

The Corporation of The Town of Cobourg COMMITTEE OF THE WHOLE MEETING AGENDA

> Monday, December 7, 2020 6:00 P.M. Electronic Participation

- 1. CALL TO ORDER
- 2. ADDITIONS TO THE AGENDA
- 3. DISCLOSURE OF PECUNIARY (FINANCIAL) INTEREST
- 4. **PRESENTATIONS**
- 5. DELEGATIONS
  - 5.1. Jack Gibbons, Chair, Ontario Clean Air Alliance, regarding Ontario's growing climate crisis

# 6. DELEGATION ACTIONS

# 7. GENERAL GOVERNMENT SERVICES

7.1. Memo from the Treasurer/ Director of Corporate Services, regarding the Third Quarter 2020 - Operating Budget Variance Report

Action Recommended:

THAT Council receive the Third Quarter 2020 Operating Budget Variance Report for information purposes.

7.2. Memo from the Treasurer/ Director of Corporate Services regarding the 202 Second Street Parking Lot - Lease Agreement

# Action Recommended:

THAT Council receive the report for information purposes; and

FURTHER THAT Council authorize the preparation of a by-law be prepared and presented at a Regular Council meeting to authorize the Mayor and Municipal Clerk to execute an agreement with Cobourg Harbourpark Properties Inc. (Harbourpark) for the lease of a vacant lot known municipally as 202 Second Street being at the intersection of Second Street and Albert Street.

7.3. Memo from the Senior Financial Analyst, regarding Financial Report -Cash in Lieu of Parkland Reserves 2019 Pages

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Action Recommended:

THAT Council receive the 2019 financial report regarding the Cash in Lieu of Parkland Reserve for information purposes; and

FURTHER THAT a copy of the report be made available to the public on the municipal website.

7.4. Memo from Senior Financial Analyst regarding Development Charges Reserve Funds 2019

# Action Recommended:

THAT Council receive the financial report regarding the Development Charge Reserve Funds 2019 for information purposes; and

FURTHER THAT a copy of the report be made available to the public on the municipal website.

7.5. Memo from the Accessibility Coordinator, regarding the Indigenous Land Acknowledgment for the Town of Cobourg

# Action Recommended:

THAT Council receive the Land Acknowledgement, created by Alderville First Nations, for their use; and

FURTHER THAT Council incorporate the Town of Cobourg's traditional Indigenous land acknowledgement statement in all Council related meetings; and

FURTHER THAT Council incorporate the Town of Cobourg's traditional Indigenous land acknowledgement statement in all Board and Advisory Committee meetings; and

FURTHER THAT Council incorporate the Town of Cobourg's traditional Indigenous land acknowledgement statement in all public meetings and ceremonies; and

FURTHER THAT all Town of Cobourg require their , municipal staff, Councillors, volunteers, and to attend Indigenous Awareness and Understanding Training, developed by the Town of Cobourg and/or provided by the Town of Cobourg and/or comparable to the training provided by the Town of Cobourg;

FURTHER THAT Council direct Staff to incorporate appropriate actions from the Truth and Reconciliation Commission's Calls to Action into the development of the EDI Strategy; and

FURTHER THAT Council begin to use the Land Acknowledgement on January 4, 2021 at the first Committee of the Whole meeting for 2021.

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7.6. Memo from the Accessibility Coordinator, regarding, the Town of Cobourg Equity, Diversity, and Inclusion Strategy.

# Action Recommended:

THAT Council receive this Memo from the Accessibility Coordinator for information purposes; and

FURTHER THAT Council approves the final version of the Terms of Reference for the Equity, Diversity, and Inclusion Advisory Committee of Council; and

FURTHER THAT Council authorize the preparation of a By-law to amend By-Law No. 008-2019 to include the Terms of Reference for the Equity, Diversity, and Inclusion Advisory Committee of Council ; and

FURTHER THAT Council appoints two (2) Councillors to sit as Voting Members of the Equity, Diversity, and Inclusion Advisory Committee of Council; and

FURTHER THAT Council directs Staff to begin the application process for the Equity, Diversity, and Inclusion Advisory Committee of Council; and

FURTHER THAT Council direct Staff to consult with the Equity, Diversity, and Inclusion Advisory Committee of Council on matters pertaining to the Equity, Diversity, and Inclusion Strategy for the Town of Cobourg, including public participation; and

FURTHER THAT Council sign the Declaration to join the Coalition of Inclusive Municipalities on January 4, 2021 as a commemoration to World Braille Day; and

FURTHER THAT Council direct Staff to bring forward initial budget amounts to be presented at the 2021 Budget review process for Council deliberations; and

FURTHER THAT Council participate in the "Leadership Interviews" as a part of the development of this strategy in the coming months.

