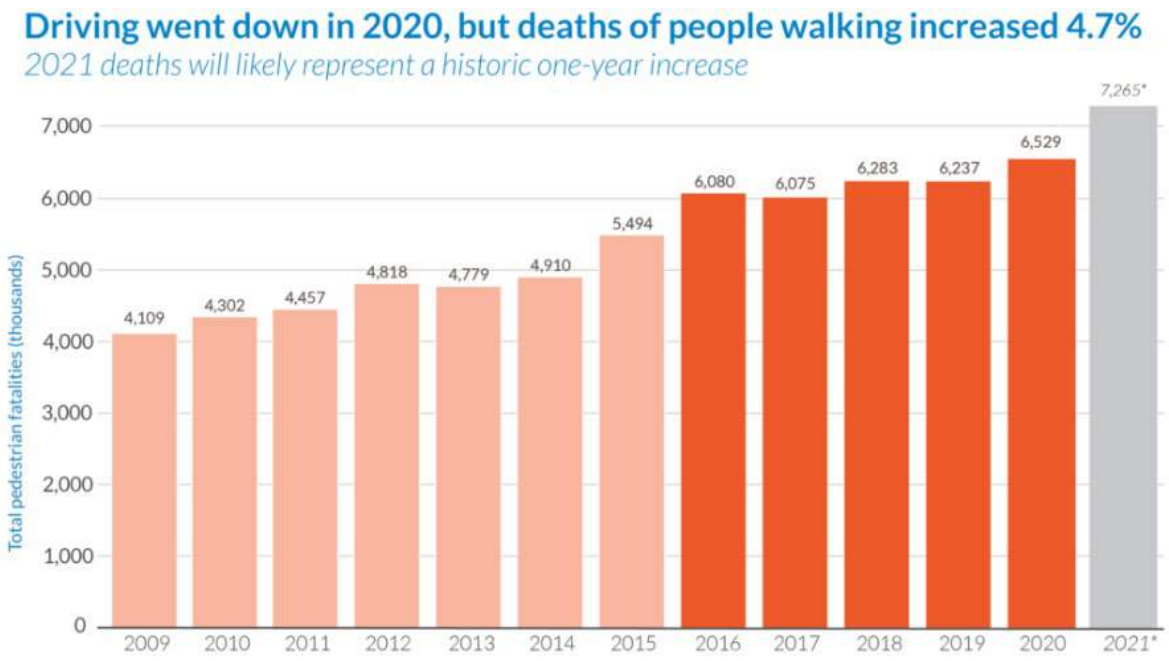
Furthermore, it is essential for planners, designers, and municipalities to consider the evolving nature of streets and roads over time. The "Complete Streets Local Policy Workbook" from Smart Growth America emphasizes the importance of defining clear priorities for each street or road, considering changing community needs, technological advancements, and environmental considerations. This forward-thinking approach ensures that the Complete Streets policy remains adaptable and responsive to the dynamic nature of communities.

5.2 Objectives

5.2.1 Complete Streets and Vision Zero

Why do we need Complete Streets? One of the main reasons is safety. There is an alarming increase in the numbers of people struck and killed while walking as shown in **Figure 5-2**. Speed is the main culprit in these fatalities. Design decisions have often prioritized speed at the expense of safety.

Figure 5-2: Number of Pedestrian Fatalities



Source : Smart Growth America, 2021

One of the best ways to reduce speeds and speeding is through a different approach to street design that prioritizes safety above all else, but especially over vehicle speed. Many design choices of Complete Streets, including continuous sidewalks and cycle tracks, protected intersections, and traffic calming measures are targeted at improving the safety and comfort of all road users. Complete Streets is therefore directly intertwined with the Vision Zero philosophy. Vision Zero aims to eliminate traffic fatalities and severe injuries, emphasizing a holistic approach to safe mobility. Complete Streets focuses on designing to accommodate various modes of transportation seamlessly. The synergy between these concepts is evident in their shared emphasis on creating streets that are inherently safe, accommodating pedestrians, cyclists, and motorists through thoughtful design and policy.

By integrating the principles of Complete Streets with the vision of Vision Zero, communities can develop comprehensive strategies that not only enhance mobility but also significantly contribute to the overarching goal of eliminating traffic-related fatalities and injuries. As the City is currently in the process of integrating their own Vision Zero strategy, this is the perfect opportunity to enhance the Vision Zero strategy by combining it with a Complete Streets approach, thereby creating a stronger framework and policy for the future safety.

5.2.2 Additional Aspects of Complete Streets

Next to safety, Complete Streets framework addresses a variety of other important aspects, including:

- **Accessibility**: ensures that streets are designed and maintained to be accessible to people of all ages and abilities, including those with disabilities. This includes features like curb ramps, tactile paving, and widened sidewalks, allowing everyone to move around comfortably and independently.
- **Health**: promotes physical activity by encouraging walking and cycling. This leads to improved public health and active transportation options also contribute to cleaner air and reduced pollution. Jurisdictions across North America reference Complete Streets as an effective preventative health strategy.
- **Sustainability**: By reducing reliance on single-occupancy vehicles and promoting alternative transportation modes, this framework helps to decrease greenhouse gas emissions, reduce air pollution, and minimize the environmental footprint of transportation. Complete Streets designs can help minimize impacts on climate and the environment through tree canopies and incorporating innovative stormwater solutions.
- **Equity**: prioritizes equity by ensuring that transportation options are available to all residents, regardless of income or mobility status. They help reduce transportation-related disparities and promote social inclusion.
- **Community Building**: fosters community building by creating vibrant, people-friendly environments. Features like public seating, gathering spaces, and street-level retail encourage social interaction, contributing to a stronger sense of belonging and social cohesion. Complete Streets animate the public realm and invite people to meet, linger, and socialize.
- **Congestion on Streets**: offers alternatives to driving, such as efficient public transit and safe cycling routes. This can lead to a reduction in traffic congestion, shorter commute times, and less stress for residents.
- **Quality of Life**: creates a more pleasant and enjoyable urban environment, enhancing the overall quality of life. They promote a sense of place and contribute positively to the local community's well-being and identity. Through green spaces, reduced noise and stress, and enhanced aesthetics, Complete Streets make communities more pleasant and vibrant.
- **Cost effectiveness**: Complete Streets can be achieved through incremental change over

time, phasing, and interim conditions. While the initial implementation of Complete Streets may require an investment, they can be cost-effective in the long run. By prioritizing multi-modal transportation and reducing the need for extensive road maintenance and expansion, Complete Streets can lead to cost savings. Moreover, they often leverage existing infrastructure and can be integrated into regular road maintenance schedules, minimizing additional expenses. In addition, the health benefits associated with active transportation can lead to reduced healthcare costs for communities, making Complete Streets an economically sound choice.

- **Economic activity**: Streets are the front door to many businesses and the quality of a street's environment can affect its economic vitality. This framework can significantly boost local economic activity. By creating pedestrian-friendly environments with amenities like wider sidewalks, street furniture, and inviting public spaces, they attract more foot traffic. This increased foot traffic can lead to higher sales for local businesses, increased property values, and a more vibrant local economy. Additionally, improved transportation options can attract new businesses to the area, spurring economic growth.

5.3 Canadian Complete Streets Projects & their Effects

Throughout the country, local, regional, and provincial governments are increasingly embracing Complete Streets framework when designing their transportation networks. The Transportation Association of Canada (TAC) has noted multiple successes from organizations involved in Complete Streets projects, which include:

- **Behavioral Impacts**: Some pilot projects have successfully encouraged sustainable travel behavior and improved safety. For instance, Ottawa witnessed increased cycling activity along the corridor due to its segregated bike lane, while Guelph's road diets enhanced cycling access and reduced rear-end collisions. In Thunder Bay, a downtown pilot project slowed vehicular traffic, creating a more pedestrian- and cyclist-friendly environment while enhancing neighborhood aesthetics.
- **Enhanced Collaboration**: Complete Streets initiatives have effectively brought together staff from various groups to address shared interests and objectives. This collaboration has streamlined discussions regarding policies, plans, and specific design elements, fostering more constructive engagement among practitioners and elected officials. Halifax Regional Municipality, for example, closely collaborated with the local health authority and Dalhousie University on its Complete Streets initiative. Thunder Bay's pilot projects showcased the potential to efficiently integrate multiple municipal strategic initiatives into single capital projects.
- **Improved Public Services**: Complete Streets concepts and projects have been recognized for serving the mobility needs of a broader cross-section of the public. They also contribute to streets becoming more integral elements of the public realm through aesthetics and public art.
- **Contextual Consideration**: Complete Streets processes have prompted stakeholders to

give greater thought to how roads align with surrounding land uses, challenging traditional one-size-fits-all design approaches.

- **Local Customization**: Delivery of Complete Streets concepts varies from one jurisdiction to another. This flexibility allows policies, guidelines, and projects to better conform to or deviate from existing objectives, principles, and practices, increasing their ability to meet evolving local needs.

5.4 Components

5.4.1 Safety and Vision Zero:

Complete Streets are closely related to Vision Zero and prioritize safety. A key design principle is that streets should be designed to serve either an access or a mobility function for vehicles – but not both (WSP, 2023). Innovative designs are used to enhance comfort and safety on streets, this is where the philosophies of Complete Streets and Vision Zero come in. Both philosophies have distinct focus areas, but they often complement each other. They share the goal of making streets safer for all users and reduce traffic-related injuries. Some of the design elements and principles of Complete Streets contribute to Vision Zero goals, these include traffic calming measures, protected bike lanes, and clear crosswalks. Overall, both philosophies are complementary and can lead to safer, more user-friendly urban environments when implemented together.

5.4.2 Multi-modal Design

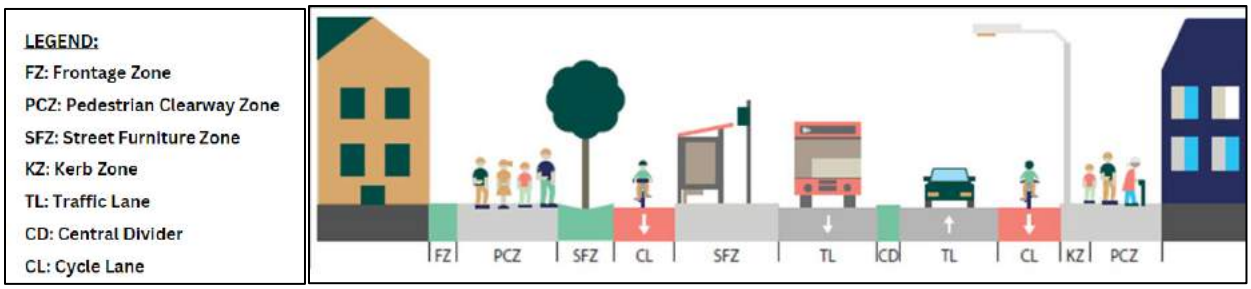
Multi-modal design is a crucial component of Complete Streets that focuses on accommodating various modes of transportation to create safer and more inclusive urban environments. A key starting point to offering multi-modal design is to understand the primary needs of each modal user. One consideration of multi-modal design is providing multi-modal transportation, meaning the provision of reliable, convenient, and attractive mobility choices. These are designed to support more efficient, active, and healthier forms of transportation and reduce vehicular congestion. This also means considerations should be given to emergency access and operations and supporting goods movement and delivery by different modes. Capacity should be analyzed from a multi-modal perspective that has a clear focus on movement of people, instead of vehicles.

5.4.3 Spatial division of streets:

Streets can be divided into zones for activity, street furniture and transport. The Oslo Street Design Manual (2020) defines these areas as the frontage zone, pedestrian clearway zone, street furniture zone, kerb zone, buffer zone, carriageway, central divider, and cycle path as shown in **Figure 5-3.** Vegetation and areas for handling stormwater may form part of the central divider, street furniture zone or frontage zone.

Using different surfaces on for example the pedestrian clearway zone and the street furniture zone/frontage zone, or providing clear edges, will make the zones more distinct and more readable. Transitions should be indicated with both tactile and visual markings, and the tactile marking should be detectable with the feet.

Figure 5-3: Spatial Division of Streets in Zones



Source: Street Design Manual for Oslo (2020)

5.4.4 Universal Design

The various people that are navigating through the City have a range of unique needs and abilities. To address this diversity effectively, it is essential to embrace universal design principles. When standard solutions cater to the broadest spectrum of individuals, there's less reliance on specialized approaches. Well-rounded, inclusive solutions that simplify navigation and create a sense of unity can encourage greater participation in the city's vibrant life and activities. Universal design is the design or layout of the physical environment, including infrastructure, transport and information and communications technology, to enable usage of transport networks by all types of users. Basing the design around the group with the greatest needs will ensure that the needs of the greatest possible number of people can be met.

5.4.5 Community Engagement

Community engagement is paramount in the success of Complete Streets projects, ensuring that the diverse needs and preferences of the local population are considered. According to the National Complete Streets Coalition, which is a program of Smart Growth America, engaging the community fosters a sense of ownership and creates streets that truly reflect the values and priorities of residents. This involvement helps identify specific challenges faced by different user groups, such as pedestrians, cyclists, and motorists, leading to more context-sensitive and effective design solutions. Additionally, community engagement in the planning process promotes transparency, builds trust between stakeholders and decision-makers, and encourages a sense of shared responsibility for the project's outcomes.

The importance of community engagement is echoed in a study published in the Journal of Planning Education and Research, which highlights those involving residents in decision-making process leads to more sustainable and equitable transportation outcomes. Community members bring valuable local knowledge and insights that might be overlooked in a top-down approach. This collaborative approach contributes to the overall success and acceptance of Complete Streets initiatives, creating safer and more accessible streets that align with the needs and aspirations of the community.

5.5 Design Elements

There are several design elements that are used to achieve Complete Streets. The key elements are summarized in this section.

5.5.1 Protected Bike Lanes

Protected bike lanes are physically separated from vehicular traffic by barriers like curbs, bollards, or planters. Studies, such as those reviewed by the National Association of City Transportation Officials (NACTO), consistently demonstrate the manifold benefits of protected bike lanes. They contribute to increased cyclist safety by providing a dedicated space, reducing the risk of collisions with vehicles. Furthermore, protected bike lanes encourage more people to choose cycling as a mode of transportation, promoting physical activity and contributing to public health. These lanes also have positive economic impacts, as they often enhance the overall urban environment, attract more pedestrians, and boost local business revenues. In the context of Complete Streets, protected bike lanes align with the philosophy of creating roadways that cater to various modes of transportation, promoting safety, accessibility, and sustainability.

Additionally, bike boxes are a feature that connects protected bike lanes to protected intersections. They help cyclists make left or right turns at intersections by placing them in front of traffic at a red light. Cyclists could also make a two-stage left-turn on roadways with high traffic volumes.

5.5.2 Continuous Sidewalks and Cycle Tracks

Places that support pedestrians are healthier, more resilient, and vibrant. Continuous sidewalks elements place the pedestrian experience in the centre of the street design. The duty to watch out for other road users is shifted from the pedestrian to motorists. Continuous sidewalks maintain a full-height, continuous sidewalk through the crossing and requires vehicles to ramp up to sidewalk level on either side of the crossing. Creating a dedicated space for pedestrians, separated from cyclists and motorized vehicles, creates a clear hierarchy of traffic, and promotes not only pedestrian, but overall traffic safety. An example of such design element from the City of Nanaimo in the province of British Columbia is depicted in **Figure 5-4.**

Figure 5-4: Continuous Sidewalk & Cycle Track under construction in Nanaimo, BC

Source: Roy Symons, @roytheplanner

5.5.3 Protected Intersections

Protected intersections are a critical component of Complete Streets, embodying the philosophy of creating safe and inclusive urban environments. These intersections prioritize the safety of pedestrians and cyclists by incorporating dedicated spaces, physical barriers, and clear ROW markings. By seamlessly integrating protected intersections into the overall Complete Streets framework, communities enhance the overall safety and accessibility of their transportation systems. An example from Netherlands depicting the features of protected intersections is shown in **Figure 5-5**. They typically include:

- **Corner Refuge Island**: A refuge island is a raised or protected area located at the corner of an intersection. It provides a safe space for pedestrians and cyclists to wait before crossing the roadway. This island increases visibility and allows for more predictable movements.
- **Curb Extensions (Bulb-outs)**: Curb extensions, also known as bulb-outs, involve extending the sidewalk into the roadway at the intersection. This reduces the crossing distance for pedestrians and increases their visibility to drivers. Bulb-outs also serve to slow down turning vehicles.
- **Separate Signal Phases**: Protected intersections often have separate signal phases for cyclists and pedestrians. This means that they have their dedicated signal timing, allowing them to cross the intersection without conflicting with vehicle movements.
- **Dedicated Bike Lanes**: Protected bike lanes are physically separated from motor vehicle lanes by barriers such as bollards, planters, or curbs. This separation provides a clear boundary and reduces the risk of collisions between cyclists and vehicles.
- **Marked Crosswalks**: Clearly marked crosswalks help guide pedestrians and cyclists safely across the intersection. These markings are often supplemented by high-visibility paint and signage to enhance awareness.
- **Advanced Stop Lines (ASLs)**: ASLs are designated areas for cyclists at the head of the traffic lane during red signal phases. They allow cyclists to move ahead of vehicles when the signal changes, giving them a head start and increasing their visibility to turning vehicles.
- **Protected Left-Turn Lanes**: In some cases, protected intersections include features like left-turn lanes that are physically separated from oncoming traffic. This improves safety for both cyclists and pedestrians, reducing the risk of conflicts with turning vehicles.
- **Clear and Intuitive Design**: The overall layout of a protected intersection is designed to be intuitive, making it easy for all road users to understand and navigate. Clear signage and road markings play a crucial role in guiding everyone safely through the intersection.

Figure 5-5: Protected Intersection in the Netherlands

Source: Urban Cycling Webinar by Marco Te Brömmelstroet for 8-80 Cities (December 12, 2023)

Protected intersections contribute to increased active transportation, promoting cycling, and walking as viable and safe alternatives to motorized transport. This not only fosters a healthier lifestyle but also addresses environmental concerns by reducing carbon emissions and traffic congestion. The design of these intersections often incorporates features such as shorter crossing distances and improved visibility, making the overall experience more convenient and appealing for pedestrians and cyclists. As a result, communities that embrace protected intersections can enjoy enhanced mobility, reduced traffic-related stress, and improved public health outcomes.

The economic benefits of constructing protected intersections should not be overlooked. These intersections often attract businesses and stimulate economic activity by creating more vibrant and pedestrian-friendly neighborhoods. The increased foot and bike traffic can lead to higher retail sales, boosting the local economy. In summary, the construction of protected intersections represents a forward-thinking approach to urban planning, offering a holistic solution that prioritizes safety, encourages active transportation, and fosters economic vitality in communities.

5.5.4 Mini Roundabouts

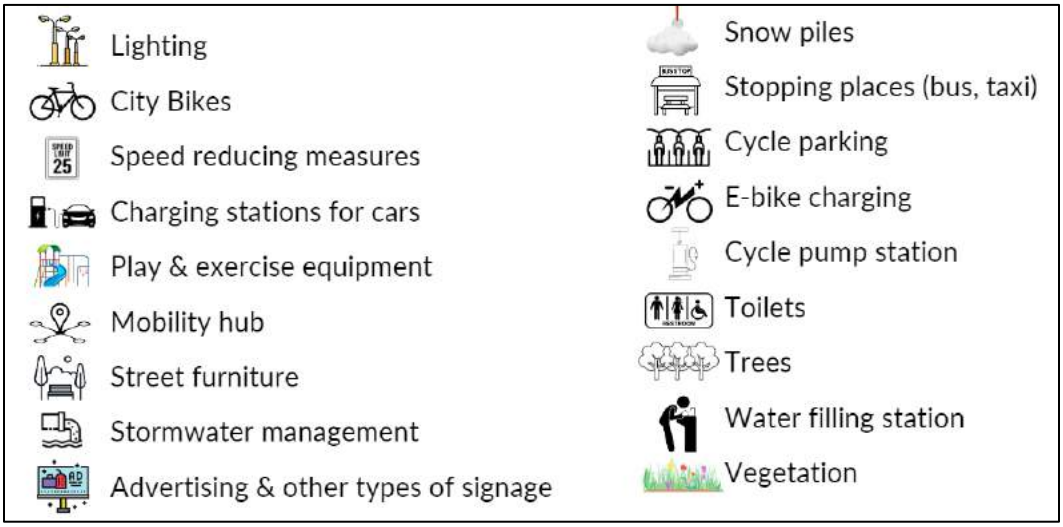
Mini roundabouts are compact traffic management features that improve intersection flow, enhance road safety, and reduce congestion in urban areas. According to research published in the "Journal of Transportation Engineering," mini roundabouts enhance safety by reducing the frequency and severity of collisions, particularly at low-speed intersections. Their efficiency in traffic calming is especially relevant in rural contexts, where they effectively manage traffic while requiring less space and maintenance than traditional roundabouts. In terms of Complete Streets, mini roundabouts align with the philosophy of creating inclusive, multi-modal road networks. They improve accessibility for all road users, including pedestrians and cyclists, and contribute to safer, more sustainable transportation systems in both urban and rural environments.

5.5.5 Street Furniture

Street furniture plays a crucial role in the design of Complete Streets, although its placement requires careful consideration. When not strategically placed, street furniture and railings have the potential to obstruct visibility between pedestrians and cyclists. However, when thoughtfully positioned, they can serve as valuable guides to encourage pedestrians to use designated crossing points. The street furniture zone, often found on both sides of a pedestrian clearway zone, serves as a space for recreation. Selection of street furniture and equipment should consider environmental and climatic factors. The specific elements to emphasize and prioritize within the street furniture zone are project-dependent and should be determined during high-level planning. In streets where speed reduction is desired, elements within the street furniture zone can be extended into the carriageway to effectively slow traffic. Additionally, when the frontage zone or street furniture zone has a paved surface, it should be differentiated from the pedestrian clearway zone through tactile and visual cues, creating a natural guideline to ensure safe passage for pedestrians while preventing collisions with open doors.

Figure 5-6 lists possible elements that can be placed in the street furniture zone. The list is not exhaustive and new elements and functions can be added when future needs arise.

Figure 5-6: Elements for the Street Furniture Zone



5.5.6 Pocket Parks

Pocket parks are small, often urban, green spaces that provide much-needed oases for relaxation and recreation in densely populated areas. According to the American Planning Association, pocket parks contribute to increased social interaction, improved mental well-being, and enhanced neighborhood aesthetics. While often associated with urban settings, pocket parks can also be valuable in rural contexts, providing serene spots for community gathering, recreation, and appreciation of nature. In the context of Complete Streets, pocket parks play a crucial role in creating more vibrant and people-centered public spaces. They contribute to the overall walkability and livability of communities, aligning with the philosophy of designing streets that cater to the diverse needs of residents and encourage community engagement.

5.6 Policy Making

All the objectives, guidelines, and design elements described in the sections above must become official through policies. Policies may be aspirational and not directly applicable to all contexts. However, implementation tools help municipalities and their consultants to implement the intent of the policy to a much wider range of contexts. In addition, Complete Streets policies can be codified in the City's engineering standards.

Smart Growth America offers a comprehensive guide for writing a strong Complete Streets policy, as well as a scoring system that can help assess how complete your Complete Streets policies are.

- The first element is about **Commitment and Vision**. Smart Growth America states that a strong Complete Streets policy establishes how and why a community wants Complete Streets. There should be a binding statement of intent.
- The second element is the **prioritization of underinvested and underserved communities**. The strongest Complete Streets policies follow this approach and allocate resources to focus on the gaps.
- The third element states that a strong **Complete Streets policy applies to all transportation projects, in every phase**. This element is essential as Complete Streets is a holistic approach and process to the overall transportation system and should not be seen as simply a series of projects or an "add-on component" to transportation projects. The strongest Complete Streets policy requires the **consideration of all users** for all new, retrofit/reconstruction, maintenance, and ongoing projects.
- The fourth element states that a strong Complete Streets policy **allows only clear exceptions**. These exceptions must be narrowly defined and require public notice prior to approval. Smart Growth America states that "Including specific, clear, and limited exceptions actually increases the strength of your policy because it prevents discretionary exceptions in the future, helping to ensure equitable implementation".
- The fifth element revolves around **coordination**. A strong Complete Streets policy requires coordination between jurisdictions, agencies, and departments.
- The sixth element stresses the adoption of **excellent design guidance**. The idea behind this element is that excellent design guidance equips engineers with the practical information they need to design streets that reflect the vision of the respective Complete Streets Policy. *"Design guidance bridges Complete Streets from policy to pavement"*.
- The seventh element focuses on **proactive and supportive land-use planning**. The policy should require the integration of land-use planning to best sync up with a community's desires for using and living on their land today and in the future.
- The eighth element revolves around **measuring progress**. It is crucial to measure progress to see if your Complete Streets policy is working. Results should be shared publicly as well. A strong Complete Streets policy requires tracking performance across a range of categories. Implementation and equity should be included in the measurements. Finally, there needs to be an appointed person to take responsibility for tracking progress.

- The ninth element focuses on **criteria for choosing projects**. The Complete Streets policy should add or update criteria that give extra weight to projects which advance Complete Streets and improve the network.
- The tenth element stresses the importance of creating an **implementation plan**. The policy should set out specific steps for implementing the policy in ways that will make a measurable impact on what gets built and where.

5.7 Implementation

5.7.1 Challenges and Approaches

Some common challenges that are being faced by municipalities implementing Complete Streets concepts include:

- **Need for collaboration** – Complete Streets approaches require a shared understanding and buy-in, as well as new forms of collaboration, among government departments (e.g. engineering, land use planning, traffic operations). Mechanisms are needed to guide integrated approaches to planning, operating, and optimizing the relationship between Complete Streets and adjacent development.
- **Public resistance** – The public can oppose Complete Streets approaches if they do not understand them, or if they perceive that their interests are being sacrificed (e.g. drivers concerned about added delay or loss of parking, as reported by the cities of Edmonton, Burlington and Guelph among others). Overcoming public resistance requires effective engagement tools, an acknowledgment of potential trade-offs, and education around how to use unfamiliar street features.
- **Resource requirements** – Innovative approaches such as Complete Streets need more staff time and effort, particularly when they are first introduced. This learning curve can be a barrier to new ways of planning and operating streets. Commitment and active support from management and elected officials can foster innovation and help ease the transition from traditional practices.
- **Competition for right-of-way** – There are competing needs for street space among users who travel with different modes, speeds, and abilities. The need to make trade-offs is inevitable, and the gains and losses of different interests (whether real or perceived) need to be understood and carefully managed. The City of Gatineau noted that the intersection of distinct facility types for different modes in the right-of-way (e.g. bicycle lanes and bus stops) can also create conflicts and demands careful resolution.

5.7.2 Barriers to Implementation

The Centre for Active Transportation (TCAT) identifies six main barriers that prevent municipalities from building more Complete Streets.

1. **Policy and guidelines**: This point stresses the importance of policies providing a strong rationale for Complete Streets and Vision Zero. There is a **clear need for guidelines**, which provide operationalizing details, resulting in internal efficiencies.

2. **Cultures of opposition**: Car culture remains the dominant perspective in the planning and designing of streets. When implementing a Complete Streets approach, one needs to be aware of a vocal minority of municipal staff, politicians and members of the public who oppose Complete Streets and Vision Zero initiatives.
3. **Staff coordination**: There is a need to facilitate **efficient communication** between municipal staff.
4. **Budgeting and resources**: The cost of maintenance for Complete Streets, the need for road widening due to car-centric road planning, and a lack of human resources can strain the budget.
5. **Balancing needs**: Given the reluctance to implement road diets, compromises must be reached on which elements are to be implemented and the location of infrastructure to be installed. The decisions that are made have **equity implications**.
6. **Data**: Insufficient means of analyzing and distributing data present an implementation burden. There is a need for better systems of management, which require greater human resources. Data collection has also faced challenges, such as those posed by COVID.

5.7.3 Lessons Learned

Municipalities that have been engaged in Complete Streets projects were asked about advice they would give to other organizations based on their own experience with Complete Streets. The respondents cited several lessons learned:

- **Engage the community** – Engaging as many stakeholders as possible from a project's early stages provides an opportunity for public education on the value of new approaches to street design. The City of Montreal noted that it can help to develop a common vision that encourages stakeholders to share their focus on a key positive outcome: the creation of roadways that better serve all users.
- **Integrate capital planning** – It is important to leverage planned investments by building Complete Streets concepts into road renewal projects, and also to allocate additional funds for elements that are outside the scope of basic street renewal. Complete streets projects are an opportunity to incorporate numerous strategic initiatives into a single capital project by involving areas as diverse as land use, transportation planning, engineering design and maintenance. Creating a multi-disciplinary team to guide the project will encourage greater collaboration and deliver better outcomes.
- **Build partnerships between sectors** – Public health leaders, in particular, have expressed a keen interest in Complete Streets. Halifax Regional Municipality cited its partnership with the local health authority and the Healthy Canada by Design organization as a supportive factor in the development of a Complete Streets policy.
- **Embrace change in transportation practices** – The transportation profession has a tremendous opportunity to help build more effective roles for walking and cycling in Canadian cities. Doing so will require practitioners to actively recognize the influence of land use context on successful roadway designs and, as noted by the City of Ottawa, to

revisit conventional approaches to managing congestion and evaluating operational effectiveness for all road users.

- **Learn from others** – The concept of Complete Streets is not one-size-fits-all. Communities need to learn from each other and tailor solutions to meet their unique needs. Openness to innovation can help in finding solutions to challenges, such as the City of Montreal's example of soil cells that enhance the viability of street trees, and retention basins that provide low-impact drainage while enhancing the landscape. Not all agencies explicitly use "Complete Streets" to identify relevant projects, so look beyond terminology when seeking similar objectives and approaches.
- **Measure, document and celebrate** – Finally, the City of Thunder Bay suggests measuring the impact of Complete Streets through before-and-after comparisons and using photos and personal stories to publicize the community value of projects. Planning launch events and giving public credit to project champions and stakeholders are good ways to celebrate success.

5.8 Monitoring and Measuring Success

Monitoring and measuring the success of Complete Streets policies in rural communities is a vital step that involves assessing various indicators to ensure the effectiveness of implemented measures. According to the "Complete Streets Guide" by Smart Growth America, successful monitoring often includes evaluating changes in safety metrics, such as reduced traffic accidents and improved pedestrian and cyclist safety. Additionally, monitoring usage patterns of alternative transportation modes, like increased walking or cycling, can be indicative of a policy's success in promoting multimodal accessibility.

Regular evaluations aligned with the principles outlined by the Federal Highway Administration's (FHWA) "Complete Streets: Best Policy and Implementation Practices" can provide valuable insights. FHWA emphasizes data-driven decision-making to inform adjustments to policies, ensuring that transportation investments fulfill the community's objectives.

Generally, the jurisdictions with the strongest Complete Streets policies take four concrete steps:

- Establish specific **performance measures across a range of categories**, including implementation and equity;
- Set a **timeline** for the recurring collection of performance measures;
- Require performance measures to be **publicly shared**; and,
- Assign **responsibility** for collecting and publicizing performance measures.

At the start of creating a Complete Streets policy, it can be overwhelming to decide what measures to focus on. Below is a list of examples that can be used:

- Number of crashes and severity of injuries
- Injuries and fatalities for all modes
- Presence of adequate lighting
- Travel time in key corridors (point A to point B) by mode

- Number of trips by walking/rolling, biking, transit, and driving
- Presence of transit facilities, biking facilities, and walking/rolling facilities
- Sidewalk condition ratings
- Number of curb ramps
- Building vacancy rates
- Access to jobs by mode
- Temporary and permanent jobs created by project
- Emergency vehicle response times
- Number of students who walk or bike to school
- Number of mode users: walk, bike, transit
- Bike route connections to off-road trails
- Number of bike share users
- Air quality
- Number of street trees
- Number of temporary and permanent art installations
- Internal policies and documents updated
- Number of staff trained
- Effectiveness of community engagement process

5.9 Complete Streets in the City of Temiskaming Shores

Adopting the Complete Streets framework in the City of Temiskaming Shores is a strategic move toward creating a safer, more accessible, and vibrant urban environment. In a city like Temiskaming Shores, where the local population has diverse transportation preferences and needs, Complete Streets provide a framework for inclusive mobility. By designing streets that cater to various modes of transportation, the city can foster a sense of community, encourage physical activity, and contribute to economic vitality and revitalization of the two downtown cores. Additionally, the adoption of Complete Streets aligns with the broader objectives of sustainable urban development, the adoption of a Vision Zero program, and can enhance the quality of life for residents while ensuring safer and more efficient transportation networks.

6 Existing Gaps & Opportunities

This section provides a review of existing transportation conditions in the City, primarily focused on the two downtown cores of New Liskeard and Haileybury. Additionally, it also documents the challenges in the existing transportation network and opportunities for various improvements utilizing the Completes Streets framework described in **Section 5**.

6.1 Vehicular Network

6.1.1 Road Network

6.1.1.1 New Liskeard

The major roadways in New Liskeard are described as follows:

- **Whitewood Avenue** is an urban two-lane roadway through New Liskeard. It is generally oriented in the east-west direction within the study area and is classified as an Arterial Road as per the City's Official Plan (March 2015). It provides a connection to Trans-Canada Highway (Highway 11) to the west and Armstrong Street to the east. There are sidewalks and on-street parking on both sides of the roadway in the vicinity of the study area. The posted speed-limit on Whitewood Avenue is 50 km/hr.
- **Broadwood Avenue** is an urban two-lane roadway through New Liskeard. It is generally oriented in the east-west direction within the study area and is classified as a Collector Road as per the City's Official Plan (2015). It provides a connection to Lakeshore Road North to the east. The speed limit on Broadwood Avenue us 40 km/hr.
- **Armstrong Street** is an urban two-lane roadway through New Liskeard. It is generally oriented in the north-south direction within the study area and is classified as an Arterial Road north of the Whitewood Avenue and as a Local Road, south of Whitewood Avenue within the Town of New Liskeard as per City's Official Plan (March 2015). It provides a connection to Highway 65 to the north which further connects to the Town of Dymond. There are sidewalks and on-street parking on both sides of the roadway, in the vicinity of the study area. The posted speed-limit on Armstrong Street is 50 km/hr.
- **Lakeshore Road** is an urban two-lane north-south roadway. It is classified as an Arterial Road within the Town of Haileybury as per City's Official Plan (March 2015). Lakeshore Road provides a connection to Whitewood Avenue to the north and Town of Haileybury to the south. There are sidewalks and on-street parking on both sides of the roadway. The posted speed-limit on Lakeshore Road/ Ferguson Avenue is 50 km/hr.

6.1.1.2 Haileybury

The major roadways in Haileybury are described as follows:

- **Main Street** is an urban two-lane roadway through Haileybury. It is generally oriented in the east-west direction within the study area and is classified as an Arterial Road as per the City's Official Plan (March 2015). Within the Town of Haileybury, Main Street is the only east-west corridor providing connection to Trans-Canada Highway (Highway 11) located west of the Community's downtown core and Lakeshore Road/ Ferguson Avenue to the east, which provides north-south connection to the Community of New Liskeard. There are sidewalks provided on both sides of the roadway and on-street parking is allowed on both sides of the roadway. There are no overhead utilities along either side of the roadway. The posted speed-limit on Main Street is 50 km/hr.
- **Lakeshore Road/ Ferguson Avenue** is an urban two-lane north-south roadway. It is classified as an Arterial Road north of Main Street and as a Local Road, south of Main Street within Haileybury as per City's Official Plan (2015). Lakeshore Road/Ferguson Avenue provides a connection to Highway 65 to the north and Main Street to the south. There are sidewalks and on-street parking on both sides of the roadway. The posted speed-limit on Lakeshore Road/ Ferguson Avenue is 50 km/hr.

6.1.2 Existing Lane Configuration

In New Liskeard there are three signalized intersections at Whitewood Avenue and Edith Street, Whitewood Avenue and Paget Street, and Whitewood Avenue and Armstrong Street. The remaining intersections along Whitewood are mostly stop-controlled.

In Haileybury all four major intersections are stop-controlled.

Figure 6-1 and **Figure 6-2** show the current lane configurations and types of intersection controls used in New Liskeard and in Haileybury, respectively.

Figure 6-1: New Liskeard Existing Lane Configuration & Intersection Control

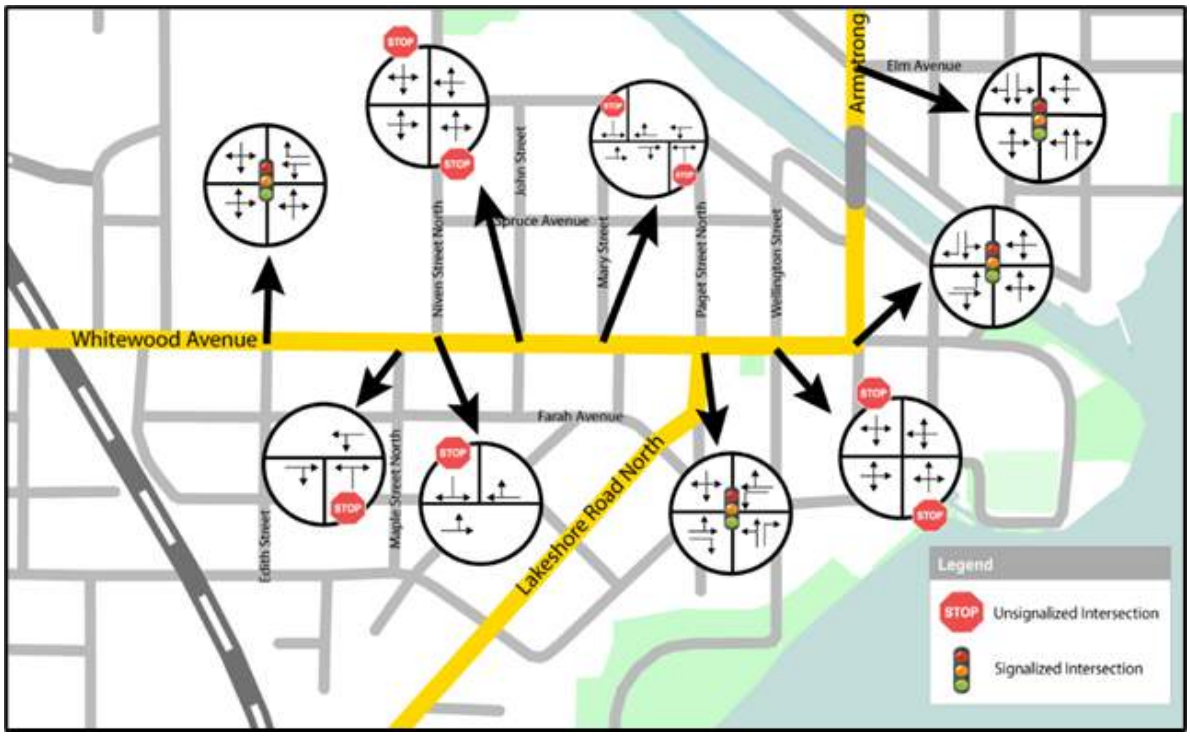
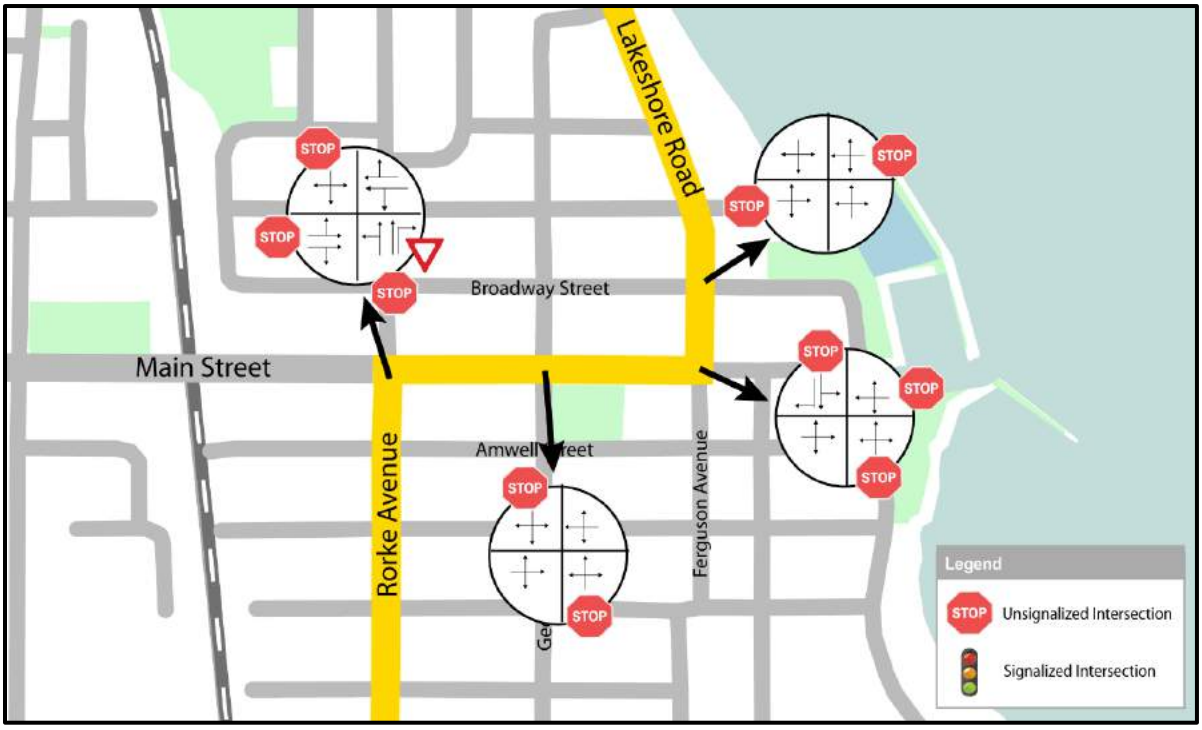


Figure 6-2: Haileybury Existing Lane Configuration & Intersection Control



6.1.3 Typical Roadway Cross-Sections

The typical cross-section for the existing right-of-way (ROW) for major study roads in Haileybury and New Liskeard, are depicted in **Figure 6-3**, **Figure 6-4**, **Figure 6-5, and Figure 6-6**.

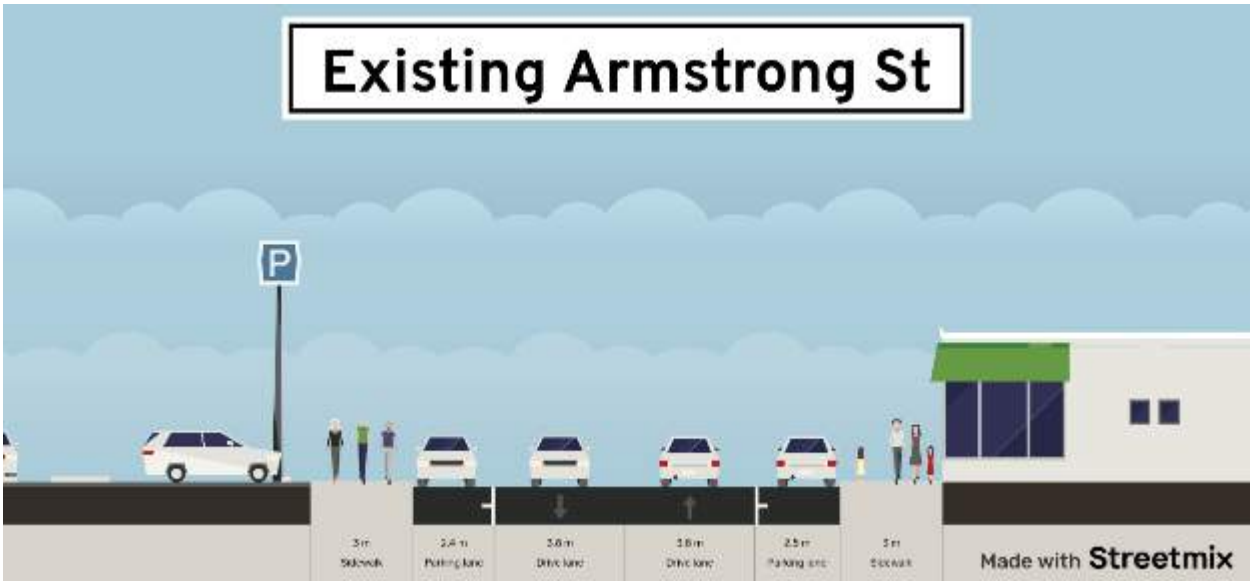
These figures illustrate the typical right-of-way widths and elements of the key arterial roadways, which generally have allocated space for on-street parking on both sides, sidewalks, and no dedicated bike lanes, consequently giving priority to vehicular through-traffic over pedestrians.

Figure 6-3: Typical Cross-Section - Ferguson Avenue

Figure 6-4: Typical Cross-Section – Main Street

Figure 6-5: Typical Cross-Section – Whitewood Avenue

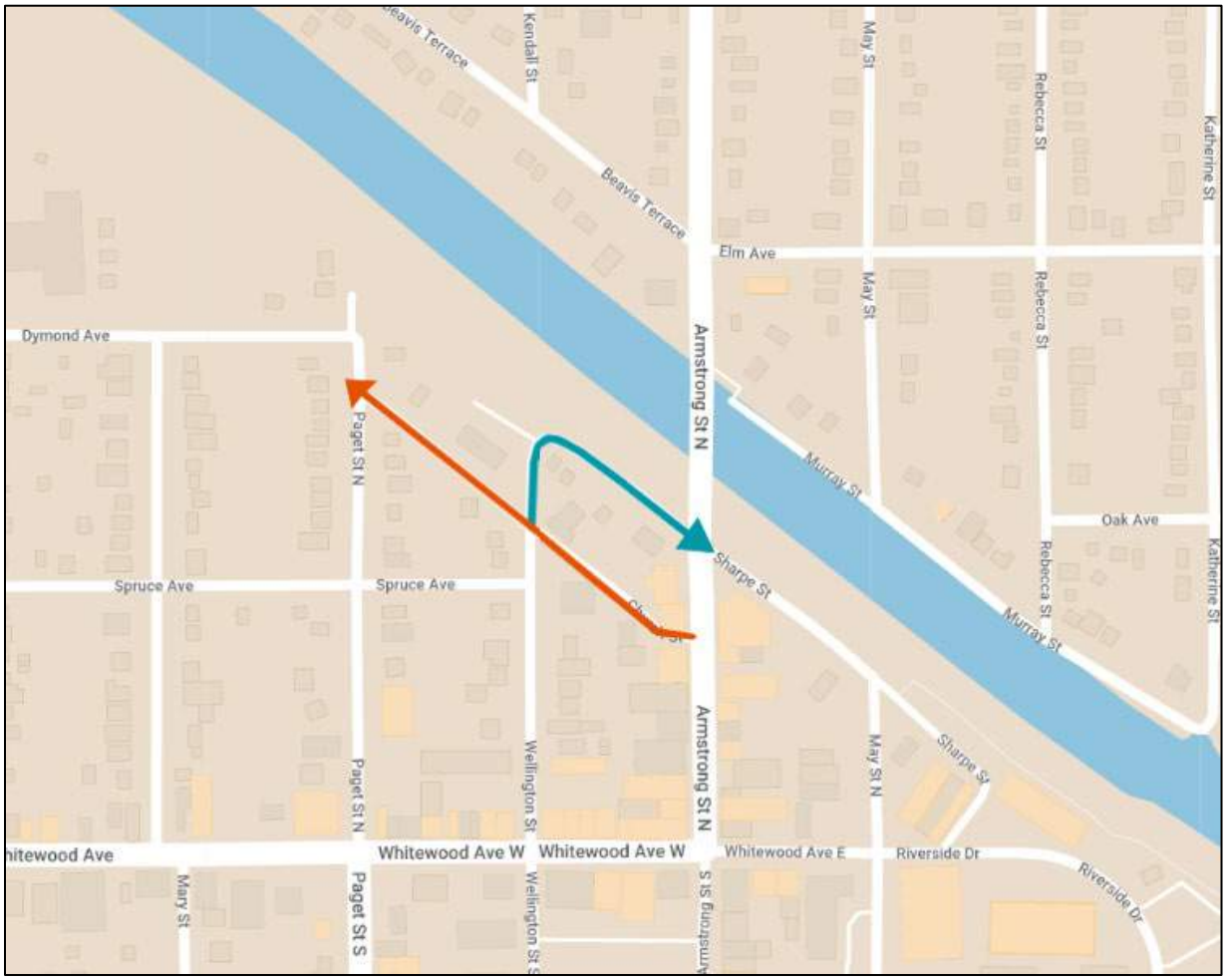
Figure 6-6: Typical Cross-Section – Armstrong Street



6.1.4 One-way Streets Review

There are currently three one-way streets across the two downtown cores: two in New Liskeard, connecting to and from Armstrong Street (**Figure 6-7**), and one in Haileybury, connecting Blackwall Street to Cecil Street (**Figure 6-8**).

Figure 6-7: One-way Streets in New Liskeard



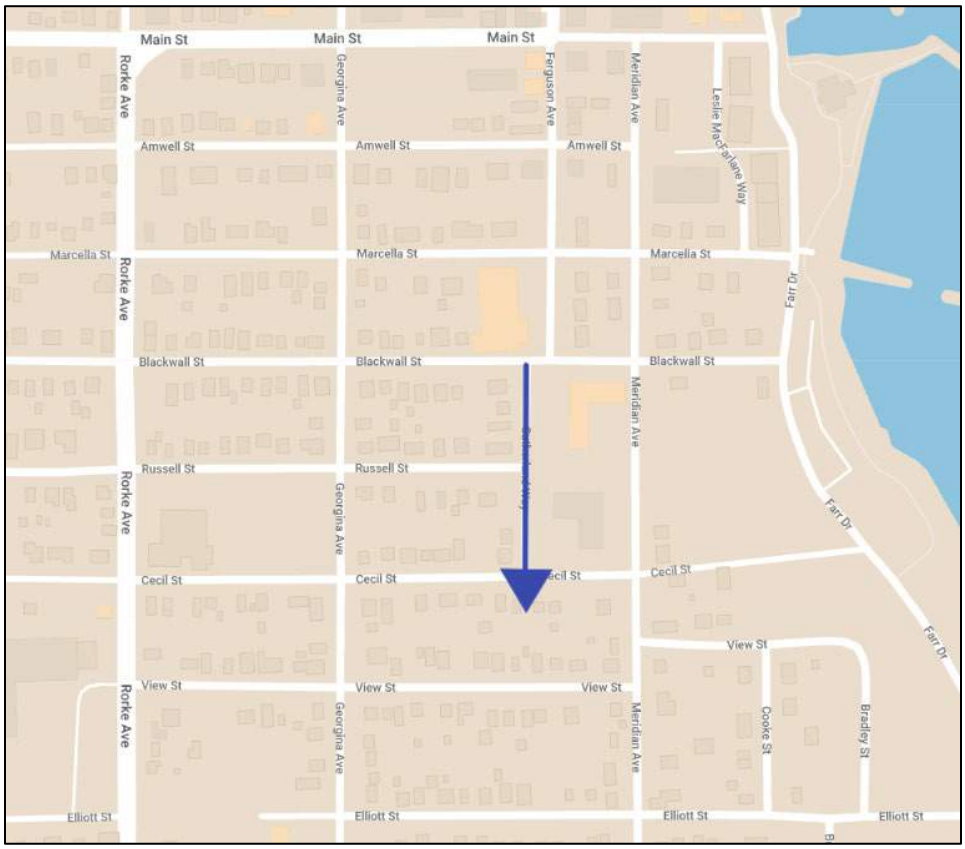
In New Liskeard, Church Street, and portions of Wellington Street/Sharpe Street, located just south of the Wabi River, exist as one-way streets and provide residential access to and from Armstrong Street, as illustrated in **Figure 6-7**.

Church Street has one-way access from Armstrong Street towards Paget Street, and it consists of a tight right turn for southbound vehicles travelling on Armstrong Street. Intersection line-of-sight analysis was conducted to assess feasibility of reversing the one-way travel direction on Church Street, and it was understood that the 3-storey building located on the north side of Church Street would obstruct sight lines – making it dangerous for vehicles to turn onto Armstrong Street. Closing off the Church Street access from Armstrong Street would also not be appropriate as the roadway currently only has one lane of travel. As a result, no changes to travel are recommended along Church Street. The line-of-sight analysis can be found in **Appendix F**.

The portion of Wellington Street/Sharpe Street currently supports one-way, eastbound travel towards Armstrong Street. TYLin has noted concerns from the City regarding potential line-of-sight obstruction at the Sharpe Street intersection with Armstrong Street and desire to assess the resulting effects of reversing the one-way direction of travel. As a result, line-of-sight analysis was conducted on the one-way portion of Sharpe Street towards Armstrong Street and no sightline issues for eastbound vehicles were found. The line-of-sight analysis can be found on **Appendix F**. Furthermore, as discussed in **Section 7** of this report, the combined resulting effects of: lane reduction on the Armstrong Street bridge crossing, curb extensions on the Armstrong Street and Sharpe Street intersection, and bikes lanes along Armstrong Street will further enhance road safety at this location.

It is recommended that the City install a stop bar along with a crosswalk on Sharpe Street to enforce the stop control and to provide a better north-south crossing to pedestrians, respectively. The City should continue to monitor road safety at this intersection following the implementation of recommended infrastructure to assess future traffic operations and safety characteristics.

Figure 6-8: One-way Street in Haileybury



In Haileybury, the existing one-way path is Sutherland Way, which limits traffic to southbound trips only. It currently provides access to three residential driveways and pedestrian access to the local church on the eastern edge of the road, immediately south of the intersection with Russell Street. The portion of Sutherland Way between Russell Street and Cecil Street has on-street angled parking in front of the church property. The one-way traffic routing on this street allows for a safer and more practical use of the angled, on-street parking.

6.1.5 Network Connectivity

The two communities in the City are connected by one arterial road; Lakeshore Road. The distance between the two communities is about 8.5 kilometers, which can be travelled by driving in 10 minutes. There is also a bus route that services the two communities, both of which have a grid-like street pattern. Grid-like street pattern is known to be easy to navigate and convenient for road users. However, pedestrian connectivity can be challenging if there are a lot of gaps in the pedestrian facility network.

6.1.5.1 New Liskeard

The New Liskeard downtown core is within proximity to points of interests and general services, but the limited pedestrian crossing opportunities along the major corridors create a barrier for pedestrians, according to **Figure 6-9.** The pedestrian crossing gaps present a clear opportunity for improvement. A better active transportation facility means that the network is more attractive for residents to walk, to cycle, and to take public transport, especially for short trips. More pedestrian crosswalks uniformly distributed along the network means safer crossing opportunities and therefore an equitable environment for all road users. Other concepts can also be considered when improving the downtown core of the City. Continuous sidewalks could greatly improve the pedestrian experience in the downtown core.

The Armstrong Street bridge crossing over the Wabi River is the only direct vehicular access to the neighborhoods north of the crossing. This poses constraints for vehicular and active transportation travel in the case of potential closures. Narrow sidewalks and instances of speeding on this crossing further indicates a need for additional crossing passages or enhanced safety features. While a separate vehicular crossing can be evaluated, it should ne noted that there is a proposed pedestrian bridge over the Wabi river at Rebecca Street, which would allow for undisturbed active transportation travel and offer a safe river-crossing alternative for pedestrians and cyclists. This additional crossing has the potential of further bolstering road network connectivity through a connection with existing and proposed biking facilities.

Figure 6-9: Limited Pedestrian Crossing Opportunities – New Liskeard

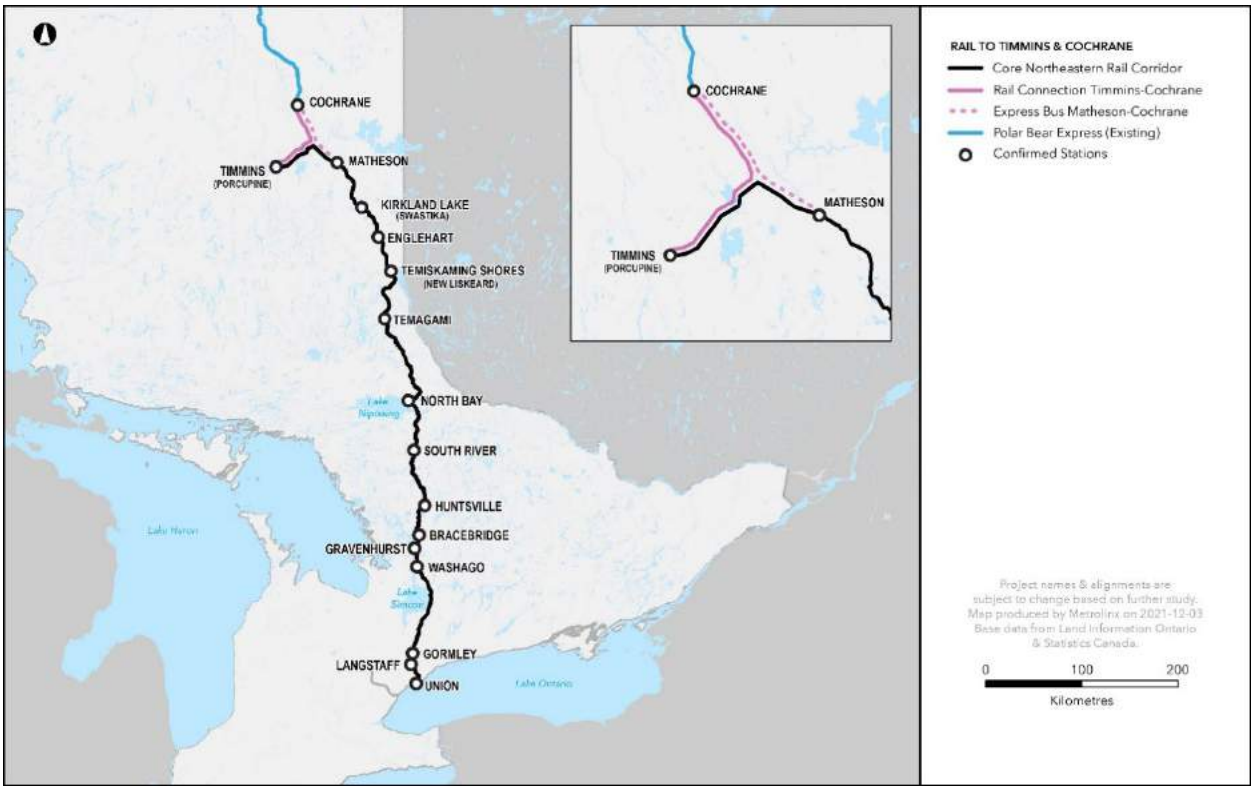
Figure 6-10: Arterial Roadway – New Liskeard

Rail Crossing

The Ontario Northland Railway corridor crosses through the City connecting Toronto to Cochrane (**Figure 6-11**) and creates two at-grade crossings in New Liskeard and one grade separated crossing on Main Street in Haileybury.

The two at-grade crossing locations at New Liskeard are located on Whitewood Avenue west of Jaffray Street and on Broadwood Avenue west of Edith Street. Both major east-west roadways play a fundamental role to the surrounding road network. As such, having at-grade rail crossing may negatively impact the vehicular traffic flow if the frequency of freight trains is high. If a train were to break down in the middle at these crossing locations, it could severely impact the transportation network, particular emergency operations.

Figure 6-11: Northlander Rail Corridor



6.1.5.2 Haileybury

In Haileybury, the major roadways are Main Street for east-west circulation, and Rorke Avenue for southbound and Ferguson / Lakeshore Road for northbound travel, as illustrated in **Figure 6-12.**

Figure 6-12: Arterial Roadways in Haileybury

Intersections

The Main Street at Rorke Avenue and Main Street at Ferguson Road intersections experience large traffic volumes. In addition, the channelized intersection on Main Street at Rorke Avenue presents issues for pedestrian crossings as the separated movement encourages higher speeds for right turning traffic. This intersection, in addition to Main Street at Lakeshore Road is currently a three-way stop-controlled intersection with a free flow movement on the westbound direction on Main Street at Rorke Avenue and on the eastbound direction on Main Street at Ferguson Road.

To improve safety for all road users and reduce speeding at these intersections, there is an opportunity to close the channelized movement at Rorke Avenue and to implement an all-way stop-control (4-way stops) at both Main Street intersections, namely at Rorke Avenue and Ferguson Road.

Notably, Main Street has a downward slope as it approaches the intersection with Ferguson Avenue, making it prone to higher speeds and increased braking distance. Implementing a 4-way stop control at the Main Street and Ferguson Avenue intersection, especially given the desire for increased active transportation, would provide a greater sense of safety to pedestrians using the crossing and cyclists using the future bike lanes on the west side of Rorke, as proposed in **Section 7.3.1**.

Pedestrian facilities

Pedestrian crossing gaps are also found to be an issue in Haileybury. According to

Figure 6-13 below, the pedestrian crossing opportunities are very limited and it is a long walk for pedestrian to find formal and safe crossings along the arterial roads. There is potential for new pedestrian crossings along **Main Street between Rorke Avenue and Lakeshore Road**.

A pedestrian crossover (PXO) previously existed at **Broadway Street and Ferguson Avenue** but was removed during a prior resurfacing of the intersection. The re-implementation of this PXO would greatly benefit local pedestrian safety and improvement circulation around businesses in the area and between the residential community and the waterfront.

Overall, a Complete Streets plan would improve road users' experience by increasing pedestrian safety and incentivizing residents to walk to their destinations. As a specific measure, the continuous sidewalk concept could be implemented as a measure in the City where the minor local roads connect to the major arterials. The continuous sidewalk concept is widely seen across the Netherlands and consists of the sidewalk to be continued at the same level through an intersection to the next block. With these measures in mind, the waterfront area, which is the major recreational destination in Haileybury, could become more attractive to residents once the area is designed to be more pedestrian friendly.

Figure 6-13: Limited Pedestrian Crossing Opportunities – Haileybury

In addition to pedestrian crossing concerns, there are some road connectivity opportunities that could be unlocked in Haileybury. Meridian Avenue provides good north-south access across the Haileybury, and with some intersection adjustments at the intersection with Main Street, could result in another alternative for connecting the southern part of the City with Lakeshore Road.

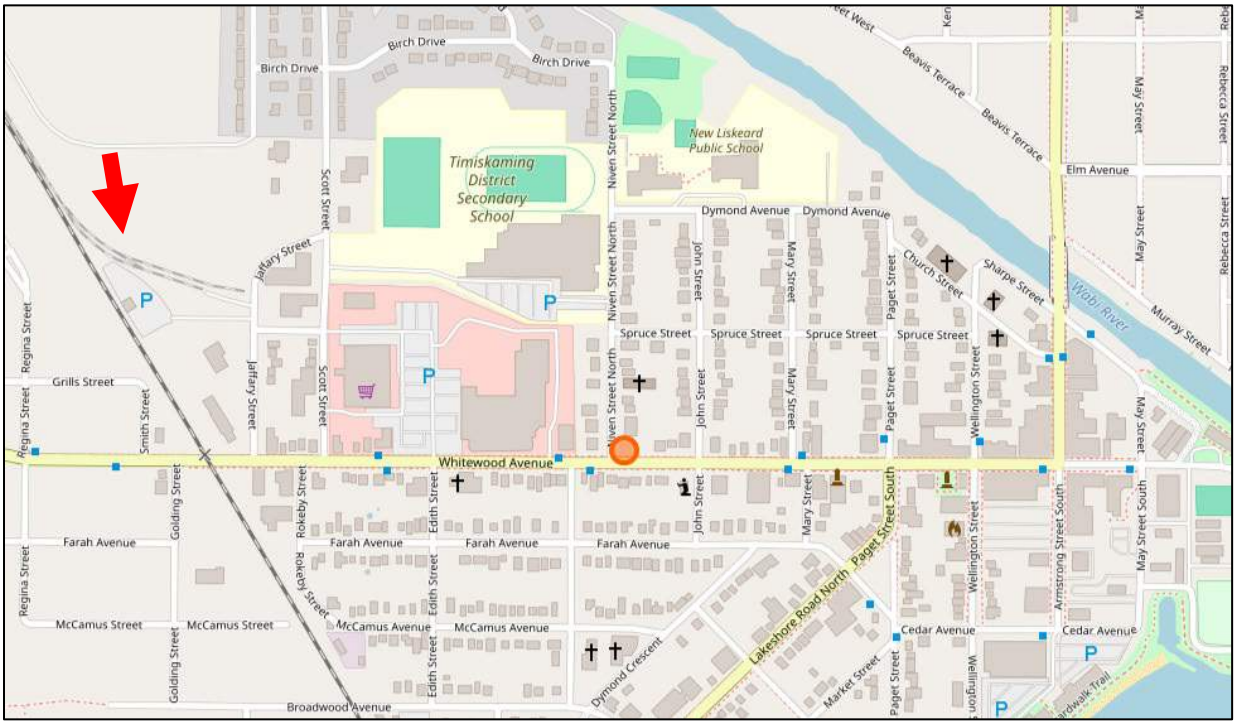
Rail Corridor

The only arterial road that has a railway crossing in Haileybury is on Main Street; however, since it is grade-separated, it is not considered to be a barrier for other modes of transportation. There are future opportunities with a special focus to the lands west of the rail which have few pedestrians and cycling connections. The nearest east-west roadway from Main Street is over 2 km away to the north outside of the downtown core and Albert Street at-grade railway crossing is 800 meters away to the south. The traffic demand on Main Street is a critical topic in Haileybury and it plays a very important role in the community as the major roadway corridor.

The railway only operates with freight trains and is important to the economy and way-of-life in northeastern Ontario. However, since 2012 there is no passenger rail service in operation between Haileybury and New Liskeard as the service was discontinued. With this gap, there is an opportunity for creating a passenger train service between the two downtown cores. There are already plans to resume the operation of the passenger service line in 2026, according to the Government of Ontario. The only train station identified in the City is located at Jaffray Street in New Liskeard (see **Figure 6-14**). It is important to ensure that the entire community is serviced by the future Northlander passenger train service. Therefore, it is recommended that further analysis be conducted to better understand the value of constructing a new railway stop in Haileybury and allows for inter-community transit. It should be noted that such as student would be dependent on Ontario Northland's passenger rail strategy and planning.

The potential of a new railway stop in Haileybury would bolder the overall transit connectivity in Temiskaming Shores. It is also important that the train station should be located near the central area of Haileybury and connectivity to public transport should also be ensured.

Figure 6-14: Location of the New Liskeard Rail Station

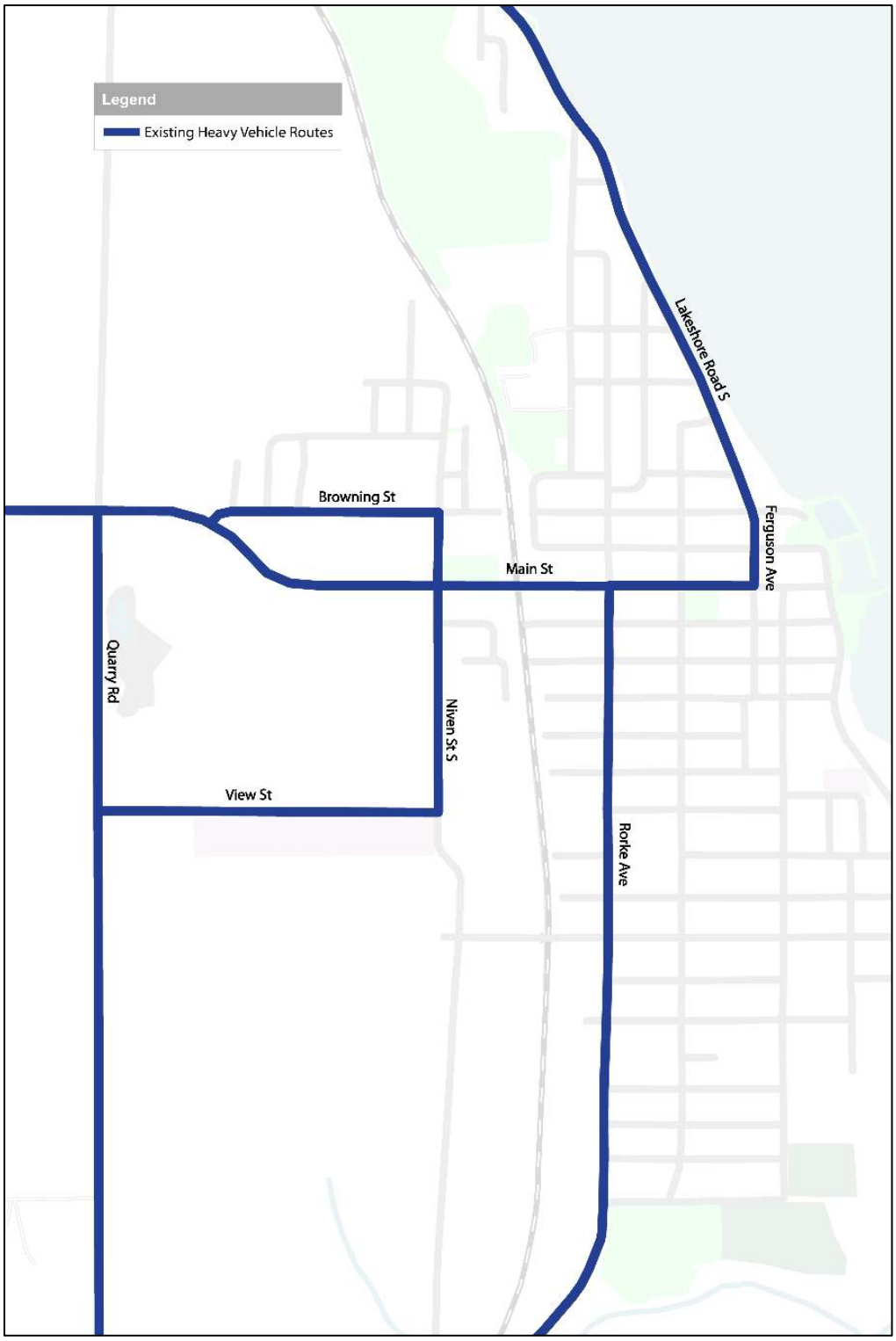


6.1.6 Heavy vehicle routes

The City's Traffic and Parking By-law No. 2012-101 shows the designated truck routes within the two downtown cores of New Liskeard and Haileybury, as indicated in **Figure 6-15** and **Figure 6-16**. In New Liskeard, there is a prohibited zone for heavy vehicle routes from Radley Hill Road to Lakeshore Road due to a steep incline on the road making it unsafe for goods movement. Due to this reason, the Emergency Detour Route has moved to Armstrong Street and Cedar Avenue instead.

Figure 6-15: Existing Heavy Vehicle Routes in New Liskeard

Figure 6-16: Existing Heavy Vehicle Routes in Haileybury



6.2 Existing Traffic Conditions

6.2.1 Traffic Operational Analysis Study Area

The traffic operational analysis focuses on the downtown cores of New Liskeard and Haileybury within the City. The settlement areas of New Liskeard and Haileybury are approximately 2 km and 7 km east of Trans-Canada Highway (Highway 11), respectively. These downtown cores are approximately 9 km apart and are connected via Lakeshore Road South running alongside Lake Temiskaming.

As described under methodology for traffic operations analysis in **Section 3.3**, based on pre-consultation with the City Staff, the existing year of 2023, 5-year horizon year of 2028, and a 20-year horizon year of 2043 were selected as study horizon years for traffic analysis.

The purpose of this traffic analysis is to evaluate the current traffic operations within the two downtown cores, determine the traffic growth and projected traffic volumes during 5-Year and 20-Year horizons; assess the impact of this traffic growth on the roadway network within the two downtown cores; and to evaluate any recommendations to improve traffic flow.

In New Liskeard, the traffic study area includes the following street corridors:

- Whitewood Avenue from Golding Street to Armstrong Street North
- Broadwood Avenue from Golding Street to Lakeshore Road North
- Lakeshore Road North from Broadwood Avenue to Whitewood Avenue
- Armstrong Street North from Whitewood Avenue to Beavis Terrace/Elm Avenue

The study area intersections in New Liskeard with their existing lane configurations and intersection control type are shown in **Figure 6-1**Figure in **Section 6.1.2**.

In Haileybury, the traffic study area includes following street corridors:

- Main Street from Rorke Avenue to Lakeshore Road South/Ferguson Avenue
- Lakeshore Road South from Main Street to Browning Street

The study area intersections in Haileybury with their existing lane configurations and intersection control type are shown in **Figure 6-2** in **Section 6.1.2**.

6.2.2 Origin Destination

Origin and destination data was obtained from TYLin's Big Data partner Urban SDK. The origin-destination trends in the City are based on data from March and April of 2023.

Figure 6-17 depicts the number of trips attracted per location in the City with darker red indicating a greater number of trips. It is evident that New Liskeard attracts the greatest number of trips, followed by Haileybury and Cobalt. Roads in the New Liskeard downtown core, Lakeshore Road, Rorke Avenue, Highway 11, and Highway 65 are the most heavily travelled routes.

Figure 6-17: Attracted Trips in the Temiskaming Region

Percentages of the total travel demand for all trips, either beginning or ending in the City are summarized in **Table 6-1.** Most trips are clustered within New Liskeard (18%), followed by trips from New Liskeard to Haileybury (12%) and trips within Haileybury (12%). Travel trends show that not many trips occur to or from Cobalt and Dymond. There are very few trips from outside the City coming into the City.

Table 6-1: Origin-Destination Trip Distribution

Origin	Destination	% Trips
New Liskeard	New Liskeard	0.18
New Liskeard	Haileybury	0.12
New Liskeard	Dymond	0.02
New Liskeard	Cobalt	0.03
New Liskeard	Outside Temiskaming	0.05
Haileybury	New Liskeard	0.03
Haileybury	Haileybury	0.12
Haileybury	Dymond	0.00
Haileybury	Cobalt	0.02
Haileybury	Outside Temiskaming	0.02
Dymond	New Liskeard	0.04
Dymond	Haileybury	0.01
Dymond	Dymond	0.07
Dymond	Cobalt	0.00
Dymond	Outside Temiskaming	0.03
Cobalt	New Liskeard	0.00
Cobalt	Haileybury	0.01
Cobalt	Dymond	0.00
Cobalt	Cobalt	0.04
Cobalt	Outside Temiskaming	0.02
Outside Temiskaming	New Liskeard	0.08
Outside Temiskaming	Haileybury	0.04
Outside Temiskaming	Dymond	0.04
Outside Temiskaming	Cobalt	0.03
Total		**1.00**

6.2.3 Existing Intersection Controls

Most intersections in the City are controlled by stop signs. As per the traffic operational analysis, and because of the low traffic volumes, the intersections in general have a good Level of Service, with minimal delays and significant remaining capacity on the network. There are five intersections operated by traffic signals, and they are all located in the New Liskeard community (See **Figure 6-1** in **Section 6.1.2**). They are:

- Whitewood Avenue at Edith Street
- Whitewood Avenue at Paget Street
- Whitewood Avenue at Armstrong Street
- Armstrong Street at Elm Avenue/Beavis Terrace
- Lakeshore Road North at Broadwood Avenue

Most of the signalized intersections (3 out of 5) are located along Whitewood Avenue, which is a major Arterial Road in the City, and one signal across the Armstrong Street bridge at Armstrong Street and Elm Avenue/Beavis Terrace. Intersections along Local streets are entirely controlled by stop signs as per **Figure 6-2** in **Section 6.1.2**, which show the intersection control types (stop-controlled and signalized) in Haileybury.

6.2.4 Existing 2023 Intersection Operational Analysis

The traffic operations analysis identifies how well the intersections are operating. The analysis contained in this report utilized the Highway Capacity Manual (HCM) 2000 methodology within the Synchro 11 Software package. The reported intersection volume-to-capacity ratios (v/c) are a measure of the saturation volume for each turning movement, while the levels-of-service (LOS) are a measure of the average delay for each turning movement. The analysis is based on 4-hour Turning Movement Counts (TMCs) that were collected for all study intersections in Haileybury on June 16, 2023, and in New Liskeard on June 26, 2023. The signal timings for all the signalized intersections were obtained from the City. The original traffic counts are attached in **Appendix A**.

The analysis includes results for v/c ratios, delays, LOS and 95th percentile queue lengths. Critical intersections and movements have been identified, in addition to any queue length projected to exceed available turning lane storage at the 95th percentile. As per the MTO's General Guidelines, 'critical' movements are defined as a movement at a signalized intersection that has a v/c ratio of 0.85 or greater.

6.2.4.1 New Liskeard

As part of the traffic operations analysis, the following study area intersections were included in the Synchro analysis model:

- Whitewood Avenue at Golding Street
- Whitewood Avenue at Edith Street
- Whitewood Avenue at John Street
- Whitewood Avenue at Mary Street
- Whitewood Avenue at Paget Street
- Whitewood Avenue at Armstrong Street

- Broadwood Avenue at Golding Street
- Broadwood Avenue at Edith Street
- Broadwood Avenue at Lakeshore Road
- Lakeshore Road at Farah Avenue
- Armstrong Street at Church Street
- Armstrong Street at Sharpe Street
- Armstrong Street at Elm Avenue/Beavis Terrace

Table 6-2 summarizes the Synchro/HCM 2000 capacity for the study intersections during the weekday AM and PM peak hours under the existing (2023) traffic conditions.

Detailed Synchro reports are attached in **Appendix B**.

Table 6-2: Existing 2023 Conditions - Traffic Operations Analysis for New Liskeard

Intersection	Movement (Storage, m)	Weekday AM Peak Hour				Weekday PM Peak Hour			
		V/C	Delay (s)	LOS	95th % Queue (m)	V/C	Delay (s)	LOS	95th % Queue (m)
Golding St & Whitewood Ave (Stop-Controlled)	*Overall*	-	1	A	-	-	1	A	-
	EBLTR	0.23	0	A	0	0.23	0	A	0
	WBLTR	0.02	1	A	0	0.02	1	A	0
	NBLTR	0.10	12	B	2	0.09	13	B	2
Edith St/Parking Entrance & Whitewood Ave (Signalized)	*Overall*	0.36	8	A	-	0.40	9	A	-
	EBLT	0.37	5	A	27	0.36	7	A	29
	EBR (45)	0.01	4	A	0	0.03	5	A	2
	WBLT	0.24	5	A	17	0.34	7	A	27
	WBR (45)	0.04	4	A	3	0.07	5	A	5
	NBLTR	0.31	19	B	11	0.27	16	B	12
	SBLTR	0.36	19	B	11	0.53	18	B	21
John St & Whitewood Ave (Stop-Controlled)	*Overall*	-	1	A	-	-	1	A	-
	EBLTR	0.01	1	A	0	0.01	1	A	0
	WBLTR	0.00	0	A	0	0.01	0	A	0
	NBLTR	0.02	12	B	1	0.04	13	B	1
	SBLTR	0.07	13	B	2	0.07	16	C	2
Mary St & Whitewood Ave (Stop-Controlled)	*Overall*	-	1	A	-	-	1	A	-
	EBLTR	0.02	1	A	*1*	0.02	1	A	*1*
	WBLTR	0.00	0	A	*0*	0.01	1	A	*0*
	NBLTR	0.02	14	B	*1*	0.03	14	B	*1*
	SBLTR	0.06	14	B	*2*	0.06	14	B	*1*
Paget St & Whitewood Ave (Signalized)	*Overall*	0.29	14	B	-	0.32	14	B	-
	EBLT	0.34	13	B	*35*	0.38	13	B	44
	EBR (40)	0.03	10	A	*4*	0.03	10	A	5

Intersection	Movement (Storage, m)	Weekday AM Peak Hour				Weekday PM Peak Hour			
		V/C	Delay (s)	LOS	95th % Queue (m)	V/C	Delay (s)	LOS	95th % Queue (m)
	WBL	0.36	14	B	*21*	0.41	14	B	32
	WBTR (40)	0.33	12	B	*34*	0.30	12	B	34
	NBLT	0.18	18	B	*18*	0.19	18	B	18
	NBR	0.12	17	B	*11*	0.14	17	B	13
	SBLTR	0.13	17	B	*13*	0.12	17	B	13
Armstrong St & Whitewood Ave (Signalized)	*Overall*	0.36	16	B	-	0.52	17	B	-
	EBL	0.44	11	B	*39*	0.62	14	B	*68*
	EBTR (17)	0.08	7	A	*8*	0.07	7	A	*7*
	WBLTR	0.08	7	A	*9*	0.09	7	A	*10*
	NBLT	0.11	21	C	*12*	0.30	24	C	*28*
	NBR (15)	0.00	20	B	*0*	0.00	20	B	*0*
	SBLT	0.17	22	C	*18*	0.23	23	C	*23*
	SBR (20)	0.20	22	C	*16*	0.23	22	C	*17*
Broadwood Ave & Golding St (Stop-Controlled)	*Overall*	-	6	A	-	-	4	A	-
	EBLTR	0.00	6	A	*0*	0.00	0	A	*0*
	WBLTR	0.02	0	A	*0*	0.03	0	A	*0*
	SBLTR	0.05	9	A	*1*	0.04	9	A	*1*
Broadwood Ave & Edith St (Stop-Controlled)	*Overall*	-	2	A	-	-	4	A	-
	EBLTR	0.01	1	A	*0*	0.01	1	A	*0*
	WBLTR	0.05	0	A	*0*	0.05	0	A	*0*
	SBLTR	0.04	9	A	*1*	0.12	10	A	*3*
Lakeshore Rd N & Broadwood Ave (Stop-Controlled)	*Overall*	-	3	A	-	-	3	A	-
	EBLTR	0.12	12	B	*3*	0.24	13	B	*7*
	WBLTR	0.04	16	C	*1*	0.02	14	B	*1*
	NBLTR	0.06	2	A	*1*	0.05	2	A	*1*
	SBLTR	0.00	0	A	*0*	0.00	0	A	*0*
Lakeshore Rd N & Farah Ave (Stop-Controlled)	*Overall*	-	3	A	-	-	4	A	-
	EBLTR	0.07	12	B	*2*	0.11	13	B	*3*
	WBLTR	0.17	14	B	*5*	0.31	18	C	*10*
	NBLTR	0.00	0	A	*0*	0.01	0	A	*0*
	SBLTR	0.03	2	A	*1*	0.02	1	A	*1*
Armstrong St & Church St (Stop-Controlled)	*Overall*	-	0	A	-	-	0	A	-
	EBLR	0.00	0	A	*0*	0.00	0	A	*0*
	NBLT	0.01	0	A	*0*	0.01	0	A	*0*
	SBTR	0.16	0	A	*0*	0.19	0	A	*0*

Intersection	Movement (Storage, m)	Weekday AM Peak Hour				Weekday PM Peak Hour			
		V/C	Delay (s)	LOS	95th % Queue (m)	V/C	Delay (s)	LOS	95th % Queue (m)
Armstrong St & Sharpe St (Stop-Controlled)	*Overall*	-	2	A	-	-	3	B	-
	EBLTR	0.09	20	C	*2*	0.31	37	**E**	*10*
	WBLR	0.07	11	B	*2*	0.21	14	B	*6*
	NBTR	0.21	0	A	*0*	0.34	0	A	*0*
	SBLT	0.06	3	A	*2*	0.04	2	A	*1*
	SBT	0.19	0	A	*0*	0.19	0	A	*0*
Armstrong St & Beavis Terr/Elm Ave (Signalized)	*Overall*	0.31	13	B	-	0.36	15	B	-
	EBLTR	0.02	6	A	*3*	0.02	8	A	*4*
	WBLTR	0.21	7	A	*12*	0.11	8	A	*9*
	NBLTR	0.50	14	B	*21*	0.70	16	B	*38*
	SBLTR	0.51	14	B	*22*	0.47	13	B	*25*

Under existing conditions, the study area intersections operate well and within capacity. All the movements operate with v/c ratios of 0.51 or less during the AM peak hour and 0.70 or less during the PM peak hour, indicating reserve capacity during both peak hours.

During the PM peak hour, the high volume of eastbound left-turning traffic at the intersection of Armstrong Street and Sharpe Street is causing a delay of 37 seconds in travel time at the eastbound left-turn movement, which is operating at LOS 'E'. However, the eastbound left-turn movement has a v/c ratio of 0.31 and operates well within capacity. Additionally, none of the 95th percentile queue lengths exceed beyond their available storage space, indicating no queue spillovers within the study area. Overall, the transportation network within the study area is functioning well, with low delays and low v/c ratios (no capacity issues) during both AM and PM peak hours.

The overall intersection LOS for all the study intersections during AM and PM peak hours in New Liskeard are shown in **Figure 6-18** and **Figure 6-19**, respectively.

Figure 6-18: Existing Conditions – AM Peak Overall Intersection LOS – New Liskeard

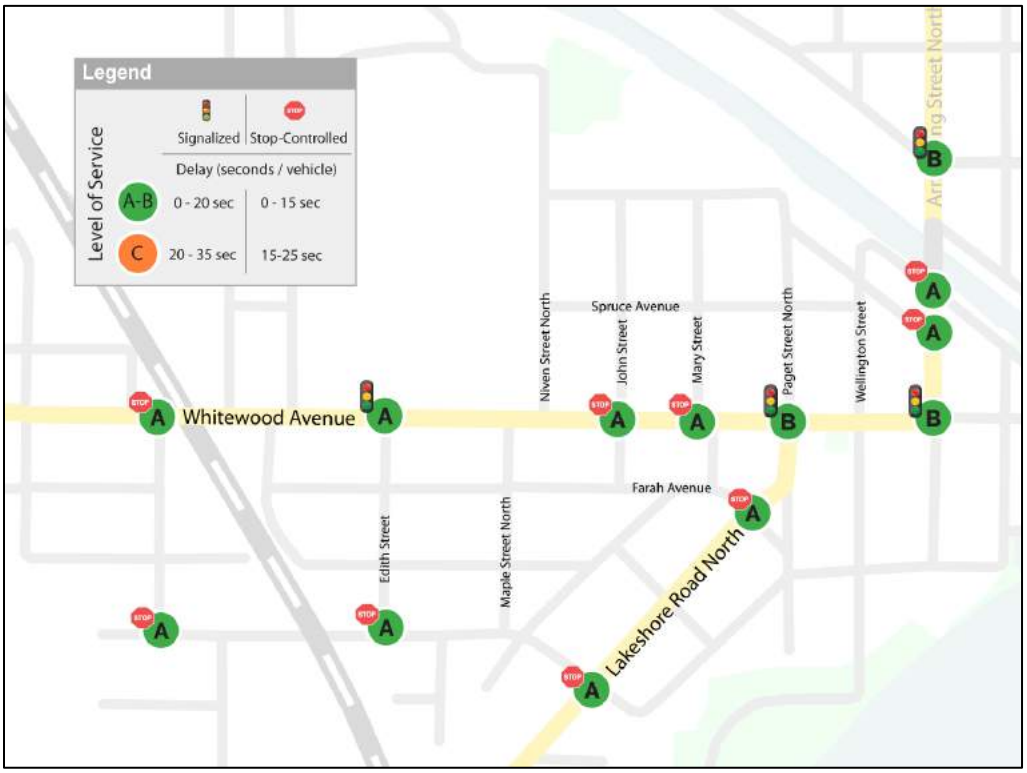
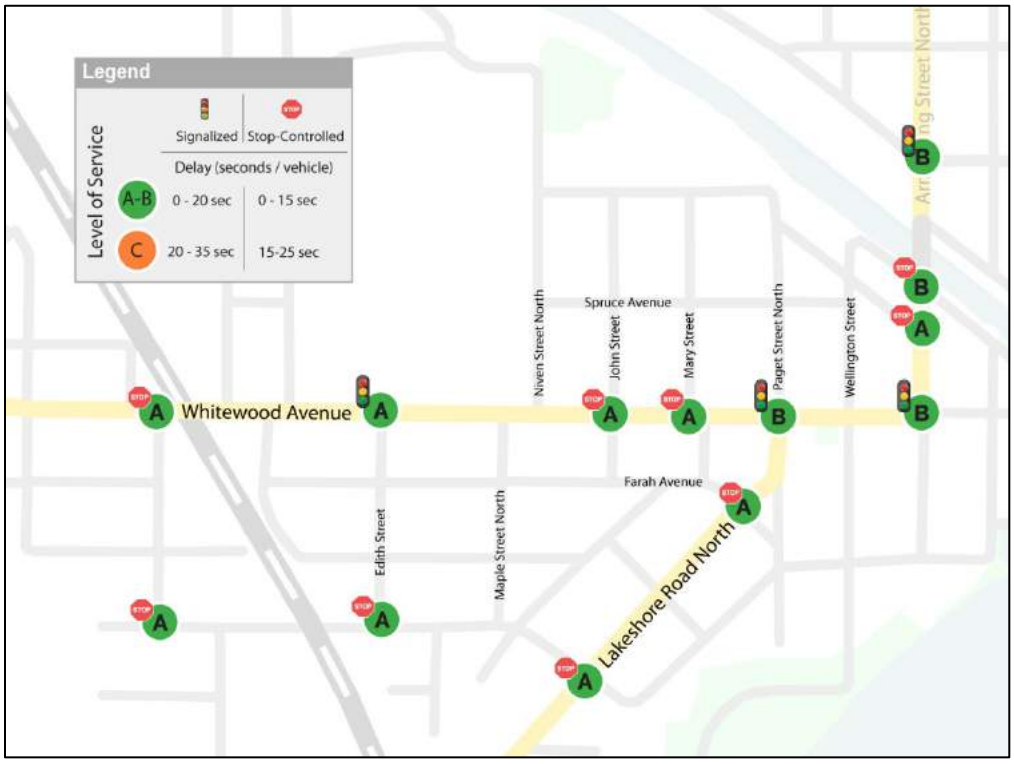


Figure 6-19: Existing Conditions – PM Peak Overall Intersection LOS – New Liskeard



6.2.4.2 Haileybury

Similar to New Liskeard, TYLin detailed the traffic operation at all turning movements at the study intersections in Haileybury as follows:

1. **Main Street at Rorke Avenue***
2. Main Street at Georgina Avenue
3. **Main Street at Ferguson Avenue***
4. Ferguson Avenue at Broadway Street
5. Ferguson Avenue/Lakeshore Road at Browning Street

Note(*): *Due to unconventional intersection signal-control (3-Way Stop-Control), the Synchro/HCM 2000 methodology could not be used to analyze the intersections of Main Street at Rorke Avenue and Main Street at Ferguson Avenue. Hence, traffic operations at these intersections have been analyzed as part of Arterial Operational Analysis in* ***Section 7.1.***

The traffic operations analysis results for the study area intersections under existing conditions in Haileybury are summarized in **Table 6-3** for weekday a.m. and p.m. peak hours.

Table 6-3: Existing 2023 Conditions - Traffic Operations Analysis for Haileybury

Intersection	Movement	Weekday AM Peak Hour				Weekday PM Peak Hour			
	(Storage m)	V/C	Delay (s)	LOS	95th % Queue (m)	V/C	Delay (s)	LOS	95th % Queue (m)
Main St & Georgina Ave (Stop-Controlled)	*Overall*	-	*2*	*A*	-	-	*2*	*A*	-
	EBLTR	0.00	0	A	0	0.00	0	A	0
	WBLTR	0.01	1	A	0	0.03	1	A	1
	NBLTR	0.12	11	B	3	0.08	11	B	2
	SBLTR	0.01	11	B	0	0.03	12	B	1
Ferguson Ave & Broadway St (Stop-Controlled)	*Overall*	-	*1*	*A*	-	-	*2*	*A*	-
	EBLTR	0.02	13	B	0	0.02	15	B	1
	WBLTR	0.05	11	B	1	0.10	12	B	3
	NBLTR	0.00	0	A	0	0.00	0	A	0
	SBLTR	0.02	1	A	0	0.02	1	A	1
Ferguson Ave/Lakeshore Rd & Browning St (Stop-Controlled)	*Overall*	-	*10*	*A*	-	-	*10*	*A*	-
	EBLTR	0.02	9	A	-	0.01	8	A	-
	WBLTR	0.01	9	A	-	0.02	8	A	-
	NBLTR	0.39	10	A	-	0.36	10	A	-
	SBLTR	0.26	9	A	-	0.42	10	B	-

Under existing conditions, the study area intersections in Haileybury operate well and within capacity. All the movements operate with v/c ratios of 0.39 or less during the AM peak hour and 0.42 or less during the PM peak hour, indicating reserve capacity during both peak hours.

The overall intersection LOS for all the study intersections during AM and PM peak hours in Haileybury are shown in **Figure 6-20** and **Figure 6-21**, respectively.

Figure 6-20: Existing Conditions – AM Peak Overall Intersection LOS – Haileybury

Figure 6-21: Existing Conditions – PM Peak Overall Intersection LOS in Haileybury

6.2.5 Existing 2023 Arterial Operational Analysis

Arterial operational analysis evaluates how a street corridor is operating as a whole and determines the average speed, travel time, and delay incurred by vehicles as they traverse through different intersections along the corridor.

There are two intersections in Haileybury identified earlier in **Section 6.2.4** (Main Street at Rorke Avenue and Main Street at Ferguson Avenue) which have unconventional signal-control. As such SimTraffic (version 11) was chosen as the analysis tool to evaluate Arterial Operations across the City. SimTraffic is a microscopic simulation tool which is part of the Synchro package and can be used to model a wide variety of traffic controls including intersections with unconventional geometries or signal controls. Each vehicle in the traffic system is individually tracked through the model and operational measures of effectiveness are collected on every vehicle during each 0.1-second interval of the simulation. Unlike Synchro, SimTraffic measures the full impact of queuing and blocking. The SimTraffic microsimulation software was utilized by using the following parameters: 10 minutes seeding time, one-hour recording, and 5 simulation runs.

6.2.5.1 New Liskeard

The following street corridors were identified in New Liskeard for arterial operational analysis:

- Whitewood Avenue
- Lakeshore Road North
- Armstrong Street North

The arterial operational analysis results for the corridors identified in New Liskeard are summarized in **Table 6-4** for weekday AM and PM peak hours under the existing traffic conditions. The detailed SimTraffic reports are attached in **Appendix B**.

Table 6-4 Existing 2023 Conditions - Arterial Operational Analysis for New Liskeard

Time Period	Corridor	Direction	From	To	Delay (s/veh)	Travel Time (s)	Dist. (km)	Avg. Speed (km/h)
AM	Whitewood Avenue	Eastbound	Golding Street	Armstrong Street	26	113	1.3	42
		Westbound	Armstrong Street	Golding Street	28	117	1.3	40
	Lakeshore Road N	Northbound	Broadwood Avenue	Whitewood Avenue	16	74	0.7	32
		Southbound	Whitewood Avenue	Broadwood Avenue	21	77	0.7	31

Time Period	Corridor	Direction	From	To	Delay (s/veh)	Travel Time (s)	Dist. (km)	Avg. Speed (km/h)
	Armstrong Street	Northbound	Whitewood Avenue	Elm Avenue	34	74	0.6	28
		Southbound	Elm Avenue	Whitewood Avenue	40	79	0.5	25
PM	Whitewood Avenue	Eastbound	Golding Street	Armstrong Street	30	118	1.3	41
		Westbound	Armstrong Street	Golding Street	32	120	1.3	40
	Lakeshore Road N	Northbound	Broadwood Avenue	Whitewood Avenue	15	73	0.7	33
		Southbound	Whitewood Avenue	Broadwood Avenue	21	79	0.7	30
	Armstrong Street	Northbound	Whitewood Avenue	Elm Avenue	39	81	0.6	26
		Southbound	Elm Avenue	Whitewood Avenue	44	83	0.5	24

Under existing conditions, the maximum travel time within the study area on Whitewood Avenue is 120 seconds, on Lakeshore Road North is 79 seconds and on Armstrong Street North is 83 seconds. None of the intersections along the corridors analyzed cause significant delay to vehicles.

6.2.5.2 Haileybury

Similarly, following street corridors were identified in Haileybury for arterial operational analysis:

1. Main Street
2. Ferguson Avenue

The arterial operational analysis results for the corridors identified in Haileybury are summarized in for weekday AM and PM peak hours under the existing traffic conditions.

Table 6-5 Existing 2023 Conditions – Arterial Operational Analysis for Haileybury

Time Period	Corridor	Direction	From	To	Delay (s/veh)	Travel Time (s)	Dist. (km)	Avg. Speed (km/h)
AM	Main Street	Eastbound	Rorke Avenue	Ferguson Avenue	12	49	0.5	40
		Westbound	Ferguson Avenue	Rorke Avenue	9	39	0.5	47
	Ferguson Avenue	Northbound	Main Street	Browning Street	16	36	0.3	30
		Southbound	Browning Street	Main Street	17	39	0.3	29
PM	Main Street	Eastbound	Rorke Avenue	Ferguson Avenue	10	44	0.5	45
		Westbound	Ferguson Avenue	Rorke Avenue	11	44	0.5	42
	Ferguson Avenue	Northbound	Main Street	Browning Street	16	36	0.3	31
		Southbound	Browning Street	Main Street	17	38	0.3	29

Under existing conditions, the maximum travel time within the study area on Main Street is 49 seconds and on Ferguson Avenue is 39 seconds. None of the intersections along the corridors analyzed cause significant delay to vehicles.

Further, a visual analysis of SimTraffic operations was conducted for both downtown cores (New Liskeard and Haileybury) and no queue spillovers, spillbacks or lane-blockages were observed within the study area.

6.3 Road Safety Review

6.3.1 Collision Data Review

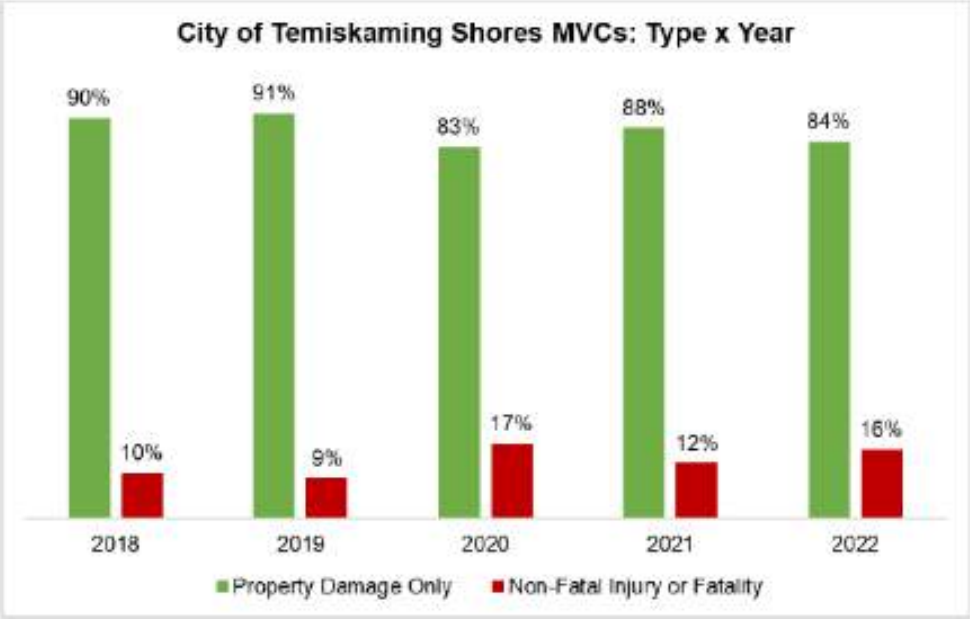
During the 5-year period, from year 2018 through 2022, the City of Temiskaming Shores saw a total of 907 reportable motor-vehicle-collisions (MVCs) with an average of 181 MVCs per year. The years 2020 and 2021 reported fewer MVCs than other years, most likely due to a reduced number of trips taken during the COVID-19 pandemic, as can be seen in **Figure 6-22**.

In total, 88% of the crashes (795 MVCs) resulted in property-damage-only (PDO), 12% of them (108 MVCs) resulted in non-fatal injuries, and 0.4% (4 MVCs) resulted in fatalities. In comparison, in Ontario, the fatality rate per 10,000 licensed drivers was 0.5% in 2020. However, there has been a recent decrease in PDO crashes and a steady increase in crashes involving injuries or fatalities, as depicted in **Figure 6-23**.

Figure 6-22: 5-year MVC Summary

source: Ontario Provincial Police

Figure 6-23: Collision Type



Source: Ontario Provincial Police

Figure 6-24 and **Figure 6-25** show the location and number of non-fatal crashes in the City between 2018 and 2022, overall collision heatmap, respectively. MVCs most often occurred along the heavily travelled areas of the City, including Highway 11 and Lakeshore Road. The stretch of Highway 11 between Highway 65 and Drive in Theatre Road, and Armstrong Street between Gray Road and the intersection of Highway 11 are high crash areas.

Lack of adequate pedestrian crossings, proper sidewalks, biking facilities, traffic control, proper street design and pavement markings, may be contributing factors to crashes in the City's downtown cores.

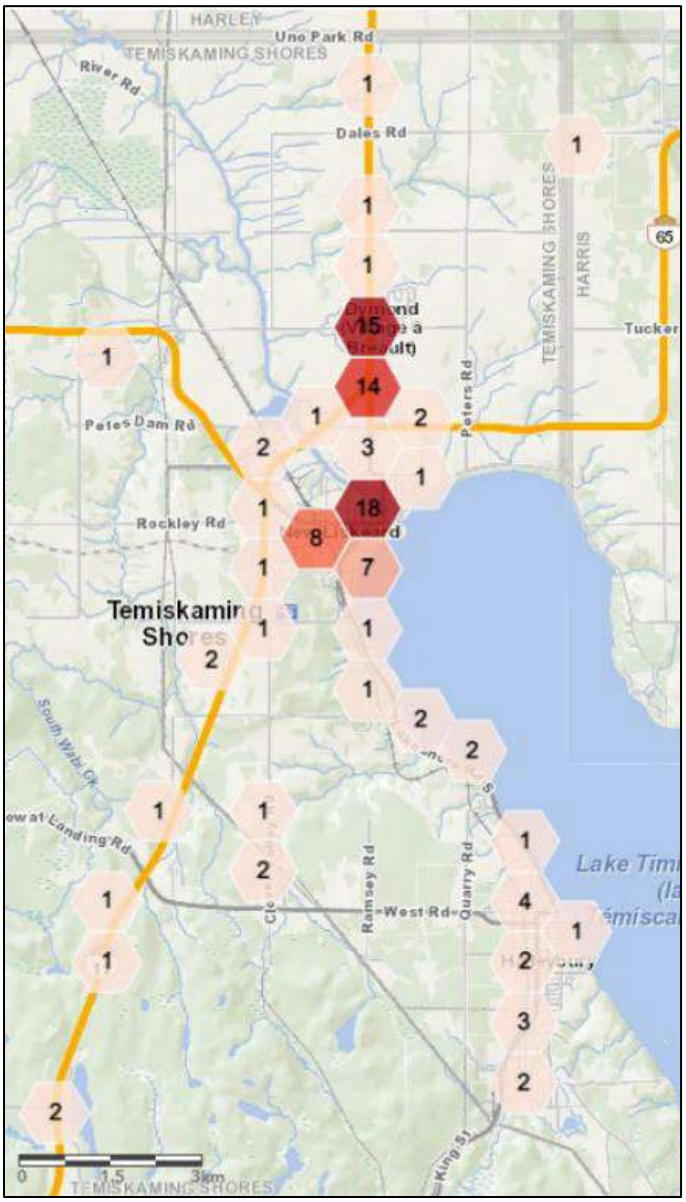
Safety Measure Considerations for Highway 11 between Tobler Road and Wabi River Bridge' report completed by the Timiskaming District Road Safety Coalition (April 2022), notes that Highway 11 is a key corridor for mobility for residents of Northern Ontario as well as a key truck route. It also noted that in the segment near Dymond, drivers (particularly of commercial vehicles) do not adjust their speed per the speed limit transition from 90km/h to 80 km/h. The report also cites anecdotal accounts from business owners and drivers that indicate that commercial vehicles occasionally jump the red signal heading south. Page 9 of the report notes that there have been numerous accounts of incidents of vehicles disregarding the traffic signals at the Walmart/Canadian Tire intersection as well as the Highway 65E intersection. The 'History of Safety Concerns' sections on Page 4 and 9 notes that residents have been concerned about speeding on this highway and there has been a history of advocacy from various groups demanding measures to lower speeds through this segment of the highway including a petition, letters to government officials, and meetings with various stakeholders, including the OPP.

Four fatal crashes occurred in Temiskaming between 2018 and 2022. **Figure 6-26** shows their location. None of them occurred in downtown New Liskeard or Haileybury.

On average, 11% of MVCs each year involve a commercial motor vehicle (CMV). **Figure 6-27** shows the percentage and numbers of collisions involving CMVs. The primary cause of 38% of MVCs were attributed to mistakes/errors made by drivers, such as improper turn, loss of control, failure to yield, etc. Another 27% were attributable to inattentive drivers, while 8.4% had 'speed-related' listed as the primary cause. Together, these three primary causes of MVCs account for 73% of all the MVCs in the 5-year period (see **Figure 6-28**).

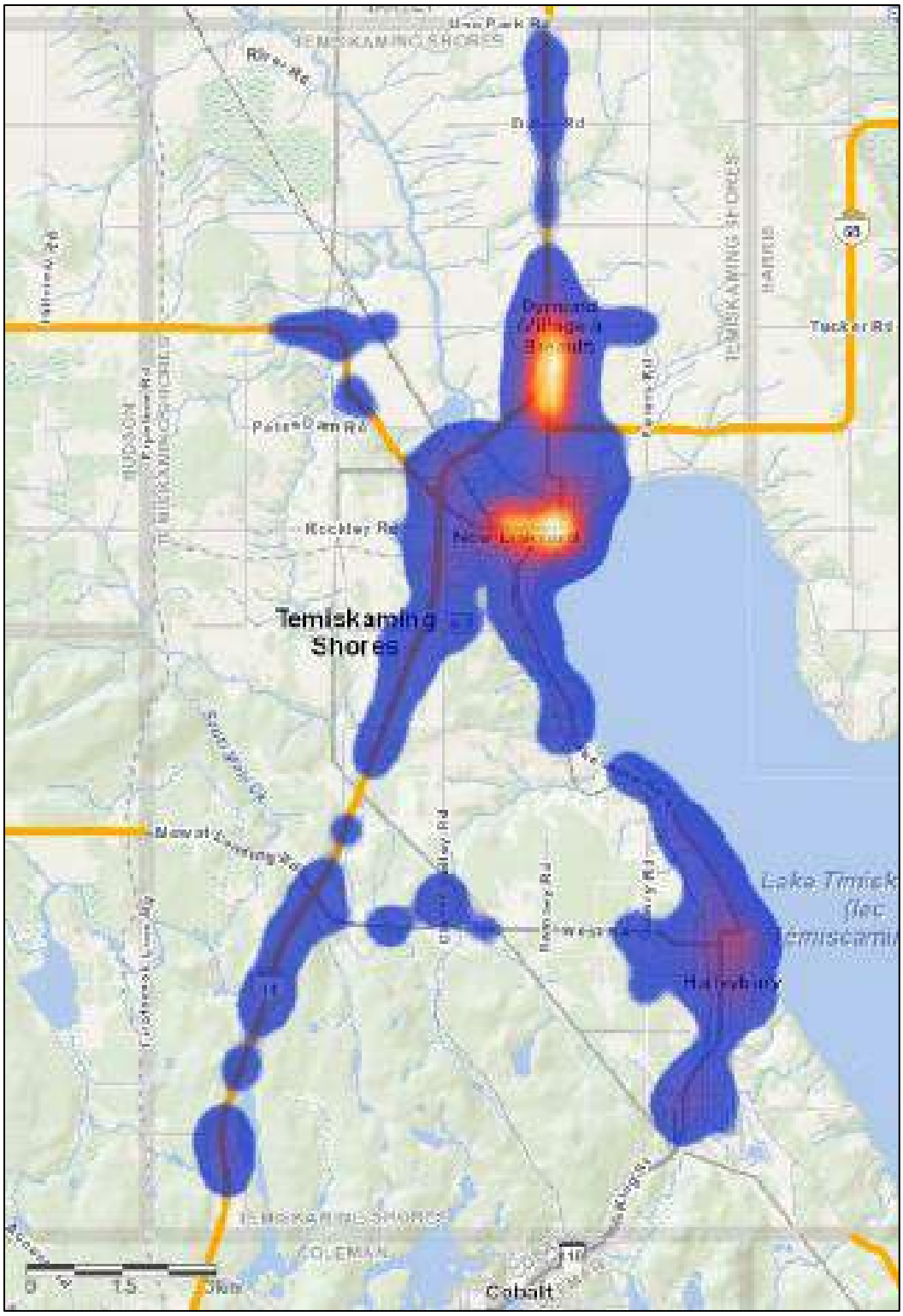
The frequency of MVCs varies by season in all years, except for 2022. Unlike the previous four years, 2022 experienced a more even distribution of MVCs across seasons. In the previous years, autumn and winter months had higher MVCs than spring and summer months, as shown in **Figure 6-29.**

Figure 6-24: Non-Fatal MVCs



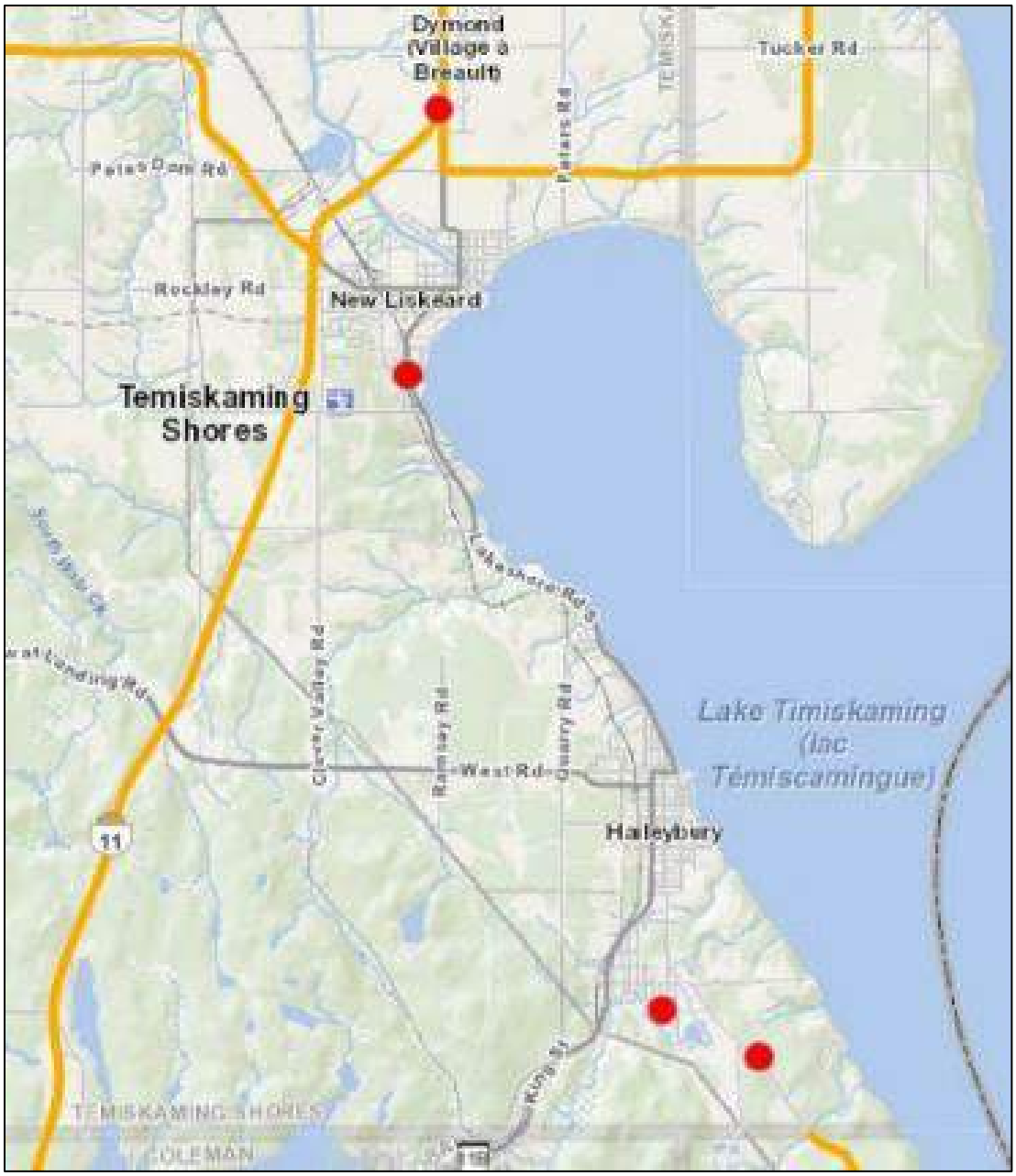
Source: Ontario Provincial Police

Figure 6-25: Collision Heat Map



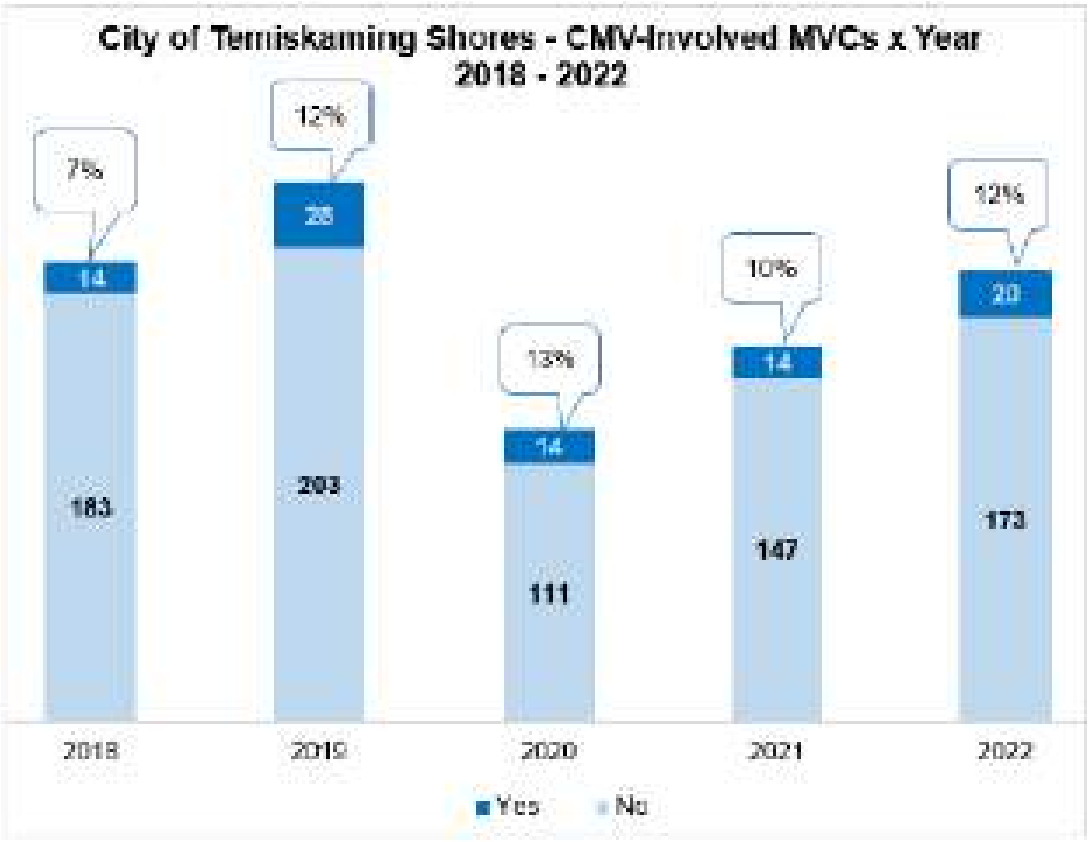
Source: Ontario Provincial Police

Figure 6-26: Location of Fatal MVCs



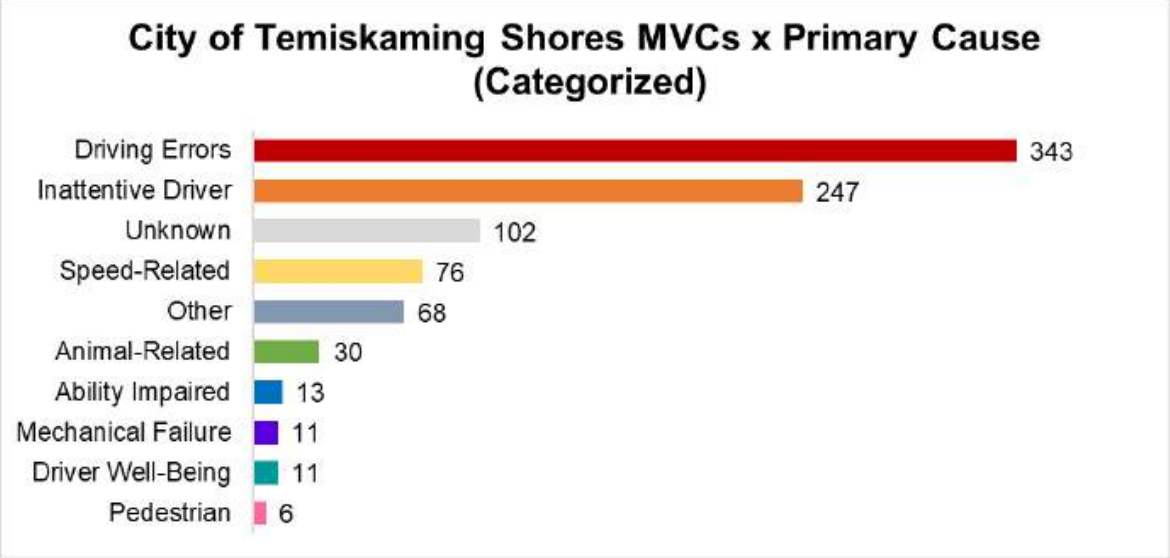
Source: Ontario Provincial Police

Figure 6-27: CMV-Involved MVCs



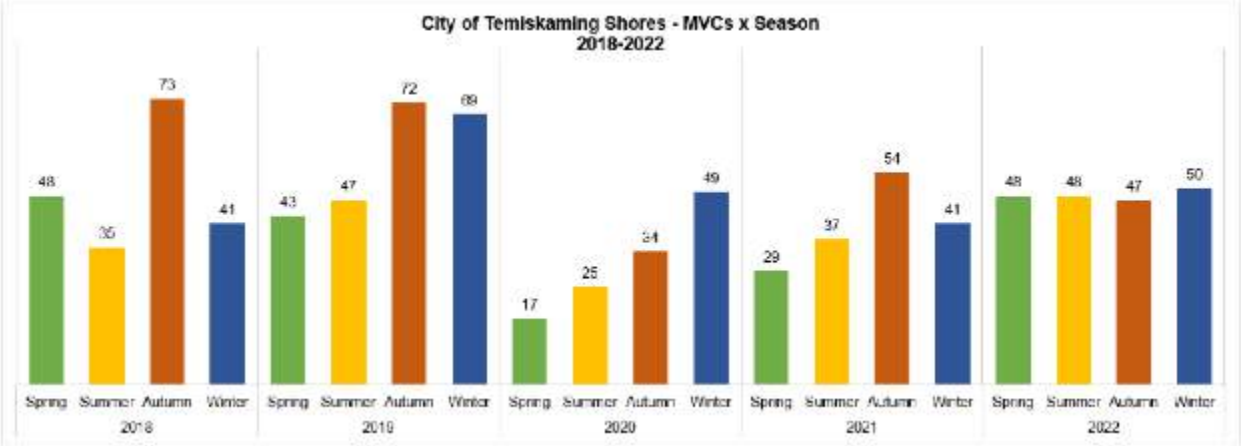
Source: Ontario Provincial Police

Figure 6-28: Primary Cause of Collisions



Source: Ontario Provincial Police

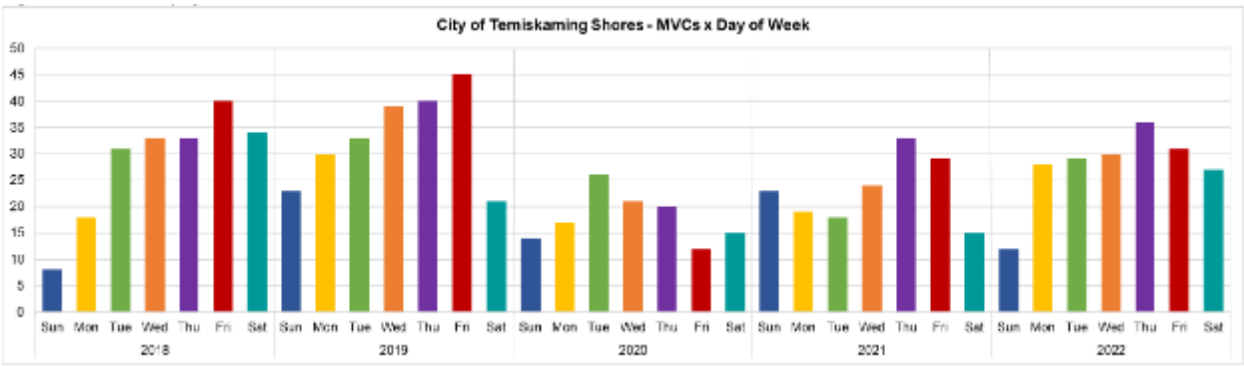
Figure 6-29: Collision Distribution by Season



Source: Ontario Provincial Police

MVCs are most frequently occurring on Thursdays, Fridays, and Wednesdays. Together, these three days account for 51% of all MVCs., as can be seen in **Figure 6-30**. There is some discrepancy from this pattern in 2020, where Tuesdays had the most MVCs. Additionally, 2022 reflects a more equal distribution across all days, except Sundays. In almost all years except 2020 and 2021, Sundays are the least frequent day for MVCs. This likely reflects less volume of traffic as Sunday is a holiday from work for most people. The deviation in 2020 and 2021 may be reflective of travel patterns during the pandemic, where weekly routines were altered considerably.

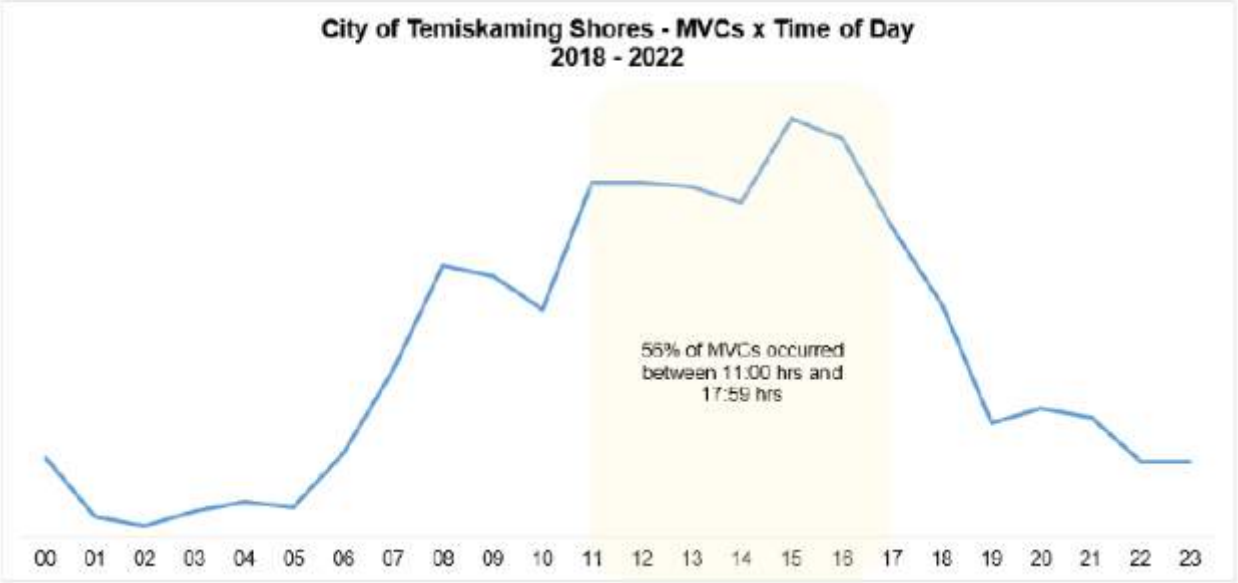
Figure 6-30 Collision Distribution by Days of Week



Source: Ontario Provincial Police

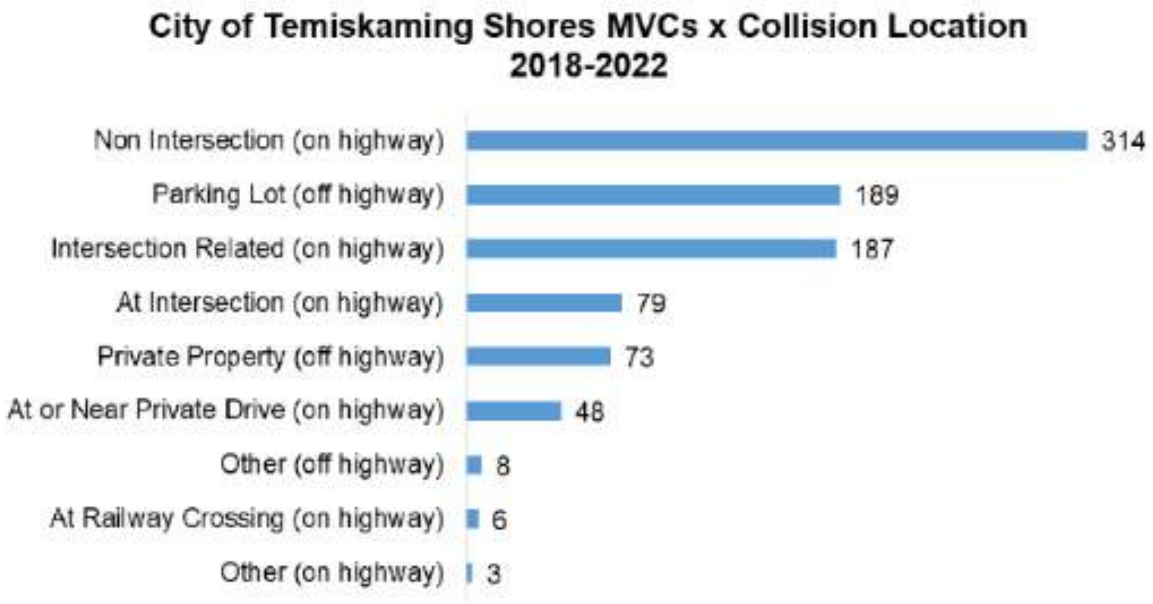
82% (747) of MVCs occurred during the 13-hour daytime period between 6 am and 7 pm. Fifty-six percent (512) of MVCs occurred between 11 am and 6 pm reflecting lunchtime movement, school pick-up times, and commutes from work to home. **Figure 6-31** shows the collision distribution per time of day and **Figure 6-32** shows the collision distribution by location.

Figure 6-31 Collision Distribution by Time of Day



Source: Ontario Provincial Police

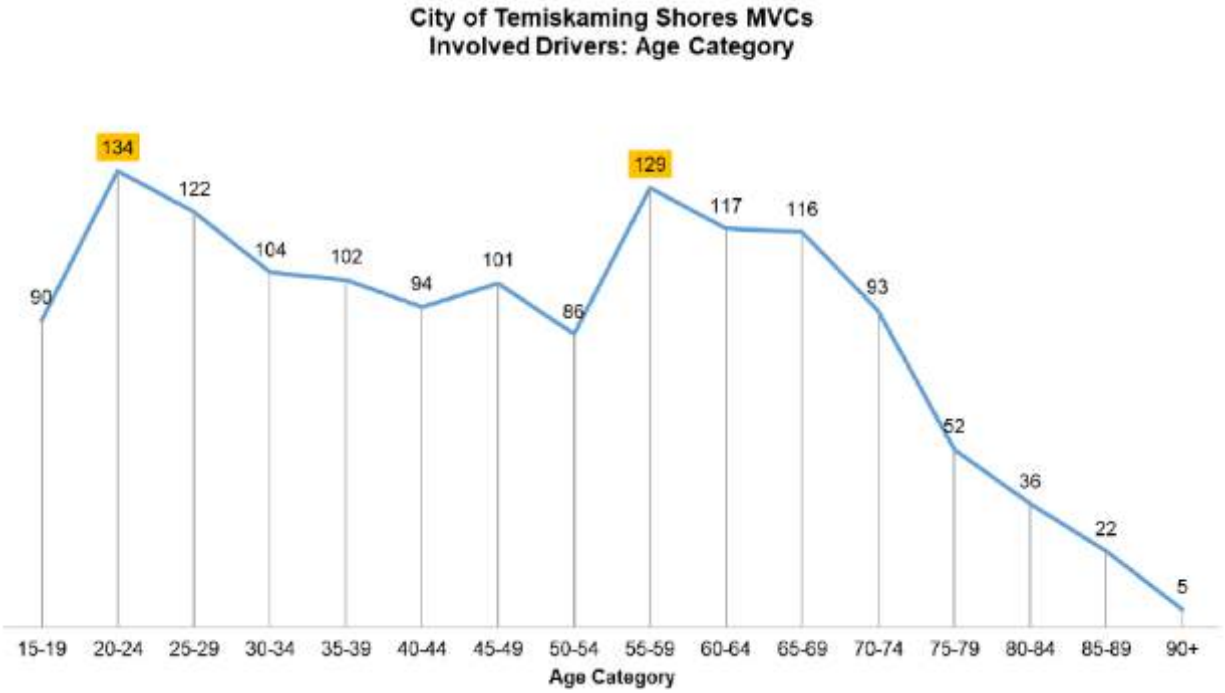
Figure 6-32: Collision Distribution by Location



Source: Ontario Provincial Police

The 907 MVCs involved 1631 drivers, of which 50% were male and 37% were female. Drivers had an average age of 47. **Figure 6-33** shows the collision distribution per the age group of the drivers involved in the MVCs. The highest peak in the graph occurs at the 20-24 years age group followed by the 55-59 years age group.

Figure 6-33: Collision distribution by Age Group (source: Ontario Provincial Police)



Source: Ontario Provincial Police

6.3.2 Speed Data

The two downtown cores generally have posted speed limits of 50 km/h or less.

The 85th Percentile speed is a statistical measure indicating the travel speed at or below which 85 percent of drivers travel at on a corresponding roadway during unobstructed, free-flow movement. These speeds were obtained for the roads in the study area from TYLin's big data partner Urban SDK. The data is from March and April 2023.

Table 6-7 compares the 85th percentile speed to the posted speed limits. However, for some roads in the study area the posted speed limits were unavailable and were assumed based on the local context. The assumed posted speed limits for these roads are summarized in **Table 6-6.**

85th percentile speeds higher than 9 km/hr or more than the posted speed limit have been highlighted in yellow. As per the table below, speeding occurs at Whitewood Avenue, Armstrong Street, Lakeshore Road, Elm Avenue, Beavis Terrace in New Liskeard and Main Street, Georgina Avenue and Lakeshore Road in Haileybury. Wide lanes, lack of pavement markings, lack of traffic calming, inadequate speed limit signage, and lack of proper traffic controls may be the probable reasons for speeding on these roads.

Table 6-6: Speed Limits Assumptions

New Liskeard	Assumed Speed Limit (km/hr)
Edith Street	40
Paget Street	40
Sharpe Street	40
John Street	40
Mary Street	40
Farah Avenue	40
Church Street	40
Golding Street	40
Elm Avenue	40
Beavis Ter	40
Haileybury	**Posted Speed Limit (km/hr)**
Ferguson Avenue	50
Georgina Avenue	40
Browning St	30

Table 6-7: Comparison of Posted Speed Limit & 85th Percentile Speed

New Liskeard	Posted Speed Limit (km/hr)	85th Percentile AM (km/hr)	85th Percentile PM (km/hr)	85th Percentile Overall Weekday (km/hr)	85th Percentile Overall Weekend (km/hr)
Whitewood Avenue (Downtown)	*50*	*54*	*54*	*55*	*59*
Whitewood Avenue- Near Hwy 65	50	64	64	63	63
Edith Street	40	37	37	37	37
Paget Street	40	36	33	37	37
Armstrong Street (Near Wabi River)	50	60	62	61	63
Armstrong Street (Near Hwy 65)	*50*	*69*	*65*	*69*	*72*
Sharpe Street	40	35	32	34	37
John Street	40	33	29	32	33
Mary Street	40	29	29	29	29
Farah Avenue	40	43	43	43	43
Lakeshore Road	*40*	*54*	*54*	*52*	*51*
Lakeshore Road (near Melville St)	50	66	66	65	63
Church Street	40	38	36	36	38
Golding Street	40	38	38	38	38
Broadwood Avenue	40	45	41	45	49
Elm Avenue	40	50	50	*50*	*50*
Beavis Terrace	40	51	51	50	50
Haileybury	**Posted Speed Limit (km/hr)**	**85th Percentile AM (km/hr)**	**85th Percentile PM (km/hr)**	**85th Percentile Overall Weekday (km/hr)**	**85th Percentile Overall Weekend (km/hr)**
Main Street	50	59	60	61	59
Rorke Avenue	*50*	*62*	*63*	*62*	*63*
Ferguson Avenue	50	56	52	55	55
Broadway Street	30	32	26	32	34
Georgina Avenue	40	50	50	50	49
Lakeshore Road	50	65	65	64	63
Browning St	30	35	28	*33*	*34*

Figure 6-34 and **Figure 6-35** visually show the 85th percentile speeds for the roads in New Liskeard for the AM and PM Peak hours, respectively. Similarly, **Figure 6-36** and **Figure 6-37** visually show the 85th percentile speeds for the roads in Haileybury in the AM and PM, respectively.

Figure 6-34: New Liskeard AM 85th Percentile Speed

Figure 6-35 New Liskeard PM 85th Percentile Speed

Figure 6-36: Haileybury AM 85th Percentile Speed

Figure 6-37: Haileybury PM 85th Percentile Speed

6.3.3 Traffic Calming

To address speeding, the City could implement a variety of traffic calming measures, which could potentially be applied in the community to protect pedestrians, cyclists, and reduce vehicular speed in each downtown core.

Currently, the City utilizes few traffic calming devices such as curb extensions around Whitewood Avenue. According to NACTO, curb extensions visually and physically narrow the roadway, slowing vehicles down, and shortening crossing distances to pedestrians. In addition, a curb extension creates a physical barrier to enclose on-street parking spaces. The intersections of Whitewood Avenue at Armstrong Street and Whitewood Avenue at Wellington Street include curb extensions. Expanding on the quantity and types of traffic calming measures used would also align with the City's efforts on implementing Vision Zero in the community.

6.4 Active Transportation (AT) Network

When compared to other municipalities of a similar size, the level of active transportation within Temiskaming Shores is impressive. About 15% of the City's population use bicycles and 27% opt for walking (Active Transportation Plan, 2021). The City recognizes the importance of active transportation infrastructure for its community.

As noted in **Section 4.3**, City's Official Plan (2015) states that the City is aiming to provide "*a range of services and facilities that are accessible by walking and cycling*". In addition, the City wants to build a "*healthy, safe and livable community that encourages active living and healthy lifestyles*". The Official Plan also considers the impacts of climate change and states the importance of implementing measures to "*support the reduction of greenhouse gas emissions through urban and rural design practices and to encourage and support green infrastructure*".

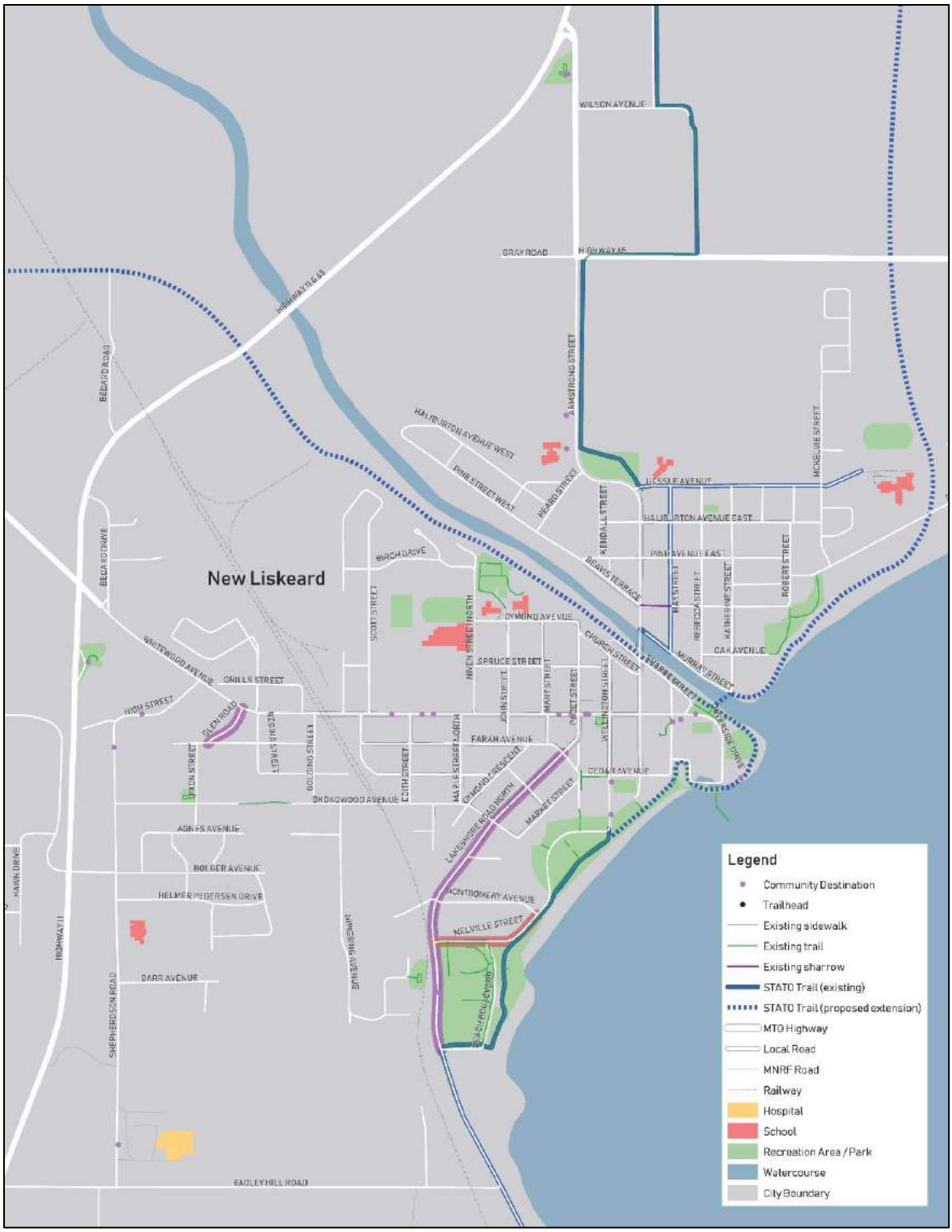
Both, the Official Plan and the Active Transportation Plan, which was presented in **Section 4.1**, show that the City is aware of the issues facing active transportation and is aiming to implement measures that improve the cycling and pedestrian conditions.

6.4.1 Existing AT Facilities

6.4.1.1 New Liskeard

Figure 6-38 shows the existing active transportation conditions in New Liskeard indicating existing sidewalks, trails, sharrows, and the existing and planned sections of the STATO trail. The exhibit clearly shows missing active transportation links, especially for cycling infrastructure, around the downtown area on Whitewood Avenue.

Figure 6-38: Existing AT Network in New Liskeard

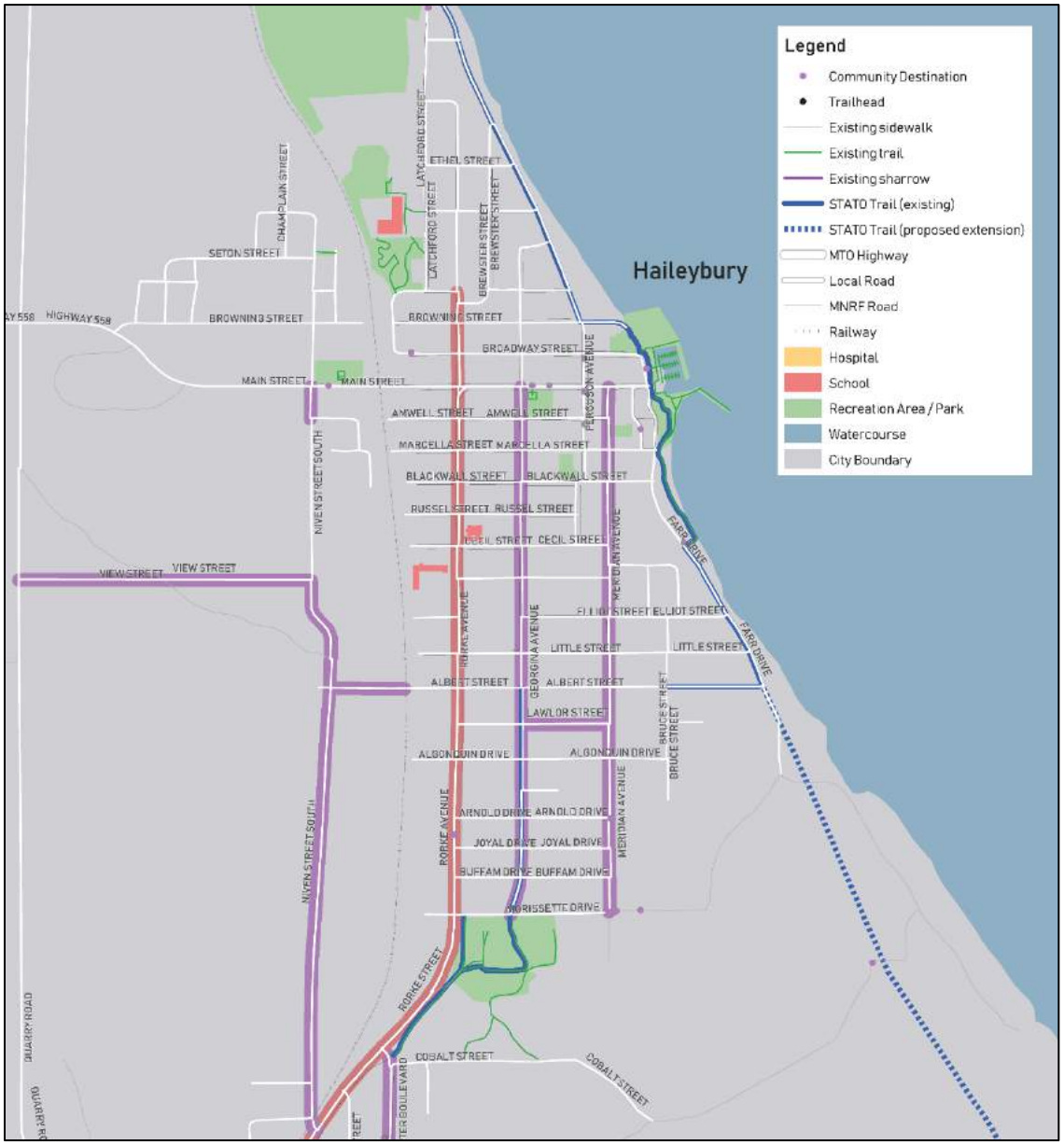


Source: Temiskaming Shores Active Transportation Plan, 2021

6.4.1.2 Haileybury

Figure 6-39 illustrates the current existing active transportation network in Haileybury. The figure shows that sharrows are more extensively provided in Haileybury than in New Liskeard and mostly run in a north-south direction. However, again it is evident that AT infrastructure is lacking in the downtown area around Main Street and Ferguson Avenue.

Figure 6-39: Existing AT Facilities in Haileybury



Source: Active Transportation Plan, 2021

6.4.2 Bicycle Facilities

Trails

The main trail runs along Lakeshore Road, Farr Drive, and Armstrong Street and connects the communities of Dymond, New Liskeard, and Haileybury. This trail is called the South Temiskaming Active Transportation Organization (STATO) trail and can be seen in **Figure 6-40**. The STATO trail also services two schools in New Liskeard, called École Secondaire Catholique Sainte-Marie as well as École Publique des Navigateurs (French public schools).

Figure 6-40 Existing STATO Bike Trail

Source: Active Transportation Plan, 2021 – Clockwise from top left: STATO Trail in New Liskeard, Waterfront in Haileybury, Downtown Haileybury and STATO Trail on Lakeshore Road.

Bike Lanes and Sharrows

There is currently a lack of designated bike lanes and signage within the two downtowns cores in the City informing users of the facility. There are opportunities to improve the current bicycle network in the City with the implementation of simple cost-effective measures such as signage, road diets, sharrow lanes, paved shoulders, and other types of bicycle infrastructure.

6.4.2.1 New Liskeard

In August 2019, with support and direction from the City's Bicycle Friendly Committee, the City painted sharrows along the east and west side of the Armstrong Street Bridge and along Elm Avenue. The sharrows were intended to improve the cycling experience across the bridge and address the challenge of crossing the bridge due to narrow lanes in both directions and raised sidewalks on both sides. There is currently a sharrow on Armstrong Street North as shown in **Figure 6-41**, leading over

the Wabi Bridge shows its condition.

During the same time, the City conducted a survey in which the results showed that many cyclists were still anxious about crossing over the bridge even with sharrows and many still felt unsafe and still chose to ride on the sidewalk especially in high traffic times. The desire for further solutions to safely cross the Wabi River Bridge was evident in the expressed desire for a separate bike lane, reduced speed, and motorist and cyclist education.

Figure 6-41: Sharrow on Armstrong Street North

Source: Google Maps, 2022

6.4.2.2 Haileybury

The City's 2021 Active Transportation Plan proposed a sharrow along Ferguson Avenue. A sharrow is a type of bicycle facility that is typically an inverted V-Shape above a bicycle pavement marking which indicates to vehicles that part of the road should be shared by cyclists.

6.4.3 Pedestrian Crossing

6.4.3.1 New Liskeard

Pedestrian crossing opportunities along the two major roads in New Liskeard; Whitewood Avenue and Armstrong Street are rather limited as depicted in **Figure 6-9**Figure in **Section 6.1.5**.

The only location in New Liskeard where there is a signalized intersection and a dedicated crosswalk on all leg of the intersection is Armstrong Street & Beavis Terrace/Elm Avenue. There is a pedestrian crosswalk on the east leg of the intersection of Whitewood Avenue and John Street. As this intersection does not meet the signal warrant, the City placed a flashing light/beacon for enhanced pedestrian crossing safety.

The Transportation Association of Canada (TAC) guidelines recommend reducing pedestrian crossing distance whenever possible using various design tools such as smaller curb radius, curb extensions, etc. Reducing the crossing distance enhances pedestrian safety by minimizing the exposure time of pedestrians to vehicular traffic. The following figures indicate the approximate crosswalk length at the signalized study intersections along Whitewood Avenue and Armstrong Street.

Figure 6-42: Existing crosswalk layout at Whitewood Avenue and Edith Street

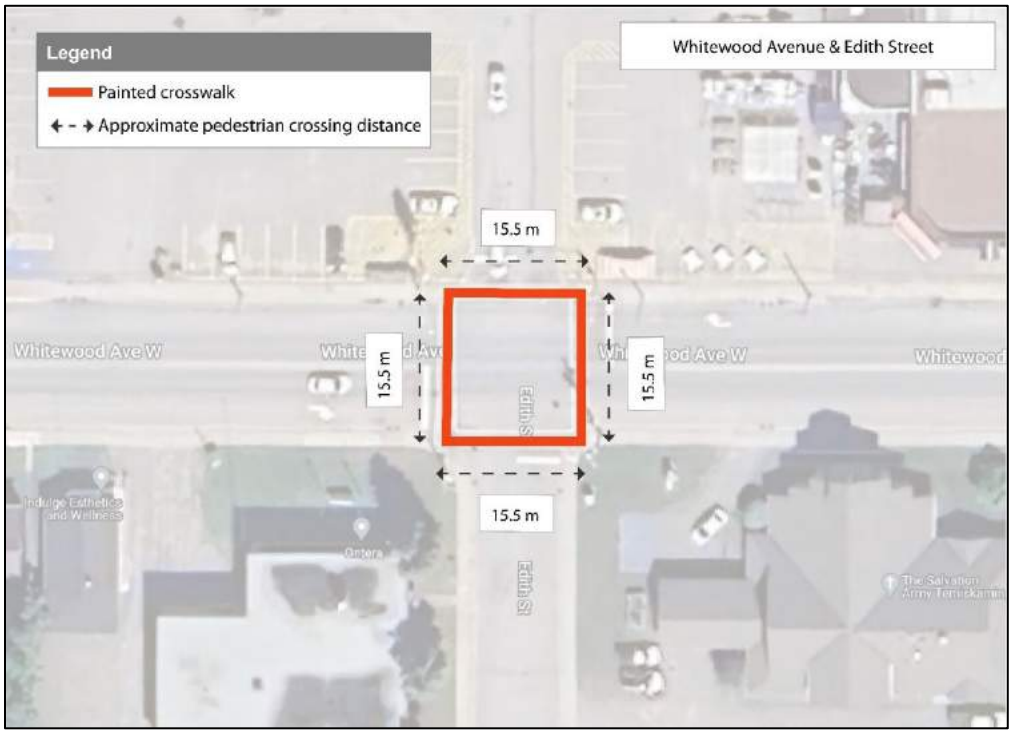


Figure 6-43: Existing crosswalk layout at Whitewood Avenue and Paget Street

Figure 6-44: Existing crosswalk layout at Whitewood Avenue and Armstrong Street

Figure 6-45: Existing crosswalk layout at Armstrong Street and Beavis Terrace

An alternative pedestrian pathway to Whitewood Avenue could be Farah Avenue, a parallel street south of Whitewood Avenue. However, it currently has disconnected narrow sidewalks on only one side of the street. Furthermore, the Farah Avenue and Dymond Crescent intersection presents a 27 m crossing distance along its southern leg, as illustrated in **Figure 6-46**, which creates undesirable pedestrian crossing conditions.

Figure 6-46: Existing crosswalk layout at Farah Avenue and Dymond Crescent

As shown in **Figure 6-47**, the pedestrian conditions at Lakeshore Road and Farah Avenue are poor due to narrow sidewalks, which do not provide enough space for comfortable walking. Additionally, the stop bar for southbound traffic on Lakeshore Road is positioned far back from the intersection, causing drivers to stop in various locations adding confusion to the crossing experience for all users. Moreover, the bus stop lacks necessary infrastructure, making it particularly undesirable during the winter months.

There is an opportunity to tighten the lane widths and widen the sidewalks to improve the crossing facilities and moving the stop bar forward to bring clarity to the driver and crossing experience.

Figure 6-47: Lakeshore Road and Farah Avenue Crossing Issues

A lack of safe pedestrian crossings makes it dangerous to cross the roads for the following reasons:

- **Visibility and Awareness:** Proper pedestrian crossings, such as marked crosswalks and signalized intersections, are designed to enhance the visibility of pedestrians to drivers and vice versa. Without these crossings, drivers might not expect pedestrians to be present in certain areas, increasing the likelihood of accidents.
- **Unpredictable Crossing Points**: Without designated crossings, pedestrians might attempt to cross the road at unpredictable and potentially hazardous locations. This can catch drivers off guard and lead to collisions.
- **Inconsistent Driver Behavior**: When drivers are not aware of designated crossing points, they might not slow down or stop for pedestrians. Proper crossings help set clear expectations for both pedestrians and drivers, promoting safer behavior from all parties.
- **Speed Differential**: Roads are often designed for vehicle traffic, which can lead to higher speeds that are unsafe for pedestrians to cross. Proper pedestrian crossings often come with traffic-calming measures to slow down vehicles, making it safer for pedestrians to cross.
- **Pedestrian Vulnerability**: Pedestrians are much more vulnerable than vehicles in collisions. A lack of proper crossings makes it more difficult for pedestrians to navigate busy roads safely, putting them at a higher risk of injury or fatality.
- **Complex Intersections**: In areas with complex intersections or multiple lanes, pedestrian crossings provide a clear structure for pedestrians to cross one lane at a time. Without proper crossings, pedestrians might attempt to cross all lanes at once, increasing the likelihood of accidents.
- **Accessibility**: Proper pedestrian crossings often include features like curb ramps and tactile paving for people with disabilities. A lack of these features can make it difficult or even impossible for individuals with mobility challenges to cross the road safely.
- **Encouragement of Safe Behavior**: Designated crossings encourage pedestrians to cross at safer locations and drivers to yield the right-of-way. This promotes a culture of pedestrian safety and shared responsibility among road users.

6.4.3.2 Haileybury

The intersection of two key arterial roads in Haileybury with high traffic volume, Main Street and Ferguson Avenue, is a key location for pedestrian activity. Ferguson Avenue runs north-south and plays an important role in connecting the two downtown cores of the City. Main Street runs east-west and is lined with restaurants, stores, and recreational offerings and is therefore at the economic centre of the Haileybury community. Main Street has a significant downhill slope toward the lake. Additionally, this key major intersection does not currently have a traffic signal and safe crossing for pedestrians. **Figure 6-48** shows a visible lack of crossing facilities and traffic signals.

Figure 6-48: Main Street and Ferguson Avenue showing a lack of pedestrian crosswalks

Source: TYLin

This location is particularly dangerous for pedestrians when considering the long crossing distances of approximately 15 metres, in a location where cars and trucks travelling eastbound down the hill are not required to stop as the intersection operates as a 3-way stop controlled intersection. High vehicle speeds and the downward slope of the road make it more difficult to spontaneously stop for pedestrians or cyclists and increase the risk of collisions. Similarly, the slope may make it more difficult to cross and require longer crossing times, especially for those with mobility challenges.

Another high-volume intersection in Haileybury is the intersection of Main Street and Rorke Avenue. It has a painted pedestrian crossing on the west side only with no other dedicated pedestrian crossings as shown in **Figure 6-49**.

Pedestrian infrastructure is fundamental when it comes to promoting pedestrian activity throughout the City. Educational institutions are a great example of places that should have strong active transportation connections to public services and facilities such as transit systems. Northern College in Haileybury currently lacks pedestrian connectivity to Haileybury downtown. Many Roads in Haileybury have a rural cross-section without dedicated sidewalks for pedestrians, which negatively influences the pedestrian level of service, safety, and comfort. This problem also highlights the difficulty of connecting the downtown area to more rural parts of the City.

Figure 6-49: Main Street and Rorke Avenue lacking pedestrian crossing facilities

Source: TYLin

6.4.4 Winter Conditions

The City's Official Plan (2015) has a section dedicated to creating a safe and livable winter city. It notes City's efforts to build safety measures to protect pedestrians from the impacts of climate such as minimizing snow drifting at entrance points to buildings and emergency exits, as well as avoiding structures which allow snow or ice to fall onto sidewalks or pedestrian pathways. It also notes that landscaping should be used to shelter from wind, maximize sun light penetration, and provide weather protected pedestrian spaces and bus shelters.

Overall, the City has an excellent winter maintenance program that ensures snow removal during the winter months. Sidewalks and all downtown cores are completely sanded and cleared, making it safe for residents year-round.

6.4.5 Topography

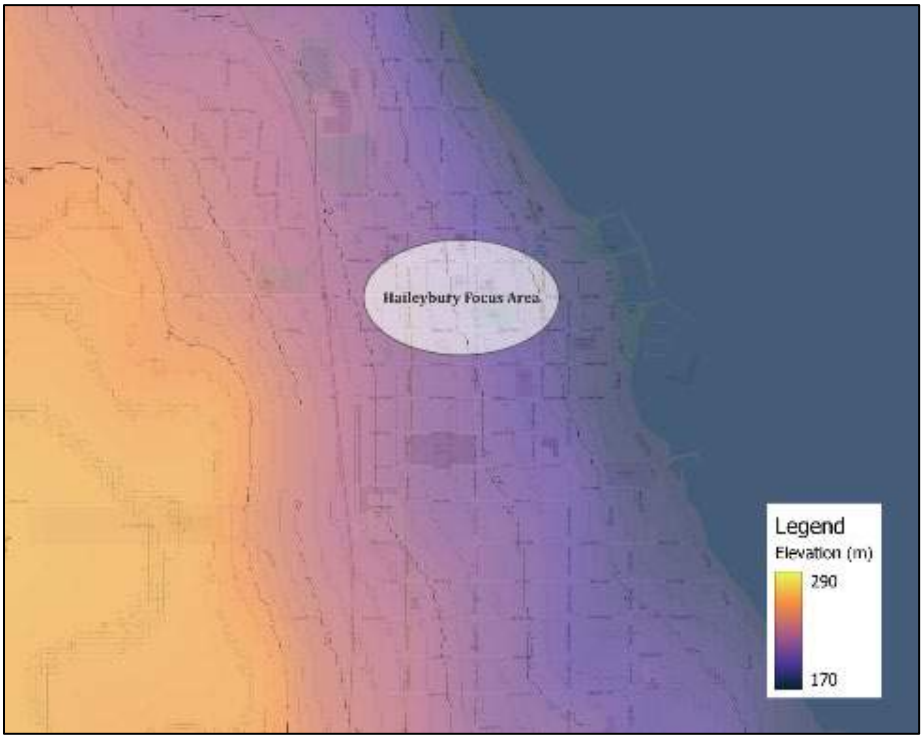
As illustrated in **Figure 6-50**, New Liskeard is mostly situated upon flat land with an elevation ranging from 175 m to 185 m above sea level in most areas across the City. Most of the New Liskeard downtown core is located within this area of low elevation while the southwest region of the City, and the areas surrounding the Temiskaming Hospital is built upon an ascending slope where the elevation increases to up to 290 m. Similarly, Dymond is also located in an uphill area but is not as elevated as the southwest region of New Liskeard. The low elevation of the study area makes promoting active transportation especially feasible in the New Liskeard downtown core, as it allows for accessibility, reduces physical strain, safety, and connectivity.

The Haileybury area is not situated on land that is as flat as New Liskeard as illustrated in **Figure**

6-51. This area experiences a descending slope when moving from west to east – as notably represented by the downward slope of Main Street towards the waterfront. Descending slopes can encourage use of active transportation infrastructure for one way travel while simultaneously posing a challenge for travel in the opposite direction. The elevation profile of this region is comparable to that of New Liskeard, as this area also has a base elevation of approximately 170 m above sea level which increase to approximately 290 m.

Figure 6-50: Topographical Map – New Liskeard & Dymond

Figure 6-51: Topographical Map – Haileybury



6.5 Parking Assessment

6.5.1 New Liskeard

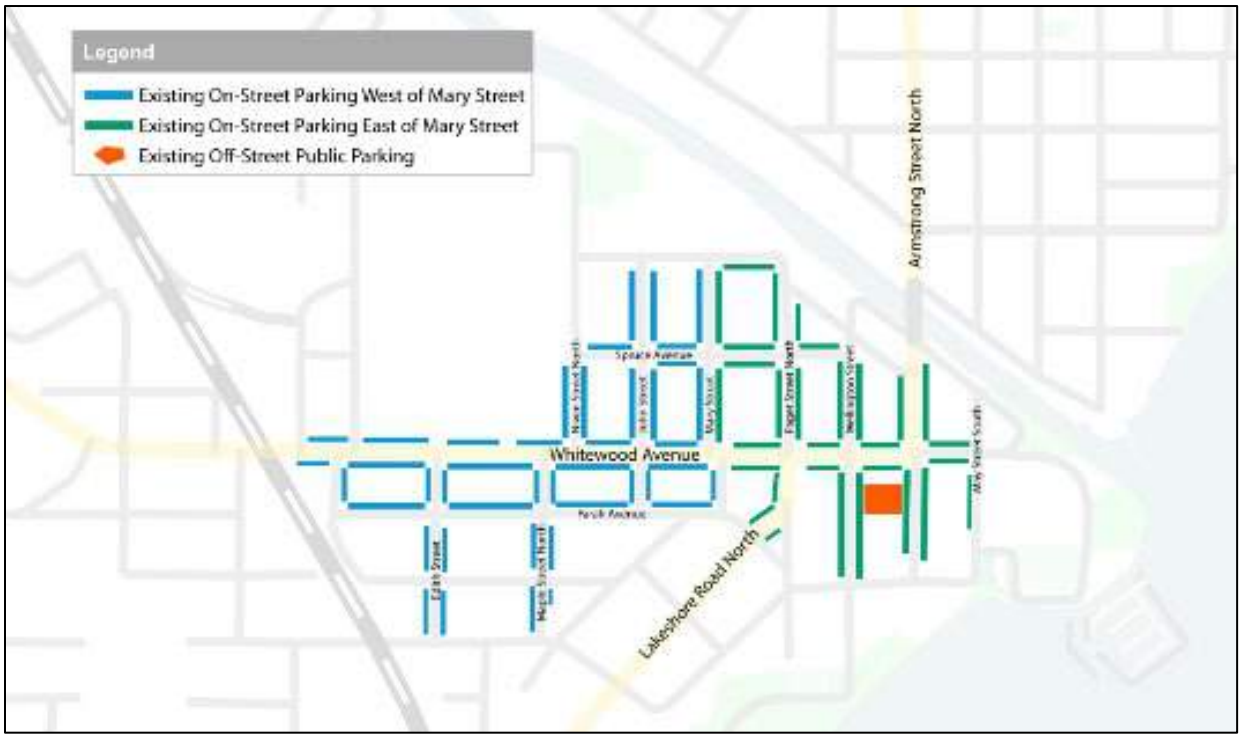
A review of the existing parking supply found that on-street parking is available on all major and local streets in New Liskeard. A summary of the approximate number of the on-street parking spaces are listed in **Table 6-8.** In addition to several private parking lots fronting or in proximity to Whitewood Avenue, there is one City-owned public parking lot in the downtown core located between Wellington Street and Armstrong Street, south of Whitewood Avenue (Municipal Address: 32 Wellington Street). **Figure 6-52** shows the available public parking supply including on-street parking lanes and City's owned parking lot.

Most of the on-street parking spaces within New Liskeard exist as road-side unmarked parking areas apart from accessible parking spaces which are marked with a blue paint at a few store-front locations on Whitewood Avenue. Parking signage is also installed on sidewalks curbs to indicate allowable parking durations. The off-street public parking lot located south of Whitewood Avenue is in poor condition and is largely a gravel lot which does not have parking delineation.

Table 6-8: Approximate Number of On-Street Parking Spaces – New Liskeard

New Liskeard	Number of Parking Spaces
Armstrong Street	60
Wellington Street	73
Paget Street	65
Spruce Avenue	21
Whitewood Avenue	71
Armstrong Street Public Parking Lot	137
Total East of Mary Street	**427**
John Street	58
Niven Street	35
Maple Street	45
Edith Street	46
Farah Avenue	65
Spruce Avenue	23
Whitewood Avenue	79
Total West of Mary Street	**351**
Mary Street	74
May Street	9
Total Number of Parking Spaces	**861**

Figure 6-52: Existing Parking Supply – New Liskeard



6.5.2 Haileybury

Most major streets in Haileybury accommodate on-street parking on both sides of the road, as quantified in Error! Reference source not found..

Table 6-9: Approximate Number of On-Street Parking Spaces – Haileybury

Haileybury	Number of Parking Spaces
Broadway Street	68
Farr Drive	19
Rorke Avenue	16
Georgina Avenue	7
Ferguson Avenue	40
Browning Street Public Parking Lot	18
Total Parking North of Main Street	168
Amwell Street	80
Georgina Avenue	6
Ferguson Avenue	40
Total Parking South of Main Street	126
Main Street	86
Total Number of Parking Spaces	**941**

Figure 6-53 illustrates locations of the on- and off-street parking facilities, including the one off-street public parking facility at Browning Street.

Figure 6-53: Existing Parking Supply – Haileybury

6.6 Transit Network

The City was formed through the amalgamation of three neighboring towns and townships (Haileybury, New Liskeard, Dymond). Cobalt, another neighboring town that is located south-west of Haileybury, was also part of the original amalgamation plan but did not join the merger. As a result of the proximity between these communities, a shared transit service and network currently exists, connecting the four areas. This transit network is named "Temiskaming Transit", and it exists as a linear north-south route starting from Cobalt and ending in Dymond. Temiskaming Shores has historically utilized private transit services to operate its network and has recently awarded its latest contract to Voyago Transit. There are 19 major stops and multiple minor stops across Temiskaming Shores and Cobalt. The transit service also provides an online bus tracking service for providing real-time information on time-of-arrival information to users. Furthermore, for intercity transit, Ontario Northland provides daily bus service to Cobalt, Haileybury, New Liskeard and Dymond from various transit stops in Ontario. These stops are serviced along Ontario Northland's Schedule 301-302 route which covers major Cities including North Bay, Timmins, and the Town of Cochrane.

6.6.1 New Liskeard

Within New Liskeard, the transit service currently runs on the major arterial and collector roads in addition to local routes in Dymond. A total of 23 minor stops and 7 major stops are located are serviced within this network, as illustrated in **Figure 6-54**. The major transit stops are located on both sides of the road where there is bi-directional transit travel. The minor transit stops are placed to show their approximate location on each side of the road.

6.6.2 Haileybury

In Haileybury, the one transit route is configured to support the residential communities with 400 m buffer distances, as illustrated in **Figure 6-55**. This route has a total of 12 minor and 5 major transit stops. The major stops are located on both sides of the road where there is bi-directional transit travel. The minor stops are placed to show their approximate location on each side of the road.

Figure 6-54: Existing Transit Routes & Stop Locations – New Liskeard

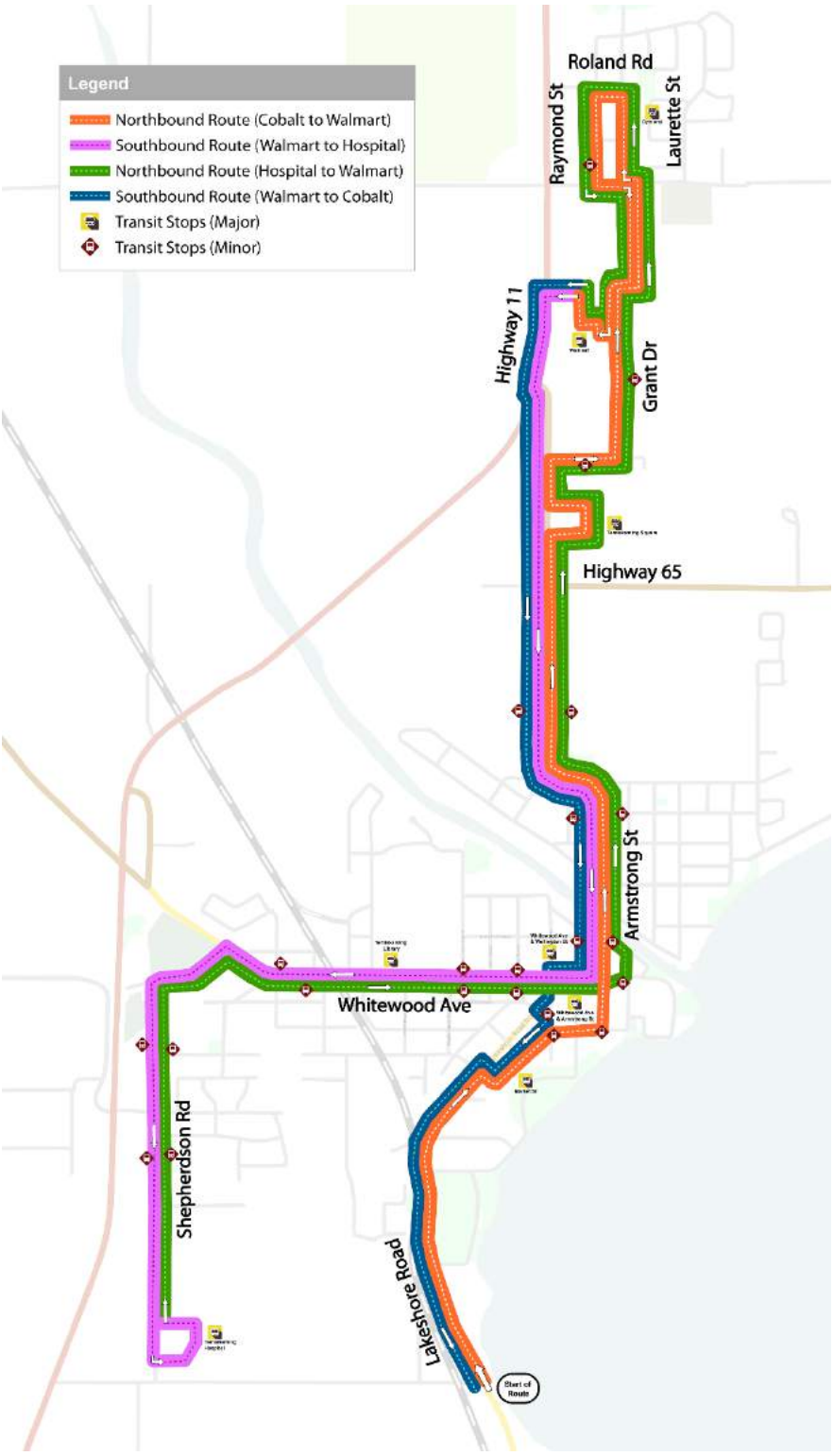
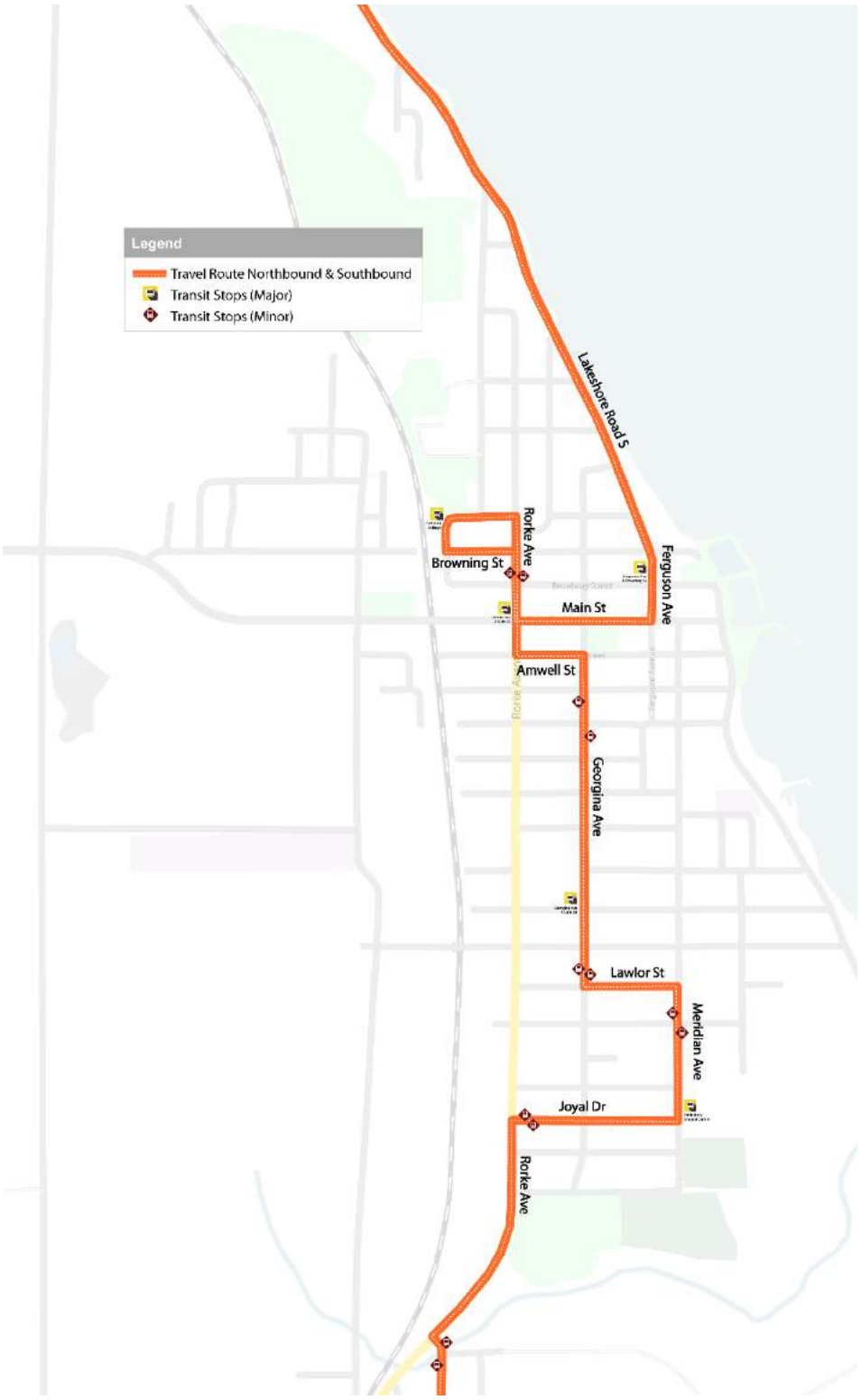


Figure 6-55: Existing Transit Routes & Stop Locations – Haileybury



Service Frequency

Northbound bus service begins in Cobalt at 6 am with the last bus departing at 9 pm on weekdays and 8 pm on weekends. The first Northbound transit route starts in Cobalt and travels towards Dymond while making stops in North Cobalt, Haileybury, and New Liskeard. The service route then extends back towards New Liskeard and to Temiskaming Hospital before making the way back towards Dymond. Finally, departing Dymond again, the service travels Southbound to Cobalt, while making stops in the four communities. Transit frequency at most bust stops is approximately one hour on weekdays, and two hours between 10 am to 2 pm. During weekends, the transit frequency is 2 hours. Public feedback indicated that the busses generally followed a reliable schedule and connected the key areas across the City. Furthermore, the feedback also indicated displeasure relating to low frequency, lack of bus shelters, and services hours during later evening periods.

The first north-bound bus starts its south-bound route at approximately 7:20 am from Walmart in Dymond and arrives back in Cobalt around 8 am - indicating a complete route duration of approximately 2 hours. Riders can purchase individual fares, bulk of 10 tickets or a monthly pass to use the service. Pre-school children are allowed to ride for free while students and seniors are provided a discounted fare of $3.50. The adult fare is priced at $3.75.

Infrastructure

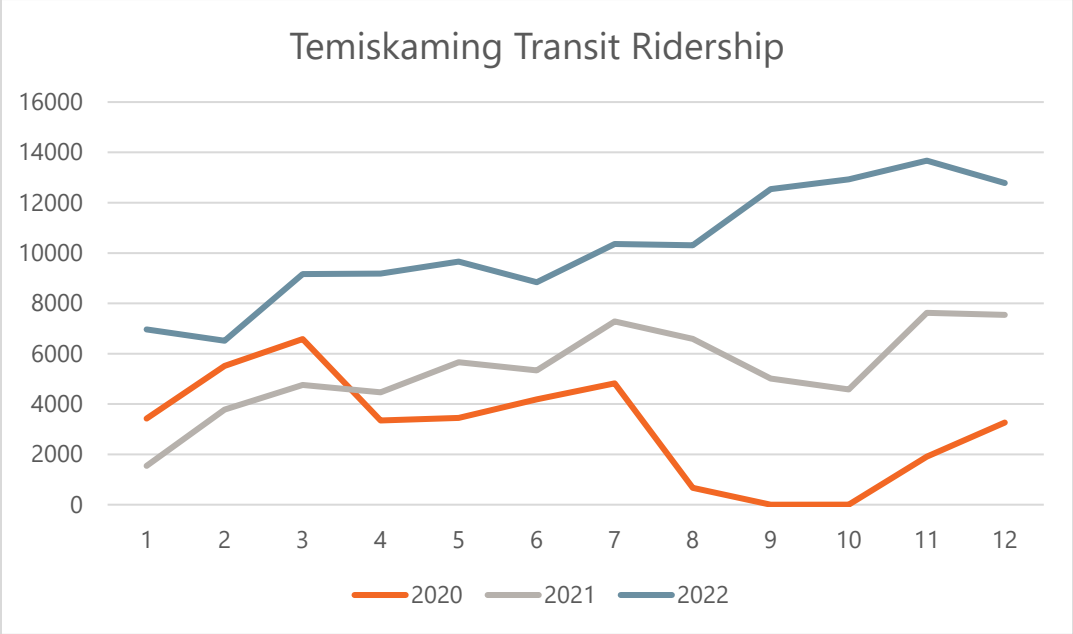
According to Google Maps imagery, with the latest available street view data collected in 2009 and some additional imagery collected in 2018 and 2022, there are very few marked bus stops with bus shelters in the transit network. There are nine installed bus shelters across the transit route as listed in **Table 6-10.** A sparse selection of stops on Whitewood Avenue are fitted with physical signs, indicating stop locations. Most bus stops are unmarked and provides no signage to transit users to indicate a stop location.

Table 6-10: Transit Bus Shelter locations within Temiskaming Shores

Bus Shelter	Location	Area	Year Installed
1	Meridian (Medical Centre)	Haileybury	2018
2	Rorke and Main	Haileybury	2021
3	Probyn and Hardy	Haileybury	2019
4	Ferguson and Browning	Haileybury HL	2013
5	Market	New Liskeard	2013
6	Walmart	Dymond	2019
7	Georgina and Little	Haileybury	2021
8	Hospital	New Liskeard	2013

Ridership data from 2020 to 2022 was obtained from the automatic passenger count measure collected by the City's transit service. As depicted in **Figure 6-56**, the 2020 ridership profile is unlike the 2021 and 2022 profile; it portrays a decreasing ridership count after the month of March, largely resulting from the onset of the Covid-19 pandemic.

Figure 6-56: Monthly onboarding passenger counts Yearly Transit Ridership



A relatively linear and steady increase in ridership counts is observed between 2021 to 2022, while maintaining an increased overall ridership as compared to that seen in 2020. The total ridership in 2021 and 2022 was a 170% and a 330% increase, respectively, from the ridership recorded in 2020. Overall, approximately 37,000, 64,000, and 122,000 passengers onboarded the City's transit busses in the years 2020, 2021 and 2022, respectively.

7 Development of Network Improvement Phases & Recommended Solutions

Following the Complete Streets methodology, a number of improvements have been identified for traffic, active transportation, and transit and parking conditions, to address issues and service gaps identified through the Existing Conditions review in **Section 6,** for both downtown cores.

This section details the baseline traffic improvements, and two recommended phases for the implementation of broader solutions that improve the safety and experience of all road users in the City. Phase 1 proposes intersection improvements and traffic calming measures which may be implemented in the short term at a lower cost, providing immediate benefit for all users. Phase 2 examines broader city-wide features and more comprehensive corridor improvements which may be phased in the short-medium-long term as required by the city.

7.1 Traffic Impact Assessment

A traffic analysis for two horizon years, 5-year (2028) and 20-year (2043) were examined to act as a baseline against the proposed improvement concepts to check the degree of benefit they could bring to the communities in the future and whether they are addressing the problems and gaps identified in Section 6.

This scenario was analyzed assuming the geometry of the existing transportation network without any physical geometric improvements. A conservative annual growth rate of 2% was assumed for all the arterial roads in both downtown cores. No growth rates were applied to the local streets. Similar to the existing traffic operations analysis (see Section 6.2), the following analyses were performed to identify any traffic improvements for the future study network:

- Intersection operational analysis
- Arterial Operational analysis
- Signal Warrant analysis (at stop-controlled intersections)
- All-Way-Stop-Control Warrant Analysis (at Two-Way-Stop-Controlled intersections)

7.1.1 Intersection Operational Analysis

The traffic operations analysis results for the study area intersections in both downtown cores for the future baseline scenarios are included in subsequent sections. The signal timings at all the signalized intersections were optimized for the future baseline conditions analysis. All the synchro reports for baseline scenario are attached in **Appendix D**.

7.1.1.1 5-Year Horizon (2028)

The traffic operations analysis results for the study area intersections in New Liskeard under 2028 future Baseline scenario are summarized in **Table 7-1** for both the weekday AM and AM peak hours.

Table 7-1: 5-Year Horizon (2028) - Traffic Operations Analysis for New Liskeard

Intersection	Movement (Storage m)	Weekday AM Peak Hour				Weekday PM Peak Hour			
		V/C	Delay (s)	LOS	95th % Queue (m)	V/C	Delay (s)	LOS	95th % Queue (m)
Golding St & Whitewood Ave (Stop-Controlled)	*Overall*	-	1	A	-	-	1	A	-
	EBLTR	0.26	0	A	0	0.25	0	A	0
	WBLTR	0.02	1	A	0	0.02	1	A	0
	NBLTR	0.10	13	B	3	0.10	14	B	3
Edith St/Parking Entrance & Whitewood Ave (Signalized)	*Overall*	0.40	7	A	-	0.43	9	A	-
	EBLT	0.41	5	A	31	0.40	7	A	33
	EBR (45)	0.01	4	A	0	0.03	5	A	2
	WBLT	0.26	5	A	19	0.38	7	A	30
	WBR (45)	0.04	4	A	3	0.07	5	A	5
	NBLTR	0.31	18	B	10	0.27	16	B	12
	SBLTR	0.35	18	B	10	0.51	17	B	20
John St & Whitewood Ave (Stop-Controlled)	*Overall*	-	1	A	-	-	1	A	-
	EBLTR	0.01	1	A	0	0.01	0	A	0
	WBLTR	0.00	0	A	0	0.01	0	A	0
	NBLTR	0.02	13	B	1	0.04	14	B	1
	SBLTR	0.07	13	B	2	0.08	16	C	2
Mary St & Whitewood Ave (Stop-Controlled)	*Overall*	-	1	A	-	-	1	A	-
	EBLTR	0.03	1	A	*1*	0.02	1	A	*1*
	WBLTR	0.00	0	A	*0*	0.01	0	A	*0*
	NBLTR	0.02	15	B	*1*	0.03	14	B	*1*
	SBLTR	0.07	15	B	*2*	0.06	15	B	*2*
Paget St & Whitewood Ave (Signalized)	*Overall*	0.31	14	B	-	0.32	14	B	-
	EBLT	0.33	11	B	*35*	0.37	11	B	45
	EBR (40)	0.03	8	A	*4*	0.03	8	A	5
	WBL	0.37	13	B	*25*	0.42	13	B	40

Intersection	Movement (Storage m)	Weekday AM Peak Hour				Weekday PM Peak Hour			
		V/C	Delay (s)	LOS	95th % Queue (m)	V/C	Delay (s)	LOS	95th % Queue (m)
	WBTR (40)	0.32	11	B	*42*	0.30	10	B	42
	NBLT	0.21	22	C	*20*	0.22	22	C	20
	NBR	0.13	21	C	*13*	0.15	21	C	15
	SBLTR	0.16	21	C	*15*	0.13	21	C	15
Armstrong St & Whitewood Ave (Signalized)	*Overall*	0.40	16	B	-	0.57	18	B	-
	EBL	0.49	10	A	*35*	0.67	12	B	*47*
	EBTR (17)	0.08	6	A	*9*	0.07	5	A	*7*
	WBLTR	0.08	8	A	*10*	0.10	7	A	*11*
	NBLT	0.12	22	C	*13*	0.34	26	C	*32*
	NBR (15)	0.00	21	A	*0*	0.00	22	B	*0*
	SBLT	0.18	23	C	*20*	0.26	25	C	*26*
	SBR (20)	0.22	23	C	*17*	0.25	25	C	*18*
Broadwood Ave & Golding St (Stop-Controlled)	*Overall*	-	6	A	-	-	4	A	-
	EBLTR	0.00	6	A	*0*	0.00	0	A	*0*
	WBLTR	0.02	0	A	*0*	0.03	0	A	*0*
	SBLTR	0.05	9	A	*1*	0.04	9	A	*1*
Broadwood Ave & Edith St (Stop-Controlled)	*Overall*	-	2	A	-	-	4	A	-
	EBLTR	0.01	1	A	*0*	0.01	1	A	*0*
	WBLTR	0.05	0	A	*0*	0.05	0	A	*0*
	SBLTR	0.04	9	A	*1*	0.12	10	A	*3*
Lakeshore Rd N & Broadwood Ave (Stop-Controlled)	*Overall*	-	3	A	-	-	3	B	-
	EBLTR	0.13	12	B	*3*	0.25	14	B	*7*
	WBLTR	0.04	17	C	*1*	0.03	15	B	*1*
	NBLTR	0.06	2	A	*1*	0.05	2	A	*1*
	SBLTR	0.00	0	A	*0*	0.00	0	A	*0*
Lakeshore Rd N & Farah Ave (Stop-Controlled)	*Overall*	-	3	A	-	-	4	A	-
	EBLTR	0.08	13	B	*2*	0.11	14	B	*3*
	WBLTR	0.18	15	B	*5*	0.33	20	C	*11*
	NBLTR	0.00	0	A	*0*	0.01	0	A	*0*
	SBLTR	0.03	2	A	*1*	0.03	1	A	*1*
Armstrong St & Church St (Stop-Controlled)	*Overall*	-	0	A	-	-	0	A	-
	EBLR	0.00	0	A	*0*	0.00	0	A	*0*
	NBLT	0.01	0	A	*0*	0.01	0	A	*0*
	SBTR	0.32	0	A	*0*	0.35	0	A	*0*
	Overall	-	2	A	-	-	3	B	-

Intersection	Movement (Storage m)	Weekday AM Peak Hour				Weekday PM Peak Hour			
		V/C	Delay (s)	LOS	95th % Queue (m)	V/C	Delay (s)	LOS	95th % Queue (m)
Armstrong St & Sharpe St (Stop-Controlled)	EBLTR	0.10	21	C	*2*	0.35	42	E	*11*
	WBLTR	0.08	11	B	*2*	0.23	15	C	*7*
	NBTR	0.23	0	A	*0*	0.37	0	A	*0*
	SBLT	0.07	3	A	*2*	0.05	2	A	*1*
	SBT	0.21	0	A	*0*	0.21	0	A	*0*
Armstrong St & Beavis Terrace/Elm Ave (Signalized)	*Overall*	0.33	13	B	-	0.38	14	B	-
	EBLTR	0.02	6	A	*3*	0.02	8	A	*4*
	WBLTR	0.21	7	A	*13*	0.12	9	A	*11*
	NBLTR	0.54	14	B	*23*	0.71	16	B	*41*
	SBLTR	0.54	14	B	*24*	0.48	13	B	*27*

After optimizing the signal timings, future 2028 Baseline operations for New Liskeard have stayed similar to the existing conditions (see Table 6-2).

The study area intersections will operate well and within capacity. All the movements will operate with v/c ratios of 0.54 or less during the AM peak hour and 0.71 or less during the PM peak hour, indicating available capacity during both peak hours.

Similar to existing conditions, the high volume of eastbound left-turning traffic at the intersection of Armstrong Street and Sharpe Street during the PM peak hour is expected to cause a delay of 42 seconds in travel time at the eastbound left-turn movement, which will be operating at LOS 'E'. However, the eastbound left-turn movement will have a v/c ratio of 0.35 and operate well within capacity. Additionally, the none of the 95th percentile queue lengths exceed beyond their available storage space, indicating no queue spillovers within the study area. Overall, the transportation network within the study area is expected to be functioning well, with low delays and low v/c ratios (no capacity issues) during both AM and PM peak hours.

The overall intersection LOS in the year 2028 for all the study intersections during the AM and PM peak hours in New Liskeard are shown in **Figure 7-1** and **Figure 7-2**, respectively.

Figure 7-1: 5-Year Horizon (2028) – AM Peak Overall Intersection LOS – New Liskeard

Figure 7-2: 5-Year Horizon (2028) – PM Peak Overall Intersection LOS – New Liskeard

The traffic operations analysis results for the study area intersections in Haileybury under 2028 future Baseline scenario are summarized in **Table 7-2** for both the weekday AM and PM peak hours.

Table 7-2: 5-Year Horizon (2028) - Traffic Operations Analysis (Haileybury)

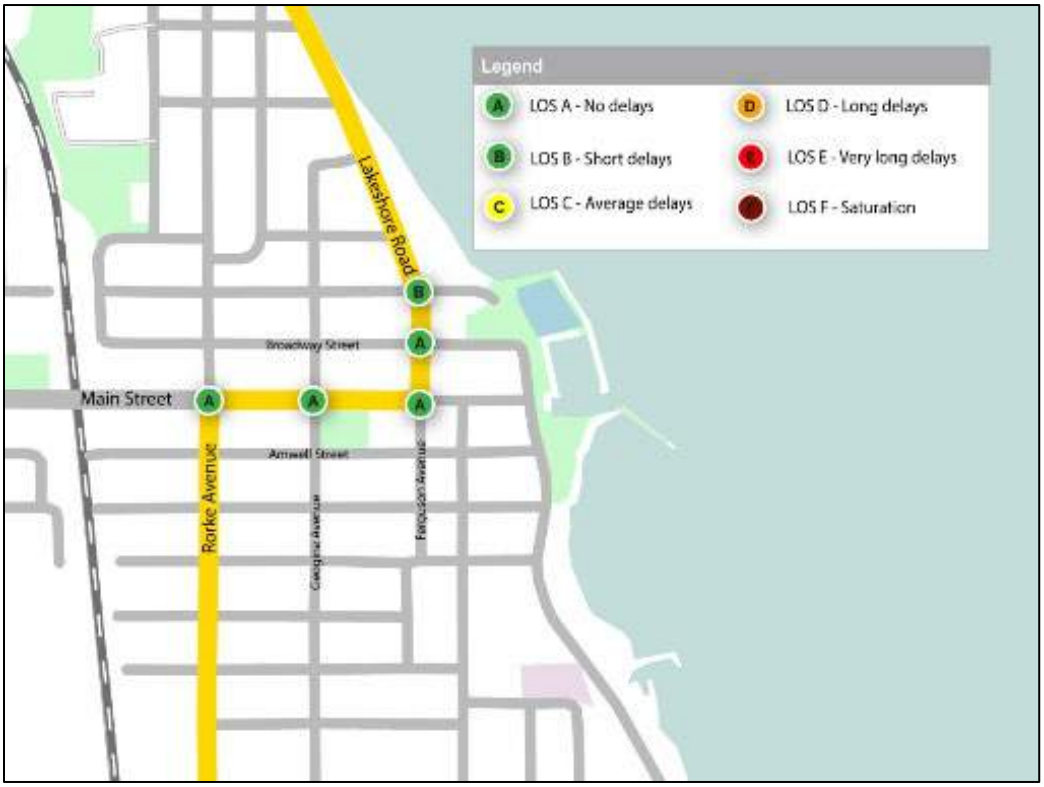
Intersection	Movement (Storage m)	Weekday AM Peak Hour				Weekday PM Peak Hour			
		V/C	Delay (s)	LOS	95th % Queue (m)	V/C	Delay (s)	LOS	95th % Queue (m)
Main St & Georgina Ave (Stop-Controlled)	*Overall*	-	*2*	*A*	-	-	*2*	*A*	-
	EBLTR	0.00	0	A	0	0.00	0	A	0
	WBLTR	0.01	1	A	0	0.03	1	A	1
	NBLTR	0.12	12	B	3	0.08	12	B	2
	SBLTR	0.01	11	B	0	0.03	13	B	1
Ferguson Ave & Broadway St (Stop-Controlled)	*Overall*	-	*1*	*A*	-	-	*2*	*A*	-
	EBLTR	0.02	14	B	0	0.03	16	C	1
	WBLTR	0.06	11	B	1	0.11	13	B	3
	NBLTR	0.00	0	A	0	0.00	0	A	0
	SBLTR	0.02	1	A	0	0.02	1	A	1
Ferguson Ave/Lakeshore Rd & Browning St (Stop-Controlled)	*Overall*	-	*10*	*A*	-	-	*11*	*A*	-
	EBLTR	0.02	9	A	-	0.01	8	A	-
	WBLTR	0.01	9	A	-	0.02	9	A	-
	NBLTR	0.44	11	B	-	0.40	10	A	-
	SBLTR	0.29	9	A	-	0.47	11	B	-

Under future 2028 Baseline conditions, the study area intersections in Haileybury are expected to operate well and within capacity. All the movements will operate with v/c ratios of 0.44 or less during the AM peak hour and 0.47 or less during the PM peak hour, indicating available capacity during both peak hours.

The overall intersection LOS in the year 2028 for all the study intersections during the AM and PM peak hours in Haileybury are shown **Figure 7-3** and **Figure 7-4,** respectively.

Figure 7-3: 5-Year Horizon (2028) – AM Peak Overall Intersection LOS – Haileybury

Figure 7-4: 5-Year Horizon (2028) – PM Peak Overall Intersection LOS – Haileybury



7.1.1.2 20-Year Horizon (2043)

The traffic operations analysis results for the study area intersections in New Liskeard under 2043 future Baseline scenario are summarized in **Table 7-3** for both the weekday AM and PM peak hours.

Table 7-3: 20-Year Horizon (2043) - Traffic Operations Analysis for New Liskeard

Intersection	Movement (Storage m)	Weekday AM Peak Hour				Weekday PM Peak Hour			
		V/C	Delay (s)	LOS	95th % Queue (m)	V/C	Delay (s)	LOS	95th % Queue (m)
Golding St & Whitewood Ave (Stop-Controlled)	*Overall*	-	1	A	-	-	1	A	-
	EBLTR	0.34	0	A	0	0.33	0	A	0
	WBLTR	0.02	1	A	0	0.02	1	A	1
	NBLTR	0.13	16	C	4	0.14	17	C	4
Edith St/Parking Entrance & Whitewood Ave (Signalized)	*Overall*	0.49	8	A	-	0.53	9	A	-
	EBLT	0.52	6	A	44	0.53	8	A	46
	EBR (45)	0.01	4	A	0	0.03	5	A	2
	WBLT	0.34	5	A	25	0.50	8	A	42
	WBR (45)	0.04	4	A	3	0.07	5	A	5
	NBLTR	0.34	20	B	12	0.26	16	B	12
	SBLTR	0.39	20	C	12	0.51	17	B	20
John St & Whitewood Ave (Stop-Controlled)	*Overall*	-	1	A	-	-	1	A	-
	EBLTR	0.02	1	A	0	0.02	0	A	0
	WBLTR	0.00	0	A	0	0.01	0	A	0
	NBLTR	0.03	15	C	1	0.05	17	C	1
	SBLTR	0.09	16	C	2	0.11	21	C	3
Mary St & Whitewood Ave (Stop-Controlled)	*Overall*	-	1	A	-	-	1	A	-
	EBLTR	0.03	1	A	*1*	0.02	1	A	*1*
	WBLTR	0.00	0	A	*0*	0.01	0	A	*0*
	NBLTR	0.03	19	C	*1*	0.04	18	C	*1*
	SBLTR	0.10	19	C	*2*	0.09	20	C	*2*
Paget St & Whitewood Ave (Signalized)	*Overall*	0.44	14	B	-	0.50	15	B	-
	EBLT	0.40	9	A	*42*	0.46	10	A	55
	EBR (40)	0.03	6	A	*3*	0.03	6	A	4
	WBL	0.51	14	B	*38*	0.60	14	B	56
	WBTR (40)	0.39	9	A	*50*	0.36	9	A	50
	NBLT	0.26	26	C	*22*	0.28	27	C	22
	NBR	0.17	25	C	*16*	0.20	25	C	19
	SBLTR	0.19	25	C	*16*	0.16	24	C	16
	Overall	0.55	18	B	-	0.78	25	C	-

Intersection	Movement (Storage m)	Weekday AM Peak Hour				Weekday PM Peak Hour			
		V/C	Delay (s)	LOS	95th % Queue (m)	V/C	Delay (s)	LOS	95th % Queue (m)
Armstrong St & Whitewood Ave (Signalized)	EBL	0.67	14	B	*48*	**0.93**	29	B	*163*
	EBTR (17)	0.10	6	A	*11*	0.08	6	A	*8*
	WBLTR	0.11	8	A	*12*	0.12	7	A	*13*
	NBLT	0.15	22	C	*15*	0.44	28	C	*40*
	NBR (15)	0.00	21	C	*0*	0.00	22	B	*0*
	SBLT	0.25	24	C	*26*	0.34	26	C	*33*
	SBR (20)	0.30	24	C	*19*	0.34	26	C	*20*
Broadwood Ave & Golding St (Stop-Controlled)	*Overall*	-	6	A	-	-	4	A	-
	EBLTR	0.00	6	A	*0*	0.00	0	A	*0*
	WBLTR	0.02	0	A	*0*	0.03	0	A	*0*
	SBLTR	0.05	9	A	*1*	0.04	9	A	*1*
Broadwood Ave & Edith St (Stop-Controlled)	*Overall*	-	2	A	-	-	4	A	-
	EBLTR	0.01	1	A	*0*	0.01	1	A	*0*
	WBLTR	0.05	0	A	*0*	0.05	0	A	*0*
	SBLTR	0.04	9	A	*1*	0.12	10	A	*3*
Lakeshore Rd N & Broadwood Ave (Stop-Controlled)	*Overall*	-	2	A	-	-	3	C	-
	EBLTR	0.16	14	B	*4*	0.32	18	C	*11*
	WBLTR	0.06	21	C	*1*	0.04	19	C	*1*
	NBLTR	0.06	2	A	*2*	0.05	2	A	*1*
	SBLTR	0.00	0	A	*0*	0.00	0	A	*0*
Lakeshore Rd N & Farah Ave (Stop-Controlled)	*Overall*	-	3	A	-	-	5	A	-
	EBLTR	0.09	14	B	*2*	0.14	16	C	*4*
	WBLTR	0.22	18	C	*6*	0.45	29	D	*17*
	NBLTR	0.01	0	A	*0*	0.01	0	A	*0*
	SBLTR	0.04	2	A	*1*	0.03	1	A	*1*
Armstrong St & Church St (Stop-Controlled)	*Overall*	-	0	A	-	-	0	A	-
	EBLR	0.00	0	A	*0*	0.00	0	A	*0*
	NBLT	0.01	0	A	*0*	0.01	0	A	*0*
	SBTR	0.41	0	A	*0*	0.46	0	A	*0*
Armstrong St & Sharpe St (Stop-Controlled)	*Overall*	-	2	B	-	-	5	B	-
	EBLTR	0.11	24	C	*3*	0.61	**98**	**F**	*21*
	WBLTR	0.09	12	B	*2*	0.32	21	C	*10*
	NBTR	0.31	0	A	*0*	0.50	0	A	*0*
	SBLT	0.08	3	A	*2*	0.06	2	A	*2*
	SBT	0.28	0	A	*0*	0.29	0	A	*0*

Intersection	Movement (Storage m)	Weekday AM Peak Hour				Weekday PM Peak Hour			
		V/C	Delay (s)	LOS	95th % Queue (m)	V/C	Delay (s)	LOS	95th % Queue (m)
Armstrong St & Beavis Terr/Elm Ave (Signalized)	*Overall*	0.39	15	B	-	0.46	16	B	-
	EBLTR	0.02	7	A	*4*	0.03	10	A	*4*
	WBLTR	0.22	8	A	*15*	0.13	10	B	*11*
	NBLTR	0.63	15	B	*30*	0.81	19	B	*58*
	SBLTR	0.64	15	B	*32*	0.56	13	B	*37*

The future 2043 Baseline operations for New Liskeard have stayed similar to the 2028 Baseline operations with the following exceptions:

- Heavy estimated eastbound left-turn volume at the intersection of Whitewood Avenue at Armstrong Street during the PM peak hour will be causing the movement v/c ratio of 0.93, exceeding the threshold of 0.85 as per MTO's General Guidelines' 'critical' movements. However, the movement is expected to operate at a delay of 29 seconds/vehicle and LOS 'B' indicating vehicles are not expected to experience extensive delays. Further, the queue storage is sufficient to accommodate an expected 95th percentile queue length 163 m and no queue spillbacks into upstream intersections are expected.
- Heavy estimated major street (Armstrong Street) volumes at the stop-controlled intersection of Armstrong Street and Sharpe Street during the PM peak hour are expected to be causing the eastbound shared left-through-right movement to operate at a delay of 98 seconds/vehicle and at an LOS 'F'. However, the v/c ratio for the movement is expected to be 0.61 during the PM peak hour indicating reserve capacity.