# 8. PLANNING AND DEVELOPMENT SERVICES

8.1. Memo from the Director of Planning and Development, regarding the Application for Approval of a Draft Plan Subdivision – Lands West of Canadian Tire Vandyk – West Park Village Limited.

# Action Recommended:

THAT Council receive this Report for information purposes; and,

FUTHER THAT Council authorize the preparation of by-law to be

presented to Council and a Regular Council meeting which grants draft plan of subdivision approval to Vandyk – West Park Village Limited for the development of the 3.7 ha (9.1 ac) parcel of land west of Canadian Tire for 62 townhouse units, 10 semi-detached units, a 0.6 ha (1.5 ac) commercial block, a 0.12 ha (0.3 ac) public parkette block, and an emergency/pedestrian-only access block, subject to the conditions outlined in Schedule "A" of the By-law.

8.2. Memo from the Secretary of the Planning and Development Advisory Committee regarding the Application for Approval of a Draft Plan Subdivision – Lands West of Canadian Tire Vandyk – West Park Village Limited

# Action Recommended:

THAT Council receive the memo from the Secretary of the Planning and Development Advisory Committee to endorse the conclusions and recommendations of the Planning Report for information purposes.

8.3. Memo from the Manager of Planning regarding an application for Clearance of Conditions - Draft Plan of Subdivision - Pre-Servicing and Subdivision Agreement - Nickerson D'Arcy Street, north of Nickerson Drive, Cobourg - LeBlanc Enterprises

# Action Recommended:

THAT the report be received for information purposes; and

FURTHER THAT Council authorize the preparation of By-law to be presented at a Regular Council Meeting attached as Figure 4 of the Staff Report to be endorsed to authorize the Mayor and Municipal Clerk to execute a Pre-Servicing Agreement and a Subdivision Agreement with Leblanc Enterprises for the 23-unit residential freeholdcondominium subdivision development located on a 2.0 ha parcel of land located on an extension of D'Arcy Street, north of Nickerson Drive, subject to the finalization of details by municipal staff and partner review agencies.

8.4. Memo from the Secretary of the Cobourg Heritage Advisory Committee regarding the Amendment to Heritage Designation By-law 589 King Street West

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# Action Recommended:

THAT Council endorse the recommendation from the Cobourg Heritage Advisory Committee to authorize municipal staff to implement the required process to amend the Designation By-law in accordance with the requirements of the Heritage Act, including the issuance of a Notice of Intention to Amend Schedule A to Designating Bylaw 16-93, the preparation of a new Schedule A, and the registration of the necessary documents on title to recognize the new property limits for The Cedars on Lot 9, Plan 39M-936.

# 9. PUBLIC WORKS SERVICES

9.1. Memo from he Manager of Engineering and Capital Projects regarding the Assumption of Municipal Services and Infrastructure at West Park Village, Phase 4A, 4B and 4C

# Action Recommended:

THAT Council authorize the Municipal Clerk to prepare a By-law to be presented to Municipal Council to authorize the assumption of municipal services and Infrastructure at West Park Village Phases 4A, 4B and 4C, namely the streets known as:

- Charles Wilson Parkway (Wilkins Gate to Fisher Street);
- Leslie Street (Wilkins Gate to Fisher Street);
- Fisher Street (Leslie Street to Kerr Street);
- Robinson Drive (Leslie Street to Kerr Street);
- McMurdo Drive (Fisher Street to first rear lot line East of Robinson Drive);
- Kerr Street (Fisher Street to first rear lot line east of Robinson Drive);
- Henderson Drive (Leslie Street to McMurdo Drive); and
- McMurdo Drive (Wilkins Gate to Fisher Street);

All part of Registered Plan 39M-876 and with the limits as indicated on attached Schedule A and described in the Subdivision Agreement Between the Corporation of the Town of Cobourg and VanDyk West Park Village Limited dated July 30, 2012.

9.2. Memo from the Director of Public Works, regarding the execution of a Transfer Payment Agreement with Investing in Canada Infrastructure Program (ICIP) – Transit Stream.

# Action Recommended:

THAT Council authorize the preparation of a By-law to be presented to Council for adoption at a Regular Council meeting to authorize the Mayor and Municipal Clerk to execute an agreement with Her Majesty the Queen in right of Ontario represented by the Minister of Agriculture, Food and Rural Affairs and the Corporation of the Town of Cobourg for the Investing in Canada Infrastructure Program Public Transit Stream.