All the movements are expected to operate with v/c ratios of 0.67 or less during the AM peak hour and 0.93 or less during the PM peak hour. Except for the two locations discussed above, rest of the study area interactions will be operating at reserve capacity during both peak hours. Additionally, the none of the 95th percentile queue lengths are expected to exceed beyond their available storage space, indicating no queue spillovers within the study area. Overall, the transportation network within the study area is functioning well, with low delays and low v/c ratios (no capacity issues) during both AM and PM peak hours.

The traffic operations analysis results for the study area intersections in Haileybury under 2043 future Baseline scenario are summarized in **Table 7-4** for both the weekday AM and PM peak hours.

Table 7-4: 20-Year Horizon (2043) - Traffic Operations Analysis for Haileybury

Intersection	Movement	Weekday AM Peak Hour				Weekday PM Peak Hour			
	(Storage m)	V/C	Delay (s)	LOS	95th % Queue (m)	V/C	Delay (s)	LOS	95th % Queue (m)
Main St & Georgina Ave (Stop-Controlled)	*Overall*	-	*2*	*A*	-	-	*2*	*A*	-
	EBLTR	0.00	0	A	0	0.00	0	A	0
	WBLTR	0.01	1	A	0	0.03	1	A	1
	NBLTR	0.15	13	B	4	0.10	13	B	3
	SBLTR	0.01	12	B	0	0.04	15	B	1
Ferguson Ave & Broadway St (Stop-Controlled)	*Overall*	-	*1*	*A*	-	-	*2*	*A*	-
	EBLTR	0.03	17	C	1	0.04	20	C	1
	WBLTR	0.07	13	B	2	0.14	15	B	4
	NBLTR	0.00	0	A	0	0.00	0	A	0
	SBLTR	0.02	1	A	1	0.02	1	A	1
Ferguson Ave/Lakeshore Rd & Browning St (Stop-Controlled)	*Overall*	-	*12*	*A*	-	-	*14*	*A*	-
	EBLTR	0.02	9	A	-	0.01	9	A	-
	WBLTR	0.01	9	A	-	0.03	9	A	-
	NBLTR	0.60	14	B	-	0.55	13	B	-
	SBLTR	0.39	11	B	-	0.64	15	C	-

Under future 2043 Baseline conditions, the study area intersections in Haileybury are expected to operate well and within capacity. All the movements will operate with v/c ratios of 0.60 or less during the AM peak hour and 0.64 or less during the PM peak hour, indicating reserve capacity during both peak hours. Additionally, the none of the 95th percentile queue lengths will exceed beyond their available storage space, indicating no queue spillovers within the study area. Overall, the transportation network within the study area is expected to be functioning well, with low delays and low v/c ratios (no capacity issues) during both AM and PM peak hours.

7.1.2 Arterial Operational Analysis

This section documents the results of the arterial operational analysis (for explanation on arterial operational analysis, please see **Section 6.2.5**), for the street corridors identified in both downtown cores for the future Baseline scenario. The signal timings at all the signalized intersections were optimized for the future conditions analysis.

Synchro reports for Baseline scenario are attached in **Appendix D.**

Similar to existing conditions, the following street corridors have been analyzed in New Liskeard:

- Whitewood Avenue
- Lakeshore Road North
- Armstrong Street North

The following street corridors have been analyzed in Haileybury:

- Main Street
- Ferguson Avenue

7.1.2.1 5-Year Horizon (2028)

The arterial operational analysis results for the corridors identified in New Liskeard are summarized in **Table 7-5** for weekday AM and PM peak hours under 2028 future Baseline scenario.

Table 7-5: 5-Year Horizon (2028) – Arterial Operational Analysis for New Liskeard

Time Period	Corridor	Direction	From	To	Delay (s/veh)	Travel Time (s)	Dist. (km)	Avg. Speed (km/h)
AM	Whitewood Avenue	Eastbound	Golding Street	Armstrong Street	24	112	1.3	43
		Westbound	Armstrong Street	Golding Street	26	116	1.3	41
	Lakeshore Road N	Northbound	Broadwood Avenue	Whitewood Avenue	17	76	0.7	32
		Southbound	Whitewood Avenue	Broadwood Avenue	20	75	0.7	31
	Armstrong Street	Northbound	Whitewood Avenue	Elm Avenue	36	77	0.6	27
		Southbound	Elm Avenue	Whitewood Avenue	44	83	0.5	24
PM	Whitewood Avenue	Eastbound	Golding Street	Armstrong Street	27	115	1.3	42
		Westbound	Armstrong Street	Golding Street	27	116	1.3	41
	Lakeshore Road N	Northbound	Broadwood Avenue	Whitewood Avenue	20	78	0.7	31

Time Period	Corridor	Direction	From	To	Delay (s/veh)	Travel Time (s)	Dist. (km)	Avg. Speed (km/h)
		Southbound	Whitewood Avenue	Broadwood Avenue	22	79	0.7	30
	Armstrong Street	Northbound	Whitewood Avenue	Elm Avenue	45	86	0.6	24
		Southbound	Elm Avenue	Whitewood Avenue	47	86	0.5	23

Due to signal timing optimizations, the travel time along all three corridors in New Liskeard under 2028 future Baseline conditions are similar or in some cases slightly better than existing conditions (See **Table 6-4**) due to the application of the signal optimization. The maximum travel time within the study area on Whitewood Avenue is 116 seconds, on Lakeshore Road North is 79 seconds and on Armstrong Street North is 86 seconds. None of the intersections along the corridors analyzed cause significant delay to vehicles.

The arterial operational analysis results for the corridors identified in Haileybury are summarized in **Table 7-6** for weekday AM and PM peak hours under 2028 future Baseline scenario.

Table 7-6: 5-Year Horizon (2028) – Arterial Operational Analysis for Haileybury

Time Period	Corridor	Direction	From	To	Delay (s/veh)	Travel Time (s)	Dist. (km)	Avg. Speed (km/h)
AM	Main Street	Eastbound	Rorke Avenue	Ferguson Avenue	10	44	0.5	45
		Westbound	Ferguson Avenue	Rorke Avenue	10	42	0.5	44
	Ferguson Avenue	Northbound	Main Street	Browning Street	16	36	0.3	30
		Southbound	Browning Street	Main Street	17	39	0.3	29
PM	Main Street	Eastbound	Rorke Avenue	Ferguson Avenue	12	50	0.5	39
		Westbound	Ferguson Avenue	Rorke Avenue	11	41	0.5	44
	Ferguson Avenue	Northbound	Main Street	Browning Street	17	37	0.3	29
		Southbound	Browning Street	Main Street	18	40	0.3	28

Under 2028 future Baseline conditions, the travel time along both corridors in Haileybury is expected to be similar to existing conditions (see **Table 6-5**). The maximum travel time on Main Street is 50 seconds and on Ferguson Avenue is 40 seconds. None of the intersections along the corridors

analyzed cause significant delay to vehicles.

Further, a visual analysis of SimTraffic operations under 2028 future Baseline scenario was conducted for both downtown cores and no queue spillovers, spillbacks or lane-blockages were observed.

7.1.2.2 20-Year Horizon (2043)

The arterial operational analysis results for the corridors identified in New Liskeard are summarized in **Table 7-7** for weekday AM and PM peak hours under 2043 future Baseline scenario.

Table 7-7: 20-Year Horizon (2043) – Arterial Operational Analysis for New Liskeard

Time Period	Corridor	Direction	From	To	Delay (s/veh)	Travel Time (s)	Dist. (km)	Avg. Speed (km/h)
AM	Whitewood Avenue	Eastbound	Golding Street	Armstrong Street	27	115	1.3	42
		Westbound	Armstrong Street	Golding Street	28	117	1.3	41
	Lakeshore Road N	Northbound	Broadwood Avenue	Whitewood Avenue	16	73	0.7	33
		Southbound	Whitewood Avenue	Broadwood Avenue	27	81	0.7	29
	Armstrong Street	Northbound	Whitewood Avenue	Elm Avenue	45	86	0.6	24
		Southbound	Elm Avenue	Whitewood Avenue	48	86	0.5	23
PM	Whitewood Avenue	Eastbound	Golding Street	Armstrong Street	34	122	1.3	39
		Westbound	Armstrong Street	Golding Street	32	121	1.3	40
	Lakeshore Road N	Northbound	Broadwood Avenue	Whitewood Avenue	21	79	0.7	30
		Southbound	Whitewood Avenue	Broadwood Avenue	30	86	0.7	27
	Armstrong Street	Northbound	Whitewood Avenue	Elm Avenue	57	98	0.6	21
		Southbound	Elm Avenue	Whitewood Avenue	55	94	0.5	21

Under 2043 future Baseline conditions, the travel times along all three corridors in New Liskeard are expected to be similar or marginally higher than 2028 future Baseline conditions. The highest travel time increase is along northbound Armstrong Street where the travel times have slightly increased by 9 seconds to 86 seconds during AM peak hour and by 12 seconds to 98 seconds during PM peak hour, compared to 2028 future Baseline conditions. These increases in travel times also correlate with

increase in delay of 9 seconds resulting in 45 seconds of delay during the AM peak hour and increase in delay of 12 seconds resulting in 57 seconds of delay during PM peak hour along the entire northbound Armstrong Street corridor within study area.

The average travel speeds also reduced by 3 seconds during both AM and PM peak hours along northbound Armstrong Street. These increased travel times and delays are because of high traffic volumes at 20-year horizon (2043). However, these are only minor increases and vehicles traversing the study area corridors are not expected to face significant delays or increased travel times.

The maximum travel time under 2043 future Baseline conditions within the study area on Whitewood Avenue is 122 seconds, on Lakeshore Road North is 86 seconds and on Armstrong Street North is 98 seconds. None of the intersections along the corridors analyzed cause significant delay to vehicles.

The arterial operational analysis results for the corridors identified in Haileybury are summarized in **Table 7-8** for weekday AM and PM peak hours under 2043 future Baseline scenario.

Table 7-8: 20-Year Horizon (2043) – Arterial Operational Analysis for Haileybury

Time Period	Corridor	Direction	From	To	Delay (s/veh)	Travel Time (s)	Dist. (km)	Avg. Speed (km/h)
AM	Main Street	Eastbound	Rorke Avenue	Ferguson Avenue	12	46	0.5	42
		Westbound	Ferguson Avenue	Rorke Avenue	12	43	0.5	43
	Ferguson Avenue	Northbound	Main Street	Browning Street	18	37	0.3	29
		Southbound	Browning Street	Main Street	15	35	0.3	32
PM	Main Street	Eastbound	Rorke Avenue	Ferguson Avenue	15	53	0.5	37
		Westbound	Ferguson Avenue	Rorke Avenue	11	42	0.5	44
	Ferguson Avenue	Northbound	Main Street	Browning Street	18	38	0.3	28
		Southbound	Browning Street	Main Street	19	40	0.3	28

Under 2043 future Baseline conditions, the travel time along both corridors in Haileybury is expected to be similar to 2028 future Baseline conditions and no significant increases in delays or travel times are expected. The maximum travel time on Main Street is 53 seconds and on Ferguson Avenue is 40 seconds. None of the intersections along the corridors analyzed cause significant delay to vehicles.

Further, a visual analysis of SimTraffic operations under 2043 future Baseline scenario was conducted for both downtown cores (New Liskeard and Haileybury) and no queue spillovers, spillbacks or lane-blockages were observed.

7.1.3 Signal Warrant Analysis

A signal warrant analysis was conducted for all the Stop-Controlled study area intersections in New Liskeard and Haileybury under future horizon years (2028 and 2043) to determine if the estimated future traffic or pedestrian volumes would justify the installation of a traffic signal. The signal warrants were conducted for the following three justifications:

- Justification 4 – Minimum 4-Hour Vehicle Volume
- Justification 6 - Pedestrian Volume and Delay (8-Hour)
- Justification 7 – Projected Volumes (Average Hour Volume)

According to Chapter 4.2 of the Ontario Traffic Manual (OTM), 8-Hour traffic and pedestrian volumes and 8-Hour pedestrian delays are needed to conduct Justification 6 - Pedestrian Volume and Delay warrant analysis. Since, only 4-Hour traffic and pedestrian counts were available, the Justification 6 warrant analysis was conducted using the 4-Hour traffic counts assuming if warrants are not met for 4-Hour volumes they will also not be met for 8-Hour volumes.

Based on Justification 4, 6 and 7 of Book 12 of the OTM, 2012, it was found that future year vehicular or pedestrian volumes do not fulfill the Justification for the implementation of a traffic signal at any of the stop-controlled intersections during 2028 or 2043 future Do-Nothing traffic conditions. Hence, installation of a traffic signal is not recommended at any of the study intersections at this time.

A detailed signal warrant summary for the study intersections is provided in **Appendix E**.

7.1.4 All-Way-Stop-Control Volume Warrant Analysis

An all-way stop control (AWSC) warrant for all the study intersections was conducted for future traffic conditions (Year 2028 and 2043) based on the volume warrant analysis methodology outlined by the OTM Book 5 "Regulatory Signs" (2021). The volume warrant analysis is based on the following criteria/inputs:

- Total vehicle volume on all intersection approaches over the highest eight or four hours (depending on the road classification);
- Combined vehicle and pedestrian volume on the minor street; and,
- Volume split of the major and minor legs.

The OTM lists three different volume-related criteria that, when all are met, indicate that all-way stop control may be considered depending on the road types involved. The criteria are summarized in **Table 7-9.**

Table 7-9: OTM Book 5 AWSC Volume Warrant Criteria

Criteria	Urban Arterials	Collectors and Rural Arterials	Local Roads
Total Volumes for Highest Hours Each Day	>500 vehicles per hour for each of the highest 8 hours	>375 vehicles per hour for each of the highest 8 hours	>200 vehicles per hour for each of the highest 4 hours
Combined Minor Street Vehicle and Pedestrian Volumes	(i) >200 units (vehicles plus pedestrians) for each of the same hours as total volume, or; (ii) >150 units for the each of the same hours as total volume with average minor street delay >30 seconds	(i) >150 units (vehicles plus pedestrians) for each of the same hours as total volume, or; (ii) >120 units for the each of the same hours as total volume with average minor street delay >30 seconds	>75 units (vehicles plus pedestrians) for each of the same hours as total volume
Major-Minor Volume Split	Volume split does not exceed 70/30 (i.e. minor street must be >30% of intersection volume), or 75/25 for three-legged intersections		

As all the major streets in New Liskeard and Haileybury are classified as Arterials and are located in the downtown cores. The AWSC Volume Warrant for 'Urban Arterials' was conducted for all study intersections. Since, 8-Hour traffic counts were not available, the warrant analysis was conducted using the 4-Hour traffic counts assuming if warrants are not met for 4-Hour volumes they will also not be met for 8-Hour volumes.

By using this methodology, none of the existing two-way stop-controlled intersections in the study area meet the AWSC Volume Warrant during the 2028 traffic scenario. Under the 2043 traffic scenario, the **Main Street and Rorke Avenue** intersection passes the peak 4-Hour volume AWSC warrant.

The detailed AWSC Volume Warrant analysis for all study intersections is included in **Appendix D**.

7.2 Phase 1 – Intersection improvements & Minor Mid-Block Traffic Calming Measures

This section presents recommendations geared towards standard geometric and traffic control improvements at intersections and minor traffic calming measures at strategic key mid-block locations in the City to improve safety and mobility for all road users in the short-term.

7.2.1 Traffic Control

It is proposed that the following two intersections in Haileybury, which currently operate as 3-way-stops, be upgraded to all-way stop control (AWSC) intersections:

- Main Street and Rorke Avenue
- Main Street and Ferguson Avenue

7.2.1.1 Main Street and Rorke Avenue AWSC

The AWSC volume-warrant analysis was conducted for both the 2028 and 2043 horizon periods, and it was determined that the AWSC is warranted at the Main Street and Rorke Avenue intersection by the 2043 horizon period.

Although not warranted by travel volumes in the 2028 horizon period, it is recommended that the current 3-way stop control intersection be upgraded to a 4-way stop in the short-term, when factoring in the safety analysis conducted in **Section 6** which identified a concentration of higher speeds and reported collisions along the Main Street corridor.

The conversion of the intersection to an all-way stop will greatly improve the pedestrian crossing experience, increasing the sense of security when crossing the intersection. Cyclists, especially those utilizing the recommended bike lanes on the Main Street, would also benefit from the predictability and reduced risk of conflicts with vehicles. Additionally, the implementation of an AWSC stop can encourage drivers to be more cautious and attentive, as they must yield the right-of-way to other vehicles and pedestrians at the intersection. This can lead to a safer environment for all road users and contribute to a more pedestrian-friendly and bike-friendly community.

This improvement is recommended in conjunction with the removal of the channelized northbound right-turn lane and installation of a transit shelter in the same location, as detailed in Section 7.3 below.

7.2.1.2 Main Street and Feguson Avenue AWSC

Based on forecasted volumes, an AWSC is not warranted for the Main Street and Ferguson Avenue intersection; however, it is recommended when considering the safety analysis conducted in **Section 6** which identified a concentration of higher speeds and reported collisions along the Main Street corridor.

The downhill slope for the eastbound movement on Main Street and Ferguson Avenue and the lack of a stop-sign currently create an uncomfortable pedestrian crossing experience, and a confusing situation for non-local drivers visiting the city.

To ensure that eastbound vehicles can easily come to a stop approaching the intersection, an oversize stop-sign is recommended at the eastbound leg. Installing an oversize stop sign at the eastbound approach of an intersection is a practical measure to enhance visibility and ensure that drivers can readily see and respond to the stop sign. Oversize stop signs are larger than standard ones, which can make them more conspicuous, especially from a distance or under various lighting/ weather conditions. This increased visibility can help to improve safety by prompting drivers to stop in advance of the intersection, reducing the risk of accidents or collisions.

Additionally, incorporating other traffic calming measures, such as pavement markings and tactile warning strips up the hill leading to this intersection will support the gradual reduction in vehicle speeds on approach to the intersection.

7.2.2 Pedestrian Crossover (PXO)

To improve pedestrian connectivity and safer crossing opportunities, it is recommended that two pedestrian crossovers be implemented in Temiskaming Shores.

In Haileybury, the PXO is recommended at the intersection of **Broadway Street at Ferguson Avenue**, where a crosswalk previously existed. Re-introducing this marked east-west crossing on Ferguson Avenue will facilitate pedestrian crossing in the area, supporting local businesses and circulation to/from the waterfront.

In New Liskeard, the PXO should be located on **Armstrong Street at Church Street**. An east-west crosswalk at this location would improve the pedestrian experience in the area, adjacent to many businesses and parking spaces. Currently, crossing in the area is dangerous because of the four-lane roadway, limited sightlines for southbound traffic coming down the Armstrong bridge, and high volume of road users. A PXO which is designed with curb extensions in the right lanes (currently parking) to reduce the crossing distances will greatly benefit pedestrians and motorists traveling down Armstrong by introducing consistency in a crossing location and slowing traffic for vehicles turning onto Church Street.

7.2.3 Pavement Markings

As identified through the existing conditions review in **Section 6**, pavement markings along the study roadways are barely visible under existing conditions. It is recommended that the City undertake re-painting program for pavement markings, which include centerlines, lane dividers, crosswalks, parking lanes, and accessible parking symbols. Re-striping lanes will help to visually narrow the roadway for drivers and naturally lower travel speeds, while parking areas may be striped to ensure maximum efficiency of the curb area within the downtown cores.

Additionally, to further improve visibility of pedestrian crossings at intersections, it is recommended that all existing crosswalks be upgraded to zebra crosswalks.

7.2.4 Curb Extensions

Curb extensions, also known as curb bump-outs or bulb-outs, are sidewalk extensions at intersections that protrude into the street. Installing curb extensions promotes pedestrian safety by reducing the time it takes to cross at intersections, improves visibility, calms traffic, enhances accessibility,

contributes to urban design, and offers additional benefits such as stormwater management and encouragement of active transportation. They are especially beneficial in areas where safety is a significant concern, such as in school zones or busy downtown areas. Pedestrians have a safer crossing experience resulting from the reduced crossing distances and slow vehicular speeds caused by narrowed roadways and reduced turning radii.

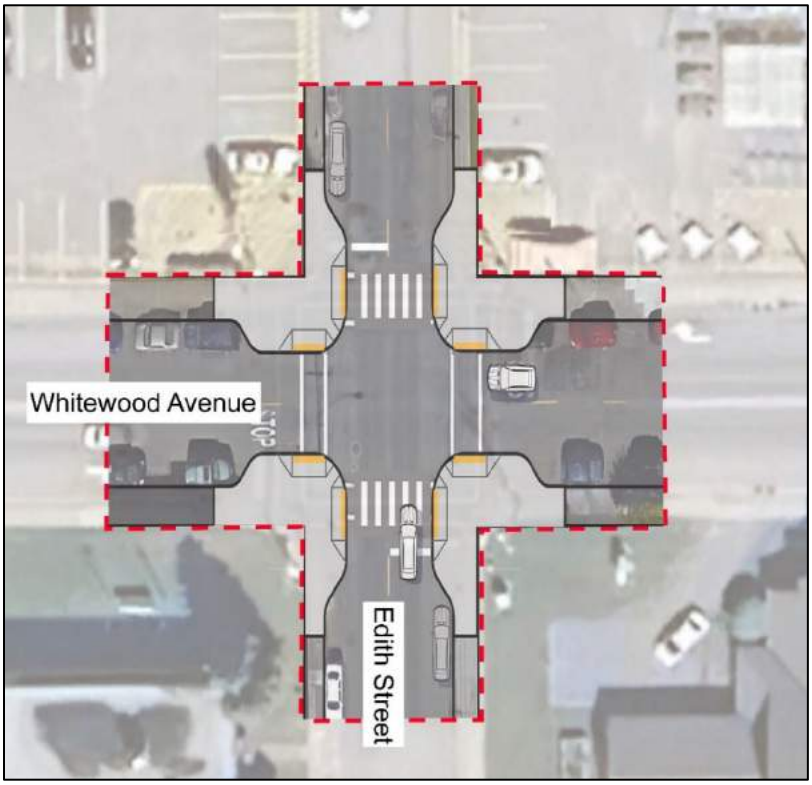
As part of Phase 1, it is recommended that the following intersections along Whitewood Avenue and Armstrong Street be reconstructed with curb extensions, based on traffic volumes, vehicle speeds, and presence of pedestrian activity:

- Edith Street at Whitewood Avenue
- Paget Street at Whitewood Avenue
- Armstrong Street at Whitewood Avenue
- Sharpe Street at Armstrong Street

Figure 7-5 depicts a potential curb extension conceptual design at the Whitewood Avenue and Edith Street intersection, which provides access into a large commercial plaza. With this implementation, vehicular traffic will naturally slow down when approaching the intersection while pedestrians will also have a shorter crossing distance and be more visible to oncoming traffic.

Key intersections are also recommended to be reconstructed as fully protected intersections as part of Phase 2, which is described further in **Section 7.3**.

Figure 7-5: Conceptual Curb Extension Design – Whitewood Ave & Edith St

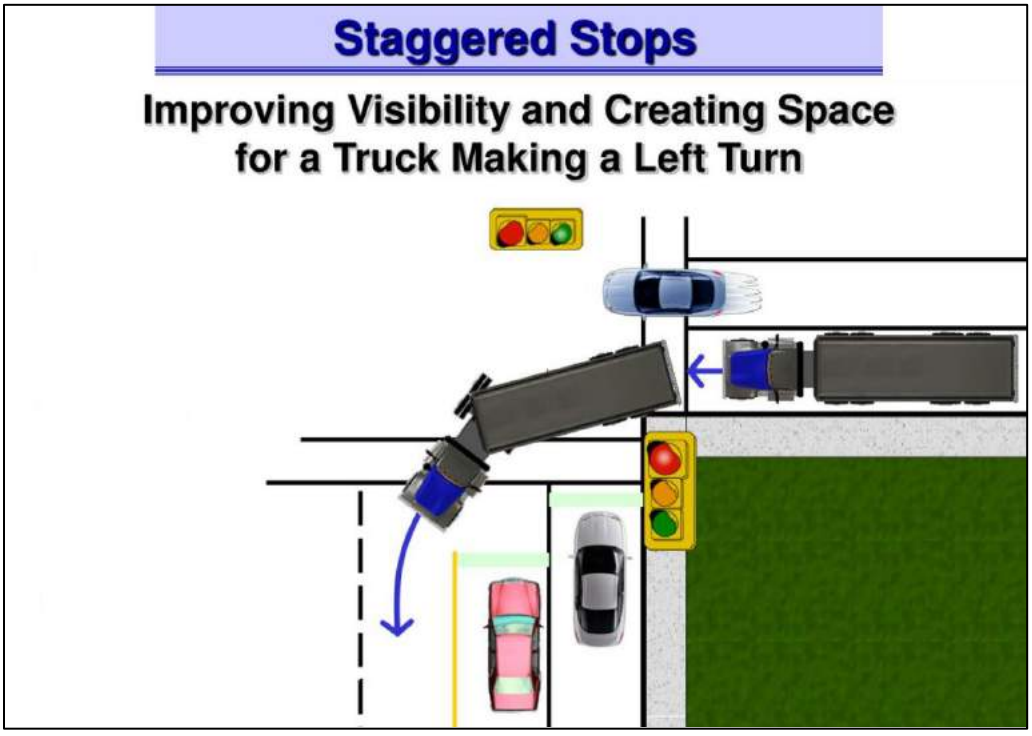


7.2.5 Additional Improvements for Consideration

Additional Improvements suggested by the public for consideration are:

- In New Liskeard, key intersections with traffic signals should be upgraded with pedestrian count down signals to assist pedestrian crossing the street and provided information on the number of seconds remaining for a pedestrian to complete their crossing.
- Advance green signal should be upgraded to the new standard of a green arrow (currently intersection have a solid green flashing light which corresponds to the old standard).
- Stagger Stops Lines (Where the stop line for the lane adjacent to the opposing traffic is pushed back) at signalized intersections to improve visibility for vehicles turning left. See image below:

Figure 7-6: Staggered Stop Lines



7.3 Phase 2 – Complete Streets & Full Traffic Calming Measures

For the second phase, a full Complete Streets framework and more robust traffic calming measures were applied to the network. This phase includes a larger scale transformation of various roads across both downtown cores and builds upon the solutions recommended in Phase 1. This section details the elements of the recommended solutions in Phase 2.

7.3.1 Active Transportation (AT) Improvements

The recommended active transportation facilities and traffic calming measures in New Liskeard and Haileybury are illustrated within **Figure 7-7** and **Figure 7-8.**

On street cycle lanes are recommended on the following roadways, with the inclusion of an appropriate buffer zone where the right-of-way permits:

- New Liskeard:
    - Whitewood Avenue from the railway/Jaffray Street to Riverside Drive
    - Armstrong Street from Cedar Avenue to Heard Street
    - Lakeshore Road North from Broadwood Avenue to Whitewood Avenue
    - Wellington Street from Whitewood Avenue to Fleming Drive
    - Sharpe Street – May Street South – Cedar Avenue
    - Dymond Avenue from Niven Street North to Paget Street
- Haileybury
    - Main Street from Rorke Avenue to Farr Drive
    - Ferguson Avenue from Main Street to Browning Street

Additionally, **Figure 7-7** illustrates the locations for traffic calming and pedestrian safety measures such as continuous sidewalks, mini-roundabouts and protected intersections, which are detailed below. Overall, features such as parkettes, repainted crosswalks and pedestrian crossovers are also proposed within the community to improve safety and increase the appeal of active transportation.

Similarly, **Figure 7-8** illustrates the recommended cycling facilities on Main Street which are an at-grade bi-directional two-way cycle track on the north side of the road, in alignment with the goal of maintaining the existing on-street parking on both sides of the road. The illustrated AT facilities at Lakeshore and Ferguson turn into the STATO path after Browning Street.

Not illustrated but considered, Georgina Avenue is an ideal road for future cycling facilities since it is traffic-calmed, offering a safer and more pleasant route for cyclists than adjacent arterial roads. The reduced vehicle speeds and volumes on Georgina Avenue minimize the risk of accidents and create a more relaxed cycling experience. A new pedestrian crosswalk and two new protected intersections are also proposed along the main corridors of the Haileybury community, as detailed below.

Figure 7-7: Proposed AT & Traffic Calming Measures – New Liskeard

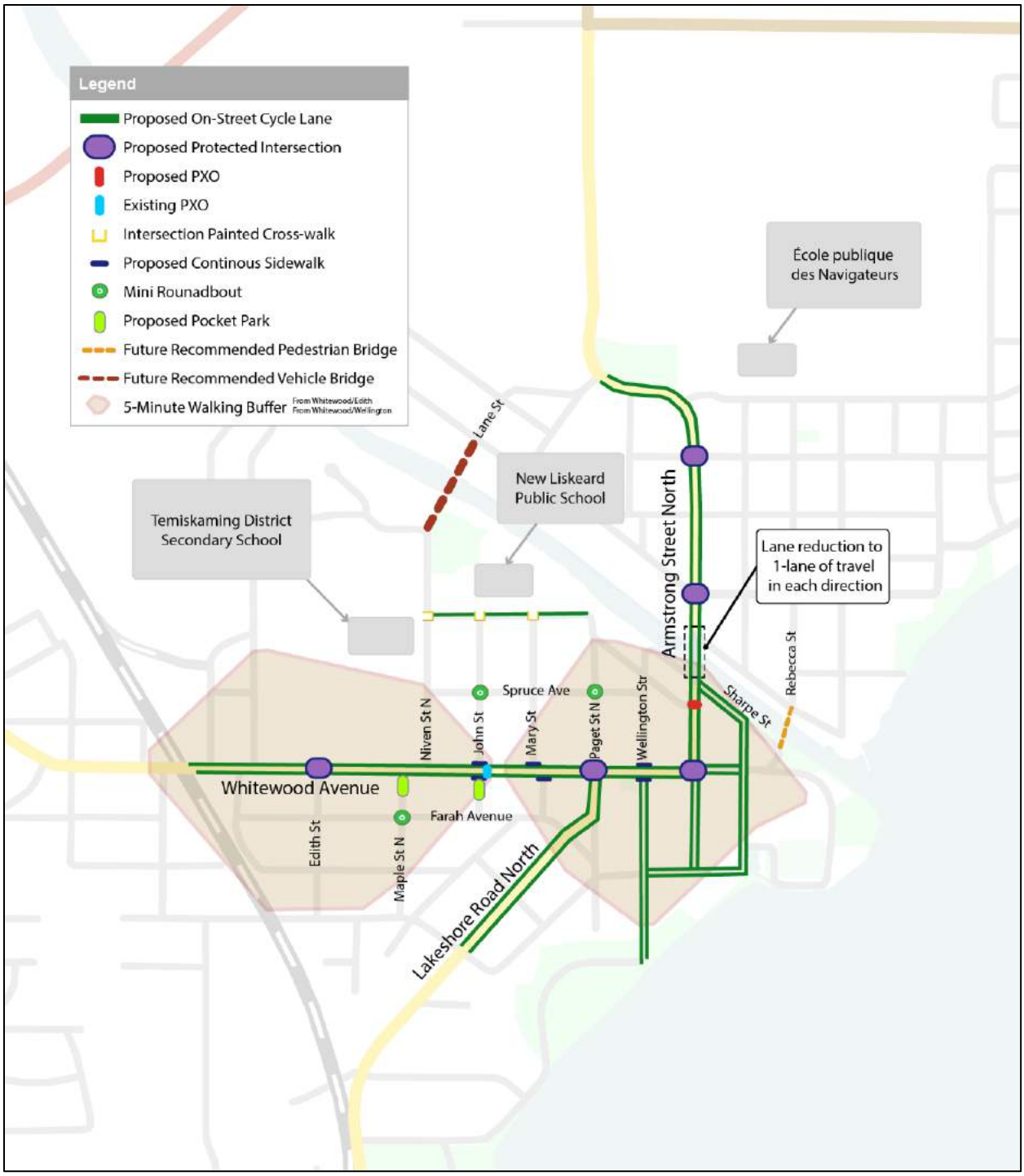
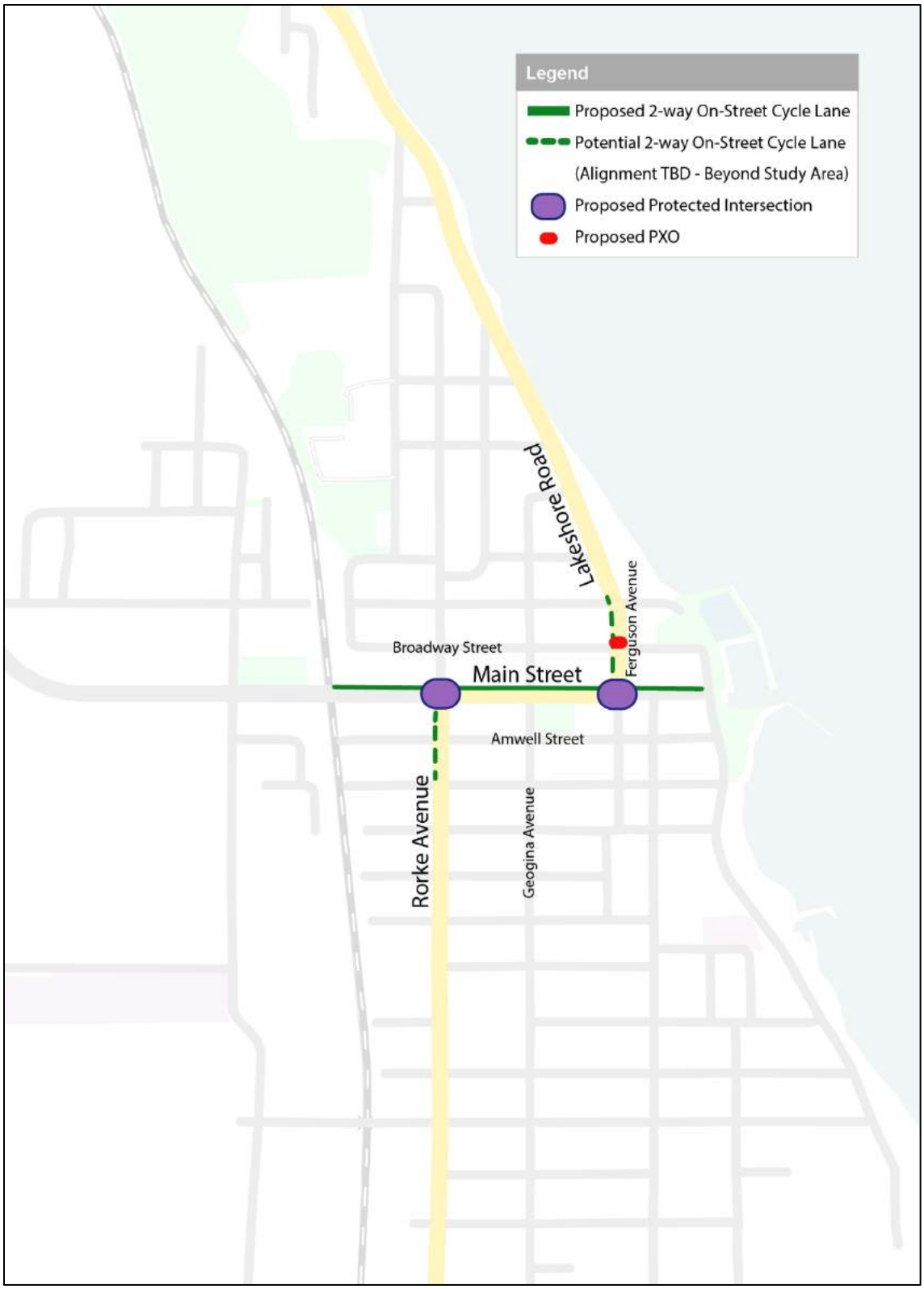


Figure 7-8: Proposed AT & Traffic Calming Measures – Haileybury



7.3.2 Protected Intersections

Protected intersections are a modern approach to urban planning and transportation infrastructure that offer a myriad of benefits for both cyclists and pedestrians as described in detail under Complete Streets Framework in **Section 5**.

At their core, these intersections prioritize safety by physically separating vulnerable road users from motorized traffic. The most notable advantage is the significant reduction in the risk of collisions between cyclists, pedestrians, and vehicles. By incorporating dedicated spaces and barriers, protected intersections create a clear and intuitive separation of paths, minimizing the chances of accidents and enhancing overall road safety.

Protected intersections are recommended along the major corridors of both downtown cores at the following locations:

- New Liskeard
    - Whitewood Avenue and Edith Street
    - Whitewood Avenue and Paget Street North
    - Whitewood Avenue and Armstrong Street
    - Armstrong Street and Beavis Terrace/Elm Avenue
    - Armstrong Street and Haliburton Avenue
- Haileybury
    - Main Street and Rorke Avenue
    - Main Street and Ferguson Avenue

Along Whitewood Avenue, the recommended protected intersections at Edith Street, Paget Street North, and Armstrong Street will serve as traffic calming measures as these intersections experience the largest turning traffic volumes.

Figure 7-9 shows a conceptual protected intersection configuration at the Whitewood Avenue & Edith Street intersection.

Figure 7-9: Protected Intersection Conceptual Design – Whitewood Avenue & Edith Street

Along Armstrong Street North, two more protected intersections are also recommended at the intersections with Beavis Terrace/Elm Avenue and Haliburton Avenue where vehicle speeds are high and there is potential for increased pedestrian traffic around the local schools and to/from downtown. The Beavis Terrace/Elm Avenue protected intersection is paired with additional traffic calming measures at the Armstrong Street and Sharpe Street intersection to reduce speeding occurrences on the Wabi River bridge. Similarly, a protected intersection at Armstrong Street & Haliburton Avenue will discourage speeding and enhance pedestrian safety in an area close to a school/daycare zone.

7.3.3 Traffic Calming Measures

In addition to the measures indicated in Phase 1, additional traffic calming measures are recommended in Phase 2. This includes features such as mini-roundabouts, continuous sidewalks, and traffic calming in school zones.

7.3.3.1 Mini Roundabouts

Mini roundabouts are a type of traffic control. They have been proposed at the following locations as a physical traffic calming measure in the City:

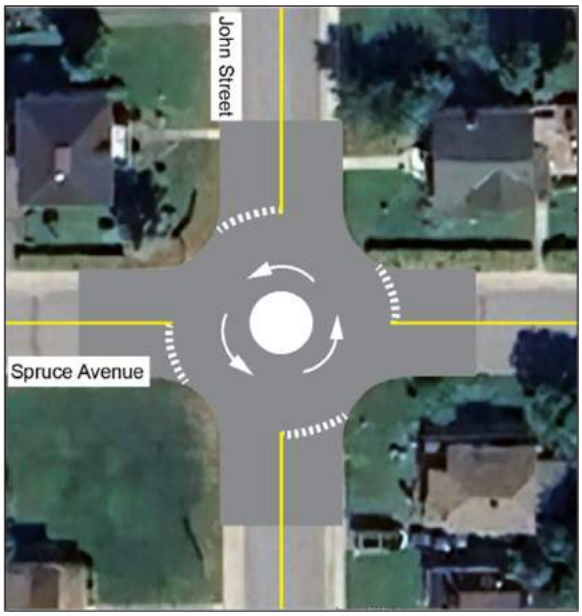
- Edith Street and Farah Avenue
- John Street and Spruce Avenue
- Paget Street North and Spruce Avenue

The two mini roundabouts are being proposed along Spruce Avenue as they are in the vicinity of school zones located near Dymond Avenue and Niven Street North. These two locations will cause vehicles to slow down due to the curvature of the travel lane from the roundabout centre island.

The mini roundabout at Edith Street and Farah Avenue will serve a similar purpose of slowing vehicular speeds and increasing safety in the residential neighbourhood south of Whitewood Avenue. It is anticipated to function as a driver deterrent to using Farah Avenue as a 'cut-through' route to avoid broader improvements along Whitewood Avenue. **Figure 7-10** depicts a conceptual mini-roundabout design at the John Street and Spruce Avenue intersection.

Additionally, a mini roundabout in Haileybury at Morissette Drive and Georgina Avenue was considered but it is beyond the study area of this Mobility Plan Report. Traffic Data was not collected as far south as Morisette Drive; however, it is understood that City staff and public would like to see a mini roundabout here. It is recommended that the City further investigate this opportunity.

Figure 7-10: Conceptual Mini-Roundabout Design – Spruce Ave & John St



7.3.3.2 Continuous Sidewalks

The continuous sidewalks, which are essential for good connectivity in the AT facilities network, encourages walking as a mode of transportation, promoting healthier lifestyles and decreasing reliance on cars, which aligns with sustainable urban development goals. The aesthetic enhancement brought about by well-designed and maintained sidewalks can improve the visual appeal of neighborhoods, contributing to a more vibrant and inviting community.

Within New Liskeard, the following intersection are recommended to be fitted with continuous sidewalks to build an attractive, connected pedestrian network in conjunction with other active transportation infrastructure such as protected intersections:

- Whitewood Avenue and John Street
- Whitewood Avenue and Mary Street
- Whitewood Avenue and Wellington Street

In Haileybury, continuous sidewalks are recommended at the following intersection to allow for a safer crossing experience for pedestrians aiming to access the Haileybury Beach:

- Ferguson Avenue and Broadway Street

The intersection of Main Street and Georgina was considered for a continuous sidewalk but was ultimately rules out due to the presence of the fire station and the downward slope of Main Street at this intersection. Curb extensions may be feasible here if traffic calming is desired.

In addition to safety and aesthetic considerations, continuous sidewalks play a vital role in fostering community connectivity and social interaction. They serve as essential public spaces where people can walk, jog, or simply gather, enhancing the sense of community. This increased foot traffic can positively impact local businesses, leading to economic benefits for the area.

7.3.3.3 Traffic Calming in School Zones

Enhancing traffic calming measures in school zones, particularly around Dymond Avenue and Niven Street, is crucial for addressing safety concerns during and after school hours. The current chaotic traffic situation in this area necessitates a reassessment of crossing improvements and traffic calming strategies. Proposed measures include painted crosswalks at key intersections:

- Dymond Avenue and Niven Street North
- Dymond Avenue and John Street
- Dymond Avenue and Mary Street

Considering congestions experienced during peak school pick-up and drop-off times, implementing a school bus-only zone during rush hour, and exploring alternative pick-up/drop-off locations are recommended. Additionally, at at-grade bi-directional two-way cycle lane is being proposed as an additional layer of safety and for promoting active transportation for school children. This bike facility is recommended to be on the north side as the sidewalk is currently on the north side of Dymond Street.

7.3.4 Armstrong Street Bridge Measures

The Armstrong Street bridge currently serves as a vital thoroughfare, accommodating high vehicular capacity with two travel lanes in both directions. However, this design, combined with the bridge's slope gradient, has inadvertently contributed to high travel speeds for southbound vehicles. To enhance transportation safety and encourage active transportation, the following measures are recommended:

- Travel Lane reduction from 2 lanes to 1 lane in each direction.
- Cycle lane on each side of the bridge tying to proposed facilities north and south.
- Protected intersection at Armstrong Street and Beavis Terrance/Elm Avenue.
- Ultimately widen pedestrian sidewalks on the bridge or increase protection from vehicles.
- Curb extensions at the Armstrong Street and Sharpe Street intersection (recommended in Phase 1).

Reducing travel lanes on the Armstrong Street bridge will facilitate the addition of cycle lanes, promoting active transportation. The inclusion of cycle lanes on both sides of the bridge aims to encourage and facilitate bicycle commuting and recreational cycling. This initiative aligns with broader urban development goals focused on sustainability and reducing reliance on fossil fuel-driven modes of transport.

Coupled with the suggested curb extensions and protected intersection on both ends of the bridge, lower travel speeds are also anticipated, further encouraging pedestrian and cyclist use. The addition of a protected intersection at Armstrong Street and Beavis Terrace/Elm Avenue is aimed to create a safer environment for pedestrians, cyclists, and motorists by prioritizing the protection of vulnerable road users and minimizing the risk of collisions. Similarly, the curb extensions at the Armstrong Street and Sharpe Street intersection will shorten pedestrian crossing distances, enhance visibility, and encourage slower vehicular speeds. These enhancements will be implemented as part of Phase 1 of the development plan, emphasizing the prioritization of pedestrian safety and comfort.

A new Pedestrian Crossover (PXO) is also recommended south of the bridge at the Armstrong Street and Church Street intersection as part of the Phase 1 development plan. This addition will provide a convenient crossing point for pedestrians while also contributing to the broader objective of reducing traffic speeds and fostering a more pedestrian-friendly streetscape.

7.3.5 New Parkettes

Parkettes, also known as pocket parks, are proposed at the following two locations:

- Maple Street North and Whitewood Avenue; and,
- John Street and Whitewood Avenue.

Both parkettes are proposed at the south side of Whitewood Avenue and would serve to create a small community gathering spot. They would likely contain some vegetation cover in the forms of trees and planters, some lights, and seating arrangements. They can reimagine the space and become a small attraction for residents that live in proximity. These parkettes would incentivise AT use and simultaneously reduce vehicular access points onto Whitewood Avenue, allowing for safer and less congested movement on this major transportation corridor**. Figure 7-11** illustrates a conceptual pocket park at the south leg of the Whitewood Avenue & John Street intersection.

Figure 7-11: Conceptual Parkette Design – Whitewood Ave & John St

Implementing Parkettes

At the intersection of Maple Street at Whitewood Avenue, turning Maple Street into a dead-end roadway south of Whitewood and replacing the northern-most part of Maple Street with a parkette would help redistribute vehicular traffic to adjacent roadways, avoiding the disjointed intersection with Niven Street. This improvement would also serve as a road safety measure on Maple Street and potentially improve the traffic operations on Whitewood Avenue. Current driveways, parking, and laneways would not be affected by the provision of a parkette, as they are located relatively far from Whitewood Avenue.

Another parkette can also be introduced at the intersection of John Street at Whitewood Avenue on the intersection's south leg while turning it into a dead-end roadway. This parkette would help redistribute traffic along adjacent roadways, and away from Whitewood Avenue. Additionally, the location of St. John's Anglican Church on the south-west corner of this intersection synergizes well with the introduction of a parkette through the combined pedestrian attraction value of both features. There would not be any negative effect on existing driveway of the property located southeast corner of the intersection as the parkette would not extend past this driveway entrance.

Figure 7-12: Neighbourhood Parkette

Source: DTAH

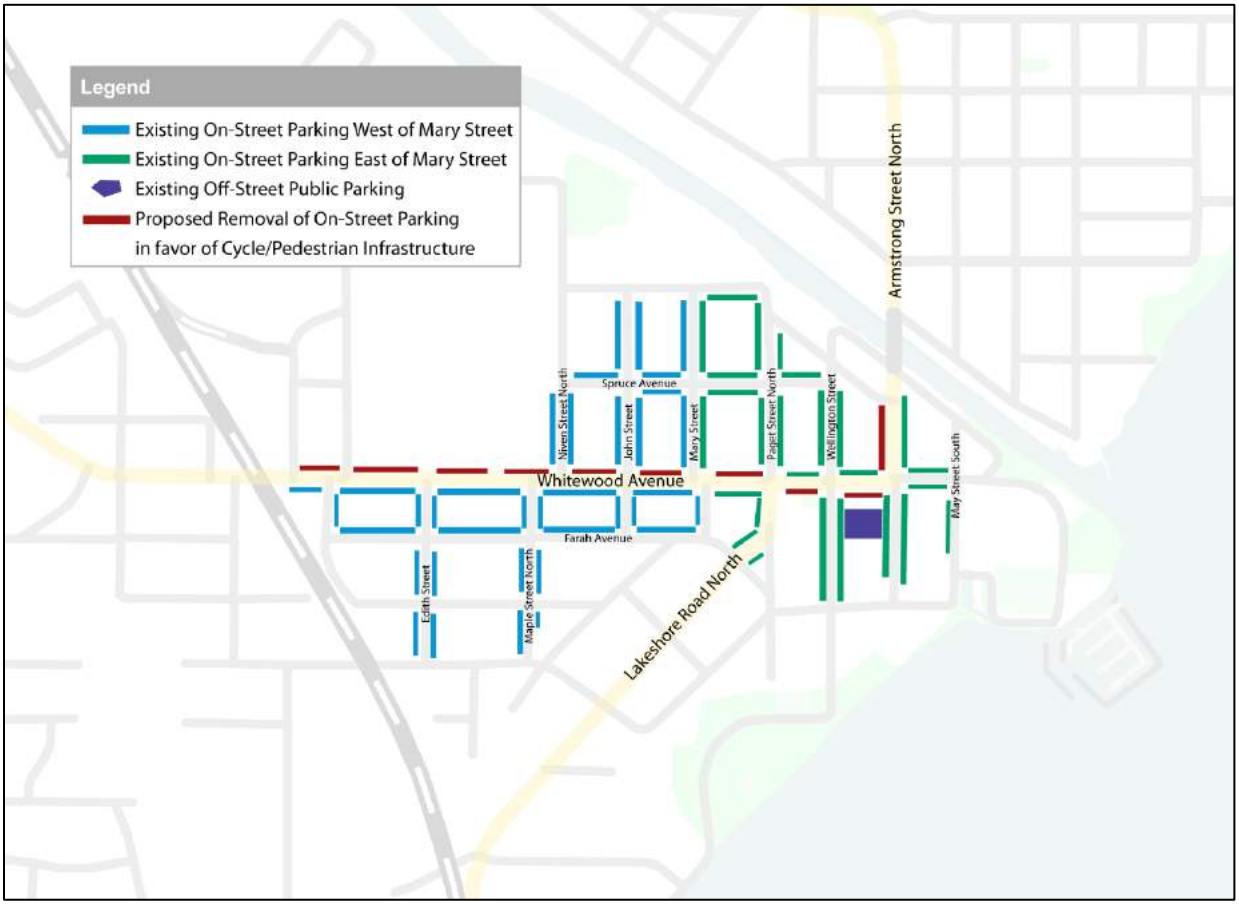
Figure 7-13: Sumach-Shuter Parkette in the City of Toronto

Source: City of Toronto

7.3.6 Parking Supply

As per City's goal to improve AT infrastructure within the City, the proposed cycle lanes along both sides of road on Whitewood Avenue, the existing parking lane on the north side of the road and a small section of Armstrong Street west side will no longer have on-street parking as illustrated in **Figure 7-14**. The existing off-street public parking lot south of Whitewood Avenue is largely a gravel lot and does not have parking space delineation through pavement markings. It is recommended that the City reconstruct this public parking lot to an asphalt pavement structure to support its increased use that is anticipated following the removal of the on-street parking on one side on Whitewood Avenue.

Figure 7-14: Proposed On-Street Parking Removal – New Liskeard



There is no change being proposed to the on- or off-street parking within Haileybury. Following consultation with City staff and with the existence of a high parking demand on Main Street, on-street parking is not recommended to be reduced in Haileybury. Unlike Whitewood Avenue, Main Street is proposed to have a singular, two-lane, bi-directional bike path on the northern edge of the road. This will allow just enough space to maintain on-street parking on both sides of Main Street. The proposed parking figure will maintain all existing parking as illustrated in previous **Section 6.5.2** and **Figure 6-53**.

7.3.7 Transit Network Improvements

The integration of the public transportation system in the City is key for promoting development, tourism, and economic growth. It is recommended that the City undertake both short- and long-term transit improvements which will enhance rider comfort, interconnectivity with other modes of transportation and ultimately increase transit ridership for shorter trips.

7.3.7.1 Short & Medium-term (1-10 Years) Improvements

The future transit network in the City is proposed to maintain the existing connection between Cobalt, Haileybury, New Liskeard and Dymond. In the short-term, all bus stops along the network are recommended to be retrofitted as sheltered bus stops for enhanced safety and year-round shelter. **Figure 7-15** and **Figure 7-16** show the proposed bus shelter locations across the New Liskeard and Haileybury transit route, respectively. The formalization of bus shelters across the City is recommended to provide weather protection barriers, appropriate illumination, wayfinding and live-transit tracking to riders. Some major transit stops can also be fitted with connecting bike parking shelters to further encourage the use of non-vehicular travel and enhance multi-modal interconnectivity.

Additionally, a minor route change is recommended in New Liskeard to connect a larger residential zone north of Wabi River; along Elm Avenue, Robert Street and Haliburton Avenue East. It is noted that this eastward expansion of the transit route is met with steep road-elevation changes, especially along Robert Street, which can affect certain vehicles' travel along the extended route.

7.3.7.2 Long-term (10+ Years) Improvements

In longer-term period, as noted in Section 0 already, there is an opportunity to reimagine the bus transit route between Haileybury and New Liskeard. The current route extends from Cobalt towards Dymond with bus stops in Haileybury and New Liskeard. This route primarily spans in the north-south direction while also extending east-west in New Liskeard along Whitewood Avenue and eventually towards the Temiskaming Hospital. In the system, the needs of inter-city (north-south) travel riders is combined with the needs of those who plan on travelling along the Temiskaming Downtown (east-west). By separating the route into two separate routes, riders on both routes can experience increased reliability in the service while also making it easier to increase service frequency for critical destinations such as the Temiskaming Hospital in New Liskeard.

Additionally, a large-scale transit route change could be facilitated through the provision of a transit hub. With the Ontario Northlander Railway bisecting New Liskeard, there is an opportunity to introduce passenger rail transit into New Liskeard and develop a larger transit hub which connects the existing New Liskeard Train Station with Temiskaming Shores' transit network. This transit hub could be connected to existing and planned AT infrastructure to incentivize the use of non-vehicular travel for relatively shorter trips.

Figure 7-15: Proposed Transit Infrastructure Improvements – New Liskeard

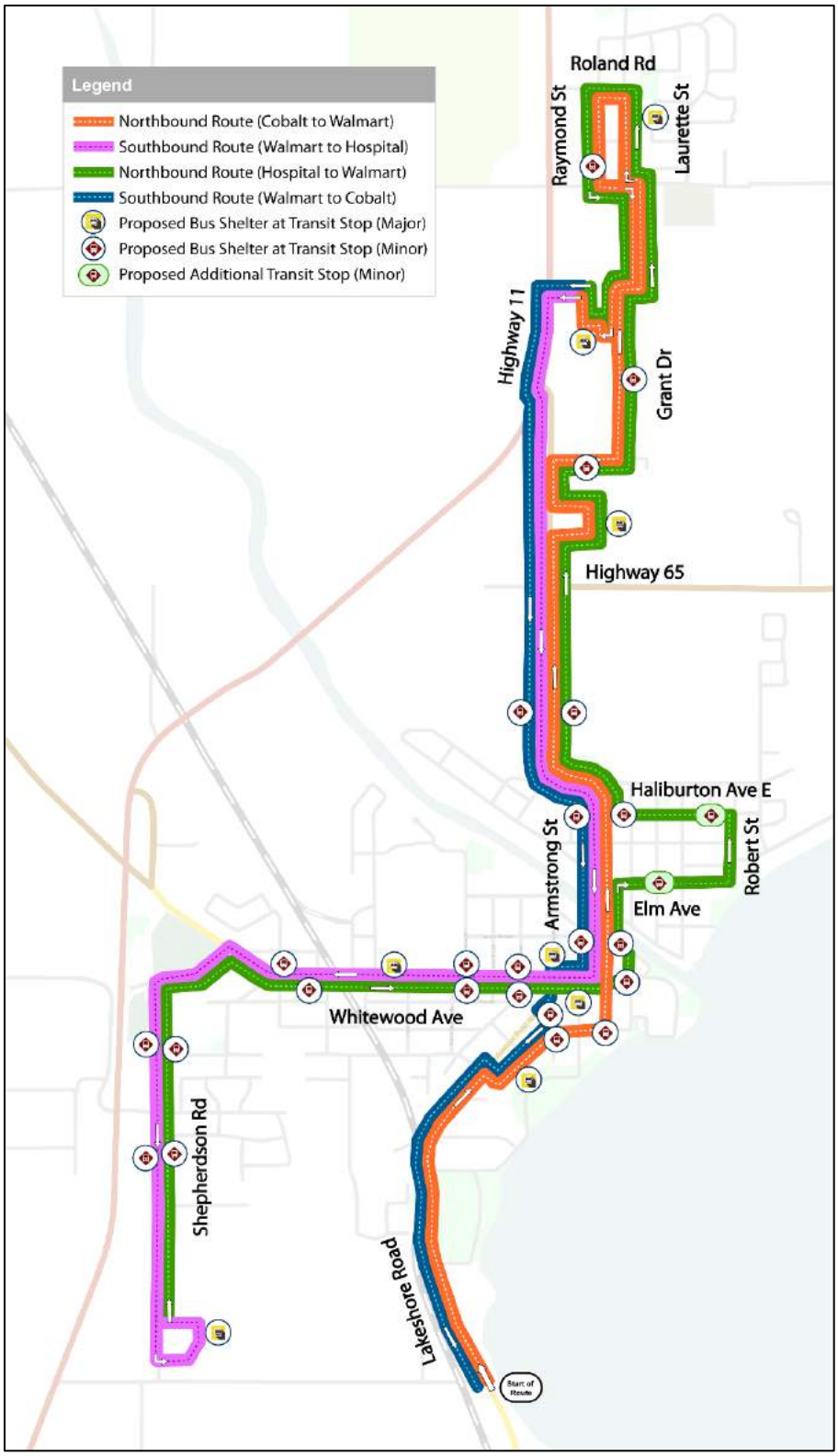
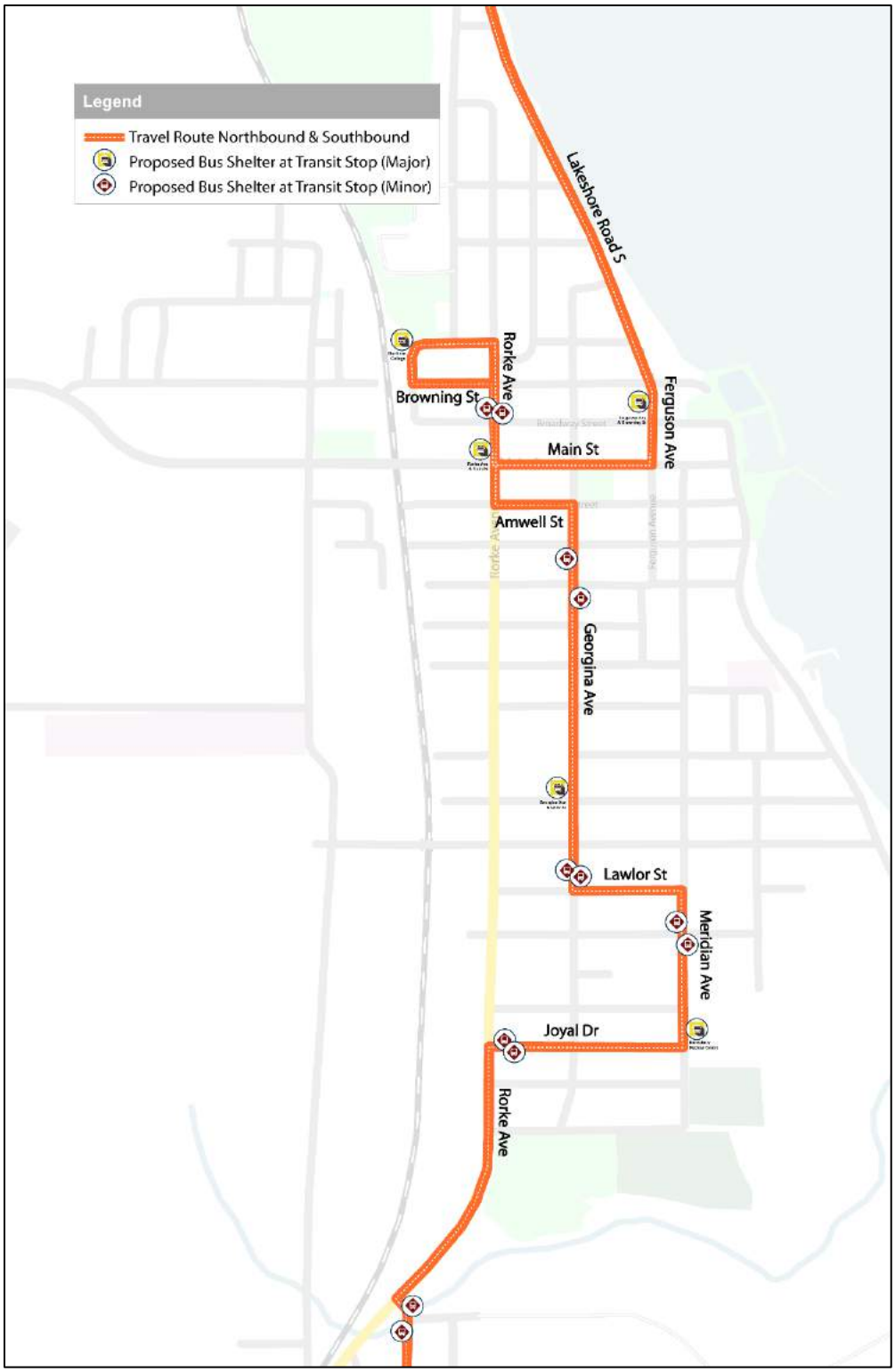


Figure 7-16: Proposed Transit Infrastructure Improvement – Haileybury



7.3.8 Recommendations Summary

TYLin recommends the full implementation of all mobility network solutions identified for the downtown cores of New Liskeard and Haileybury, outlined in **Section 7**, over a flexible period of time and at the discretion of City Council and staff.

Given the unique experiences and diverse needs of Temiskaming Shores residents, we emphasize the importance of piloting and thoroughly testing these initiatives before full-scale deployment. Piloting allows for the identification of potential challenges, the refinement of strategies, and the gathering of crucial feedback from stakeholders. We recommend a phased approach to implementation, allowing for flexibility and adaptation based on the discretion of local council and the availability of funding, as presented in **Section 10**.

By taking these measures, Temiskaming Shores can ensure that the proposed interventions are effectively tailored to the specific contexts of the City, maximizing their impact and sustainability in the long run.

7.3.8.1 Illustrating Proposed Improvements

This framework primarily applies to the future condition of the four major roadways studied (Armstrong Street and Whitewood Avenue in New Liskeard, and Main Street and Ferguson Avenue in Haileybury) as illustrated by the conceptual roadway linework enclosed in **Appendix G.**

The improvements for the main roadways are illustrated in **Figure 7-17** and **Figure 7-18** for New Liskeard in **Figure 7-19** and **Figure 7-20** for Haileybury. These figures illustrate the typical right-of-way widths and elements of the key arterial roadways, which generally have allocated space for on-street parking, sidewalks, and dedicated bike lanes, consequently giving priority to pedestrian movement. The recommended designs will maintain the traffic capacity of the study roadways across the future horizon years, while functionally slowing speeds in high-traffic zones to improve safety for all users, improving the visibility of parking spaces, and improving the pedestrian experience across the downtown cores.

By utilizing the existing right-of-way, the recommendations are economically conservative, eliminating the need for costly road widenings or property acquisitions, ultimately utilizing the Complete Streets framework to balance the needs of all road users within the space available.

New Liskeard

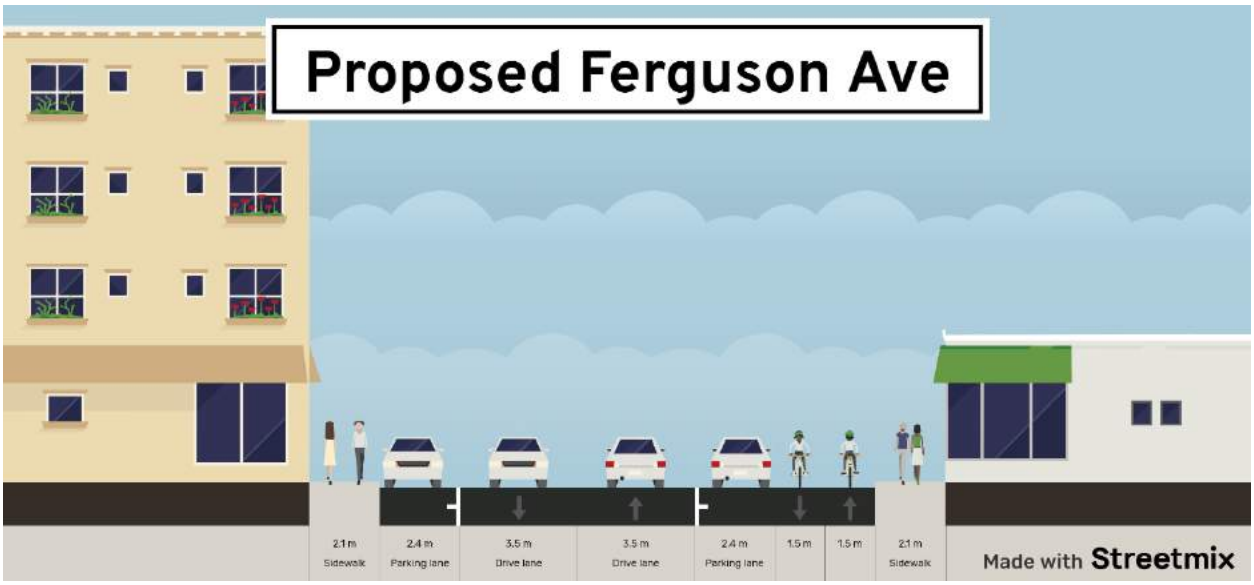
Figure 7-17: Proposed cross-section for Armstrong Street

Figure 7-18: Proposed cross-section for Whitewood Avenue

Haileybury

Figure 7-19: Proposed cross-section for Main Street

Figure 7-20: Proposed cross-section for Ferguson Avenue



Finally, **Figure 7-21 and Figure 7-22** illustrate the combination of Complete Streets measures along Whitewood Avenue in New Liskeard, which demonstrate the proposed balance of modes within the existing right-of-way.

Figure 7-21: Whitewood Avenue before proposed improvements

Source: Google Maps

Figure 7-22: Whitewood Avenue after proposed improvements

Source: TYLin

8 Consultation Summary

Public and stakeholder engagement is a key tool used to developing transportation solutions as this opportunity for public input and engagement ensures that the plan reflects the needs, concerns, and aspirations of the community. This section summarizes the consultation that has been undertaken to develop the transportation network improvement solutions for the City.

8.1 Notice of Commencement

The Notice of Commencement (NOC) for the Study was issued both in English and French language, on February 23, 2023, on the City's social media sites (Facebook, Twitter) and published on the City's website for this study at www.temiskamingshores.ca/en/resident/downtown-cores-mobility-study. The Notice contained information on what is the Study and why it is being undertaken by the City, the project contact information and how to get involved, including a link and QR code to the Online Survey. A copy of the Notice of Commencement can be found in **Appendix C**. The Notice was also emailed on the same day by TYLin to a list of stakeholders provided by the City. The stakeholder list included:

City Departments:

- Temiskaming Health Unit
- Bicycle Friendly Communities Committee / Bike Temiskaming Shores
- Downtown New Liskeard BIA
- Haileybury Business Improvement Group
- Temiskaming Shores and Area Chamber of Commerce
- GEMS (Going the Extra Mile for Safety)
- Temiskaming Shores Active and Safe Routes to School Committee
- Age Friendly Committee
- Timiskaming District Road Safety Coalition

Neighbouring Communities

- Town of Cobalt
- Township of Coleman
- Township of Harris

Local Indigenous Communities:

- Beaverhouse First Nation
- Matachewan First Nation
- Mattagami First Nation
- Temagami First Nation
- Wahnapitae First Nation

8.2 Summary of Online Survey #1

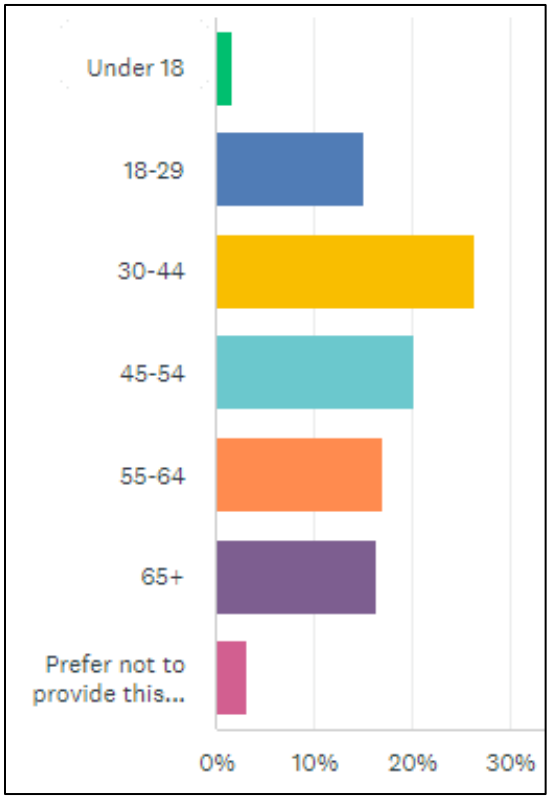
A public online survey was promoted on the City's Website, the City's social media channels, by City Councillors and staff during the summer block parties, as well as through support from the Timiskaming Health Unit (THU), who shared the survey link on their social media and with community partners who are part of the Timiskaming Community Collaborative. The survey contained 26 questions and was available in English and French. The survey was open from end of February to the end of July 2023.

The English survey was answered by 306 respondents and the French survey received answers from 19 respondents.

Of the 325 respondents 166 live in New Liskeard, 96 in Haileybury, 24 in Dymond, and 41 in another community. Around 64% of the respondents identified as female, 31% as male, about 5% indicated other or preferred not to say.

In terms of respondent's age, the age distribution can be seen in **Figure 8-1,** with the largest percentage of respondents in the 30-44 age bracket.

Figure 8-1: Age distribution of Survey Respondents

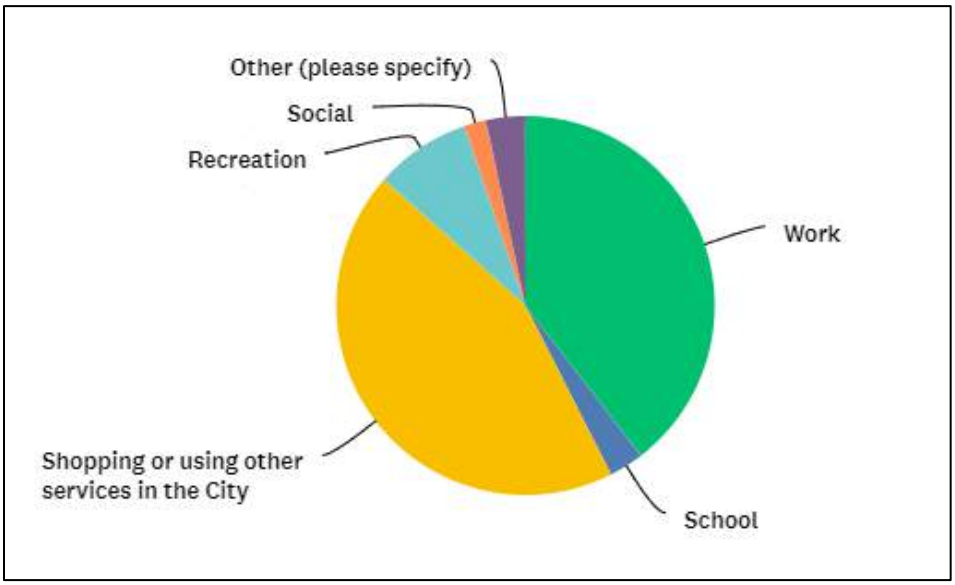


Most respondents drive a car as a primary mode of transportation to access the Downtown Cores (66%), followed by walking (30%), transit (12%), being a car passenger (10%), and biking (9%). Additionally, most respondents indicated that their household currently has access to two cars (49%), followed by one (25%), zero (11.5%), and three (8%). The vast majority of respondents live in a single

detached house (81%). Around 24% of respondents have a household income greater than $150,000, whereas 16% indicated a household income below $40,000. Fifty-six percent of respondents are employed full time, 11% part-time, and 18% are retired. More than half work exclusively or primarily in-person, with about 62% indicating New Liskeard as their typical place of work, while 19% indicated Haileybury as their typical place of work, 3% indicated Dymond, and 16% indicated another community as their typical place of work.

Most respondents travel into the city for work (38%) or shopping (45%) as can be seen in **Figure 8-2**.

Figure 8-2: Reasons for Traveling Downtown – Online Survey Results



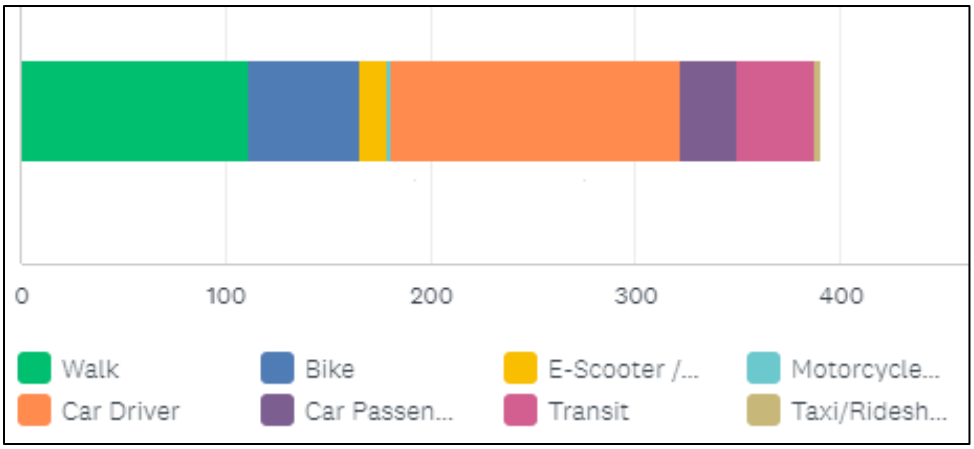
When respondents were asked to choose their biggest challenge when travelling in the city the answers were rather mixed as can be seen in **Table 8-1**.

Table 8-1: Challenges when travelling in the City – Online Survey Results

Challenges when travelling in the City	Responses
Access to sidewalks and crosswalks	16.15%
Safety	14.23%
Congestion along the route	11.92%
Cost of travel	8.85%
Access to cycling infrastructure	8.08%
Distance or time to destination	7.96%
Access to transit stops	3.46%
Convenience	1.38%
Other	19.23%

When asked what travel mode respondents would ideally prefer to use when traveling around the city 52% chose Car Driver, while 42% chose Walking, 21% biking, and 15% transit **Figure 8-3**.

Figure 8-3: Preferred Mode of Travel – Online Survey Results



Most people indicated that reasons preventing them from using their preferred mode of transportation include sense of safety, lack of active transportation infrastructure, travel time, and a lack of parking.

Around one third of respondents changed their travel behavior, while two thirds did not change their travel behavior because of the COVID-19 pandemic. Respondents ranked the following issues in order of importance to be considered for the Transportation Study: Road Safety (speeding, crossings, road design), Walking and Cycling (sidewalks, crosswalks, cycle lanes), Accessible Infrastructure (wheelchairs, strollers, mobility scooters, rolling walkers, etc.), Public Transit Services and Connectivity, Traffic Volume and Congestion, and environmental impact/climate change resilience.

Respondents ranked the following issues in order of importance to be considered for the Transportation Study: Road Safety (speeding, crossings, road design), Walking and Cycling (sidewalks, crosswalks, cycle lanes, cycle parkin), Accessible Infrastructure (wheelchairs, strollers, mobility scooters, rolling walkers, and more), Public Transit Services and Connectivity, Traffic Volume and Congestion, and environmental impact/climate change resilience.

- 58% of respondents would like to see speed reductions for traffic calming and road safety.
- 64% agree or strongly agree that their perception of safety impacts their choice of transportation routes.
- Around 60% agree that there should be more educational resources for safe driving, safe cycling practices, and “share the road” behavior.
- 65% of respondents agree that it is easy to find a parking space when shopping or dining
- More than half (56%) of respondents agree or strongly agree that the City should prioritize walking, cycling, and public transportation even if that means travelling by car could be less convenient in build-up areas.
- 57% would like to see temporary “pedestrian only” streets in the summer for open streets activities and events.

8.3 Summary of Online Survey #2

Alongside the Public Open House, a survey was conducted between November 1st and 27th, 2023 and circulated to the residents of New Liskeard and Haileybury. The survey contained 12 questions and had about 57 responses. The comments received encompass a range of perspectives regarding proposed changes to the public transit system and infrastructure in the community. There's a notable divergence in opinions, with some advocating for improvements to the transit system's frequency, stop accessibility, and scheduling to accommodate crucial appointments, while others express concerns about the impact of proposed changes on parking, traffic flow, safety, and the perceived necessity of certain alterations.

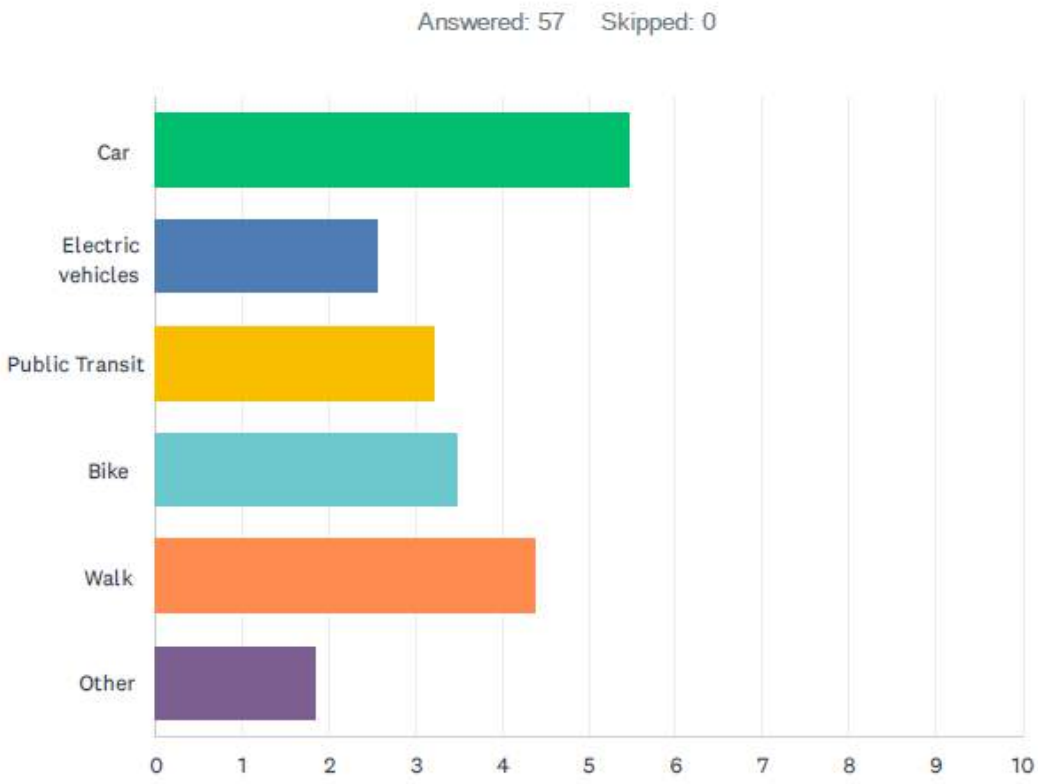
Feedback highlights:

- **Transit System:** Concerns were raised about the inadequacy of the current transit system, particularly in meeting the needs of individuals with crucial medical appointments like dialysis. Suggestions for increased bus frequency and more accessible stops were prominent.
- **Infrastructure Alterations:** Proposed changes such as pedestrian and bike lanes, bridge constructions, and adjustments to parking arrangements generated mixed responses. Some supported these alterations for safety and environmental reasons, while others expressed concerns about their impact on traffic flow, parking availability, and business operations.
- **Safety and Traffic Flow:** Safety considerations were a common theme, including worries about pedestrian crossings, speeding, road accessibility during winter months, and potential disruptions caused by infrastructure changes.

Our survey had a clear aim: engaging the public during the open house by presenting proposed enhancements and gathering invaluable feedback as a crucial part of our consultation process. We tailored our questions specifically to address proposed improvements for active transportation and the envisioned implementation of the Complete Streets framework detailed in **Section 3.2**.

When asked what the preferred mode of transportation is within the city, the consensus in **Figure 8-4** revealed that most respondents rely on their cars, followed by biking and walking.

Figure 8-4: Preferred Mode of Travel



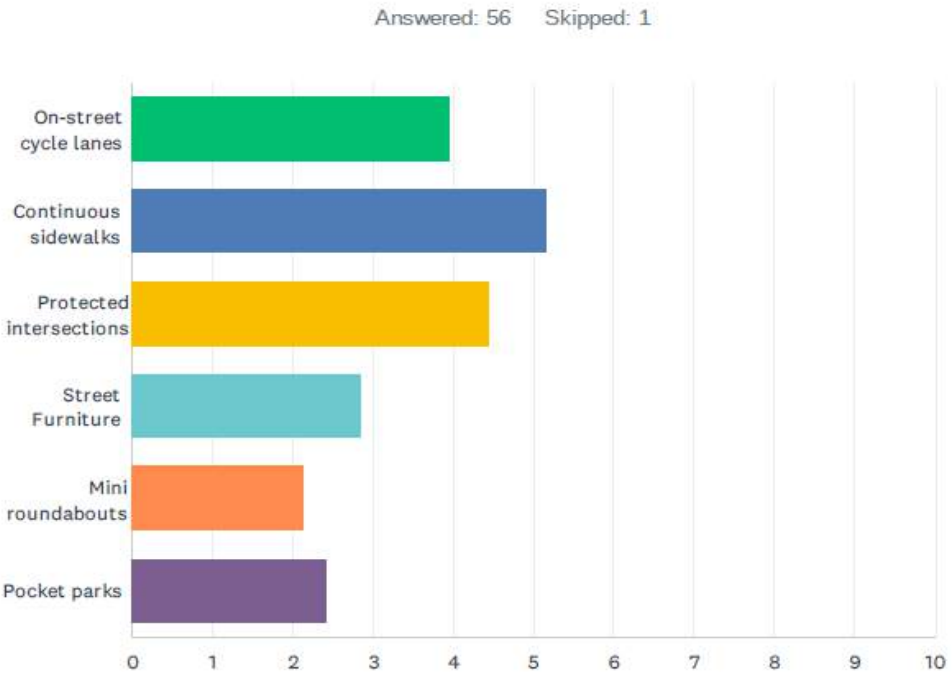
The current inadequacy of transit options leads residents to prefer using private vehicles for commuting. The second most preferred mode is walking, followed by biking. These preferences align with our city's plan to enhance active transportation facilities.

Similarly, regarding proposed transit infrastructure improvements, 89% of respondents (49 out of 55) agree that the proposed enhancements meet their needs.

Additionally, respondents were in favour of Complete Streets features that we proposed and ranked their preferences. As shown in **Figure 8-5**, the vast majority ranked continuous sidewalks with the highest priority, followed by protected intersections and on-street cycle lanes.

Overall, the feedback reveals a diverse range of opinions and concerns, highlighting the need for comprehensive consideration and a balanced approach to address the community's varying needs and preferences regarding proposed transit and infrastructure changes.

Figure 8-5: Priority for Complete Streets Elements – Online Survey Results



8.4 Summary of Email Comments

In addition to answering the survey, residents also had the opportunity to email City Staff directly to provide their comments, concerns, and ideas for the Transportation Study. Below are some of the comments received:

- A local driving instructor identified several deficiencies from a new driver's perspective that could be remedied from simple improvements such as increased line markings, as well as the potential changing of directions to some current one-way streets.
- One resident noted that there is a need for more traffic in downtown Haileybury to support the existing businesses and improve the potential for new businesses.
- This resident also explained that "a single marina in the south end of the city would bring traffic and strengthen the south end downtown core for the summer months. There is space to relocate the north end boat slips to the south end marina. This would reduce the city's operating and capital expenses etc."
- The inclusion of equity dimensions (i.e., gender, income) in the survey is great, as the collection of these data is important to determine who the survey did and did not reach. For example, those who are most affected by the built environment may not have had a chance to complete the survey due to barriers such as technology, literacy level, etc. We suggest that this should be recognized when considering survey results.

All consultation materials and anonymized responses will be included in **Appendix E**.

8.5 Public Open House

The project team organized a public consultation on November 1st, 2023, held at City Hall. There were two time slots for the public open house, the first one between 2 p.m.- 4 p.m. and the second one between 6 p.m. – 8 p.m. Notice was disseminated through social media channels and emails to key stakeholders, offering an opportunity to review the proposed changes and initiatives.

This event served as a platform for community members to engage with one another, offering valuable comments and suggestions regarding the proposed alterations **Figure 8-6** shows the public open house. Subsequently, a survey was distributed to gather comprehensive feedback, and a summary of these insights can be found in **Section 0** and **Section 8.4**.

Figure 8-6: Public Open House, November 1st, 2023

Source: TYLin

In reviewing the Public Open House feedback, several key themes and suggestions emerged across various aspects of urban development and transportation:

- **Traffic Calming and Safety Measures:** The community expressed interest in traffic calming measures, advocating for enhanced safety near TDSS and NLPS schools. There were differing opinions regarding the necessity of 4-way stops at specific intersections, with some suggesting alternative traffic calming solutions.
- **Bike Lanes and Pedestrian Infrastructure:** Strong support was voiced for proposed bike lanes and continuous sidewalks, along with specific recommendations for enhancing connectivity, like bike lanes on Sharpe to link downtown with the waterfront. Concerns were raised about potential conflicts between bike lanes and sidewalk patios.
- **Road Design and Lane Changes:** Feedback included opinions on lane configurations, proposing changes like the removal of lanes on Rorke in favor of bike paths and considering the elimination of on-street parking in certain zones.
- **Pedestrian Crossings and Safety:** The community urged for enhanced pedestrian safety measures, suggesting pedestrian lights and PXOs at various locations. Concerns were highlighted about busy streets like Paget Street and solutions for safer traffic flow.
- **Downtown Development and Amenities:** Suggestions ranged from adding greenery and seating to enhancing aesthetics with decorations and public art installations. Calls were made for increased infrastructure like garbage cans, recycling bins, and bike racks.
- **Public Transportation and Infrastructure:** Some voiced concerns regarding separate services for communities, emphasizing potential drawbacks such as complexity and decreased ridership support.
- **Miscellaneous Concerns:** The community raised specific concerns about traffic issues stemming from a gas station at Sharpe and Armstrong and suggested alterations to parking arrangements to better support local businesses.

These insights gleaned from the Public Open House comments provide a comprehensive understanding of community needs and desires, forming a valuable foundation for future urban planning and development initiatives in the area.

Public Support

During this Public Open House, existing conditions and future recommendations were presented to community members, and a prevailing sentiment emerged largely in favor of implementing the proposed solutions. The public expressed a collective desire for an assertive revitalization effort, signaling a shared commitment to embracing change and enhance mobility infrastructure. This enthusiastic response underscores the community's active engagement and willingness to support progressive measures that align with their aspirations for a more dynamic and accessible urban environment. The insights gathered from this open house and the online surveys serve as a valuable foundation for a mobility plan that not only meets the community's expectations but also catalyzes a vibrant and sustainable local activity.

9 Implementation & Phasing Strategy

Based on recommendations provided in **Section 7.3.8**, the phasing of the project should be approached gradually, ensuring a balanced and methodical progression. Items that can be quickly and economically implemented should be prioritized first, allowing for immediate benefits and adjustments as needed. An initial phase should address the most straightforward and readily achievable elements, based on available funding and impact to manage traffic and improve road safety objectives.

Subsequently, items that require more detailed design and extensive study are recommended in later phases. These items should be closely monitored by staff to determine the appropriate timing based on availability of funds and allowing for continuous assessment and improvement. This approach ensures that more complex and resource-intensive aspects are provided the necessary time and attention to develop thoroughly.

By balancing quick wins with thoughtful planning, and by closely monitoring progress, this phased strategy aims to optimize resource allocation, manage risks effectively, and achieve sustained, long-term success.

The following tables (namely **Table 9-1**, **Table 9-2**, **Table 9-3**) provide the recommended project cost breakdown for each phase as well as overall estimates.

A detailed costing framework is enclosed in **Appendix H.**

9.1 Phase 1 Components & Cost Estimates

Table 9-1: Phase 1 Cost Estimates

Phase 1 (1-5 years)		
Category	**Item**	**Cost**
Traffic Controls, Intersection & Pavement Design	Stop Signs	$700
	Pedestrian Crossovers (PXO)	$40,000
	Pavement Markings	$9,870.04
	Subtotal	*$50,570.04*
Traffic Calming Measures	Curb Bump-Out	$60,000.00
	Subtotal	*$60,000.00*
Total		***$110,570.04***

9.2 Phase 2 Components & Cost Estimates

Table 9-2: Phase 2 Cost Estimates

Phase 2 (5-10 years)		
Category	**Item**	**Cost**
Active Transportation	Concrete Sidewalk Construction	$27,847.89
	Crosswalk	$67,905
	Painted Bike Lanes	$4,833,020
	Protected Intersection	$9,100,000
	Pocket Park	$1,064,000
	Subtotal	*$15,092,772.89*
Transit	Bus Pad	$110,925
	Bus Shelter	$1,170,000
	Bike Rack	$9,800
	Wayfinding Signage	$910
	Subtotal	*$1,291,635*
Traffic Calming Measures	Mini Roundabout	$750,000
	Subtotal	*$750,000*
Parking & Placemaking	Parking Lane Marking	$2,030
	Parking Lot Paving	$104,400
	Subtotal	*$106,430*
Total		***$17,240,837.89***

9.3 Overall Cost Estimates

Overall Cost Estimate represents Phase 1 and 2 combined.

Table 9-3: Cost Estimates for Phase 1 and Phase 2

Overall Cost Estimate	
Category	**Cost**
Active Transportation	$15,092,772.89
Transit	$1,291,635.00
Traffic Controls, Intersection & Pavement Design	$50,570.04
Traffic Calming Measures	$810,000.00
Parking and Place Making	$106,430.00
Total	***$17,351,407.93***

10 Funding

10.1 What is the Green Municipal Fund (GMF)?

The Green Municipal Fund is a $1.6 billion program funded by the Government of Canada. Its aim is to accelerate local governments' transition to sustainability through a unique mix of funding, resources, and training, empowering municipalities to enhance resilience and improve the lives of Canadians.

The GMF targets five sub-sectors for change, which are the following:

1. Energy
2. ***Transportation***
3. Land Use
4. Circular Economy
5. Water

Under the Transportation sub-sector for change, GMF aims for net-zero transportation emissions in municipalities through demand management, affordable transit, and active transportation, utilizing zero-emission vehicles. Investments also prioritize resilience in infrastructure and equipment.

10.2 Net-Zero Transformation Initiatives

The GMF offers four funding initiatives under their Net-Zero Transformation program. The funding is open to the following:

- Canadian municipal governments
    - Towns, cities, regions, districts, and local boards
- And Municipal Partners
    - Private sector entities
    - Municipally owned corporations
    - Regional, provincial, or territorial organizations delivering municipal services
    - Non-governmental organizations
    - Not-for-profit organizations
    - Research institutes (e.g., universities)
    - An Indigenous community is an eligible lead applicant if they are partnering with a Canadian municipal government on an eligible project, or if they have a shared service agreement with a Canadian municipal government related to municipal infrastructure, climate change or adaptation.

The Net-Zero Transformation program has four funding opportunities. Each of these initiatives have goals for which are described below:

- **Planning Studies:** A plan that sets a high standard for municipal planning exercises and sets the stage for a net-zero future.
- **Feasibility Studies:** A feasibility study that assesses in detail new approaches and solutions to bring your community closer to net-zero.
- **Pilot Projects:** A pilot project that evaluates innovative GHG reduction solutions in real-world conditions.
- **Capital Projects:** A capital project that has the potential to result in a significant contribution to net-zero.

Table 10-1 is a summary of the GMF's funding information:

Table 10-1: GMF funding information

Planning Studies	• **Grant for up to 50 percent of eligible costs** • **Up to a maximum of $175,000**
Feasibility Studies	• Grant for up to 50 percent of eligible costs • Up to a maximum of $175,000
Pilot Projects	• Grant for up to 50 percent of eligible costs • Up to a maximum of $500,000
Capital Projects	• Combined grant and loan for up to 80% of eligible costs • Loan up to a maximum of $10 million • Grant up to 15% of total loan amount.

For more information about the above funding opportunities, please refer to the Green Municipal Fund website.

10.3 Emerging Opportunity – Spring 2024

TYLin's discussion with the GMF indicate that the typical grants for studies and pilot projects cover up to 50%. However, a new offer launching this spring may allow certain applicants to receive grants covering up to 80% of project costs.

These applicants include:

- Municipalities (or their partners) with a population of 10,000 or under (The City of Temiskaming Shores had a total population of 9,634 in the Canada 2021 Census).
- Regional governments or groups of municipalities where the average population of the member municipalities is 10,000 or under.
- Eligible Indigenous communities.
- Northern communities.

An exciting aspect of this offer is that Northern and eligible Indigenous communities applying to the GMF for the first time may qualify for grants covering up to 100% of eligible costs. As a Northern community, Temiskaming Shores could benefit greatly from this opportunity.

11 Conclusion

In conclusion, the Downtown Cores Mobility Plan for the City of Temiskaming Shores can serve as a cornerstone guiding document, poised to shape the trajectory of the transportation network for years to come. Developed in harmony with broader city objectives, this comprehensive plan provides a blueprint for a sustainable transportation system within and around the downtown cores of New Liskeard and Haileybury. It stands as a robust framework for enhancing the existing network, addressing present challenges, and preparing for future demands as the City continues to grow and the downtown areas attract more activity.

The phased implementation of solutions, contingent upon council discretion and available funding, ensures a pragmatic approach to realizing the strategic vision for this plan. With a focus on creating complete streets, the Mobility Plan prioritizes improved pedestrian accessibility and proposes bold road design changes aimed at increasing road safety and multi-modal connectivity. Following a robust public engagement effort and with the support of identified funding sources, the City is poised to cultivate a safer, more efficient, and interconnected transportation system that enhances the quality of life for all residents and visitors to the downtown cores of New Liskeard and Haileybury in the City of Temiskaming Shores.

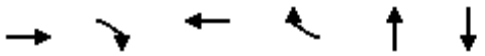
APPENDIX A

Existing Synchro and SimTraffic Reports

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	327	16	16	225	16	30
Future Volume (Veh/h)	327	16	16	225	16	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	376	18	18	259	18	34
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				336		
pX, platoon unblocked						
vC, conflicting volume			394		680	385
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			394		680	385
tC, single (s)			4.2		6.4	6.3
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.4
p0 queue free %			98		96	95
cM capacity (veh/h)			1138		413	652

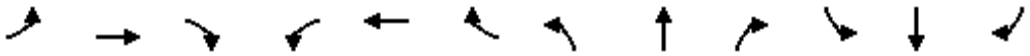
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	394	277	52
Volume Left	0	18	18
Volume Right	18	0	34
cSH	1700	1138	543
Volume to Capacity	0.23	0.02	0.10
Queue Length 95th (m)	0.0	0.4	2.4
Control Delay (s)	0.0	0.7	12.3
Lane LOS		A	B
Approach Delay (s)	0.0	0.7	12.3
Approach LOS			B

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	333	15	216	64	80	68
v/c Ratio	0.32	0.01	0.20	0.06	0.22	0.22
Control Delay	7.2	0.0	6.4	2.3	12.4	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.2	0.0	6.4	2.3	12.4	14.5
Queue Length 50th (m)	14.8	0.0	8.7	0.0	3.2	3.4
Queue Length 95th (m)	27.0	0.1	17.0	3.4	11.0	10.9
Internal Link Dist (m)	312.0		313.1		280.6	74.2
Turn Bay Length (m)		45.0		45.0		
Base Capacity (vph)	1100	1103	1104	1168	792	701
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.01	0.20	0.05	0.10	0.10

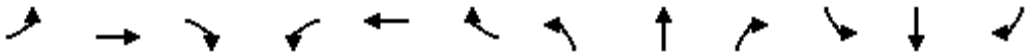
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	272	13	9	177	55	25	23	21	38	13	8
Future Volume (vph)	15	272	13	9	177	55	25	23	21	38	13	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2	6.2		6.2	6.2		6.2			6.2	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.98			0.97	
Satd. Flow (prot)		1557	1512		1561	1601		1664			1649	
Flt Permitted		0.98	1.00		0.98	1.00		0.85			0.76	
Satd. Flow (perm)		1532	1512		1536	1601		1444			1288	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	17	316	15	10	206	64	29	27	24	44	15	9
RTOR Reduction (vph)	0	0	6	0	0	26	0	21	0	0	8	0
Lane Group Flow (vph)	0	333	9	0	216	38	0	59	0	0	60	0
Heavy Vehicles (%)	7%	11%	8%	0%	11%	2%	16%	0%	10%	14%	8%	0%
Parking (#/hr)		0			0							
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)		26.8	26.8		26.8	26.8		5.9			5.9	
Effective Green, g (s)		26.8	26.8		26.8	26.8		5.9			5.9	
Actuated g/C Ratio		0.59	0.59		0.59	0.59		0.13			0.13	
Clearance Time (s)		6.2	6.2		6.2	6.2		6.2			6.2	
Vehicle Extension (s)		5.0	5.0		5.0	5.0		2.5			2.5	
Lane Grp Cap (vph)		910	898		912	951		188			168	
v/s Ratio Prot												
v/s Ratio Perm		c0.22	0.01		0.14	0.02		0.04			c0.05	
v/c Ratio		0.37	0.01		0.24	0.04		0.31			0.36	
Uniform Delay, d1		4.7	3.7		4.3	3.8		17.8			17.9	
Progression Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.5	0.0		0.3	0.0		0.7			1.0	
Delay (s)		5.3	3.7		4.6	3.8		18.5			18.8	
Level of Service		A	A		A	A		B			B	
Approach Delay (s)		5.2			4.4			18.5			18.8	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	45.1	Sum of lost time (s)	12.4
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

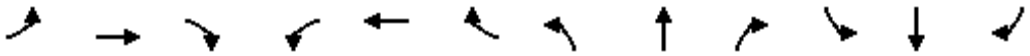
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	260	4	4	231	8	4	0	5	11	4	15
Future Volume (Veh/h)	15	260	4	4	231	8	4	0	5	11	4	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	17	295	5	5	262	9	5	0	6	12	5	17
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		337			245							
pX, platoon unblocked												
vC, conflicting volume	271			300			628	612	298	614	610	266
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	271			300			628	612	298	614	610	266
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.2	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.6	4.0	3.4
p0 queue free %	99			100			99	100	99	97	99	98
cM capacity (veh/h)	1264			1273			381	403	747	384	405	744

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	317	276	11	34
Volume Left	17	5	5	12
Volume Right	5	9	6	17
cSH	1264	1273	520	512
Volume to Capacity	0.01	0.00	0.02	0.07
Queue Length 95th (m)	0.3	0.1	0.5	1.6
Control Delay (s)	0.5	0.2	12.1	12.5
Lane LOS	A	A	B	B
Approach Delay (s)	0.5	0.2	12.1	12.5
Approach LOS			B	B

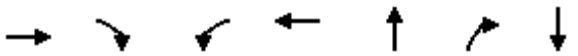
Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	32.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	248	8	4	247	8	2	3	2	8	4	10
Future Volume (Veh/h)	23	248	8	4	247	8	2	3	2	8	4	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	29	310	10	5	309	10	2	4	2	10	5	12
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					126							
pX, platoon unblocked	0.93						0.93	0.93		0.93	0.93	0.93
vC, conflicting volume	319			320			712	702	315	701	702	314
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	232			320			654	643	315	642	643	227
tC, single (s)	4.3			4.1			7.1	6.5	6.2	7.1	7.2	6.3
tC, 2 stage (s)												
tF (s)	2.4			2.2			3.5	4.0	3.3	3.5	4.7	3.4
p0 queue free %	98			100			99	99	100	97	98	98
cM capacity (veh/h)	1161			1251			339	357	730	351	281	739

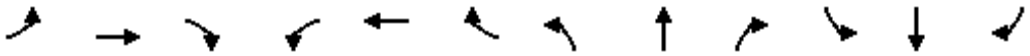
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	349	324	8	27
Volume Left	29	5	2	10
Volume Right	10	10	2	12
cSH	1161	1251	403	432
Volume to Capacity	0.02	0.00	0.02	0.06
Queue Length 95th (m)	0.6	0.1	0.5	1.5
Control Delay (s)	0.9	0.2	14.1	13.9
Lane LOS	A	A	B	B
Approach Delay (s)	0.9	0.2	14.1	13.9
Approach LOS			B	B

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	36.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	258	38	119	260	87	176	64
v/c Ratio	0.34	0.05	0.36	0.33	0.18	0.27	0.14
Control Delay	12.9	3.7	15.4	12.4	18.1	4.2	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.9	3.7	15.4	12.4	18.1	4.2	16.4
Queue Length 50th (m)	20.7	0.0	9.7	20.2	8.4	0.0	5.5
Queue Length 95th (m)	34.7	3.9	21.0	33.9	17.5	10.9	13.0
Internal Link Dist (m)	101.5			191.0	51.6		138.0
Turn Bay Length (m)		40.0					
Base Capacity (vph)	762	741	331	793	475	648	450
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.05	0.36	0.33	0.18	0.27	0.14

Intersection Summary

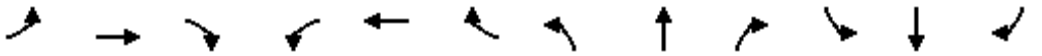


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	218	33	105	215	14	39	38	155	30	21	5
Future Volume (vph)	9	218	33	105	215	14	39	38	155	30	21	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	5.5	5.5	5.5			5.5	5.5		5.5	
Lane Util. Factor		1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt		1.00	0.85	1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00	1.00	0.95	1.00			0.98	1.00		0.97	
Satd. Flow (prot)		1541	1445	1074	1580			1539	1512		1450	
Flt Permitted		0.99	1.00	0.59	1.00			0.85	1.00		0.85	
Satd. Flow (perm)		1524	1445	664	1580			1346	1512		1265	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	10	248	38	119	244	16	44	43	176	34	24	6
RTOR Reduction (vph)	0	0	19	0	3	0	0	0	114	0	4	0
Lane Group Flow (vph)	0	258	19	119	257	0	0	87	62	0	60	0
Heavy Vehicles (%)	12%	12%	13%	70%	9%	0%	13%	6%	8%	17%	10%	20%
Parking (#/hr)		0			0			0			0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)		37.5	37.5	37.5	37.5			26.5	26.5		26.5	
Effective Green, g (s)		37.5	37.5	37.5	37.5			26.5	26.5		26.5	
Actuated g/C Ratio		0.50	0.50	0.50	0.50			0.35	0.35		0.35	
Clearance Time (s)		5.5	5.5	5.5	5.5			5.5	5.5		5.5	
Lane Grp Cap (vph)		762	722	332	790			475	534		446	
v/s Ratio Prot					0.16							
v/s Ratio Perm		0.17	0.01	c0.18				c0.06	0.04		0.05	
v/c Ratio		0.34	0.03	0.36	0.33			0.18	0.12		0.13	
Uniform Delay, d1		11.3	9.5	11.4	11.2			16.8	16.4		16.5	
Progression Factor		1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.2	0.1	3.0	1.1			0.8	0.4		0.6	
Delay (s)		12.5	9.6	14.4	12.3			17.6	16.8		17.1	
Level of Service		B	A	B	B			B	B		B	
Approach Delay (s)		12.1			13.0			17.1			17.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

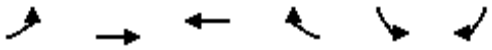
Lane Group	EBL	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	304	80	76	44	3	77	300
v/c Ratio	0.44	0.09	0.08	0.11	0.01	0.17	0.48
Control Delay	11.5	5.5	6.6	21.6	0.0	22.2	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	5.5	6.6	21.6	0.0	22.2	5.8
Queue Length 50th (m)	22.4	3.1	3.7	4.7	0.0	8.4	0.0
Queue Length 95th (m)	38.9	8.2	8.8	11.9	0.0	18.0	16.1
Internal Link Dist (m)		191.0	154.1	180.0		119.0	
Turn Bay Length (m)					15.0		20.0
Base Capacity (vph)	697	931	937	395	475	452	631
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.09	0.08	0.11	0.01	0.17	0.48

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	271	49	22	2	56	10	10	29	3	3	66	267
Future Volume (vph)	271	49	22	2	56	10	10	29	3	3	66	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5			5.6			5.6	5.6		5.5	5.5
Lane Util. Factor	1.00	1.00			1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.95			0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99	1.00		1.00	1.00
Satd. Flow (prot)	1615	1590			1618			1511	1633		1647	1498
Flt Permitted	0.71	1.00			1.00			0.94	1.00		0.99	1.00
Satd. Flow (perm)	1203	1590			1615			1436	1633		1638	1498
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	304	55	25	2	63	11	11	33	3	3	74	300
RTOR Reduction (vph)	0	11	0	0	5	0	0	0	2	0	0	217
Lane Group Flow (vph)	304	69	0	0	71	0	0	44	1	0	77	83
Heavy Vehicles (%)	13%	3%	5%	50%	4%	0%	10%	14%	0%	0%	5%	9%
Parking (#/hr)		0			0			0			0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	44.0	44.0			43.9			20.9	20.9		21.0	21.0
Effective Green, g (s)	44.0	44.0			43.9			20.9	20.9		21.0	21.0
Actuated g/C Ratio	0.58	0.58			0.58			0.27	0.27		0.28	0.28
Clearance Time (s)	5.5	5.5			5.6			5.6	5.6		5.5	5.5
Lane Grp Cap (vph)	696	920			932			394	449		452	413
v/s Ratio Prot		0.04										
v/s Ratio Perm	c0.25				0.04			0.03	0.00		0.05	c0.06
v/c Ratio	0.44	0.08			0.08			0.11	0.00		0.17	0.20
Uniform Delay, d1	9.0	7.0			7.1			20.6	20.0		20.9	21.1
Progression Factor	1.00	1.00			1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	2.0	0.2			0.2			0.6	0.0		0.8	1.1
Delay (s)	11.0	7.2			7.3			21.2	20.0		21.7	22.2
Level of Service	B	A			A			C	B		C	C
Approach Delay (s)		10.2			7.3			21.1			22.1	
Approach LOS		B			A			C			C	

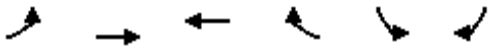
Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	76.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	3	1	2	16	33	0
Future Volume (Veh/h)	3	1	2	16	33	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	4	1	3	23	46	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	26				24	14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	26				24	14
tC, single (s)	4.1				6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	100				95	100
cM capacity (veh/h)	1601				963	1071

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	5	26	46
Volume Left	4	0	46
Volume Right	0	23	0
cSH	1601	1700	963
Volume to Capacity	0.00	0.02	0.05
Queue Length 95th (m)	0.1	0.0	1.1
Control Delay (s)	5.8	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	5.8	0.0	8.9
Approach LOS			A

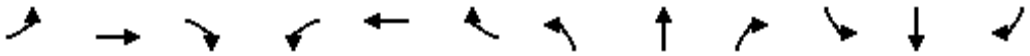
Intersection Summary			
Average Delay		5.7	
Intersection Capacity Utilization		13.3%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	6	32	22	39	24	2
Future Volume (Veh/h)	6	32	22	39	24	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	8	44	30	53	33	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	83				116	56
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	83				116	56
tC, single (s)	4.4				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.5				3.5	3.3
p0 queue free %	99				96	100
cM capacity (veh/h)	1335				879	1016

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	52	83	36
Volume Left	8	0	33
Volume Right	0	53	3
cSH	1335	1700	889
Volume to Capacity	0.01	0.05	0.04
Queue Length 95th (m)	0.1	0.0	1.0
Control Delay (s)	1.2	0.0	9.2
Lane LOS	A		A
Approach Delay (s)	1.2	0.0	9.2
Approach LOS			A

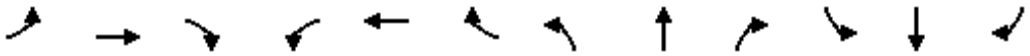
Intersection Summary			
Average Delay		2.3	
Intersection Capacity Utilization		16.8%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	4	46	7	2	3	68	273	4	0	169	9
Future Volume (Veh/h)	13	4	46	7	2	3	68	273	4	0	169	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	15	5	53	8	2	3	78	314	5	0	194	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	676	674	199	727	676	316	204			319		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	676	674	199	727	676	316	204			319		
tC, single (s)	7.2	6.5	6.2	7.2	6.5	6.5	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.6	4.0	3.6	2.2			2.2		
p0 queue free %	96	99	94	97	99	100	94			100		
cM capacity (veh/h)	341	357	834	286	356	656	1362			1252		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	73	13	397	204
Volume Left	15	8	78	0
Volume Right	53	3	5	10
cSH	601	341	1362	1252
Volume to Capacity	0.12	0.04	0.06	0.00
Queue Length 95th (m)	3.1	0.9	1.4	0.0
Control Delay (s)	11.8	16.0	2.0	0.0
Lane LOS	B	C	A	
Approach Delay (s)	11.8	16.0	2.0	0.0
Approach LOS	B	C		

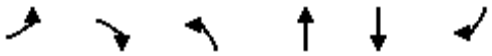
Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	41.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	12	15	41	15	15	6	210	83	34	120	6
Future Volume (Veh/h)	8	12	15	41	15	15	6	210	83	34	120	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	9	13	17	46	17	17	7	236	93	38	135	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)											157	
pX, platoon unblocked												
vC, conflicting volume	536	558	138	534	514	282	142			329		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	536	558	138	534	514	282	142			329		
tC, single (s)	7.1	6.5	6.5	7.2	6.6	6.2	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.6	3.6	4.1	3.3	2.2			2.3		
p0 queue free %	98	97	98	89	96	98	100			97		
cM capacity (veh/h)	423	425	831	416	440	761	1453			1192		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	39	80	336	180
Volume Left	9	46	7	38
Volume Right	17	17	93	7
cSH	539	466	1453	1192
Volume to Capacity	0.07	0.17	0.00	0.03
Queue Length 95th (m)	1.8	4.7	0.1	0.8
Control Delay (s)	12.2	14.3	0.2	1.9
Lane LOS	B	B	A	A
Approach Delay (s)	12.2	14.3	0.2	1.9
Approach LOS	B	B		

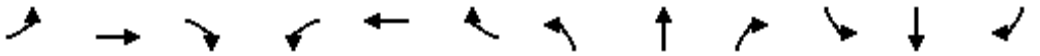
Intersection Summary				
Average Delay	3.2			
Intersection Capacity Utilization	41.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	5	290	341	90
Future Volume (Veh/h)	0	0	5	290	341	90
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	0	6	337	397	105
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				143	233	
pX, platoon unblocked	0.91	0.87	0.87			
vC, conflicting volume	798	450	502			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	544	293	354			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	454	654	1059			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	343	502
Volume Left	0	6	0
Volume Right	0	0	105
cSH	1700	1059	1700
Volume to Capacity	0.00	0.01	0.30
Queue Length 95th (m)	0.0	0.1	0.0
Control Delay (s)	0.0	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	0.0	0.2	0.0
Approach LOS	A		

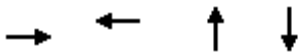
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	26.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	2	5	1	0	40	0	298	4	65	411	0
Future Volume (Veh/h)	14	2	5	1	0	40	0	298	4	65	411	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	16	2	6	1	0	47	0	347	5	76	478	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								192			184	
pX, platoon unblocked	0.95	0.95	0.97	0.95	0.95	0.94	0.97			0.94		
vC, conflicting volume	1026	982	239	748	980	350	478			352		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	889	842	157	596	839	273	403			276		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	7.1	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	92	99	99	100	100	93	100			94		
cM capacity (veh/h)	203	270	842	350	271	663	1133			1184		

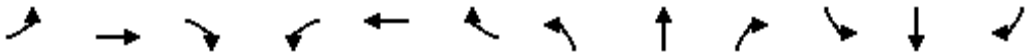
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	24	48	352	235	319
Volume Left	16	1	0	76	0
Volume Right	6	47	5	0	0
cSH	257	651	1700	1184	1700
Volume to Capacity	0.09	0.07	0.21	0.06	0.19
Queue Length 95th (m)	2.3	1.8	0.0	1.6	0.0
Control Delay (s)	20.4	11.0	0.0	3.1	0.0
Lane LOS	C	B		A	
Approach Delay (s)	20.4	11.0	0.0	1.3	
Approach LOS	C	B			

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	47.0%	ICU Level of Service		A
Analysis Period (min)	15			



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	31	128	403	404
v/c Ratio	0.04	0.22	0.52	0.51
Control Delay	4.1	7.9	15.3	16.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.1	7.9	15.3	16.2
Queue Length 50th (m)	0.2	4.3	12.4	13.4
Queue Length 95th (m)	3.1	12.4	20.7	21.7
Internal Link Dist (m)	111.3	124.3	159.9	149.4
Turn Bay Length (m)				
Base Capacity (vph)	794	586	1266	1312
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.22	0.32	0.31

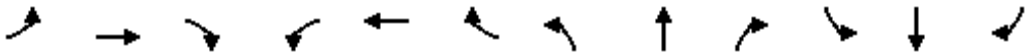
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	3	23	98	2	11	8	305	37	5	345	1
Future Volume (vph)	2	3	23	98	2	11	8	305	37	5	345	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2			6.2			5.9			5.9	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.89			0.99			0.98			1.00	
Flt Protected		1.00			0.96			1.00			1.00	
Satd. Flow (prot)		1698			1613			3181			3320	
Flt Permitted		0.99			0.74			0.94			0.94	
Satd. Flow (perm)		1680			1248			2987			3137	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	2	3	26	113	2	13	9	351	43	6	397	1
RTOR Reduction (vph)	0	14	0	0	7	0	0	22	0	0	1	0
Lane Group Flow (vph)	0	17	0	0	121	0	0	381	0	0	403	0
Heavy Vehicles (%)	0%	0%	0%	13%	0%	10%	13%	13%	11%	0%	10%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		20.0			20.0			10.9			10.9	
Effective Green, g (s)		20.0			20.0			10.9			10.9	
Actuated g/C Ratio		0.47			0.47			0.25			0.25	
Clearance Time (s)		6.2			6.2			5.9			5.9	
Vehicle Extension (s)		5.0			5.0			2.5			2.5	
Lane Grp Cap (vph)		781			580			757			795	
v/s Ratio Prot												
v/s Ratio Perm		0.01			c0.10			0.13			c0.13	
v/c Ratio		0.02			0.21			0.50			0.51	
Uniform Delay, d1		6.2			6.8			13.7			13.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.0			0.4			0.4			0.4	
Delay (s)		6.2			7.2			14.1			14.1	
Level of Service		A			A			B			B	
Approach Delay (s)		6.2			7.2			14.1			14.1	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	43.0	Sum of lost time (s)	12.1
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection Sign configuration not allowed in HCM analysis.

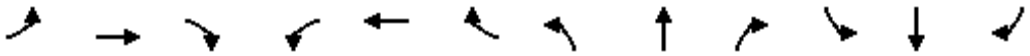


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	215	7	8	114	3	12	7	43	1	0	4
Future Volume (Veh/h)	4	215	7	8	114	3	12	7	43	1	0	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	5	262	9	10	139	4	15	9	52	1	0	5
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	143			271			442	440	266	494	442	141
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	143			271			442	440	266	494	442	141
tC, single (s)	4.1			4.1			7.4	6.7	6.2	7.1	6.5	7.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.8	4.1	3.3	3.5	4.0	4.2
p0 queue free %	100			99			97	98	93	100	100	99
cM capacity (veh/h)	1452			1304			467	487	765	445	507	701

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	276	153	76	6
Volume Left	5	10	15	1
Volume Right	9	4	52	5
cSH	1452	1304	641	640
Volume to Capacity	0.00	0.01	0.12	0.01
Queue Length 95th (m)	0.1	0.2	3.0	0.2
Control Delay (s)	0.2	0.6	11.4	10.7
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	0.6	11.4	10.7
Approach LOS			B	B

Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	24.4%	ICU Level of Service	A	
Analysis Period (min)	15			

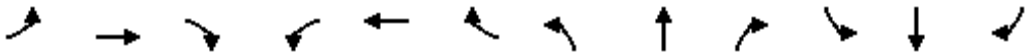
Intersection Sign configuration not allowed in HCM analysis.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	1	5	2	23	1	270	0	20	134	10
Future Volume (Veh/h)	6	0	1	5	2	23	1	270	0	20	134	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	7	0	1	6	2	27	1	314	0	23	156	12
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	552	524	162	525	530	314	168			314		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	552	524	162	525	530	314	168			314		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	100	99	100	96	100			98		
cM capacity (veh/h)	423	452	888	459	448	731	1422			1229		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	35	315	191
Volume Left	7	6	1	23
Volume Right	1	27	0	12
cSH	453	643	1422	1229
Volume to Capacity	0.02	0.05	0.00	0.02
Queue Length 95th (m)	0.4	1.3	0.0	0.4
Control Delay (s)	13.1	10.9	0.0	1.1
Lane LOS	B	B	A	A
Approach Delay (s)	13.1	10.9	0.0	1.1
Approach LOS	B	B		

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	33.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	2	0	5	0	1	0	283	1	3	172	5
Future Volume (vph)	9	2	0	5	0	1	0	283	1	3	172	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	11	2	0	6	0	1	0	333	1	4	202	6

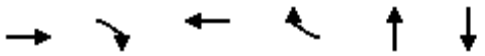
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	13	7	334	212
Volume Left (vph)	11	6	0	4
Volume Right (vph)	0	1	1	6
Hadj (s)	0.47	0.38	0.07	0.09
Departure Headway (s)	5.6	5.5	4.2	4.4
Degree Utilization, x	0.02	0.01	0.39	0.26
Capacity (veh/h)	579	585	835	800
Control Delay (s)	8.7	8.6	10.0	8.9
Approach Delay (s)	8.7	8.6	10.0	8.9
Approach LOS	A	A	A	A

Intersection Summary				
Delay	9.5			
Level of Service	A			
Intersection Capacity Utilization	25.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	326	30	16	358	15	28
Future Volume (Veh/h)	326	30	16	358	15	28
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	358	33	18	393	16	31
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				336		
pX, platoon unblocked						
vC, conflicting volume			391		804	374
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			391		804	374
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			98		95	95
cM capacity (veh/h)			1179		340	676

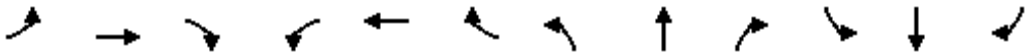
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	391	411	47
Volume Left	0	18	16
Volume Right	33	0	31
cSH	1700	1179	506
Volume to Capacity	0.23	0.02	0.09
Queue Length 95th (m)	0.0	0.4	2.3
Control Delay (s)	0.0	0.5	12.8
Lane LOS		A	B
Approach Delay (s)	0.0	0.5	12.8
Approach LOS			B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	317	42	288	119	91	180
v/c Ratio	0.33	0.04	0.32	0.12	0.24	0.46
Control Delay	8.8	2.0	8.7	2.3	13.3	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.8	2.0	8.7	2.3	13.3	15.8
Queue Length 50th (m)	13.6	0.0	12.2	0.0	4.4	8.9
Queue Length 95th (m)	29.0	2.4	26.7	5.1	12.3	21.3
Internal Link Dist (m)	312.0		313.1		280.6	74.2
Turn Bay Length (m)		45.0		45.0		
Base Capacity (vph)	1030	1002	978	1044	808	801
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.04	0.29	0.11	0.11	0.22

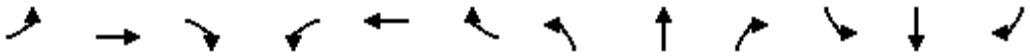
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	258	36	22	223	101	40	24	14	71	42	40
Future Volume (vph)	11	258	36	22	223	101	40	24	14	71	42	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2	6.2		6.2	6.2		6.2			6.2	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.96	
Flt Protected		1.00	1.00		1.00	1.00		0.97			0.98	
Satd. Flow (prot)		1693	1585		1654	1617		1828			1797	
Flt Permitted		0.98	1.00		0.95	1.00		0.81			0.81	
Satd. Flow (perm)		1668	1585		1584	1617		1514			1482	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	13	304	42	26	262	119	47	28	16	84	49	47
RTOR Reduction (vph)	0	0	20	0	0	56	0	13	0	0	29	0
Lane Group Flow (vph)	0	317	22	0	288	63	0	78	0	0	151	0
Heavy Vehicles (%)	0%	2%	3%	5%	4%	1%	0%	0%	0%	0%	0%	3%
Parking (#/hr)		0			0							
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)		23.8	23.8		23.8	23.8		8.7			8.7	
Effective Green, g (s)		23.8	23.8		23.8	23.8		8.7			8.7	
Actuated g/C Ratio		0.53	0.53		0.53	0.53		0.19			0.19	
Clearance Time (s)		6.2	6.2		6.2	6.2		6.2			6.2	
Vehicle Extension (s)		5.0	5.0		5.0	5.0		2.5			2.5	
Lane Grp Cap (vph)		884	840		839	857		293			287	
v/s Ratio Prot												
v/s Ratio Perm		c0.19	0.01		0.18	0.04		0.05			c0.10	
v/c Ratio		0.36	0.03		0.34	0.07		0.27			0.53	
Uniform Delay, d1		6.1	5.0		6.1	5.2		15.4			16.2	
Progression Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.5	0.0		0.5	0.1		0.4			1.3	
Delay (s)		6.6	5.1		6.6	5.2		15.7			17.6	
Level of Service		A	A		A	A		B			B	
Approach Delay (s)		6.5			6.2			15.7			17.6	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	44.9	Sum of lost time (s)	12.4
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

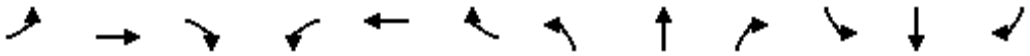
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	350	7	5	293	12	4	0	9	11	3	8
Future Volume (Veh/h)	14	350	7	5	293	12	4	0	9	11	3	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	17	417	8	6	349	14	5	0	11	13	4	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		337			245							
pX, platoon unblocked	0.98						0.98	0.98		0.98	0.98	0.98
vC, conflicting volume	363			425			835	830	421	834	827	356
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	344			425			824	819	421	823	816	337
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			98	100	98	95	99	99
cM capacity (veh/h)	1206			1145			278	301	637	281	303	698

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	442	369	16	27
Volume Left	17	6	5	13
Volume Right	8	14	11	10
cSH	1206	1145	454	366
Volume to Capacity	0.01	0.01	0.04	0.07
Queue Length 95th (m)	0.3	0.1	0.8	1.8
Control Delay (s)	0.5	0.2	13.2	15.6
Lane LOS	A	A	B	C
Approach Delay (s)	0.5	0.2	13.2	15.6
Approach LOS			B	C

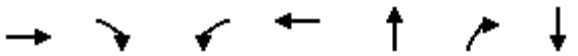
Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	36.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	339	9	7	301	6	1	4	5	8	2	12
Future Volume (Veh/h)	22	339	9	7	301	6	1	4	5	8	2	12
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	25	381	10	8	338	7	1	4	6	9	2	13
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					126							
pX, platoon unblocked	0.93						0.93	0.93		0.93	0.93	0.93
vC, conflicting volume	345			391			808	797	386	802	798	342
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	262			391			758	747	386	752	748	259
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	98			99			100	99	99	97	99	98
cM capacity (veh/h)	1199			1179			291	312	666	295	311	712

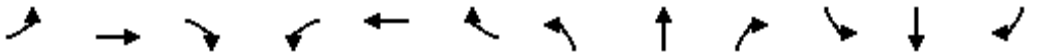
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	416	353	11	24
Volume Left	25	8	1	9
Volume Right	10	7	6	13
cSH	1199	1179	436	435
Volume to Capacity	0.02	0.01	0.03	0.06
Queue Length 95th (m)	0.5	0.2	0.6	1.3
Control Delay (s)	0.7	0.3	13.5	13.8
Lane LOS	A	A	B	B
Approach Delay (s)	0.7	0.3	13.5	13.8
Approach LOS			B	B

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	39.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	319	56	200	255	85	220	70
v/c Ratio	0.38	0.07	0.41	0.30	0.19	0.31	0.14
Control Delay	13.2	3.3	14.9	12.0	18.3	4.0	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	3.3	14.9	12.0	18.3	4.0	13.9
Queue Length 50th (m)	26.2	0.0	16.7	19.5	8.2	0.0	4.9
Queue Length 95th (m)	43.5	5.0	32.3	33.6	17.8	12.7	12.9
Internal Link Dist (m)	101.5			191.0	51.6		138.0
Turn Bay Length (m)		40.0					
Base Capacity (vph)	844	844	492	837	443	707	517
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.07	0.41	0.30	0.19	0.31	0.14

Intersection Summary

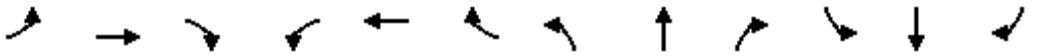


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	286	51	182	219	13	67	10	200	28	19	16
Future Volume (vph)	5	286	51	182	219	13	67	10	200	28	19	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	5.5	5.5	5.5			5.5	5.5		5.5	
Lane Util. Factor		1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt		1.00	0.85	1.00	0.99			1.00	0.85		0.97	
Flt Protected		1.00	1.00	0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)		1694	1633	1772	1667			1629	1601		1604	
Flt Permitted		1.00	1.00	0.53	1.00			0.74	1.00		0.87	
Satd. Flow (perm)		1689	1633	985	1667			1255	1601		1433	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	5	314	56	200	241	14	74	11	220	31	21	18
RTOR Reduction (vph)	0	0	28	0	3	0	0	0	142	0	12	0
Lane Group Flow (vph)	0	319	28	200	252	0	0	85	78	0	58	0
Heavy Vehicles (%)	0%	2%	0%	3%	3%	0%	2%	0%	2%	0%	0%	7%
Parking (#/hr)		0			0			0			0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)		37.5	37.5	37.5	37.5			26.5	26.5		26.5	
Effective Green, g (s)		37.5	37.5	37.5	37.5			26.5	26.5		26.5	
Actuated g/C Ratio		0.50	0.50	0.50	0.50			0.35	0.35		0.35	
Clearance Time (s)		5.5	5.5	5.5	5.5			5.5	5.5		5.5	
Lane Grp Cap (vph)		844	816	492	833			443	565		506	
v/s Ratio Prot					0.15							
v/s Ratio Perm		0.19	0.02	c0.20				c0.07	0.05		0.04	
v/c Ratio		0.38	0.03	0.41	0.30			0.19	0.14		0.12	
Uniform Delay, d1		11.6	9.5	11.8	11.0			16.8	16.5		16.3	
Progression Factor		1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.3	0.1	2.5	0.9			1.0	0.5		0.5	
Delay (s)		12.8	9.6	14.2	12.0			17.8	17.0		16.8	
Level of Service		B	A	B	B			B	B		B	
Approach Delay (s)		12.4			13.0			17.2			16.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

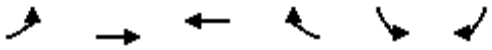
Lane Group	EBL	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	478	73	95	132	2	105	355
v/c Ratio	0.62	0.08	0.10	0.30	0.00	0.23	0.51
Control Delay	15.1	4.8	6.2	24.2	0.0	23.0	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.1	4.8	6.2	24.2	0.0	23.0	5.7
Queue Length 50th (m)	41.1	2.3	4.5	15.0	0.0	11.6	0.0
Queue Length 95th (m)	67.9	7.0	9.9	28.1	0.0	22.8	16.6
Internal Link Dist (m)		191.0	154.1	180.0		119.0	
Turn Bay Length (m)					15.0		20.0
Base Capacity (vph)	765	917	979	434	475	453	690
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.08	0.10	0.30	0.00	0.23	0.51

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	421	36	28	1	67	16	24	92	2	14	78	312
Future Volume (vph)	421	36	28	1	67	16	24	92	2	14	78	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5			5.6			5.6	5.6		5.5	5.5
Lane Util. Factor	1.00	1.00			1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.93			0.97			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99	1.00		0.99	1.00
Satd. Flow (prot)	1807	1563			1684			1685	1633		1716	1570
Flt Permitted	0.70	1.00			1.00			0.93	1.00		0.95	1.00
Satd. Flow (perm)	1323	1563			1683			1580	1633		1642	1570
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	478	41	32	1	76	18	27	105	2	16	89	355
RTOR Reduction (vph)	0	13	0	0	8	0	0	0	1	0	0	257
Lane Group Flow (vph)	478	60	0	0	87	0	0	132	1	0	105	98
Heavy Vehicles (%)	1%	6%	0%	0%	0%	0%	0%	2%	0%	0%	0%	4%
Parking (#/hr)		0			0			0			0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	44.0	44.0			43.9			20.9	20.9		21.0	21.0
Effective Green, g (s)	44.0	44.0			43.9			20.9	20.9		21.0	21.0
Actuated g/C Ratio	0.58	0.58			0.58			0.27	0.27		0.28	0.28
Clearance Time (s)	5.5	5.5			5.6			5.6	5.6		5.5	5.5
Lane Grp Cap (vph)	765	904			972			434	449		453	433
v/s Ratio Prot		0.04										
v/s Ratio Perm	c0.36				0.05			c0.08	0.00		0.06	0.06
v/c Ratio	0.62	0.07			0.09			0.30	0.00		0.23	0.23
Uniform Delay, d1	10.6	7.0			7.2			21.8	20.0		21.3	21.2
Progression Factor	1.00	1.00			1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	3.8	0.1			0.2			1.8	0.0		1.2	1.2
Delay (s)	14.4	7.1			7.3			23.6	20.0		22.5	22.4
Level of Service	B	A			A			C	B		C	C
Approach Delay (s)		13.4			7.3			23.5			22.4	
Approach LOS		B			A			C			C	

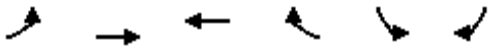
Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	76.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	4	41	2	34
Future Volume (Veh/h)	0	0	4	41	2	34
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	0	5	51	2	42
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	56				30	30
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	56				30	30
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	96
cM capacity (veh/h)	1562				989	1050

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	0	56	44
Volume Left	0	0	2
Volume Right	0	51	42
cSH	1700	1700	1047
Volume to Capacity	0.00	0.03	0.04
Queue Length 95th (m)	0.0	0.0	1.0
Control Delay (s)	0.0	0.0	8.6
Lane LOS			A
Approach Delay (s)	0.0	0.0	8.6
Approach LOS			A

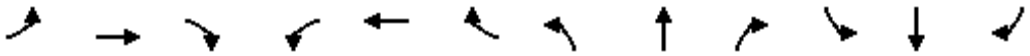
Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	47	41	25	71	5
Future Volume (Veh/h)	8	47	41	25	71	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	11	63	55	33	95	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	88				156	72
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	88				156	72
tC, single (s)	4.1				6.4	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.5
p0 queue free %	99				89	99
cM capacity (veh/h)	1520				829	943

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	74	88	102
Volume Left	11	0	95
Volume Right	0	33	7
cSH	1520	1700	836
Volume to Capacity	0.01	0.05	0.12
Queue Length 95th (m)	0.2	0.0	3.2
Control Delay (s)	1.1	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	1.1	0.0	9.9
Approach LOS			A

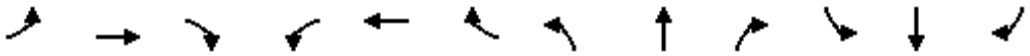
Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	20.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	4	98	2	0	7	50	260	2	2	300	18
Future Volume (Veh/h)	20	4	98	2	0	7	50	260	2	2	300	18
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	22	4	109	2	0	8	56	289	2	2	333	20
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	757	750	343	860	759	290	353			291		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	757	750	343	860	759	290	353			291		
tC, single (s)	7.1	6.5	6.2	8.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	4.4	4.0	3.3	2.2			2.2		
p0 queue free %	93	99	85	99	100	99	95			100		
cM capacity (veh/h)	311	326	704	154	322	754	1206			1282		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	135	10	347	355
Volume Left	22	2	56	2
Volume Right	109	8	2	20
cSH	568	424	1206	1282
Volume to Capacity	0.24	0.02	0.05	0.00
Queue Length 95th (m)	7.0	0.6	1.1	0.0
Control Delay (s)	13.3	13.7	1.7	0.1
Lane LOS	B	B	A	A
Approach Delay (s)	13.3	13.7	1.7	0.1
Approach LOS	B	B		

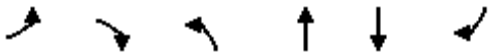
Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	52.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	23	23	62	32	18	9	233	47	28	240	9
Future Volume (Veh/h)	3	23	23	62	32	18	9	233	47	28	240	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	3	25	25	67	34	19	10	251	51	30	258	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)											157	
pX, platoon unblocked	0.98	0.98	0.98	0.98	0.98		0.98					
vC, conflicting volume	656	645	263	657	624	276	268			302		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	634	624	232	636	603	276	237			302		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.3		
p0 queue free %	99	93	97	81	91	98	99			98		
cM capacity (veh/h)	342	382	792	345	393	767	1309			1226		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	53	120	312	298
Volume Left	3	67	10	30
Volume Right	25	19	51	10
cSH	501	393	1309	1226
Volume to Capacity	0.11	0.31	0.01	0.02
Queue Length 95th (m)	2.7	9.7	0.2	0.6
Control Delay (s)	13.0	18.2	0.3	1.0
Lane LOS	B	C	A	A
Approach Delay (s)	13.0	18.2	0.3	1.0
Approach LOS	B	C		

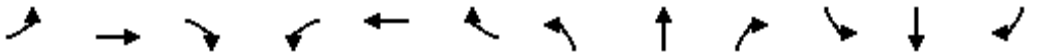
Intersection Summary				
Average Delay	4.2			
Intersection Capacity Utilization	45.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	5	519	410	50
Future Volume (Veh/h)	0	0	5	519	410	50
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	0	6	611	482	59
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				143	233	
pX, platoon unblocked	0.91	0.83	0.83			
vC, conflicting volume	1134	512	541			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	716	314	349			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	362	609	1017			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	617	541
Volume Left	0	6	0
Volume Right	0	0	59
cSH	1700	1017	1700
Volume to Capacity	0.00	0.01	0.32
Queue Length 95th (m)	0.0	0.1	0.0
Control Delay (s)	0.0	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	0.0	0.2	0.0
Approach LOS	A		

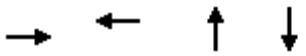
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	0	10	0	0	93	0	492	14	37	432	0
Future Volume (Veh/h)	36	0	10	0	0	93	0	492	14	37	432	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	41	0	11	0	0	106	0	559	16	42	491	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								192			184	
pX, platoon unblocked	0.88	0.88	0.95	0.88	0.88	0.86	0.95			0.86		
vC, conflicting volume	1248	1150	246	908	1142	567	491			575		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	998	887	97	612	878	413	356			422		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	7.0	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	70	100	99	100	100	79	100			96		
cM capacity (veh/h)	136	241	898	322	244	502	1152			967		

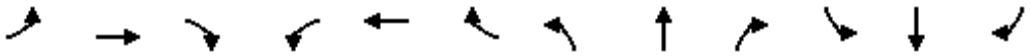
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	52	106	575	206	327
Volume Left	41	0	0	42	0
Volume Right	11	106	16	0	0
cSH	165	502	1700	967	1700
Volume to Capacity	0.31	0.21	0.34	0.04	0.19
Queue Length 95th (m)	9.6	6.0	0.0	1.0	0.0
Control Delay (s)	36.5	14.1	0.0	2.2	0.0
Lane LOS	E	B		A	
Approach Delay (s)	36.5	14.1	0.0	0.8	
Approach LOS	E	B			

Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	56.3%	ICU Level of Service		B
Analysis Period (min)	15			



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	32	84	723	468
v/c Ratio	0.04	0.13	0.71	0.47
Control Delay	5.4	7.9	17.5	14.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.4	7.9	17.5	14.5
Queue Length 50th (m)	0.3	2.8	24.8	15.8
Queue Length 95th (m)	3.9	9.4	37.6	24.8
Internal Link Dist (m)	111.3	124.3	159.9	149.4
Turn Bay Length (m)				
Base Capacity (vph)	751	631	1268	1257
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.13	0.57	0.37

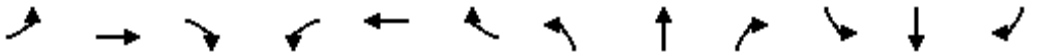
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	5	22	53	1	20	31	503	102	14	397	1
Future Volume (vph)	1	5	22	53	1	20	31	503	102	14	397	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2			6.2			5.9			5.9	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.89			0.96			0.98			1.00	
Flt Protected		1.00			0.97			1.00			1.00	
Satd. Flow (prot)		1716			1714			3509			3540	
Flt Permitted		0.99			0.81			0.91			0.91	
Satd. Flow (perm)		1709			1434			3190			3238	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	1	6	25	60	1	23	35	572	116	16	451	1
RTOR Reduction (vph)	0	14	0	0	13	0	0	34	0	0	0	0
Lane Group Flow (vph)	0	18	0	0	71	0	0	689	0	0	468	0
Heavy Vehicles (%)	0%	0%	0%	4%	0%	5%	0%	1%	3%	0%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		20.1			20.1			14.3			14.3	
Effective Green, g (s)		20.1			20.1			14.3			14.3	
Actuated g/C Ratio		0.43			0.43			0.31			0.31	
Clearance Time (s)		6.2			6.2			5.9			5.9	
Vehicle Extension (s)		5.0			5.0			2.5			2.5	
Lane Grp Cap (vph)		738			619			981			995	
v/s Ratio Prot												
v/s Ratio Perm		0.01			c0.05			c0.22			0.14	
v/c Ratio		0.02			0.11			0.70			0.47	
Uniform Delay, d1		7.6			7.9			14.2			13.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.0			0.2			2.1			0.3	
Delay (s)		7.6			8.1			16.4			13.3	
Level of Service		A			A			B			B	
Approach Delay (s)		7.6			8.1			16.4			13.3	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	46.5	Sum of lost time (s)	12.1
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection Sign configuration not allowed in HCM analysis.

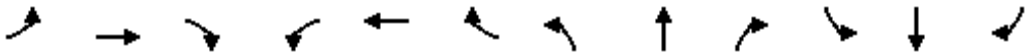


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	173	7	32	253	7	12	3	30	4	4	5
Future Volume (Veh/h)	4	173	7	32	253	7	12	3	30	4	4	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	4	194	8	36	284	8	13	3	34	4	4	6
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	292			202			574	570	198	602	570	288
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	292			202			574	570	198	602	570	288
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			97	99	96	99	99	99
cM capacity (veh/h)	1281			1382			417	421	838	387	421	756

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	206	328	50	14
Volume Left	4	36	13	4
Volume Right	8	8	34	6
cSH	1281	1382	634	504
Volume to Capacity	0.00	0.03	0.08	0.03
Queue Length 95th (m)	0.1	0.6	1.9	0.7
Control Delay (s)	0.2	1.1	11.2	12.3
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.1	11.2	12.3
Approach LOS			B	B

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	38.6%	ICU Level of Service	A	
Analysis Period (min)	15			

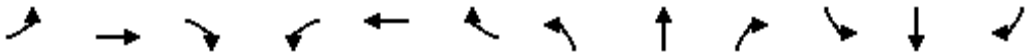
Intersection Sign configuration not allowed in HCM analysis.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	4	0	19	3	32	1	224	26	27	278	27
Future Volume (Veh/h)	5	4	0	19	3	32	1	224	26	27	278	27
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	4	0	20	3	34	1	236	27	28	293	28
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	650	628	307	616	628	250	321			263		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	650	628	307	616	628	250	321			263		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	100	95	99	96	100			98		
cM capacity (veh/h)	360	393	738	395	393	794	1250			1313		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	9	57	264	349
Volume Left	5	20	1	28
Volume Right	0	34	27	28
cSH	374	564	1250	1313
Volume to Capacity	0.02	0.10	0.00	0.02
Queue Length 95th (m)	0.6	2.5	0.0	0.5
Control Delay (s)	14.9	12.1	0.0	0.8
Lane LOS	B	B	A	A
Approach Delay (s)	14.9	12.1	0.0	0.8
Approach LOS	B	B		

Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	44.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	2	0	2	7	3	5	4	261	4	5	311	8
Future Volume (vph)	2	0	2	7	3	5	4	261	4	5	311	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	2	0	2	8	3	5	4	287	4	5	342	9

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	4	16	295	356
Volume Left (vph)	2	8	4	5
Volume Right (vph)	2	5	4	9
Hadj (s)	-0.20	-0.09	0.04	0.01
Departure Headway (s)	5.1	5.2	4.4	4.3
Degree Utilization, x	0.01	0.02	0.36	0.42
Capacity (veh/h)	613	605	810	826
Control Delay (s)	8.2	8.3	9.7	10.3
Approach Delay (s)	8.2	8.3	9.7	10.3
Approach LOS	A	A	A	B

Intersection Summary			
Delay	10.0		
Level of Service	B		
Intersection Capacity Utilization	29.6%	ICU Level of Service	A
Analysis Period (min)	15		

Arterial Level of Service: EB Whitewood Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Golding St	1	0.4	14.1	0.2	50
Edith St	2	5.3	27.7	0.3	44
John ST	3	2.2	24.6	0.3	49
Mary St	4	0.8	9.6	0.1	45
Paget St #1	5	10.9	19.7	0.1	23
Armstrong St	6	6.1	17.5	0.2	44
Total		25.8	113.3	1.3	42

Arterial Level of Service: WB Whitewood Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Armstrong St	6	7.4	20.0	0.2	32
Paget St #1	5	11.0	23.8	0.2	32
Mary St	4	1.9	10.6	0.1	42
John ST	3	0.5	9.2	0.1	46
Parking Entrance	2	5.3	29.2	0.3	42
Golding St	1	1.9	24.1	0.3	50
Total		28.0	117.0	1.3	40

Arterial Level of Service: NB #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Broadwood Ave	9	0.7	16.2	0.2	39
Farah Ave	10	1.3	30.8	0.3	39
	38	0.2	7.7	0.1	38
Whitewood Ave	5	13.7	19.7	0.1	14
Total		15.9	74.4	0.7	32

Arterial Level of Service: SB #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Whitewood Ave	5	18.8	33.2	0.2	18
	38	1.5	8.9	0.1	31
Farah Ave	10	0.4	5.4	0.1	56
Broadwood Ave	9	0.5	29.3	0.3	41
Total		21.2	76.8	0.7	31

Arterial Level of Service: NB Armstrong St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Whitewood Ave	6	19.8	34.2	0.2	22
Church St	11	2.0	11.2	0.1	47
	40	0.1	1.3	0.0	53
Sharpe St	12	0.1	1.9	0.0	58
Elm Ave	13	11.6	25.3	0.2	26
Total		33.6	73.9	0.6	28

Arterial Level of Service: SB Armstrong St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Beavis Terr	13	14.5	26.5	0.2	24
Sharpe St	12	4.2	17.6	0.2	38
	40	0.8	3.0	0.0	36
Church St	11	0.4	1.6	0.0	44
Whitewood Ave	6	19.7	29.8	0.1	17
Total		39.7	78.5	0.5	25

Arterial Level of Service: EB Main St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Rorke Ave	14	6.7	21.0	0.2	35
Georgina Ave	15	2.4	12.7	0.2	49
Ferguson Ave #2	16	0.6	10.0	0.2	61
Total		9.7	43.8	0.5	45

Arterial Level of Service: WB Main St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Ferguson Ave #2	16	8.7	20.7	0.2	28
Georgina Ave	15	1.5	10.5	0.2	59
Rorke Ave	14	0.5	12.2	0.2	51
Total		10.7	43.3	0.5	42

Arterial Level of Service: NB #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Main St	16	6.8	15.2	0.1	30
Broadway St	17	2.5	8.2	0.1	40
Browning St	18	6.2	12.0	0.1	25
Total		15.5	35.5	0.3	31

Arterial Level of Service: SB #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Browning St	18	6.8	16.1	0.1	31
Broadway St	17	2.7	8.6	0.1	34
Main St	16	7.2	13.7	0.1	24
Total		16.7	38.4	0.3	29

Arterial Level of Service: EB Whitewood Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Golding St	1	0.6	14.2	0.2	49
Edith St	2	6.0	28.4	0.3	43
John ST	3	2.3	25.3	0.3	48
Mary St	4	0.8	9.6	0.1	45
Paget St #1	5	10.9	19.5	0.1	23
Armstrong St	6	9.0	20.9	0.2	37
Total		29.7	117.9	1.3	41

Arterial Level of Service: WB Whitewood Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Armstrong St	6	6.8	19.5	0.2	33
Paget St #1	5	13.7	27.4	0.2	29
Mary St	4	1.8	10.3	0.1	44
John ST	3	0.6	9.6	0.1	45
Parking Entrance	2	7.4	30.3	0.3	40
Golding St	1	1.9	22.8	0.3	53
Total		32.1	119.9	1.3	40

Arterial Level of Service: NB #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Broadwood Ave	9	0.7	16.2	0.2	39
Farah Ave	10	1.2	31.1	0.3	39
	38	0.2	7.7	0.1	38
Whitewood Ave	5	12.6	18.3	0.1	15
Total		14.6	73.4	0.7	33

Arterial Level of Service: SB #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Whitewood Ave	5	17.7	32.0	0.2	18
	38	1.3	8.5	0.1	32
Farah Ave	10	0.5	7.3	0.1	41
Broadwood Ave	9	1.4	31.2	0.3	39
Total		20.9	79.0	0.7	30

Arterial Level of Service: NB Armstrong St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Whitewood Ave	6	23.9	38.5	0.2	19
Church St	11	2.0	12.2	0.1	42
	40	0.1	1.3	0.0	51
Sharpe St	12	0.2	1.9	0.0	57
Elm Ave	13	13.2	26.5	0.2	25
Total		39.4	80.5	0.6	26

Arterial Level of Service: SB Armstrong St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Beavis Terr	13	16.4	28.4	0.2	22
Sharpe St	12	4.4	18.1	0.2	37
	40	0.7	2.9	0.0	38
Church St	11	0.3	1.5	0.0	45
Whitewood Ave	6	22.5	32.6	0.1	16
Total		44.3	83.4	0.5	24

Arterial Level of Service: EB Main St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Rorke Ave	14	8.0	22.3	0.2	33
Georgina Ave	15	3.0	14.7	0.2	42
Ferguson Ave #2	16	0.8	12.5	0.2	49
Total		11.8	49.4	0.5	40

Arterial Level of Service: WB Main St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Ferguson Ave #2	16	7.4	18.6	0.2	32
Georgina Ave	15	1.5	9.3	0.2	67
Rorke Ave	14	0.5	11.2	0.2	55
Total		9.4	39.1	0.5	47

Arterial Level of Service: NB #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Main St	16	6.9	15.6	0.1	29
Broadway St	17	2.6	8.4	0.1	39
Browning St	18	6.5	12.3	0.1	24
Total		16.0	36.3	0.3	30

Arterial Level of Service: SB #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Browning St	18	7.7	17.1	0.1	30
Broadway St	17	2.8	8.9	0.1	33
Main St	16	6.9	13.2	0.1	25
Total		17.4	39.2	0.3	29

APPENDIX B

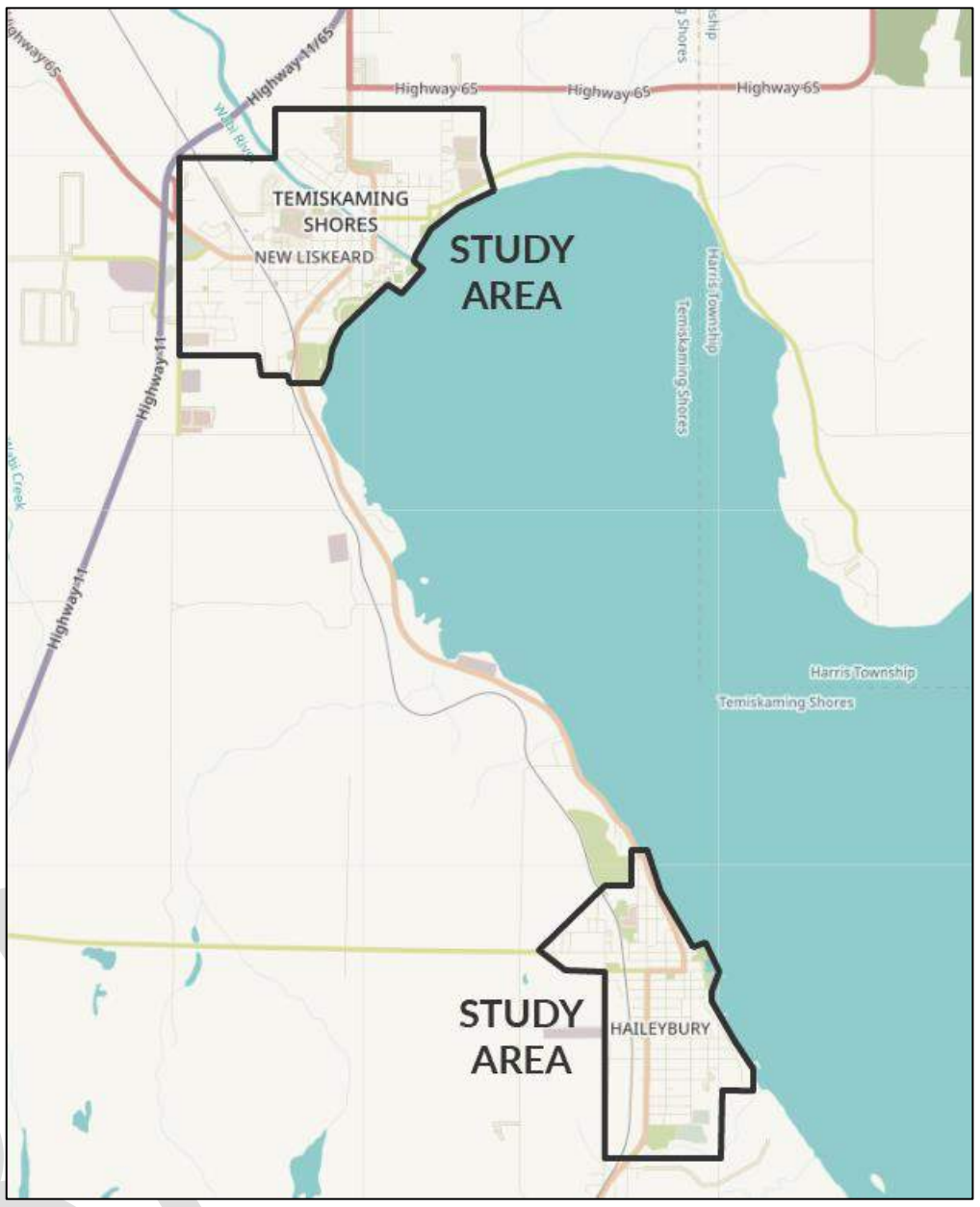
Consultation Materials

NOTICE OF STUDY COMMENCEMENT

CITY OF TEMISKAMING SHORES TRANSPORTATION STUDY

THE STUDY

The City of Temiskaming Shores is initiating a Transportation Study to investigate the current transportation network related problems within the City; particularly two of its downtown cores. The Transportation Study will be the City's blueprint for strategic transportation planning and direction for the future. The Transportation Study will establish a transportation system to better serve residents, employers, employees, and visitors while accommodating all modes of transportation (e.g., public transit, commuter travel, commercial vehicles, and active transportation). There is a unique opportunity through this study to create a real sense of place, a community where people choose to meet, dine, and stay for a while instead of driving through; a city where people can safely and pleasantly travel with two feet or two wheels.



THE PROCESS

The study will evaluate City-wide transport operations to develop network solutions with focus on the Downtown Cores for all modes of mobility including:

- Active & Micro-Mobility
- Transit
- Automobile
- Smart & Emerging Mobility
- Freight & Goods Movement
- Downtown Parking

In tandem with network solutions, the Study will also develop supporting policies that will aid the City in guiding future development and operations in a manner that supports planned mode share changes, new sustainable mobility links, and maintains safe streets for all road users such as Road Classification & Cross-Sections, Vision Zero Policy (Traffic Calming), Intersection Implementation Policy, Transportation Demand Management Policies, etc.

WE WANT TO HEAR FROM YOU:

A key component of the study will be consultation with stakeholders, regulatory agencies and the general public. Anyone with an interest in this study has the opportunity to get involved and provide input. Two (2) Public Meetings have been planned during the study to inform the process to the stakeholders, present findings and receive public and stakeholder input. A notice containing the time and location of the Public Meetings shall be published in local newspapers and posted on the study website at www.temiskamingshores.ca/en/resident/downtown-cores-mobility-study.aspx.

At this time, the study team is requesting your comments regarding the existing conditions and related infrastructure in the study area through an online survey at https://www.surveymonkey.com/r/TemiskamingTS or you may scan the QR code.

For more information, to submit a comment, question, or to be added to the project mailing list, please contact:

Mitch McCrank, CET
Manager of Transportation Services
City of Temiskaming Shores
325 Farr Drive
Temiskaming Shores, ON P0J 1K0
Phone: 705.672.3363 ext. 4113
Email: mmccrank@temiskamingshores.ca

OR

Amar Lad
Consultant Project Manager
TYLin International Canada Inc.
8800 Dufferin Street Suite 200
Vaughan, ON L4K 0C5, Canada
Phone: 905.738.5700
Email: amar.lad@tylin.com

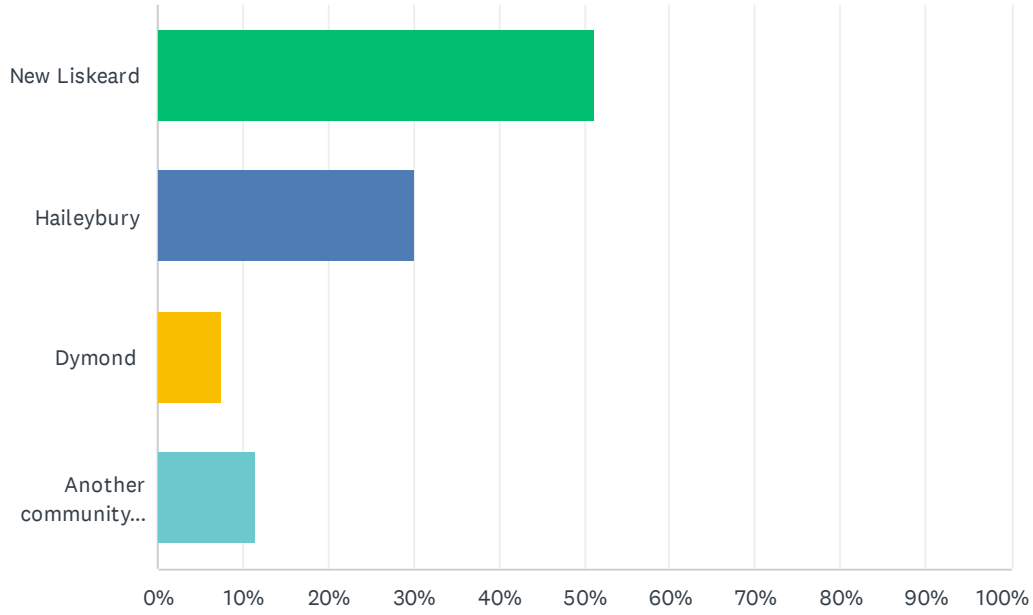
Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act and the Ontario Environmental Assessment Act. With the exception of personal information, all comments will become part of the public record and will be released, if requested, to any person.

Notice first issued February 23, 2023

Temiskaming Shores Downtown Cores Mobility Study Survey #1

Q1 Which community do you currently live in (primary, year-round residence? (Choose any one option) (Required)

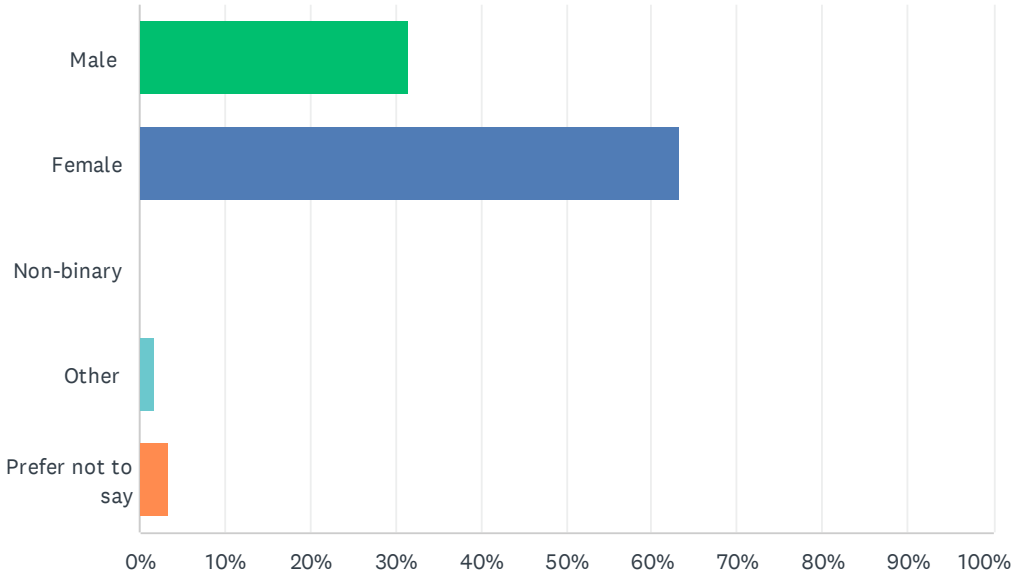
Answered: 297 Skipped: 0



ANSWER CHOICES	RESPONSES	
New Liskeard	51.18%	152
Haileybury	29.97%	89
Dymond	7.41%	22
Another community (please specify)	11.45%	34
TOTAL		297

Q2 Studies have shown that gender plays a role in how transportation is experienced. What gender do you identify with? (Choose any one option) (Required)

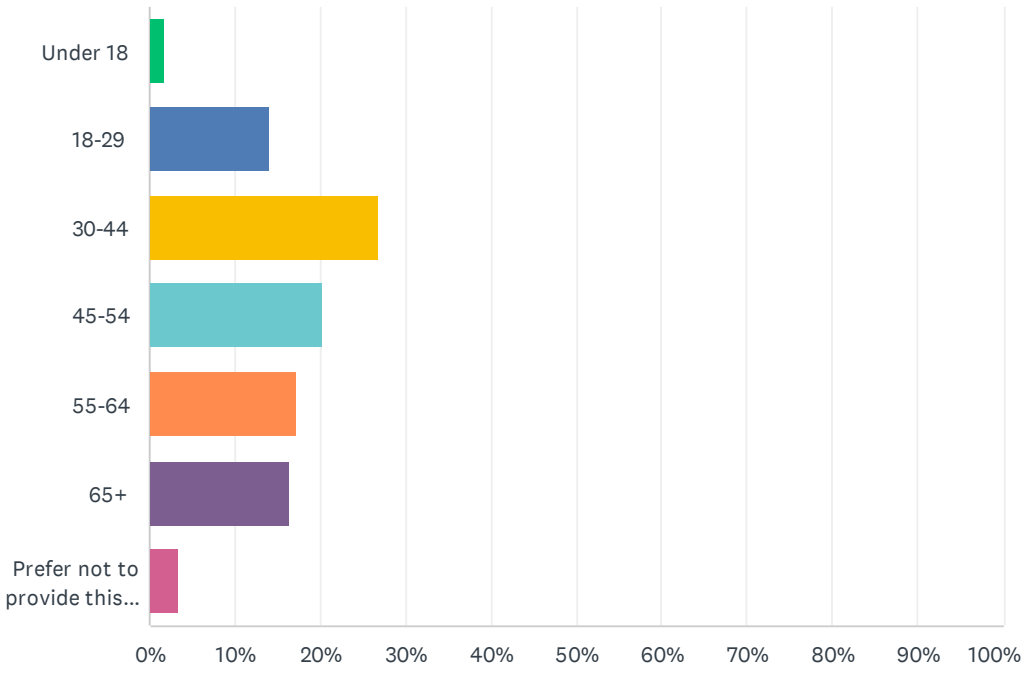
Answered: 297 Skipped: 0



ANSWER CHOICES	RESPONSES	
Male	31.65%	94
Female	63.30%	188
Non-binary	0.00%	0
Other	1.68%	5
Prefer not to say	3.37%	10
TOTAL		297

Q3 What is your age? (Choose any one option) (Required)

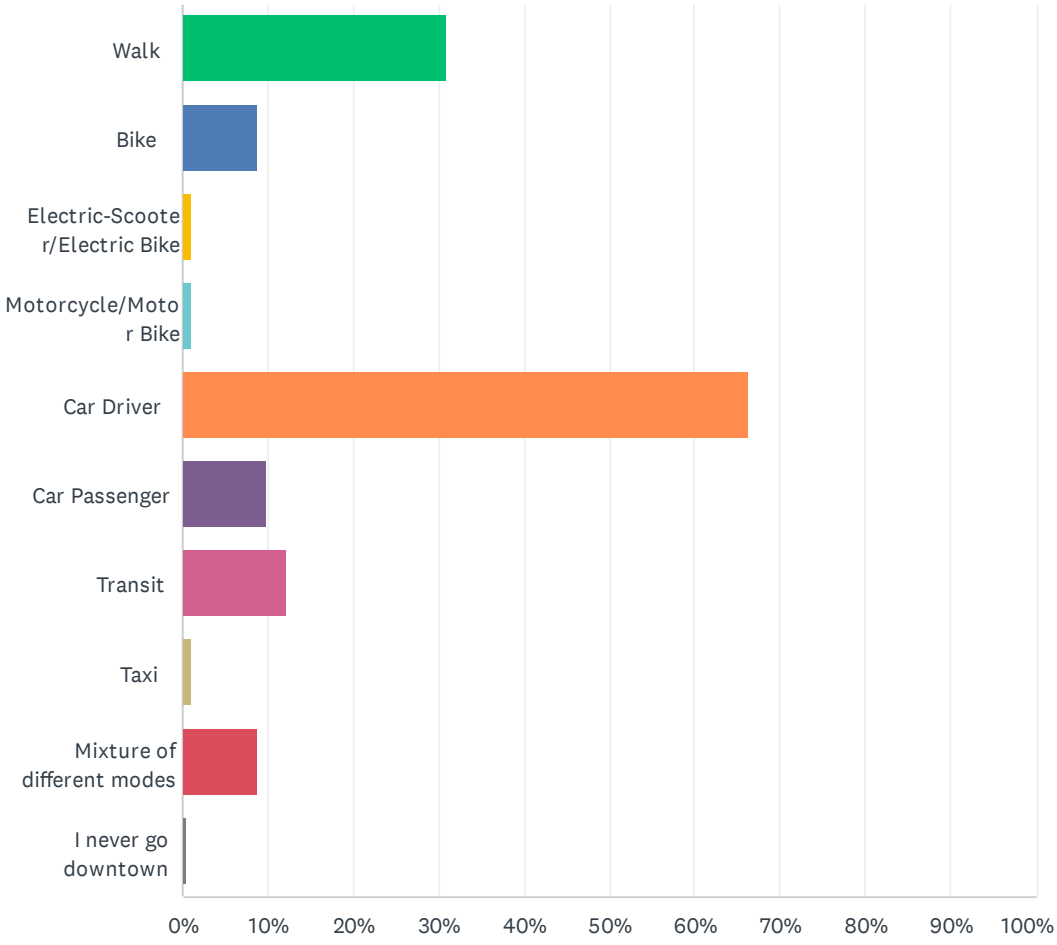
Answered: 297 Skipped: 0



ANSWER CHOICES	RESPONSES	
Under 18	1.68%	5
18-29	14.14%	42
30-44	26.94%	80
45-54	20.20%	60
55-64	17.17%	51
65+	16.50%	49
Prefer not to provide this information	3.37%	10
TOTAL		297

Q4 What is your primary mode of transportation to access the Downtown Cores? Please check one that apply. (Required)

Answered: 297 Skipped: 0



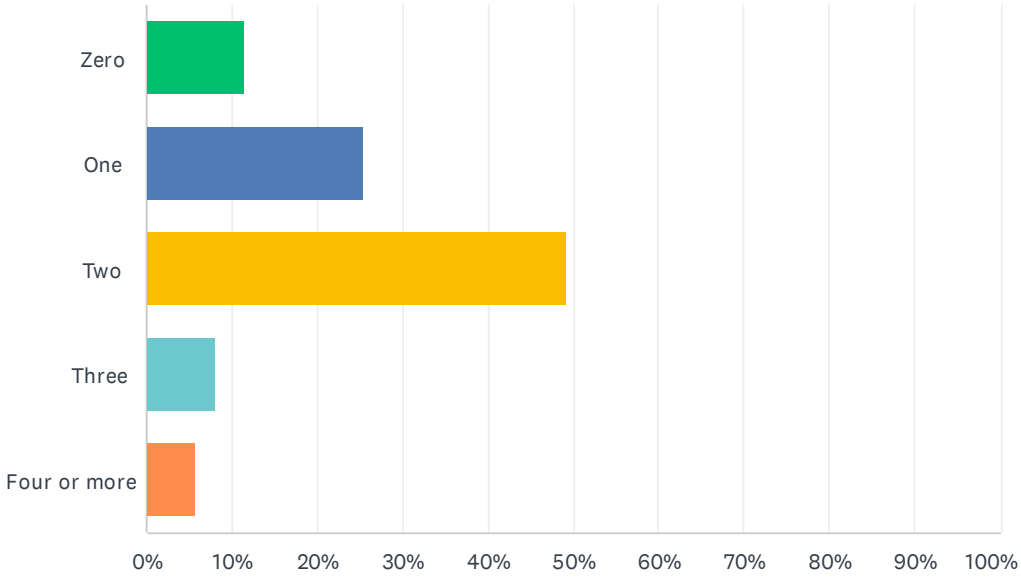
ANSWER CHOICES	RESPONSES	
Walk	30.98%	92
Bike	8.75%	26
Electric-Scooter/Electric Bike	1.01%	3
Motorcycle/Motor Bike	1.01%	3
Car Driver	66.33%	197
Car Passenger	9.76%	29
Transit	12.12%	36
Taxi	1.01%	3
Mixture of different modes	8.75%	26
I never go downtown	0.34%	1
Total Respondents: 297		

Q5 If you selected a mixture of different modes of transportation in the previous question, (i.e., walking & biking, walking & driving, driving & transit), please specify your answer here:

Answered: 16 Skipped: 281

Q6 How many vehicles does your household currently own or have access to? (Choose any one option) (Required)

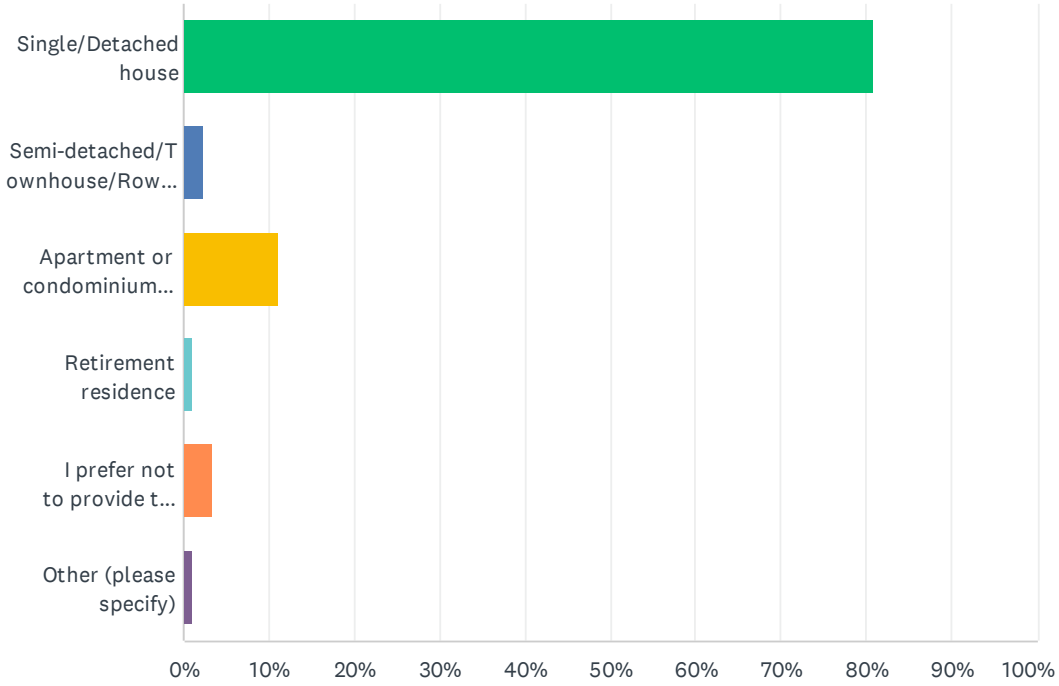
Answered: 260 Skipped: 37



ANSWER CHOICES	RESPONSES	
Zero	11.54%	30
One	25.38%	66
Two	49.23%	128
Three	8.08%	21
Four or more	5.77%	15
TOTAL		260

Q7 What type of home do you live in? (Choose any one option) (Required)

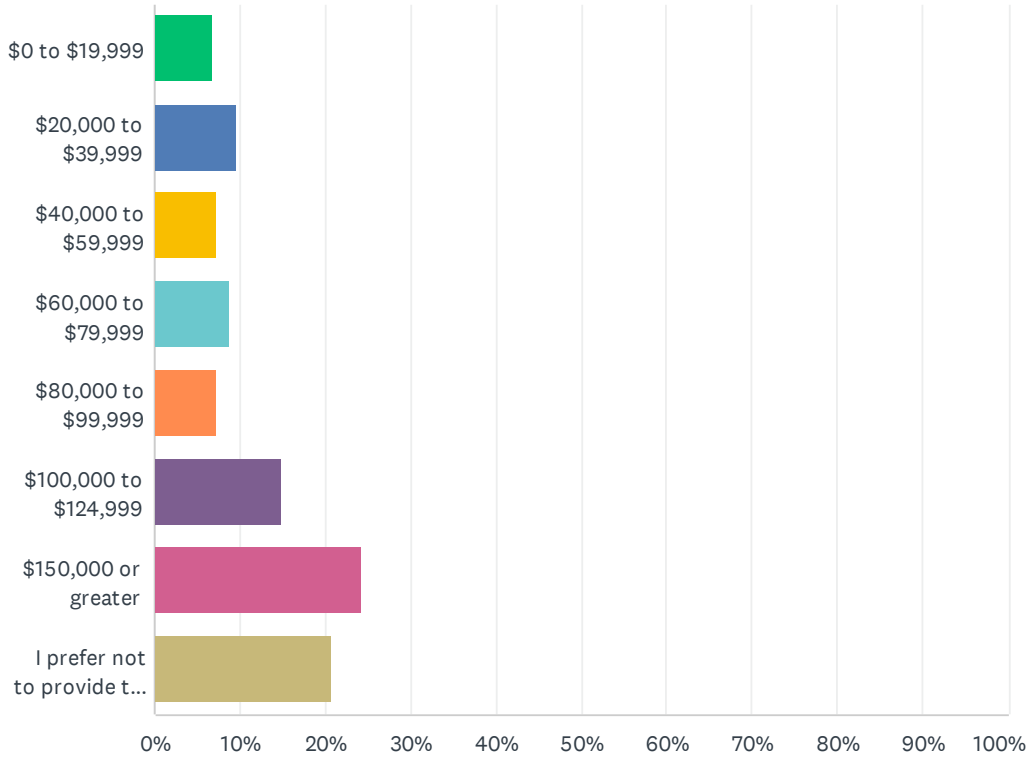
Answered: 260 Skipped: 37



ANSWER CHOICES	RESPONSES	
Single/Detached house	80.77%	210
Semi-detached/Townhouse/Rowhouse	2.31%	6
Apartment or condominium building	11.15%	29
Retirement residence	1.15%	3
I prefer not to provide this information	3.46%	9
Other (please specify)	1.15%	3
TOTAL		260

Q8 What is your annual household income range? (Choose any one option) (Required)

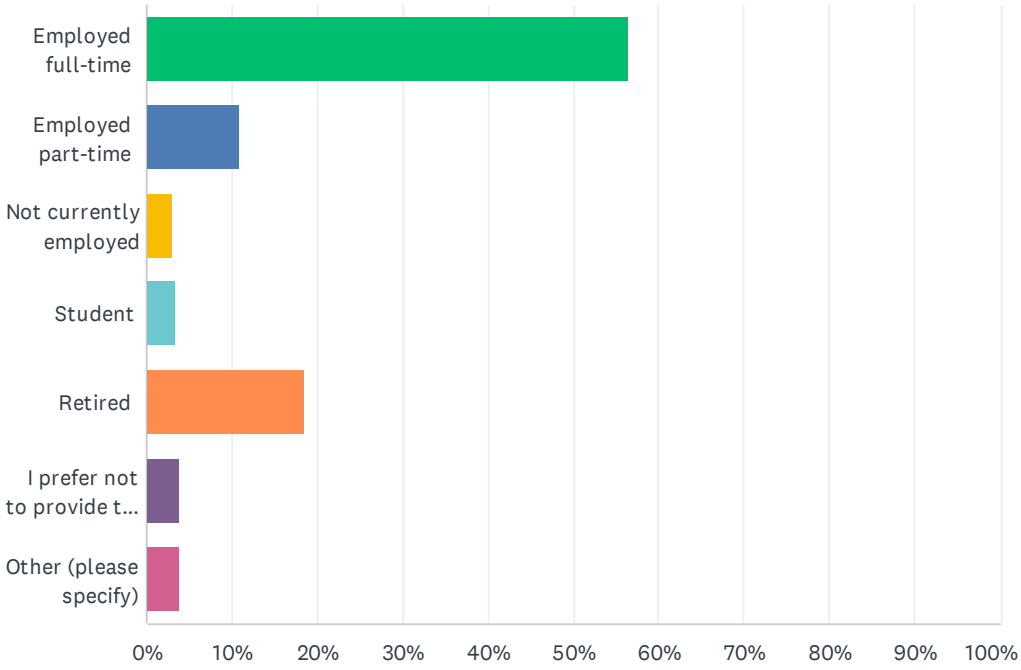
Answered: 260 Skipped: 37



ANSWER CHOICES	RESPONSES	
$0 to $19,999	6.92%	18
$20,000 to $39,999	9.62%	25
$40,000 to $59,999	7.31%	19
$60,000 to $79,999	8.85%	23
$80,000 to $99,999	7.31%	19
$100,000 to $124,999	15.00%	39
$150,000 or greater	24.23%	63
I prefer not to provide this information	20.77%	54
TOTAL		260

Q9 What is your current working status? (Choose any one option) (Required)

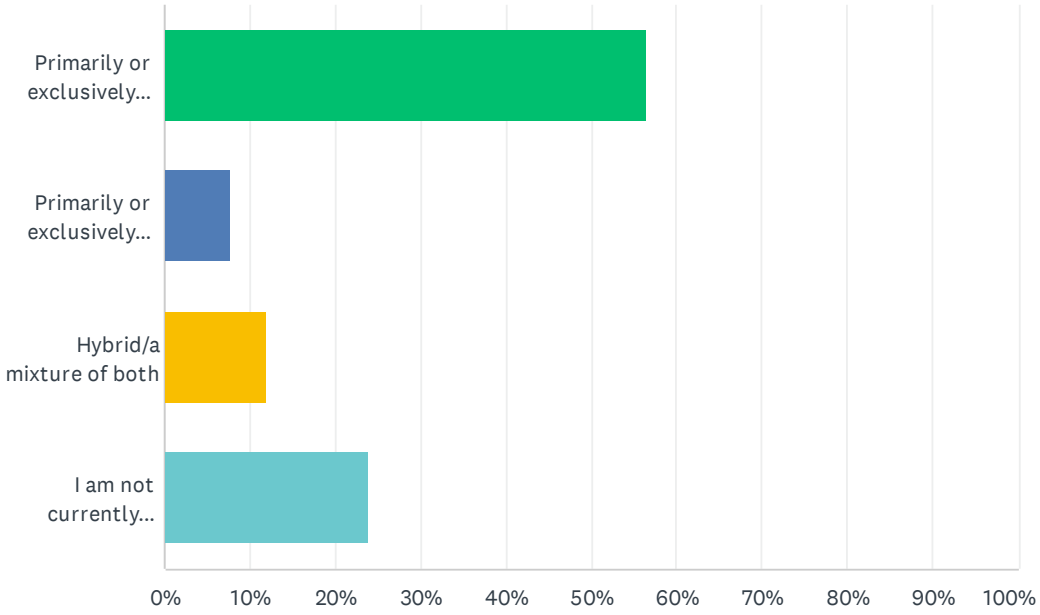
Answered: 260 Skipped: 37



ANSWER CHOICES	RESPONSES	
Employed full-time	56.54%	147
Employed part-time	10.77%	28
Not currently employed	3.08%	8
Student	3.46%	9
Retired	18.46%	48
I prefer not to provide this information	3.85%	10
Other (please specify)	3.85%	10
TOTAL		260

Q10 If you are currently employed, do you typically work on-site or remotely? (Choose any one option) (Required)

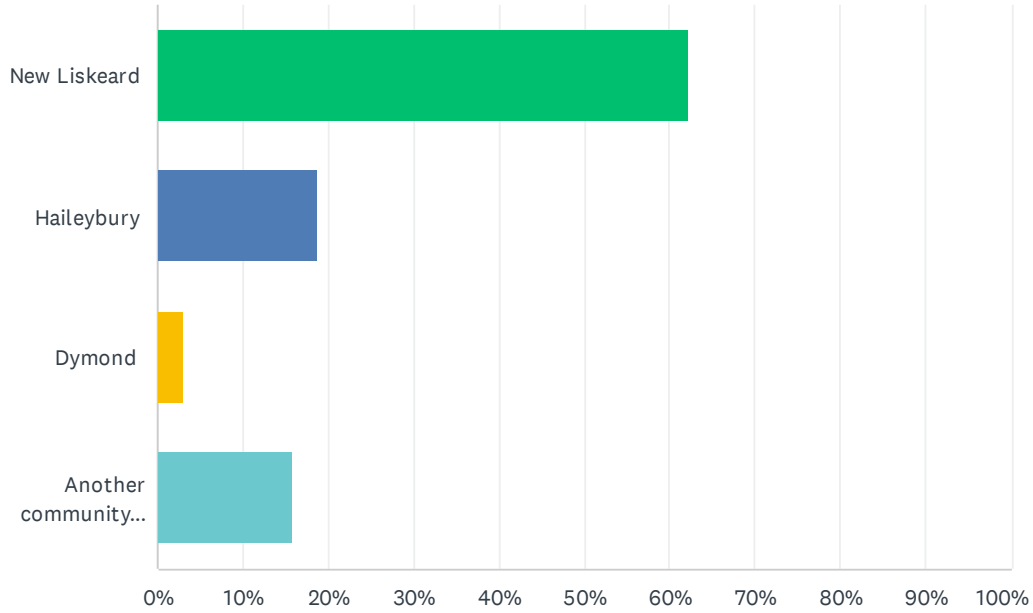
Answered: 260 Skipped: 37



ANSWER CHOICES	RESPONSES	
Primarily or exclusively in-person	56.54%	147
Primarily or exclusively remote	7.69%	20
Hybrid/a mixture of both	11.92%	31
I am not currently employed	23.85%	62
TOTAL		260

Q11 If you are currently employed, what is your typical place of work? (Choose any one option) (Required)

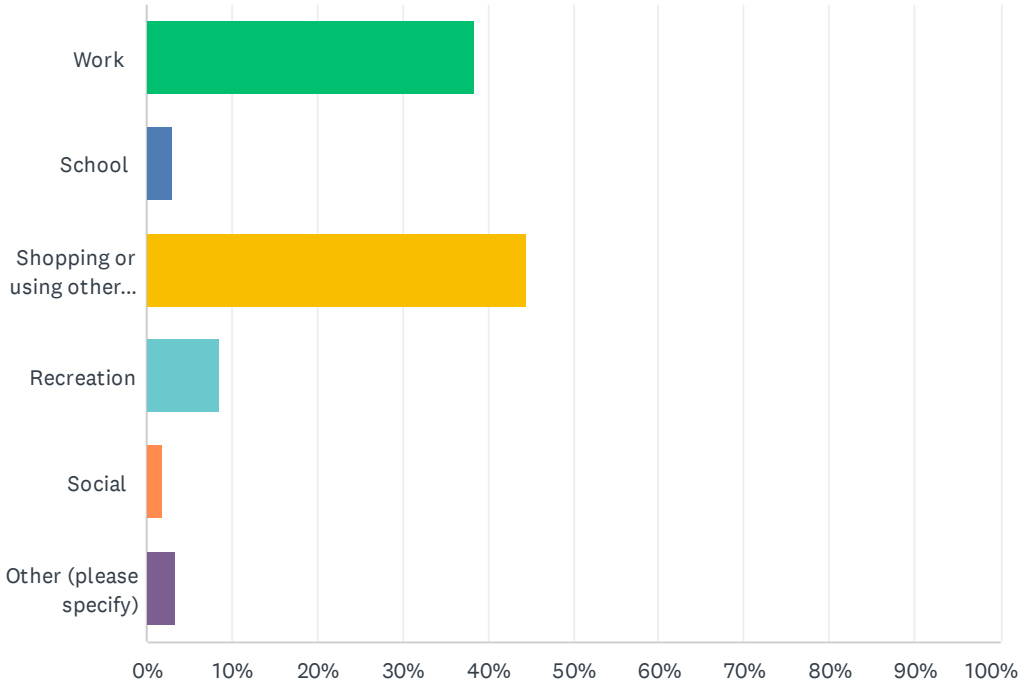
Answered: 260 Skipped: 37



ANSWER CHOICES	RESPONSES	
New Liskeard	62.31%	162
Haileybury	18.85%	49
Dymond	3.08%	8
Another community (please specify)	15.77%	41
TOTAL		260

Q12 What is your most common purpose for travelling in the City? (Choose any one option) (Required)

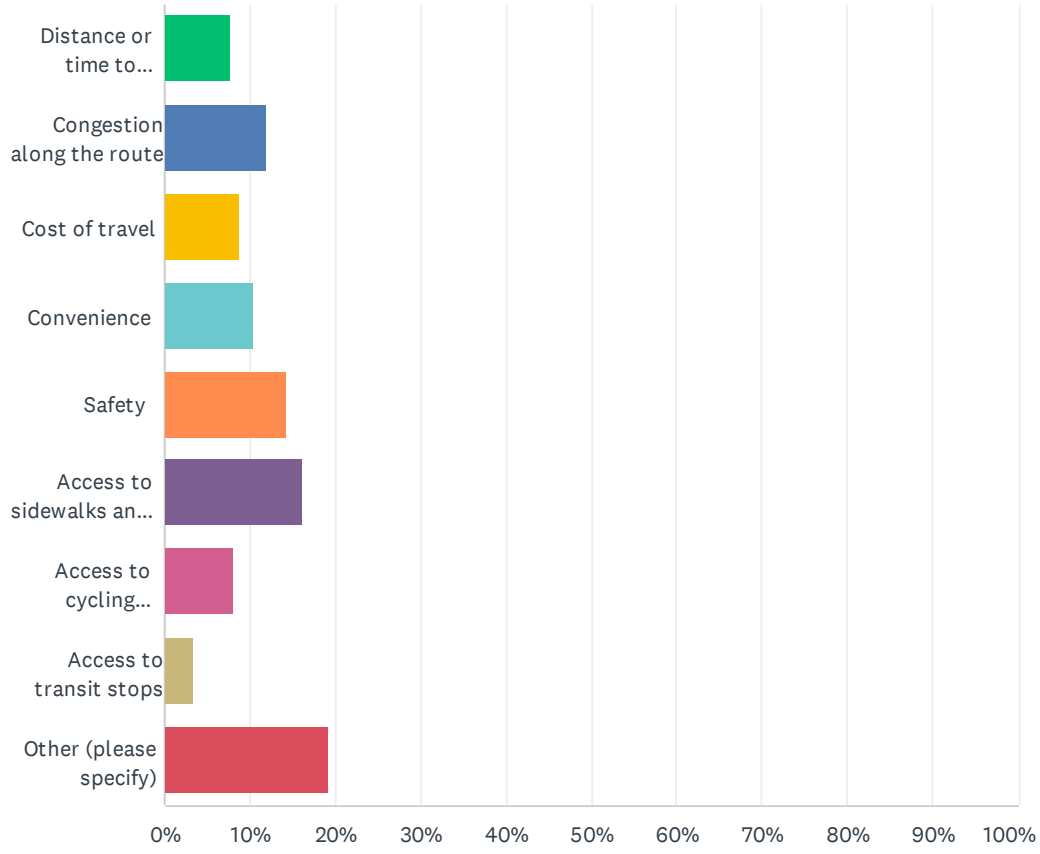
Answered: 260 Skipped: 37



ANSWER CHOICES	RESPONSES	
Work	38.46%	100
School	3.08%	8
Shopping or using other services in the City	44.62%	116
Recreation	8.46%	22
Social	1.92%	5
Other (please specify)	3.46%	9
TOTAL		260

Q13 What is the biggest challenge you face when travelling in the City, regardless of your mode of transportation choice? (Choose any one option) (Required)

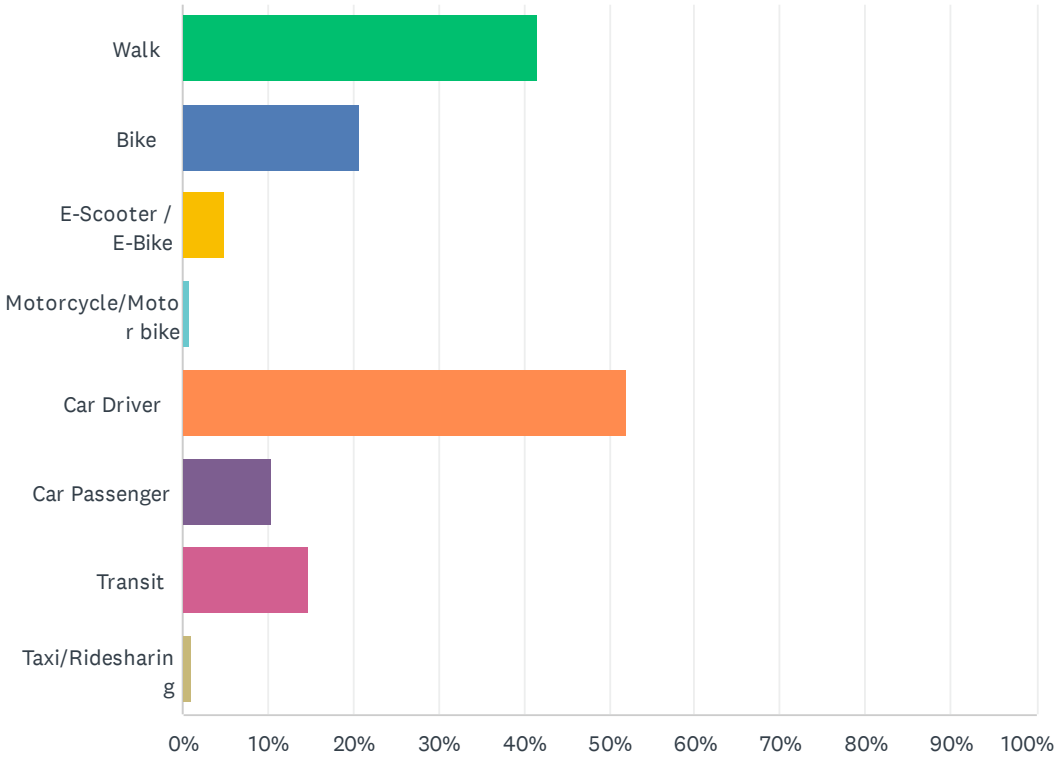
Answered: 260 Skipped: 37



ANSWER CHOICES	RESPONSES	
Distance or time to destination	7.69%	20
Congestion along the route	11.92%	31
Cost of travel	8.85%	23
Convenience	10.38%	27
Safety	14.23%	37
Access to sidewalks and crosswalks	16.15%	42
Access to cycling infrastructure	8.08%	21
Access to transit stops	3.46%	9
Other (please specify)	19.23%	50
TOTAL		260

Q14 Ideally, what travel mode would you prefer to use most of the time when traveling around the City? Please select up to two options from the list below. (Choose any one option) (Required)

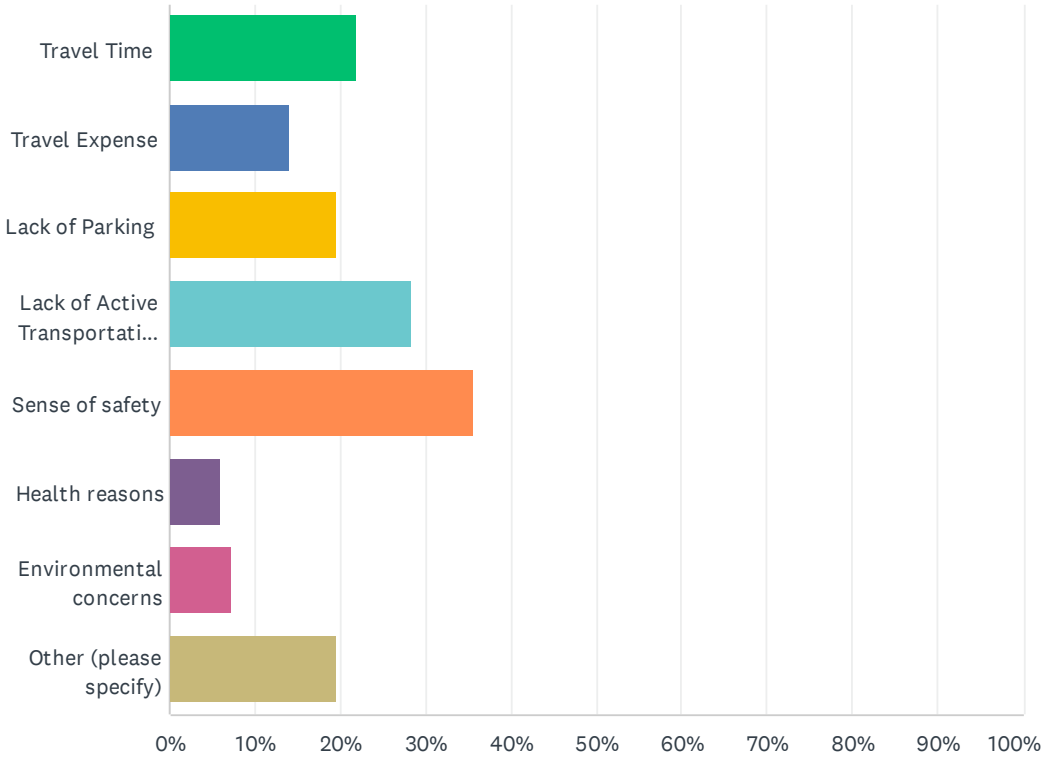
Answered: 260 Skipped: 37



ANSWER CHOICES	RESPONSES	
Walk	41.54%	108
Bike	20.77%	54
E-Scooter / E-Bike	5.00%	13
Motorcycle/Motor bike	0.77%	2
Car Driver	51.92%	135
Car Passenger	10.38%	27
Transit	14.62%	38
Taxi/Ridesharing	1.15%	3
Total Respondents: 260		

Q15 Which of the following reasons prevent you from using your preferred mode of transportation? (Select all that apply)

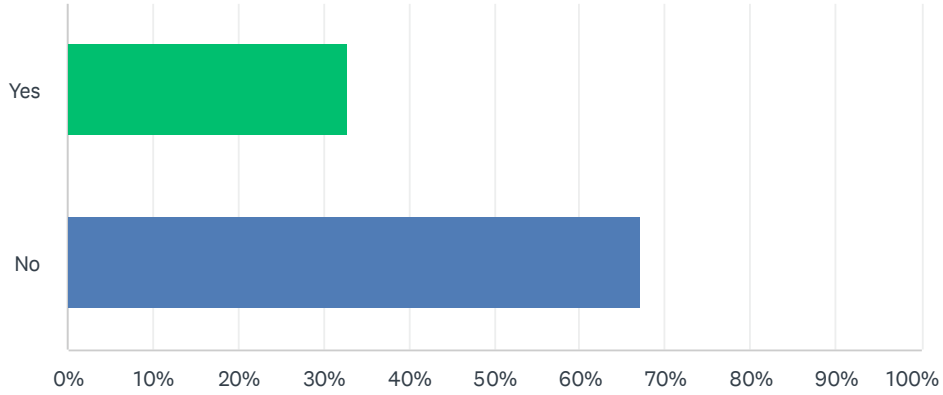
Answered: 219 Skipped: 78



ANSWER CHOICES	RESPONSES	
Travel Time	21.92%	48
Travel Expense	14.16%	31
Lack of Parking	19.63%	43
Lack of Active Transportation (Walking/Cycling) infrastructure	28.31%	62
Sense of safety	35.62%	78
Health reasons	5.94%	13
Environmental concerns	7.31%	16
Other (please specify)	19.63%	43
Total Respondents: 219		

Q16 Has the pandemic changed your travel behaviour?

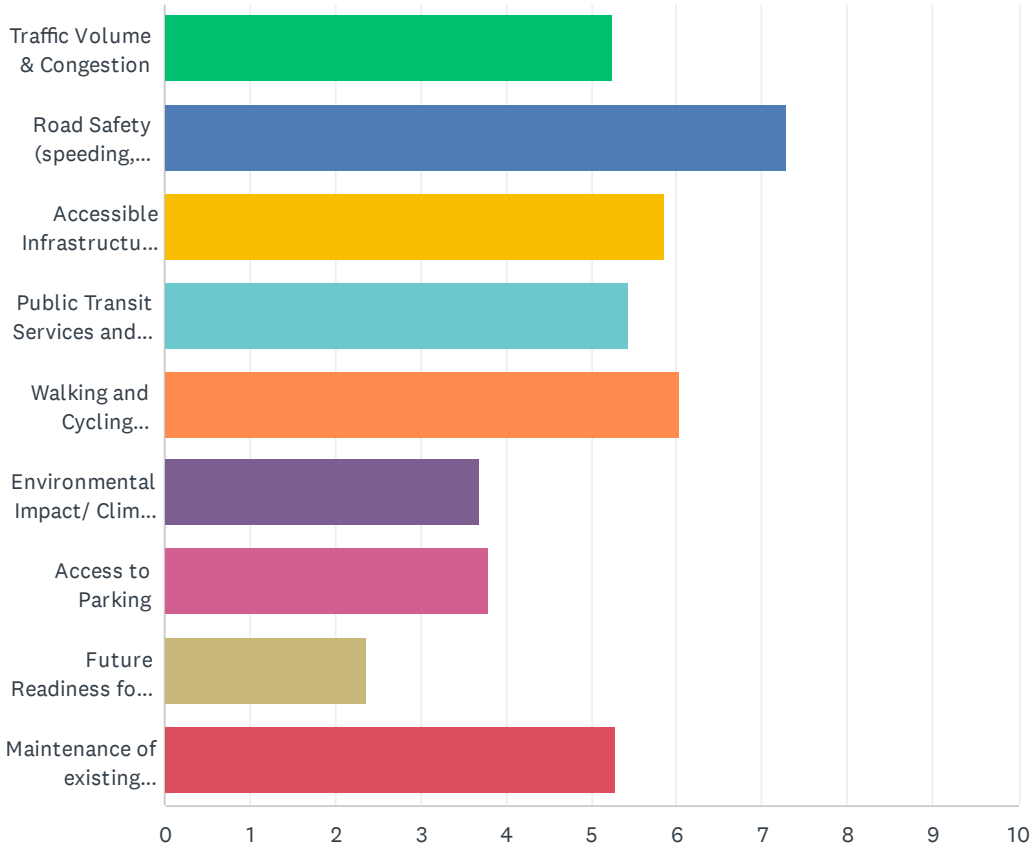
Answered: 219 Skipped: 78



ANSWER CHOICES	RESPONSES	
Yes	32.88%	72
No	67.12%	147
TOTAL		219

Q17 In order of importance (1 being MOST important and 8 being LEAST important), please rank the following list of transportation issues that the Transportation Study should consider for the future of the City.