# 10. PARKS AND RECREATION SERVICES

# 11. PROTECTION SERVICES

	11.1.	Memo from the Secretary of the Accessibility Advisory Committee regarding the Accessibility Coordinator Position	288
		Action Recommended: THAT Council receive the memo from the Accessibility Advisory Committee for information purposes.	
	11.2.	Memo from the Secretary of the Accessibility Advisory Committee regarding the Accessible Parking Spaces in the Town of Cobourg	289
		Action Recommended: THAT Council receive the recommendation from the Accessibility Advisory Committee in response to the Council Motion on October 7th ; and	
		FURTHER THAT the Accessibility Advisory Committee recommends that accessible parking spots in the Town of Cobourg remain as paid parking spots to ensure equity for Persons with Disabilities.	
	11.3.	Memo from the Secretary of the Accessibility Advisory Committee regarding the APS Signal Priority Intersections for 2021	290
		Action Recommended: THAT Council endorse the recommendation from the Accessibility Advisory Committee and designate that the intersections of Elgin/Frei and Elgin/Rogers be the priority intersections for new APS signals for the 2021 year.	
	11.4.	Memo from the Secretary of the Accessibility Advisory Committee regarding the Accessibility Advisory Committee Workplan	291
		Action Recommended: THAT Council receive and approve the 2021 Work Plan for the Accessibility Advisory Committee.	
12.	ARTS C	CULTURE AND TOURISM SERVICES	
13.	UNFINI	SHED BUSINESS	
	which h appeara	ms listed in the order of the topics set out in the agenda of prior meetings have not been disposed of by Council and the date of their first ance on the agenda shall be noted and repeated on each subsequent o until disposed of by Council, unless removed from the agenda by leave	

13.1. Municipal Council Unfinished/Outstanding Business Tracking Table.

# 14. COMMITTEE OF THE WHOLE OPEN FORUM

of Council - Council Procedural By-law No. 009-2019.

# 15. ADJOURNMENT

Gas Plant Pollution to increase by more than 300%

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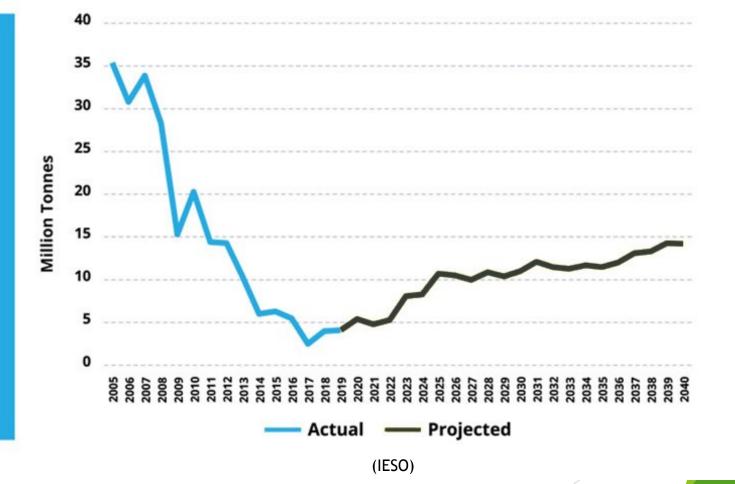
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ONTARIO CLEAN AIR ALLIANCE

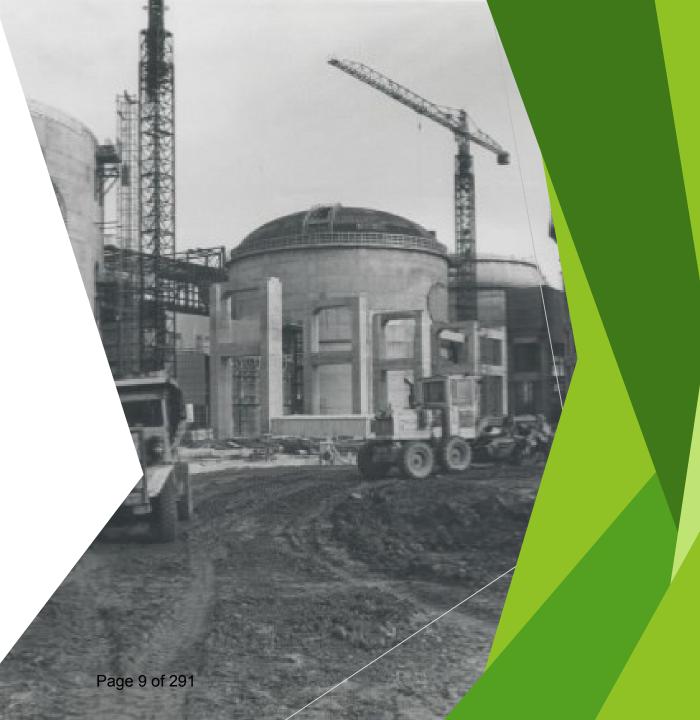
# **Ontario's rising emissions**

Ontario's Historic and Forecast GHG Pollution from its Electric Power Plants



# What's behind these rising emissions?

- Ontario's demand for electricity will rise by about 1% per year.
- The Pickering Nuclear Station will close in 2024.
- Virtually all of our need for new electricity resources will be met by ramping up province's gas-fired power plants.