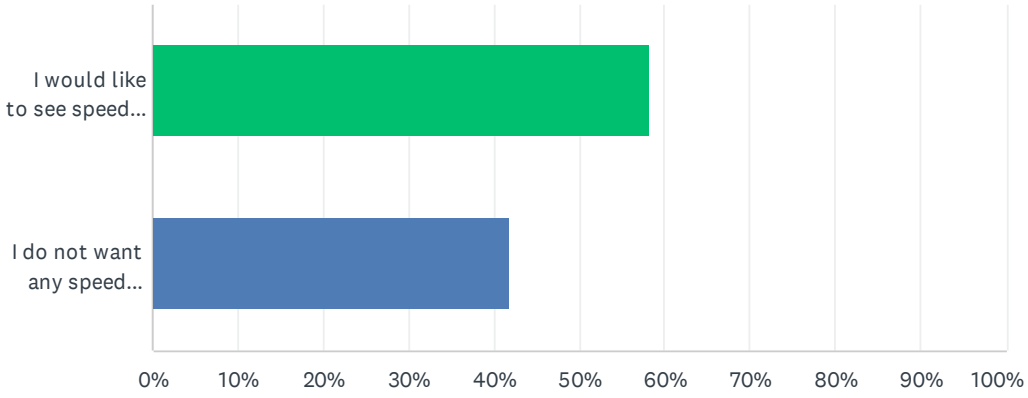
Answered: 214 Skipped: 83



	1	2	3	4	5	6	7	8	9	TOTAL	SCORE
Traffic Volume & Congestion	11.21% 24	16.36% 35	9.35% 20	14.02% 30	9.35% 20	8.88% 19	9.35% 20	11.68% 25	9.81% 21	214	5.25
Road Safety (speeding, crossings, road design, etc.)	30.84% 66	28.04% 60	13.55% 29	12.62% 27	6.07% 13	3.74% 8	1.87% 4	2.80% 6	0.47% 1	214	7.29
Accessible Infrastructure (i.e. wheelchairs, strollers, mobility scooters, rolling walkers, visually impaired, etc.)	6.54% 14	13.08% 28	22.90% 49	15.42% 33	19.16% 41	10.75% 23	7.48% 16	3.27% 7	1.40% 3	214	5.86
Public Transit Services and Connectivity	17.29% 37	6.07% 13	9.35% 20	15.89% 34	14.02% 30	13.08% 28	10.75% 23	9.81% 21	3.74% 8	214	5.43
Walking and Cycling Infrastructure (sidewalks, crosswalks, cycle lanes, cycle parking, etc.)	14.02% 30	17.76% 38	15.42% 33	12.62% 27	14.49% 31	12.62% 27	5.61% 12	4.21% 9	3.27% 7	214	6.03
Environmental Impact/ Climate Change Resilience	1.40% 3	1.40% 3	6.54% 14	6.54% 14	11.68% 25	21.96% 47	23.83% 51	15.89% 34	10.75% 23	214	3.69
Access to Parking	4.67% 10	5.61% 12	9.35% 20	6.07% 13	7.01% 15	9.81% 21	18.22% 39	21.96% 47	17.29% 37	214	3.79
Future Readiness for new technologies (EV charging stations, e-scooters, sidewalk delivery robots, etc.)	0.93% 2	1.40% 3	0.47% 1	3.27% 7	4.67% 10	9.35% 20	13.08% 28	27.10% 58	39.72% 85	214	2.36
Maintenance of existing infrastructure	13.08% 28	10.28% 22	13.08% 28	13.55% 29	13.55% 29	9.81% 21	9.81% 21	3.27% 7	13.55% 29	214	5.29

Q18 Would you like to see speed reduction (traffic calming and road safety) devices implemented on City roads?

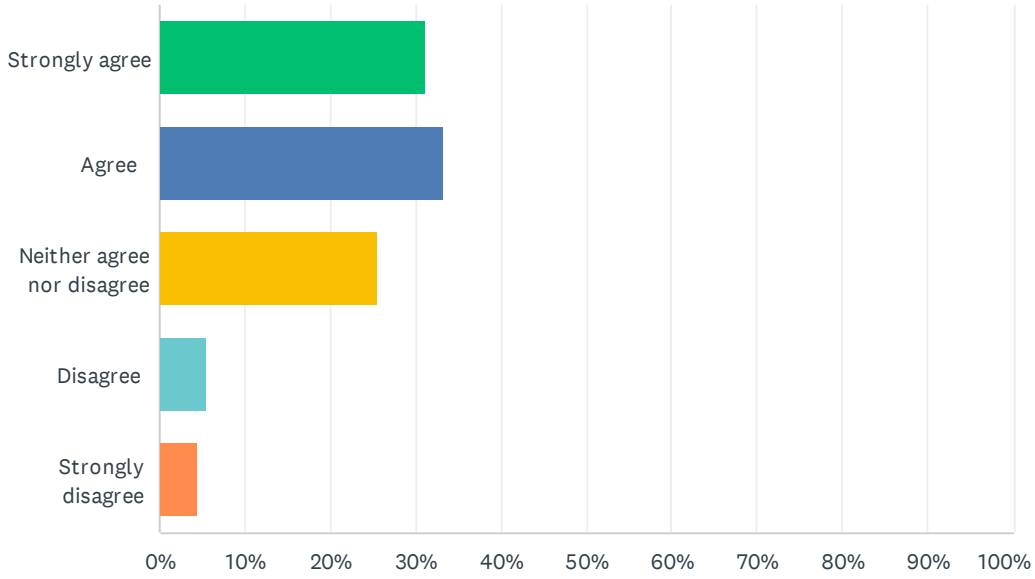
Answered: 218 Skipped: 79



ANSWER CHOICES	RESPONSES	
I would like to see speed reductions	58.26%	127
I do not want any speed reductions	41.74%	91
TOTAL		218

Q19 Agree or disagree: My perception of safety impacts the routes of transportation I choose to move around the City.

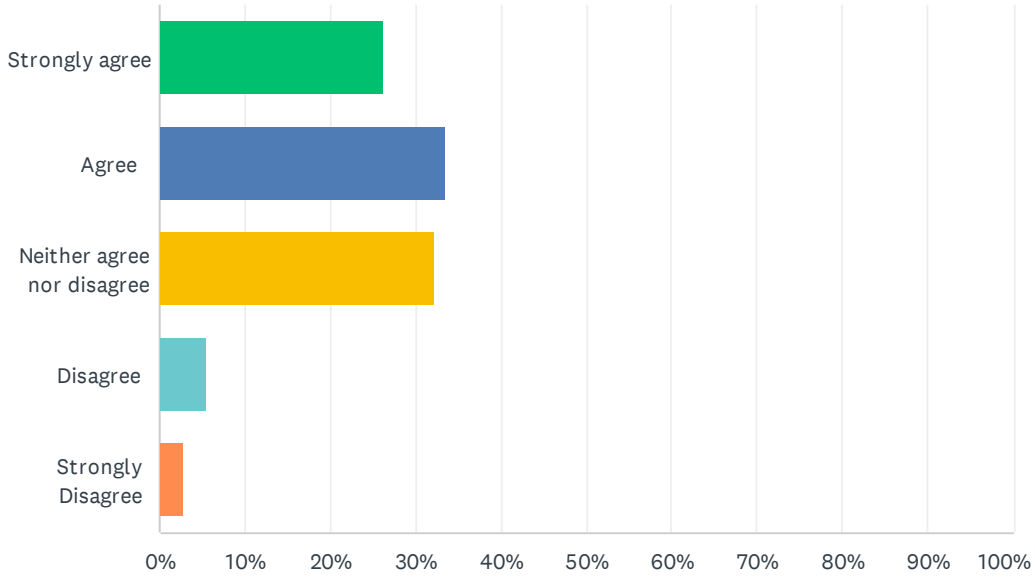
Answered: 219 Skipped: 78



ANSWER CHOICES	RESPONSES	
Strongly agree	31.05%	68
Agree	33.33%	73
Neither agree nor disagree	25.57%	56
Disagree	5.48%	12
Strongly disagree	4.57%	10
TOTAL		219

Q20 Agree or disagree: There should be more educational resources made available for safe driving and safe cycling practices, and ‘share the road’ behaviour.

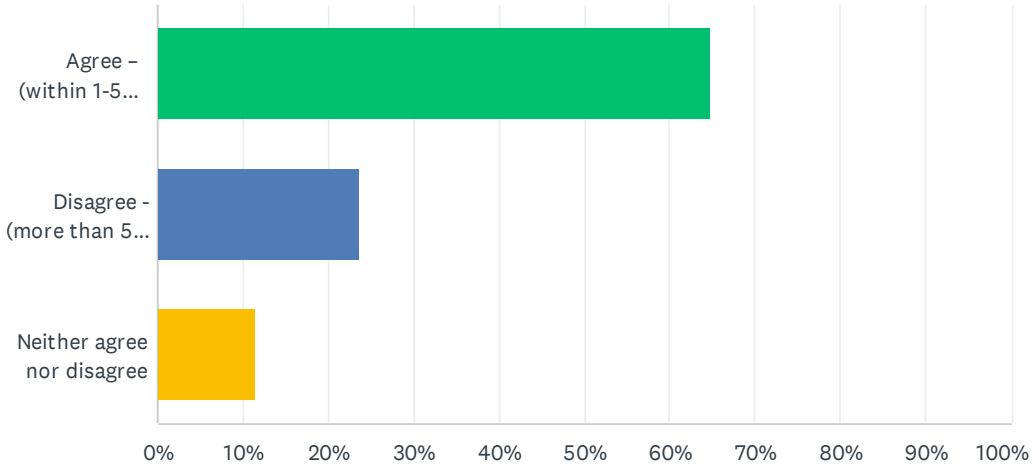
Answered: 218 Skipped: 79



ANSWER CHOICES	RESPONSES	
Strongly agree	26.15%	57
Agree	33.49%	73
Neither agree nor disagree	32.11%	70
Disagree	5.50%	12
Strongly Disagree	2.75%	6
TOTAL		218

Q21 Agree or disagree: It is typically easy to find a parking space when I shop or dine in the City.

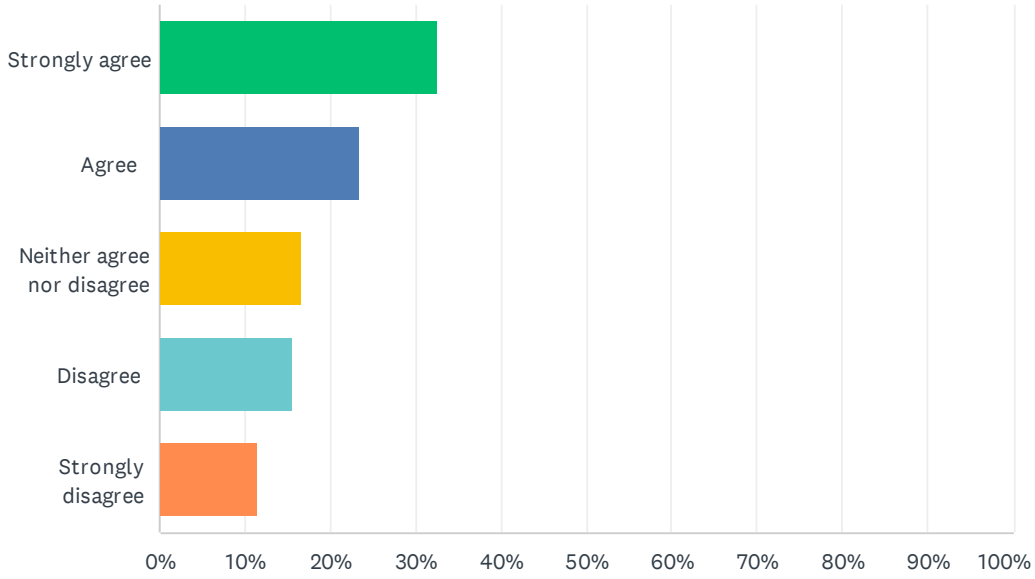
Answered: 219 Skipped: 78



ANSWER CHOICES	RESPONSES	
Agree – (within 1-5 mins walk)	64.84%	142
Disagree - (more than 5 mins walk)	23.74%	52
Neither agree nor disagree	11.42%	25
TOTAL		219

Q22 Agree or disagree: The City should prioritize walking, cycling and public transportation even if that means travelling by car could be less convenient in build-up areas.

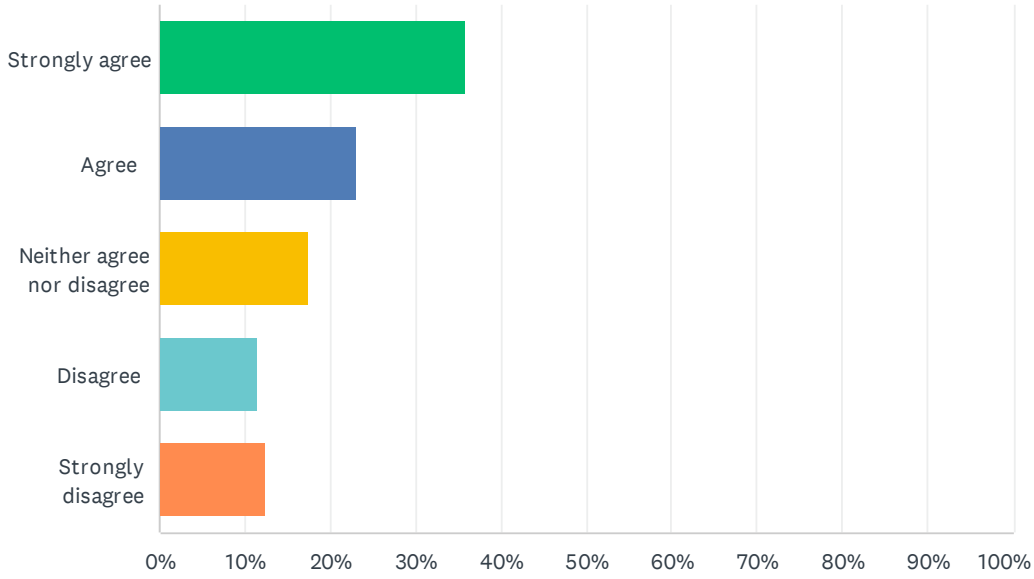
Answered: 217 Skipped: 80



ANSWER CHOICES	RESPONSES	
Strongly agree	32.72%	71
Agree	23.50%	51
Neither agree nor disagree	16.59%	36
Disagree	15.67%	34
Strongly disagree	11.52%	25
TOTAL		217

Q23 The Town should consider temporarily making streets 'pedestrian only' in the summer months for open streets activities and events.

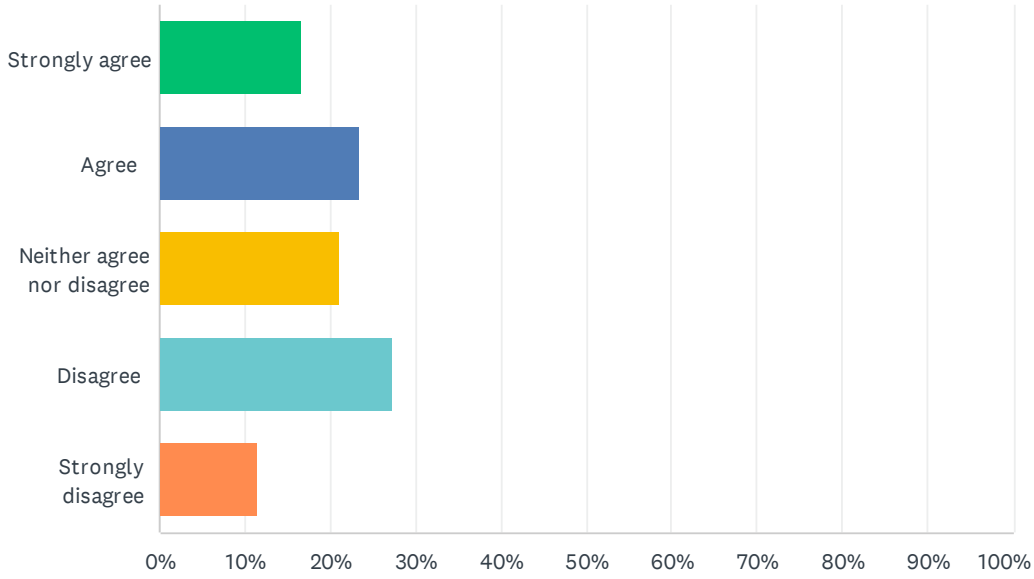
Answered: 218 Skipped: 79



ANSWER CHOICES	RESPONSES	
Strongly agree	35.78%	78
Agree	22.94%	50
Neither agree nor disagree	17.43%	38
Disagree	11.47%	25
Strongly disagree	12.39%	27
TOTAL		218

Q24 Agree or disagree: My use of active transportation choices (walking or cycling) would remain unchanged year-round (summer versus winter).

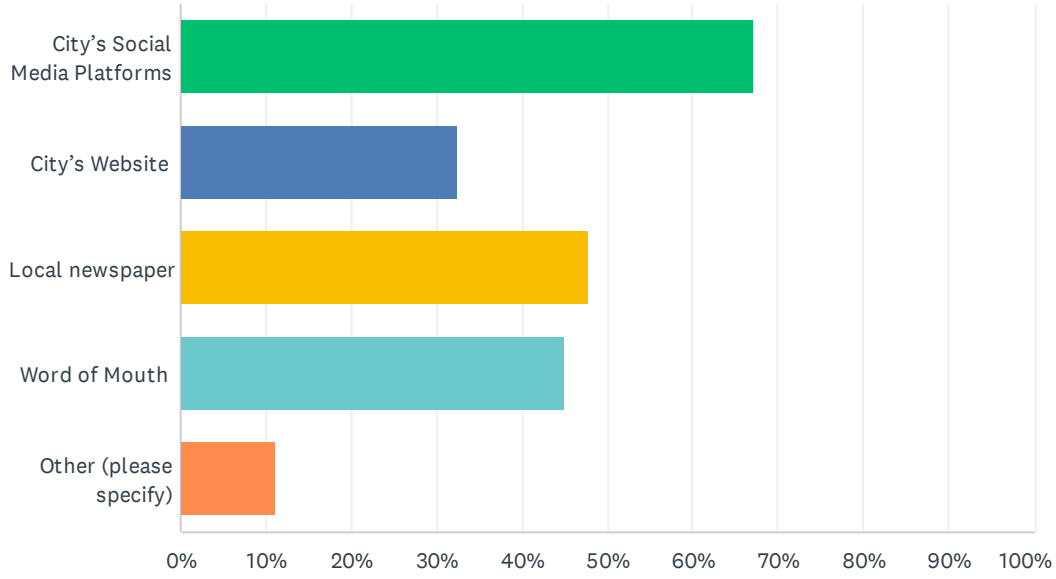
Answered: 217 Skipped: 80



ANSWER CHOICES	RESPONSES	
Strongly agree	16.59%	36
Agree	23.50%	51
Neither agree nor disagree	21.20%	46
Disagree	27.19%	59
Strongly disagree	11.52%	25
TOTAL		217

Q25 Where do you get your City-related news from? (Select all that apply)

Answered: 216 Skipped: 81



ANSWER CHOICES	RESPONSES	
City's Social Media Platforms	67.13%	145
City's Website	32.41%	70
Local newspaper	47.69%	103
Word of Mouth	44.91%	97
Other (please specify)	11.11%	24
Total Respondents: 216		

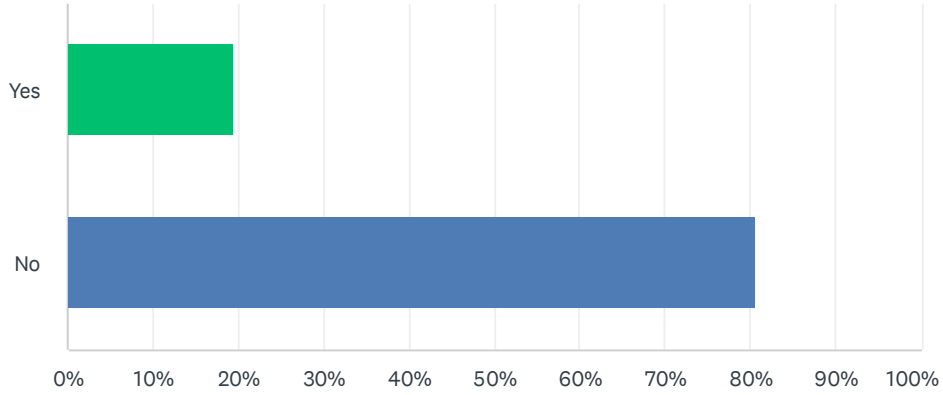
Q26 Would you like to receive future notifications about the City of Temiskaming’s Transportation Study? If yes, please provide your email address.

Answered: 59 Skipped: 238

Temiskaming Shores Downtown Cores Mobility Study Survey #2

Q1 Did you attend the Public Open House on November 1st?

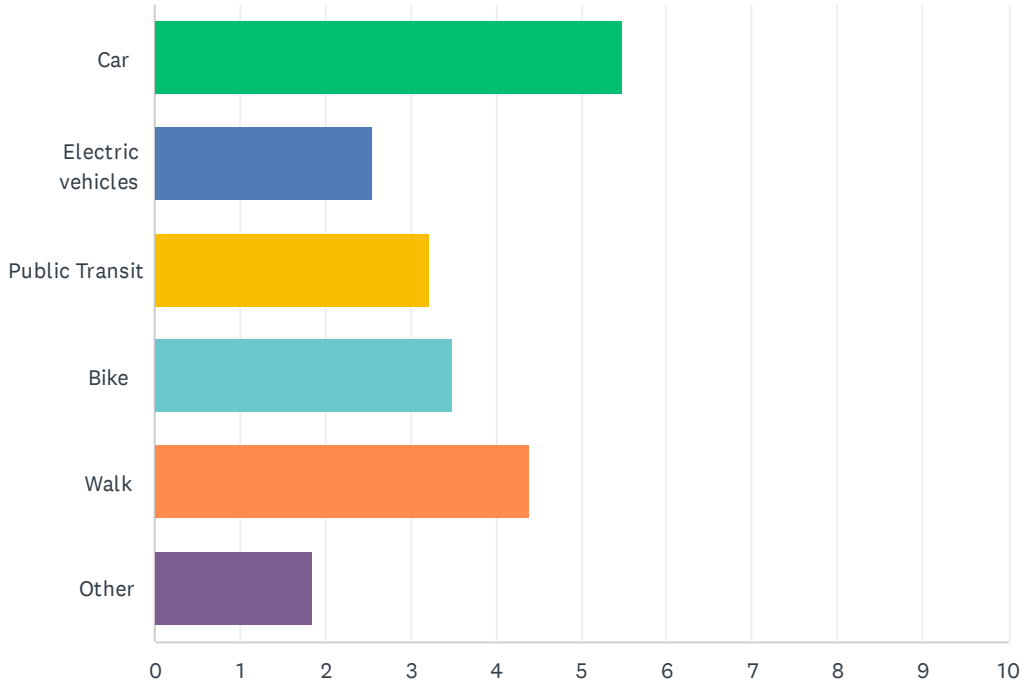
Answered: 57 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	19.30%	11
No	80.70%	46
Total Respondents: 57		

Q2 Please rank the method of transportation you use most often to travel to and within the downtown cores of New Liskeard and Haileybury.

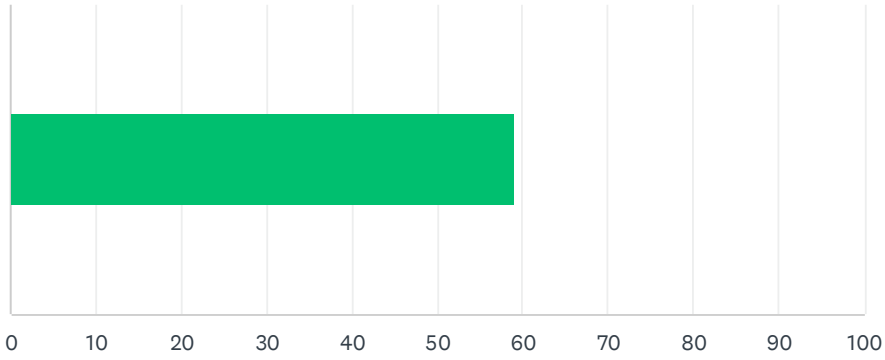
Answered: 57 Skipped: 0



	1	2	3	4	5	6	TOTAL	SCORE
Car	70.18% 40	14.04% 8	10.53% 6	3.51% 2	1.75% 1	0.00% 0	57	5.47
Electric vehicles	1.75% 1	17.54% 10	7.02% 4	12.28% 7	31.58% 18	29.82% 17	57	2.56
Public Transit	14.04% 8	3.51% 2	21.05% 12	26.32% 15	21.05% 12	14.04% 8	57	3.21
Bike	1.75% 1	8.77% 5	42.11% 24	35.09% 20	8.77% 5	3.51% 2	57	3.49
Walk	12.28% 7	56.14% 32	10.53% 6	1.75% 1	19.30% 11	0.00% 0	57	4.40
Other	0.00% 0	0.00% 0	8.77% 5	21.05% 12	17.54% 10	52.63% 30	57	1.86

Q3 Refer to the image above. How effective do you think the Complete Streets framework will be in New Liskeard and Haileybury?

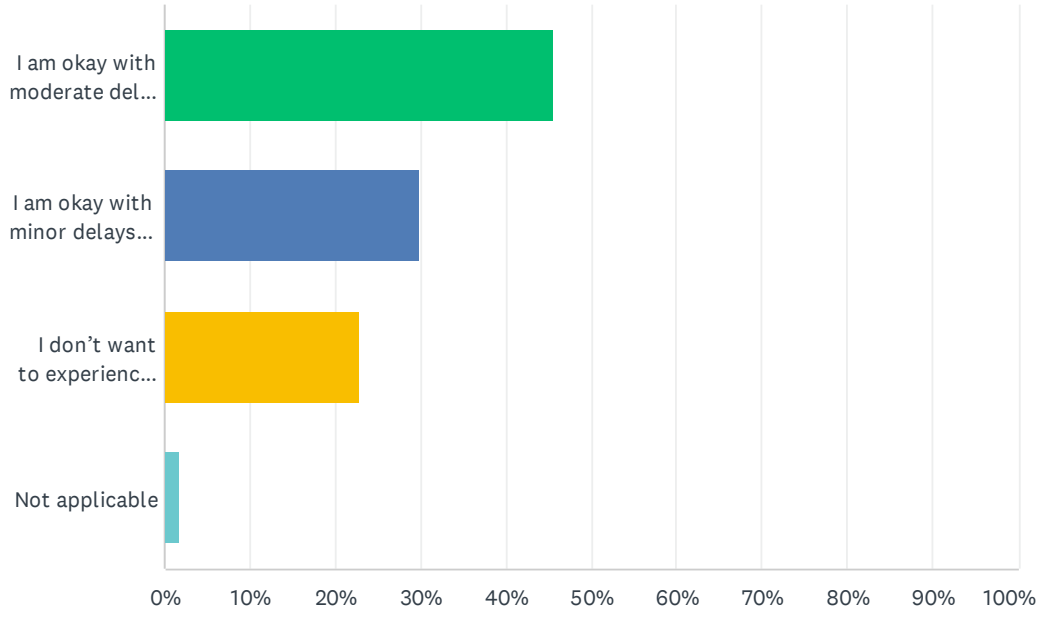
Answered: 57 Skipped: 0



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	59	3,364	57
Total Respondents: 57			

Q4 Traffic modelling indicates that proposed changes would not significantly impact vehicular delay in the long term (see figure above). What level of intervention would you support if it meant an improved and revitalized downtown core?

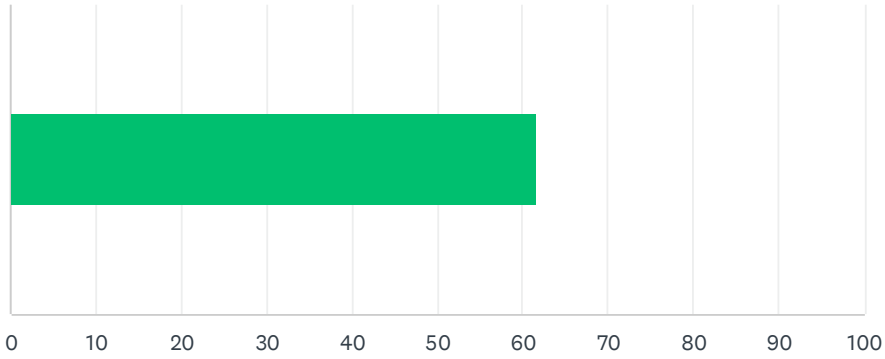
Answered: 57 Skipped: 0



ANSWER CHOICES	RESPONSES	
I am okay with moderate delays in driving to my destination downtown.	45.61%	26
I am okay with minor delays in driving to my destination downtown.	29.82%	17
I don't want to experience any delays.	22.81%	13
Not applicable	1.75%	1
TOTAL		57

Q5 The image above summarizes the road safety review. How much do you think a complete streets approach can help improve road safety and reduce speeding?

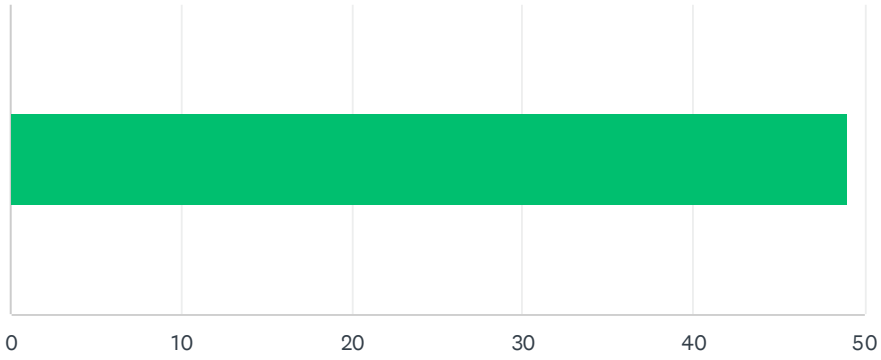
Answered: 57 Skipped: 0



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	62	3,513	57
Total Respondents: 57			

Q6 To which degree do the proposed transit improvements meet your needs?

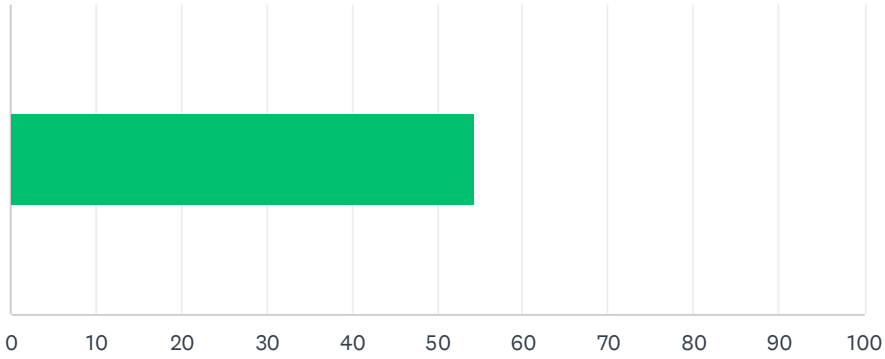
Answered: 55 Skipped: 2



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	49	2,697	55
Total Respondents: 55			

Q7 Do you believe the proposed active transportation improvements/complete streets implementations will help revitalize the two downtown cores?

Answered: 57 Skipped: 0



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	54	3,102	57
Total Respondents: 57			

Q8 How do you rate the proposed changes to parking in New Liskeard?

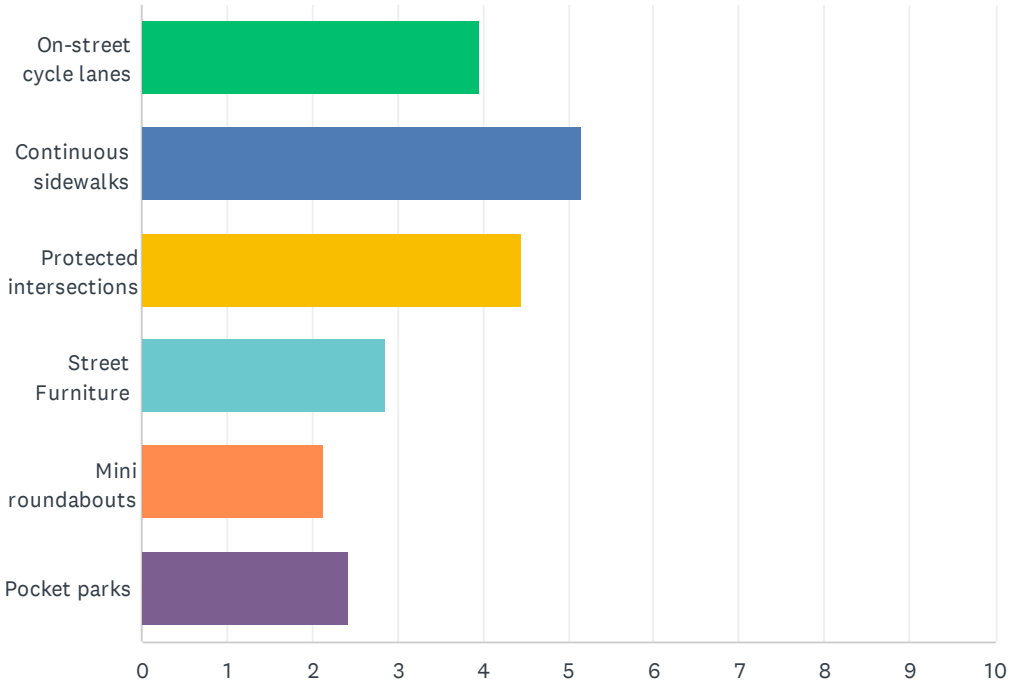
Answered: 57 Skipped: 0

3.2★
average rating

	VERY POOR	(NO LABEL)	NEUTRAL	(NO LABEL)	VERY GOOD	TOTAL	WEIGHTED AVERAGE
☆	19.30% 11	12.28% 7	22.81% 13	22.81% 13	22.81% 13	57	3.18

Q9 Please rate the proposed complete streets implementations in terms of priority.

Answered: 56 Skipped: 1



	1	2	3	4	5	6	TOTAL	SCORE
On-street cycle lanes	25.00% 14	14.29% 8	19.64% 11	19.64% 11	16.07% 9	5.36% 3	56	3.96
Continuous sidewalks	37.50% 21	48.21% 27	8.93% 5	3.57% 2	1.79% 1	0.00% 0	56	5.16
Protected intersections	30.36% 17	19.64% 11	28.57% 16	10.71% 6	8.93% 5	1.79% 1	56	4.46
Street Furniture	1.79% 1	7.14% 4	19.64% 11	33.93% 19	21.43% 12	16.07% 9	56	2.86
Mini roundabouts	3.57% 2	5.36% 3	5.36% 3	14.29% 8	28.57% 16	42.86% 24	56	2.13
Pocket parks	1.79% 1	5.36% 3	17.86% 10	17.86% 10	23.21% 13	33.93% 19	56	2.43

Q10 Overall, how well do you think the proposed solutions address the area’s existing and future transportation needs?

Answered: 57 Skipped: 0

3.8★
average rating

	VERY POOR	(NO LABEL)	(NO LABEL)	(NO LABEL)	(NO LABEL)	EXCELLENT	TOTAL	WEIGHTED AVERAGE
☆	17.54% 10	3.51% 2	17.54% 10	24.56% 14	15.79% 9	21.05% 12	57	3.81

Q11 If you have any additional comments, please provide them in the textbox below.

Answered: 38 Skipped: 19

Q12 If you want to receive updates about this study, please provide your email address in the textbox below.

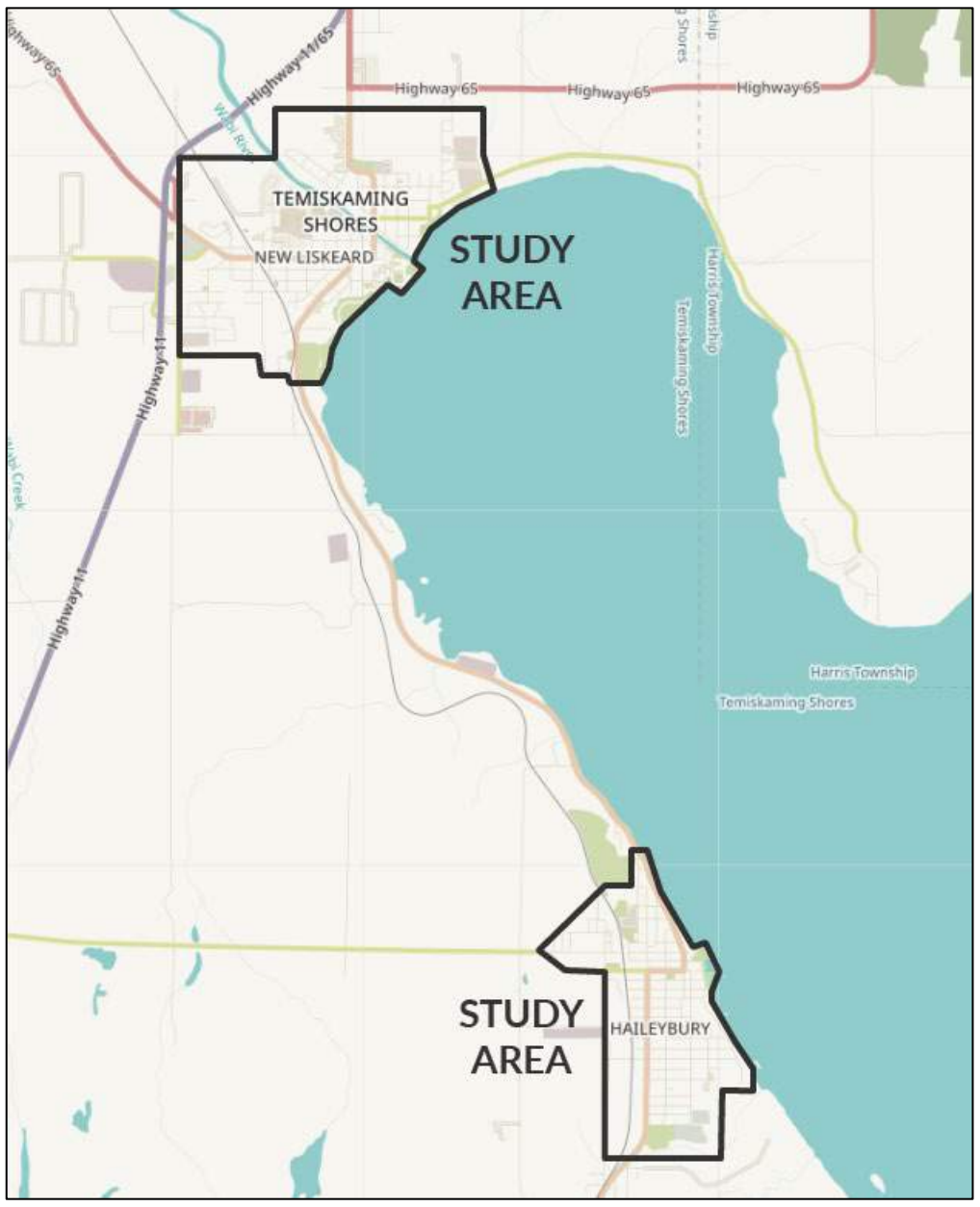
Answered: 15 Skipped: 42

NOTICE OF STUDY COMPLETION

CITY OF TEMISKAMING SHORES TRANSPORTATION STUDY

THE STUDY

The City of Temiskaming Shores has completed a Transportation Study to investigate the current transportation network related problems within the City; particularly two of its downtown cores. The Transportation Study will be the City's blueprint for strategic transportation planning and direction for the future. The Transportation Study will establish a transportation system to better serve residents, employers, employees, and visitors while accommodating all modes of transportation (e.g., public transit, commuter travel, commercial vehicles, and active transportation). There is a unique opportunity through this study to create a real sense of place, a community where people choose to meet, dine, and stay for a while instead of driving through; a city where people can safely and pleasantly travel with two feet or two wheels.



THE PROCESS

The study will evaluate City-wide transport operations to develop network solutions with focus on the Downtown Cores for all modes of mobility including:

- Active & Micro-Mobility
- Transit
- Automobile
- Smart & Emerging Mobility
- Freight & Goods Movement
- Downtown Parking

In tandem with network solutions, the Study has developed supporting policies that will aid the City in guiding future development and operations in a manner that supports planned mode share changes, new sustainable mobility links, and maintains safe streets for all road users such as Road Classification & Cross-Sections, Vision Zero Policy (Traffic Calming), Intersection Implementation Policy, Transportation Demand Management Policies, etc.

For more information, to submit a comment, question, or to be added to the project mailing list, please contact:

Mitch McCrank, CET
Manager of Transportation Services
City of Temiskaming Shores
325 Farr Drive
Temiskaming Shores, ON P0J 1K0
Phone: 705.672.3363 ext. 4113
Email: mmccrank@temiskamingshores.ca

OR

Amar Lad
Consultant Project Manager
TYLin International Canada Inc.
8800 Dufferin Street Suite 200
Vaughan, ON L4K 0C5, Canada
Phone: 905.738.5700
Email: amar.lad@tylin.com

Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act and the Ontario Environmental Assessment Act. With the exception of personal information, all comments will become part of the public record and will be released, if requested, to any person.

Notice first issued May 31st, 2024

APPENDIX C

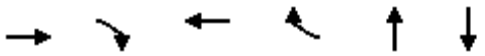
Future Do-Nothing Scenario Synchro and SimTraffic Reports

Future Do-Nothing Scenario:
2028 Synchro Reports

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	362	16	16	249	16	30
Future Volume (Veh/h)	362	16	16	249	16	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	416	18	18	286	18	34
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				336		
pX, platoon unblocked						
vC, conflicting volume			434		747	425
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			434		747	425
tC, single (s)			4.2		6.4	6.3
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.4
p0 queue free %			98		95	95
cM capacity (veh/h)			1099		377	619

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	434	304	52
Volume Left	0	18	18
Volume Right	18	0	34
cSH	1700	1099	506
Volume to Capacity	0.26	0.02	0.10
Queue Length 95th (m)	0.0	0.4	2.6
Control Delay (s)	0.0	0.6	12.9
Lane LOS		A	B
Approach Delay (s)	0.0	0.6	12.9
Approach LOS			B

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		



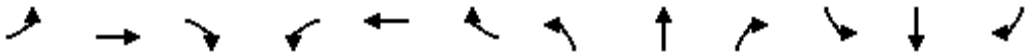
Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	367	15	238	64	80	68
v/c Ratio	0.35	0.01	0.23	0.06	0.22	0.22
Control Delay	7.7	0.0	6.7	2.2	12.0	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	0.0	6.7	2.2	12.0	14.0
Queue Length 50th (m)	16.8	0.0	9.8	0.0	3.2	3.4
Queue Length 95th (m)	30.8	0.0	19.0	3.2	10.4	10.1
Internal Link Dist (m)	312.0		313.1		280.6	74.2
Turn Bay Length (m)		45.0		45.0		
Base Capacity (vph)	1057	1065	1060	1126	597	526
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.01	0.22	0.06	0.13	0.13

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	301	13	9	196	55	25	23	21	38	13	8
Future Volume (vph)	15	301	13	9	196	55	25	23	21	38	13	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2	6.2		6.2	6.2		6.2			6.2	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.98			0.97	
Satd. Flow (prot)		1557	1512		1561	1601		1664			1649	
Flt Permitted		0.98	1.00		0.98	1.00		0.85			0.76	
Satd. Flow (perm)		1533	1512		1536	1601		1444			1288	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	17	350	15	10	228	64	29	27	24	44	15	9
RTOR Reduction (vph)	0	0	6	0	0	26	0	21	0	0	8	0
Lane Group Flow (vph)	0	367	9	0	238	38	0	59	0	0	60	0
Heavy Vehicles (%)	7%	11%	8%	0%	11%	2%	16%	0%	10%	14%	8%	0%
Parking (#/hr)		0			0							
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)		26.2	26.2		26.2	26.2		5.9			5.9	
Effective Green, g (s)		26.2	26.2		26.2	26.2		5.9			5.9	
Actuated g/C Ratio		0.59	0.59		0.59	0.59		0.13			0.13	
Clearance Time (s)		6.2	6.2		6.2	6.2		6.2			6.2	
Vehicle Extension (s)		5.0	5.0		5.0	5.0		2.5			2.5	
Lane Grp Cap (vph)		902	890		904	942		191			170	
v/s Ratio Prot												
v/s Ratio Perm		c0.24	0.01		0.15	0.02		0.04			c0.05	
v/c Ratio		0.41	0.01		0.26	0.04		0.31			0.35	
Uniform Delay, d1		4.9	3.8		4.5	3.9		17.5			17.6	
Progression Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.6	0.0		0.3	0.0		0.7			0.9	
Delay (s)		5.6	3.8		4.8	3.9		18.1			18.5	
Level of Service		A	A		A	A		B			B	
Approach Delay (s)		5.5			4.6			18.1			18.5	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	44.5	Sum of lost time (s)	12.4
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

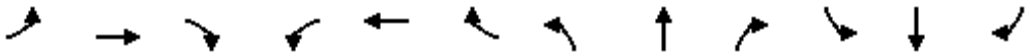
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	288	4	4	256	8	4	0	5	11	4	15
Future Volume (Veh/h)	15	288	4	4	256	8	4	0	5	11	4	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	17	327	5	5	291	9	5	0	6	12	5	17
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		337			245							
pX, platoon unblocked												
vC, conflicting volume	300			332			688	674	330	675	672	296
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	300			332			688	674	330	675	672	296
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.2	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.6	4.0	3.4
p0 queue free %	99			100			99	100	99	97	99	98
cM capacity (veh/h)	1233			1239			346	372	717	349	373	716

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	349	305	11	34
Volume Left	17	5	5	12
Volume Right	5	9	6	17
cSH	1233	1239	482	476
Volume to Capacity	0.01	0.00	0.02	0.07
Queue Length 95th (m)	0.3	0.1	0.5	1.7
Control Delay (s)	0.5	0.2	12.6	13.1
Lane LOS	A	A	B	B
Approach Delay (s)	0.5	0.2	12.6	13.1
Approach LOS			B	B

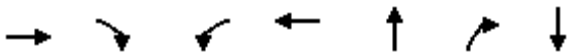
Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	34.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	274	8	4	273	8	2	3	2	8	4	10
Future Volume (Veh/h)	23	274	8	4	273	8	2	3	2	8	4	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	29	342	10	5	341	10	2	4	2	10	5	12
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					126							
pX, platoon unblocked	0.93						0.93	0.93		0.93	0.93	0.93
vC, conflicting volume	351			352			776	766	347	765	766	346
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	262			352			720	709	347	708	709	257
tC, single (s)	4.3			4.1			7.1	6.5	6.2	7.1	7.2	6.3
tC, 2 stage (s)												
tF (s)	2.4			2.2			3.5	4.0	3.3	3.5	4.7	3.4
p0 queue free %	97			100			99	99	100	97	98	98
cM capacity (veh/h)	1128			1218			304	326	701	316	254	708

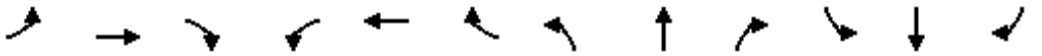
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	381	356	8	27
Volume Left	29	5	2	10
Volume Right	10	10	2	12
cSH	1128	1218	368	395
Volume to Capacity	0.03	0.00	0.02	0.07
Queue Length 95th (m)	0.6	0.1	0.5	1.7
Control Delay (s)	0.9	0.2	15.0	14.8
Lane LOS	A	A	B	B
Approach Delay (s)	0.9	0.2	15.0	14.8
Approach LOS			B	B

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	38.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	284	38	132	286	87	195	64
v/c Ratio	0.33	0.05	0.37	0.32	0.21	0.33	0.16
Control Delay	11.1	3.1	13.7	10.6	22.4	5.1	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.1	3.1	13.7	10.6	22.4	5.1	20.2
Queue Length 50th (m)	21.8	0.0	9.8	20.0	9.7	0.0	6.4
Queue Length 95th (m)	35.4	3.6	25.2	41.5	20.0	12.6	14.9
Internal Link Dist (m)	101.5			191.0	51.6		138.0
Turn Bay Length (m)		40.0					
Base Capacity (vph)	848	820	358	882	408	598	388
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.05	0.37	0.32	0.21	0.33	0.16

Intersection Summary

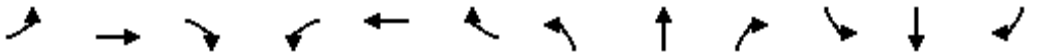


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	241	33	116	238	14	39	38	172	30	21	5
Future Volume (vph)	9	241	33	116	238	14	39	38	172	30	21	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	5.5	5.5	5.5			5.5	5.5		5.5	
Lane Util. Factor		1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt		1.00	0.85	1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00	1.00	0.95	1.00			0.98	1.00		0.97	
Satd. Flow (prot)		1541	1445	1074	1580			1539	1512		1450	
Flt Permitted		0.99	1.00	0.57	1.00			0.85	1.00		0.84	
Satd. Flow (perm)		1525	1445	645	1580			1336	1512		1255	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	10	274	38	132	270	16	44	43	195	34	24	6
RTOR Reduction (vph)	0	0	17	0	3	0	0	0	135	0	4	0
Lane Group Flow (vph)	0	284	21	132	283	0	0	87	60	0	60	0
Heavy Vehicles (%)	12%	12%	13%	70%	9%	0%	13%	6%	8%	17%	10%	20%
Parking (#/hr)		0			0			0			0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)		44.5	44.5	44.5	44.5			24.5	24.5		24.5	
Effective Green, g (s)		44.5	44.5	44.5	44.5			24.5	24.5		24.5	
Actuated g/C Ratio		0.56	0.56	0.56	0.56			0.31	0.31		0.31	
Clearance Time (s)		5.5	5.5	5.5	5.5			5.5	5.5		5.5	
Lane Grp Cap (vph)		848	803	358	878			409	463		384	
v/s Ratio Prot					0.18							
v/s Ratio Perm		0.19	0.01	c0.20				c0.07	0.04		0.05	
v/c Ratio		0.33	0.03	0.37	0.32			0.21	0.13		0.16	
Uniform Delay, d1		9.7	8.0	9.9	9.6			20.6	20.0		20.2	
Progression Factor		1.00	1.00	1.02	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.1	0.1	2.7	0.9			1.2	0.6		0.9	
Delay (s)		10.7	8.1	12.8	10.5			21.8	20.6		21.1	
Level of Service		B	A	B	B			C	C		C	
Approach Delay (s)		10.4			11.2			21.0			21.1	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

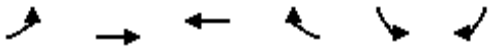
Lane Group	EBL	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	337	87	83	48	3	85	331
v/c Ratio	0.49	0.09	0.09	0.12	0.01	0.18	0.50
Control Delay	10.1	4.8	6.9	22.5	0.0	23.2	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	4.8	6.9	22.5	0.0	23.2	5.8
Queue Length 50th (m)	18.1	2.7	4.4	5.4	0.0	9.8	0.0
Queue Length 95th (m)	34.4	8.7	9.9	13.0	0.0	20.1	17.1
Internal Link Dist (m)		191.0	154.1	180.0		119.0	
Turn Bay Length (m)					15.0		20.0
Base Capacity (vph)	694	939	943	403	482	461	659
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.09	0.09	0.12	0.01	0.18	0.50

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	55	22	2	62	10	10	33	3	3	73	295
Future Volume (vph)	300	55	22	2	62	10	10	33	3	3	73	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5			5.6			5.6	5.6		5.5	5.5
Lane Util. Factor	1.00	1.00			1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.96			0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99	1.00		1.00	1.00
Satd. Flow (prot)	1615	1597			1622			1512	1633		1647	1498
Flt Permitted	0.70	1.00			1.00			0.94	1.00		0.99	1.00
Satd. Flow (perm)	1195	1597			1619			1442	1633		1639	1498
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	337	62	25	2	70	11	11	37	3	3	82	331
RTOR Reduction (vph)	0	10	0	0	5	0	0	0	2	0	0	238
Lane Group Flow (vph)	337	77	0	0	78	0	0	48	1	0	85	93
Heavy Vehicles (%)	13%	3%	5%	50%	4%	0%	10%	14%	0%	0%	5%	9%
Parking (#/hr)		0			0			0			0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	46.5	46.5			46.4			22.4	22.4		22.5	22.5
Effective Green, g (s)	46.5	46.5			46.4			22.4	22.4		22.5	22.5
Actuated g/C Ratio	0.58	0.58			0.58			0.28	0.28		0.28	0.28
Clearance Time (s)	5.5	5.5			5.6			5.6	5.6		5.5	5.5
Lane Grp Cap (vph)	694	928			939			403	457		460	421
v/s Ratio Prot		0.05										
v/s Ratio Perm	c0.28				0.05			0.03	0.00		0.05	c0.06
v/c Ratio	0.49	0.08			0.08			0.12	0.00		0.18	0.22
Uniform Delay, d1	9.8	7.4			7.4			21.5	20.7		21.8	22.0
Progression Factor	0.75	0.82			1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	2.3	0.2			0.2			0.6	0.0		0.9	1.2
Delay (s)	9.7	6.2			7.6			22.1	20.8		22.7	23.2
Level of Service	A	A			A			C	C		C	C
Approach Delay (s)		9.0			7.6			22.0			23.1	
Approach LOS		A			A			C			C	

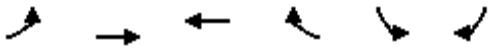
Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	3	1	2	16	33	0
Future Volume (Veh/h)	3	1	2	16	33	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	4	1	3	23	46	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	26				24	14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	26				24	14
tC, single (s)	4.1				6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	100				95	100
cM capacity (veh/h)	1601				963	1071

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	5	26	46
Volume Left	4	0	46
Volume Right	0	23	0
cSH	1601	1700	963
Volume to Capacity	0.00	0.02	0.05
Queue Length 95th (m)	0.1	0.0	1.1
Control Delay (s)	5.8	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	5.8	0.0	8.9
Approach LOS			A

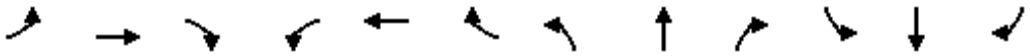
Intersection Summary			
Average Delay		5.7	
Intersection Capacity Utilization		13.3%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	6	32	22	39	24	2
Future Volume (Veh/h)	6	32	22	39	24	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	8	44	30	53	33	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	83				116	56
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	83				116	56
tC, single (s)	4.4				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.5				3.5	3.3
p0 queue free %	99				96	100
cM capacity (veh/h)	1335				879	1016

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	52	83	36
Volume Left	8	0	33
Volume Right	0	53	3
cSH	1335	1700	889
Volume to Capacity	0.01	0.05	0.04
Queue Length 95th (m)	0.1	0.0	1.0
Control Delay (s)	1.2	0.0	9.2
Lane LOS	A		A
Approach Delay (s)	1.2	0.0	9.2
Approach LOS			A

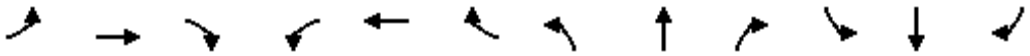
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	16.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	4	46	7	2	3	68	302	4	0	187	9
Future Volume (Veh/h)	13	4	46	7	2	3	68	302	4	0	187	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	15	5	53	8	2	3	78	347	5	0	215	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	730	728	220	781	730	350	225			352		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	730	728	220	781	730	350	225			352		
tC, single (s)	7.2	6.5	6.2	7.2	6.5	6.5	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.6	4.0	3.6	2.2			2.2		
p0 queue free %	95	98	93	97	99	100	94			100		
cM capacity (veh/h)	313	332	812	262	331	627	1338			1218		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	73	13	430	225
Volume Left	15	8	78	0
Volume Right	53	3	5	10
cSH	569	315	1338	1218
Volume to Capacity	0.13	0.04	0.06	0.00
Queue Length 95th (m)	3.3	1.0	1.4	0.0
Control Delay (s)	12.3	16.9	1.9	0.0
Lane LOS	B	C	A	
Approach Delay (s)	12.3	16.9	1.9	0.0
Approach LOS	B	C		

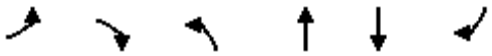
Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	44.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	12	15	41	15	15	6	232	83	34	133	6
Future Volume (Veh/h)	8	12	15	41	15	15	6	232	83	34	133	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	9	13	17	46	17	17	7	261	93	38	149	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)											157	
pX, platoon unblocked												
vC, conflicting volume	576	596	152	574	554	308	156			354		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	576	596	152	574	554	308	156			354		
tC, single (s)	7.1	6.5	6.5	7.2	6.6	6.2	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.6	3.6	4.1	3.3	2.2			2.3		
p0 queue free %	98	97	98	88	96	98	100			97		
cM capacity (veh/h)	397	404	816	391	418	737	1436			1167		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	39	80	361	194
Volume Left	9	46	7	38
Volume Right	17	17	93	7
cSH	515	441	1436	1167
Volume to Capacity	0.08	0.18	0.00	0.03
Queue Length 95th (m)	1.9	5.0	0.1	0.8
Control Delay (s)	12.6	15.0	0.2	1.8
Lane LOS	B	B	A	A
Approach Delay (s)	12.6	15.0	0.2	1.8
Approach LOS	B	B		

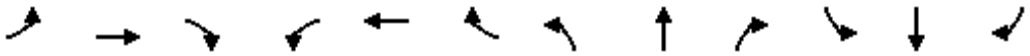
Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	42.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	5	321	377	90
Future Volume (Veh/h)	0	0	5	321	377	90
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	0	6	373	438	105
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				143	233	
pX, platoon unblocked	0.89	0.84	0.84			
vC, conflicting volume	876	490	543			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	566	301	363			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	431	626	1016			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	379	543
Volume Left	0	6	0
Volume Right	0	0	105
cSH	1700	1016	1700
Volume to Capacity	0.00	0.01	0.32
Queue Length 95th (m)	0.0	0.1	0.0
Control Delay (s)	0.0	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	0.0	0.2	0.0
Approach LOS	A		

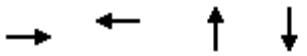
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	28.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	2	5	1	0	40	0	330	4	65	454	0
Future Volume (Veh/h)	14	2	5	1	0	40	0	330	4	65	454	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	16	2	6	1	0	47	0	384	5	76	528	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								192			184	
pX, platoon unblocked	0.94	0.94	0.95	0.94	0.94	0.92	0.95			0.92		
vC, conflicting volume	1114	1069	264	810	1066	386	528			389		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	900	853	127	577	850	288	404			290		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	7.1	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	92	99	99	100	100	93	100			93		
cM capacity (veh/h)	196	263	863	357	264	635	1110			1145		

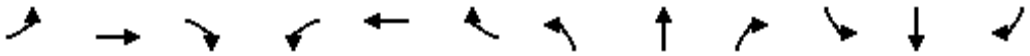
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	24	48	389	252	352
Volume Left	16	1	0	76	0
Volume Right	6	47	5	0	0
cSH	250	625	1700	1145	1700
Volume to Capacity	0.10	0.08	0.23	0.07	0.21
Queue Length 95th (m)	2.4	1.9	0.0	1.6	0.0
Control Delay (s)	21.0	11.2	0.0	3.0	0.0
Lane LOS	C	B		A	
Approach Delay (s)	21.0	11.2	0.0	1.2	
Approach LOS	C	B			

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	49.9%	ICU Level of Service		A
Analysis Period (min)	15			



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	31	128	439	445
v/c Ratio	0.04	0.22	0.55	0.54
Control Delay	4.2	8.2	15.9	16.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.2	8.2	15.9	16.6
Queue Length 50th (m)	0.2	4.5	14.0	15.0
Queue Length 95th (m)	3.2	12.9	22.8	23.8
Internal Link Dist (m)	111.3	124.3	159.9	149.4
Turn Bay Length (m)				
Base Capacity (vph)	894	660	1398	1453
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.03	0.19	0.31	0.31

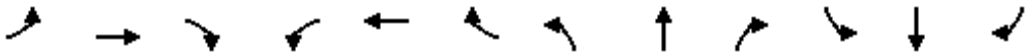
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	3	23	98	2	11	8	337	37	5	381	1
Future Volume (vph)	2	3	23	98	2	11	8	337	37	5	381	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2			6.2			5.9			5.9	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.89			0.99			0.99			1.00	
Flt Protected		1.00			0.96			1.00			1.00	
Satd. Flow (prot)		1698			1613			3185			3320	
Flt Permitted		0.99			0.74			0.94			0.94	
Satd. Flow (perm)		1680			1247			2992			3139	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	2	3	26	113	2	13	9	387	43	6	438	1
RTOR Reduction (vph)	0	14	0	0	7	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	17	0	0	121	0	0	421	0	0	445	0
Heavy Vehicles (%)	0%	0%	0%	13%	0%	10%	13%	13%	11%	0%	10%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		20.0			20.0			11.3			11.3	
Effective Green, g (s)		20.0			20.0			11.3			11.3	
Actuated g/C Ratio		0.46			0.46			0.26			0.26	
Clearance Time (s)		6.2			6.2			5.9			5.9	
Vehicle Extension (s)		5.0			5.0			2.5			2.5	
Lane Grp Cap (vph)		774			574			779			817	
v/s Ratio Prot												
v/s Ratio Perm		0.01			c0.10			0.14			c0.14	
v/c Ratio		0.02			0.21			0.54			0.54	
Uniform Delay, d1		6.4			7.0			13.8			13.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.0			0.4			0.6			0.6	
Delay (s)		6.4			7.4			14.4			14.4	
Level of Service		A			A			B			B	
Approach Delay (s)		6.4			7.4			14.4			14.4	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	43.4	Sum of lost time (s)	12.1
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection Sign configuration not allowed in HCM analysis.

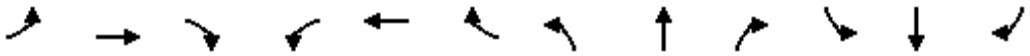


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	238	7	8	126	3	12	7	43	1	0	4
Future Volume (Veh/h)	4	238	7	8	126	3	12	7	43	1	0	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	5	290	9	10	154	4	15	9	52	1	0	5
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	158			299			486	482	294	537	485	156
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	158			299			486	482	294	537	485	156
tC, single (s)	4.1			4.1			7.4	6.7	6.2	7.1	6.5	7.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.8	4.1	3.3	3.5	4.0	4.2
p0 queue free %	100			99			97	98	93	100	100	99
cM capacity (veh/h)	1434			1274			436	460	738	416	479	686

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	304	168	76	6
Volume Left	5	10	15	1
Volume Right	9	4	52	5
cSH	1434	1274	611	619
Volume to Capacity	0.00	0.01	0.12	0.01
Queue Length 95th (m)	0.1	0.2	3.2	0.2
Control Delay (s)	0.2	0.5	11.7	10.9
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	0.5	11.7	10.9
Approach LOS			B	B

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	25.7%	ICU Level of Service	A	
Analysis Period (min)	15			

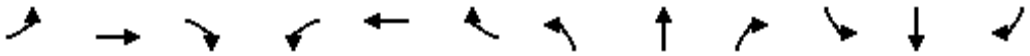
Intersection Sign configuration not allowed in HCM analysis.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	1	5	2	23	1	299	0	20	148	10
Future Volume (Veh/h)	6	0	1	5	2	23	1	299	0	20	148	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	7	0	1	6	2	27	1	348	0	23	172	12
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	602	574	178	575	580	348	184			348		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	602	574	178	575	580	348	184			348		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	100	99	100	96	100			98		
cM capacity (veh/h)	391	423	870	425	420	700	1403			1194		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	35	349	207
Volume Left	7	6	1	23
Volume Right	1	27	0	12
cSH	420	609	1403	1194
Volume to Capacity	0.02	0.06	0.00	0.02
Queue Length 95th (m)	0.4	1.4	0.0	0.4
Control Delay (s)	13.7	11.3	0.0	1.1
Lane LOS	B	B	A	A
Approach Delay (s)	13.7	11.3	0.0	1.1
Approach LOS	B	B		

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	33.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	2	0	5	0	1	0	313	1	3	190	5
Future Volume (vph)	9	2	0	5	0	1	0	313	1	3	190	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	11	2	0	6	0	1	0	368	1	4	224	6

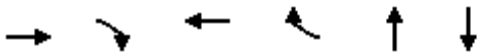
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	13	7	369	234
Volume Left (vph)	11	6	0	4
Volume Right (vph)	0	1	1	6
Hadj (s)	0.47	0.38	0.07	0.09
Departure Headway (s)	5.7	5.6	4.3	4.4
Degree Utilization, x	0.02	0.01	0.44	0.29
Capacity (veh/h)	563	568	830	793
Control Delay (s)	8.8	8.7	10.5	9.2
Approach Delay (s)	8.8	8.7	10.5	9.2
Approach LOS	A	A	B	A

Intersection Summary				
Delay	10.0			
Level of Service	A			
Intersection Capacity Utilization	26.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	360	30	16	396	15	28
Future Volume (Veh/h)	360	30	16	396	15	28
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	396	33	18	435	16	31
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				336		
pX, platoon unblocked						
vC, conflicting volume			429		884	412
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			429		884	412
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			98		95	95
cM capacity (veh/h)			1141		305	644

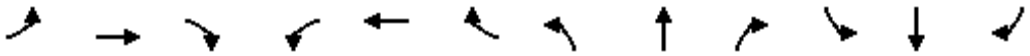
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	429	453	47
Volume Left	0	18	16
Volume Right	33	0	31
cSH	1700	1141	467
Volume to Capacity	0.25	0.02	0.10
Queue Length 95th (m)	0.0	0.4	2.5
Control Delay (s)	0.0	0.5	13.6
Lane LOS		A	B
Approach Delay (s)	0.0	0.5	13.6
Approach LOS			B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	348	42	317	119	91	180
v/c Ratio	0.37	0.05	0.35	0.12	0.23	0.45
Control Delay	9.3	1.6	9.2	2.4	12.8	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	1.6	9.2	2.4	12.8	15.0
Queue Length 50th (m)	15.3	0.0	13.7	0.0	4.4	8.7
Queue Length 95th (m)	32.5	2.0	29.9	5.3	11.6	19.7
Internal Link Dist (m)	312.0		313.1		280.6	74.2
Turn Bay Length (m)		45.0		45.0		
Base Capacity (vph)	964	946	917	985	606	608
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.04	0.35	0.12	0.15	0.30

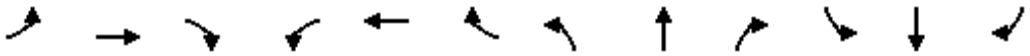
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	285	36	22	247	101	40	24	14	71	42	40
Future Volume (vph)	11	285	36	22	247	101	40	24	14	71	42	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2	6.2		6.2	6.2		6.2			6.2	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.96	
Flt Protected		1.00	1.00		1.00	1.00		0.97			0.98	
Satd. Flow (prot)		1693	1585		1654	1617		1828			1797	
Flt Permitted		0.98	1.00		0.95	1.00		0.81			0.81	
Satd. Flow (perm)		1668	1585		1586	1617		1512			1482	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	13	335	42	26	291	119	47	28	16	84	49	47
RTOR Reduction (vph)	0	0	20	0	0	57	0	13	0	0	31	0
Lane Group Flow (vph)	0	348	22	0	317	62	0	78	0	0	149	0
Heavy Vehicles (%)	0%	2%	3%	5%	4%	1%	0%	0%	0%	0%	0%	3%
Parking (#/hr)		0			0							
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)		23.3	23.3		23.3	23.3		8.7			8.7	
Effective Green, g (s)		23.3	23.3		23.3	23.3		8.7			8.7	
Actuated g/C Ratio		0.52	0.52		0.52	0.52		0.20			0.20	
Clearance Time (s)		6.2	6.2		6.2	6.2		6.2			6.2	
Vehicle Extension (s)		5.0	5.0		5.0	5.0		2.5			2.5	
Lane Grp Cap (vph)		875	831		832	848		296			290	
v/s Ratio Prot												
v/s Ratio Perm		c0.21	0.01		0.20	0.04		0.05			c0.10	
v/c Ratio		0.40	0.03		0.38	0.07		0.26			0.51	
Uniform Delay, d1		6.3	5.1		6.3	5.2		15.1			16.0	
Progression Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.6	0.0		0.6	0.1		0.3			1.1	
Delay (s)		7.0	5.1		6.9	5.3		15.5			17.1	
Level of Service		A	A		A	A		B			B	
Approach Delay (s)		6.8			6.4			15.5			17.1	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	44.4	Sum of lost time (s)	12.4
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

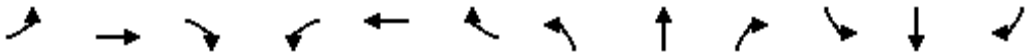
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	387	7	5	324	12	4	0	9	11	3	8
Future Volume (Veh/h)	14	387	7	5	324	12	4	0	9	11	3	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	17	461	8	6	386	14	5	0	11	13	4	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		337			245							
pX, platoon unblocked	0.97						0.97	0.97		0.97	0.97	0.97
vC, conflicting volume	400			469			916	911	465	915	908	393
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	372			469			901	896	465	900	893	364
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			98	100	98	95	99	99
cM capacity (veh/h)	1168			1103			244	269	602	247	270	668

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	486	406	16	27
Volume Left	17	6	5	13
Volume Right	8	14	11	10
cSH	1168	1103	413	327
Volume to Capacity	0.01	0.01	0.04	0.08
Queue Length 95th (m)	0.3	0.1	0.9	2.0
Control Delay (s)	0.4	0.2	14.1	17.0
Lane LOS	A	A	B	C
Approach Delay (s)	0.4	0.2	14.1	17.0
Approach LOS			B	C

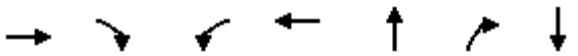
Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	38.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	375	9	7	333	6	1	4	5	8	2	12
Future Volume (Veh/h)	22	375	9	7	333	6	1	4	5	8	2	12
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	25	421	10	8	374	7	1	4	6	9	2	13
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					126							
pX, platoon unblocked	0.93						0.93	0.93		0.93	0.93	0.93
vC, conflicting volume	381			431			884	873	426	878	874	378
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	298			431			838	826	426	831	828	294
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	98			99			100	99	99	97	99	98
cM capacity (veh/h)	1160			1139			256	280	633	260	279	679

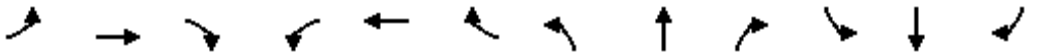
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	456	389	11	24
Volume Left	25	8	1	9
Volume Right	10	7	6	13
cSH	1160	1139	397	394
Volume to Capacity	0.02	0.01	0.03	0.06
Queue Length 95th (m)	0.5	0.2	0.6	1.5
Control Delay (s)	0.7	0.2	14.3	14.7
Lane LOS	A	A	B	B
Approach Delay (s)	0.7	0.2	14.3	14.7
Approach LOS			B	B

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	41.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	352	56	221	280	85	243	70
v/c Ratio	0.37	0.06	0.42	0.30	0.22	0.37	0.16
Control Delay	11.4	2.7	13.2	10.2	22.7	4.9	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.4	2.7	13.2	10.2	22.7	4.9	17.1
Queue Length 50th (m)	27.7	0.0	17.4	20.2	9.6	0.0	5.7
Queue Length 95th (m)	44.7	4.5	39.2	42.4	20.3	14.9	14.7
Internal Link Dist (m)	101.5			191.0	51.6		138.0
Turn Bay Length (m)		40.0					
Base Capacity (vph)	939	933	531	930	379	658	448
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.06	0.42	0.30	0.22	0.37	0.16

Intersection Summary

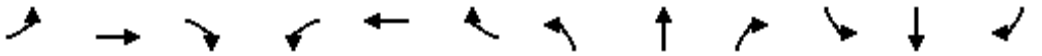


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	316	51	201	242	13	67	10	221	28	19	16
Future Volume (vph)	5	316	51	201	242	13	67	10	221	28	19	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	5.5	5.5	5.5			5.5	5.5		5.5	
Lane Util. Factor		1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt		1.00	0.85	1.00	0.99			1.00	0.85		0.97	
Flt Protected		1.00	1.00	0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)		1694	1633	1772	1668			1629	1601		1604	
Flt Permitted		1.00	1.00	0.51	1.00			0.73	1.00		0.87	
Satd. Flow (perm)		1689	1633	954	1668			1239	1601		1424	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	5	347	56	221	266	14	74	11	243	31	21	18
RTOR Reduction (vph)	0	0	25	0	2	0	0	0	169	0	12	0
Lane Group Flow (vph)	0	352	31	221	278	0	0	85	74	0	58	0
Heavy Vehicles (%)	0%	2%	0%	3%	3%	0%	2%	0%	2%	0%	0%	7%
Parking (#/hr)		0			0			0			0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)		44.5	44.5	44.5	44.5			24.5	24.5		24.5	
Effective Green, g (s)		44.5	44.5	44.5	44.5			24.5	24.5		24.5	
Actuated g/C Ratio		0.56	0.56	0.56	0.56			0.31	0.31		0.31	
Clearance Time (s)		5.5	5.5	5.5	5.5			5.5	5.5		5.5	
Lane Grp Cap (vph)		939	908	530	927			379	490		436	
v/s Ratio Prot					0.17							
v/s Ratio Perm		0.21	0.02	c0.23				c0.07	0.05		0.04	
v/c Ratio		0.37	0.03	0.42	0.30			0.22	0.15		0.13	
Uniform Delay, d1		10.0	8.0	10.3	9.5			20.7	20.2		20.1	
Progression Factor		1.00	1.00	1.01	0.99			1.00	1.00		1.00	
Incremental Delay, d2		1.1	0.1	2.2	0.7			1.4	0.7		0.6	
Delay (s)		11.1	8.1	12.6	10.1			22.0	20.8		20.7	
Level of Service		B	A	B	B			C	C		C	
Approach Delay (s)		10.7			11.2			21.2			20.7	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

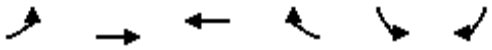
Lane Group	EBL	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	528	77	103	143	2	115	392
v/c Ratio	0.67	0.08	0.10	0.34	0.00	0.26	0.56
Control Delay	12.7	3.6	6.0	26.8	0.0	25.3	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.7	3.6	6.0	26.8	0.0	25.3	6.2
Queue Length 50th (m)	26.8	1.4	5.0	17.6	0.0	13.8	0.0
Queue Length 95th (m)	47.3	6.6	10.5	32.0	0.0	26.2	17.9
Internal Link Dist (m)		191.0	154.1	180.0		119.0	
Turn Bay Length (m)					15.0		20.0
Base Capacity (vph)	785	951	1014	415	454	434	702
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.08	0.10	0.34	0.00	0.26	0.56

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	465	40	28	1	74	16	24	102	2	14	87	345
Future Volume (vph)	465	40	28	1	74	16	24	102	2	14	87	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5			5.6			5.6	5.6		5.5	5.5
Lane Util. Factor	1.00	1.00			1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.94			0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99	1.00		0.99	1.00
Satd. Flow (prot)	1807	1566			1687			1685	1633		1717	1570
Flt Permitted	0.69	1.00			1.00			0.93	1.00		0.95	1.00
Satd. Flow (perm)	1313	1566			1687			1584	1633		1646	1570
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	528	45	32	1	84	18	27	116	2	16	99	392
RTOR Reduction (vph)	0	13	0	0	7	0	0	0	1	0	0	289
Lane Group Flow (vph)	528	64	0	0	96	0	0	143	1	0	115	103
Heavy Vehicles (%)	1%	6%	0%	0%	0%	0%	0%	2%	0%	0%	0%	4%
Parking (#/hr)		0			0			0			0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	47.9	47.9			47.8			21.0	21.0		21.1	21.1
Effective Green, g (s)	47.9	47.9			47.8			21.0	21.0		21.1	21.1
Actuated g/C Ratio	0.60	0.60			0.60			0.26	0.26		0.26	0.26
Clearance Time (s)	5.5	5.5			5.6			5.6	5.6		5.5	5.5
Lane Grp Cap (vph)	786	937			1007			415	428		434	414
v/s Ratio Prot		0.04										
v/s Ratio Perm	c0.40				0.06			c0.09	0.00		0.07	0.07
v/c Ratio	0.67	0.07			0.10			0.34	0.00		0.26	0.25
Uniform Delay, d1	10.8	6.7			6.9			23.9	21.8		23.3	23.2
Progression Factor	0.72	0.76			1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	4.3	0.1			0.2			2.3	0.0		1.5	1.4
Delay (s)	12.0	5.2			7.1			26.2	21.8		24.8	24.7
Level of Service	B	A			A			C	C		C	C
Approach Delay (s)		11.2			7.1			26.1			24.7	
Approach LOS		B			A			C			C	

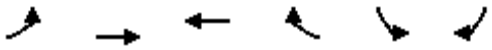
Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	4	41	2	34
Future Volume (Veh/h)	0	0	4	41	2	34
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	0	5	51	2	42
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	56				30	30
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	56				30	30
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	96
cM capacity (veh/h)	1562				989	1050

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	0	56	44
Volume Left	0	0	2
Volume Right	0	51	42
cSH	1700	1700	1047
Volume to Capacity	0.00	0.03	0.04
Queue Length 95th (m)	0.0	0.0	1.0
Control Delay (s)	0.0	0.0	8.6
Lane LOS			A
Approach Delay (s)	0.0	0.0	8.6
Approach LOS			A

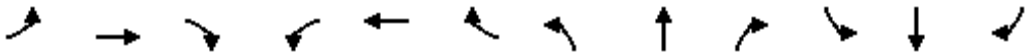
Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	47	41	25	71	5
Future Volume (Veh/h)	8	47	41	25	71	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	11	63	55	33	95	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	88				156	72
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	88				156	72
tC, single (s)	4.1				6.4	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.5
p0 queue free %	99				89	99
cM capacity (veh/h)	1520				829	943

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	74	88	102
Volume Left	11	0	95
Volume Right	0	33	7
cSH	1520	1700	836
Volume to Capacity	0.01	0.05	0.12
Queue Length 95th (m)	0.2	0.0	3.2
Control Delay (s)	1.1	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	1.1	0.0	9.9
Approach LOS			A

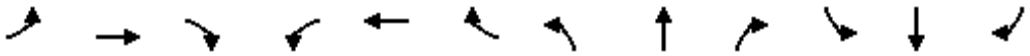
Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	20.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	4	98	2	0	7	50	288	2	2	332	18
Future Volume (Veh/h)	20	4	98	2	0	7	50	288	2	2	332	18
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	22	4	109	2	0	8	56	320	2	2	369	20
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	824	817	379	927	826	321	389			322		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	824	817	379	927	826	321	389			322		
tC, single (s)	7.1	6.5	6.2	8.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	4.4	4.0	3.3	2.2			2.2		
p0 queue free %	92	99	84	99	100	99	95			100		
cM capacity (veh/h)	280	298	672	136	294	724	1170			1249		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	135	10	378	391
Volume Left	22	2	56	2
Volume Right	109	8	2	20
cSH	531	388	1170	1249
Volume to Capacity	0.25	0.03	0.05	0.00
Queue Length 95th (m)	7.6	0.6	1.1	0.0
Control Delay (s)	14.1	14.5	1.6	0.1
Lane LOS	B	B	A	A
Approach Delay (s)	14.1	14.5	1.6	0.1
Approach LOS	B	B		

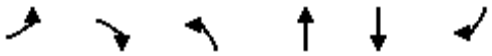
Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	55.8%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	23	23	62	32	18	9	258	47	28	265	9
Future Volume (Veh/h)	3	23	23	62	32	18	9	258	47	28	265	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	3	25	25	67	34	19	10	277	51	30	285	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)											157	
pX, platoon unblocked	0.97	0.97	0.97	0.97	0.97		0.97					
vC, conflicting volume	708	698	290	710	678	302	295			328		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	685	674	254	686	653	302	259			328		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.3		
p0 queue free %	99	93	97	79	91	97	99			97		
cM capacity (veh/h)	313	356	767	316	366	742	1279			1199		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	53	120	338	325
Volume Left	3	67	10	30
Volume Right	25	19	51	10
cSH	471	363	1279	1199
Volume to Capacity	0.11	0.33	0.01	0.03
Queue Length 95th (m)	2.9	10.8	0.2	0.6
Control Delay (s)	13.6	19.8	0.3	1.0
Lane LOS	B	C	A	A
Approach Delay (s)	13.6	19.8	0.3	1.0
Approach LOS	B	C		

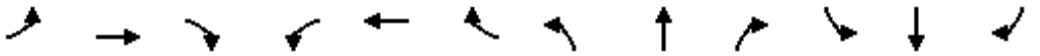
Intersection Summary				
Average Delay	4.2			
Intersection Capacity Utilization	47.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	5	574	453	50
Future Volume (Veh/h)	0	0	5	574	453	50
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	0	6	675	533	59
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				143	233	
pX, platoon unblocked	0.90	0.81	0.81			
vC, conflicting volume	1250	562	592			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	752	341	377			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	342	571	964			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	681	592
Volume Left	0	6	0
Volume Right	0	0	59
cSH	1700	964	1700
Volume to Capacity	0.00	0.01	0.35
Queue Length 95th (m)	0.0	0.1	0.0
Control Delay (s)	0.0	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	0.0	0.2	0.0
Approach LOS	A		

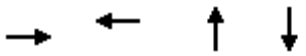
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	37.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	0	10	0	0	93	0	544	14	37	477	0
Future Volume (Veh/h)	36	0	10	0	0	93	0	544	14	37	477	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	41	0	11	0	0	106	0	618	16	42	542	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								192			184	
pX, platoon unblocked	0.87	0.87	0.93	0.87	0.87	0.84	0.93			0.84		
vC, conflicting volume	1358	1260	271	992	1252	626	542			634		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1040	928	67	621	918	459	358			469		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	7.0	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	66	100	99	100	100	77	100			95		
cM capacity (veh/h)	122	225	920	313	228	459	1127			909		

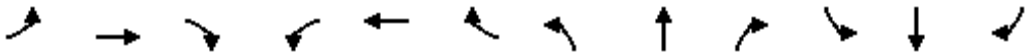
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	52	106	634	223	361
Volume Left	41	0	0	42	0
Volume Right	11	106	16	0	0
cSH	149	459	1700	909	1700
Volume to Capacity	0.35	0.23	0.37	0.05	0.21
Queue Length 95th (m)	10.9	6.7	0.0	1.1	0.0
Control Delay (s)	41.6	15.2	0.0	2.1	0.0
Lane LOS	E	C		A	
Approach Delay (s)	41.6	15.2	0.0	0.8	
Approach LOS	E	C			

Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	57.3%	ICU Level of Service	B	
Analysis Period (min)	15			



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	32	84	783	516
v/c Ratio	0.04	0.14	0.72	0.48
Control Delay	6.0	8.8	17.2	14.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.0	8.8	17.2	14.1
Queue Length 50th (m)	0.3	3.0	28.1	17.7
Queue Length 95th (m)	4.3	10.7	41.1	26.8
Internal Link Dist (m)	111.3	124.3	159.9	149.4
Turn Bay Length (m)				
Base Capacity (vph)	753	632	1494	1492
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.13	0.52	0.35

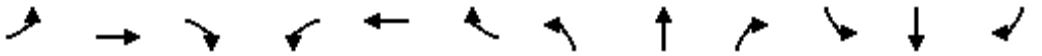
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	5	22	53	1	20	31	556	102	14	439	1
Future Volume (vph)	1	5	22	53	1	20	31	556	102	14	439	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2			6.2			5.9			5.9	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.89			0.96			0.98			1.00	
Flt Protected		1.00			0.97			1.00			1.00	
Satd. Flow (prot)		1716			1714			3517			3541	
Flt Permitted		0.99			0.81			0.91			0.92	
Satd. Flow (perm)		1709			1431			3201			3246	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	1	6	25	60	1	23	35	632	116	16	499	1
RTOR Reduction (vph)	0	15	0	0	13	0	0	29	0	0	0	0
Lane Group Flow (vph)	0	17	0	0	71	0	0	754	0	0	516	0
Heavy Vehicles (%)	0%	0%	0%	4%	0%	5%	0%	1%	3%	0%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		20.1			20.1			16.1			16.1	
Effective Green, g (s)		20.1			20.1			16.1			16.1	
Actuated g/C Ratio		0.42			0.42			0.33			0.33	
Clearance Time (s)		6.2			6.2			5.9			5.9	
Vehicle Extension (s)		5.0			5.0			2.5			2.5	
Lane Grp Cap (vph)		711			595			1067			1082	
v/s Ratio Prot												
v/s Ratio Perm		0.01			c0.05			c0.24			0.16	
v/c Ratio		0.02			0.12			0.71			0.48	
Uniform Delay, d1		8.3			8.7			14.0			12.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.0			0.2			2.0			0.2	
Delay (s)		8.3			8.8			16.0			13.0	
Level of Service		A			A			B			B	
Approach Delay (s)		8.3			8.8			16.0			13.0	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	48.3	Sum of lost time (s)	12.1
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection Sign configuration not allowed in HCM analysis.

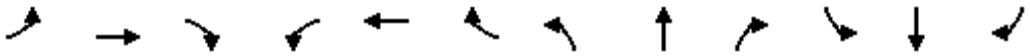


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	192	7	32	280	7	12	3	30	4	4	5
Future Volume (Veh/h)	4	192	7	32	280	7	12	3	30	4	4	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	4	216	8	36	315	8	13	3	34	4	4	6
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	323			224			627	623	220	654	623	319
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	323			224			627	623	220	654	623	319
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			97	99	96	99	99	99
cM capacity (veh/h)	1248			1357			384	393	815	356	393	726

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	228	359	50	14
Volume Left	4	36	13	4
Volume Right	8	8	34	6
cSH	1248	1357	601	472
Volume to Capacity	0.00	0.03	0.08	0.03
Queue Length 95th (m)	0.1	0.6	2.1	0.7
Control Delay (s)	0.2	1.0	11.5	12.9
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.0	11.5	12.9
Approach LOS			B	B

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	41.0%	ICU Level of Service	A	
Analysis Period (min)	15			

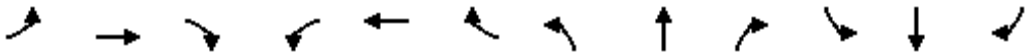
Intersection Sign configuration not allowed in HCM analysis.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	4	0	19	3	32	1	248	26	27	307	27
Future Volume (Veh/h)	5	4	0	19	3	32	1	248	26	27	307	27
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	4	0	20	3	34	1	261	27	28	323	28
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	705	683	337	672	684	274	351			288		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	705	683	337	672	684	274	351			288		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	99	100	94	99	96	100			98		
cM capacity (veh/h)	330	366	710	363	365	769	1219			1286		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	9	57	289	379
Volume Left	5	20	1	28
Volume Right	0	34	27	28
cSH	345	530	1219	1286
Volume to Capacity	0.03	0.11	0.00	0.02
Queue Length 95th (m)	0.6	2.7	0.0	0.5
Control Delay (s)	15.7	12.6	0.0	0.8
Lane LOS	C	B	A	A
Approach Delay (s)	15.7	12.6	0.0	0.8
Approach LOS	C	B		

Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	47.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	2	0	2	7	3	5	4	289	4	5	344	8
Future Volume (vph)	2	0	2	7	3	5	4	289	4	5	344	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	2	0	2	8	3	5	4	318	4	5	378	9

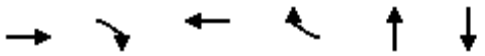
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	4	16	326	392
Volume Left (vph)	2	8	4	5
Volume Right (vph)	2	5	4	9
Hadj (s)	-0.20	-0.09	0.04	0.01
Departure Headway (s)	5.3	5.4	4.4	4.3
Degree Utilization, x	0.01	0.02	0.40	0.47
Capacity (veh/h)	589	584	803	820
Control Delay (s)	8.3	8.5	10.3	11.0
Approach Delay (s)	8.3	8.5	10.3	11.0
Approach LOS	A	A	B	B

Intersection Summary				
Delay	10.6			
Level of Service	B			
Intersection Capacity Utilization	31.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	486	16	16	335	16	30
Future Volume (Veh/h)	486	16	16	335	16	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	559	18	18	385	18	34
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				336		
pX, platoon unblocked						
vC, conflicting volume			577		989	568
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			577		989	568
tC, single (s)			4.2		6.4	6.3
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.4
p0 queue free %			98		93	93
cM capacity (veh/h)			972		271	513

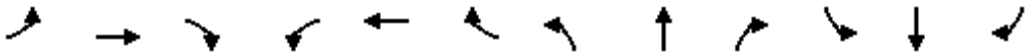
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	577	403	52
Volume Left	0	18	18
Volume Right	18	0	34
cSH	1700	972	392
Volume to Capacity	0.34	0.02	0.13
Queue Length 95th (m)	0.0	0.4	3.5
Control Delay (s)	0.0	0.6	15.6
Lane LOS		A	C
Approach Delay (s)	0.0	0.6	15.6
Approach LOS			C

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	488	15	317	64	80	68
v/c Ratio	0.45	0.01	0.29	0.06	0.23	0.23
Control Delay	8.1	0.0	6.5	2.1	13.8	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.1	0.0	6.5	2.1	13.8	16.1
Queue Length 50th (m)	24.8	0.0	13.9	0.0	3.4	3.6
Queue Length 95th (m)	43.7	0.0	25.0	3.3	11.7	11.5
Internal Link Dist (m)	312.0		313.1		280.6	74.2
Turn Bay Length (m)		45.0		45.0		
Base Capacity (vph)	1123	1122	1124	1187	570	500
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.01	0.28	0.05	0.14	0.14

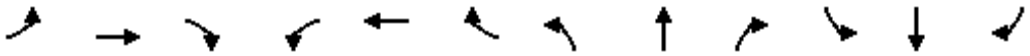
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	405	13	9	264	55	25	23	21	38	13	8
Future Volume (vph)	15	405	13	9	264	55	25	23	21	38	13	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2	6.2		6.2	6.2		6.2			6.2	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.98			0.97	
Satd. Flow (prot)		1557	1512		1560	1601		1664			1649	
Flt Permitted		0.98	1.00		0.98	1.00		0.85			0.76	
Satd. Flow (perm)		1536	1512		1537	1601		1444			1288	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	17	471	15	10	307	64	29	27	24	44	15	9
RTOR Reduction (vph)	0	0	6	0	0	25	0	21	0	0	8	0
Lane Group Flow (vph)	0	488	9	0	317	39	0	59	0	0	60	0
Heavy Vehicles (%)	7%	11%	8%	0%	11%	2%	16%	0%	10%	14%	8%	0%
Parking (#/hr)		0			0							
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)		28.9	28.9		28.9	28.9		5.7			5.7	
Effective Green, g (s)		28.9	28.9		28.9	28.9		5.7			5.7	
Actuated g/C Ratio		0.61	0.61		0.61	0.61		0.12			0.12	
Clearance Time (s)		6.2	6.2		6.2	6.2		6.2			6.2	
Vehicle Extension (s)		5.0	5.0		5.0	5.0		2.5			2.5	
Lane Grp Cap (vph)		944	929		945	984		175			156	
v/s Ratio Prot												
v/s Ratio Perm		c0.32	0.01		0.21	0.02		0.04			c0.05	
v/c Ratio		0.52	0.01		0.34	0.04		0.34			0.39	
Uniform Delay, d1		5.1	3.5		4.4	3.6		18.9			19.0	
Progression Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Incremental Delay, d2		1.0	0.0		0.4	0.0		0.8			1.2	
Delay (s)		6.1	3.5		4.8	3.6		19.8			20.2	
Level of Service		A	A		A	A		B			C	
Approach Delay (s)		6.0			4.6			19.8			20.2	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	47.0	Sum of lost time (s)	12.4
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		

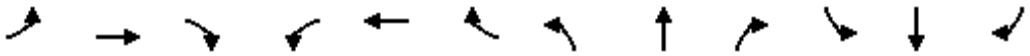
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	387	4	4	344	8	4	0	5	11	4	15
Future Volume (Veh/h)	15	387	4	4	344	8	4	0	5	11	4	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	17	440	5	5	391	9	5	0	6	12	5	17
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		337			245							
pX, platoon unblocked	0.98						0.98	0.98		0.98	0.98	0.98
vC, conflicting volume	400			445			902	886	442	888	884	396
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	382			445			891	876	442	878	874	377
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.2	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.6	4.0	3.4
p0 queue free %	98			100			98	100	99	95	98	97
cM capacity (veh/h)	1131			1126			247	279	619	250	280	633

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	462	405	11	34
Volume Left	17	5	5	12
Volume Right	5	9	6	17
cSH	1131	1126	367	366
Volume to Capacity	0.02	0.00	0.03	0.09
Queue Length 95th (m)	0.3	0.1	0.7	2.3
Control Delay (s)	0.5	0.1	15.1	15.8
Lane LOS	A	A	C	C
Approach Delay (s)	0.5	0.1	15.1	15.8
Approach LOS			C	C

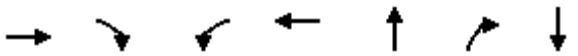
Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	39.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	369	8	4	368	8	2	3	2	8	4	10
Future Volume (Veh/h)	23	369	8	4	368	8	2	3	2	8	4	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	29	461	10	5	460	10	2	4	2	10	5	12
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					126							
pX, platoon unblocked	0.90						0.90	0.90		0.90	0.90	0.90
vC, conflicting volume	470			471			1014	1004	466	1003	1004	465
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	353			471			958	948	466	947	948	347
tC, single (s)	4.3			4.1			7.1	6.5	6.2	7.1	7.2	6.3
tC, 2 stage (s)												
tF (s)	2.4			2.2			3.5	4.0	3.3	3.5	4.7	3.4
p0 queue free %	97			100			99	98	100	95	97	98
cM capacity (veh/h)	1008			1101			200	228	601	209	172	609

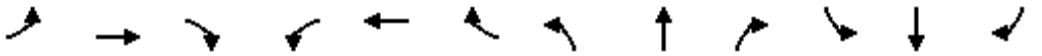
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	500	475	8	27
Volume Left	29	5	2	10
Volume Right	10	10	2	12
cSH	1008	1101	260	280
Volume to Capacity	0.03	0.00	0.03	0.10
Queue Length 95th (m)	0.7	0.1	0.7	2.4
Control Delay (s)	0.8	0.1	19.3	19.2
Lane LOS	A	A	C	C
Approach Delay (s)	0.8	0.1	19.3	19.2
Approach LOS			C	C

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	44.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	378	38	178	380	87	263	64
v/c Ratio	0.40	0.04	0.51	0.39	0.26	0.46	0.20
Control Delay	9.6	2.4	15.1	9.2	26.7	6.3	24.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	2.4	15.1	9.2	26.7	6.3	24.0
Queue Length 50th (m)	26.5	0.0	12.2	23.8	10.6	0.0	7.0
Queue Length 95th (m)	41.9	3.0	37.8	50.2	21.8	15.7	16.3
Internal Link Dist (m)	101.5			191.0	51.6		138.0
Turn Bay Length (m)		40.0					
Base Capacity (vph)	935	899	350	970	330	575	314
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.04	0.51	0.39	0.26	0.46	0.20

Intersection Summary

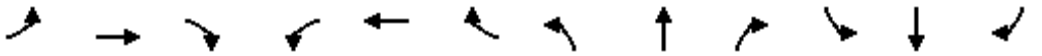


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	324	33	157	320	14	39	38	231	30	21	5
Future Volume (vph)	9	324	33	157	320	14	39	38	231	30	21	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	5.5	5.5	5.5			5.5	5.5		5.5	
Lane Util. Factor		1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt		1.00	0.85	1.00	0.99			1.00	0.85		0.99	
Flt Protected		1.00	1.00	0.95	1.00			0.98	1.00		0.97	
Satd. Flow (prot)		1542	1445	1074	1582			1539	1512		1450	
Flt Permitted		0.99	1.00	0.51	1.00			0.84	1.00		0.83	
Satd. Flow (perm)		1527	1445	573	1582			1321	1512		1239	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	10	368	38	178	364	16	44	43	262	34	24	6
RTOR Reduction (vph)	0	0	15	0	2	0	0	0	197	0	5	0
Lane Group Flow (vph)	0	378	23	178	378	0	0	87	66	0	60	0
Heavy Vehicles (%)	12%	12%	13%	70%	9%	0%	13%	6%	8%	17%	10%	20%
Parking (#/hr)		0			0			0			0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)		49.0	49.0	49.0	49.0			20.0	20.0		20.0	
Effective Green, g (s)		49.0	49.0	49.0	49.0			20.0	20.0		20.0	
Actuated g/C Ratio		0.61	0.61	0.61	0.61			0.25	0.25		0.25	
Clearance Time (s)		5.5	5.5	5.5	5.5			5.5	5.5		5.5	
Lane Grp Cap (vph)		935	885	350	968			330	378		309	
v/s Ratio Prot					0.24							
v/s Ratio Perm		0.25	0.02	c0.31				c0.07	0.04		0.05	
v/c Ratio		0.40	0.03	0.51	0.39			0.26	0.17		0.19	
Uniform Delay, d1		8.0	6.1	8.7	7.9			24.1	23.5		23.6	
Progression Factor		1.00	1.00	1.06	1.02			1.00	1.00		1.00	
Incremental Delay, d2		1.3	0.1	4.6	1.0			1.9	1.0		1.4	
Delay (s)		9.3	6.2	13.8	9.1			26.0	24.5		25.0	
Level of Service		A	A	B	A			C	C		C	
Approach Delay (s)		9.0			10.6			24.9			25.0	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

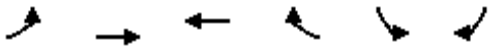
Lane Group	EBL	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	453	107	107	60	3	114	446
v/c Ratio	0.67	0.11	0.11	0.15	0.01	0.25	0.60
Control Delay	14.2	5.2	7.1	22.9	0.0	24.0	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.2	5.2	7.1	22.9	0.0	24.0	6.4
Queue Length 50th (m)	27.8	4.1	6.0	6.8	0.0	13.3	0.0
Queue Length 95th (m)	48.1	10.9	12.2	15.4	0.0	25.6	19.4
Internal Link Dist (m)		191.0	154.1	180.0		119.0	
Turn Bay Length (m)					15.0		20.0
Base Capacity (vph)	680	948	949	406	482	461	741
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.11	0.11	0.15	0.01	0.25	0.60

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	403	73	22	2	84	10	10	44	3	3	99	397
Future Volume (vph)	403	73	22	2	84	10	10	44	3	3	99	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5			5.6			5.6	5.6		5.5	5.5
Lane Util. Factor	1.00	1.00			1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.96			0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99	1.00		1.00	1.00
Satd. Flow (prot)	1615	1612			1631			1513	1633		1647	1498
Flt Permitted	0.69	1.00			1.00			0.95	1.00		1.00	1.00
Satd. Flow (perm)	1170	1612			1629			1449	1633		1641	1498
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	453	82	25	2	94	11	11	49	3	3	111	446
RTOR Reduction (vph)	0	10	0	0	5	0	0	0	2	0	0	321
Lane Group Flow (vph)	453	97	0	0	102	0	0	60	1	0	114	125
Heavy Vehicles (%)	13%	3%	5%	50%	4%	0%	10%	14%	0%	0%	5%	9%
Parking (#/hr)		0			0			0			0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	46.5	46.5			46.4			22.4	22.4		22.5	22.5
Effective Green, g (s)	46.5	46.5			46.4			22.4	22.4		22.5	22.5
Actuated g/C Ratio	0.58	0.58			0.58			0.28	0.28		0.28	0.28
Clearance Time (s)	5.5	5.5			5.6			5.6	5.6		5.5	5.5
Lane Grp Cap (vph)	680	936			944			405	457		461	421
v/s Ratio Prot		0.06										
v/s Ratio Perm	c0.39				0.06			0.04	0.00		0.07	c0.08
v/c Ratio	0.67	0.10			0.11			0.15	0.00		0.25	0.30
Uniform Delay, d1	11.4	7.5			7.5			21.6	20.7		22.2	22.6
Progression Factor	0.77	0.83			1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	4.7	0.2			0.2			0.8	0.0		1.3	1.8
Delay (s)	13.5	6.4			7.8			22.4	20.8		23.5	24.4
Level of Service	B	A			A			C	C		C	C
Approach Delay (s)		12.2			7.8			22.3			24.2	
Approach LOS		B			A			C			C	

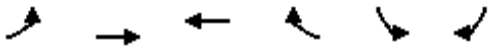
Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	3	1	2	16	33	0
Future Volume (Veh/h)	3	1	2	16	33	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	4	1	3	23	46	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	26				24	14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	26				24	14
tC, single (s)	4.1				6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	100				95	100
cM capacity (veh/h)	1601				963	1071

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	5	26	46
Volume Left	4	0	46
Volume Right	0	23	0
cSH	1601	1700	963
Volume to Capacity	0.00	0.02	0.05
Queue Length 95th (m)	0.1	0.0	1.1
Control Delay (s)	5.8	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	5.8	0.0	8.9
Approach LOS			A

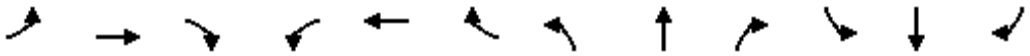
Intersection Summary			
Average Delay		5.7	
Intersection Capacity Utilization		13.3%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	6	32	22	39	24	2
Future Volume (Veh/h)	6	32	22	39	24	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	8	44	30	53	33	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	83				116	56
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	83				116	56
tC, single (s)	4.4				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.5				3.5	3.3
p0 queue free %	99				96	100
cM capacity (veh/h)	1335				879	1016

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	52	83	36
Volume Left	8	0	33
Volume Right	0	53	3
cSH	1335	1700	889
Volume to Capacity	0.01	0.05	0.04
Queue Length 95th (m)	0.1	0.0	1.0
Control Delay (s)	1.2	0.0	9.2
Lane LOS	A		A
Approach Delay (s)	1.2	0.0	9.2
Approach LOS			A

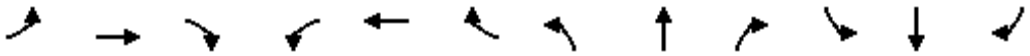
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	16.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	4	46	7	2	3	68	406	4	0	252	9
Future Volume (Veh/h)	13	4	46	7	2	3	68	406	4	0	252	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	15	5	53	8	2	3	78	467	5	0	290	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	924	923	295	976	926	470	300			472		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	924	923	295	976	926	470	300			472		
tC, single (s)	7.2	6.5	6.2	7.2	6.5	6.5	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.6	4.0	3.6	2.2			2.2		
p0 queue free %	93	98	93	96	99	99	94			100		
cM capacity (veh/h)	229	255	737	190	254	533	1255			1100		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	73	13	550	300
Volume Left	15	8	78	0
Volume Right	53	3	5	10
cSH	465	234	1255	1100
Volume to Capacity	0.16	0.06	0.06	0.00
Queue Length 95th (m)	4.2	1.3	1.5	0.0
Control Delay (s)	14.2	21.3	1.7	0.0
Lane LOS	B	C	A	
Approach Delay (s)	14.2	21.3	1.7	0.0
Approach LOS	B	C		

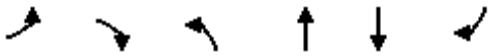
Intersection Summary				
Average Delay	2.4			
Intersection Capacity Utilization	53.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	12	15	41	15	15	6	313	83	34	179	6
Future Volume (Veh/h)	8	12	15	41	15	15	6	313	83	34	179	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	9	13	17	46	17	17	7	352	93	38	201	7
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)											157	
pX, platoon unblocked												
vC, conflicting volume	718	740	204	716	696	398	208			445		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	718	740	204	716	696	398	208			445		
tC, single (s)	7.1	6.5	6.5	7.2	6.6	6.2	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.6	3.6	4.1	3.3	2.2			2.3		
p0 queue free %	97	96	98	85	95	97	99			96		
cM capacity (veh/h)	315	333	761	310	345	656	1375			1079		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	39	80	452	246
Volume Left	9	46	7	38
Volume Right	17	17	93	7
cSH	434	358	1375	1079
Volume to Capacity	0.09	0.22	0.01	0.04
Queue Length 95th (m)	2.2	6.4	0.1	0.8
Control Delay (s)	14.1	17.9	0.2	1.6
Lane LOS	B	C	A	A
Approach Delay (s)	14.1	17.9	0.2	1.6
Approach LOS	B	C		

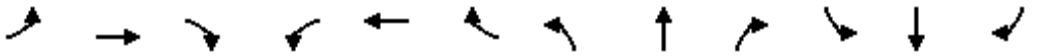
Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	46.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	5	431	507	90
Future Volume (Veh/h)	0	0	5	431	507	90
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	0	6	501	590	105
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				143	233	
pX, platoon unblocked	0.83	0.76	0.76			
vC, conflicting volume	1156	642	695			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	677	367	436			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	348	517	858			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	507	695
Volume Left	0	6	0
Volume Right	0	0	105
cSH	1700	858	1700
Volume to Capacity	0.00	0.01	0.41
Queue Length 95th (m)	0.0	0.2	0.0
Control Delay (s)	0.0	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	0.0	0.2	0.0
Approach LOS	A		

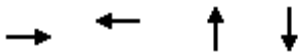
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	2	5	1	0	40	0	443	4	65	611	0
Future Volume (Veh/h)	14	2	5	1	0	40	0	443	4	65	611	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	16	2	6	1	0	47	0	515	5	76	710	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								192			184	
pX, platoon unblocked	0.91	0.91	0.89	0.91	0.91	0.85	0.89			0.85		
vC, conflicting volume	1426	1382	355	1032	1380	518	710			520		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	964	915	27	530	913	351	426			353		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	7.1	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	90	99	99	100	100	91	100			92		
cM capacity (veh/h)	166	231	933	369	232	537	1018			1009		

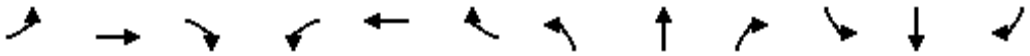
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	24	48	520	313	473
Volume Left	16	1	0	76	0
Volume Right	6	47	5	0	0
cSH	216	532	1700	1009	1700
Volume to Capacity	0.11	0.09	0.31	0.08	0.28
Queue Length 95th (m)	2.8	2.2	0.0	1.9	0.0
Control Delay (s)	23.8	12.4	0.0	2.7	0.0
Lane LOS	C	B		A	
Approach Delay (s)	23.8	12.4	0.0	1.1	
Approach LOS	C	B			

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	60.2%	ICU Level of Service		B
Analysis Period (min)	15			



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	31	128	574	597
v/c Ratio	0.04	0.23	0.64	0.65
Control Delay	5.1	9.7	17.0	17.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.1	9.7	17.0	17.4
Queue Length 50th (m)	0.3	5.1	19.8	21.4
Queue Length 95th (m)	3.7	15.2	30.1	31.8
Internal Link Dist (m)	111.3	124.3	159.9	149.4
Turn Bay Length (m)				
Base Capacity (vph)	854	628	1337	1387
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.20	0.43	0.43

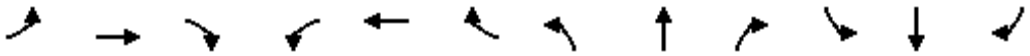
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	3	23	98	2	11	8	454	37	5	513	1
Future Volume (vph)	2	3	23	98	2	11	8	454	37	5	513	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2			6.2			5.9			5.9	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.89			0.99			0.99			1.00	
Flt Protected		1.00			0.96			1.00			1.00	
Satd. Flow (prot)		1698			1613			3196			3319	
Flt Permitted		0.99			0.74			0.94			0.95	
Satd. Flow (perm)		1680			1242			3006			3143	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	2	3	26	113	2	13	9	522	43	6	590	1
RTOR Reduction (vph)	0	15	0	0	7	0	0	12	0	0	0	0
Lane Group Flow (vph)	0	16	0	0	121	0	0	562	0	0	597	0
Heavy Vehicles (%)	0%	0%	0%	13%	0%	10%	13%	13%	11%	0%	10%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		20.1			20.1			13.5			13.5	
Effective Green, g (s)		20.1			20.1			13.5			13.5	
Actuated g/C Ratio		0.44			0.44			0.30			0.30	
Clearance Time (s)		6.2			6.2			5.9			5.9	
Vehicle Extension (s)		5.0			5.0			2.5			2.5	
Lane Grp Cap (vph)		738			546			887			928	
v/s Ratio Prot												
v/s Ratio Perm		0.01			c0.10			0.19			c0.19	
v/c Ratio		0.02			0.22			0.63			0.64	
Uniform Delay, d1		7.2			7.9			14.0			14.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.0			0.4			1.3			1.4	
Delay (s)		7.3			8.4			15.3			15.4	
Level of Service		A			A			B			B	
Approach Delay (s)		7.3			8.4			15.3			15.4	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	45.7	Sum of lost time (s)	12.1
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection Sign configuration not allowed in HCM analysis.

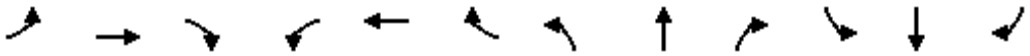


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	320	7	8	170	3	12	7	43	1	0	4
Future Volume (Veh/h)	4	320	7	8	170	3	12	7	43	1	0	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	5	390	9	10	207	4	15	9	52	1	0	5
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	211			399			638	636	394	690	638	209
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	211			399			638	636	394	690	638	209
tC, single (s)	4.1			4.1			7.4	6.7	6.2	7.1	6.5	7.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.8	4.1	3.3	3.5	4.0	4.2
p0 queue free %	100			99			96	98	92	100	100	99
cM capacity (veh/h)	1372			1171			342	375	648	324	392	636

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	404	221	76	6
Volume Left	5	10	15	1
Volume Right	9	4	52	5
cSH	1372	1171	513	548
Volume to Capacity	0.00	0.01	0.15	0.01
Queue Length 95th (m)	0.1	0.2	3.9	0.3
Control Delay (s)	0.1	0.4	13.2	11.6
Lane LOS	A	A	B	B
Approach Delay (s)	0.1	0.4	13.2	11.6
Approach LOS			B	B

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	30.2%	ICU Level of Service	A	
Analysis Period (min)	15			

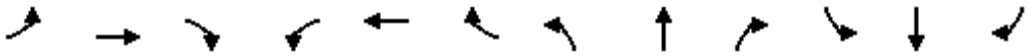
Intersection Sign configuration not allowed in HCM analysis.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	1	5	2	23	1	402	0	20	200	10
Future Volume (Veh/h)	6	0	1	5	2	23	1	402	0	20	200	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	7	0	1	6	2	27	1	467	0	23	233	12
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	782	754	239	755	760	467	245			467		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	782	754	239	755	760	467	245			467		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	100	98	99	95	100			98		
cM capacity (veh/h)	294	333	805	322	330	600	1333			1079		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	35	468	268
Volume Left	7	6	1	23
Volume Right	1	27	0	12
cSH	319	502	1333	1079
Volume to Capacity	0.03	0.07	0.00	0.02
Queue Length 95th (m)	0.6	1.7	0.0	0.5
Control Delay (s)	16.6	12.7	0.0	0.9
Lane LOS	C	B	A	A
Approach Delay (s)	16.6	12.7	0.0	0.9
Approach LOS	C	B		

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	36.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	2	0	5	0	1	0	421	1	3	256	5
Future Volume (vph)	9	2	0	5	0	1	0	421	1	3	256	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	11	2	0	6	0	1	0	495	1	4	301	6

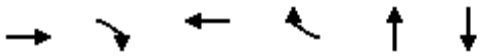
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	13	7	496	311
Volume Left (vph)	11	6	0	4
Volume Right (vph)	0	1	1	6
Hadj (s)	0.47	0.38	0.07	0.09
Departure Headway (s)	6.2	6.1	4.4	4.6
Degree Utilization, x	0.02	0.01	0.60	0.39
Capacity (veh/h)	510	512	815	770
Control Delay (s)	9.3	9.2	13.7	10.5
Approach Delay (s)	9.3	9.2	13.7	10.5
Approach LOS	A	A	B	B

Intersection Summary				
Delay	12.4			
Level of Service	B			
Intersection Capacity Utilization	32.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	485	30	16	532	15	28
Future Volume (Veh/h)	485	30	16	532	15	28
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	533	33	18	585	16	31
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				336		
pX, platoon unblocked						
vC, conflicting volume			566		1170	550
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			566		1170	550
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			98		92	94
cM capacity (veh/h)			1016		204	539

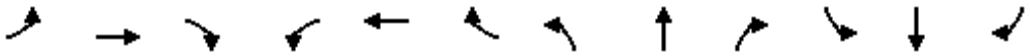
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	566	603	47
Volume Left	0	18	16
Volume Right	33	0	31
cSH	1700	1016	346
Volume to Capacity	0.33	0.02	0.14
Queue Length 95th (m)	0.0	0.4	3.5
Control Delay (s)	0.0	0.5	17.0
Lane LOS		A	C
Approach Delay (s)	0.0	0.5	17.0
Approach LOS			C

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	465	42	417	119	91	180
v/c Ratio	0.49	0.04	0.46	0.12	0.23	0.45
Control Delay	10.7	1.6	10.5	2.4	12.9	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.7	1.6	10.5	2.4	12.9	15.1
Queue Length 50th (m)	22.3	0.0	19.6	0.0	4.4	8.7
Queue Length 95th (m)	46.3	2.0	41.6	5.3	11.6	19.7
Internal Link Dist (m)	312.0		313.1		280.6	74.2
Turn Bay Length (m)		45.0		45.0		
Base Capacity (vph)	964	944	917	983	604	607
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.04	0.45	0.12	0.15	0.30

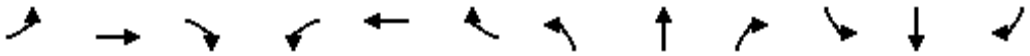
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	384	36	22	332	101	40	24	14	71	42	40
Future Volume (vph)	11	384	36	22	332	101	40	24	14	71	42	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2	6.2		6.2	6.2		6.2			6.2	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.96	
Flt Protected		1.00	1.00		1.00	1.00		0.97			0.98	
Satd. Flow (prot)		1694	1585		1656	1617		1828			1797	
Flt Permitted		0.98	1.00		0.96	1.00		0.81			0.81	
Satd. Flow (perm)		1670	1585		1590	1617		1512			1482	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	13	452	42	26	391	119	47	28	16	84	49	47
RTOR Reduction (vph)	0	0	20	0	0	56	0	13	0	0	31	0
Lane Group Flow (vph)	0	465	22	0	417	63	0	78	0	0	149	0
Heavy Vehicles (%)	0%	2%	3%	5%	4%	1%	0%	0%	0%	0%	0%	3%
Parking (#/hr)		0			0							
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)		23.4	23.4		23.4	23.4		8.7			8.7	
Effective Green, g (s)		23.4	23.4		23.4	23.4		8.7			8.7	
Actuated g/C Ratio		0.53	0.53		0.53	0.53		0.20			0.20	
Clearance Time (s)		6.2	6.2		6.2	6.2		6.2			6.2	
Vehicle Extension (s)		5.0	5.0		5.0	5.0		2.5			2.5	
Lane Grp Cap (vph)		878	833		836	850		295			289	
v/s Ratio Prot												
v/s Ratio Perm		c0.28	0.01		0.26	0.04		0.05			c0.10	
v/c Ratio		0.53	0.03		0.50	0.07		0.26			0.51	
Uniform Delay, d1		6.9	5.1		6.8	5.2		15.2			16.0	
Progression Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Incremental Delay, d2		1.1	0.0		1.0	0.1		0.4			1.2	
Delay (s)		8.0	5.1		7.8	5.3		15.5			17.2	
Level of Service		A	A		A	A		B			B	
Approach Delay (s)		7.8			7.2			15.5			17.2	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	44.5	Sum of lost time (s)	12.4
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

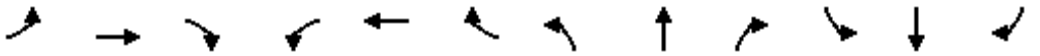
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	521	7	5	436	12	4	0	9	11	3	8
Future Volume (Veh/h)	14	521	7	5	436	12	4	0	9	11	3	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	17	620	8	6	519	14	5	0	11	13	4	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		337			245							
pX, platoon unblocked	0.94			0.95			0.96	0.96	0.95	0.96	0.96	0.94
vC, conflicting volume	533			628			1208	1203	624	1207	1200	526
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	468			585			1086	1080	581	1085	1077	461
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			97	100	98	93	98	98
cM capacity (veh/h)	1035			953			179	206	493	181	207	567

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	645	539	16	27
Volume Left	17	6	5	13
Volume Right	8	14	11	10
cSH	1035	953	318	248
Volume to Capacity	0.02	0.01	0.05	0.11
Queue Length 95th (m)	0.4	0.1	1.2	2.7
Control Delay (s)	0.4	0.2	16.9	21.3
Lane LOS	A	A	C	C
Approach Delay (s)	0.4	0.2	16.9	21.3
Approach LOS			C	C

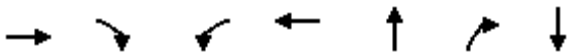
Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	46.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	504	9	7	448	6	1	4	5	8	2	12
Future Volume (Veh/h)	22	504	9	7	448	6	1	4	5	8	2	12
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	25	566	10	8	503	7	1	4	6	9	2	13
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					126							
pX, platoon unblocked	0.90						0.90	0.90		0.90	0.90	0.90
vC, conflicting volume	510			576			1158	1147	571	1152	1148	506
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	404			576			1121	1109	571	1114	1111	400
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	98			99			99	98	99	94	99	98
cM capacity (veh/h)	1029			1007			158	185	524	160	184	573

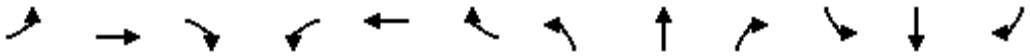
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	601	518	11	24
Volume Left	25	8	1	9
Volume Right	10	7	6	13
cSH	1029	1007	279	268
Volume to Capacity	0.02	0.01	0.04	0.09
Queue Length 95th (m)	0.6	0.2	0.9	2.2
Control Delay (s)	0.7	0.2	18.4	19.8
Lane LOS	A	A	C	C
Approach Delay (s)	0.7	0.2	18.4	19.8
Approach LOS			C	C

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	49.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	472	56	298	372	85	327	70
v/c Ratio	0.46	0.05	0.60	0.36	0.28	0.51	0.19
Control Delay	10.1	2.0	15.4	8.7	27.3	6.2	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	2.0	15.4	8.7	27.3	6.2	20.3
Queue Length 50th (m)	34.6	0.0	22.9	23.9	10.5	0.0	6.2
Queue Length 95th (m)	54.6	3.8	56.3	50.2	22.2	18.5	16.1
Internal Link Dist (m)	101.5			191.0	51.6		138.0
Turn Bay Length (m)		40.0					
Base Capacity (vph)	1035	1021	499	1024	303	645	365
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.05	0.60	0.36	0.28	0.51	0.19

Intersection Summary



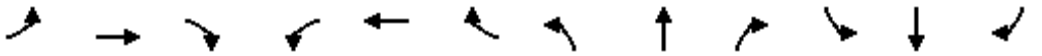
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	425	51	271	326	13	67	10	298	28	19	16
Future Volume (vph)	5	425	51	271	326	13	67	10	298	28	19	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	5.5	5.5	5.5			5.5	5.5		5.5	
Lane Util. Factor		1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt		1.00	0.85	1.00	0.99			1.00	0.85		0.97	
Flt Protected		1.00	1.00	0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)		1695	1633	1772	1671			1629	1601		1604	
Flt Permitted		1.00	1.00	0.44	1.00			0.71	1.00		0.86	
Satd. Flow (perm)		1690	1633	816	1671			1214	1601		1409	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	5	467	56	298	358	14	74	11	327	31	21	18
RTOR Reduction (vph)	0	0	22	0	2	0	0	0	245	0	14	0
Lane Group Flow (vph)	0	472	34	298	370	0	0	85	82	0	57	0
Heavy Vehicles (%)	0%	2%	0%	3%	3%	0%	2%	0%	2%	0%	0%	7%
Parking (#/hr)		0			0			0			0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)		49.0	49.0	49.0	49.0			20.0	20.0		20.0	
Effective Green, g (s)		49.0	49.0	49.0	49.0			20.0	20.0		20.0	
Actuated g/C Ratio		0.61	0.61	0.61	0.61			0.25	0.25		0.25	
Clearance Time (s)		5.5	5.5	5.5	5.5			5.5	5.5		5.5	
Lane Grp Cap (vph)		1035	1000	499	1023			303	400		352	
v/s Ratio Prot					0.22							
v/s Ratio Perm		0.28	0.02	c0.37				c0.07	0.05		0.04	
v/c Ratio		0.46	0.03	0.60	0.36			0.28	0.20		0.16	
Uniform Delay, d1		8.3	6.1	9.5	7.7			24.2	23.7		23.4	
Progression Factor		1.00	1.00	1.05	1.00			1.00	1.00		1.00	
Incremental Delay, d2		1.4	0.1	4.4	0.8			2.3	1.2		1.0	
Delay (s)		9.8	6.2	14.3	8.6			26.5	24.9		24.4	
Level of Service		A	A	B	A			C	C		C	
Approach Delay (s)		9.4			11.1			25.2			24.4	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	711	93	133	183	2	148	527
v/c Ratio	0.93	0.10	0.13	0.44	0.00	0.34	0.66
Control Delay	31.4	4.1	6.5	28.5	0.0	26.5	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	4.1	6.5	28.5	0.0	26.5	6.9
Queue Length 50th (m)	90.6	2.6	6.9	23.1	0.0	18.2	0.0
Queue Length 95th (m)	#163.4	7.7	13.4	40.0	0.0	32.6	19.8
Internal Link Dist (m)		191.0	154.1	180.0		119.0	
Turn Bay Length (m)					15.0		20.0
Base Capacity (vph)	765	957	1020	419	454	436	802
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.10	0.13	0.44	0.00	0.34	0.66

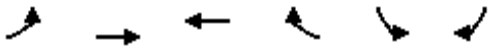
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	626	54	28	1	100	16	24	137	2	14	116	464
Future Volume (vph)	626	54	28	1	100	16	24	137	2	14	116	464
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5			5.6			5.6	5.6		5.5	5.5
Lane Util. Factor	1.00	1.00			1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.95			0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99	1.00		0.99	1.00
Satd. Flow (prot)	1807	1578			1697			1688	1633		1720	1570
Flt Permitted	0.67	1.00			1.00			0.94	1.00		0.96	1.00
Satd. Flow (perm)	1278	1578			1696			1598	1633		1656	1570
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	711	61	32	1	114	18	27	156	2	16	132	527
RTOR Reduction (vph)	0	13	0	0	7	0	0	0	1	0	0	388
Lane Group Flow (vph)	711	80	0	0	126	0	0	183	1	0	148	139
Heavy Vehicles (%)	1%	6%	0%	0%	0%	0%	0%	2%	0%	0%	0%	4%
Parking (#/hr)		0			0			0			0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	47.9	47.9			47.8			21.0	21.0		21.1	21.1
Effective Green, g (s)	47.9	47.9			47.8			21.0	21.0		21.1	21.1
Actuated g/C Ratio	0.60	0.60			0.60			0.26	0.26		0.26	0.26
Clearance Time (s)	5.5	5.5			5.6			5.6	5.6		5.5	5.5
Lane Grp Cap (vph)	765	944			1013			419	428		436	414
v/s Ratio Prot		0.05										
v/s Ratio Perm	c0.56				0.07			c0.11	0.00		0.09	0.09
v/c Ratio	0.93	0.08			0.12			0.44	0.00		0.34	0.34
Uniform Delay, d1	14.5	6.8			7.0			24.6	21.8		23.8	23.8
Progression Factor	0.74	0.80			1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	17.8	0.2			0.3			3.3	0.0		2.1	2.2
Delay (s)	28.6	5.6			7.3			27.9	21.8		25.9	26.0
Level of Service	C	A			A			C	C		C	C
Approach Delay (s)		26.0			7.3			27.8			26.0	
Approach LOS		C			A			C			C	

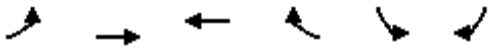
Intersection Summary			
HCM 2000 Control Delay	24.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	4	41	2	34
Future Volume (Veh/h)	0	0	4	41	2	34
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	0	5	51	2	42
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	56				30	30
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	56				30	30
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	96
cM capacity (veh/h)	1562				989	1050

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	0	56	44
Volume Left	0	0	2
Volume Right	0	51	42
cSH	1700	1700	1047
Volume to Capacity	0.00	0.03	0.04
Queue Length 95th (m)	0.0	0.0	1.0
Control Delay (s)	0.0	0.0	8.6
Lane LOS			A
Approach Delay (s)	0.0	0.0	8.6
Approach LOS			A

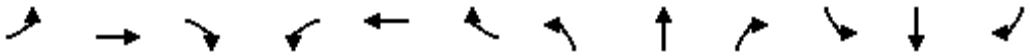
Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	47	41	25	71	5
Future Volume (Veh/h)	8	47	41	25	71	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	11	63	55	33	95	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	88				156	72
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	88				156	72
tC, single (s)	4.1				6.4	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.5
p0 queue free %	99				89	99
cM capacity (veh/h)	1520				829	943

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	74	88	102
Volume Left	11	0	95
Volume Right	0	33	7
cSH	1520	1700	836
Volume to Capacity	0.01	0.05	0.12
Queue Length 95th (m)	0.2	0.0	3.2
Control Delay (s)	1.1	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	1.1	0.0	9.9
Approach LOS			A

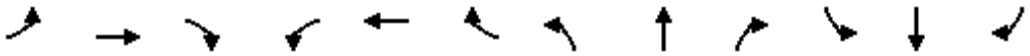
Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	20.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	4	98	2	0	7	50	387	2	2	446	18
Future Volume (Veh/h)	20	4	98	2	0	7	50	387	2	2	446	18
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	22	4	109	2	0	8	56	430	2	2	496	20
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1061	1054	506	1164	1063	431	516			432		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1061	1054	506	1164	1063	431	516			432		
tC, single (s)	7.1	6.5	6.2	8.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	4.4	4.0	3.3	2.2			2.2		
p0 queue free %	89	98	81	98	100	99	95			100		
cM capacity (veh/h)	192	215	570	85	213	629	1050			1138		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	135	10	488	518
Volume Left	22	2	56	2
Volume Right	109	8	2	20
cSH	417	277	1050	1138
Volume to Capacity	0.32	0.04	0.05	0.00
Queue Length 95th (m)	10.5	0.9	1.3	0.0
Control Delay (s)	17.7	18.5	1.5	0.1
Lane LOS	C	C	A	A
Approach Delay (s)	17.7	18.5	1.5	0.1
Approach LOS	C	C		

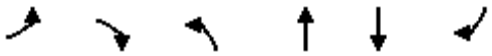
Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	67.0%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	23	23	62	32	18	9	347	47	28	357	9
Future Volume (Veh/h)	3	23	23	62	32	18	9	347	47	28	357	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	3	25	25	67	34	19	10	373	51	30	384	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)											157	
pX, platoon unblocked	0.95	0.95	0.95	0.95	0.95		0.95					
vC, conflicting volume	904	893	389	905	872	398	394			424		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	870	859	327	872	837	398	332			424		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.3		
p0 queue free %	99	91	96	70	88	97	99			97		
cM capacity (veh/h)	222	271	681	226	278	656	1173			1104		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	53	120	434	424
Volume Left	3	67	10	30
Volume Right	25	19	51	10
cSH	372	268	1173	1104
Volume to Capacity	0.14	0.45	0.01	0.03
Queue Length 95th (m)	3.7	16.6	0.2	0.6
Control Delay (s)	16.3	28.9	0.3	0.9
Lane LOS	C	D	A	A
Approach Delay (s)	16.3	28.9	0.3	0.9
Approach LOS	C	D		

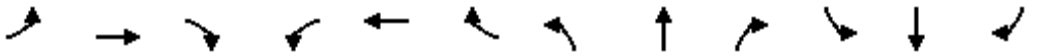
Intersection Summary				
Average Delay	4.7			
Intersection Capacity Utilization	53.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	5	772	610	50
Future Volume (Veh/h)	0	0	5	772	610	50
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	0	6	908	718	59
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				143	233	
pX, platoon unblocked	0.81	0.72	0.72			
vC, conflicting volume	1668	748	777			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	925	454	495			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	241	439	776			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	914	777
Volume Left	0	6	0
Volume Right	0	0	59
cSH	1700	776	1700
Volume to Capacity	0.00	0.01	0.46
Queue Length 95th (m)	0.0	0.2	0.0
Control Delay (s)	0.0	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	0.0	0.2	0.0
Approach LOS	A		

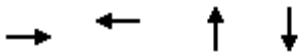
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	0	10	0	0	93	0	732	14	37	642	0
Future Volume (Veh/h)	36	0	10	0	0	93	0	732	14	37	642	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	41	0	11	0	0	106	0	832	16	42	730	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								192			184	
pX, platoon unblocked	0.77	0.77	0.87	0.77	0.77	0.71	0.87			0.71		
vC, conflicting volume	1760	1662	365	1300	1654	840	730			848		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1220	1093	0	622	1082	565	400			576		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	7.0	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	40	100	99	100	100	68	100			94		
cM capacity (veh/h)	69	156	953	272	158	329	1021			696		

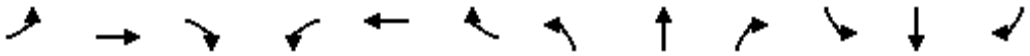
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	52	106	848	285	487
Volume Left	41	0	0	42	0
Volume Right	11	106	16	0	0
cSH	86	329	1700	696	1700
Volume to Capacity	0.61	0.32	0.50	0.06	0.29
Queue Length 95th (m)	21.2	10.3	0.0	1.5	0.0
Control Delay (s)	97.8	21.1	0.0	2.2	0.0
Lane LOS	F	C		A	
Approach Delay (s)	97.8	21.1	0.0	0.8	
Approach LOS	F	C			

Intersection Summary				
Average Delay	4.5			
Intersection Capacity Utilization	61.3%	ICU Level of Service		B
Analysis Period (min)	15			



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	32	84	1001	687
v/c Ratio	0.05	0.15	0.82	0.56
Control Delay	6.3	9.7	20.3	14.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.3	9.7	20.3	14.6
Queue Length 50th (m)	0.4	3.7	40.5	25.2
Queue Length 95th (m)	4.3	10.7	57.8	36.8
Internal Link Dist (m)	111.3	124.3	159.9	149.4
Turn Bay Length (m)				
Base Capacity (vph)	706	590	1401	1399
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.05	0.14	0.71	0.49

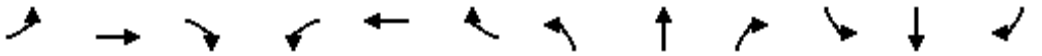
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	5	22	53	1	20	31	748	102	14	590	1
Future Volume (vph)	1	5	22	53	1	20	31	748	102	14	590	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2			6.2			5.9			5.9	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.89			0.96			0.98			1.00	
Flt Protected		1.00			0.97			1.00			1.00	
Satd. Flow (prot)		1716			1714			3538			3541	
Flt Permitted		0.99			0.80			0.91			0.92	
Satd. Flow (perm)		1709			1425			3216			3251	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	1	6	25	60	1	23	35	850	116	16	670	1
RTOR Reduction (vph)	0	15	0	0	14	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	17	0	0	70	0	0	982	0	0	687	0
Heavy Vehicles (%)	0%	0%	0%	4%	0%	5%	0%	1%	3%	0%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		20.1			20.1			19.3			19.3	
Effective Green, g (s)		20.1			20.1			19.3			19.3	
Actuated g/C Ratio		0.39			0.39			0.37			0.37	
Clearance Time (s)		6.2			6.2			5.9			5.9	
Vehicle Extension (s)		5.0			5.0			2.5			2.5	
Lane Grp Cap (vph)		667			556			1205			1218	
v/s Ratio Prot												
v/s Ratio Perm		0.01			c0.05			c0.31			0.21	
v/c Ratio		0.03			0.13			0.81			0.56	
Uniform Delay, d1		9.7			10.1			14.5			12.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.0			0.2			4.2			0.5	
Delay (s)		9.7			10.3			18.7			13.3	
Level of Service		A			B			B			B	
Approach Delay (s)		9.7			10.3			18.7			13.3	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	51.5	Sum of lost time (s)	12.1
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection Sign configuration not allowed in HCM analysis.

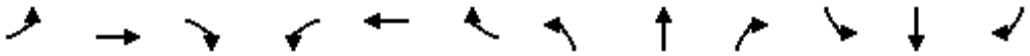


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	258	7	32	376	7	12	3	30	4	4	5
Future Volume (Veh/h)	4	258	7	32	376	7	12	3	30	4	4	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	4	290	8	36	422	8	13	3	34	4	4	6
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	430			298			808	804	294	836	804	426
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	430			298			808	804	294	836	804	426
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			95	99	95	99	99	99
cM capacity (veh/h)	1140			1275			289	309	741	267	309	633

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	302	466	50	14
Volume Left	4	36	13	4
Volume Right	8	8	34	6
cSH	1140	1275	497	374
Volume to Capacity	0.00	0.03	0.10	0.04
Queue Length 95th (m)	0.1	0.7	2.5	0.9
Control Delay (s)	0.1	0.9	13.1	15.0
Lane LOS	A	A	B	B
Approach Delay (s)	0.1	0.9	13.1	15.0
Approach LOS			B	B

Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	49.0%	ICU Level of Service	A	
Analysis Period (min)	15			

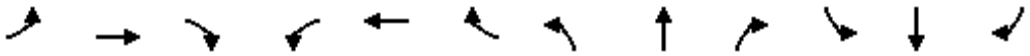
Intersection Sign configuration not allowed in HCM analysis.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	4	0	19	3	32	1	333	26	27	414	27
Future Volume (Veh/h)	5	4	0	19	3	32	1	333	26	27	414	27
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	4	0	20	3	34	1	351	27	28	436	28
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	908	886	450	874	886	364	464			378		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	908	886	450	874	886	364	464			378		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	99	100	92	99	95	100			98		
cM capacity (veh/h)	239	279	613	264	279	685	1108			1192		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	9	57	379	492
Volume Left	5	20	1	28
Volume Right	0	34	27	28
cSH	255	419	1108	1192
Volume to Capacity	0.04	0.14	0.00	0.02
Queue Length 95th (m)	0.8	3.6	0.0	0.5
Control Delay (s)	19.6	14.9	0.0	0.7
Lane LOS	C	B	A	A
Approach Delay (s)	19.6	14.9	0.0	0.7
Approach LOS	C	B		

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	54.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	2	0	2	7	3	5	4	388	4	5	463	8
Future Volume (vph)	2	0	2	7	3	5	4	388	4	5	463	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	2	0	2	8	3	5	4	426	4	5	509	9

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	4	16	434	523
Volume Left (vph)	2	8	4	5
Volume Right (vph)	2	5	4	9
Hadj (s)	-0.20	-0.09	0.05	0.01
Departure Headway (s)	5.8	5.9	4.5	4.4
Degree Utilization, x	0.01	0.03	0.55	0.64
Capacity (veh/h)	531	531	777	800
Control Delay (s)	8.8	9.0	12.9	15.1
Approach Delay (s)	8.8	9.0	12.9	15.1
Approach LOS	A	A	B	C

Intersection Summary				
Delay	14.0			
Level of Service	B			
Intersection Capacity Utilization	37.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Future Do-Nothing Scenario:
2028 SimTraffic Reports

Arterial Level of Service: EB Whitewood Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Golding St	1	0.5	14.1	0.2	50
Edith St	2	5.4	27.5	0.3	44
John ST	3	2.3	24.7	0.3	49
Mary St	4	0.8	9.6	0.1	45
Paget St #1	5	9.7	18.5	0.1	24
Armstrong St	6	5.5	17.0	0.2	45
Total		24.3	111.5	1.3	43

Arterial Level of Service: WB Whitewood Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Armstrong St	6	7.4	20.1	0.2	32
Paget St #1	5	8.6	21.7	0.2	37
Mary St	4	1.8	10.5	0.1	43
John ST	3	0.5	9.3	0.1	46
Parking Entrance	2	6.1	29.4	0.3	41
Golding St	1	2.1	24.6	0.3	49
Total		26.4	115.6	1.3	41

Arterial Level of Service: NB #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Broadwood Ave	9	0.8	16.4	0.2	39
Farah Ave	10	1.4	31.4	0.3	38
	38	0.2	7.8	0.1	38
Whitewood Ave	5	14.9	20.7	0.1	13
Total		17.3	76.3	0.7	32

Arterial Level of Service: SB #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Whitewood Ave	5	18.2	32.3	0.2	18
	38	1.3	8.5	0.1	32
Farah Ave	10	0.3	5.3	0.1	56
Broadwood Ave	9	0.5	29.0	0.3	42
Total		20.3	75.1	0.7	31

Arterial Level of Service: NB Armstrong St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Whitewood Ave	6	21.4	36.1	0.2	20
Church St	11	2.3	12.4	0.1	42
	40	0.1	1.3	0.0	53
Sharpe St	12	0.1	1.9	0.0	58
Elm Ave	13	11.6	25.2	0.2	26
Total		35.5	76.8	0.6	27

Arterial Level of Service: SB Armstrong St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Beavis Terr	13	15.0	26.9	0.2	23
Sharpe St	12	4.5	17.7	0.2	37
	40	0.8	3.0	0.0	36
Church St	11	0.4	1.6	0.0	43
Whitewood Ave	6	23.3	33.4	0.1	15
Total		44.1	82.7	0.5	24

Arterial Level of Service: EB Main St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Rorke Ave	14	6.7	21.0	0.2	35
Georgina Ave	15	2.6	13.0	0.2	48
Ferguson Ave #2	16	0.7	9.8	0.2	62
Total		10.1	43.8	0.5	45

Arterial Level of Service: WB Main St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Ferguson Ave #2	16	8.2	19.8	0.2	30
Georgina Ave	15	1.5	10.1	0.2	61
Rorke Ave	14	0.5	12.1	0.2	51
Total		10.2	41.9	0.5	44

Arterial Level of Service: NB #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Main St	16	7.2	15.9	0.1	29
Broadway St	17	2.4	7.8	0.1	42
Browning St	18	6.5	12.3	0.1	24
Total		16.1	36.1	0.3	30

Arterial Level of Service: SB #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Browning St	18	7.0	16.3	0.1	31
Broadway St	17	2.6	8.5	0.1	35
Main St	16	7.6	14.2	0.1	23
Total		17.3	39.1	0.3	29

Arterial Level of Service: EB Whitewood Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Golding St	1	0.6	14.2	0.2	49
Edith St	2	6.1	28.5	0.3	42
John ST	3	2.5	25.4	0.3	48
Mary St	4	1.0	9.7	0.1	44
Paget St #1	5	10.0	18.7	0.1	24
Armstrong St	6	6.8	18.5	0.2	42
Total		26.9	115.0	1.3	42

Arterial Level of Service: WB Whitewood Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Armstrong St	6	6.1	18.8	0.2	34
Paget St #1	5	8.9	23.8	0.2	34
Mary St	4	1.6	10.1	0.1	45
John ST	3	0.6	9.5	0.1	45
Parking Entrance	2	8.0	31.1	0.3	39
Golding St	1	2.0	22.8	0.3	53
Total		27.1	116.1	1.3	41

Arterial Level of Service: NB #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Broadwood Ave	9	0.7	16.3	0.2	39
Farah Ave	10	1.2	31.1	0.3	39
	38	0.2	7.8	0.1	38
Whitewood Ave	5	17.5	23.2	0.1	12
Total		19.6	78.3	0.7	31

Arterial Level of Service: SB #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Whitewood Ave	5	18.4	32.0	0.2	18
	38	1.1	7.8	0.1	35
Farah Ave	10	0.6	7.3	0.1	40
Broadwood Ave	9	1.4	31.4	0.3	38
Total		21.5	78.5	0.7	30

Arterial Level of Service: NB Armstrong St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Whitewood Ave	6	29.6	43.9	0.2	17
Church St	11	2.3	12.5	0.1	41
	40	0.1	1.3	0.0	51
Sharpe St	12	0.2	1.9	0.0	56
Elm Ave	13	12.4	25.9	0.2	26
Total		44.6	85.6	0.6	24

Arterial Level of Service: SB Armstrong St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Beavis Terr	13	15.3	27.3	0.2	23
Sharpe St	12	4.3	18.1	0.2	37
	40	0.6	2.8	0.0	38
Church St	11	0.3	1.5	0.0	45
Whitewood Ave	6	26.0	35.9	0.1	14
Total		46.5	85.6	0.5	23

Arterial Level of Service: EB Main St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Rorke Ave	14	8.3	22.7	0.2	32
Georgina Ave	15	3.0	15.0	0.2	42
Ferguson Ave #2	16	1.0	12.7	0.2	48
Total		12.4	50.4	0.5	39

Arterial Level of Service: WB Main St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Ferguson Ave #2	16	8.4	20.0	0.2	30
Georgina Ave	15	1.5	10.0	0.2	62
Rorke Ave	14	0.8	11.2	0.2	55
Total		10.7	41.3	0.5	44

Arterial Level of Service: NB #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Main St	16	7.4	16.0	0.1	29
Broadway St	17	2.9	8.6	0.1	38
Browning St	18	6.5	12.3	0.1	24
Total		16.8	36.9	0.3	29

Arterial Level of Service: SB #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Browning St	18	7.9	17.4	0.1	29
Broadway St	17	2.9	8.9	0.1	33
Main St	16	7.4	13.9	0.1	24
Total		18.2	40.2	0.3	28

Arterial Level of Service: EB Whitewood Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Golding St	1	0.6	14.4	0.2	49
Edith St	2	6.4	28.8	0.3	42
John ST	3	2.8	25.2	0.3	48
Mary St	4	1.1	9.9	0.1	44
Paget St #1	5	8.9	17.6	0.1	26
Armstrong St	6	7.6	19.0	0.2	41
Total		27.3	114.9	1.3	42

Arterial Level of Service: WB Whitewood Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Armstrong St	6	8.2	20.9	0.2	31
Paget St #1	5	9.0	22.1	0.2	37
Mary St	4	1.7	10.1	0.1	45
John ST	3	0.5	9.3	0.1	46
Parking Entrance	2	6.7	29.8	0.3	41
Golding St	1	2.3	24.8	0.3	49
Total		28.4	117.2	1.3	41

Arterial Level of Service: NB #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Broadwood Ave	9	0.9	16.6	0.2	39
Farah Ave	10	1.7	30.8	0.3	39
	38	0.2	7.8	0.1	37
Whitewood Ave	5	12.7	17.9	0.1	15
Total		15.6	73.2	0.7	33

Arterial Level of Service: SB #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Whitewood Ave	5	24.1	37.8	0.2	15
	38	1.6	8.7	0.1	31
Farah Ave	10	0.4	5.3	0.1	57
Broadwood Ave	9	0.8	28.7	0.3	42
Total		26.9	80.5	0.7	29

Arterial Level of Service: NB Armstrong St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Whitewood Ave	6	30.5	44.9	0.2	16
Church St	11	2.2	11.8	0.1	44
	40	0.1	1.3	0.0	52
Sharpe St	12	0.2	1.9	0.0	57
Elm Ave	13	12.4	26.1	0.2	25
Total		45.4	86.1	0.6	24

Arterial Level of Service: SB Armstrong St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Beavis Terr	13	16.0	28.0	0.2	23
Sharpe St	12	5.2	18.4	0.2	36
	40	0.8	3.0	0.0	36
Church St	11	0.4	1.6	0.0	43
Whitewood Ave	6	25.6	35.4	0.1	15
Total		48.1	86.4	0.5	23

Arterial Level of Service: EB Main St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Rorke Ave	14	7.8	22.0	0.2	33
Georgina Ave	15	2.9	13.6	0.2	46
Ferguson Ave #2	16	1.0	10.8	0.2	57
Total		11.7	46.4	0.5	42

Arterial Level of Service: WB Main St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Ferguson Ave #2	16	9.5	20.8	0.2	28
Georgina Ave	15	1.4	9.5	0.2	65
Rorke Ave	14	0.6	12.4	0.2	50
Total		11.5	42.6	0.5	43

Arterial Level of Service: NB #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Main St	16	8.3	16.9	0.1	27
Broadway St	17	2.3	7.4	0.1	45
Browning St	18	7.1	13.0	0.1	23
Total		17.7	37.4	0.3	29

Arterial Level of Service: SB #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Browning St	18	7.5	16.9	0.1	30
Broadway St	17	2.7	8.6	0.1	35
Main St	16	4.7	10.0	0.1	33
Total		14.9	35.4	0.3	32

Arterial Level of Service: EB Whitewood Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Golding St	1	0.9	14.6	0.2	48
Edith St	2	7.7	30.2	0.3	40
John ST	3	2.8	25.3	0.3	48
Mary St	4	1.2	10.0	0.1	43
Paget St #1	5	8.8	17.4	0.1	26
Armstrong St	6	12.4	24.4	0.2	32
Total		33.8	121.8	1.3	39

Arterial Level of Service: WB Whitewood Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Armstrong St	6	6.9	19.6	0.2	33
Paget St #1	5	10.9	25.1	0.2	32
Mary St	4	1.6	9.8	0.1	46
John ST	3	0.6	9.6	0.1	45
Parking Entrance	2	9.4	33.6	0.3	36
Golding St	1	2.3	22.9	0.3	53
Total		31.8	120.6	1.3	40

Arterial Level of Service: NB #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Broadwood Ave	9	0.9	16.5	0.2	39
Farah Ave	10	1.5	30.9	0.3	39
	38	0.3	7.9	0.1	37
Whitewood Ave	5	17.8	23.6	0.1	12
Total		20.5	79.0	0.7	30

Arterial Level of Service: SB #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Whitewood Ave	5	26.1	40.1	0.2	15
	38	1.4	7.6	0.1	36
Farah Ave	10	0.8	7.4	0.1	40
Broadwood Ave	9	1.8	31.3	0.3	39
Total		30.1	86.4	0.7	27

Arterial Level of Service: NB Armstrong St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Whitewood Ave	6	39.6	53.9	0.2	14
Church St	11	2.5	12.9	0.1	40
	40	0.1	1.4	0.0	50
Sharpe St	12	0.2	2.0	0.0	56
Elm Ave	13	14.8	28.2	0.2	23
Total		57.2	98.3	0.6	21

Arterial Level of Service: SB Armstrong St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Beavis Terr	13	20.1	32.2	0.2	20
Sharpe St	12	5.9	19.6	0.2	34
	40	0.9	3.1	0.0	36
Church St	11	0.5	1.7	0.0	41
Whitewood Ave	6	28.0	37.7	0.1	14
Total		55.4	94.1	0.5	21

Arterial Level of Service: EB Main St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Rorke Ave	14	10.3	24.4	0.2	30
Georgina Ave	15	3.5	15.3	0.2	41
Ferguson Ave #2	16	1.4	13.3	0.2	46
Total		15.2	53.0	0.5	37

Arterial Level of Service: WB Main St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Ferguson Ave #2	16	9.0	20.1	0.2	29
Georgina Ave	15	1.5	9.5	0.2	66
Rorke Ave	14	0.9	11.8	0.2	53
Total		11.4	41.5	0.5	44

Arterial Level of Service: NB #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Main St	16	8.0	16.8	0.1	27
Broadway St	17	3.1	8.8	0.1	37
Browning St	18	7.1	12.8	0.1	23
Total		18.2	38.3	0.3	28

Arterial Level of Service: SB #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Browning St	18	9.0	18.6	0.1	27
Broadway St	17	3.1	9.2	0.1	32
Main St	16	6.3	12.3	0.1	27
Total		18.5	40.2	0.3	28

APPENDIX D

Future Do-Nothing Scenario Signal Warrants

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Whitewood Ave	**Direction:**	East/West
Minor Street:	Golding St	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Three ("T" Intersection)	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Whitewood Ave						Minor: Golding St						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	0	362	16	16	249	0	16	0	30	0	0	0	0
PM	0	360	30	16	396	0	15	0	28	0	0	0	0
AHV[1]	**0**	**181**	**12**	**8**	**161**	**0**	**8**	**0**	**15**	**0**	**0**	**0**	**0**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = (AM_{PHV} + PM_{PHV}) / 4. In the case that only one estimate is available then AHV = AM_{PHV} / 2 **or** AHV = PM_{PHV} / 2.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	385	Justification 2A: Major Street Both Approaches	362
Justification 1B: Minor Street Both Approaches	23	Justification 2B: Traffic Crossing Major Street	8

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			8
(2) The heaviest through volume from the minor street:			0
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	8	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	189	FALSE	
(4) Pedestrians crossing the major street:			0
		Total	**8**

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Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Whitewood Ave	**Direction:**	East/West
Minor Street:	Golding St	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	150%	**306**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	385	**864**	45%	**No**
1B: Minor Street Both Approaches	23	**306**	8%	
2A: Major Street Both Approaches	362	**864**	42%	**No**
2B: Traffic Crossing Major Street	8	**90**	9%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Whitewood Ave	**Direction:**	East/West
Minor Street:	John	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Whitewood Ave						Minor: John						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	15	288	4	4	256	8	4	0	5	11	4	15	7
PM	14	387	7	5	324	12	4	0	9	11	3	8	6
AHV[1]	**7**	**169**	**3**	**2**	**145**	**5**	**2**	**0**	**4**	**6**	**2**	**6**	**3**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = (AM_{PHV} + PM_{PHV}) / 4. In the case that only one estimate is available then AHV = AM_{PHV} / 2 **or** AHV = PM_{PHV} / 2.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	351	Justification 2A: Major Street Both Approaches	331
Justification 1B: Minor Street Both Approaches	20	Justification 2B: Traffic Crossing Major Street	13

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			8
(2) The heaviest through volume from the minor street:			2
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	7	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	152	FALSE	
(4) Pedestrians crossing the major street:			3
		Total	**13**

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Whitewood Ave	**Direction:**	East/West
Minor Street:	John	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	351	**864**	41%	**No**
1B: Minor Street Both Approaches	20	**204**	10%	
2A: Major Street Both Approaches	331	**864**	38%	**No**
2B: Traffic Crossing Major Street	13	**90**	14%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Whitewood Ave	**Direction:**	East/West
Minor Street:	Mary	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Whitewood Ave						Minor: Mary						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	23	274	8	4	273	8	2	3	2	8	4	10	3
PM	22	375	9	7	333	6	1	4	5	8	2	12	5
AHV[1]	**11**	**162**	**4**	**3**	**152**	**4**	**1**	**2**	**2**	**4**	**2**	**6**	**2**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	353	Justification 2A: Major Street Both Approaches	336
Justification 1B: Minor Street Both Approaches	17	Justification 2B: Traffic Crossing Major Street	9

Note: The crossing volume is defined as the sum of:			
(1) Left turns from both minor street approaches:			5
(2) The heaviest through volume from the minor street:			2
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	11	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	163	FALSE	
(4) Pedestrians crossing the major street:			2
		Total	**9**

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Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Whitewood Ave	**Direction:**	East/West
Minor Street:	Mary	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	353	**864**	41%	**No**
1B: Minor Street Both Approaches	17	**204**	8%	
2A: Major Street Both Approaches	336	**864**	39%	**No**
2B: Traffic Crossing Major Street	9	**90**	10%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

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Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Broadwood	**Direction:**	East/West
Minor Street:	Golding	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Three ("T" Intersection)	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Broadwood						Minor: Golding						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	3	1	0	0	2	16	0	0	0	33	0	0	0
PM	0	0	0	0	4	41	0	0	0	2	0	34	0
AHV[1]	**1**	**0**	**0**	**0**	**2**	**14**	**0**	**0**	**0**	**9**	**0**	**9**	**0**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = (AM_{PHV} + PM_{PHV}) / 4. In the case that only one estimate is available then AHV = AM_{PHV} / 2 **or** AHV = PM_{PHV} / 2.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	35	Justification 2A: Major Street Both Approaches	17
Justification 1B: Minor Street Both Approaches	18	Justification 2B: Traffic Crossing Major Street	9

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			9
(2) The heaviest through volume from the minor street:			0
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	1	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	3	FALSE	
(4) Pedestrians crossing the major street:			0
		Total	**9**

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Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Broadwood	**Direction:**	East/West
Minor Street:	Golding	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	150%	**306**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	35	**864**	4%	**No**
1B: Minor Street Both Approaches	18	**306**	6%	
2A: Major Street Both Approaches	17	**864**	2%	**No**
2B: Traffic Crossing Major Street	9	**90**	10%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Broadwood	**Direction:**	East/West
Minor Street:	Edith	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Three ("T" Intersection)	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Broadwood						Minor: Edith						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	6	32	0	0	22	39	0	0	0	24	0	2	0
PM	8	47	0	0	41	25	0	0	0	71	0	5	0
AHV[1]	**4**	**20**	**0**	**0**	**16**	**16**	**0**	**0**	**0**	**24**	**0**	**2**	**0**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	82	Justification 2A: Major Street Both Approaches	56
Justification 1B: Minor Street Both Approaches	26	Justification 2B: Traffic Crossing Major Street	24

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			24
(2) The heaviest through volume from the minor street:			0
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	4	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	20	FALSE	
(4) Pedestrians crossing the major street:			0
		Total	**24**

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Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Broadwood	**Direction:**	East/West
Minor Street:	Edith	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	150%	**306**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	82	**864**	9%	**No**
1B: Minor Street Both Approaches	26	**306**	8%	
2A: Major Street Both Approaches	56	**864**	6%	**No**
2B: Traffic Crossing Major Street	24	**90**	27%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Lakeshore	**Direction:**	North/South
Minor Street:	Broadwood	**Direction:**	East/West

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Lakeshore						Minor: Broadwood						Pedestrians Crossing Major
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM	68	302	4	0	187	9	13	4	46	7	2	3	9
PM	50	288	2	2	332	18	20	4	98	2	0	7	6
AHV[1]	**30**	**148**	**2**	**1**	**130**	**7**	**8**	**2**	**36**	**2**	**1**	**3**	**4**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	370	Justification 2A: Major Street Both Approaches	318
Justification 1B: Minor Street Both Approaches	52	Justification 2B: Traffic Crossing Major Street	16

Note: The crossing volume is defined as the sum of:			
(1) Left turns from both minor street approaches:			10
(2) The heaviest through volume from the minor street:			2
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	30	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	160	FALSE	
(4) Pedestrians crossing the major street:			4
		Total	**16**

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Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Lakeshore	**Direction:**	North/South
Minor Street:	Broadwood	**Direction:**	East/West

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	370	**864**	43%	**No**
1B: Minor Street Both Approaches	52	**204**	25%	
2A: Major Street Both Approaches	318	**864**	37%	**No**
2B: Traffic Crossing Major Street	16	**90**	18%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Lakeshore	**Direction:**	North/South
Minor Street:	Farah	**Direction:**	East/West

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Lakeshore						Minor: Farah						Pedestrians Crossing Major
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM	6	232	83	34	133	6	8	12	15	41	15	15	10
PM	9	258	47	28	265	9	3	23	23	62	32	18	4
AHV[1]	**4**	**123**	**33**	**16**	**100**	**4**	**3**	**9**	**10**	**26**	**12**	**8**	**4**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = (AM_{PHV} + PM_{PHV}) / 4. In the case that only one estimate is available then AHV = AM_{PHV} / 2 **or** AHV = PM_{PHV} / 2.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	348	Justification 2A: Major Street Both Approaches	280
Justification 1B: Minor Street Both Approaches	68	Justification 2B: Traffic Crossing Major Street	45

Note: The crossing volume is defined as the sum of:			
(1) Left turns from both minor street approaches:			29
(2) The heaviest through volume from the minor street:			12
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	16	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	139	FALSE	
(4) Pedestrians crossing the major street:			4
		Total	**45**

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Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Lakeshore	**Direction:**	North/South
Minor Street:	Farah	**Direction:**	East/West

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	348	**864**	40%	**No**
1B: Minor Street Both Approaches	68	**204**	33%	
2A: Major Street Both Approaches	280	**864**	32%	**No**
2B: Traffic Crossing Major Street	45	**90**	50%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Armstrong	**Direction:**	North/South
Minor Street:	Church	**Direction:**	East/West

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Three ("T" Intersection)	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Armstrong						Minor: Church						Pedestrians Crossing Major
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM	5	321	0	0	377	90	0	0	0	0	0	0	5
PM	5	574	0	0	453	50	0	0	0	0	0	0	2
AHV[1]	**3**	**224**	**0**	**0**	**208**	**35**	**0**	**0**	**0**	**0**	**0**	**0**	**2**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = (AM_{PHV} + PM_{PHV}) / 4. In the case that only one estimate is available then AHV = AM_{PHV} / 2 **or** AHV = PM_{PHV} / 2.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	470
Justification 1B: Minor Street Both Approaches	0

Justification 2A: Major Street Both Approaches	470
Justification 2B: Traffic Crossing Major Street	2

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			0
(2) The heaviest through volume from the minor street:			0
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	3	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	211	FALSE	
(4) Pedestrians crossing the major street:			2
		Total	**2**

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Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Armstrong	**Direction:**	North/South
Minor Street:	Church	**Direction:**	East/West

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	150%	**306**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	470	**864**	54%	**No**
1B: Minor Street Both Approaches	0	**306**	0%	
2A: Major Street Both Approaches	470	**864**	54%	**No**
2B: Traffic Crossing Major Street	2	**90**	2%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Armstrong	**Direction:**	North/South
Minor Street:	Sherpe	**Direction:**	East/West

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Armstrong						Minor: Sherpe						Pedestrians Crossing Major
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM	0	330	4	65	454	0	14	2	5	1	0	40	5
PM	0	544	14	37	477	0	36	0	10	0	0	93	2
AHV[1]	**0**	**219**	**5**	**26**	**233**	**0**	**13**	**1**	**4**	**0**	**0**	**33**	**2**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	534	Justification 2A: Major Street Both Approaches	483
Justification 1B: Minor Street Both Approaches	51	Justification 2B: Traffic Crossing Major Street	16

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			13
(2) The heaviest through volume from the minor street:			1
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	26	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	245	FALSE	
(4) Pedestrians crossing the major street:			2
		Total	**16**

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Armstrong	**Direction:**	North/South
Minor Street:	Sherpe	**Direction:**	East/West

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	534	**864**	62%	**No**
1B: Minor Street Both Approaches	51	**204**	25%	
2A: Major Street Both Approaches	483	**864**	56%	**No**
2B: Traffic Crossing Major Street	16	**90**	18%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Main	**Direction:**	East/West
Minor Street:	Rorke	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Main						Minor: Rorke						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	10	39	38	82	50	9	61	19	192	5	21	14	1
PM	14	84	73	206	60	9	52	24	127	5	24	11	5
AHV[1]	**6**	**31**	**28**	**72**	**28**	**5**	**28**	**11**	**80**	**3**	**11**	**6**	**2**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	309	Justification 2A: Major Street Both Approaches	170
Justification 1B: Minor Street Both Approaches	139	Justification 2B: Traffic Crossing Major Street	44

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			31
(2) The heaviest through volume from the minor street:			11
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	72	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	103	FALSE	
(4) Pedestrians crossing the major street:			2
		Total	**44**

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Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Main	**Direction:**	East/West
Minor Street:	Rorke	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	309	**864**	36%	**No**
1B: Minor Street Both Approaches	139	**204**	68%	
2A: Major Street Both Approaches	170	**864**	20%	**No**
2B: Traffic Crossing Major Street	44	**90**	49%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Main	**Direction:**	East/West
Minor Street:	Gorgina	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Main						Minor: Gorgina						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	4	238	7	8	126	3	12	7	43	1	0	4	3
PM	4	192	7	32	280	7	12	3	30	4	4	5	11
AHV[1]	**2**	**108**	**4**	**10**	**102**	**3**	**6**	**3**	**18**	**1**	**1**	**2**	**4**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = (AM_{PHV} + PM_{PHV}) / 4. In the case that only one estimate is available then AHV = AM_{PHV} / 2 **or** AHV = PM_{PHV} / 2.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	260	Justification 2A: Major Street Both Approaches	229
Justification 1B: Minor Street Both Approaches	31	Justification 2B: Traffic Crossing Major Street	14

Note: The crossing volume is defined as the sum of:			
(1) Left turns from both minor street approaches:			7
(2) The heaviest through volume from the minor street:			3
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	10	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	118	FALSE	
(4) Pedestrians crossing the major street:			4
		Total	**14**

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Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Main	**Direction:**	East/West
Minor Street:	Gorgina	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	260	**864**	30%	**No**
1B: Minor Street Both Approaches	31	**204**	15%	
2A: Major Street Both Approaches	229	**864**	27%	**No**
2B: Traffic Crossing Major Street	14	**90**	16%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Main	**Direction:**	East/West
Minor Street:	Ferguson	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Main						Minor: Ferguson						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	243	19	6	1	13	44	6	11	0	29	21	106	7
PM	208	27	12	0	18	52	7	13	0	20	40	269	21
AHV[1]	**113**	**12**	**5**	**0**	**8**	**24**	**3**	**6**	**0**	**12**	**15**	**94**	**7**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	292
Justification 1B: Minor Street Both Approaches	130

Justification 2A: Major Street Both Approaches	162
Justification 2B: Traffic Crossing Major Street	37

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			15
(2) The heaviest through volume from the minor street:			15
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	113	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	121	FALSE	
(4) Pedestrians crossing the major street:			7
		Total	**37**

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Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Main	**Direction:**	East/West
Minor Street:	Ferguson	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	292	**864**	34%	**No**
1B: Minor Street Both Approaches	130	**204**	64%	
2A: Major Street Both Approaches	162	**864**	19%	**No**
2B: Traffic Crossing Major Street	37	**90**	41%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Ferguson	**Direction:**	North/South
Minor Street:	Broadway	**Direction:**	East/West

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Ferguson						Minor: Broadway						Pedestrians Crossing Major
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM	1	299	0	20	148	10	6	0	1	5	2	23	0
PM	1	248	26	27	307	27	5	4	0	19	3	32	2
AHV[1]	**1**	**137**	**7**	**12**	**114**	**9**	**3**	**1**	**0**	**6**	**1**	**14**	**1**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = (AM_{PHV} + PM_{PHV}) / 4. In the case that only one estimate is available then AHV = AM_{PHV} / 2 **or** AHV = PM_{PHV} / 2.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	305	Justification 2A: Major Street Both Approaches	280
Justification 1B: Minor Street Both Approaches	25	Justification 2B: Traffic Crossing Major Street	11

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			9
(2) The heaviest through volume from the minor street:			1
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	12	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	149	FALSE	
(4) Pedestrians crossing the major street:			1
		Total	**11**

TYLin

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Ferguson	**Direction:**	North/South
Minor Street:	Broadway	**Direction:**	East/West

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	305	**864**	35%	**No**
1B: Minor Street Both Approaches	25	**204**	12%	
2A: Major Street Both Approaches	280	**864**	32%	**No**
2B: Traffic Crossing Major Street	11	**90**	12%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Ferguson	**Direction:**	North/South
Minor Street:	Browning	**Direction:**	East/West

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Ferguson						Minor: Browning						Pedestrians Crossing Major
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM	0	313	1	3	190	5	9	2	0	5	0	1	2
PM	4	289	4	5	344	8	2	0	2	7	3	5	2
AHV[1]	**1**	**151**	**1**	**2**	**134**	**3**	**3**	**1**	**1**	**3**	**1**	**2**	**1**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = (AM_{PHV} + PM_{PHV}) / 4. In the case that only one estimate is available then AHV = AM_{PHV} / 2 **or** AHV = PM_{PHV} / 2.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	303	Justification 2A: Major Street Both Approaches	292
Justification 1B: Minor Street Both Approaches	11	Justification 2B: Traffic Crossing Major Street	8

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			6
(2) The heaviest through volume from the minor street:			1
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	2	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	153	FALSE	
(4) Pedestrians crossing the major street:			1
		Total	**8**

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2028	**Analyst:**	GC

Study Intersection Summary

Major Street:	Ferguson	**Direction:**	North/South
Minor Street:	Browning	**Direction:**	East/West

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	303	**864**	35%	**No**
1B: Minor Street Both Approaches	11	**204**	5%	
2A: Major Street Both Approaches	292	**864**	34%	**No**
2B: Traffic Crossing Major Street	8	**90**	9%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

TYLin

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Whitewood Ave	**Direction:**	East/West
Minor Street:	Golding St	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Three ("T" Intersection)	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Whitewood Ave						Minor: Golding St						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	0	486	16	16	335	0	16	0	30	0	0	0	0
PM	0	485	30	16	532	0	15	0	28	0	0	0	0
AHV[1]	**0**	**243**	**12**	**8**	**217**	**0**	**8**	**0**	**15**	**0**	**0**	**0**	**0**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	503	Justification 2A: Major Street Both Approaches	480
Justification 1B: Minor Street Both Approaches	23	Justification 2B: Traffic Crossing Major Street	8

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			8
(2) The heaviest through volume from the minor street:			0
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	8	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	251	FALSE	
(4) Pedestrians crossing the major street:			0
		Total	**8**

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Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Whitewood Ave	**Direction:**	East/West
Minor Street:	Golding St	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	150%	**306**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	503	**864**	58%	**No**
1B: Minor Street Both Approaches	23	**306**	8%	
2A: Major Street Both Approaches	480	**864**	56%	**No**
2B: Traffic Crossing Major Street	8	**90**	9%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

TYLin

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Whitewood Ave	**Direction:**	East/West
Minor Street:	John	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Whitewood Ave						Minor: John						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	15	387	4	4	344	8	4	0	5	11	4	15	7
PM	14	521	7	5	436	12	4	0	9	11	3	8	6
AHV[1]	**7**	**227**	**3**	**2**	**195**	**5**	**2**	**0**	**4**	**6**	**2**	**6**	**3**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	459	Justification 2A: Major Street Both Approaches	439
Justification 1B: Minor Street Both Approaches	20	Justification 2B: Traffic Crossing Major Street	13

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			8
(2) The heaviest through volume from the minor street:			2
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	7	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	202	FALSE	
(4) Pedestrians crossing the major street:			3
		Total	**13**

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Whitewood Ave	**Direction:**	East/West
Minor Street:	John	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	459	**864**	53%	**No**
1B: Minor Street Both Approaches	20	**204**	10%	
2A: Major Street Both Approaches	439	**864**	51%	**No**
2B: Traffic Crossing Major Street	13	**90**	14%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Whitewood Ave	**Direction:**	East/West
Minor Street:	Mary	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Whitewood Ave						Minor: Mary						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	23	369	8	4	368	8	2	3	2	8	4	10	3
PM	22	504	9	7	448	6	1	4	5	8	2	12	5
AHV[1]	**11**	**218**	**4**	**3**	**204**	**4**	**1**	**2**	**2**	**4**	**2**	**6**	**2**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = (AM_{PHV} + PM_{PHV}) / 4. In the case that only one estimate is available then AHV = AM_{PHV} / 2 **or** AHV = PM_{PHV} / 2.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	461	Justification 2A: Major Street Both Approaches	444
Justification 1B: Minor Street Both Approaches	17	Justification 2B: Traffic Crossing Major Street	9

Note: The crossing volume is defined as the sum of:			
(1) Left turns from both minor street approaches:			5
(2) The heaviest through volume from the minor street:			2
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	11	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	215	FALSE	
(4) Pedestrians crossing the major street:			2
		Total	**9**

TYLin

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Whitewood Ave	**Direction:**	East/West
Minor Street:	Mary	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	461	**864**	53%	**No**
1B: Minor Street Both Approaches	17	**204**	8%	
2A: Major Street Both Approaches	444	**864**	51%	**No**
2B: Traffic Crossing Major Street	9	**90**	10%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Broadwood	**Direction:**	East/West
Minor Street:	Golding	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Three ("T" Intersection)	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Broadwood						Minor: Golding						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	3	1	0	0	2	16	0	0	0	33	0	0	0
PM	0	0	0	0	4	41	0	0	0	2	0	34	0
AHV[1]	**1**	**0**	**0**	**0**	**2**	**14**	**0**	**0**	**0**	**9**	**0**	**9**	**0**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = (AM_{PHV} + PM_{PHV}) / 4. In the case that only one estimate is available then AHV = AM_{PHV} / 2 **or** AHV = PM_{PHV} / 2.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	35	Justification 2A: Major Street Both Approaches	17
Justification 1B: Minor Street Both Approaches	18	Justification 2B: Traffic Crossing Major Street	9

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			9
(2) The heaviest through volume from the minor street:			0
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	1	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	3	FALSE	
(4) Pedestrians crossing the major street:			0
		Total	**9**

TYLin

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Broadwood	**Direction:**	East/West
Minor Street:	Golding	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	150%	**306**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	35	**864**	4%	**No**
1B: Minor Street Both Approaches	18	**306**	6%	
2A: Major Street Both Approaches	17	**864**	2%	**No**
2B: Traffic Crossing Major Street	9	**90**	10%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Broadwood	**Direction:**	East/West
Minor Street:	Edith	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Three ("T" Intersection)	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Broadwood						Minor: Edith						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	6	32	0	0	22	39	0	0	0	24	0	2	0
PM	8	47	0	0	41	25	0	0	0	71	0	5	0
AHV[1]	**4**	**20**	**0**	**0**	**16**	**16**	**0**	**0**	**0**	**24**	**0**	**2**	**0**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = (AM_{PHV} + PM_{PHV}) / 4. In the case that only one estimate is available then AHV = AM_{PHV} / 2 **or** AHV = PM_{PHV} / 2.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	82	Justification 2A: Major Street Both Approaches	56
Justification 1B: Minor Street Both Approaches	26	Justification 2B: Traffic Crossing Major Street	24

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			24
(2) The heaviest through volume from the minor street:			0
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	4	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	20	FALSE	
(4) Pedestrians crossing the major street:			0
		Total	**24**

TYLin

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Broadwood	**Direction:**	East/West
Minor Street:	Edith	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	150%	**306**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	82	**864**	9%	**No**
1B: Minor Street Both Approaches	26	**306**	8%	
2A: Major Street Both Approaches	56	**864**	6%	**No**
2B: Traffic Crossing Major Street	24	**90**	27%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

TYLin

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Lakeshore	**Direction:**	North/South
Minor Street:	Broadwood	**Direction:**	East/West

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Lakeshore						Minor: Broadwood						Pedestrians Crossing Major
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM	68	406	4	0	252	9	13	4	46	7	2	3	9
PM	50	387	2	2	446	18	20	4	98	2	0	7	6
AHV[1]	**30**	**198**	**2**	**1**	**175**	**7**	**8**	**2**	**36**	**2**	**1**	**3**	**4**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	465	Justification 2A: Major Street Both Approaches	413
Justification 1B: Minor Street Both Approaches	52	Justification 2B: Traffic Crossing Major Street	16

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			10
(2) The heaviest through volume from the minor street:			2
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	30	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	205	FALSE	
(4) Pedestrians crossing the major street:			4
		Total	**16**

TYLin

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Lakeshore	**Direction:**	North/South
Minor Street:	Broadwood	**Direction:**	East/West

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	465	**864**	54%	**No**
1B: Minor Street Both Approaches	52	**204**	25%	
2A: Major Street Both Approaches	413	**864**	48%	**No**
2B: Traffic Crossing Major Street	16	**90**	18%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

TYLin

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Lakeshore	**Direction:**	North/South
Minor Street:	Farah	**Direction:**	East/West

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Lakeshore						Minor: Farah						Pedestrians Crossing Major
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM	6	313	83	34	179	6	8	12	15	41	15	15	10
PM	9	347	47	28	357	9	3	23	23	62	32	18	4
AHV[1]	**4**	**165**	**33**	**16**	**134**	**4**	**3**	**9**	**10**	**26**	**12**	**8**	**4**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	424	Justification 2A: Major Street Both Approaches	356
Justification 1B: Minor Street Both Approaches	68	Justification 2B: Traffic Crossing Major Street	45

Note: The crossing volume is defined as the sum of:			
(1) Left turns from both minor street approaches:			29
(2) The heaviest through volume from the minor street:			12
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	16	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	181	FALSE	
(4) Pedestrians crossing the major street:			4
		Total	**45**

TYLin

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Lakeshore	**Direction:**	North/South
Minor Street:	Farah	**Direction:**	East/West

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	424	**864**	49%	**No**
1B: Minor Street Both Approaches	68	**204**	33%	
2A: Major Street Both Approaches	356	**864**	41%	**No**
2B: Traffic Crossing Major Street	45	**90**	50%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Armstrong	**Direction:**	North/South
Minor Street:	Church	**Direction:**	East/West

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Three ("T" Intersection)	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Armstrong						Minor: Church						Pedestrians Crossing Major
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM	5	431	0	0	507	90	0	0	0	0	0	0	5
PM	5	772	0	0	610	50	0	0	0	0	0	0	2
AHV[1]	**3**	**301**	**0**	**0**	**279**	**35**	**0**	**0**	**0**	**0**	**0**	**0**	**2**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	618
Justification 1B: Minor Street Both Approaches	0

Justification 2A: Major Street Both Approaches	618
Justification 2B: Traffic Crossing Major Street	2

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			0
(2) The heaviest through volume from the minor street:			0
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	3	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	282	FALSE	
(4) Pedestrians crossing the major street:			2
		Total	**2**

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Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Armstrong	**Direction:**	North/South
Minor Street:	Church	**Direction:**	East/West

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	150%	**306**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	618	**864**	72%	**No**
1B: Minor Street Both Approaches	0	**306**	0%	
2A: Major Street Both Approaches	618	**864**	72%	**No**
2B: Traffic Crossing Major Street	2	**90**	2%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

TYLin

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Armstrong	**Direction:**	North/South
Minor Street:	Sherpe	**Direction:**	East/West

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Armstrong						Minor: Sherpe						Pedestrians Crossing Major
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM	0	443	4	65	611	0	14	2	5	1	0	40	5
PM	0	732	14	37	642	0	36	0	10	0	0	93	2
AHV[1]	**0**	**294**	**5**	**26**	**313**	**0**	**13**	**1**	**4**	**0**	**0**	**33**	**2**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	689	Justification 2A: Major Street Both Approaches	638
Justification 1B: Minor Street Both Approaches	51	Justification 2B: Traffic Crossing Major Street	16

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			13
(2) The heaviest through volume from the minor street:			1
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	26	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	320	FALSE	
(4) Pedestrians crossing the major street:			2
		Total	**16**

TYLin

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Armstrong	**Direction:**	North/South
Minor Street:	Sherpe	**Direction:**	East/West

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	689	**864**	80%	**No**
1B: Minor Street Both Approaches	51	**204**	25%	
2A: Major Street Both Approaches	638	**864**	74%	**No**
2B: Traffic Crossing Major Street	16	**90**	18%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

TYLin

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Main	**Direction:**	East/West
Minor Street:	Rorke	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Main						Minor: Rorke						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	10	53	51	110	67	9	82	19	258	5	21	14	1
PM	14	113	99	277	81	9	70	24	171	5	24	11	5
AHV[1]	**6**	**42**	**38**	**97**	**37**	**5**	**38**	**11**	**107**	**3**	**11**	**6**	**2**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	401	Justification 2A: Major Street Both Approaches	225
Justification 1B: Minor Street Both Approaches	176	Justification 2B: Traffic Crossing Major Street	54

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			41
(2) The heaviest through volume from the minor street:			11
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	97	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	139	FALSE	
(4) Pedestrians crossing the major street:			2
		Total	**54**

TYLin

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Main	**Direction:**	East/West
Minor Street:	Rorke	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	401	**864**	46%	**No**
1B: Minor Street Both Approaches	176	**204**	86%	
2A: Major Street Both Approaches	225	**864**	26%	**No**
2B: Traffic Crossing Major Street	54	**90**	60%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Main	**Direction:**	East/West
Minor Street:	Gorgina	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Main						Minor: Gorgina						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	4	320	7	8	170	3	12	7	43	1	0	4	3
PM	4	258	7	32	376	7	12	3	30	4	4	5	11
AHV[1]	**2**	**145**	**4**	**10**	**137**	**3**	**6**	**3**	**18**	**1**	**1**	**2**	**4**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = (AM_{PHV} + PM_{PHV}) / 4. In the case that only one estimate is available then AHV = AM_{PHV} / 2 **or** AHV = PM_{PHV} / 2.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	332	Justification 2A: Major Street Both Approaches	301
Justification 1B: Minor Street Both Approaches	31	Justification 2B: Traffic Crossing Major Street	14

Note: The crossing volume is defined as the sum of:			
(1) Left turns from both minor street approaches:			7
(2) The heaviest through volume from the minor street:			3
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	10	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	155	FALSE	
(4) Pedestrians crossing the major street:			4
		Total	**14**

TYLin

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Main	**Direction:**	East/West
Minor Street:	Gorgina	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	332	**864**	38%	**No**
1B: Minor Street Both Approaches	31	**204**	15%	
2A: Major Street Both Approaches	301	**864**	35%	**No**
2B: Traffic Crossing Major Street	14	**90**	16%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

TYLin

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Main	**Direction:**	East/West
Minor Street:	Ferguson	**Direction:**	North/South

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Main						Minor: Ferguson						Pedestrians Crossing Major
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
AM	327	19	6	1	13	58	6	11	0	29	21	143	7
PM	280	27	12	0	18	70	7	13	0	20	40	362	21
AHV[1]	**152**	**12**	**5**	**0**	**8**	**32**	**3**	**6**	**0**	**12**	**15**	**126**	**7**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	371
Justification 1B: Minor Street Both Approaches	162

Justification 2A: Major Street Both Approaches	209
Justification 2B: Traffic Crossing Major Street	37

Note: The crossing volume is defined as the sum of:

(1) Left turns from both minor street approaches:			15
(2) The heaviest through volume from the minor street:			15
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	152	TRUE	
(b) The left turn volume plus the opposing volume > 720 vph	160	FALSE	
(4) Pedestrians crossing the major street:			7
		Total	**37**

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Main	**Direction:**	East/West
Minor Street:	Ferguson	**Direction:**	North/South

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	371	**864**	43%	**No**
1B: Minor Street Both Approaches	162	**204**	79%	
2A: Major Street Both Approaches	209	**864**	24%	**No**
2B: Traffic Crossing Major Street	37	**90**	41%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Ferguson	**Direction:**	North/South
Minor Street:	Broadway	**Direction:**	East/West

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Ferguson						Minor: Broadway						Pedestrians Crossing Major
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM	1	402	0	20	200	10	6	0	1	5	2	23	0
PM	1	333	26	27	414	27	5	4	0	19	3	32	2
AHV[1]	**1**	**184**	**7**	**12**	**154**	**9**	**3**	**1**	**0**	**6**	**1**	**14**	**1**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = $(AM_{PHV} + PM_{PHV}) / 4$. In the case that only one estimate is available then AHV = $AM_{PHV} / 2$ **or** AHV = $PM_{PHV} / 2$.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	392	Justification 2A: Major Street Both Approaches	367
Justification 1B: Minor Street Both Approaches	25	Justification 2B: Traffic Crossing Major Street	11

Note: The crossing volume is defined as the sum of:			
(1) Left turns from both minor street approaches:			9
(2) The heaviest through volume from the minor street:			1
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	12	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	196	FALSE	
(4) Pedestrians crossing the major street:			1
		Total	**11**

TYLin

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Ferguson	**Direction:**	North/South
Minor Street:	Broadway	**Direction:**	East/West

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	392	**864**	45%	**No**
1B: Minor Street Both Approaches	25	**204**	12%	
2A: Major Street Both Approaches	367	**864**	42%	**No**
2B: Traffic Crossing Major Street	11	**90**	12%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

Traffic Signal Warrant - Input Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Ferguson	**Direction:**	North/South
Minor Street:	Browning	**Direction:**	East/West

Intersection Details for Warrant Parameters

Flow Conditions:	Restricted Flow (Urban)	**Number of Lanes:**	1
Number of Legs:	Four	**Intersection Type:**	Existing

Notes: "Free Flow" is used when the operating speed is greater than or equal to 70km/h, "Restricted Flow" otherwise.
The Number of Lanes greater than 1 only needs to be for one direction along the major road.
An intersection is considered "New" if at least 1-leg is added to an existing intersection.

Input Volumes and Average Hourly Volume Determination

Peak Hour	Major: Ferguson						Minor: Browning						Pedestrians Crossing Major
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM	0	421	1	3	256	5	9	2	0	5	0	1	2
PM	4	388	4	5	463	8	2	0	2	7	3	5	2
AHV[1]	**1**	**202**	**1**	**2**	**180**	**3**	**3**	**1**	**1**	**3**	**1**	**2**	**1**

1. The AHV is determined by the availability of the peak hour estimates. If both the AM and PM Peak Hour Volume estimate is available then AHV = (AM_{PHV} + PM_{PHV}) / 4. In the case that only one estimate is available then AHV = AM_{PHV} / 2 **or** AHV = PM_{PHV} / 2.

Determination of Justification Volumes (Based on AHV)

Justification 1A: All Approach Lanes	400	Justification 2A: Major Street Both Approaches	389
Justification 1B: Minor Street Both Approaches	11	Justification 2B: Traffic Crossing Major Street	8

Note: The crossing volume is defined as the sum of:			
(1) Left turns from both minor street approaches:			6
(2) The heaviest through volume from the minor street:			1
(3) 50% of the heavier left turn movement from major street when both of the following criteria are met:			0
(a) The left turn volume > 120 vph	2	FALSE	
(b) The left turn volume plus the opposing volume > 720 vph	204	FALSE	
(4) Pedestrians crossing the major street:			1
		Total	**8**

Traffic Signal Warrant - Output Sheet
Justification 7 - Projected Volumes

Based Ontario Traffic Manual Book 12 - Traffic Signals (March 2012)

Project and Scenario Summary

Project:	Temiskaming Shores Downtown Cores Transportation Study			**Project No.:**	10777
				Date:	2023-08-22
Horizon:	Future Background	**Horizon Year:**	2043	**Analyst:**	GC

Study Intersection Summary

Major Street:	Ferguson	**Direction:**	North/South
Minor Street:	Browning	**Direction:**	East/West

Summary of Base Justification Thresholds

Justification	1 Approach Lane		2 or More Approach Lanes	
	Free Flow	Restricted Flow	Free Flow	Restricted Flow
1A: All Approach Lanes	480	**720**	600	900
1B: Minor Street Both Approaches	120	**170**	120	170
2A: Major Street Both Approaches	480	**720**	600	900
2B: Traffic Crossing Major Street	50	**75**	50	75

The above values are taken from Table 12 and Table 13 from OTM Book 12 (March 2012).
The grey shaded values are provided for reference only, and are not applicable to the study intersection.

Adjusted Justification Thresholds for Study Intersection Conditions

Justification	Base Threshold	Existing Intersection	"T" Intersection	Final Threshold
1A: All Approach Lanes	720	120%	-	**864**
1B: Minor Street Both Approaches	170	120%	100%	**204**
2A: Major Street Both Approaches	720	120%	-	**864**
2B: Traffic Crossing Major Street	75	120%	-	**90**

The above adjustments are taken from OTM Book 12 (March 2012) the "T" Intersection adjustment only applies to Justification 1B, and is a 50% increase on the threshold when the study intersection is a "T' intersection. Otherwise a value of 100% is used.

Warrant Calculation

Justification	Study Intersection Justification Volume	Justification Threshold	Percentage Warrant	Warrant Met?
1A: All Approach Lanes	400	**864**	46%	**No**
1B: Minor Street Both Approaches	11	**204**	5%	
2A: Major Street Both Approaches	389	**864**	45%	**No**
2B: Traffic Crossing Major Street	8	**90**	9%	

Notes: In the case of Justification 7 based on AHV both Warrant 1 and 2 must be met 100%, which requires both the A and B part of each warrant being equal to 100%.
When calculating the percentage, any value greater than 100% is expressed as 100%.

Based on OTM Book 12's Signal Warrant Justification 7 and the estimated AHV for the subject study intersection a signal is:

Not Warranted

APPENDIX E

Future Do-Nothing Scenario AWSC Warrants

AWSC WARRANT CALCULATIONS

Intersection	Time	Total Intersection Volume	Total Minor Street Volume	Control Type	Intersection Legs	Minor approach Split	AWSC Warrant met?
Whitewood Avenue at Golding Street	7:00 AM	377	31	Unsig	3-leg	8%	
Whitewood Avenue at Golding Street	8:00 AM	630	49	Unsig	3-leg	8%	**No**
Whitewood Avenue at Golding Street	4:00 PM	739	51	Unsig	3-leg	7%	
Whitewood Avenue at Golding Street	5:00 PM	603	38	Unsig	3-leg	6%	
Whitewood Avenue at John Street	7:00 AM	344	26	Unsig	4-leg	8%	
Whitewood Avenue at John Street	8:00 AM	561	60	Unsig	4-leg	11%	**No**
Whitewood Avenue at John Street	4:00 PM	684	42	Unsig	4-leg	6%	
Whitewood Avenue at John Street	5:00 PM	577	57	Unsig	4-leg	10%	
Whitewood Avenue at Mary Street	7:00 AM	339	22	Unsig	4-leg	6%	
Whitewood Avenue at Mary Street	8:00 AM	567	63	Unsig	4-leg	11%	**No**
Whitewood Avenue at Mary Street	4:00 PM	695	51	Unsig	4-leg	7%	
Whitewood Avenue at Mary Street	5:00 PM	563	38	Unsig	4-leg	7%	
Broadwood Avenue at Golding Street	7:00 AM	50	25	Unsig	4-leg	50%	
Broadwood Avenue at Golding Street	8:00 AM	47	21	Unsig	4-leg	45%	**No**
Broadwood Avenue at Golding Street	4:00 PM	74	25	Unsig	4-leg	34%	
Broadwood Avenue at Golding Street	5:00 PM	65	36	Unsig	4-leg	55%	
Broadwood Avenue at Edith Street	7:00 AM	79	13	Unsig	4-leg	16%	
Broadwood Avenue at Edith Street	8:00 AM	118	30	Unsig	4-leg	25%	**No**
Broadwood Avenue at Edith Street	4:00 PM	190	76	Unsig	4-leg	40%	
Broadwood Avenue at Edith Street	5:00 PM	153	69	Unsig	4-leg	45%	
Broadwood Avenue at Lakeshore Road	7:00 AM	467	47	Unsig	4-leg	10%	
Broadwood Avenue at Lakeshore Road	8:00 AM	587	80	Unsig	4-leg	14%	**No**
Broadwood Avenue at Lakeshore Road	4:00 PM	715	134	Unsig	4-leg	19%	
Broadwood Avenue at Lakeshore Road	5:00 PM	691	116	Unsig	4-leg	17%	
Lakeshore Road at Farah Avenue	7:00 AM	452	72	Unsig	4-leg	16%	
Lakeshore Road at Farah Avenue	8:00 AM	565	114	Unsig	4-leg	20%	**No**
Lakeshore Road at Farah Avenue	4:00 PM	713	174	Unsig	4-leg	24%	
Lakeshore Road at Farah Avenue	5:00 PM	660	139	Unsig	4-leg	21%	
Armstrong Street at Church Street	7:00 AM	490	1	Unsig	4-leg	0%	
Armstrong Street at Church Street	8:00 AM	726	5	Unsig	4-leg	1%	**No**
Armstrong Street at Church Street	4:00 PM	952	9	Unsig	4-leg	1%	
Armstrong Street at Church Street	5:00 PM	875	3	Unsig	4-leg	0%	
Armstrong Street at Sharpe Street	7:00 AM	560	65	Unsig	4-leg	12%	
Armstrong Street at Sharpe Street	8:00 AM	840	69	Unsig	4-leg	8%	**No**
Armstrong Street at Sharpe Street	4:00 PM	1091	151	Unsig	4-leg	14%	
Armstrong Street at Sharpe Street	5:00 PM	978	127	Unsig	4-leg	13%	
Main Street at Rorke Avenue	7:00 AM	408	166	Unsig	4-leg	41%	
Main Street at Rorke Avenue	8:00 AM	460	209	Unsig	4-leg	45%	**No**
Main Street at Rorke Avenue	4:00 PM	593	227	Unsig	4-leg	38%	
Main Street at Rorke Avenue	5:00 PM	542	189	Unsig	4-leg	35%	
Main Street at Georgina Avenue	7:00 AM	317	39	Unsig	4-leg	12%	
Main Street at Georgina Avenue	8:00 AM	396	80	Unsig	4-leg	20%	**No**
Main Street at Georgina Avenue	4:00 PM	502	67	Unsig	4-leg	13%	
Main Street at Georgina Avenue	5:00 PM	458	49	Unsig	4-leg	11%	
Main Street at Ferguson Avenue	7:00 AM	340	116	Unsig	4-leg	34%	
Main Street at Ferguson Avenue	8:00 AM	461	167	Unsig	4-leg	36%	**No**
Main Street at Ferguson Avenue	4:00 PM	575	301	Unsig	4-leg	52%	
Main Street at Ferguson Avenue	5:00 PM	551	265	Unsig	4-leg	48%	
Ferguson Avenue at Broadway Street	7:00 AM	352	42	Unsig	4-leg	12%	
Ferguson Avenue at Broadway Street	8:00 AM	467	32	Unsig	4-leg	7%	**No**
Ferguson Avenue at Broadway Street	4:00 PM	599	65	Unsig	4-leg	11%	
Ferguson Avenue at Broadway Street	5:00 PM	564	62	Unsig	4-leg	11%	
Ferguson Avenue/Lakeshore Road at Browning Street	7:00 AM	348	18	Unsig	4-leg	5%	
Ferguson Avenue/Lakeshore Road at Browning Street	8:00 AM	479	12	Unsig	4-leg	3%	**No**
Ferguson Avenue/Lakeshore Road at Browning Street	4:00 PM	577	25	Unsig	4-leg	4%	
Ferguson Avenue/Lakeshore Road at Browning Street	5:00 PM	533	21	Unsig	4-leg	4%	

APPENDIX F

Existing Line-of-Sight Analysis

RIGHT TURN MOVEMENT

95

LEFT TURN MOVEMENT

105

TYLin
8800 Dufferin Street,
Suite 200
Vaughan, ON
L4K 0C5
p: 905.738.5700

TEMISKAMING SHORES DOWNTOWN CORES MOBILITY PLAN
SITE LINE REVIEW
SHARPE STREET AT ARMSTRONG STREET

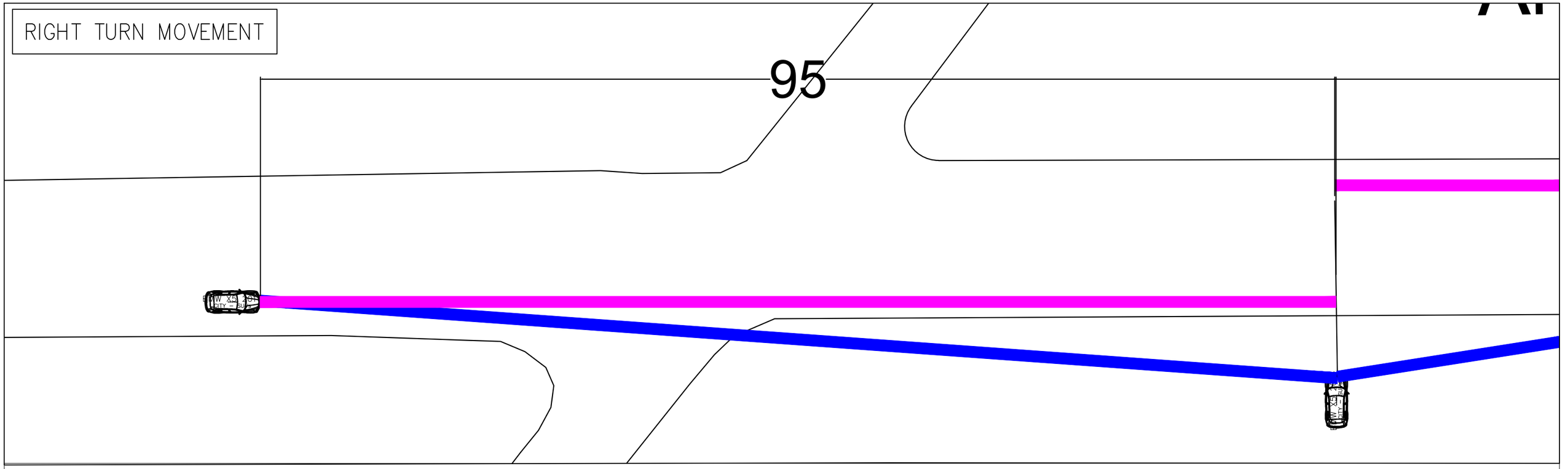
N

DRAWING No.
001

DATE
2023-12-20

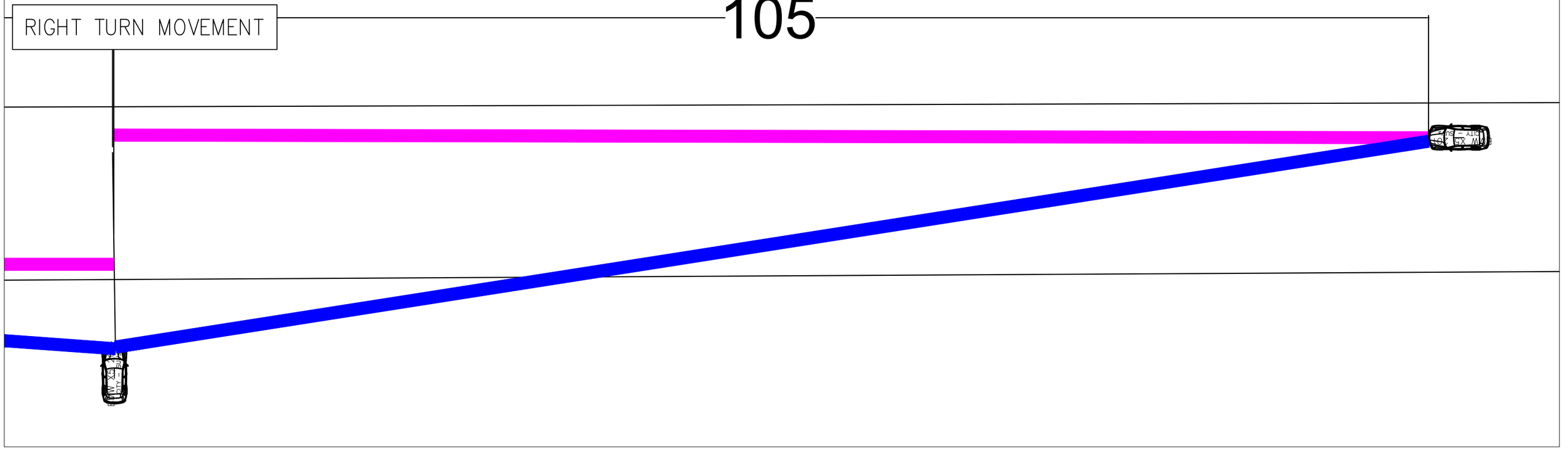
RIGHT TURN MOVEMENT

95



RIGHT TURN MOVEMENT

105



TYLin
8800 Dufferin Street,
Suite 200
Vaughan, ON
L4K 0C5
p: 905.738.5700

TEMISKAMING SHORES DOWNTOWN CORES MOBILITY PLAN
SITE LINE REVIEW
CHURCH STREET AT ARMSTRONG STREET

N

DRAWING No.
001

DATE
2023-12-20

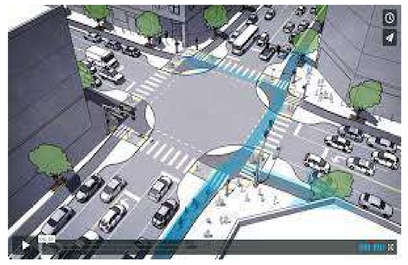
APPENDIX G

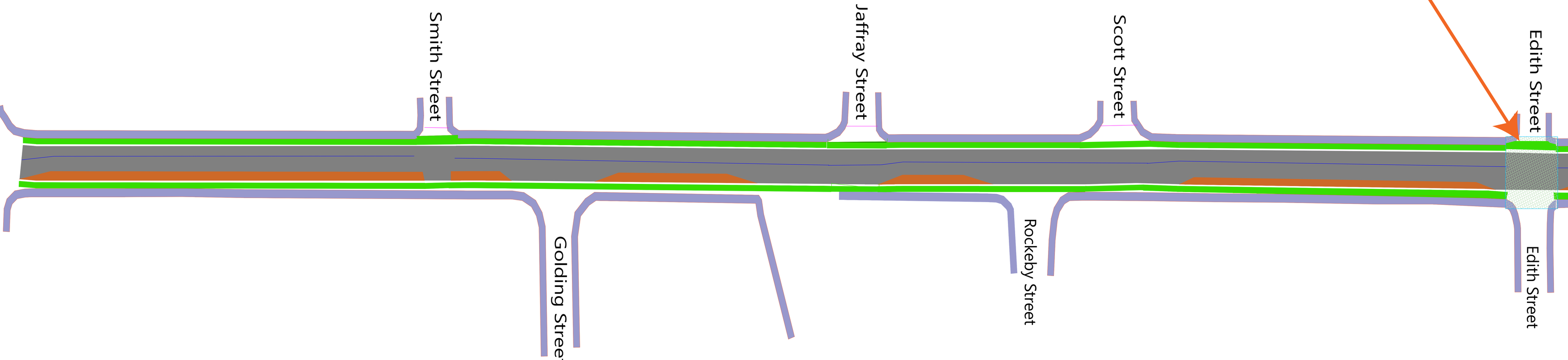
Line Work

New Liskeard Downtown Core
Proposed Mobility Plan

- 2.1-3.0 m sidewalks
- 2.4 m parking lane
- 3.3-3.5m vehicle lanes on both ways
- 1.5 m bike lane
- 0.6 m bike buffer zone

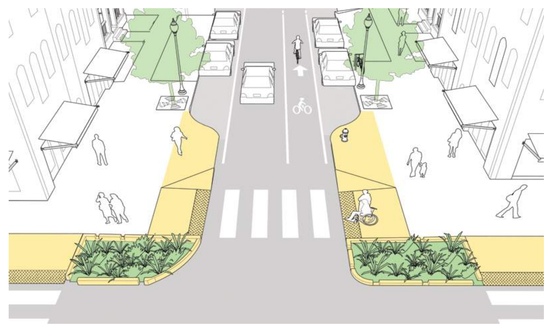
Protected intersections are innovative traffic designs that prioritize cyclist and pedestrian safety by offering dedicated safety by offering dedicated and right-of-way protection.

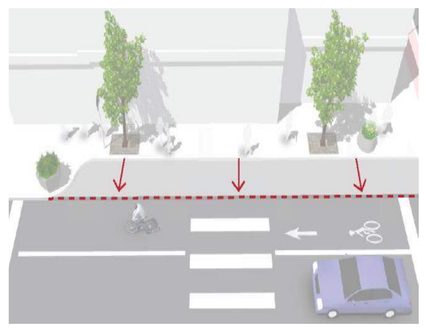




Spruce Avenue

Continuous Sidewalks ensure seamless and safe pathways for pedestrians, promoting accessibility, and contributing to vibrant, walkable communities.





Mini Roundabouts are compact traffic management features that improve intersection flow, mitigate the risk of collisions and improve safety for pedestrians.

Niven Street N

John Street

Consider a 3-Way Stop Controlled Intersection

Mary Street

Continuous Sidewalk

Whitewood Avenue

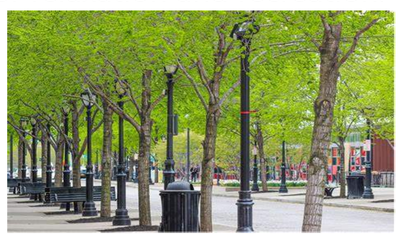
Mary Street

Pocket Park/ Road Closure

Maple Street

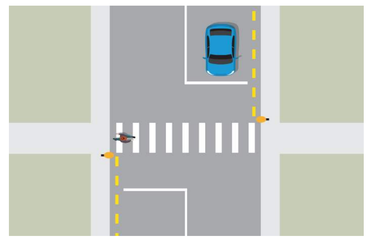
John Street

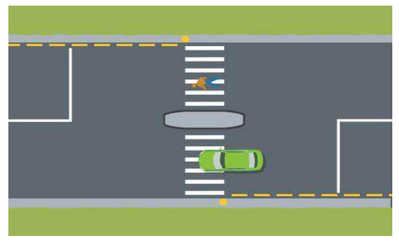
Pocket Parks are small, green spaces that utilize redundant accesses to provide refuge for relaxation and recreation.



A midblock pedestrian crosswalk (PXO) is a designated crossing area installed away from intersections to enhance pedestrian safety and provide convenient access to destinations between cross streets.

Some features of pedestrian crossovers are crossovers are curb bump-outs, painted crosswalk, lighting, tactile strips, signage, and pavement markings for drivers.





Street Furniture encompasses benches, public art, lighting, and other functional elements that enhance the aesthetic and usability of public spaces, fostering a more engaging environment.

Protected Intersection

Sharpe Street

Sharpe Street

A

Armstrong Street

Protected Intersection

Beavis Terrace

Elm Avenue

Armstrong Street

A

Paget Street

Protected Intersection

Wellington Street

Continuous Sidewalk

Semi-Protected Intersection

May Street N

Paget Street

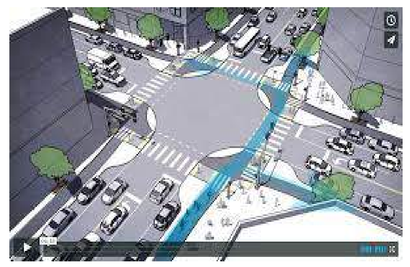
Wellington Street

May Street N

Haileybury Downtown Core
Proposed Mobility Plan

- 2.1-3.0m sidewalks
- 2.4 m parking lane
- 3.3-3.5 m vehicle lanes on both ways
- 1.5 m bike lane
- 0.6 m bike buffer zone

Protected intersections are innovative traffic designs that prioritize cyclist and pedestrian safety by offering dedicated safety by offering dedicated and right-of-way protection.



Main Street

Georgina Ave

Rorke Avenue

Georgina Ave

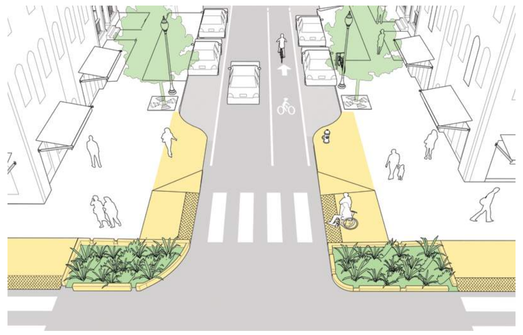
Proposed removal of channelized right turn lane

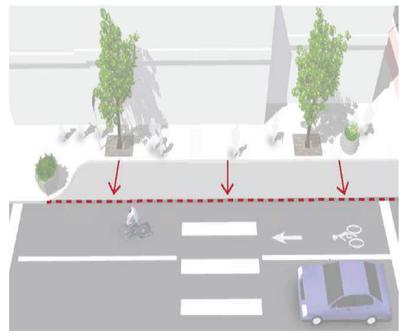
Proposed change to curb boundary,
additional space to be used as green space

Proposed removal of one Southbound lane
to accomodate bi-directional bike path

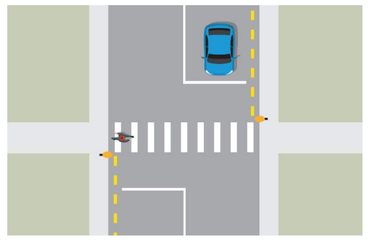
On-Street Bi-directional Cycle Lanes are dedicated sections off road that enhance cyclist safety and encourage active and eco-friendly transportation.

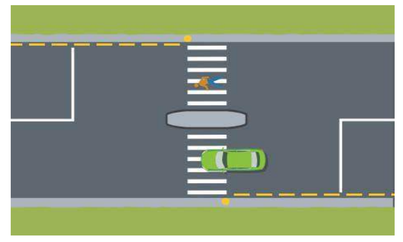
Continuous Sidewalks ensure seamless and safe pathways for pedestrians, promoting accessibility, and contributing to vibrant, walkable communities.





A pedestrian crosswalk (PXO) is a designated crossing area installed at an intersections to enhance pedestrian safety and provide convenient access to destinations between cross streets.
Some features of pedestrian crossovers are crossovers are curb bump-outs, painted crosswalk, lighting, tactile strips, signage, and pavement markings for drivers.





Broadway Street

Protected Intersection

Ferguson Avenue

Meridiran Avenue

Street Furniture encompasses benches, public art, lighting, and other functional elements that enhance the aesthetic and usability of public spaces fostering a more engaging environment.

APPENDIX H

Costing Framework

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost
Active Transportation	**Concrete Sidewalk Construction**	**NL** - Whitewood Ave & John St (on north and south crossings of the intersection) *Continous Sidewalk*	m2		31	1.7	$ 90.00	$ 4,795.02
		NL - Whitewood Ave & Mary St (on north crossings of the intersection) *Continous Sidewalk*	m2		21	4	$ 90.00	$ 7,628.40
		NL - Whitewood Ave & Mary St (on south crossings of the intersection) *Continous Sidewalk*	m2		21	1.7	$ 90.00	$ 3,242.07
		NL - Whitewood Ave & Wellington St (on north and south crossings of the intersection) *Continous Sidewalk*	m2		34	4	$ 90.00	$ 12,182.40
	Subtotal (Sidewalk Construction)							**$ 27,847.89**
	Crosswalks	**NL** - Dymond Ave & Niven St N - For North, South, and East Crosswalks	m2	3	9.5	3	$ 30.00	$ 2,565.00
		NL - Dymond Ave & John St - East, South, and West Crosswalks	m2	3	9.5	3	$ 30.00	$ 2,565.00
		NL - Dymond Ave & Mary St - East, South, and West Crosswalks	m2	3	9.5	3	$ 30.00	$ 2,565.00
		NL - Jaffray St & Whitewood Ave - North Crosswalk	m2	1	10.0	3	$ 30.00	$ 900.00
		NL - Rokeby St & Whitewood Ave - South Crosswalk	m2	1	14.0	3	$ 30.00	$ 1,260.00
		NL - Scott St & Whitewood Ave - North Crosswalk	m2	1	10.0	3	$ 30.00	$ 900.00
		NL - Edith St & Whitewood Ave - East and West Crosswalks	m2	2	15.0	3	$ 30.00	$ 2,700.00
		NL - Edith St & Whitewood Ave - North and South Crosswalks	m2	2	12.0	3	$ 30.00	$ 2,160.00
		NL - Maple St & Whitewood Ave - South Crosswalk	m2	1	9.0	3	$ 30.00	$ 810.00
		NL - Niven St & Whitewood Ave - North Crosswalk	m2	1	10.0	3	$ 30.00	$ 900.00
		NL - John St & Whitewood Ave - North and South Crosswalks	m2	2	9.0	3	$ 30.00	$ 1,620.00
		NL - John St & Whitewood Ave - East Crosswalk	m2	1	13.0	3	$ 30.00	$ 1,170.00
		NL - Mary St & Whitewood Ave - North and South Croswalks	m2	2	9.5	3	$ 30.00	$ 1,710.00
		NL - Paget St & Whitewood Ave - North Crosswalk	m2	1	14.0	3	$ 30.00	$ 1,260.00
		NL - Paget St & Whitewood Ave - South, East, and West Crosswalks	m2	3	16.0	3	$ 30.00	$ 4,320.00
		NL - Wellington St & Whitewood Ave - North and South Crosswalks	m2	2	10.0	3	$ 30.00	$ 1,800.00
		NL - Armstrong St & Whitewood Ave - North, South, East, and West Crosswalks	m2	4	15.0	3	$ 30.00	$ 5,400.00
		NL - May St & Whitewood Avenue - North and South Croswalks	m2	2	10.0	3	$ 30.00	$ 1,800.00
		NL - Armstrong St & Sharpe St - East and West Crosswalks	m2	2	11.0	3	$ 30.00	$ 1,980.00
		NL - Armstrong St & Elm Ave/Beavis Terrace - East and West Crosswalks	m2	2	11.0	3	$ 30.00	$ 1,980.00
		NL - Armstrong St & Elm Ave/Beavis Terrace - North and South Crosswalks	m2	2	16.0	3	$ 30.00	$ 2,880.00
		NL - Armstrong St & Pine Ave - East and West Crosswalks	m2	2	7.5	3	$ 30.00	$ 1,350.00
		NL - Armstrong St & Haliburton Ave - East and West Crosswalks	m2	2	9.0	3	$ 30.00	$ 1,620.00
		NL - Lakeshore Rd & Farah Ave - East and West Crosswalks	m2	2	10.0	3	$ 30.00	$ 1,800.00
		H - Amwell St & Rorke Ave - East and West Crosswalks	m2	2	9.0	3	$ 30.00	$ 1,620.00
		H - Main St & Rorke Ave - North, South, East and West Crosswalks	m2	4	13.0	3	$ 30.00	$ 4,680.00
		H - Main St & Georgina Ave - North and South Crosswalks	m2	2	9.0	3	$ 30.00	$ 1,620.00
		H - Main St & Ferguson Ave - North, South, East and West Crosswalks	m2	4	13.0	3	$ 30.00	$ 4,680.00
		H - Main St & Meridian Ave - South Crosswalk	m2	1	9.5	3	$ 30.00	$ 855.00
		H - Main St & Leslie MacFarlane Way - South Crosswalk	m2	1	9.5	3	$ 30.00	$ 855.00
		H - Main St & Farr Dr - West Crosswalk	m2	1	14.0	3	$ 30.00	$ 1,260.00
		H - Main St & Farr Dr - North and South Crosswalks	m2	2	12.0	3	$ 30.00	$ 2,160.00
		H - Ferguson Ave & Broadway St - East and West Crosswalks	m2	2	12.0	3	$ 30.00	$ 2,160.00
	Subtotal (Crosswalks)							**$ 67,905.00**
	Painted Bike Lanes	**NL** - Armstrong St (from Heard St to Cedar Ave) / 2 Lanes (1 per direction)	m	2	1182		$ 500.00	$ 1,181,610.00
		NL - Whitewood Ave (from Railway to May St) / 2 Lanes (1 per direction)	m	2	1192		$ 500.00	$ 1,192,470.00
		NL - Lakeshore Rd N (from Whitewood Ave to Broadwood Ave / 2 Lanes (1 per direction)	m	2	488		$ 500.00	$ 487,850.00
		NL - Dymond Ave (from Niven St N to Paget St N) / 1 Lane (bi-directional)	m	1	357		$ 500.00	$ 178,740.00
		NL - Wellington St (from Whitewood Ave to Fleming Dr) / 2 Lanes (1 per direction)	m	2	402		$ 500.00	$ 402,490.00
		NL - Cedar Ave (from Wellington St to May St) / 2 Lanes (1 per direction)	m	2	210		$ 500.00	$ 209,980.00
		NL - Sharpe St (from Armstrong St N to May St N) / 2 Lanes (1 per direction)	m	2	131		$ 500.00	$ 131,200.00
		NL - May St (from Sharpe St to Cedar Ave) / 2 Lanes (1 per direction)	m	2	318		$ 500.00	$ 317,580.00
			m				$ 500.00	$ -
		H - Main St (from Railway to Farr Dr) / 2 Lanes (1 per direction)	m	2	731		$ 500.00	$ 731,100.00
	Subtotal (Painted Bike Lanes)							**$ 4,833,020.00**
	Protected Intersection	**NL** - Hailburton Ave W & Armstrong St	ea	1			$ 1,300,000.00	$ 1,300,000.00
		NL - Beavis Terrace & Armstrong St	ea	1			$ 1,300,000.00	$ 1,300,000.00
		NL - Whitewood Ave & Edith St	ea	1			$ 1,300,000.00	$ 1,300,000.00
		NL - Whitewood Ave & Lakeshore Rd N	ea	1			$ 1,300,000.00	$ 1,300,000.00
		NL - Whitewood Ave & Armstrong St N	ea	1			$ 1,300,000.00	$ 1,300,000.00
							$ 1,300,000.00	$ -
		H - Main St & Rorke Avenue	ea	1			$ 1,300,000.00	$ 1,300,000.00
		H - Main St & Ferguson Ave	ea	1			$ 1,300,000.00	$ 1,300,000.00
	Subtotal (Protected Intersection)							**$ 9,100,000.00**
	Pocket Park	**NL** - South side of Whitewood Ave & Maple St N	ea	1			$ 532,000.00	$ 532,000.00
		NL - South side of Whitewood Ave & John St	ea	1			$ 532,000.00	$ 532,000.00
	Subtotal (Bike Repair Stations)							**$ 1,064,000.00**
SUBTOTAL (ACTIVE TRANSPORTATION)								**$ 15,092,772.89**
		Paget Street South at Cedar Avenue	m2	1	15	3	$ 85.00	$ 3,825.00
		Cedar Avenue at Armstrong Street	m2	1	15	3	$ 85.00	$ 3,825.00
		Armstrong Street at Pine Avenue	m2	2	15	3	$ 85.00	$ 7,650.00
		Farah Avenue at Paget Street	m2	1	15	3	$ 85.00	$ 3,825.00
		Whitewood Avenue at Regina Street	m2	2	15	3	$ 85.00	$ 7,650.00
		Shepherdson Road at McCamus Avenue	m2	2	15	3	$ 85.00	$ 7,650.00
		Shepherdson Road at G.N.F.H.T Medical Centr	m2	2	15	3	$ 85.00	$ 7,650.00
		Wilson Avenue at Highway 65	m2	1	15	3	$ 85.00	$ 3,825.00
		Grant Drive opposite Canadian Tire	m2	1	15	3	$ 85.00	$ 3,825.00

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost
Transit	Bus Pad	Lauretter Street at Roland Road (Dymond Subdivision)	m2	1	15	3	$ 85.00	$ 3,825.00
		Raymond Street at Drive in Theatre Road	m2	1	15	3	$ 85.00	$ 3,825.00
		Armstrong Avenue at OPP	m2	1	15	3	$ 85.00	$ 3,825.00
		Elm Avenue at Rebecca Street	m2	1	15	3	$ 85.00	$ 3,825.00
		Haliburton Avenue East at Grant Street	m2	1	15	3	$ 85.00	$ 3,825.00
		Carter Boulevard at Rorke Street	m2	2	15	3	$ 85.00	$ 7,650.00
		Joyal Drive at Rorke Avenue	m2	2	15	3	$ 85.00	$ 7,650.00
		Meridian Avenue at Algonquin Drive	m2	2	15	3	$ 85.00	$ 7,650.00
		Georgina Avenue at Lawlor Street	m2	2	15	3	$ 85.00	$ 7,650.00
		Giorgina Avenue at Blackwall Street	m2	1	15	3	$ 85.00	$ 3,825.00
		Giorgina Avenue at Marcella Street	m2	1	15	3	$ 85.00	$ 3,825.00
		Rorke Avenue at Broadway Street	m2	1	15	3	$ 85.00	$ 3,825.00
	Subtotal (Bus Pad)							**$ 110,925.00**
	Bus Shelter	Whitewood Avenue at Armstrong Street	ea	2			$ 30,000.00	$ 60,000.00
		Whitewood Avenue at Wellington Street	ea	1			$ 30,000.00	$ 30,000.00
		Whitewood Avenue at Edith Street	ea	2			$ 30,000.00	$ 60,000.00
		Paget Street South at Cedar Avenue	ea	1			$ 30,000.00	$ 30,000.00
		Cedar Avenue at Armstrong Street	ea	1			$ 30,000.00	$ 30,000.00
		Armstrong Street at Pine Avenue	ea	2			$ 30,000.00	$ 60,000.00
		Armstrong Street at Sharpe Street	ea	1			$ 30,000.00	$ 30,000.00
		Farah Avenue at Paget Street	ea	1			$ 30,000.00	$ 30,000.00
		Whitewood Avenue at Niven Street	ea	2			$ 30,000.00	$ 60,000.00
		Whitewood Avenue at Regina Street	ea	2			$ 30,000.00	$ 60,000.00
		Shepherdson Road at McCamus Avenue	ea	2			$ 30,000.00	$ 60,000.00
		Shepherdson Road at G.N.F.H.T Medical Centr	ea	2			$ 30,000.00	$ 60,000.00
		Timiskaming Plaza Mall (Food Basics)	ea	2			$ 30,000.00	$ 60,000.00
		Wilson Avenue at Highway 65	ea	1			$ 30,000.00	$ 30,000.00
		Grant Drive opposite Canadian Tire	ea	1			$ 30,000.00	$ 30,000.00
		Lauretter Street at Roland Road (Dymond Subdivision)	ea	1			$ 30,000.00	$ 30,000.00
		Raymond Street at Drive in Theatre Road	ea	1			$ 30,000.00	$ 30,000.00
		Armstrong Avenue at OPP	ea	1			$ 30,000.00	$ 30,000.00
		Elm Avenue at Rebecca Street	ea	1			$ 30,000.00	$ 30,000.00
		Haliburton Avenue East at Grant Street	ea	1			$ 30,000.00	$ 30,000.00
		Carter Boulevard at Rorke Street	ea	2			$ 30,000.00	$ 60,000.00
		Joyal Drive at Rorke Avenue	ea	2			$ 30,000.00	$ 60,000.00
		Meridian Avenue at Algonquin Drive	ea	2			$ 30,000.00	$ 60,000.00
		Georgina Avenue at Lawlor Street	ea	2			$ 30,000.00	$ 60,000.00
		Giorgina Avenue at Blackwall Street	ea	1			$ 30,000.00	$ 30,000.00
		Giorgina Avenue at Marcella Street	ea	1			$ 30,000.00	$ 30,000.00
		Rorke Avenue at Broadway Street	ea	1			$ 30,000.00	$ 30,000.00
	Subtotal (Bus Shelter)							**$ 1,170,000.00**
	Bike Rack	College	ea	1			$ 1,400.00	$ 1,400.00
		Rorke Avenue at Main Street	ea	1			$ 1,400.00	$ 1,400.00
		Hospital	ea	1			$ 1,400.00	$ 1,400.00
		Whitewood Avenue at Armstrong Street	ea	1			$ 1,400.00	$ 1,400.00
		Whitewood Avenue at Edith Street	ea	1			$ 1,400.00	$ 1,400.00
		Walmart	ea	1			$ 1,400.00	$ 1,400.00
		Temiskaming Plaza Mall (Food Basics)	ea	1			$ 1,400.00	$ 1,400.00
	Subtotal (Bike Rack)							**$ 9,800.00**
	Wayfinding Signage (New sign + Pole)	Elm Avenue at Rebecca Street			1		$ 455.00	$ 455.00
		Haliburton Avenue East at Grant Street			1		$ 455.00	$ 455.00
	Subtotal (Wayfinding Signage)							**$ 910.00**
	SUBTOTAL (TRANSIT)							**$ 1,291,635.00**
Traffic Controls, Intersections & Pavement Design	Stop Signs	**H** - Main St & Rorke Ave - East Leg	1				$ 350.00	$ 350.00
		H - Main St & Ferguson Ave - West Leg	1				$ 350.00	$ 350.00
	Subtotal (Stop Signs)							**$ 700.00**
	Pedestrians Crossovers (PXO)	**NL** - Church St & Armstrong St N	ea	1			$20,000	$ 20,000.00
			ea				$20,000	$ -
		H - Broadway St & Ferguson Ave	ea	1			$20,000	$ 20,000.00
	Subtotal (Pedestrians Crossover)							**$ 40,000.00**
	Pavement Markings	**NL** - Armstrong Street North - Double Solid Yellow (from Heard St to Sharp St)	m	2	782.79		$ 1.40	$ 2,191.81
		NL - Armstrong Street North - Two Broken White (from Heard St to Sharp St)	m	2	782.79		$ 1.00	$ 1,565.58
		NL - Armstrong Street North - Solid Yellow (from Sharp St to Cedar Ave)	m	1	397.97		$ 1.40	$ 557.16
		NL - Whitewood Avenue - Solid Yellow (from railway to Main St)	m	1	1187.57		$ 1.40	$ 1,662.60
		NL - Lakeshore Road North - Solid Yellow (from Whitewood Ave to Broadwood Ave)	m	1	490.43		$ 1.40	$ 686.60
		NL - Lakeshore Road North - Two Solid White (from Whitewood Ave to Broadwood Ave)	m	2	490.43		$ 1.40	$ 1,373.20
		H - Ferguson Avenue - Solid Yellow (from Browning St to Main St)	m	1	171.06		$ 1.40	$ 239.48
		H - Main Street - Solid Yellow (from railway to Farr Dr)	m	1	722.3		$ 1.40	$ 1,011.22
		H - Rorke Avenue - Solid Yellow (from Main St to Marcella St)	m	1	171.29		$ 1.40	$ 239.81
		H - Rorke Avenue - Two Broken White (from Main St to Marcella St)	m	2	171.29		$ 1.00	$ 342.58
	Subtotal (Pavement Markings)							**$ 9,870.04**

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost
	SUBTOTAL (TRAFFIC)							**$ 50,570.04**
Traffic Calming Measures	**Curb Bumpout**	**NL** - Whitewood Ave & Armstrong St	ea	1			$ 20,000.00	$ 20,000.00
		NL - Whitewood Ave & Edith St	ea	1			$ 20,000.00	$ 20,000.00
		NL - Whitewood Ave & Paget St	ea	1			$ 20,000.00	$ 20,000.00
	Subtotal (Curb Bumpout)							**$ 60,000.00**
	Mini Roundabout	**NL** - Spruce Ave & John St	Lump Sum	1			$ 250,000.00	$ 250,000.00
		NL - Spruce Ave & Paget St N	Lump Sum	1			$ 250,000.00	$ 250,000.00
		NL - Farah Ave & Maple St N	Lump Sum	1			$ 250,000.00	$ 250,000.00
	Subtotal (Mini Roundabout)							**$ 750,000.00**
	SUBTOTAL (TRAFFIC CALMING MEASURES)							**$ 810,000.00**
Parking & Placemaking	**Parking Lane Markings**	Public parking lot on New Liskeard	metre		1450	0.10	$ 1.40	$ 2,030.00
	Subtotal (Parking Lane Markings)							**$ 2,030.00**
	Parking Lot Paving	Public parking lot on New Liskeard	sq.ft.		60	290	$ 6.00	$ 104,400.00
	Subtotal (Parking Lot Paving)							**$ 104,400.00**
	SUBTOTAL (PARKING AND PLACE MAKING)							**$ 106,430.00**
	TOTAL							**$ 17,351,407.93**

The Corporation of the City of Temiskaming Shores

By-law No. 2024-079

Being a by-law to amend By-law No. 2022-107 as amended, to authorize the entering into an agreement with Enterprise Fleet Management for light-duty fleet management services, expertise and strategic planning for the City of Temiskaming Shores - Additional six (6) vehicles leases for 2025

Whereas under Section 8 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, the powers of a municipality shall be interpreted broadly to enable it to govern its affairs as it considers appropriate and to enhance the municipality's ability to respond to municipal issues; and

Whereas under Section 9 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act; and

Whereas under Section 10 (1) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a single-tier municipality may provide any service or thing that the municipality considers necessary or desirable for the public; and

Whereas Council considered Administrative Report No. PW-022-2022 at the June 7, 2022 Regular Council meeting, and directed staff to prepare the necessary by-law to enter into an agreement with Enterprise Fleet Management for light-duty fleet management services, maintenance services, and strategic planning for all of the existing light-duty fleet (24 vehicles) and nine (9) light-duty vehicles for replacement under the program on a pilot project basis, for consideration at the June 21, 2022 Regular Council meeting; and

Whereas Council considered Memo No. 015-2023-PW at the June 20, 2023 Regular Council Meeting, and directed staff to prepare the necessary by-law amend By-law No. 2022-107 to include the Consignment Auction Agreement as a part of Schedule A to said by-law for consideration at the June 20, 2023 Regular Council meeting; and

Whereas Council considered Administrative Report No. PW-019-2022 at the July 9, 2024 Committee of the Whole Meeting, and directed staff to prepare the necessary by-law amend By-law No. 2022-107 for an additional six (6) vehicles leases in 2025, for consideration at the July 9, 2024, Regular Council meeting.

Now therefore the Council of The Corporation of the City of Temiskaming Shores hereby enacts the following as a by-law:

1. That By-law No. 2022-107, as amended, be further amended by <u>replacing</u> item no. 1 with:

   > That Council authorizes the entering into a Master Equity Vehicle Lease Agreement with Enterprise Fleet Management for fifteen (15) light-duty fleet vehicles, a copy of which is attached hereto as Schedule "A" and forming part of this by-law.

2. That By-law No. 2022-107, as amended, be further amended by replacing item no. 2 with:

> That Council authorizes the entering into a Full Maintenance Agreement with Enterprise Fleet Management for the fifteen (15) light-duty fleet vehicles under the Master Equity Vehicle Lease Agreement, a copy of which is attached hereto as Schedule “B” and forming part of this by-law.

3. That By-law No. 2022-107, as amended, be further amended by replacing item 3 with:

> That Council authorizes the entering into a Maintenance Management Agreement with Enterprise Fleet Management for the remaining twelve (12) light-duty fleet vehicles.

That the Clerk of the City of Temiskaming Shores is hereby authorized to make any minor modifications or corrections of an administrative, numerical, grammatical, semantically or descriptive nature or kind to the by-law and schedule as may be deemed necessary after the passage of this by-law, where such modifications or corrections do not alter the intent of the by-law.

Read a first, second and third time and finally passed this 9th day of July, 2024.

_____
Mayor

_____
Clerk

The Corporation of the City of Temiskaming Shores

By-law No. 2024-080

Being a by-law to amend By-law No. 2015-128 to establish a system for the Collection and Disposal of Garbage, Recyclables and other refuse – Amended Tipping Fees

Whereas under Section 8 of the Municipal Act, 2001, S.O. 2001, c. 25, as amended, the powers of a municipality shall be interpreted broadly to enable it to govern its affairs as it considers appropriate and to enhance the municipality's ability to respond to municipal issues; and

Whereas under Section 9 of the Municipal Act, 2001, S.O. 2001, c. 25, as amended, a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act; and

Whereas under Section 10.(1) of the Municipal Act, 2001, S.O. 2001, c. 25, as amended, a single-tier municipality may provide any service or thing that the municipality considers necessary or desirable for the public; and

Whereas Council adopted By-law No. 2015-128 being a by-law to establish a system for the Collection and Disposal of Garbage, Recyclables and other refuse on June 16, 2015; and

Whereas Council considered Administrative Report No. PW-020-2023 at the September 5, 2023 Committee of the Whole meeting and directed staff to prepare the necessary by-law to amend By-law No. 2015-128 to modify the Landfill Tipping Fees, for consideration at the September 19, 2023 Regular Council meeting; and

Whereas Council considered Memo No. 022-2023-PW at the September 19, 2023 Regular Council meeting and directed staff to prepare the necessary by-law to amend By-law No. 2015-128 to replace the Tipping Fee Schedule in Appendix 03 with a new schedule, including the addition of a clarifying note regarding the deposit of mixed waste categories, for consideration at the September 19,2023, Regular Council Meeting; and

Whereas Council considered administrative Report No. PW-020-2024 at the July 9, 2024 Committee of the Whole Meeting, and directed staff to prepare the necessary By-law to amend By-law 2015-128 (Solid Waste Management) for the replacement of Appendix 03 with a new Tipping Fee Schedule, titled Tipping Fees: New Liskeard Landfill Site, for consideration at the July 9, 2024, Regular Council Meeting.

Now therefore the Council of The Corporation of the City of Temiskaming Shores enacts the following as a by-law:

1. That Council hereby amends Schedule "A" to By-law No. 2015-128 by deleting **Appendix 03**, and replacing it with Schedule "A" – Tipping Fees: New Liskeard Landfill Site, a copy of which is attached hereto and forming part of this by-law.

2. That the Clerk of the City of Temiskaming Shores is hereby authorized to make any minor modifications or corrections of an administrative, numerical, grammatical, semantical or descriptive nature or kind to the by-law and schedule as may be deemed necessary after the passage of this by-law where such modifications or corrections do not alter the intent of the by-law.

Read a first, second and third time and finally passed this 9th day of July, 2024.

Mayor

Clerk

Tipping Fees: New Liskeard Landfill Site

Category	Description	Applicable Fee Per Metric Tonnes/Per Cubic Yard	
		Resident	**Non-Resident**
1	Flat Rate – Scale Fee	$5.00	$10.00
2	Sorted Residential/Commercial/Sorted Construction/Metals/Bulky Waste/ Non-Hazardous Waste: *includes abandoned residential or commercial waste, either animal or vegetable, organic waste, wearing apparel, broken crockery and refuse of a similar nature, but shall not include metal, weighty or bulky articles such as large appliances, furniture, barrels, bed springs, furnaces, or anything of a similar nature. Items whose large size precludes or complicates handling by normal collection, processing, or disposal methods such as furniture and appliances. Also, ferrous metal, aluminum, mixed metal, white goods, and old vehicles.*	Effective Aug 1/2024 $30.00/$10.00 Effective Jan 1/2025 $45.00/$10.00	Effective Aug 1/2024 $60.00/$10.00 Effective Jan 1/2025 $90.00/$10.00
3	Unsorted Residential/Commercial/Construction Waste and Inorganic Earth Like Material – *Recyclable materials not sorted from waste and reclaimed asphalt products, aggregate, and soils free of chemical contaminants.*	Effective Aug 1/2024 $60.00/$10.00 Effective Jan 1/2025 $90.00/$10.00	Effective Aug 1/2024 $120.00/$10.00 Effective Jan 1/2025 $180.00/$10.00
4	Yard Waste: *Includes clean wood, brush, yard, and plant materials.*	$10.00/$5.00	$20.00/$10.00
5	Contaminated Waste: *includes excavated soils containing organic or hydrocarbon contaminants at a level that is acceptable to the Ministry of the Environment for disposal at the Municipality's Landfill Site.* *Asbestos waste includes $100.00 flat rate, plus tipping fee.*	$75.00/$50.00	$150.00/$100.00
6	Freon Containing Items	$75 each	$150 each
7	Rubber Tires: *Passenger Vehicle and Light Truck Tires* *Medium Truck Tires* *Small and Medium Off-the-Road Tires*	No Fee	
	Notes: 1. All other tire sizes will not be accepted at the Landfill Site. 2. Landfill attendant shall accept up to a total of ten (10) tires per day per person.		

Note: The landfill site will only accept waste that is within the conditions of the Environmental Compliance Approval.

Should a load of waste consist of a mixture of categories, the highest tipping fee rate will apply.

The Corporation of the City of Temiskaming Shores

By-law No. 2024-081

Being a by-law to enter into a Lease Agreement with Smitty's Canteen / Michael Smith for the operation of the Shelley Herbert Shea Memorial Arena concession and pro shop from September 1, 2024, to April 30, 2027

Whereas under Section 8 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, the powers of a municipality shall be interpreted broadly to enable it to govern its affairs as it considers appropriate and to enhance the municipality's ability to respond to municipal issues; and

Whereas under Section 9 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act; and

Whereas under Section 10 (1) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a single-tier municipality may provide any service or thing that the municipality considers necessary or desirable for the public; and

Whereas Council considered Administrative Report RS-014-2024 at the July 9, 2024 Committee of the Whole meeting, and directed staff to prepare the necessary by-law to enter into a lease agreement with Smitty's Canteen / Michael Smith for the use of the Shelley Herbert-Shea Memorial Arena to operate a concession and pro shop from September 1, 2024, to April 30, 2027, for consideration at the July 9, 2024 Regular Council meeting; and

Whereas the Council of The Corporation of the City of Temiskaming Shores deems it desirable to enter into a Lease Agreement for the operation of concession services and pro shop at the Shelley Herbert-Shea Memorial Arena.

Now therefore the Council of The Corporation of the City of Temiskaming Shores hereby enacts the following as a by-law:

1. That the Mayor and Clerk be authorized to enter into a Lease Agreement with Smitty's Canteen / Michael Smith for the use of the Shelley Herbert-Shea Memorial Arena to operate a concession and pro shop from September 1, 2024, to April 30, 2027, a copy of which is attached hereto as Schedule "A" and forming part of this by-law.

2. That the Clerk of the City of Temiskaming Shores is hereby authorized to make minor modifications or corrections of a grammatical or typographical nature to the By-law and schedule, after the passage of this By-law, where such modifications or corrections do not alter the intent of the by-law or its associated schedule.

Read a first, second and third time and finally passed this 9th, day of July, 2024.

Mayor

Clerk

Schedule “A” to

By-law No. 2024-081

Lease Agreement between

The Corporation of the City of Temiskaming Shores

and

Smitty’s Canteen / Michael Smith

For the operation of the Shelley Herbert-Shea Memorial Arena to operate a concession and pro shop from September 1, 2024, to April 30, 2027

This agreement made this 9th day of July, 2024.

Between:

City of Temiskaming Shores

(Hereinafter called the "City")

And:

Smitty's Canteen / Michael Smith

(Hereinafter called the "Tenant")

Whereas the City is the owner of the lands in the City of Temiskaming Shores, in the District of Temiskaming as described herein;

And whereas the parties hereto have agreed to enter into this Lease.

1. **Leased premises**

The City hereby demises and leases to the Tenant part of the City's Building known as the Shelley Herbert-Shea Memorial Arena Concession containing a rentable area for concession operations in the City of Temiskaming Shores, Ontario and a part of the City's Building known as the Shelley Herbert-Shea Memorial Arena Room 18 containing a rentable area for pro shop operations being hereinafter called the "premises".

2. Term

To hold the premises for a term commencing **September 1, 2024,** to **April 30, 2027.**

3. Rent

The Tenant shall pay **Sixteen Hundred and fifty Dollars ($1,650)** plus applicable taxes per year. Rent shall be payable in installments of two hundred seventy-five dollars ($275) plus applicable taxes on the first day of each October, November, December, January, February and March for the term of this agreement. To be specific, the total amount payable for the full term of the agreement is Four Thousand Nine Hundred Fifty Dollars ($4,950) plus applicable taxes.

4. Renewal

The Tenant, upon the satisfaction of the City, shall have the right to renew the agreement under the same conditions and provisions contained herein.

The City reserves the right to seek proposals or renegotiate the conditions and provisions for the lease of the premises if it is felt in the best interest of the City to do so.

5. Business Services

The Tenant shall provide Concession and Pro Shop services from the leased spaces to patrons of the Shelley Herbert-Shea Memorial Arena. They shall work in good faith with the City of Temiskaming Shores to schedule hours of operation in accordance with Appendix 02 of this agreement. The Tenant shall work in good faith to be open for all Temiskaming Shores Minor Hockey Association games and all special events on Fridays, Saturdays and Sundays of this agreement.

6. Healthy Eating at Recreation Settings (HERS)

The Tenant shall support the promotion of affordable healthy options at municipal facilities by committing to the Healthy Eating at Recreations Settings (HERS) program as outlined in Appendix 01 attached herein.

7. Vending Services

The Tenant acknowledges and confirms that this agreement does not provide the Tenant with any privileges for the provision of vending services within the Shelley Herbert-Shea Memorial Arena and all vending services within the Shelley Herbert-Shea Memorial Arena are at the sole discretion of the City.

8. Tenant's Covenants

a) Rent - to pay rent;

b) Insurance - To provide General Liability Insurance for coverage of all areas under this lease in the joint names of the Tenant and the City of Temiskaming Shores with the limits of not less than ($2,000,000) **two million dollars (Canadian),** inclusive per occurrence for bodily injury, death or damage for property including loss of use thereof, with property deductible of five hundred dollars ($500). Proof of insurance must be supplied to the City prior to occupying the facilities and thereafter to provide proof of insurance on each anniversary of the date of occupation; and, to provide proof of insurance forthwith upon request by the City at any time.

c) Repair - to repair, reasonable wear and tear and damage by fire, lightning and tempest only excepted; and to permit the City to enter and view the state of repair and to repair according to notice in writing, reasonable wear and tear and damage by fire, lightning and tempest only excepted; and to leave the premises in good repair, reasonable wear and tear and damage by fire, lightning and tempest only excepted;

d) Cost of repair where Tenant at fault - that if the building including the premises, boilers, engines, pipes and other apparatus (or any of them) used for the purpose of heating or air conditioning the building, or if the water pipes, drainage pipes, electric lighting or other equipment of the building or the roof or outside walls of the building get out of repair or become damaged or destroyed through the negligence, carelessness or misuse of the Tenant, his servants, agents, employees or anyone

permitted by him to be in the building (or through him or them in any way stopping up or injuring the heating apparatus, water pipes, drainage pipes, or other equipment or part of the building) the expense of any necessary repairs, replacements or alterations shall be paid by the Tenant to the City forthwith on demand;

e) **Assigning or subletting** - not to assign, sublet or part with possession of any part of the premises without leave of the City, which leave shall not be unreasonably withheld, and which leave shall not be required in the event of a sublease to add any personnel to the group comprising the Tenant or to a management corporation which may be incorporated by the Tenant;

f) **Entry by City** - to permit the City or its agents to enter upon the premises at any time and from time to time for the purpose of inspecting and making repairs, alterations or improvements to the premises or to the building, and the Tenant shall not be entitled to compensation for any inconvenience, nuisance, or discomfort occasioned thereby; provided that the City shall give reasonable advance notice to avoid inconvenience to the Tenant, given the private and confidential nature of the profession of the Tenant;

g) **Indemnity** - to indemnify and save harmless the City against and from any and all claims by or on behalf of any person or persons, firm or firms, or corporation or corporations arising from the conduct or any work, by or through any act of negligence of the Tenant or any assignee, subtenant, agent, contractor, servants, employee or licensee of the Tenant;

h) **Alterations** - not to make or erect in or to the premises any installation, alteration, addition, or partition without submitting plans and specifications to the Tenant and obtaining the Tenant's prior written consent (in each instance); such work shall if the Tenant so elects, be performed by employees of or contractors designated by the Tenant; in the absence of such election, such work may be performed with the Tenant's consent in writing (given prior to letting of contract) by contractors engaged by the City but in each case only under written contract approved in writing by the Tenant and subject to all conditions which the Tenant may impose; the City shall submit to the Tenant or the City's contractors (as the case may be), when due the costs of all such work and of all materials, labour and services involved therein and of all decoration and all changes in the building, its equipment or services, necessitated thereby; provided, that it is at this time understood by the Tenant that certain equipment is to be installed and to be placed at convenient places as designated by the City;

i) **Use of Building -** the Tenant shall not allow the building and/or property to be used for any purpose other than to carry on the business of a Concession Stand and pro shop.

9. City's Covenants

The City covenants with the Tenant;

a) **Quiet enjoyment** - for the quiet enjoyment;

b) **Taxes** - to pay all taxes and rates, municipal, parliamentary or otherwise, levied against the premises or the Tenant on account thereof;

c) **Electricity and water** - to pay for the electricity and water supplied to the premises;

d) **Refuse Collection** – The City **shall not** provide any additional refuse or recycling receptacles or collection specific to this operation;

e) **Structural soundness** - to keep the premises, common areas and parking lot structurally sound and to look after any structural defects which may arise.

10. Provisos

Provided always and it is hereby agreed as follows:

a) **Fire** - In case of damage to the premises by fire, lightning or tempest, rent shall cease until the premises are rebuilt. The City may at its option terminate this lease on giving written notice to the Tenant.

b) **Damage to property** - The Tenant shall not be liable nor responsible in any way for any loss of or damage or injury to any property belonging to the City or to the employees of the City or to any other person while in the building or in the yard of the building unless such loss, damage or injury shall be caused by the negligence of the Tenant or its employees, servants or agents for any damage to any such property caused by steam, water, rain or snow which may leak into, issue or flow from any part of the building or from the water, steam or drainage of the building or from any other place or quarter nor for any damage caused by or attributable to the condition or arrangement of any electric or other wiring omitted by any other City;

c) **Right of termination by the City -** The City shall have the right to terminate this lease forthwith by leaving upon the Premises, or sent by ordinary mail to his usual place of business, sixty (60) days' notice in writing of its intention, and thereupon any payments owing to the Tenant under this lease shall be computed, apportioned and paid in full to the date of such termination, and the Tenant shall immediately deliver up possession of the Premises to the Landlord, and the Landlord may re-enter and take possession of the Premises.

d) **Right of termination by the Tenant -** the Tenant, in addition to all other rights, shall have the right to terminate this lease forthwith by leaving upon the premises

notice in writing of its intention, sixty (60) days' notice in writing of its intention, and thereupon rent and any other payments for which the Tenant is liable under this lease shall be computed, apportioned and paid in full to the date of such termination, and the Tenant shall immediately deliver up possession of the Premises to the City, and the City may re-enter and take possession of the premises;

11. Headings

The headings in this lease have been inserted as a matter of convenience and for reference only and in no way define, limit or enlarge the scope or meaning of this lease or any provisions hereof

Remainder of this page left blank intentionally

In witness whereof the parties have executed this Agreement the day and year first above written.

Signed and Sealed in the presence of)

Smitty's Canteen / Michael Smith

Owner/Operator – Michael Smith

Municipal Seal)

The Corporation of the City of Temiskaming Shores

Mayor – Jeff Laferriere

Clerk – Logan Belanger

Healthy Eating at Recreation Settings

The City of Temiskaming Shores supports the promotion of affordable healthy options at municipal facilities, the Concession Operator is required to commit to the following:

- Fruit smoothies and fresh fruit are mandatory menu items and must be available at all times when the concessions are open. The Haileybury beach concession must also have at least one healthy grilled sandwich available at all times, and the other 2 concessions must have at least 1 grilled sandwich available on tournament weekends.
- Commit to have bottled water available at all times and consider option of 100% fruit juice in smaller bottles, as well as milk.
- Fruit smoothies and healthy grilled sandwiches must be prepared following the recipes provided/approved by the Timiskaming Health Unit Registered (THU) Dietitians. Preparing fruit smoothies with fruit juice and/or flavored syrup is not permitted.
- If Vending Machines are included in the lease agreement the Concession Operators must commit to include at least 20% (1 healthy option for every 4 other options available) of healthy items in the vending machines. A list of healthy options from the THU will be provided. If in doubt about what other healthy options can be included in the vending machines please contact the Registered Dietitians at the Timiskaming Health Unit.
- Prices for healthy options to be the same or lower than the prices for similar menu options. Healthy Eating at Recreation Settings
- The City of Temiskaming Shores supports the promotion of affordable healthy options at municipal facilities, the Concession Operator is required to commit to the following:
- Fruit smoothies and fresh fruit are mandatory menu items and must be available at all times when the concessions are open. The Haileybury beach concession must also have at least one healthy grilled sandwich available at all times, and the other 2 concessions must have at least 1 grilled sandwich available on tournament weekends.
- Commit to have bottled water available at all times and consider option of 100% fruit juice in smaller bottles, as well as milk.
- Fruit smoothies and healthy grilled sandwiches must be prepared following the recipes provided/approved by the Timiskaming Health Unit Registered (THU) Dietitians. Preparing fruit smoothies with fruit juice and/or flavored syrup is not permitted.
- If Vending Machines are included in the lease agreement the Concession Operators must commit to include at least 20% (1 healthy option for every 4 other options available) of healthy items in the vending machines. A list of healthy options from the THU will be provided. If in doubt about what other healthy options can be included in the vending machines please contact the Registered Dietitians at the Timiskaming

Health Unit.

- Prices for healthy options to be the same or lower than the prices for similar menu options.
- Freggie Fuel branded materials must be used by concession operators to promote the healthy options available at all times. This includes: a posted menu board for healthy choices, a sandwich menu board, a large Freggie cut-out and Freggie Fuel stickers for both smoothie cups and fresh fruit pieces. If in need for more materials (such as stickers) contact the Timiskaming Health Unit. The Proponent to include other branded materials suggested and provided by the City of Temiskaming Shores.
- The City of Temiskaming Shores may plan and implement ongoing promotional initiatives to encourage patrons' consumption/purchase of the healthy options available. These initiatives will be at no-cost to the operators.
- Additional healthy items – Adding other healthy options to the menu is encouraged by the City of Temiskaming Shores. Those healthy items must follow these general healthy eating guidelines: high in vitamins & minerals, whole grains and fiber **and** low in sodium, added sugars, trans and saturated fat. Any new proposed healthy items to be submitted to the Timiskaming Health Unit for approval.
- Concession operators are required to keep track of the sales for the healthy options and provide the City of Temiskaming Shores with this information on a monthly basis for the term of the lease. A tracking sheet will be provided.
- The City of Temiskaming Shores reserves the right to modify the HERS requirement.

Form of Agreement

PROPOSAL for Smitty's Canteen
at
SHSMA (Haileybury)

Smitty's Canteen will be owned and operated by Michael Smith. I have prior to this adventure successfully owned and operated a snow removal business for more then 4 years. I have been part of this community for more almost my entire life, from going to school here to playing sports as a child to there I am today living and working in the community for over 18years currently.

Smitty's Canteen will serve a number of items starting with cold drinks, fresh fruit, muffins, chips, chocolate bars, popcorn, gum then growing to include hotdogs, soup, nachos, pizza. Operation hours will take place Saturday Sunday during the winter season in partnership with the minor hockey and local figure skating schedules. Where there are games, tournaments, or competitions scheduled on a Friday, you can ensure the hours of operations will work in the same matter as the Saturday and Sunday schedule.
Below are dates that the canteen will not be open, do to prior obligations.

Dates: Oct 7,8
Oct 14,15
Dec 9,10
Dec 16,17
Feb 10,11

Smitty's CANTEEN

1. Smitty's Canteen will provide service both 1 hour before and 1 hour after schedule times from above noted parties.

2. The employees of Smitty's Canteen will possess the "Food Handling Certificate" and have them posted at all times. (Will be provided, prior to opening)

3. Smitty's Canteen at all times keeps cleanliness of canteen premises at utmost priority for maintaining hygienic environment.

4. Smitty's Canteen will in sure fresh fruits and/or other healthy food choices will be made available for purchase.

5. Smitty's Canteen will be responsible for washing and storing of Crockery, Cutlery, and Glassware.

6. Smitty's Canteen will provide a copy of the insurance that is outlined in your agreement, prior to opening on sept 16, 2023

PERIOD OF CONTRACT

The contract for Smitty's Canteen Services shall remain valid from Sept 16, 2023, to Apr 30, 2024

PAYMENT

Smitty's Canteen will agree to pay The City of Temiskaming Shores $100/month for the exclusive use of the Herbert-Shea Memorial Arena Concession during the dates listed above.

Smitty's CANTEEN
PRICES--
Milk $2
Juice $2
Pop $2
Gatorade $3
Chips $2
Chocolate Bars $2
Fruit $1
Muffins $2
Gum $2
Coffee $ unknown at this time
Pizza $ unknown at this time
Hotdogs $ unknown at this time
Soup $ unknown at this time
Slushy $ unknown at this time
Nacho $ unknown at this time
Popcorn$ unknown at this time

- Just to name a few.

The Corporation of the City of Temiskaming Shores

By-law No. 2024-082

Being a by-law to enter into a Lease Agreements for the use of rooms within the Don Shepherdson Memorial Arena and the Shelley Herbert-Shea Memorial Arena

Whereas under Section 8 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, the powers of a municipality shall be interpreted broadly to enable it to govern its affairs as it considers appropriate and to enhance the municipality's ability to respond to municipal issues; and

Whereas under Section 9 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act; and

Whereas under Section 10 (1) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a single-tier municipality may provide any service or thing that the municipality considers necessary or desirable for the public; and

Whereas Council considered Administrative Report No. RS-015-2024 at the July 9, 2024 Committee of the Whole meeting, and directed staff to prepare the necessary by-law to confirm the lease agreements for use of rooms within the Don Shepherdson Memorial Arena and the Shelley Herbert-Shea Memorial Arena, for consideration at the July 9, 2024 Regular Council meeting.

Now therefore the Council of The Corporation of the City of Temiskaming Shores hereby enacts the following as a by-law:

1. That the Council delegates authority to the Director of Recreation to execute lease agreement with the **Armstrong Oldtimers Hockey Team** for the use of Room #17 in the Shelley Herbert-Shea Memorial Arena, a copy of which is attached hereto as Schedule "A" and forming part of this by-law.

2. That the Council delegates authority to the Director of Recreation to execute lease agreement with the **New Liskeard Cubs U18 "AAA" Hockey Club f**or the use of Room #11 in the Don Shepherdson Memorial Arena, a copy of which is attached hereto as Schedule "B" and forming part of this by-law.

3. That the Council delegates authority to the Director of Recreation to execute lease agreement with the **Grant Propane Oldtimers Hockey Team,** for the use of Room #13 in the Don Shepherdson Memorial Arena, a copy of which is attached hereto as Schedule "C" and forming part of this by-law.

4. That the Council delegates authority to the Director of Recreation to execute lease agreement with the **New Liskeard Lions u18 Hockey Club,** for the use of Room #12 in the Don Shepherdson Memorial Arena, a copy of which is attached hereto as Schedule "D" and forming part of this by-law.

5. That the Council delegates authority to the Director of Recreation to execute lease agreement with the **Temiskaming Shores Minor Hockey Association,** for the use of Room #9 in the Don Shepherdson Memorial Arena, a copy of which is attached hereto as Schedule “E” and forming part of this by-law.

6. That the Council delegates authority to the Director of Recreation to execute lease agreement with the **Temiskaming Shores Skating Club,** for the use of Room #10 in the Don Shepherdson Memorial Arena, a copy of which is attached hereto as Schedule “F” and forming part of this by-law.

7. That the Council delegates authority to the Director of Recreation to execute lease agreement with the **Temiskaming Shores Skating Club**, for the use of Room #16 in the Shelley Herbert-Shea Memorial Arena, a copy of which is attached hereto as Schedule “G” and forming part of this by-law.

8. That the Clerk of the City of Temiskaming Shores is hereby authorized to make minor modifications or corrections of a grammatical or typographical nature to the By-law and schedule, after the passage of this By-law, where such modifications or corrections do not alter the intent of the by-law or its associated schedule.

Read a first, second and third time and finally passed this 9th, day of July, 2024.

_____
Mayor

_____
Clerk

Schedule “A” to

By-law No. 2024-082

Lease Agreement between

The Corporation of the City of Temiskaming Shores

and

Armstrong Oldtimers Hockey Team

for the use of Room #17 in the Shelley Herbert-Shea Memorial Arena

The Corporation of the City of Temiskaming Shores

- and -

Armstrong Oldtimers Hockey Team

LEASE

Mathew Bahm
Director of Recreation
The Corporation of the City of Temiskaming Shores
P.O. Box 2050
Haileybury, Ontario
P0J 1K0

THIS LEASE made this ___ day of _____, 2024.

between:

The City of Temiskaming Shores
hereinafter called the “Landlord”
-and-

Armstrong Oldtimers Hockey Team
hereinafter called the “Tenant”

Whereas the Applicant is desirous of renting Room #17 owned by the City of Temiskaming Shores at the Shelley Herbert-Shea Memorial Arena from July 1st, 2024, to June 30th, 2027.

And whereas it is necessary and desirous to establish certain guidelines and rules for the purpose of the rental of the aforesaid premises;

And whereas it is understood that Mike Kidd hereby undertakes and agrees to be responsible for compliance with all requirements under the Agreement;

And whereas the parties hereto have agreed to enter into this Lease.

1. **Leased Premises**

The Landlord hereby demises and leases to the Tenant Room #17 owned by the City of Temiskaming Shores at the Shelley Herbert-Shea Memorial Arena as described hereinafter called the "premises".

The Landlord agrees to rent to the Tenant premises owned by the Landlord in accordance to the following:

a) Use of **Room #17** located in the **Shelley Herbert-Shea Memorial Arena**, exclusively for the duration of the lease:

2. **Term**

To hold the premises for a term commencing on July 1, 2024, to June 30, 2027.

3. Rent

The Tenant shall pay the Landlord **One Thousand Two Hundred and Sixty Dollars ($1,260.00)** plus applicable taxes per year. Rent shall be payable in advance of the first day of October, each year of the agreement. To be specific, the total amount payable for the full term of the agreement is Three Thousand Seven Hundred Eighty Dollars ($3,780.00) plus applicable taxes

5. Tenants Covenants

a) Rent - to pay rent;

b) Insurance - To provide General Liability Insurance for coverage of all areas under this lease in the joint names of the Tenant and the City of Temiskaming Shores with the limits of not less than ($2,000,000) **two million dollars (Canadian),** inclusive per occurrence for bodily injury, death or damage for property including loss of use thereof, with property deductible of five hundred dollars ($500). Proof of insurance must be supplied to the Landlord prior to occupying the facilities and thereafter to provide proof of insurance on each anniversary of the date of occupation; and, to provide proof of insurance forthwith upon request by the City at any time.

c) Cost of repair where Tenant at fault - that if the building including the premises, boilers, engines, pipes and other apparatus (or any of them) used for the purpose of heating or air conditioning the building, or if the water pipes, drainage pipes, electric lighting or other equipment of the building or the roof or outside walls of the building get out of repair or become damaged or destroyed through the negligence, carelessness or misuse of the Tenant, his servants, agents, employees or anyone permitted by him to be in the building (or through him or them in any way stopping up or injuring the heating apparatus, water pipes, drainage pipes, or other equipment or part of the building) the expense of any necessary repairs, replacements or alterations shall be paid by the Tenant to the Landlord forthwith on demand;

d) Assigning or subletting - not to assign, sublet or part with possession of any part of the premises without leave of the Landlord, which leave shall not be unreasonably withheld, and which leave shall not be required in the event of a sublease to add any personnel to the group comprising the Tenant or to a management corporation which may be incorporated by the Tenant;

e) Entry by Landlord - to permit the Landlord or its agents to enter upon the premises at any time and from time to time for the purpose of inspecting and making repairs, alterations or improvements to the premises or to the building, and the Tenant shall not be entitled to compensation for any inconvenience, nuisance, or discomfort occasioned thereby; provided that the Landlord shall give reasonable advance notice to avoid inconvenience to the Tenant, given the private and confidential nature of the profession of the Tenant;

f) Indemnity - to indemnify and save harmless the Landlord against and from any and all claims by or on behalf of any person or persons, firm or firms, or corporation or corporations arising from the conduct or any work, by or through any act of negligence of the Tenant or any assignee, subtenant, agent, contractor, servants, employee or licensee of the Tenant;

g) Alterations - not to make or erect in or to the premises any installation, alteration, addition, or partition without submitting plans and specifications to the Landlord and obtaining the Landlord’s prior written consent (in each instance); such work shall if

the Tenant so elects, be performed by employees of, volunteers of, or contractors designated by the Tenant; in the absence of such election, such work may be performed with the Tenant's consent in writing (given prior to letting of contract) by contractors engaged by the Landlord but in each case only under written contract approved in writing by the Tenant and subject to all conditions which the Tenant may impose; the Landlord shall submit to the Tenant or the Landlord's contractors (as the case may be), when due the costs of all such work and of all materials, labour and services involved therein and of all decoration and all changes in the building, its equipment or services, necessitated thereby; provided, that it is at this time understood by the Tenant that certain equipment is to be installed and to be placed at convenient places as designated by the Landlord;

h) Facility Fees - to pay the applicable rate for all other municipal services as outlined in the current Municipal Fees By-Law;

i) Use of Building - the Tenant shall not allow the building and/or property to be used for any purpose other than to conduct normal activities of their organization;

j) Equipment - to cover any and all costs associated with providing equipment for use by the tenant including but not limited to laundry, office furniture, and/or skate sharpener;

k) By-laws - to follow all applicable by-laws and policies of the City of Temiskaming Shores;

l) Cleaning - to keep the premises in a clean, tidy manner, such that the leased spaces are in compliance with applicable building and fire regulations and such that the premises do not attract vermin and/or provide unreasonable opportunities for the transmission of communicable diseases.

6. Landlord’s Covenants

The Landlord covenants with the Tenant;

a) Quiet enjoyment - for the quiet enjoyment;

b) Taxes - to pay all taxes and rates, municipal, parliamentary or otherwise, levied against the premises or the Tenant on account thereof;

c) Electricity and water - to pay for the electricity and water supplied to the premises;

d) Structural soundness - to keep the premises, common areas and parking lot structurally sound and to look after any structural defects which may arise.

e) Keys - to provide either one (1) key or, a numerical code, to access the leased space.

8. Provisos

Provided always and it is hereby agreed as follows:

a) **Fixtures** - The Landlord may remove his fixtures, but all installations, alterations, additions, partitions and fixtures except trade or Landlord's fixtures in or upon the premises, whether placed there by the Landlord or by the Tenant, shall be the Tenant's property without compensation therefore to the Landlord and shall not be removed from the premises at any time (either during or after the term);

b) **Fire** - In case of damage to the premises by fire, lightning or tempest, rent shall cease until the premises are rebuilt; and the Tenant, instead of re-building or making the premises fit for the purpose of the Landlord, may at its option terminate this lease on giving to the Landlord within thirty days after such fire, lightning or tempest, notice in writing of its intention (so to do) and thereupon rent and any other payments for which the Landlord is liable under this lease shall be apportioned and paid to the date of such fire, lightning or tempest, and the Landlord shall immediately deliver up possession of the premises to the Tenant;

c) **Damage to property** - The Tenant shall not be liable nor responsible in any way for any loss of or damage or injury to any property belonging to the Landlord or to the employees of the Landlord or to any other person while in the building or in the yard of the building unless such loss, damage or injury shall be caused by the negligence of the Tenant or its employees, servants or agents for any damage to any such property caused by steam, water, rain or snow which may leak into, issue or flow from any part of the building or from the water, steam or drainage of the building or from any other place or quarter nor for any damage caused by or attributable to the condition or arrangement of any electric or other wiring omitted by any other Landlord;

d) **Impossibility of performance** - It is understood and agreed that whenever and to the extent that the Tenant shall be unable to fulfill, or shall be delayed or restricted in fulfilling any obligation hereunder for the supply or provision of any service or utility or the doing of any work or the making of any repairs because it is unable to obtain the material, goods, equipment, service, utility or labour required to enable it to fulfill such obligations or by reason of any statute, law or order-in-council or any regulation or order passed or made pursuant thereto or by reason of the order or direction of any administrator, controller or board, or any government department or officer or other authority, or by reason of not being able to obtain any permission or authority required thereby, or by reason of any other cause beyond its control whether of the foregoing character or not, the Tenant shall be relieved from the fulfillment of such obligation and the Landlord shall not be entitled to compensation for any inconvenience, nuisance or discomfort thereby occasioned;

e) **Default of Landlord** - If the rent reserved or any part thereof shall not be paid on the day appointed for payment, whether lawfully demanded or not, or in case of breach or non-observance or non-performance of any of the covenants or

agreements or rules or regulations herein contained or referred to on the part of the Landlord to be observed and performed, or in case the premises shall be vacated or remain unoccupied or in case the term shall be taken in execution or attachment for any cause whatsoever, (and in every such case) the Tenant shall be entitled thereafter to enter (into and) upon the premises (or any part thereof in the name of the whole) and the same to (have again), repossess and enjoy as of its former estate, anything herein contained to the contrary notwithstanding;

f) **Bankruptcy of Landlord** - In case without the written consent of the Tenant the premises shall remain vacant or not used for the period of fifteen days or be used by any other person than the Landlord or for any other purpose than that for which they were let or in case the term or any of the goods and chattels of the Landlord shall at any time be seized in execution or attachment by any creditor of the Landlord or if the Landlord shall make any assignment for the benefit of creditors or any bulk sale of any act (now or hereafter in force) for bankrupt or insolvent debtors (or if the Landlord is a company any order shall be made for the winding up of the Landlord), then in any such case this lease shall at the option of the Tenant cease and terminate and the term shall immediately become forfeited and void and the current month's rent and the next ensuing three month's rent shall immediately become due and payable and the Tenant may re- enter and take possession of the premises as though the Landlord or other occupant (or occupants) of the premises was (or were) holding over after the expiration of the term without any right whatever;

g) **Distress** - The Landlord waives and renounces the benefit of any present or future statute taking away or limiting the Tenant's right of distress, and covenants and agrees that notwithstanding any such statute none of the goods and chattels of the Landlord on the premises at any time during the term shall be exempt from levy by distress for rent in arrears;

h) **Right of re-entry** - On the Tenant's becoming entitled to re-enter the premises under any of the provisions of this lease, the Tenant in addition to all other rights may do so as the agent of the Landlord, using force if necessary, without being liable for any prosecution therefore, and may re-let the premises as agent of the Landlord, and receive the rent therefore, and as agent of the Landlord may take possession of any furniture or other property on the premises and sell the same at a public or private sale without notice and apply the proceeds of such sale and any rent derived from re-letting the premises upon account of rent under this lease, and the Landlord shall be liable to the Tenant for any deficiency;

i) **Right of termination by the Landlord -** The lease may be terminated for any valid operational reason;

j) **Right of termination by the Tenant -** On the Tenant's becoming entitled to re-enter the premises under any of the provisions of this lease, the Tenant, in addition to all other rights, shall have the right to terminate this lease forthwith by leaving upon the premises notice in writing of its intention, and thereupon rent and any other payments for which the Landlord is liable under this lease shall be computed,

apportioned and paid in full to the date of such termination, and the Landlord shall immediately deliver up possession of the Premises to the Tenant, and the Tenant may re-enter and take possession of the premises;

k) **Right of Renewal** - The Tenant shall have the right, if not otherwise in default, of renewing the lease. Terms and conditions to be negotiated at signing. The Tenant shall be required to give written notice of his intention to renew the lease on or before the 1st day of May prior to the commencement of the renewal term.

At the end of the term of this agreement and where a new agreement has not been entered into the Tenant may continue to occupy the facility on a month-to-month basis under the same terms as were previously agreed to until such time the terms are renegotiated, unless the Landlord gives notice to vacate in writing. Such notice shall be a minimum of sixty (60) days.

l) **Notice -** All communications in writing between the parties, or between them shall be deemed to have been received by the addressee if delivered to the individual or to a member of the firm or to an officer of the Owner for whom they are intended or if sent by hand, Canada Post, courier, facsimile or by another electronic communication where, during or after the transmission of the communication, no indication or notice of a failure or suspension of transmission has been communicated to the sender. For deliveries by courier or by hand, delivery shall be deemed to have been received on the date of delivery; by Canada Post, 5 days after the date on which it was mailed. A communication sent by facsimile or by electronic communication with no indication of failure or suspension of delivery, shall be deemed to have been received at the opening of business on the next day, unless the next day is not a working day for the recipient, in which case it shall be deemed to have been received on the next working day of the recipient at the opening of business.

The Landlord:

City of Temiskaming Shores
P.O. Box 2050 / 325 Farr Drive
Haileybury, Ontario
P0J 1K0

Attn.: Director of Recreation

9. Headings

The headings in this lease have been inserted as a matter of convenience and for reference only and in no way define, limit or enlarge the scope or meaning of this lease or any provisions hereof.

11. Effect of Lease

This lease and everything herein contained, shall extend to and bind and may be taken advantage of by the heirs, executors, administrators, successors and assigns, as the case may be, of each (and every) of the parties hereto, and where there is more than one Landlord or there is a female party or a corporation, the provisions hereof shall be read with all grammatical changes thereby rendered necessary and all covenants shall be deemed joint and several.

In witness whereof the Party of the First Part has hereunto affixed its corporate seal attested by the hands of its duly authorized officers, and the Party of the Second Part has hereunto set its hand and seal by execution under seal by each and every individual comprising the Party of the Second Part.

Signed and Sealed in the presence of

Armstrong Oldtimers Hockey Team

_____
Signing Authority
Name: _____

_____
Witness -

Municipal Seal

Corporation of the City of Temiskaming Shores

_____
Director of Recreation – Mathew Bahm

_____
Witness
Print Name: _____

Schedule “B” to

By-law No. 2024-082

Lease Agreement between

The Corporation of the City of Temiskaming Shores

and

New Liskeard Cubs U18 “AAA” Hockey Club

for the use of Room #11 in the Don Shepherdson Memorial Arena

The Corporation of the City of Temiskaming Shores

- and -

New Liskeard Cubs U18 “AAA” Hockey Club

LEASE

Mathew Bahm
Director of Recreation
The Corporation of the City of Temiskaming Shores
P.O. Box 2050
Haileybury, Ontario
P0J 1K0

THIS LEASE made this ___ day of _____, 2024.

between:

The City of Temiskaming Shores
hereinafter called the “Landlord”
-and-

New Liskeard Cubs U18 “AAA” Hockey Club
hereinafter called the “Tenant”

Whereas the Applicant is desirous of renting Room #11 owned by the City of Temiskaming Shores at the Don Shepherdson Memorial Arena from July 1st, 2024, to June 30th, 2027.

And whereas it is necessary and desirous to establish certain guidelines and rules for the purpose of the rental of the aforesaid premises;

And whereas it is understood that the New Liskeard Cubs U18 “AAA” Hockey Club President hereby undertake and agree to be responsible for compliance with all requirements under the Agreement;

And whereas the parties hereto have agreed to enter into this Lease.

1. **Leased Premises**

The Landlord hereby demises and leases to the Tenant Room #11 owned by the City of Temiskaming Shores at the Don Shepherdson Memorial Arena as described hereinafter called the "premises".

The Landlord agrees to rent to the Tenant premises owned by the Landlord in accordance to the following:

a) Use of **Room #11** located in the **Don Shepherdson Memorial Arena**, exclusively for the duration of the lease:

2. **Term**

To hold the premises for a term commencing on July 1, 2024, to June 30, 2027.

3. Rent

The Tenant shall pay the Landlord **One Thousand Eight Hundred and Ninety-Six Dollars ($1,896.00)** plus applicable taxes per year. Rent shall be payable in advance of the first day of October, each year of the agreement. To be specific, the total amount payable for the full term of the agreement is Five Thousand Six Hundred Eighty-Eight Dollars ($5,688.00) plus applicable taxes.

5. Tenants Covenants

a) Rent - to pay rent;

b) Insurance - To provide General Liability Insurance for coverage of all areas under this lease in the joint names of the Tenant and the City of Temiskaming Shores with the limits of not less than ($2,000,000) **two million dollars (Canadian),** inclusive per occurrence for bodily injury, death or damage for property including loss of use thereof, with property deductible of five hundred dollars ($500). Proof of insurance must be supplied to the Landlord prior to occupying the facilities and thereafter to provide proof of insurance on each anniversary of the date of occupation; and, to provide proof of insurance forthwith upon request by the City at any time.

c) Cost of repair where Tenant at fault - that if the building including the premises, boilers, engines, pipes and other apparatus (or any of them) used for the purpose of heating or air conditioning the building, or if the water pipes, drainage pipes, electric lighting or other equipment of the building or the roof or outside walls of the building get out of repair or become damaged or destroyed through the negligence, carelessness or misuse of the Tenant, his servants, agents, employees or anyone permitted by him to be in the building (or through him or them in any way stopping up or injuring the heating apparatus, water pipes, drainage pipes, or other equipment or part of the building) the expense of any necessary repairs, replacements or alterations shall be paid by the Tenant to the Landlord forthwith on demand;

d) Assigning or subletting - not to assign, sublet or part with possession of any part of the premises without leave of the Landlord, which leave shall not be unreasonably withheld, and which leave shall not be required in the event of a sublease to add any personnel to the group comprising the Tenant or to a management corporation which may be incorporated by the Tenant;

e) Entry by Landlord - to permit the Landlord or its agents to enter upon the premises at any time and from time to time for the purpose of inspecting and making repairs, alterations or improvements to the premises or to the building, and the Tenant shall not be entitled to compensation for any inconvenience, nuisance, or discomfort occasioned thereby; provided that the Landlord shall give reasonable advance notice to avoid inconvenience to the Tenant, given the private and confidential nature of the profession of the Tenant;

f) Indemnity - to indemnify and save harmless the Landlord against and from any and all claims by or on behalf of any person or persons, firm or firms, or corporation or corporations arising from the conduct or any work, by or through any act of negligence of the Tenant or any assignee, subtenant, agent, contractor, servants, employee or licensee of the Tenant;

g) Alterations - not to make or erect in or to the premises any installation, alteration, addition, or partition without submitting plans and specifications to the Landlord and obtaining the Landlord’s prior written consent (in each instance); such work shall if

the Tenant so elects, be performed by employees of, volunteers of, or contractors designated by the Tenant; in the absence of such election, such work may be performed with the Tenant's consent in writing (given prior to letting of contract) by contractors engaged by the Landlord but in each case only under written contract approved in writing by the Tenant and subject to all conditions which the Tenant may impose; the Landlord shall submit to the Tenant or the Landlord's contractors (as the case may be), when due the costs of all such work and of all materials, labour and services involved therein and of all decoration and all changes in the building, its equipment or services, necessitated thereby; provided, that it is at this time understood by the Tenant that certain equipment is to be installed and to be placed at convenient places as designated by the Landlord;

h) Facility Fees - to pay the applicable rate for all other municipal services as outlined in the current Municipal Fees By-Law;

i) Use of Building - the Tenant shall not allow the building and/or property to be used for any purpose other than to conduct normal activities of their organization;

j) Equipment - to cover any and all costs associated with providing equipment for use by the tenant including but not limited to laundry, office furniture, and/or skate sharpener;

k) By-laws - to follow all applicable by-laws and policies of the City of Temiskaming Shores;

l) Cleaning - to keep the premises in a clean, tidy manner, such that the leased spaces are in compliance with applicable building and fire regulations and such that the premises do not attract vermin and/or provide unreasonable opportunities for the transmission of communicable diseases.

6. Landlord’s Covenants

The Landlord covenants with the Tenant;

a) Quiet enjoyment - for the quiet enjoyment;

b) Taxes - to pay all taxes and rates, municipal, parliamentary or otherwise, levied against the premises or the Tenant on account thereof;

c) Electricity and water - to pay for the electricity and water supplied to the premises;

d) Structural soundness - to keep the premises, common areas and parking lot structurally sound and to look after any structural defects which may arise.

e) Keys - to provide one (1) key to access the facility and two (2) keys to access the leased space.

8. Provisos

Provided always and it is hereby agreed as follows:

a) **Fixtures** - The Landlord may remove his fixtures, but all installations, alterations, additions, partitions and fixtures except trade or Landlord's fixtures in or upon the premises, whether placed there by the Landlord or by the Tenant, shall be the Tenant's property without compensation therefore to the Landlord and shall not be removed from the premises at any time (either during or after the term);

b) **Fire** - In case of damage to the premises by fire, lightning or tempest, rent shall cease until the premises are rebuilt; and the Tenant, instead of re-building or making the premises fit for the purpose of the Landlord, may at its option terminate this lease on giving to the Landlord within thirty days after such fire, lightning or tempest, notice in writing of its intention (so to do) and thereupon rent and any other payments for which the Landlord is liable under this lease shall be apportioned and paid to the date of such fire, lightning or tempest, and the Landlord shall immediately deliver up possession of the premises to the Tenant;

c) **Damage to property** - The Tenant shall not be liable nor responsible in any way for any loss of or damage or injury to any property belonging to the Landlord or to the employees of the Landlord or to any other person while in the building or in the yard of the building unless such loss, damage or injury shall be caused by the negligence of the Tenant or its employees, servants or agents for any damage to any such property caused by steam, water, rain or snow which may leak into, issue or flow from any part of the building or from the water, steam or drainage of the building or from any other place or quarter nor for any damage caused by or attributable to the condition or arrangement of any electric or other wiring omitted by any other Landlord;

d) **Impossibility of performance** - It is understood and agreed that whenever and to the extent that the Tenant shall be unable to fulfill, or shall be delayed or restricted in fulfilling any obligation hereunder for the supply or provision of any service or utility or the doing of any work or the making of any repairs because it is unable to obtain the material, goods, equipment, service, utility or labour required to enable it to fulfill such obligations or by reason of any statute, law or order-in-council or any regulation or order passed or made pursuant thereto or by reason of the order or direction of any administrator, controller or board, or any government department or officer or other authority, or by reason of not being able to obtain any permission or authority required thereby, or by reason of any other cause beyond its control whether of the foregoing character or not, the Tenant shall be relieved from the fulfillment of such obligation and the Landlord shall not be entitled to compensation for any inconvenience, nuisance or discomfort thereby occasioned;

e) **Default of Landlord** - If the rent reserved or any part thereof shall not be paid on the day appointed for payment, whether lawfully demanded or not, or in case of breach or non-observance or non-performance of any of the covenants or

agreements or rules or regulations herein contained or referred to on the part of the Landlord to be observed and performed, or in case the premises shall be vacated or remain unoccupied or in case the term shall be taken in execution or attachment for any cause whatsoever, (and in every such case) the Tenant shall be entitled thereafter to enter (into and) upon the premises (or any part thereof in the name of the whole) and the same to (have again), repossess and enjoy as of its former estate, anything herein contained to the contrary notwithstanding;

f) **Bankruptcy of Landlord** - In case without the written consent of the Tenant the premises shall remain vacant or not used for the period of fifteen days or be used by any other person than the Landlord or for any other purpose than that for which they were let or in case the term or any of the goods and chattels of the Landlord shall at any time be seized in execution or attachment by any creditor of the Landlord or if the Landlord shall make any assignment for the benefit of creditors or any bulk sale of any act (now or hereafter in force) for bankrupt or insolvent debtors (or if the Landlord is a company any order shall be made for the winding up of the Landlord), then in any such case this lease shall at the option of the Tenant cease and terminate and the term shall immediately become forfeited and void and the current month's rent and the next ensuing three month's rent shall immediately become due and payable and the Tenant may re- enter and take possession of the premises as though the Landlord or other occupant (or occupants) of the premises was (or were) holding over after the expiration of the term without any right whatever;

g) **Distress** - The Landlord waives and renounces the benefit of any present or future statute taking away or limiting the Tenant's right of distress, and covenants and agrees that notwithstanding any such statute none of the goods and chattels of the Landlord on the premises at any time during the term shall be exempt from levy by distress for rent in arrears;

h) **Right of re-entry** - On the Tenant's becoming entitled to re-enter the premises under any of the provisions of this lease, the Tenant in addition to all other rights may do so as the agent of the Landlord, using force if necessary, without being liable for any prosecution therefore, and may re-let the premises as agent of the Landlord, and receive the rent therefore, and as agent of the Landlord may take possession of any furniture or other property on the premises and sell the same at a public or private sale without notice and apply the proceeds of such sale and any rent derived from re-letting the premises upon account of rent under this lease, and the Landlord shall be liable to the Tenant for any deficiency;

i) **Right of termination by the Landlord -** The lease may be terminated for any valid operational reason;

j) **Right of termination by the Tenant -** On the Tenant's becoming entitled to re-enter the premises under any of the provisions of this lease, the Tenant, in addition to all other rights, shall have the right to terminate this lease forthwith by leaving upon the premises notice in writing of its intention, and thereupon rent and any other payments for which the Landlord is liable under this lease shall be computed,

apportioned and paid in full to the date of such termination, and the Landlord shall immediately deliver up possession of the Premises to the Tenant, and the Tenant may re-enter and take possession of the premises;

k) **Right of Renewal** - The Tenant shall have the right, if not otherwise in default, of renewing the lease. Terms and conditions to be negotiated at signing. The Tenant shall be required to give written notice of his intention to renew the lease on or before the 1st day of May prior to the commencement of the renewal term.

At the end of the term of this agreement and where a new agreement has not been entered into the Tenant may continue to occupy the facility on a month to month basis under the same terms as were previously agreed to until such time the terms are renegotiated, unless the Landlord gives notice to vacate in writing. Such notice shall be a minimum of sixty (60) days.

l) **Notice -** All communications in writing between the parties, or between them and the Engineer shall be deemed to have been received by the addressee if delivered to the individual or to a member of the firm or to an officer of the Owner for whom they are intended or if sent by hand, Canada Post, courier, facsimile or by another electronic communication where, during or after the transmission of the communication, no indication or notice of a failure or suspension of transmission has been communicated to the sender. For deliveries by courier or by hand, delivery shall be deemed to have been received on the date of delivery; by Canada Post, 5 days after the date on which it was mailed. A communication sent by facsimile or by electronic communication with no indication of failure or suspension of delivery, shall be deemed to have been received at the opening of business on the next day, unless the next day is not a working day for the recipient, in which case it shall be deemed to have been received on the next working day of the recipient at the opening of business.

The Landlord:

City of Temiskaming Shores
P.O. Box 2050 / 325 Farr Drive
Haileybury, Ontario
P0J 1K0

Attn.: Director of Recreation

9. Headings

The headings in this lease have been inserted as a matter of convenience and for reference only and in no way define, limit or enlarge the scope or meaning of this lease or any provisions hereof.

11. Effect of Lease

This lease and everything herein contained, shall extend to and bind and may be taken advantage of by the heirs, executors, administrators, successors and assigns, as the case may be, of each (and every) of the parties hereto, and where there is more than one Landlord or there is a female party or a corporation, the provisions hereof shall be read with all grammatical changes thereby rendered necessary and all covenants shall be deemed joint and several.

In witness whereof the Party of the First Part has hereunto affixed its corporate seal attested by the hands of its duly authorized officers, and the Party of the Second Part has hereunto set its hand and seal by execution under seal by each and every individual comprising the Party of the Second Part.

Signed and Sealed in the presence of

New Liskeard Cubs U18 “AAA” Hockey Club

_____
Signing Authority
Name: _____
Title: _____

_____
Witness
Print Name: _____

Municipal Seal

Corporation of the City of Temiskaming Shores

_____
Director of Recreation – Mathew Bahm

_____
Witness
Print Name: _____

Schedule “C” to

By-law No. 2024-082

Lease Agreement between

The Corporation of the City of Temiskaming Shores

and

Grant Propane Oldtimers Hockey Team

for the use of Room #13 in the Don Shepherdson Memorial Arena

The Corporation of the City of Temiskaming Shores

- and -

Grant Propane Oldtimers Hockey Team

LEASE

Mathew Bahm
Director of Recreation
The Corporation of the City of Temiskaming Shores
P.O. Box 2050
Haileybury, Ontario
P0J 1K0

THIS LEASE made this ___ day of _____, 2024.

between:

The City of Temiskaming Shores
hereinafter called the “Landlord”
-and-

Grant Propane Oldtimers Hockey Team
hereinafter called the “Tenant”

Whereas the Applicant is desirous of renting Room #13 owned by the City of Temiskaming Shores at the Don Shepherdson Memorial Arena from July 1st, 2024, to June 30th, 2027.

And whereas it is necessary and desirous to establish certain guidelines and rules for the purpose of the rental of the aforesaid premises;

And whereas it is understood that Dan McDonald hereby undertakes and agrees to be responsible for compliance with all requirements under the Agreement;

And whereas the parties hereto have agreed to enter into this Lease.

1. **Leased Premises**

The Landlord hereby demises and leases to the Tenant Room #13 owned by the City of Temiskaming Shores at the Don Shepherdson Memorial Arena as described hereinafter called the "premises".

The Landlord agrees to rent to the Tenant premises owned by the Landlord in accordance to the following:

a) Use of **Room #13** located in the **Don Shepherdson Memorial Arena**, exclusively for the duration of the lease:

2. **Term**

To hold the premises for a term commencing on July 1, 2024, to June 30, 2027.

3. Rent

The Tenant shall pay the Landlord **Nine Hundred and Forty-Eight Dollars ($948.00)** plus applicable taxes per year. Rent shall be payable in advance of the first day of October, each year of the agreement. To be specific, the total amount payable for the full term of the agreement is Two Thousand Eight Hundred Forty-Four Dollars ($2,844.00) plus applicable taxes.

4. Tenants Covenants

a) Rent - to pay rent;

b) Insurance - To provide General Liability Insurance for coverage of all areas under this lease in the joint names of the Tenant and the City of Temiskaming Shores with the limits of not less than ($2,000,000) **two million dollars (Canadian),** inclusive per occurrence for bodily injury, death or damage for property including loss of use thereof, with property deductible of five hundred dollars ($500). Proof of insurance must be supplied to the Landlord prior to occupying the facilities and thereafter to provide proof of insurance on each anniversary of the date of occupation; and, to provide proof of insurance forthwith upon request by the City at any time.

c) Cost of repair where Tenant at fault - that if the building including the premises, boilers, engines, pipes and other apparatus (or any of them) used for the purpose of heating or air conditioning the building, or if the water pipes, drainage pipes, electric lighting or other equipment of the building or the roof or outside walls of the building get out of repair or become damaged or destroyed through the negligence, carelessness or misuse of the Tenant, his servants, agents, employees or anyone permitted by him to be in the building (or through him or them in any way stopping up or injuring the heating apparatus, water pipes, drainage pipes, or other equipment or part of the building) the expense of any necessary repairs, replacements or alterations shall be paid by the Tenant to the Landlord forthwith on demand;

d) Assigning or subletting - not to assign, sublet or part with possession of any part of the premises without leave of the Landlord, which leave shall not be unreasonably withheld, and which leave shall not be required in the event of a sublease to add any personnel to the group comprising the Tenant or to a management corporation which may be incorporated by the Tenant;

e) Entry by Landlord - to permit the Landlord or its agents to enter upon the premises at any time and from time to time for the purpose of inspecting and making repairs, alterations or improvements to the premises or to the building, and the Tenant shall not be entitled to compensation for any inconvenience, nuisance, or discomfort occasioned thereby; provided that the Landlord shall give reasonable advance notice to avoid inconvenience to the Tenant, given the private and confidential nature of the profession of the Tenant;

f) Indemnity - to indemnify and save harmless the Landlord against and from any and all claims by or on behalf of any person or persons, firm or firms, or corporation or corporations arising from the conduct or any work, by or through any act of negligence of the Tenant or any assignee, subtenant, agent, contractor, servants, employee or licensee of the Tenant;

g) Alterations - not to make or erect in or to the premises any installation, alteration, addition, or partition without submitting plans and specifications to the Landlord and obtaining the Landlord’s prior written consent (in each instance); such work shall if

the Tenant so elects, be performed by employees of, volunteers of, or contractors designated by the Tenant; in the absence of such election, such work may be performed with the Tenant's consent in writing (given prior to letting of contract) by contractors engaged by the Landlord but in each case only under written contract approved in writing by the Tenant and subject to all conditions which the Tenant may impose; the Landlord shall submit to the Tenant or the Landlord's contractors (as the case may be), when due the costs of all such work and of all materials, labour and services involved therein and of all decoration and all changes in the building, its equipment or services, necessitated thereby; provided, that it is at this time understood by the Tenant that certain equipment is to be installed and to be placed at convenient places as designated by the Landlord;

h) Facility Fees - to pay the applicable rate for all other municipal services as outlined in the current Municipal Fees By-Law;

i) Use of Building - the Tenant shall not allow the building and/or property to be used for any purpose other than to conduct normal activities of their organization;

j) Equipment - to cover any and all costs associated with providing equipment for use by the tenant including but not limited to laundry, office furniture, and/or skate sharpener;

k) By-laws - to follow all applicable by-laws and policies of the City of Temiskaming Shores;

l) Cleaning - to keep the premises in a clean, tidy manner, such that the leased spaces are in compliance with applicable building and fire regulations and such that the premises do not attract vermin and/or provide unreasonable opportunities for the transmission of communicable diseases.

5. Landlord’s Covenants

The Landlord covenants with the Tenant;

a) Quiet enjoyment - for the quiet enjoyment;

b) Taxes - to pay all taxes and rates, municipal, parliamentary or otherwise, levied against the premises or the Tenant on account thereof;

c) Electricity and water - to pay for the electricity and water supplied to the premises;

d) Structural soundness - to keep the premises, common areas and parking lot structurally sound and to look after any structural defects which may arise.

e) Keys - to provide either two (2) keys or, a numerical code, to access the leased space.

6. Provisos

Provided always and it is hereby agreed as follows:

a) **Fixtures** - The Landlord may remove his fixtures, but all installations, alterations, additions, partitions and fixtures except trade or Landlord's fixtures in or upon the premises, whether placed there by the Landlord or by the Tenant, shall be the Tenant's property without compensation therefore to the Landlord and shall not be removed from the premises at any time (either during or after the term);

b) **Fire** - In case of damage to the premises by fire, lightning or tempest, rent shall cease until the premises are rebuilt; and the Tenant, instead of re-building or making the premises fit for the purpose of the Landlord, may at its option terminate this lease on giving to the Landlord within thirty days after such fire, lightning or tempest, notice in writing of its intention (so to do) and thereupon rent and any other payments for which the Landlord is liable under this lease shall be apportioned and paid to the date of such fire, lightning or tempest, and the Landlord shall immediately deliver up possession of the premises to the Tenant;

c) **Damage to property** - The Tenant shall not be liable nor responsible in any way for any loss of or damage or injury to any property belonging to the Landlord or to the employees of the Landlord or to any other person while in the building or in the yard of the building unless such loss, damage or injury shall be caused by the negligence of the Tenant or its employees, servants or agents for any damage to any such property caused by steam, water, rain or snow which may leak into, issue or flow from any part of the building or from the water, steam or drainage of the building or from any other place or quarter nor for any damage caused by or attributable to the condition or arrangement of any electric or other wiring omitted by any other Landlord;

d) **Impossibility of performance** - It is understood and agreed that whenever and to the extent that the Tenant shall be unable to fulfill, or shall be delayed or restricted in fulfilling any obligation hereunder for the supply or provision of any service or utility or the doing of any work or the making of any repairs because it is unable to obtain the material, goods, equipment, service, utility or labour required to enable it to fulfill such obligations or by reason of any statute, law or order-in-council or any regulation or order passed or made pursuant thereto or by reason of the order or direction of any administrator, controller or board, or any government department or officer or other authority, or by reason of not being able to obtain any permission or authority required thereby, or by reason of any other cause beyond its control whether of the foregoing character or not, the Tenant shall be relieved from the fulfillment of such obligation and the Landlord shall not be entitled to compensation for any inconvenience, nuisance or discomfort thereby occasioned;

e) **Default of Landlord** - If the rent reserved or any part thereof shall not be paid on the day appointed for payment, whether lawfully demanded or not, or in case of breach or non-observance or non-performance of any of the covenants or

agreements or rules or regulations herein contained or referred to on the part of the Landlord to be observed and performed, or in case the premises shall be vacated or remain unoccupied or in case the term shall be taken in execution or attachment for any cause whatsoever, (and in every such case) the Tenant shall be entitled thereafter to enter (into and) upon the premises (or any part thereof in the name of the whole) and the same to (have again), repossess and enjoy as of its former estate, anything herein contained to the contrary notwithstanding;

f) **Bankruptcy of Landlord** - In case without the written consent of the Tenant the premises shall remain vacant or not used for the period of fifteen days or be used by any other person than the Landlord or for any other purpose than that for which they were let or in case the term or any of the goods and chattels of the Landlord shall at any time be seized in execution or attachment by any creditor of the Landlord or if the Landlord shall make any assignment for the benefit of creditors or any bulk sale of any act (now or hereafter in force) for bankrupt or insolvent debtors (or if the Landlord is a company any order shall be made for the winding up of the Landlord), then in any such case this lease shall at the option of the Tenant cease and terminate and the term shall immediately become forfeited and void and the current month's rent and the next ensuing three month's rent shall immediately become due and payable and the Tenant may re- enter and take possession of the premises as though the Landlord or other occupant (or occupants) of the premises was (or were) holding over after the expiration of the term without any right whatever;

g) **Distress** - The Landlord waives and renounces the benefit of any present or future statute taking away or limiting the Tenant's right of distress, and covenants and agrees that notwithstanding any such statute none of the goods and chattels of the Landlord on the premises at any time during the term shall be exempt from levy by distress for rent in arrears;

h) **Right of re-entry** - On the Tenant's becoming entitled to re-enter the premises under any of the provisions of this lease, the Tenant in addition to all other rights may do so as the agent of the Landlord, using force if necessary, without being liable for any prosecution therefore, and may re-let the premises as agent of the Landlord, and receive the rent therefore, and as agent of the Landlord may take possession of any furniture or other property on the premises and sell the same at a public or private sale without notice and apply the proceeds of such sale and any rent derived from re-letting the premises upon account of rent under this lease, and the Landlord shall be liable to the Tenant for any deficiency;

i) **Right of termination by the Landlord -** The lease may be terminated for any valid operational reason;

j) **Right of termination by the Tenant -** On the Tenant's becoming entitled to re-enter the premises under any of the provisions of this lease, the Tenant, in addition to all other rights, shall have the right to terminate this lease forthwith by leaving upon the premises notice in writing of its intention, and thereupon rent and any other payments for which the Landlord is liable under this lease shall be computed,

apportioned and paid in full to the date of such termination, and the Landlord shall immediately deliver up possession of the Premises to the Tenant, and the Tenant may re-enter and take possession of the premises;

k) **Right of Renewal** - The Tenant shall have the right, if not otherwise in default, of renewing the lease. Terms and conditions to be negotiated at signing. The Tenant shall be required to give written notice of his intention to renew the lease on or before the 1st day of May prior to the commencement of the renewal term.

At the end of the term of this agreement and where a new agreement has not been entered into the Tenant may continue to occupy the facility on a month to month basis under the same terms as were previously agreed to until such time the terms are renegotiated, unless the Landlord gives notice to vacate in writing. Such notice shall be a minimum of sixty (60) days.

l) **Notice -** All communications in writing between the parties, or between them and the Engineer shall be deemed to have been received by the addressee if delivered to the individual or to a member of the firm or to an officer of the Owner for whom they are intended or if sent by hand, Canada Post, courier, facsimile or by another electronic communication where, during or after the transmission of the communication, no indication or notice of a failure or suspension of transmission has been communicated to the sender. For deliveries by courier or by hand, delivery shall be deemed to have been received on the date of delivery; by Canada Post, 5 days after the date on which it was mailed. A communication sent by facsimile or by electronic communication with no indication of failure or suspension of delivery, shall be deemed to have been received at the opening of business on the next day, unless the next day is not a working day for the recipient, in which case it shall be deemed to have been received on the next working day of the recipient at the opening of business.

The Landlord:

City of Temiskaming Shores
P.O. Box 2050 / 325 Farr Drive
Haileybury, Ontario
P0J 1K0

Attn.: Director of Recreation

7. Headings

The headings in this lease have been inserted as a matter of convenience and for reference only and in no way define, limit or enlarge the scope or meaning of this lease or any provisions hereof.

8. Effect of Lease

This lease and everything herein contained, shall extend to and bind and may be taken advantage of by the heirs, executors, administrators, successors and assigns, as the case may be, of each (and every) of the parties hereto, and where there is more than one Landlord or there is a female party or a corporation, the provisions hereof shall be read with all grammatical changes thereby rendered necessary and all covenants shall be deemed joint and several.

In witness whereof the Party of the First Part has hereunto affixed its corporate seal attested by the hands of its duly authorized officers, and the Party of the Second Part has hereunto set its hand and seal by execution under seal by each and every individual comprising the Party of the Second Part.

Signed and Sealed in the presence of

Grant Propane Oldtimers Hockey Team

_____
Signing Authority
Name: _____

_____
Witness -

Municipal Seal

Corporation of the City of Temiskaming Shores

_____
Director of Recreation – Mathew Bahm

_____
Witness
Print Name: _____

Schedule “D” to

By-law No. 2024-082

Lease Agreement between

The Corporation of the City of Temiskaming Shores

and

New Liskeard Lions u18 Hockey Club

for the use of Room #12 in the Don Shepherdson Memorial Arena

The Corporation of the City of Temiskaming Shores

- and -

New Liskeard Lions u18 Hockey Club

LEASE

Mathew Bahm
Director of Recreation
The Corporation of the City of Temiskaming Shores
P.O. Box 2050
Haileybury, Ontario
P0J 1K0

THIS LEASE made this ___ day of _____, 2024.

between:

The City of Temiskaming Shores
hereinafter called the “Landlord”
-and-

New Liskeard Lions u18 Hockey Club
hereinafter called the “Tenant”

Whereas the Applicant is desirous of renting Room #12 owned by the City of Temiskaming Shores at the Don Shepherdson Memorial Arena from July 1st, 2024, to June 30th, 2027.

And whereas it is necessary and desirous to establish certain guidelines and rules for the purpose of the rental of the aforesaid premises;

And whereas it is understood that the New Liskeard Lions u18 Hockey Club President hereby undertake and agree to be responsible for compliance with all requirements under the Agreement;

And whereas the parties hereto have agreed to enter into this Lease.

1. **Leased Premises**

The Landlord hereby demises and leases to the Tenant Room #12 owned by the City of Temiskaming Shores at the Don Shepherdson Memorial Arena as described hereinafter called the "premises".

The Landlord agrees to rent to the Tenant premises owned by the Landlord in accordance to the following:

a) Use of **Room #12** located in the **Don Shepherdson Memorial Arena**, exclusively for the duration of the lease:

2. **Term**

To hold the premises for a term commencing on July 1, 2024, to June 30, 2027.

3. Rent

The Tenant shall pay the Landlord **One Thousand Two Hundred and Sixty Dollars ($1,260.00)** plus applicable taxes per year. Rent shall be payable in advance of the first day of October, each year of the agreement. To be specific, the total amount payable for the full term of the agreement is Three Thousand Seven Hundred Eighty Dollars ($3,780.00) plus applicable taxes

4. Tenants Covenants

a) Rent - to pay rent;

b) Insurance - To provide General Liability Insurance for coverage of all areas under this lease in the joint names of the Tenant and the City of Temiskaming Shores with the limits of not less than ($2,000,000) **two million dollars (Canadian),** inclusive per occurrence for bodily injury, death or damage for property including loss of use thereof, with property deductible of five hundred dollars ($500). Proof of insurance must be supplied to the Landlord prior to occupying the facilities and thereafter to provide proof of insurance on each anniversary of the date of occupation; and, to provide proof of insurance forthwith upon request by the City at any time.

c) Cost of repair where Tenant at fault - that if the building including the premises, boilers, engines, pipes and other apparatus (or any of them) used for the purpose of heating or air conditioning the building, or if the water pipes, drainage pipes, electric lighting or other equipment of the building or the roof or outside walls of the building get out of repair or become damaged or destroyed through the negligence, carelessness or misuse of the Tenant, his servants, agents, employees or anyone permitted by him to be in the building (or through him or them in any way stopping up or injuring the heating apparatus, water pipes, drainage pipes, or other equipment or part of the building) the expense of any necessary repairs, replacements or alterations shall be paid by the Tenant to the Landlord forthwith on demand;

d) Assigning or subletting - not to assign, sublet or part with possession of any part of the premises without leave of the Landlord, which leave shall not be unreasonably withheld, and which leave shall not be required in the event of a sublease to add any personnel to the group comprising the Tenant or to a management corporation which may be incorporated by the Tenant;

e) Entry by Landlord - to permit the Landlord or its agents to enter upon the premises at any time and from time to time for the purpose of inspecting and making repairs, alterations or improvements to the premises or to the building, and the Tenant shall not be entitled to compensation for any inconvenience, nuisance, or discomfort occasioned thereby; provided that the Landlord shall give reasonable advance notice to avoid inconvenience to the Tenant, given the private and confidential nature of the profession of the Tenant;

f) Indemnity - to indemnify and save harmless the Landlord against and from any and all claims by or on behalf of any person or persons, firm or firms, or corporation or corporations arising from the conduct or any work, by or through any act of negligence of the Tenant or any assignee, subtenant, agent, contractor, servants, employee or licensee of the Tenant;

g) Alterations - not to make or erect in or to the premises any installation, alteration, addition, or partition without submitting plans and specifications to the Landlord and obtaining the Landlord’s prior written consent (in each instance); such work shall if

the Tenant so elects, be performed by employees of, volunteers of, or contractors designated by the Tenant; in the absence of such election, such work may be performed with the Tenant's consent in writing (given prior to letting of contract) by contractors engaged by the Landlord but in each case only under written contract approved in writing by the Tenant and subject to all conditions which the Tenant may impose; the Landlord shall submit to the Tenant or the Landlord's contractors (as the case may be), when due the costs of all such work and of all materials, labour and services involved therein and of all decoration and all changes in the building, its equipment or services, necessitated thereby; provided, that it is at this time understood by the Tenant that certain equipment is to be installed and to be placed at convenient places as designated by the Landlord;

h) Facility Fees - to pay the applicable rate for all other municipal services as outlined in the current Municipal Fees By-Law;

i) Use of Building - the Tenant shall not allow the building and/or property to be used for any purpose other than to conduct normal activities of their organization;

j) Equipment - to cover any and all costs associated with providing equipment for use by the tenant including but not limited to laundry, office furniture, and/or skate sharpener;

k) By-laws - to follow all applicable by-laws and policies of the City of Temiskaming Shores;

l) Cleaning - to keep the premises in a clean, tidy manner, such that the leased spaces are in compliance with applicable building and fire regulations and such that the premises do not attract vermin and/or provide unreasonable opportunities for the transmission of communicable diseases.

5. Landlord’s Covenants

The Landlord covenants with the Tenant;

a) Quiet enjoyment - for the quiet enjoyment;

b) Taxes - to pay all taxes and rates, municipal, parliamentary or otherwise, levied against the premises or the Tenant on account thereof;

c) Electricity and water - to pay for the electricity and water supplied to the premises;

d) Structural soundness - to keep the premises, common areas and parking lot structurally sound and to look after any structural defects which may arise;

e) Keys - to provide one (1) key to access the facility and two (2) keys to access the leased space;

f) Cleaning – to clean the washroom, located in the adjacent space, to facility standards after all ice time rentals or as necessary.

6. Provisos

Provided always and it is hereby agreed as follows:

a) **Fixtures** - The Landlord may remove his fixtures, but all installations, alterations, additions, partitions and fixtures except trade or Landlord's fixtures in or upon the premises, whether placed there by the Landlord or by the Tenant, shall be the Tenant's property without compensation therefore to the Landlord and shall not be removed from the premises at any time (either during or after the term);

b) **Fire** - In case of damage to the premises by fire, lightning or tempest, rent shall cease until the premises are rebuilt; and the Tenant, instead of re-building or making the premises fit for the purpose of the Landlord, may at its option terminate this lease on giving to the Landlord within thirty days after such fire, lightning or tempest, notice in writing of its intention (so to do) and thereupon rent and any other payments for which the Landlord is liable under this lease shall be apportioned and paid to the date of such fire, lightning or tempest, and the Landlord shall immediately deliver up possession of the premises to the Tenant;

c) **Damage to property** - The Tenant shall not be liable nor responsible in any way for any loss of or damage or injury to any property belonging to the Landlord or to the employees of the Landlord or to any other person while in the building or in the yard of the building unless such loss, damage or injury shall be caused by the negligence of the Tenant or its employees, servants or agents for any damage to any such property caused by steam, water, rain or snow which may leak into, issue or flow from any part of the building or from the water, steam or drainage of the building or from any other place or quarter nor for any damage caused by or attributable to the condition or arrangement of any electric or other wiring omitted by any other Landlord;

d) **Impossibility of performance** - It is understood and agreed that whenever and to the extent that the Tenant shall be unable to fulfill, or shall be delayed or restricted in fulfilling any obligation hereunder for the supply or provision of any service or utility or the doing of any work or the making of any repairs because it is unable to obtain the material, goods, equipment, service, utility or labour required to enable it to fulfill such obligations or by reason of any statute, law or order-in-council or any regulation or order passed or made pursuant thereto or by reason of the order or direction of any administrator, controller or board, or any government department or officer or other authority, or by reason of not being able to obtain any permission or authority required thereby, or by reason of any other cause beyond its control whether of the foregoing character or not, the Tenant shall be relieved from the fulfillment of such obligation and the Landlord shall not be entitled to compensation for any inconvenience, nuisance or discomfort thereby occasioned;

e) **Default of Landlord** - If the rent reserved or any part thereof shall not be paid on the day appointed for payment, whether lawfully demanded or not, or in case of breach or non-observance or non-performance of any of the covenants or agreements or rules or regulations herein contained or referred to on the part of the Landlord to be observed and performed, or in case the premises shall be vacated or remain unoccupied or in case the term shall be taken in execution or attachment for any cause whatsoever, (and in every such case) the Tenant shall be entitled thereafter to enter (into and) upon the premises (or any part thereof in the name of the whole) and the same to (have again), repossess and enjoy as of its former estate, anything herein contained to the contrary notwithstanding;

f) **Bankruptcy of Landlord** - In case without the written consent of the Tenant the premises shall remain vacant or not used for the period of fifteen days or be used by any other person than the Landlord or for any other purpose than that for which they were let or in case the term or any of the goods and chattels of the Landlord shall at any time be seized in execution or attachment by any creditor of the Landlord or if the Landlord shall make any assignment for the benefit of creditors or any bulk sale of any act (now or hereafter in force) for bankrupt or insolvent debtors (or if the Landlord is a company any order shall be made for the winding up of the Landlord), then in any such case this lease shall at the option of the Tenant cease and terminate and the term shall immediately become forfeited and void and the current month's rent and the next ensuing three month's rent shall immediately become due and payable and the Tenant may re- enter and take possession of the premises as though the Landlord or other occupant (or occupants) of the premises was (or were) holding over after the expiration of the term without any right whatever;

g) **Distress** - The Landlord waives and renounces the benefit of any present or future statute taking away or limiting the Tenant's right of distress, and covenants and agrees that notwithstanding any such statute none of the goods and chattels of the Landlord on the premises at any time during the term shall be exempt from levy by distress for rent in arrears;

h) **Right of re-entry** - On the Tenant's becoming entitled to re-enter the premises under any of the provisions of this lease, the Tenant in addition to all other rights may do so as the agent of the Landlord, using force if necessary, without being liable for any prosecution therefore, and may re-let the premises as agent of the Landlord, and receive the rent therefore, and as agent of the Landlord may take possession of any furniture or other property on the premises and sell the same at a public or private sale without notice and apply the proceeds of such sale and any rent derived from re-letting the premises upon account of rent under this lease, and the Landlord shall be liable to the Tenant for any deficiency;

i) **Right of termination by the Landlord -** The lease may be terminated for any valid operational reason;

j) **Right of termination by the Tenant -** On the Tenant's becoming entitled to re-enter the premises under any of the provisions of this lease, the Tenant, in addition to all

other rights, shall have the right to terminate this lease forthwith by leaving upon the premises notice in writing of its intention, and thereupon rent and any other payments for which the Landlord is liable under this lease shall be computed, apportioned and paid in full to the date of such termination, and the Landlord shall immediately deliver up possession of the Premises to the Tenant, and the Tenant may re-enter and take possession of the premises;

k) **Right of Renewal** - The Tenant shall have the right, if not otherwise in default, of renewing the lease. Terms and conditions to be negotiated at signing. The Tenant shall be required to give written notice of his intention to renew the lease on or before the 1st day of May prior to the commencement of the renewal term.

At the end of the term of this agreement and where a new agreement has not been entered into the Tenant may continue to occupy the facility on a month-to-month basis under the same terms as were previously agreed to until such time the terms are renegotiated, unless the Landlord gives notice to vacate in writing. Such notice shall be a minimum of sixty (60) days.

l) **Notice -** All communications in writing between the parties, or between them and the Engineer shall be deemed to have been received by the addressee if delivered to the individual or to a member of the firm or to an officer of the Owner for whom they are intended or if sent by hand, Canada Post, courier, facsimile or by another electronic communication where, during or after the transmission of the communication, no indication or notice of a failure or suspension of transmission has been communicated to the sender. For deliveries by courier or by hand, delivery shall be deemed to have been received on the date of delivery; by Canada Post, 5 days after the date on which it was mailed. A communication sent by facsimile or by electronic communication with no indication of failure or suspension of delivery, shall be deemed to have been received at the opening of business on the next day, unless the next day is not a working day for the recipient, in which case it shall be deemed to have been received on the next working day of the recipient at the opening of business.

The Landlord:

City of Temiskaming Shores
P.O. Box 2050 / 325 Farr Drive
Haileybury, Ontario
P0J 1K0

Attn.: Director of Recreation

7. Headings

The headings in this lease have been inserted as a matter of convenience and for reference only and in no way define, limit or enlarge the scope or meaning of this lease or any provisions hereof.

8. Effect of Lease

This lease and everything herein contained, shall extend to and bind and may be taken advantage of by the heirs, executors, administrators, successors and assigns, as the case may be, of each (and every) of the parties hereto, and where there is more than one Landlord or there is a female party or a corporation, the provisions hereof shall be read with all grammatical changes thereby rendered necessary and all covenants shall be deemed joint and several.

In witness whereof the Party of the First Part has hereunto affixed its corporate seal attested by the hands of its duly authorized officers, and the Party of the Second Part has hereunto set its hand and seal by execution under seal by each and every individual comprising the Party of the Second Part.

Signed and Sealed in the presence of

New Liskeard Lions u18 Hockey Club

_____
Signing Authority
Name: _____
Title: _____

_____
Witness
Print Name: _____

Municipal Seal

Corporation of the City of Temiskaming Shores

_____
Director of Recreation – Mathew Bahm

_____
Witness
Print Name:_____

Schedule “E” to

By-law No. 2024-082

Lease Agreement between

The Corporation of the City of Temiskaming Shores

and

Temiskaming Shores Minor Hockey Association

for the use of Room #9 in the Don Shepherdson Memorial Arena

The Corporation of the City of Temiskaming Shores

- and -

Temiskaming Shores Minor Hockey Association

LEASE

Matt Bahm
Director of Recreation
The Corporation of the City of Temiskaming Shores
P.O. Box 2050
Haileybury, Ontario
P0J 1K0

THIS LEASE made this __ day of _____, 2024.

between:

The City of Temiskaming Shores
hereinafter called the “Landlord”
-and-

Temiskaming Shores Minor Hockey Association
hereinafter called the “Tenant”

Whereas the Applicant is desirous of renting Room #9 owned by the City of Temiskaming Shores at the Don Shepherdson Memorial Arena from July 1st, 2024, to June 30th, 2027.

And whereas it is necessary and desirous to establish certain guidelines and rules for the purpose of the rental of the aforesaid premises;

And whereas it is understood that the Temiskaming Shores Minor Hockey Association President hereby undertake and agree to be responsible for compliance with all requirements under the Agreement;

And whereas the parties hereto have agreed to enter into this Lease.

1. **Leased Premises**

The Landlord hereby demises and leases to the Tenant Room #9 owned by the City of Temiskaming Shores at the Don Shepherdson Memorial Arena as described hereinafter called the "premises".

The Landlord agrees to rent to the Tenant premises owned by the Landlord in accordance to the following:

a) Use of **Room #9** located in the **Don Shepherdson Memorial Arena**, exclusively for the duration of the lease:

2. **Term**

To hold the premises for a term commencing on July 1, 2024, to June 30, 2027.

3. Rent

The Tenant shall pay the Landlord **One Thousand Two Hundred and Sixty Dollars ($1,260.00)** plus applicable taxes per year. Rent shall be payable in advance of the first day of October, each year of the agreement. To be specific, the total amount payable for the full term of the agreement is Three Thousand Seven Hundred Eighty Dollars ($3,780.00) plus applicable taxes

4. Tenants Covenants

a) Rent - to pay rent;

b) Insurance - To provide General Liability Insurance for coverage of all areas under this lease in the joint names of the Tenant and the City of Temiskaming Shores with the limits of not less than ($2,000,000) **two million dollars (Canadian),** inclusive per occurrence for bodily injury, death or damage for property including loss of use thereof, with property deductible of five hundred dollars ($500). Proof of insurance must be supplied to the Landlord prior to occupying the facilities and thereafter to provide proof of insurance on each anniversary of the date of occupation; and, to provide proof of insurance forthwith upon request by the City at any time.

c) Cost of repair where Tenant at fault - that if the building including the premises, boilers, engines, pipes and other apparatus (or any of them) used for the purpose of heating or air conditioning the building, or if the water pipes, drainage pipes, electric lighting or other equipment of the building or the roof or outside walls of the building get out of repair or become damaged or destroyed through the negligence, carelessness or misuse of the Tenant, his servants, agents, employees or anyone permitted by him to be in the building (or through him or them in any way stopping up or injuring the heating apparatus, water pipes, drainage pipes, or other equipment or part of the building) the expense of any necessary repairs, replacements or alterations shall be paid by the Tenant to the Landlord forthwith on demand;

d) Assigning or subletting - not to assign, sublet or part with possession of any part of the premises without leave of the Landlord, which leave shall not be unreasonably withheld, and which leave shall not be required in the event of a sublease to add any personnel to the group comprising the Tenant or to a management corporation which may be incorporated by the Tenant;

e) Entry by Landlord - to permit the Landlord or its agents to enter upon the premises at any time and from time to time for the purpose of inspecting and making repairs, alterations or improvements to the premises or to the building, and the Tenant shall not be entitled to compensation for any inconvenience, nuisance, or discomfort occasioned thereby; provided that the Landlord shall give reasonable advance notice to avoid inconvenience to the Tenant, given the private and confidential nature of the profession of the Tenant;

f) Indemnity - to indemnify and save harmless the Landlord against and from any and all claims by or on behalf of any person or persons, firm or firms, or corporation or corporations arising from the conduct or any work, by or through any act of negligence of the Tenant or any assignee, subtenant, agent, contractor, servants, employee or licensee of the Tenant;

g) Alterations - not to make or erect in or to the premises any installation, alteration, addition, or partition without submitting plans and specifications to the Landlord and obtaining the Landlord’s prior written consent (in each instance); such work shall if

the Tenant so elects, be performed by employees of, volunteers of, or contractors designated by the Tenant; in the absence of such election, such work may be performed with the Tenant's consent in writing (given prior to letting of contract) by contractors engaged by the Landlord but in each case only under written contract approved in writing by the Tenant and subject to all conditions which the Tenant may impose; the Landlord shall submit to the Tenant or the Landlord's contractors (as the case may be), when due the costs of all such work and of all materials, labour and services involved therein and of all decoration and all changes in the building, its equipment or services, necessitated thereby; provided, that it is at this time understood by the Tenant that certain equipment is to be installed and to be placed at convenient places as designated by the Landlord;

h) Facility Fees - to pay the applicable rate for all other municipal services as outlined in the current Municipal Fees By-Law;

i) Use of Building - the Tenant shall not allow the building and/or property to be used for any purpose other than to conduct normal activities of their organization;

j) Equipment - to cover any and all costs associated with providing equipment for use by the tenant including but not limited to laundry, office furniture, and/or skate sharpener;

k) By-laws - to follow all applicable by-laws and policies of the City of Temiskaming Shores;

l) Cleaning - to keep the premises in a clean, tidy manner, such that the leased spaces are in compliance with applicable building and fire regulations and such that the premises do not attract vermin and/or provide unreasonable opportunities for the transmission of communicable diseases.

5. Landlord’s Covenants

The Landlord covenants with the Tenant;

a) Quiet enjoyment - for the quiet enjoyment;

b) Taxes - to pay all taxes and rates, municipal, parliamentary or otherwise, levied against the premises or the Tenant on account thereof;

c) Electricity and water - to pay for the electricity and water supplied to the premises;

d) Structural soundness - to keep the premises, common areas and parking lot structurally sound and to look after any structural defects which may arise;

e) Keys - to provide one (1) key to access the facility and two (2) keys to access the leased space.

6. Provisos

Provided always and it is hereby agreed as follows:

a) **Fixtures** - The Landlord may remove his fixtures, but all installations, alterations, additions, partitions and fixtures except trade or Landlord's fixtures in or upon the premises, whether placed there by the Landlord or by the Tenant, shall be the Tenant's property without compensation therefore to the Landlord and shall not be removed from the premises at any time (either during or after the term);

b) **Fire** - In case of damage to the premises by fire, lightning or tempest, rent shall cease until the premises are rebuilt; and the Tenant, instead of re-building or making the premises fit for the purpose of the Landlord, may at its option terminate this lease on giving to the Landlord within thirty days after such fire, lightning or tempest, notice in writing of its intention (so to do) and thereupon rent and any other payments for which the Landlord is liable under this lease shall be apportioned and paid to the date of such fire, lightning or tempest, and the Landlord shall immediately deliver up possession of the premises to the Tenant;

c) **Damage to property** - The Tenant shall not be liable nor responsible in any way for any loss of or damage or injury to any property belonging to the Landlord or to the employees of the Landlord or to any other person while in the building or in the yard of the building unless such loss, damage or injury shall be caused by the negligence of the Tenant or its employees, servants or agents for any damage to any such property caused by steam, water, rain or snow which may leak into, issue or flow from any part of the building or from the water, steam or drainage of the building or from any other place or quarter nor for any damage caused by or attributable to the condition or arrangement of any electric or other wiring omitted by any other Landlord;

d) **Impossibility of performance** - It is understood and agreed that whenever and to the extent that the Tenant shall be unable to fulfill, or shall be delayed or restricted in fulfilling any obligation hereunder for the supply or provision of any service or utility or the doing of any work or the making of any repairs because it is unable to obtain the material, goods, equipment, service, utility or labour required to enable it to fulfill such obligations or by reason of any statute, law or order-in-council or any regulation or order passed or made pursuant thereto or by reason of the order or direction of any administrator, controller or board, or any government department or officer or other authority, or by reason of not being able to obtain any permission or authority required thereby, or by reason of any other cause beyond its control whether of the foregoing character or not, the Tenant shall be relieved from the fulfillment of such obligation and the Landlord shall not be entitled to compensation for any inconvenience, nuisance or discomfort thereby occasioned;

e) **Default of Landlord** - If the rent reserved or any part thereof shall not be paid on the day appointed for payment, whether lawfully demanded or not, or in case of breach or non-observance or non-performance of any of the covenants or

agreements or rules or regulations herein contained or referred to on the part of the Landlord to be observed and performed, or in case the premises shall be vacated or remain unoccupied or in case the term shall be taken in execution or attachment for any cause whatsoever, (and in every such case) the Tenant shall be entitled thereafter to enter (into and) upon the premises (or any part thereof in the name of the whole) and the same to (have again), repossess and enjoy as of its former estate, anything herein contained to the contrary notwithstanding;

f) **Bankruptcy of Landlord** - In case without the written consent of the Tenant the premises shall remain vacant or not used for the period of fifteen days or be used by any other person than the Landlord or for any other purpose than that for which they were let or in case the term or any of the goods and chattels of the Landlord shall at any time be seized in execution or attachment by any creditor of the Landlord or if the Landlord shall make any assignment for the benefit of creditors or any bulk sale of any act (now or hereafter in force) for bankrupt or insolvent debtors (or if the Landlord is a company any order shall be made for the winding up of the Landlord), then in any such case this lease shall at the option of the Tenant cease and terminate and the term shall immediately become forfeited and void and the current month's rent and the next ensuing three month's rent shall immediately become due and payable and the Tenant may re- enter and take possession of the premises as though the Landlord or other occupant (or occupants) of the premises was (or were) holding over after the expiration of the term without any right whatever;

g) **Distress** - The Landlord waives and renounces the benefit of any present or future statute taking away or limiting the Tenant's right of distress, and covenants and agrees that notwithstanding any such statute none of the goods and chattels of the Landlord on the premises at any time during the term shall be exempt from levy by distress for rent in arrears;

h) **Right of re-entry** - On the Tenant's becoming entitled to re-enter the premises under any of the provisions of this lease, the Tenant in addition to all other rights may do so as the agent of the Landlord, using force if necessary, without being liable for any prosecution therefore, and may re-let the premises as agent of the Landlord, and receive the rent therefore, and as agent of the Landlord may take possession of any furniture or other property on the premises and sell the same at a public or private sale without notice and apply the proceeds of such sale and any rent derived from re-letting the premises upon account of rent under this lease, and the Landlord shall be liable to the Tenant for any deficiency;

i) **Right of termination by the Landlord -** The lease may be terminated for any valid operational reason;

j) **Right of termination by the Tenant -** On the Tenant's becoming entitled to re-enter the premises under any of the provisions of this lease, the Tenant, in addition to all other rights, shall have the right to terminate this lease forthwith by leaving upon the premises notice in writing of its intention, and thereupon rent and any other payments for which the Landlord is liable under this lease shall be computed,

apportioned and paid in full to the date of such termination, and the Landlord shall immediately deliver up possession of the Premises to the Tenant, and the Tenant may re-enter and take possession of the premises;

k) **Right of Renewal** - The Tenant shall have the right, if not otherwise in default, of renewing the lease. Terms and conditions to be negotiated at signing. The Tenant shall be required to give written notice of his intention to renew the lease on or before the 1st day of May prior to the commencement of the renewal term.

At the end of the term of this agreement and where a new agreement has not been entered into the Tenant may continue to occupy the facility on a month to month basis under the same terms as were previously agreed to until such time the terms are renegotiated, unless the Landlord gives notice to vacate in writing. Such notice shall be a minimum of sixty (60) days;

l) **Notice -** All communications in writing between the parties, or between them and the Engineer shall be deemed to have been received by the addressee if delivered to the individual or to a member of the firm or to an officer of the Owner for whom they are intended or if sent by hand, Canada Post, courier, facsimile or by another electronic communication where, during or after the transmission of the communication, no indication or notice of a failure or suspension of transmission has been communicated to the sender. For deliveries by courier or by hand, delivery shall be deemed to have been received on the date of delivery; by Canada Post, 5 days after the date on which it was mailed. A communication sent by facsimile or by electronic communication with no indication of failure or suspension of delivery, shall be deemed to have been received at the opening of business on the next day, unless the next day is not a working day for the recipient, in which case it shall be deemed to have been received on the next working day of the recipient at the opening of business;

The Landlord:

City of Temiskaming Shores
P.O. Box 2050 / 325 Farr Drive
Haileybury, Ontario
P0J 1K0

Attn.: Director of Recreation

7. Headings

The headings in this lease have been inserted as a matter of convenience and for reference only and in no way define, limit or enlarge the scope or meaning of this lease or any provisions hereof;

8. Effect of Lease

This lease and everything herein contained, shall extend to and bind and may be taken advantage of by the heirs, executors, administrators, successors and assigns, as the case may be, of each (and every) of the parties hereto, and where there is more than one Landlord or there is a female party or a corporation, the provisions hereof shall be read with all grammatical changes thereby rendered necessary and all covenants shall be deemed joint and several.

In witness whereof the Party of the First Part has hereunto affixed its corporate seal attested by the hands of its duly authorized officers, and the Party of the Second Part has hereunto set its hand and seal by execution under seal by each and every individual comprising the Party of the Second Part.

Signed and Sealed in the presence of

Temiskaming Shores Minor Hockey Association

_____
Signing Authority
Name: _____
Title: _____

_____
Witness
Print Name: _____

Municipal Seal

Corporation of the City of Temiskaming Shores

_____
Director of Recreation – Mathew Bahm

_____
Witness
Print Name: _____

Schedule “F” to

By-law No. 2024-082

Lease Agreement between

The Corporation of the City of Temiskaming Shores

and

Temiskaming Shores Skating Club

for the use of Room #10 in the Don Shepherdson Memorial Arena

The Corporation of the City of Temiskaming Shores

- and -

Temiskaming Shores Skating Club

LEASE

Mathew Bahm
Director of Recreation
The Corporation of the City of Temiskaming Shores
P.O. Box 2050
Haileybury, Ontario
P0J 1K0

THIS LEASE made this ___ day of _____, 2024.

between:

The City of Temiskaming Shores
hereinafter called the “Landlord”
-and-

Temiskaming Shores Skating Club
hereinafter called the “Tenant”

Whereas the Applicant is desirous of renting Room #10 owned by the City of Temiskaming Shores at the Don Shepherdson Memorial Arena from July 1st 2021 to June 30th, 2024.

And whereas it is necessary and desirous to establish certain guidelines and rules for the purpose of the rental of the aforesaid premises;

And whereas it is understood that the Temiskaming Shores Skating Club President hereby undertake and agree to be responsible for compliance with all requirements under the Agreement;

And whereas the parties hereto have agreed to enter into this Lease.

1. **Leased Premises**

The Landlord hereby demises and leases to the Tenant Room #10 owned by the City of Temiskaming Shores at the Don Shepherdson Memorial Arena as described hereinafter called the "premises".

The Landlord agrees to rent to the Tenant premises owned by the Landlord in accordance to the following:

a) Use of **Room #10** located in the **Don Shepherdson Memorial Arena**, exclusively for the duration of the lease:

2. **Term**

To hold the premises for a term commencing on July 1, 2024, to June 30, 2027.

3. Rent

The Tenant shall pay the Landlord **One Thousand Two Hundred and Sixty Dollars ($1,260.00)** plus applicable taxes per year. Rent shall be payable in advance of the first day of October, each year of the agreement. To be specific, the total amount payable for the full term of the agreement is Three Thousand Seven Hundred Eighty Dollars ($3,780.00) plus applicable taxes

4. Tenants Covenants

a) Rent - to pay rent;

b) Insurance - To provide General Liability Insurance for coverage of all areas under this lease in the joint names of the Tenant and the City of Temiskaming Shores with the limits of not less than ($2,000,000) **two million dollars (Canadian),** inclusive per occurrence for bodily injury, death or damage for property including loss of use thereof, with property deductible of five hundred dollars ($500). Proof of insurance must be supplied to the Landlord prior to occupying the facilities and thereafter to provide proof of insurance on each anniversary of the date of occupation; and, to provide proof of insurance forthwith upon request by the City at any time.

c) Cost of repair where Tenant at fault - that if the building including the premises, boilers, engines, pipes and other apparatus (or any of them) used for the purpose of heating or air conditioning the building, or if the water pipes, drainage pipes, electric lighting or other equipment of the building or the roof or outside walls of the building get out of repair or become damaged or destroyed through the negligence, carelessness or misuse of the Tenant, his servants, agents, employees or anyone permitted by him to be in the building (or through him or them in any way stopping up or injuring the heating apparatus, water pipes, drainage pipes, or other equipment or part of the building) the expense of any necessary repairs, replacements or alterations shall be paid by the Tenant to the Landlord forthwith on demand;

d) Assigning or subletting - not to assign, sublet or part with possession of any part of the premises without leave of the Landlord, which leave shall not be unreasonably withheld, and which leave shall not be required in the event of a sublease to add any personnel to the group comprising the Tenant or to a management corporation which may be incorporated by the Tenant;

e) Entry by Landlord - to permit the Landlord or its agents to enter upon the premises at any time and from time to time for the purpose of inspecting and making repairs, alterations or improvements to the premises or to the building, and the Tenant shall not be entitled to compensation for any inconvenience, nuisance, or discomfort occasioned thereby; provided that the Landlord shall give reasonable advance notice to avoid inconvenience to the Tenant, given the private and confidential nature of the profession of the Tenant;

f) Indemnity - to indemnify and save harmless the Landlord against and from any and all claims by or on behalf of any person or persons, firm or firms, or corporation or corporations arising from the conduct or any work, by or through any act of negligence of the Tenant or any assignee, subtenant, agent, contractor, servants, employee or licensee of the Tenant;

g) Alterations - not to make or erect in or to the premises any installation, alteration, addition, or partition without submitting plans and specifications to the Landlord and obtaining the Landlord’s prior written consent (in each instance); such work shall if

the Tenant so elects, be performed by employees of, volunteers of, or contractors designated by the Tenant; in the absence of such election, such work may be performed with the Tenant's consent in writing (given prior to letting of contract) by contractors engaged by the Landlord but in each case only under written contract approved in writing by the Tenant and subject to all conditions which the Tenant may impose; the Landlord shall submit to the Tenant or the Landlord's contractors (as the case may be), when due the costs of all such work and of all materials, labour and services involved therein and of all decoration and all changes in the building, its equipment or services, necessitated thereby; provided, that it is at this time understood by the Tenant that certain equipment is to be installed and to be placed at convenient places as designated by the Landlord;

h) Facility Fees - to pay the applicable rate for all other municipal services as outlined in the current Municipal Fees By-Law;

i) Use of Building - the Tenant shall not allow the building and/or property to be used for any purpose other than to conduct normal activities of their organization;

j) Equipment - to cover any and all costs associated with providing equipment for use by the tenant including but not limited to laundry, office furniture, and/or skate sharpener;

k) By-laws - to follow all applicable by-laws and policies of the City of Temiskaming Shores;

l) Cleaning - to keep the premises in a clean, tidy manner, such that the leased spaces are in compliance with applicable building and fire regulations and such that the premises do not attract vermin and/or provide unreasonable opportunities for the transmission of communicable diseases.

5. Landlord’s Covenants

The Landlord covenants with the Tenant;

a) Quiet enjoyment - for the quiet enjoyment;

b) Taxes - to pay all taxes and rates, municipal, parliamentary or otherwise, levied against the premises or the Tenant on account thereof;

c) Electricity and water - to pay for the electricity and water supplied to the premises;

d) Structural soundness - to keep the premises, common areas and parking lot structurally sound and to look after any structural defects which may arise;

e) Keys - to provide one (1) key to access the facility and two (2) keys to access the leased space.

6. Provisos

Provided always and it is hereby agreed as follows:

a) **Fixtures** - The Landlord may remove his fixtures, but all installations, alterations, additions, partitions and fixtures except trade or Landlord's fixtures in or upon the premises, whether placed there by the Landlord or by the Tenant, shall be the Tenant's property without compensation therefore to the Landlord and shall not be removed from the premises at any time (either during or after the term);

b) **Fire** - In case of damage to the premises by fire, lightning or tempest, rent shall cease until the premises are rebuilt; and the Tenant, instead of re-building or making the premises fit for the purpose of the Landlord, may at its option terminate this lease on giving to the Landlord within thirty days after such fire, lightning or tempest, notice in writing of its intention (so to do) and thereupon rent and any other payments for which the Landlord is liable under this lease shall be apportioned and paid to the date of such fire, lightning or tempest, and the Landlord shall immediately deliver up possession of the premises to the Tenant;

c) **Damage to property** - The Tenant shall not be liable nor responsible in any way for any loss of or damage or injury to any property belonging to the Landlord or to the employees of the Landlord or to any other person while in the building or in the yard of the building unless such loss, damage or injury shall be caused by the negligence of the Tenant or its employees, servants or agents for any damage to any such property caused by steam, water, rain or snow which may leak into, issue or flow from any part of the building or from the water, steam or drainage of the building or from any other place or quarter nor for any damage caused by or attributable to the condition or arrangement of any electric or other wiring omitted by any other Landlord;

d) **Impossibility of performance** - It is understood and agreed that whenever and to the extent that the Tenant shall be unable to fulfill, or shall be delayed or restricted in fulfilling any obligation hereunder for the supply or provision of any service or utility or the doing of any work or the making of any repairs because it is unable to obtain the material, goods, equipment, service, utility or labour required to enable it to fulfill such obligations or by reason of any statute, law or order-in-council or any regulation or order passed or made pursuant thereto or by reason of the order or direction of any administrator, controller or board, or any government department or officer or other authority, or by reason of not being able to obtain any permission or authority required thereby, or by reason of any other cause beyond its control whether of the foregoing character or not, the Tenant shall be relieved from the fulfillment of such obligation and the Landlord shall not be entitled to compensation for any inconvenience, nuisance or discomfort thereby occasioned;

e) **Default of Landlord** - If the rent reserved or any part thereof shall not be paid on the day appointed for payment, whether lawfully demanded or not, or in case of breach or non-observance or non-performance of any of the covenants or

agreements or rules or regulations herein contained or referred to on the part of the Landlord to be observed and performed, or in case the premises shall be vacated or remain unoccupied or in case the term shall be taken in execution or attachment for any cause whatsoever, (and in every such case) the Tenant shall be entitled thereafter to enter (into and) upon the premises (or any part thereof in the name of the whole) and the same to (have again), repossess and enjoy as of its former estate, anything herein contained to the contrary notwithstanding;

f) **Bankruptcy of Landlord** - In case without the written consent of the Tenant the premises shall remain vacant or not used for the period of fifteen days or be used by any other person than the Landlord or for any other purpose than that for which they were let or in case the term or any of the goods and chattels of the Landlord shall at any time be seized in execution or attachment by any creditor of the Landlord or if the Landlord shall make any assignment for the benefit of creditors or any bulk sale of any act (now or hereafter in force) for bankrupt or insolvent debtors (or if the Landlord is a company any order shall be made for the winding up of the Landlord), then in any such case this lease shall at the option of the Tenant cease and terminate and the term shall immediately become forfeited and void and the current month's rent and the next ensuing three month's rent shall immediately become due and payable and the Tenant may re- enter and take possession of the premises as though the Landlord or other occupant (or occupants) of the premises was (or were) holding over after the expiration of the term without any right whatever;

g) **Distress** - The Landlord waives and renounces the benefit of any present or future statute taking away or limiting the Tenant's right of distress, and covenants and agrees that notwithstanding any such statute none of the goods and chattels of the Landlord on the premises at any time during the term shall be exempt from levy by distress for rent in arrears;

h) **Right of re-entry** - On the Tenant's becoming entitled to re-enter the premises under any of the provisions of this lease, the Tenant in addition to all other rights may do so as the agent of the Landlord, using force if necessary, without being liable for any prosecution therefore, and may re-let the premises as agent of the Landlord, and receive the rent therefore, and as agent of the Landlord may take possession of any furniture or other property on the premises and sell the same at a public or private sale without notice and apply the proceeds of such sale and any rent derived from re-letting the premises upon account of rent under this lease, and the Landlord shall be liable to the Tenant for any deficiency;

i) **Right of termination by the Landlord -** The lease may be terminated for any valid operational reason;

j) **Right of termination by the Tenant -** On the Tenant's becoming entitled to re-enter the premises under any of the provisions of this lease, the Tenant, in addition to all other rights, shall have the right to terminate this lease forthwith by leaving upon the premises notice in writing of its intention, and thereupon rent and any other payments for which the Landlord is liable under this lease shall be computed,

apportioned and paid in full to the date of such termination, and the Landlord shall immediately deliver up possession of the Premises to the Tenant, and the Tenant may re-enter and take possession of the premises;

k) **Right of Renewal** - The Tenant shall have the right, if not otherwise in default, of renewing the lease. Terms and conditions to be negotiated at signing. The Tenant shall be required to give written notice of his intention to renew the lease on or before the 1st day of May prior to the commencement of the renewal term;

At the end of the term of this agreement and where a new agreement has not been entered into the Tenant may continue to occupy the facility on a month to month basis under the same terms as were previously agreed to until such time the terms are renegotiated, unless the Landlord gives notice to vacate in writing. Such notice shall be a minimum of sixty (60) days;

l) **Notice -** All communications in writing between the parties, or between them and the Engineer shall be deemed to have been received by the addressee if delivered to the individual or to a member of the firm or to an officer of the Owner for whom they are intended or if sent by hand, Canada Post, courier, facsimile or by another electronic communication where, during or after the transmission of the communication, no indication or notice of a failure or suspension of transmission has been communicated to the sender. For deliveries by courier or by hand, delivery shall be deemed to have been received on the date of delivery; by Canada Post, 5 days after the date on which it was mailed. A communication sent by facsimile or by electronic communication with no indication of failure or suspension of delivery, shall be deemed to have been received at the opening of business on the next day, unless the next day is not a working day for the recipient, in which case it shall be deemed to have been received on the next working day of the recipient at the opening of business.

The Landlord:

City of Temiskaming Shores
P.O. Box 2050 / 325 Farr Drive
Haileybury, Ontario
P0J 1K0

Attn.: Director of Recreation

7. Headings

The headings in this lease have been inserted as a matter of convenience and for reference only and in no way define, limit or enlarge the scope or meaning of this lease or any provisions hereof.

8. Effect of Lease

This lease and everything herein contained, shall extend to and bind and may be taken advantage of by the heirs, executors, administrators, successors and assigns, as the case may be, of each (and every) of the parties hereto, and where there is more than one Landlord or there is a female party or a corporation, the provisions hereof shall be read with all grammatical changes thereby rendered necessary and all covenants shall be deemed joint and several.

In witness whereof the Party of the First Part has hereunto affixed its corporate seal attested by the hands of its duly authorized officers, and the Party of the Second Part has hereunto set its hand and seal by execution under seal by each and every individual comprising the Party of the Second Part.

Signed and Sealed in the presence of

Temiskaming Shores Skating Club

_____
Signing Authority
Name: _____
Title: President

_____
Witness
Print Name: _____

Municipal Seal

Corporation of the City of Temiskaming Shores

_____
Director of Recreation – Mathew Bahm

_____
Witness
Print Name: _____

Schedule “G” to

By-law No. 2024-082

Lease Agreement between

The Corporation of the City of Temiskaming Shores

and

Temiskaming Shores Skating Club

for the use of Room #16 in the Shelley Herbert-Shea Memorial Arena

The Corporation of the City of Temiskaming Shores

- and -

Temiskaming Shores Skating Club

LEASE

Mathew Bahm
Director of Recreation
The Corporation of the City of Temiskaming Shores
P.O. Box 2050
Haileybury, Ontario
P0J 1K0

THIS LEASE made this ___ day of _____,2024.

between:

The City of Temiskaming Shores
hereinafter called the “Landlord”
-and-

Temiskaming Shores Skating Club
hereinafter called the “Tenant”

Whereas the Applicant is desirous of renting Room #16 owned by the City of Temiskaming Shores at the Shelley Herbert-Shea Memorial Arena from July 1st 2021 to June 30th, 2024.

And whereas it is necessary and desirous to establish certain guidelines and rules for the purpose of the rental of the aforesaid premises;

And whereas it is understood that the Temiskaming Shores Skating Club President hereby undertake and agree to be responsible for compliance with all requirements under the Agreement;

And whereas the parties hereto have agreed to enter into this Lease.

1. **Leased Premises**

The Landlord hereby demises and leases to the Tenant Room #16 owned by the City of Temiskaming Shores at the Shelley Herbert-Shea Memorial Arena as described hereinafter called the "premises".

The Landlord agrees to rent to the Tenant premises owned by the Landlord in accordance to the following:

a) Use of **Room #16** located in the **Shelley Herbert-Shea Memorial Arena**, exclusively for the duration of the lease:

2. **Term**

To hold the premises for a term commencing on July 1, 2021, to June 30, 2024.

3. Rent

The Tenant shall pay the Landlord **One Thousand Two Hundred and Sixty Dollars ($1,260.00)** plus applicable taxes per year. Rent shall be payable in advance of the first day of October, each year of the agreement. To be specific, the total amount payable for the full term of the agreement is Three Thousand Seven Hundred Eighty Dollars ($3,780.00) plus applicable taxes

4. Tenants Covenants

a) Rent - to pay rent;

b) Insurance - To provide General Liability Insurance for coverage of all areas under this lease in the joint names of the Tenant and the City of Temiskaming Shores with the limits of not less than ($2,000,000) **two million dollars (Canadian),** inclusive per occurrence for bodily injury, death or damage for property including loss of use thereof, with property deductible of five hundred dollars ($500). Proof of insurance must be supplied to the Landlord prior to occupying the facilities and thereafter to provide proof of insurance on each anniversary of the date of occupation; and, to provide proof of insurance forthwith upon request by the City at any time.

c) Cost of repair where Tenant at fault - that if the building including the premises, boilers, engines, pipes and other apparatus (or any of them) used for the purpose of heating or air conditioning the building, or if the water pipes, drainage pipes, electric lighting or other equipment of the building or the roof or outside walls of the building get out of repair or become damaged or destroyed through the negligence, carelessness or misuse of the Tenant, his servants, agents, employees or anyone permitted by him to be in the building (or through him or them in any way stopping up or injuring the heating apparatus, water pipes, drainage pipes, or other equipment or part of the building) the expense of any necessary repairs, replacements or alterations shall be paid by the Tenant to the Landlord forthwith on demand;

d) Assigning or subletting - not to assign, sublet or part with possession of any part of the premises without leave of the Landlord, which leave shall not be unreasonably withheld, and which leave shall not be required in the event of a sublease to add any personnel to the group comprising the Tenant or to a management corporation which may be incorporated by the Tenant;

e) Entry by Landlord - to permit the Landlord or its agents to enter upon the premises at any time and from time to time for the purpose of inspecting and making repairs, alterations or improvements to the premises or to the building, and the Tenant shall not be entitled to compensation for any inconvenience, nuisance, or discomfort occasioned thereby; provided that the Landlord shall give reasonable advance notice to avoid inconvenience to the Tenant, given the private and confidential nature of the profession of the Tenant;

f) Indemnity - to indemnify and save harmless the Landlord against and from any and all claims by or on behalf of any person or persons, firm or firms, or corporation or corporations arising from the conduct or any work, by or through any act of negligence of the Tenant or any assignee, subtenant, agent, contractor, servants, employee or licensee of the Tenant;

g) Alterations - not to make or erect in or to the premises any installation, alteration, addition, or partition without submitting plans and specifications to the Landlord and obtaining the Landlord’s prior written consent (in each instance); such work shall if

the Tenant so elects, be performed by employees of, volunteers of, or contractors designated by the Tenant; in the absence of such election, such work may be performed with the Tenant's consent in writing (given prior to letting of contract) by contractors engaged by the Landlord but in each case only under written contract approved in writing by the Tenant and subject to all conditions which the Tenant may impose; the Landlord shall submit to the Tenant or the Landlord's contractors (as the case may be), when due the costs of all such work and of all materials, labour and services involved therein and of all decoration and all changes in the building, its equipment or services, necessitated thereby; provided, that it is at this time understood by the Tenant that certain equipment is to be installed and to be placed at convenient places as designated by the Landlord;

h) Facility Fees - to pay the applicable rate for all other municipal services as outlined in the current Municipal Fees By-Law;

i) Use of Building - the Tenant shall not allow the building and/or property to be used for any purpose other than to conduct normal activities of their organization;

j) Equipment - to cover any and all costs associated with providing equipment for use by the tenant including but not limited to laundry, office furniture, and/or skate sharpener;

k) By-laws - to follow all applicable by-laws and policies of the City of Temiskaming Shores;

l) Cleaning - to keep the premises in a clean, tidy manner, such that the leased spaces are in compliance with applicable building and fire regulations and such that the premises do not attract vermin and/or provide unreasonable opportunities for the transmission of communicable diseases.

5. Landlord’s Covenants

The Landlord covenants with the Tenant;

a) Quiet enjoyment - for the quiet enjoyment;

b) Taxes - to pay all taxes and rates, municipal, parliamentary or otherwise, levied against the premises or the Tenant on account thereof;

c) Electricity and water - to pay for the electricity and water supplied to the premises;

d) Structural soundness - to keep the premises, common areas and parking lot structurally sound and to look after any structural defects which may arise;

e) Keys - to provide one (1) key to access the facility and two (2) keys to access the leased space.

6. Provisos

Provided always and it is hereby agreed as follows:

a) **Fixtures** - The Landlord may remove his fixtures, but all installations, alterations, additions, partitions and fixtures except trade or Landlord's fixtures in or upon the premises, whether placed there by the Landlord or by the Tenant, shall be the Tenant's property without compensation therefore to the Landlord and shall not be removed from the premises at any time (either during or after the term);

b) **Fire** - In case of damage to the premises by fire, lightning or tempest, rent shall cease until the premises are rebuilt; and the Tenant, instead of re-building or making the premises fit for the purpose of the Landlord, may at its option terminate this lease on giving to the Landlord within thirty days after such fire, lightning or tempest, notice in writing of its intention (so to do) and thereupon rent and any other payments for which the Landlord is liable under this lease shall be apportioned and paid to the date of such fire, lightning or tempest, and the Landlord shall immediately deliver up possession of the premises to the Tenant;

c) **Damage to property** - The Tenant shall not be liable nor responsible in any way for any loss of or damage or injury to any property belonging to the Landlord or to the employees of the Landlord or to any other person while in the building or in the yard of the building unless such loss, damage or injury shall be caused by the negligence of the Tenant or its employees, servants or agents for any damage to any such property caused by steam, water, rain or snow which may leak into, issue or flow from any part of the building or from the water, steam or drainage of the building or from any other place or quarter nor for any damage caused by or attributable to the condition or arrangement of any electric or other wiring omitted by any other Landlord;

d) **Impossibility of performance** - It is understood and agreed that whenever and to the extent that the Tenant shall be unable to fulfill, or shall be delayed or restricted in fulfilling any obligation hereunder for the supply or provision of any service or utility or the doing of any work or the making of any repairs because it is unable to obtain the material, goods, equipment, service, utility or labour required to enable it to fulfill such obligations or by reason of any statute, law or order-in-council or any regulation or order passed or made pursuant thereto or by reason of the order or direction of any administrator, controller or board, or any government department or officer or other authority, or by reason of not being able to obtain any permission or authority required thereby, or by reason of any other cause beyond its control whether of the foregoing character or not, the Tenant shall be relieved from the fulfillment of such obligation and the Landlord shall not be entitled to compensation for any inconvenience, nuisance or discomfort thereby occasioned;

e) **Default of Landlord** - If the rent reserved or any part thereof shall not be paid on the day appointed for payment, whether lawfully demanded or not, or in case of breach or non-observance or non-performance of any of the covenants or

agreements or rules or regulations herein contained or referred to on the part of the Landlord to be observed and performed, or in case the premises shall be vacated or remain unoccupied or in case the term shall be taken in execution or attachment for any cause whatsoever, (and in every such case) the Tenant shall be entitled thereafter to enter (into and) upon the premises (or any part thereof in the name of the whole) and the same to (have again), repossess and enjoy as of its former estate, anything herein contained to the contrary notwithstanding;

f) **Bankruptcy of Landlord** - In case without the written consent of the Tenant the premises shall remain vacant or not used for the period of fifteen days or be used by any other person than the Landlord or for any other purpose than that for which they were let or in case the term or any of the goods and chattels of the Landlord shall at any time be seized in execution or attachment by any creditor of the Landlord or if the Landlord shall make any assignment for the benefit of creditors or any bulk sale of any act (now or hereafter in force) for bankrupt or insolvent debtors (or if the Landlord is a company any order shall be made for the winding up of the Landlord), then in any such case this lease shall at the option of the Tenant cease and terminate and the term shall immediately become forfeited and void and the current month's rent and the next ensuing three month's rent shall immediately become due and payable and the Tenant may re- enter and take possession of the premises as though the Landlord or other occupant (or occupants) of the premises was (or were) holding over after the expiration of the term without any right whatever;

g) **Distress** - The Landlord waives and renounces the benefit of any present or future statute taking away or limiting the Tenant's right of distress, and covenants and agrees that notwithstanding any such statute none of the goods and chattels of the Landlord on the premises at any time during the term shall be exempt from levy by distress for rent in arrears;

h) **Right of re-entry** - On the Tenant's becoming entitled to re-enter the premises under any of the provisions of this lease, the Tenant in addition to all other rights may do so as the agent of the Landlord, using force if necessary, without being liable for any prosecution therefore, and may re-let the premises as agent of the Landlord, and receive the rent therefore, and as agent of the Landlord may take possession of any furniture or other property on the premises and sell the same at a public or private sale without notice and apply the proceeds of such sale and any rent derived from re-letting the premises upon account of rent under this lease, and the Landlord shall be liable to the Tenant for any deficiency;

i) **Right of termination by the Landlord -** The lease may be terminated for any valid operational reason;

j) **Right of termination by the Tenant -** On the Tenant's becoming entitled to re-enter the premises under any of the provisions of this lease, the Tenant, in addition to all other rights, shall have the right to terminate this lease forthwith by leaving upon the premises notice in writing of its intention, and thereupon rent and any other payments for which the Landlord is liable under this lease shall be computed,

apportioned and paid in full to the date of such termination, and the Landlord shall immediately deliver up possession of the Premises to the Tenant, and the Tenant may re-enter and take possession of the premises;

k) **Right of Renewal** - The Tenant shall have the right, if not otherwise in default, of renewing the lease. Terms and conditions to be negotiated at signing. The Tenant shall be required to give written notice of his intention to renew the lease on or before the 1st day of June prior to the commencement of the renewal term;

At the end of the term of this agreement and where a new agreement has not been entered into the Tenant may continue to occupy the facility on a month to month basis under the same terms as were previously agreed to until such time the terms are renegotiated, unless the Landlord gives notice to vacate in writing. Such notice shall be a minimum of sixty (60) days;

l) **Notice -** All communications in writing between the parties, or between them and the Engineer shall be deemed to have been received by the addressee if delivered to the individual or to a member of the firm or to an officer of the Owner for whom they are intended or if sent by hand, Canada Post, courier, facsimile or by another electronic communication where, during or after the transmission of the communication, no indication or notice of a failure or suspension of transmission has been communicated to the sender. For deliveries by courier or by hand, delivery shall be deemed to have been received on the date of delivery; by Canada Post, 5 days after the date on which it was mailed. A communication sent by facsimile or by electronic communication with no indication of failure or suspension of delivery, shall be deemed to have been received at the opening of business on the next day, unless the next day is not a working day for the recipient, in which case it shall be deemed to have been received on the next working day of the recipient at the opening of business.

The Landlord:

City of Temiskaming Shores
P.O. Box 2050 / 325 Farr Drive
Haileybury, Ontario
P0J 1K0

Attn.: Director of Recreation

7. Headings

The headings in this lease have been inserted as a matter of convenience and for reference only and in no way define, limit or enlarge the scope or meaning of this lease or any provisions hereof.

8. Effect of Lease

This lease and everything herein contained, shall extend to and bind and may be taken advantage of by the heirs, executors, administrators, successors and assigns, as the case may be, of each (and every) of the parties hereto, and where there is more than one Landlord or there is a female party or a corporation, the provisions hereof shall be read with all grammatical changes thereby rendered necessary and all covenants shall be deemed joint and several.

In witness whereof the Party of the First Part has hereunto affixed its corporate seal attested by the hands of its duly authorized officers, and the Party of the Second Part has hereunto set its hand and seal by execution under seal by each and every individual comprising the Party of the Second Part.

Signed and Sealed in the presence of)

Temiskaming Shores Skating Club

_____
Signing Authority
Name: _____
Title: President

_____
Witness
Print Name: _____

Municipal Seal)

Corporation of the City of Temiskaming Shores

_____
Director of Recreation – Mathew Bahm

_____
Witness
Print Name

The Corporation of the City of Temiskaming Shores

By-Law No. 2024-083

Being a by-law to authorize the execution of an agreement with other municipalities for the cost sharing sum for the joint operation and maintenance of a fire department communications system

Whereas Section 8 of The Municipal Act, 2001, S.O. 2001, c.25, as amended states that the powers of a municipality shall be interpreted broadly to enable it to govern its affairs as it considers appropriate and to enhance the municipality's ability to respond to municipal issues; and

Whereas Section 9 of The Municipal Act, 2001, S.O. 2001, c.25 as amended, states that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act; and

Whereas Section 10(1) of The Municipal Act, 2001, S.O. 2001, c.25 as amended, states that a single-tier municipality may provide any service or thing that the municipality considers necessary or desirable for the public; and

Whereas Section 20(1) of The Municipal Act, S.O. 2001, c. 25 as amended, states that a municipality may enter into an agreement with one or more municipalities or local bodies, as defined in section 19, or a combination of both to jointly provide, for their joint benefit, any matter which all of them have the power to provide within their own boundaries; and

Whereas Council considered Administrative Report No. PPP-007-2024 at the July 9, 2024 Committee of the Whole meeting, and directed staff to prepare the necessary by-law to adopt the Fire Department Communication System Agreement, for consideration at the July 9, 2024, Regular Council Meeting; and

Whereas Council for the City of Temiskaming Shores deems it necessary and desirable to enter into an agreement with other municipalities in respect of the purchase and joint maintenance of a Communications System.

Now therefore the Council of The Corporation of the City of Temiskaming Shores hereby enacts the following as a by-law:

1. That the Mayor and Clerk be hereby authorized to execute an agreement with other municipalities for the purchase and joint maintenance of a Communications System agreement, a copy of which is attached hereto as Schedule "A" and forming part of this by-law.

2. That the Clerk of the City of Temiskaming Shores is hereby authorized to make minor modifications or corrections of a grammatical or typographical nature to the By-law and schedule, after the passage of this By-law, where such modifications or corrections do not alter the intent of the by-law or its associated schedule.

3. That By-law No. 2013-187, By-law No. 2016-041, and all other by-laws or resolutions, or parts thereof, contrary hereto or inconsistent herewith, be and the same are hereby repealed.

4. That this By-law shall take force and effect upon the date of signing of the agreement.

Read a first, second and third time and finally passed this 9th, day of July, 2024.

Mayor

Clerk

Schedule “A” to

By-law No. 2024-083

Being a by-law to authorize the execution of an agreement with other municipalities for the cost sharing sum for the joint operation and maintenance of a fire department communications system

'SCHEDULE A'
FIRE DEPARTMENT COMMUNICATIONS SYSTEM AGREEMENT

1.1 The parties to this agreement are a municipal corporation or Fire Department under the Northern Fire Protection Program.

1.2 The parties wish to provide on a per fire department basis, a cost sharing sum for the joint operation and/or maintenance of the communication system located at Dia Base Mountain, Cobalt (owned by Spectrum Communications), and Township of Armstrong Tower (owned by the Township of Armstrong), including the phone lines as outlined in Subsection 2.1 being used by either of the parties for its radio and paging communications of the respective fire departments.

1.3 The parties wish to abolish the "South Temiskaming Paging Committee" and establish a new committee to be known as the "Fire Department Communications Steering Committee". The committee shall be comprised of one representative from each station of the participating Fire Departments, appointed by the Fire Chief, or his/her Designate from each Fire Station, to coordinate and oversee all matters as outlined in this agreement.

1.4 The parties wish to appoint the Township of Hudson to act as the Treasurer and administer this agreement. This shall include the payment of all invoices as approved by the Fire Department Communications Steering Committee, and the shared invoicing to all parties of this agreement for costs that have been authorized by the Steering Committee.

NOW THEREFORE, THE PARTIES DO HEREBY AGREE AS FOLLOWS:
2.1 Each of the parties hereto, who remain in good standing with respect to the annual communication fees shall be entitled to have access to and use the communications systems as outlined in this agreement for as long as this agreement remains in effect, which shall include the following:

- Industry Canada Radio License Fees;
- Northern Tel – Infrastructure and Hosting Services Agreement;
- Phone Line (paging) – 705-679-5005;
- Phone Line (dispatch) – 144-0737;
- Tower Rental;
- Maintenance/Repairs Fees

2.2 Each of the parties hereto shall pay annually to the Township of Hudson the amounts invoiced as outlined in this agreement, and as approved by the Steering Committee. The amounts invoiced for the communication system shall be based on an equal cost sharing arrangement per fire department for each municipality as outlined below:

Municipality/Fire Department	Cost Sharing
Township of Armstrong	Communication System, Phone lines (2), FD Campaign
Township of Brethour	FD Campaign
Township of Casey	Communication System, Phone lines (2), FD Campaign
Township of Coleman	Communication System, Phone lines (2), FD Campaign
City of Temiskaming Shores	Communication System, Phone lines (2)
Township of Harley	Communication System, Phone lines (2), FD Campaign
Township of Hilliard	FD Campaign
Township of Hudson	Communication System, Phone lines (2), FD Campaign
Township of James	FD Campaign
Township of Kerns	Communication System, Phone lines (2), FD Campaign
Town of Cobalt	Communication System, Phone lines (2), FD Campaign
Town of Latchford	Communication System, Phone lines (2), FD Campaign
Municipality of Temagami	FD Campaign
Village of Thornloe	FD Campaign
Savard and Area Fire Department	FD Campaign

2.3 Each of the parties hereto agrees that each Fire Department shall have one vote on all matters that may come before the Steering Committee. A majority vote, being the vote of more than half of the members present at any given meeting, shall determine the outcome of the question.

2.4 Each of the parties hereto agrees that there shall be a Chairperson and a Secretary of the Steering Committee who shall be the Directors of the Steering Committee. The chairperson and the Secretary of the Steering Committee shall be elected at the first regular meeting every second year by a majority vote of the Steering Committee members present at the meeting, and shall hold office for two years or until his/her successor is elected.

2.5 The Chairperson, and in his/her absence the Secretary, shall be the contact persons for all matters related to this agreement including corresponding to suppliers and to the Township of Hudson on financial matters of the Steering Committee; shall preside at all meeting of the Steering Committee and shall call special meetings when he/she deems it necessary. The secretary shall keep a record of the proceedings of all meeting of the Steering Committee, and the names of the members who attended each meeting. The secretary shall distribute the minutes of each meeting to all members of the Steering Committee and the Steering Committee shall approve the minutes at the next committee meeting. The Committee may also appoint alternate/s to act on behalf o the Committee for matters related to the maintenance and./or repair of the communications system.

2.6 This agreement shall terminate on the 31st day of December 2030 unless renewed by the parties in writing.

2.7 Any party hereto may terminate or opt out of the agreement by providing a thirty (30) day written notice.

2.8 Any part hereto who opts out of the agreement shall forfeit any rights or claim for compensation towards any join ownership of a communication equipment unless otherwise agreed to by the parties of the agreement.

2.9 This agreement shall be binding upon the parties hereto and their successors and assigns.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **The Corporation of the Township of Armstrong**

Printed name of Head of Council	Signature of Head of Council
Printed name of Clerk	Signature of Clerk

Dated this _____day of _____in the year 2024.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **The Corporation of the Township of Brethour**

Printed name of Head of Council	Signature of Head of Council
Printed name of Clerk	Signature of Clerk

Dated this _____day of _____in the year 2024.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **The Corporation of the Township of Casey**

Printed name of Head of Council	Signature of Head of Council
Printed name of Clerk	Signature of Clerk

Dated this _____day of _____in the year 2024.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **The Corporation of the Township of Coleman**

Printed name of Head of Council	Signature of Head of Council
Printed name of Clerk	Signature of Clerk

Dated this _____day of _____in the year 2024.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **The Corporation of the**
City of Temiskaming Shores

Printed name of Head of Council	Signature of Head of Council
Printed name of Clerk	Signature of Clerk

Dated this _____day of _____in the year 2024.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **The Corporation of the Township of Harley**

Printed name of Head of Council	Signature of Head of Council
Printed name of Clerk	Signature of Clerk

Dated this _____day of _____in the year 2024.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **The Corporation of the Township of Hilliard**

Printed name of Head of Council	Signature of Head of Council
Printed name of Clerk	Signature of Clerk

Dated this _____day of _____in the year 2024.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **The Corporation of the Township of Hudson**

Printed name of Head of Council	Signature of Head of Council
Printed name of Clerk	Signature of Clerk

Dated this _____day of _____in the year 2024.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **The Corporation of the Township of James**

Printed name of Head of Council	Signature of Head of Council
Printed name of Clerk	Signature of Clerk

Dated this _____day of _____in the year 2024.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **The Corporation of the Township of Kerns**

Printed name of Head of Council	Signature of Head of Council
Printed name of Clerk	Signature of Clerk

Dated this _____day of _____in the year 2024.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **The Corporation of the**
Town of Cobalt

_____ Printed name of Head of Council	_____ Signature of Head of Council
_____ Printed name of Clerk	_____ Signature of Clerk

Dated this _____day of _____in the year 2024.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **The Corporation of the**
Town of Latchford

Printed name of Head of Council	Signature of Head of Council
Printed name of Clerk	Signature of Clerk

Dated this _____day of _____in the year 2024.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **The Corporation of the Municipality of Temagami**

Printed name of Head of Council	Signature of Head of Council
Printed name of Clerk	Signature of Clerk

Dated this _____day of _____in the year 2024.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **The Corporation of the Village of Thornloe**

Printed name of Head of Council	Signature of Head of Council
Printed name of Clerk	Signature of Clerk

Dated this _____day of _____in the year 2024.

IN WITNESS WHEREOF the parties hereto have executed this Agreement.

On behalf of **Savard and Area**
Fire Department

Printed name of Fire Chief	Signature of Fire Chief
Printed name of Treasurer	Signature of Treasurer

Dated this _____day of _____in the year 2024.

The Corporation of the City of Temiskaming Shores

By-law No. 2024-084

Being a by-law to authorize the Sale of Land of vacant land on Albert Street, described as Part 1 and Part 2 on Plan 54R-6433 to Investissements Philippe Duguay Inc.

Whereas under Section 8 of the Municipal Act, 2001, S.O. 2001, c.25, amended, the powers of a municipality shall be interpreted broadly to enable it to govern its affairs as it considers appropriate and to enhance the municipality's ability to respond to municipal issues; and

Whereas under Section 9 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act; and

Whereas under Section 10 (1) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a single-tier municipality may provide any service or thing that the municipality considers necessary or desirable for the public; and

Whereas By-law No. 2015-160 establishes procedures for the disposal of real property, including the giving of notice to the public, governing the sale of land; and

Whereas Council considered Administrative Report No. CS-010-2024 at the April 2, 2024 Committee of the Whole meeting, and directed staff to continue with the disposition of municipal land, being the vacant lots described as PLAN M30NB LOTS 73 74 75 PCLS 6163 7724 14655SST, in accordance with the City's Disposition of Land By-law No. 2015-160; and to order a survey to legally describe the lands in order prepare an Offer of Purchase and Sale Agreement between the City of Temiskaming Shores as Vendor, and Yvon Champoux Inc. as Purchaser, in the amount of $33,000 plus taxes (if applicable), plus all associated costs (legal, registration, survey, administration, etc.), in accordance with By-law No. 2015-160, for consideration at a future Regular Council meeting; and

Whereas Council considered Memo No. 022-2024-CS at the July 9, 2024 Committee of the Whole meeting, and following receipt of the registered reference plan, directed staff to prepare the necessary by laws for the Purchase and Sale Agreement between the City of Temiskaming Shores as Vendor, and Investissements Philippe Duguay Inc. as Purchaser, for the vacant property on Albert Street, described as: Part 1 and Part 2 on Plan 54R-6433, and Part 3 and Part 4 on Plan 54R-6433, in the amount of $33,000 plus taxes (if applicable), plus all associated costs (legal, registration, survey, administration, etc.), in accordance with By-law No. 2015-160, for consideration at the July 9, 2024 Regular Council meeting.

Now therefore the Council of The Corporation of the City of Temiskaming Shores enacts the following as a by-law:

1. That Council hereby confirms the procedures set forth in By-law No. 2015-160 have been followed by the municipality to allow for the sale of lands herein after referred to in this By-law.

2. That Council authorizes the entering into an Agreement of Purchase and Sale between Investissements Philippe Duguay Inc. as Purchaser and The Corporation of the City of Temiskaming Shores as Vendor, in the form annexed hereto as Schedule "A" and forming part of this by-law.

3. That Council agrees to sell the subject land in the amount of $16,500.00, plus applicable taxes and other such considerations outlined in the said agreement, for the land described as: Part 1 and Part 2 on Plan 54R-6433.

4. The Mayor and Clerk are authorized to sign all necessary documents in connection to this by-law.

5. That the Clerk of the City of Temiskaming Shores is hereby authorized to make any minor modifications or corrections of an administrative, numerical, grammatical, semantically or descriptive nature or kind to the by-law and schedule as may be deemed necessary after the passage of this by-law, where such modifications or corrections do not alter the intent of the by-law.

Read a first, second and third time and finally passed this 9th day of July, 2024.

_____
Mayor

_____
Clerk

Offer to Purchase

Investissements Philippe Duguay Inc.
(as "Purchaser"), having inspected the property, hereby agree to and with

The Corporation of the City of Temiskaming Shores,
(as "Vendor") to purchase the property being:

Part 1 and Part 2 on Plan 54R-6433

(herein called the "Real Property") at the purchase price of sixteen-thousand, five-hundred dollars and zero cents ($16,500.00) payable to the Vendor, subject to adjustments, on the closing date hereinafter set forth.

The Purchaser acknowledges that the land forming part of this transaction is being purchased on an “as is where is” condition without any representations or warranties whatsoever.

The Purchaser acknowledges that Enbridge Gas Inc., has service lines running within the area which may or may not be affected by the Purchaser’s proposed site plan. The Purchaser is responsible for the required locates, and for any related costs.

This offer to Purchase shall be conditional upon the Purchaser entering into an agreement with the Vendor on or before closing, failing which this Offer to Purchaser shall be null and void. Only the Vendor may waive this condition at its option.

Legal Fees

The Parties agree that the Purchaser will pay the Vendor’s reasonable legal fees for the transaction.

Costs of Registration

The Purchaser shall pay all costs of registration and taxes for both parties documents.

Release of Information

Vendor authorizes the release of any information relating to the Real Property to the Purchaser and the Purchaser's solicitor by any governmental body or authority and appoints the Purchaser and the Purchaser's solicitor as its agent for the purpose. Without limiting the generality of the foregoing the Vendor consents to the disclosure to the Purchaser and the Purchaser's solicitor of any information relating to the Real Property or the use thereof pursuant to the *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990. C.F. 31 and the *Municipal Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, C. M. 56.

Deficiency Notices and Work Orders

The Vendor represents that as at the date of acceptance hereof the Vendor has not received from any municipal or other governmental authority any deficiency notice or work order affecting the Real Property pursuant to which any deficiencies are required to be remedied or any demolition, repairs or replacements are required to be carried out. If the Vendor receives any such deficiency notice or work order after the date of acceptance hereof, the Vendor shall forthwith produce same to the Purchaser for inspection. If by the date of closing the Vendor has not either (a) complied with such deficiency notice or work order, or (b) settled with the Purchaser any question of an abatement of the purchase price arising out of such deficiency notice or work order, the Purchaser may at his option either (a) accept the Real Property subject to such deficiency notice or work order or (b) terminate this Agreement. In the event of termination as aforesaid, all moneys paid hereunder shall be returned to the Purchaser without interest or deductions.

Adoption of LSUC – OBA Document Registration Agreement

Provided the solicitors for each of the Vendor and the Purchaser are able to complete transactions using electronic registration, the parties agree to complete this transaction using electronic registration, to adopt the LSUC-OBA Document Registration Agreement in use on the Closing Date, and to abide by, and instruct their solicitors to abide by, the closing procedures set forth therein for electronic registration.

Acceptance

This Offer shall be irrevocable by the Purchaser until **11:59 P.M. on the 15th day after the date of signing the offer**, after which time, if not accepted, this Offer shall be null and void.

Title

Title to the Real Property shall be good and free from all encumbrances, except as set out in this Agreement, and except local rates, and except as to any registered restrictions or covenants that run with the land, and subdivision agreements with the municipality, provided the same have been complied with, and except for minor easements for hydro, gas, telephone or like services. Purchaser shall accept the Real Property subject to municipal and other governmental requirements, including building and zoning by-laws, regulations and orders, provided same have been complied with.

Requisitions

Purchaser shall be allowed until closing to investigate the title at his own expense and to satisfy himself that there is no breach of municipal or other governmental requirements affecting the Real Property, that its present use may be lawfully continued and that the principal buildings may be insured against risk of fire. If within that time any valid objection to title or to any breach of municipal or other governmental requirements, or to the fact that the present use may not be lawfully continued, or that the principal buildings may not be insured against risk of fire, which the Vendor is unable or unwilling to remove, remedy

or satisfy, and which the Purchaser will not waive, this Agreement shall notwithstanding any intermediate acts or negotiations, be null and void and the deposit money returned to the Purchaser, without interest or deduction, and the Vendor shall not be liable for any costs or damages whatever. Save as to any valid objection so made within such time the Purchaser shall be conclusively deemed to have accepted the Vendor's title to the Real Property.

Surveys and Documents

The Purchaser shall not call for the production of any title deed, abstract, survey or other evidence of title except such as are in the possession or control of the Vendor. The Vendor agrees that he will deliver any existing survey to the Purchaser as soon as possible and prior to the last day allowed for examining title. In the event that a discharge of any mortgage or charge held by a Chartered Bank, Trust Company, Credit Union or Insurance Company which is not to be assumed by the Purchaser on completion, is not available in registrable form on completion, the Purchaser agrees to accept the Vendor's solicitor's personal undertaking to obtain, out of the closing funds, a discharge or cessation of charge in registrable form and to register same on title within a reasonable period of time after completion, provided that on or before completion the Vendor shall provide to the Purchaser a mortgage statement prepared by the mortgagee setting out the balance required to obtain the discharge, together with a direction executed by the Vendor directing payment to the mortgagee, of the amount required to obtain the discharge out of the balance due on completion.

Closing

This Agreement shall be completed on or before August 14, 2024 on which date vacant possession of the Real Property shall be given to the Purchaser unless otherwise provided for herein.

Inspection of Property

The Purchaser acknowledges having inspected the Real Property prior to submitting this Offer and understands that upon the Vendor accepting this offer there shall be a binding Agreement of Purchase and Sale between the Purchaser and the Vendor. The Purchaser shall be entitled to inspect the Real Property immediately prior to the date for completion.

Adjustments

Unearned fire insurance premiums, fuel, taxes, rentals and all local improvements and water rates and other charges for municipal improvements to be apportioned and allowed to the date of completion of sale (the day itself to be apportioned to the Purchaser). Provided Purchaser may elect not to accept assignment of fire insurance in which case no adjustment for insurance premiums.

Costs

The deed or transfer, save for Land Transfer Tax Affidavit, to be prepared at the expense

of the Vendor in a form acceptable to the Purchaser and if a mortgage or charge is to be given back, it shall be prepared at the expense of the Purchaser in a form acceptable to the Vendor.

Planning Act Compliance

This Agreement shall be effective only if the provisions of Section 50 of the *Planning Act*, R.S.O. 1990, C.P. 13 as amended, are complied with, and the Vendor agrees, at his expense, to comply with such provisions and to proceed diligently with the application for such compliance, if necessary.

The Transfer/Deed of Land to be given to the Purchaser shall contain a statement of the Vendor and the Vendor's solicitor pursuant to section 50(22) of the Planning Act, R.S.O. 1990, C.P. 13 as amended.

Spousal Consent

The Vendor represents and warrants that no consent to this transaction is required pursuant to s.21(1) of the *Family Law Act*, R.S.O. 1990, C.F. 3 unless the Vendor's spouse has executed this agreement to consent thereto, and that the Transfer/Deed shall contain a statement by the Vendor as required by section 21(3) of the *Family Law Act*, R.S.O. 1990, C.F. 13 or the spouse of the Vendor shall execute the Transfer/Deed to consent thereto.

Residency of Vendor

Vendor further agrees to produce evidence that he is not now and that on closing he will not be a non-resident of Canada within the meaning of s.116 of the *Income Tax Act* of Canada, or in the alternative, evidence that the provisions of s.116 regarding disposition of property by a non-resident person have been complied with at or before closing, failing which the Purchaser will be credited towards the purchase price with the amount, if any, which shall be necessary for the Purchaser to pay to the Minister of Revenue in order to satisfy the Purchaser's liability in respect of tax payable by the Vendor under S. 116 of the *Income Tax Act* of Canada by reason of the sale.

Facsimile

Either party may execute this document by signing a facsimile thereof. The parties agree that execution by any party of a facsimile shall be in all respects identical to execution of an original or photocopy. The parties agree to accept a facsimile of the signature of any party as evidence of the fact that the agreement has been executed by that party. In all respects a facsimile signature may be accepted as having the same effect as an original signature.

Counterpart

This agreement may but need not be executed in counterpart.

Time of Essence

This Offer, when accepted, shall constitute a binding contract of purchase and sale, and time in all respects shall be of the essence in this Agreement.

H.S.T.

If this transaction is subject to Harmonized Sales Tax (HST) pursuant to the Excise Tax Act (Canada) as amended (the “Act”) then such HST shall be in addition to and not included in the purchase price, and:

(a) HST shall be collected and remitted by the Vendor in accordance with the applicable legislation; or

(b) If applicable, the parties shall jointly execute an election pursuant to Act, such election to be filed by the Purchaser as required under the Act; or

(c) If the Purchaser is registered under the Act, the Purchaser shall provide the Vendor and its solicitor with proof of his/her HST registration number in a form reasonably satisfactory to the Vendor and its solicitor.

If this transaction is not subject to HST pursuant to the Act, the Vendor agrees to provide on or before closing to the Purchase or Purchaser’s solicitor a certificate in the form prescribed by the Act, if so prescribed, or otherwise in a form reasonably satisfactory to the Purchase and his/her solicitor certifying that the transaction is not subject to HST.

Representations and Warranties

It is agreed that there is no representation, warranty, collateral agreement or condition affecting this Agreement or the Real Property or supported hereby other than as expressed herein in writing.

Tender

Any tender of documents or money hereunder may be made upon the Vendor or Purchaser or upon the solicitor acting for the party on whom tender is desired, and it shall be sufficient that a cheque certified by a chartered bank or a trust company or the trust cheque of the law firm acting for the party desiring such tender be tendered instead of cash.

Gender

This Offer and the resulting Agreement to be read with all changes of gender or number required by the context.

Remainder of this page left blank intentionally

Signed, Sealed and Delivered this _____ day of _____, 2024.

in the presence of:

Purchaser: **Investissements Philippe Duguay Inc.**

[redacted]

_____
Phillipe Duguay

_____
Witness

The Vendor hereby accepts the above offer.

Dated at the _____ this _____ day of _____, 2024.

Vendor: **The Corporation of the City of Temiskaming Shores**

_____
Mayor – Jeff Laferriere

_____
Clerk – Logan Belanger

We have authority to bind the Corporation.

Vendor’s Address:
City of Temiskaming Shores
P.O. Box 2050 / 325 Farr Drive
Haileybury, Ontario
P0J 1K0

Attn.: Logan Belanger, Clerk

Purchaser's Solicitor:

DBC Law Professional Corporation
(o/a DBC Legal)
P.O. Box 2999, 7 Armstrong Street
New Liskeard, Ontario P0J 1P0

Phone Number: (705) 647-9411

Vendor's Solicitor:

Kemp Pirie Crombeen
P.O. Box 1540
22 Armstrong Street
New Liskeard, ON P0J 1P0

Phone Number: (705) 647-7353

The Corporation of the City of Temiskaming Shores

By-law No. 2024-085

Being a by-law to authorize the Sale of Land of vacant land on Albert Street, described as Part 3 and Part 4 on Plan 54R-6433 to Investissements Philippe Duguay Inc.

Whereas under Section 8 of the Municipal Act, 2001, S.O. 2001, c.25, amended, the powers of a municipality shall be interpreted broadly to enable it to govern its affairs as it considers appropriate and to enhance the municipality's ability to respond to municipal issues; and

Whereas under Section 9 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act; and

Whereas under Section 10 (1) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a single-tier municipality may provide any service or thing that the municipality considers necessary or desirable for the public; and

Whereas By-law No. 2015-160 establishes procedures for the disposal of real property, including the giving of notice to the public, governing the sale of land; and

Whereas Council considered Administrative Report No. CS-010-2024 at the April 2, 2024 Committee of the Whole meeting, and directed staff to continue with the disposition of municipal land, being the vacant lots described as PLAN M30NB LOTS 73 74 75 PCLS 6163 7724 14655SST, in accordance with the City's Disposition of Land By-law No. 2015-160; and to order a survey to legally describe the lands in order prepare an Offer of Purchase and Sale Agreement between the City of Temiskaming Shores as Vendor, and Yvon Champoux Inc. as Purchaser, in the amount of $33,000 plus taxes (if applicable), plus all associated costs (legal, registration, survey, administration, etc.), in accordance with By-law No. 2015-160, for consideration at a future Regular Council meeting; and

Whereas Council considered Memo No. 022-2024-CS at the July 9, 2024 Committee of the Whole meeting, and following receipt of the registered reference plan, directed staff to prepare the necessary by laws for the Purchase and Sale Agreement between the City of Temiskaming Shores as Vendor, and Investissements Philippe Duguay Inc. as Purchaser, for the vacant property on Albert Street, described as: Part 1 and Part 2 on Plan 54R-6433, and Part 3 and Part 4 on Plan 54R-6433, in the total amount of $33,000 plus taxes (if applicable), plus all associated costs (legal, registration, survey, administration, etc.), in accordance with By-law No. 2015-160, for consideration at the July 9, 2024 Regular Council meeting.

Now therefore the Council of The Corporation of the City of Temiskaming Shores enacts the following as a by-law:

1. That Council hereby confirms the procedures set forth in By-law No. 2015-160 have been followed by the municipality to allow for the sale of lands herein after referred to in this By-law.

2. That Council authorizes the entering into an Agreement of Purchase and Sale between Investissements Philippe Duguay Inc. as Purchaser and The Corporation of the City of Temiskaming Shores as Vendor, in the form annexed hereto as Schedule "A" and forming part of this by-law.

3. That Council agrees to sell the subject land in the amount of $16,500.00, plus applicable taxes and other such considerations outlined in the said agreement, for the land described as: Part 3 and Part 4 on Plan 54R-6433.

4. The Mayor and Clerk are authorized to sign all necessary documents in connection to this by-law.

5. That the Clerk of the City of Temiskaming Shores is hereby authorized to make any minor modifications or corrections of an administrative, numerical, grammatical, semantically or descriptive nature or kind to the by-law and schedule as may be deemed necessary after the passage of this by-law, where such modifications or corrections do not alter the intent of the by-law.

Read a first, second and third time and finally passed this 9th day of July, 2024.

_____
Mayor

_____
Clerk

Offer to Purchase

Investissements Philippe Duguay Inc.
(as "Purchaser"), having inspected the property, hereby agree to and with

The Corporation of the City of Temiskaming Shores,
(as "Vendor") to purchase the property being:

Part 3 and Part 4 on Plan 54R-6433

(herein called the "Real Property") at the purchase price of sixteen-thousand, five-hundred dollars and zero cents ($16,500.00) payable to the Vendor, subject to adjustments, on the closing date hereinafter set forth.

The Purchaser acknowledges that the land forming part of this transaction is being purchased on an “as is where is” condition without any representations or warranties whatsoever.

The Purchaser acknowledges that Enbridge Gas Inc., has service lines running within the area which may or may not be affected by the Purchaser’s proposed site plan. The Purchaser is responsible for the required locates, and for any costs related to this matter.

This offer to Purchase shall be conditional upon the Purchaser entering into an agreement with the Vendor on or before closing, failing which this Offer to Purchaser shall be null and void. Only the Vendor may waive this condition at its option.

Legal Fees

The Parties agree that the Purchaser will pay the Vendor’s reasonable legal fees for the transaction.

Costs of Registration

The Purchaser shall pay all costs of registration and taxes for both parties documents.

Release of Information

Vendor authorizes the release of any information relating to the Real Property to the Purchaser and the Purchaser's solicitor by any governmental body or authority and appoints the Purchaser and the Purchaser's solicitor as its agent for the purpose. Without limiting the generality of the foregoing the Vendor consents to the disclosure to the Purchaser and the Purchaser's solicitor of any information relating to the Real Property or the use thereof pursuant to the *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990. C.F. 31 and the *Municipal Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, C. M. 56.

Deficiency Notices and Work Orders

The Vendor represents that as at the date of acceptance hereof the Vendor has not received from any municipal or other governmental authority any deficiency notice or work order affecting the Real Property pursuant to which any deficiencies are required to be remedied or any demolition, repairs or replacements are required to be carried out. If the Vendor receives any such deficiency notice or work order after the date of acceptance hereof, the Vendor shall forthwith produce same to the Purchaser for inspection. If by the date of closing the Vendor has not either (a) complied with such deficiency notice or work order, or (b) settled with the Purchaser any question of an abatement of the purchase price arising out of such deficiency notice or work order, the Purchaser may at his option either (a) accept the Real Property subject to such deficiency notice or work order or (b) terminate this Agreement. In the event of termination as aforesaid, all moneys paid hereunder shall be returned to the Purchaser without interest or deductions.

Adoption of LSUC – OBA Document Registration Agreement

Provided the solicitors for each of the Vendor and the Purchaser are able to complete transactions using electronic registration, the parties agree to complete this transaction using electronic registration, to adopt the LSUC-OBA Document Registration Agreement in use on the Closing Date, and to abide by, and instruct their solicitors to abide by, the closing procedures set forth therein for electronic registration.

Acceptance

This Offer shall be irrevocable by the Purchaser until **11:59 P.M. on the 15th day after the date of signing the offer**, after which time, if not accepted, this Offer shall be null and void.

Title

Title to the Real Property shall be good and free from all encumbrances, except as set out in this Agreement, and except local rates, and except as to any registered restrictions or covenants that run with the land, and subdivision agreements with the municipality, provided the same have been complied with, and except for minor easements for hydro, gas, telephone or like services. Purchaser shall accept the Real Property subject to municipal and other governmental requirements, including building and zoning by-laws, regulations and orders, provided same have been complied with.

Requisitions

Purchaser shall be allowed until closing to investigate the title at his own expense and to satisfy himself that there is no breach of municipal or other governmental requirements affecting the Real Property, that its present use may be lawfully continued and that the principal buildings may be insured against risk of fire. If within that time any valid objection to title or to any breach of municipal or other governmental requirements, or to the fact that the present use may not be lawfully continued, or that the principal buildings may not be insured against risk of fire, which the Vendor is unable or unwilling to remove, remedy

or satisfy, and which the Purchaser will not waive, this Agreement shall notwithstanding any intermediate acts or negotiations, be null and void and the deposit money returned to the Purchaser, without interest or deduction, and the Vendor shall not be liable for any costs or damages whatever. Save as to any valid objection so made within such time the Purchaser shall be conclusively deemed to have accepted the Vendor's title to the Real Property.

Surveys and Documents

The Purchaser shall not call for the production of any title deed, abstract, survey or other evidence of title except such as are in the possession or control of the Vendor. The Vendor agrees that he will deliver any existing survey to the Purchaser as soon as possible and prior to the last day allowed for examining title. In the event that a discharge of any mortgage or charge held by a Chartered Bank, Trust Company, Credit Union or Insurance Company which is not to be assumed by the Purchaser on completion, is not available in registrable form on completion, the Purchaser agrees to accept the Vendor's solicitor's personal undertaking to obtain, out of the closing funds, a discharge or cessation of charge in registrable form and to register same on title within a reasonable period of time after completion, provided that on or before completion the Vendor shall provide to the Purchaser a mortgage statement prepared by the mortgagee setting out the balance required to obtain the discharge, together with a direction executed by the Vendor directing payment to the mortgagee, of the amount required to obtain the discharge out of the balance due on completion.

Closing

This Agreement shall be completed on or before August 14, 2024 on which date vacant possession of the Real Property shall be given to the Purchaser unless otherwise provided for herein.

Inspection of Property

The Purchaser acknowledges having inspected the Real Property prior to submitting this Offer and understands that upon the Vendor accepting this offer there shall be a binding Agreement of Purchase and Sale between the Purchaser and the Vendor. The Purchaser shall be entitled to inspect the Real Property immediately prior to the date for completion.

Adjustments

Unearned fire insurance premiums, fuel, taxes, rentals and all local improvements and water rates and other charges for municipal improvements to be apportioned and allowed to the date of completion of sale (the day itself to be apportioned to the Purchaser). Provided Purchaser may elect not to accept assignment of fire insurance in which case no adjustment for insurance premiums.

Costs

The deed or transfer, save for Land Transfer Tax Affidavit, to be prepared at the expense

of the Vendor in a form acceptable to the Purchaser and if a mortgage or charge is to be given back, it shall be prepared at the expense of the Purchaser in a form acceptable to the Vendor.

Planning Act Compliance

This Agreement shall be effective only if the provisions of Section 50 of the *Planning Act*, R.S.O. 1990, C.P. 13 as amended, are complied with, and the Vendor agrees, at his expense, to comply with such provisions and to proceed diligently with the application for such compliance, if necessary.

The Transfer/Deed of Land to be given to the Purchaser shall contain a statement of the Vendor and the Vendor's solicitor pursuant to section 50(22) of the Planning Act, R.S.O. 1990, C.P. 13 as amended.

Spousal Consent

The Vendor represents and warrants that no consent to this transaction is required pursuant to s.21(1) of the *Family Law Act*, R.S.O. 1990, C.F. 3 unless the Vendor's spouse has executed this agreement to consent thereto, and that the Transfer/Deed shall contain a statement by the Vendor as required by section 21(3) of the *Family Law Act*, R.S.O. 1990, C.F. 13 or the spouse of the Vendor shall execute the Transfer/Deed to consent thereto.

Residency of Vendor

Vendor further agrees to produce evidence that he is not now and that on closing he will not be a non-resident of Canada within the meaning of s.116 of the *Income Tax Act* of Canada, or in the alternative, evidence that the provisions of s.116 regarding disposition of property by a non-resident person have been complied with at or before closing, failing which the Purchaser will be credited towards the purchase price with the amount, if any, which shall be necessary for the Purchaser to pay to the Minister of Revenue in order to satisfy the Purchaser's liability in respect of tax payable by the Vendor under S. 116 of the *Income Tax Act* of Canada by reason of the sale.

Facsimile

Either party may execute this document by signing a facsimile thereof. The parties agree that execution by any party of a facsimile shall be in all respects identical to execution of an original or photocopy. The parties agree to accept a facsimile of the signature of any party as evidence of the fact that the agreement has been executed by that party. In all respects a facsimile signature may be accepted as having the same effect as an original signature.

Counterpart

This agreement may but need not be executed in counterpart.

Time of Essence

This Offer, when accepted, shall constitute a binding contract of purchase and sale, and time in all respects shall be of the essence in this Agreement.

H.S.T.

If this transaction is subject to Harmonized Sales Tax (HST) pursuant to the Excise Tax Act (Canada) as amended (the “Act”) then such HST shall be in addition to and not included in the purchase price, and:

(a) HST shall be collected and remitted by the Vendor in accordance with the applicable legislation; or

(b) If applicable, the parties shall jointly execute an election pursuant to Act, such election to be filed by the Purchaser as required under the Act; or

(c) If the Purchaser is registered under the Act, the Purchaser shall provide the Vendor and its solicitor with proof of his/her HST registration number in a form reasonably satisfactory to the Vendor and its solicitor.

If this transaction is not subject to HST pursuant to the Act, the Vendor agrees to provide on or before closing to the Purchase or Purchaser’s solicitor a certificate in the form prescribed by the Act, if so prescribed, or otherwise in a form reasonably satisfactory to the Purchase and his/her solicitor certifying that the transaction is not subject to HST.

Representations and Warranties

It is agreed that there is no representation, warranty, collateral agreement or condition affecting this Agreement or the Real Property or supported hereby other than as expressed herein in writing.

Tender

Any tender of documents or money hereunder may be made upon the Vendor or Purchaser or upon the solicitor acting for the party on whom tender is desired, and it shall be sufficient that a cheque certified by a chartered bank or a trust company or the trust cheque of the law firm acting for the party desiring such tender be tendered instead of cash.

Gender

This Offer and the resulting Agreement to be read with all changes of gender or number required by the context.

Remainder of this page left blank intentionally

Signed, Sealed and Delivered this _____ day of _____, 2024.

in the presence of:

Purchaser: **Investissements Philippe Duguay Inc.**

[redacted]

_____
Phillipe Duguay

_____
Witness

The Vendor hereby accepts the above offer.

Dated at the _____ this _____ day of _____, 2024.

Vendor: **The Corporation of the City of Temiskaming Shores**

_____
Mayor – Jeff Laferriere

_____
Clerk – Logan Belanger

We have authority to bind the Corporation.

Vendor’s Address:
City of Temiskaming Shores
P.O. Box 2050 / 325 Farr Drive
Haileybury, Ontario
P0J 1K0

Attn.: Logan Belanger, Clerk

Purchaser's Solicitor:

DBC Law Professional Corporation
(o/a DBC Legal)
P.O. Box 2999, 7 Armstrong Street
New Liskeard, Ontario P0J 1P0

Phone Number: (705) 647-9411

Vendor's Solicitor:

Kemp Pirie Crombeen
P.O. Box 1540
22 Armstrong Street
New Liskeard, ON P0J 1P0

Phone Number: (705) 647-7353

The Corporation of the City of Temiskaming Shores

By-law No. 2024-086

Being a by-law to authorize the annual insurance premium payment for Municipal Insurance and Risk Management Services with Marsh brokered by MIS Municipal Insurance Services for July 1, 2024 to June 30, 2025

Whereas under Section 8 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, the powers of a municipality shall be interpreted broadly to enable it to govern its affairs as it considers appropriate and to enhance the municipality's ability to respond to municipal issues; and

Whereas under Section 9 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act; and

Whereas under Section 10 (1) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a single-tier municipality may provide any service or thing that the municipality considers necessary or desirable for the public; and

Whereas Council authorized a by-law to enter into a three (3) year agreement with Marsh brokered by MIS Municipal Insurance Services commencing July 1, 2022 and expiring June 30, 2025 at the June 21, 2022 Regular Council meeting; and

Whereas Council considered Administrative Report No. CS-024-2024 at the July 9, 2024 Committee of the Whole meeting, and directed staff to prepare the necessary by-law to authorize the annual insurance premium payment for Municipal Insurance and Risk Management Services with Marsh brokered by MIS Municipal Insurance Services for July 1, 2024 to June 30, 2025 for consideration at the July 9, 2024 Regular Meeting of Council.

Now therefore the Council of The Corporation of the City of Temiskaming Shores hereby enacts the following as a by-law:

1. That Council agrees to authorize the annual insurance premium payment for Municipal Insurance and Risk Management Services with Marsh brokered by MIS Municipal Insurance Services for July 1, 2024 to June 30, 2025 for a premium of $616,657 plus applicable taxes for the term of July 1, 2024 to June 30, 2025.

2. That the Clerk of the City of Temiskaming Shores is hereby authorized to make minor modifications or corrections of a grammatical or typographical nature to the By-law and schedule, after the passage of this By-law, where such modifications or corrections do not alter the intent of the by-law or its associated schedule.

Read a first, second and third time and finally passed this 9th day of July, 2024.

Mayor

Clerk

The Corporation of the City of Temiskaming Shores

By-law No. 2024-087

Being a by-law to authorize an agreement with 360 Engineering and Environmental Consulting Ltd. for the implementation of an Asset Retirement Obligation Program

Whereas under Section 8 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, the powers of a municipality shall be interpreted broadly to enable it to govern its affairs as it considers appropriate and to enhance the municipality's ability to respond to municipal issues; and

Whereas under Section 9 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act; and

Whereas under Section 10 (1) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a single-tier municipality may provide any service or thing that the municipality considers necessary or desirable for the public; and

Whereas Council considered Administrative Report No. CS-026-2024 at the July 9, 2024 Committee of the Whole meeting, and directed staff to prepare the necessary by-law to enter into an agreement with 360 Engineering and Environmental Consulting Ltd. for the implementation of an Asset Retirement Obligation Program as required by the Public Sector Accounting Board (PSAB) under the new accounting standard PS 3280 in the amount of $25,473 plus applicable taxes, for consideration at the July 9, 2024 Regular Council Meeting.

Now therefore the Council of The Corporation of the City of Temiskaming Shores hereby enacts the following as a by-law:

1. That the Mayor and Clerk be authorized to enter into an agreement with 360 Engineering and Environmental Consulting Ltd. for the implementation of an Asset Retirement Obligation Program as required by the Public Sector Accounting Board (PSAB) under the new accounting standard PS 3280 in the amount of $25,473 plus applicable taxes, a copy of which is attached hereto as Schedule "A" and forming part of this by-law.

2. That the Clerk of the City of Temiskaming Shores is hereby authorized to make any minor modifications or corrections of an administrative, numerical, grammatical, semantically or descriptive nature or kind to the By-law and schedule as may be deemed necessary after the passage of this By-law, where such modifications or corrections do not alter the intent of the By-law.

Read a first, second and third time and finally passed this 9th day of July, 2024.

Mayor

Clerk

Schedule “A” to

By-law 2024-087

Agreement between

The Corporation of the City of Temiskaming Shores

And

360 Engineering and Environmental Consulting Ltd.

for the implementation of an Asset Retirement Obligation Program as required by the Public Sector Accounting Board

(403) 454-3600
info@360eec.com
www.360eec.com

Attention: Ms. Stephanie Leveille, Treasurer
The Corporation of The City of Temiskaming Shores
325 Farr Drive, PO Box 2050
Haileybury, ON
P0J 1K0

June 24, 2024

SERVICE AGREEMENT FOR THE CORPORATION OF THE CITY OF TEMISKAMING SHORES - ARO IMPLEMENTATION PROGRAM

SCOPE OF WORK

360 will calculate and implement the adoption of the City of Temiskaming Shores Asset Retirement Obligation reporting requirement per PSAB 3280 standards. The project will be completed in five phases.

1. Framework Development
    - Develop project delivery schedule and adoption of new accounting standard
    - Assign roles and responsibilities to project team
    - Risk assessment of hurdles to project delivery and completeness
    - Develop guidelines and supporting documentation for adoption and ongoing compliance
2. Identification
    - Establish the legal retirement obligations of each asset
    - Review list of Tangible Capital Assets to determine applicable assets
    - Categorize appropriate assets into categories based on asset type
3. Recognition and Measurement
    - Collaborate on appropriate transition method
    - Support decision on end-of-life dates and discounting
    - Calculate ARO based on applicable retirement activities
4. Reporting and Presentation
    - Support implementation into financial statements for 2023
    - Define roles and responsibilities for future reporting years
5. Risk Assessment and Analysis
    - Detail process, data, and assumptions to prepare assessment
    - Identify potential discrepancies or unknowns in available data and assumptions
    - Assess probability and severity of risks to calculate potential materiality

DATA RETENTION

360 will maintain and store data related to all projects for a minimum of 7 years. Data is stored on a cloud-based server and backed up to a secondary server and physical drive each day.

EXECUTION TIMELINE

The 2023 deliverables, in Fees, will be issued within 50 days from the date of acceptance and Receipt of the signed contract by 360 Engineering & Environmental Consulting Ltd.

(403) 454-3600
info@360eec.com
www.360eec.com

FEES

The fixed fee for the assessment is detailed below:

2023

Task Description	Fee
Framework Development	$2,857
Identification	$6,453
Recognition and Measurement	$6,917
Reporting and Presentation	$5,638
Risk Assessment and Analysis	$5,091
Total (prior to TMSA Discount)	**$26,956**

City of Temiskaming Shores – Fee and TMSA applied discount

Task Description	Fee
(2023) Total – ARO	$26,956
(2023) TMSA Discount 5.5%	-$1,483
(2023) Invoice Fee & Discount Total	**$25,473**

The estimated fee is based on the following assumptions:

1) Phase 1 and 2 in our proposed methodology are initiated. (360 has received asset listings from CCTS).
2) Known assets will be wholistically assessed and determined whether in scope or out of scope. Note: Additional assets including any leased property, miscellaneous/contaminated sites, ancillary infrastructure (such as storage tanks, bridges, pipes, and closure/post closure liabilities (Reference: Fees 8)).
3) Access to information and staff will not deviate from the timeframes outlined in the Service Agreement.
4) The City will engage with third party auditors for the purposes of reviewing and responding to requests for clarification or information upon the implementation and restatement of ARO within its financial statements.
5) Intrusive sampling to confirm the presence of or delineate environmental contamination, asbestos, or other hazardous materials/substances will not be required.
6) Groundwater monitoring to confirm the presence of or delineate environmental contamination will not be required.
7) Historical records will be available electronically and site visits will not be required for physical data collection or ARO estimating.
8) Change order requests/submissions will govern any requirement not defined or contained herein (Out-of-scope) that is/are deemed relevant and necessary to the implementation of the new ARO standard for the City. A change order request will be generated and approved prior to initiating any out-of-scope activities and/or producing any out-of-scope deliverables.
9) Ontario Tax Compliance Certificate: 23-015130-TCV, Business No: 786032326
10) Invoicing – All fees are subject to applicable taxes (HST/GST), payable within 30 days of receipt.

Any required time and material costs for the project are based on the fee schedule below:

Position	Rate
Director/Partner	$300
Project Manager	$195
Professional 2	$140
Professional 3	$90

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www.360eec.com

THIS GENERAL SERVICE AGREEMENT (the "Agreement") between 360 Engineering & Environmental Consulting Ltd. (“360”) and The Corporation of the City of Temiskaming Shores (“the Client”) of 325 Farr Street, Haileybury, ON P0J 1K0.

BACKGROUND

A. The Client is of the opinion that 360 has the necessary qualifications, experience, and abilities to provide services to the Client.
B. 360 is agreeable to providing such services to the Client on the terms and conditions set out in this Agreement.

IN CONSIDERATION OF the matters described above and of the mutual benefits and obligations set forth in this Agreement, the receipt and sufficiency of which consideration is hereby acknowledged, the Client and 360 (individually the "Party" and collectively the "Parties" to this Agreement) agree as follows:

SERVICES PROVIDED

1. The Client hereby agrees to engage 360 to provide the Client with the services outlined in the Scope of Work attached (the "Services")
2. The Services will also include any other tasks which the Parties may agree on. 360 hereby agrees to provide such Services to the Client. Change orders will be issued for additional, agreed upon services.

TERM OF AGREEMENT

3. The term of this Agreement (the "Term") will begin on the date of this Agreement and will remain in full force and effect indefinitely until terminated as provided in this Agreement.
4. In the event that either Party wishes to terminate this Agreement, that Party will be required to provide 30 days' written notice to the other Party.
5. This Agreement may be terminated at any time by mutual agreement of the Parties.
6. Except as otherwise provided in this Agreement, the obligations of 360 will end upon the termination of this agreement.
7. Partial invoicing may be required based on length of project and pre-planning needs.
8. The invoice is payable within 30 days of receipt.

CONFIDENTIALITY

9. The Parties agree that this Agreement, its commercial terms, and any and all work product produced by 360 constitute confidential information, and neither Party shall, without the prior written consent of the other Party, or as required to enable it to perform its obligations hereunder, disclose the terms and conditions hereof to any third party (other than its professional legal and other advisors) provided that if a court of competent jurisdiction orders any disclosure of this Agreement, then the Party required to make the disclosure shall make reasonable commercial efforts to enable the other Party to protect the terms from disclosure. All work product of 360 created in connection hereunder is proprietary and confidential, may only be used by Client for its intended purpose under this Agreement, and may not, without the prior written consent of 360, be relied on by any third party. Client agrees to indemnify 360 for any and all claims, losses, damages, liabilities, penalties, punitive damages, expenses, reasonable legal fees and costs of any kind or amount whatsoever (collectively, "Losses"), which 360 may suffer or incur resulting from Client allowing or inducing a third party to rely on the work product without having first obtained 360's prior written consent.

INDEMNIFICATION

10. Except to the extent paid in settlement from any applicable insurance policies, and to the extent permitted by applicable law, each Party agrees to indemnify and hold harmless the other Party, and its respective directors, shareholders, affiliates, officers, agents, employees, and permitted successors and assigns against any and all Losses which result from or arise out of any breach of this Agreement or any act or omission of the indemnifying party, its respective directors, shareholders, affiliates, officers, agents, employees, and permitted successors and assigns that occurs in connection with this Agreement. This indemnification will survive the termination of this Agreement.
11. The maximum aggregate liability of 360 in connection with this agreement, whether arising as a result of a claim, at law, equity or otherwise, shall not exceed the purchase price for the Services.

GOVERNING LAW

12. This Agreement will be governed by and construed in accordance with the laws of the Province of Ontario.

(403) 454-3600
info@360eec.com
www.360eec.com

SEVERABILITY

13. In the event that any of the provisions of this Agreement are held to be invalid or unenforceable in whole or in part, all other provisions will nevertheless continue to be valid and enforceable with the invalid or unenforceable parts severed from the remainder of this Agreement.

WAIVER

14. The waiver by either Party of a breach, default, delay, or omission of any of the provisions of this Agreement by the other Party will not be construed as a waiver of any subsequent breach of the same or other provisions.

IN WITNESS WHEREOF the Parties have duly affixed their signatures on this ____ day of _____ 2024.

The Corporation of the City of Temiskaming Shores	360 Engineering & Environmental Consulting Ltd.
PER: _____	PER:__ 
NAME: _____	NAME: GRAEME HAWKINS, MANAGER - ARO


360

The Corporation of the City of Temiskaming Shores

By-law No. 2024-088

Being a by-law to appoint a Municipal Law Enforcement Officer for the purpose of enforcing the City's Animal Control By-law and Noise By-law as it relates to Animal Care and Control Services – Sidney Plante

Whereas pursuant to Section 15 (1) of the Police Services Act, R.S.O. 1990, as amended, Council of a municipality may appoint persons to enforce the by-laws of the municipality;

And whereas Section 15 (2) of the Police Services Act, R.S.O. 1990, as amended, defines municipal law enforcement officers as peace officers for the purpose of enforcing municipal by-laws;

And whereas in accordance with Section 103 of the Municipal Act, S.O. 2001, Chapter M.45 as amended, Council may pass by-laws of the municipality with respect to the being at large or trespassing of animals;

And whereas the Council of the City of Temiskaming Shores passed an Animal Control By-law regulating the keeping of animals and the registration of dogs and cats;

And whereas Council of the City of Temiskaming Shores has passed a by-law to prohibit and regulate certain noises in accordance with Section 129 of the Municipal Act, S.O. 2001, Chapter M.45 as amended;

And whereas the City of Temiskaming Shores Animal Care and Control By-law defines an Animal Control Officer as a person appointed by Council as a Municipal Law Enforcement Officer to enforce the provisions of the by-law;

And whereas Council considered Memo No. 023-2024-CS at the July 9, 2024 Committee of Whole meeting and directed staff to prepare the necessary by-law to appoint Sidney Plante as Municipal Law Enforcement Officer for the purpose of enforcing the City's Animal Care and Control By-law and Noise by-law as it relates to Animal Care and Control Services, for consideration at the July 9, 2024 Regular Council meeting.

Now therefore the Council of The Corporation of the City of Temiskaming Shores enacts as follows:

1. That **Sidney Plante** is hereby appointed as Municipal Law Enforcement Officer for the purposes of enforcing the City of Temiskaming Shores Animal Care and Control by-law and Noise by-law as it relates to Animal Care and Control Services.

2. That this By-law shall come into force and take effect on the date of its final passing.

3. That the Clerk of the City of Temiskaming Shore is hereby authorized to make any minor modifications or corrections of an administrative, numerical, grammatical, semantically or descriptive nature or kind to the by-law as may be deemed

necessary after passage of this by-law, where such modifications or corrections do not alter the intent of the by-law.

Read a first, second and third time and finally passed this 9th day of July, 2024.

Mayor

Clerk

The Corporation of the City of Temiskaming Shores

By-law No. 2024-089

Being a by-law to confirm certain proceedings of Council of The Corporation of the City of Temiskaming Shores for the Committee of the Whole Meeting on July 9, 2024, and for the Regular meeting on July 9, 2024

Whereas under Section 8 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, the powers of a municipality shall be interpreted broadly to enable it to govern its affairs as it considers appropriate and to enhance the municipality's ability to respond to municipal issues; and

Whereas under Section 9 of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act; and

Whereas under Section 10 (1) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, a single-tier municipality may provide any service or thing that the municipality considers necessary or desirable for the public; and

Whereas it is the desire of the Council of The Corporation of the City of Temiskaming Shores to confirm proceedings and By-laws.

Now therefore the Council of The Corporation of the City of Temiskaming Shores hereby enacts the following as a by-law:

1. That the actions of the Council at its Regular meeting held on **July 9, 2024,** with respect to each recommendation, by-law and resolution and other action passed and taken or direction given by Council at its said meeting, is, except where the prior approval of the Ontario Municipal Board is required, hereby adopted, ratified and confirmed.

2. That the actions of the Council at its Committee of the Whole meeting held on **July 9, 2024,** with respect to each recommendation and resolution and other action passed and taken or direction given by Council at its said meeting, is, except where the prior approval of the Ontario Municipal Board is required, hereby adopted, ratified and confirmed.

3. That the Mayor, or in his absence the presiding officer of Council, and the proper officials of the municipality are hereby authorized and directed to do all things necessary to give effect to the said action or to obtain approvals where required, and except where otherwise provided, the Mayor, or in his absence the presiding officer, and the Clerk are hereby directed to execute all documents required by statute to be executed by them, as may be necessary in that behalf and to affix the corporate seal of the municipality to all such documents.

Read a first, second and third time and finally passed this 9th day of July, 2024

Mayor

Clerk