# Reaching Ontario's 2030 Climate Target

- According to Ontario's Auditor General, we need to implement measures that will reduce our greenhouse gas pollution by an additional 7.3 to 14 million tonnes per year to achieve our 2030 climate target.
- A phase-out of Ontario's gas plants would provide our province with all or virtually all of the incremental pollution reductions that it needs to achieve its 2030 climate target.

# Historic and Forecast GHG Pollution and Electricity Generation from Ontario's Gas-Fired Power Plants

Year	2017	2018	2019	2020	2025	2030	2040
GHG Pollution (Million Tonnes)	2.5	4.0	4.1	5.4	10.7	11.0	14.2
Electricity Generation (Billion kWh)	5.9	9.6 Page	9.5 10 of 291	13.6	28.0	28.6	37.0

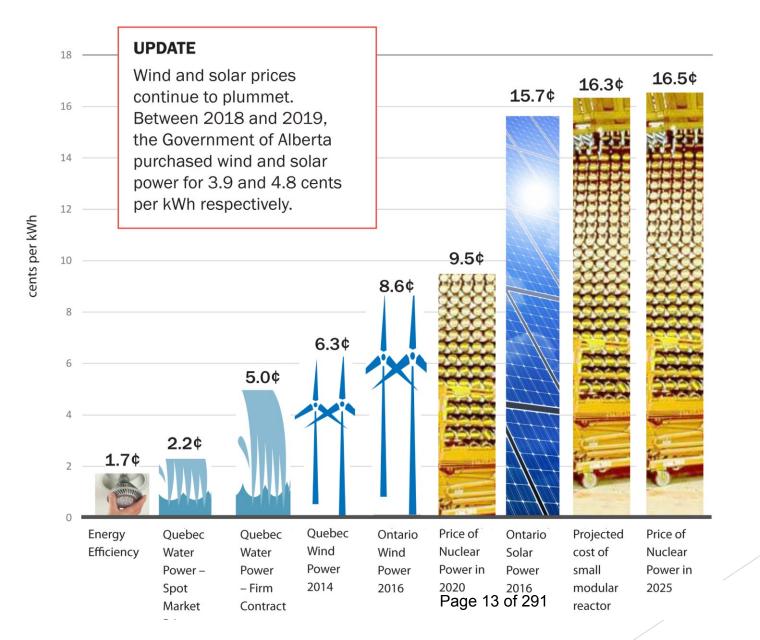
# How can we phase out Ontario's gas plants?

# Energy efficiency Quebec water power Wind and solar energy

# Distributed resources can create jobs in every community

# Quebec water power can back-up wind and solar energy

# **Ontario Electricity Options: A Cost Comparison**





# Phase out supporters

# **Kitchener council calls on province** to phase out gas-fired power production

Kitchener City Council voted unanimously on Monday to join Halton Hills in calling on the Government of Ontario to phase-out the province's gas-fired power plants by 2030.

about 10 hours ago By: Casey Taylor



# **Municipal** Leadership

Lennox Power Station near Bath, Ontario, Canada, November 2010.

# Phasing-Out Ontario'sGas-Fired Power Plants:A ROAD MAPPage 16 of 291

ONTARIO CLEAN AIR ALLIANCE



# Let's get to work!

Jack Gibbons jack@cleanairalliance.org Angela Bischoff angela@cleanairalliance.org

# CleanAirAlliance.org

OntarioClimateAction.ca

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# Draft Template for Municipal Resolution Calling for Gas-Fired Electricity Generation Phase-Out

# Background

The Government of Ontario is planning to <u>ramp up the greenhouse gas pollution</u> from Ontario's gasfired power plants by more than 300% by 2025 and by more than 400% by 2040 to replace the output of the Pickering Nuclear Station (scheduled to close in 2024). This plan will throw away more than a third of the greenhouse gas reductions Ontario achieved by phasing-out its dirty coal-fired power plants.

To support this massive increase in fossil fuel electricity and climate-threatening greenhouse gas (GHG) pollution, the provincial government recently <u>purchased 3 gas plants</u> at a cost of \$2.8 billion.

Greenhouse gas pollution is causing temperatures in Canada to rise at <u>more than double</u> the rate in the rest of the world, causing adverse impacts for the citizens of [*insert name of municipality*]. (*Insert specifics about relevant risks to municipality such as forest fires, flooding, agricultural failures, public health impacts, etc.*)

[*insert name of municipality*] has declared a Climate Emergency and is taking measures to reduce its greenhouse gas pollution. (*Insert specifics about relevant advisory committee, activities such as Climate Action Plan, Community Energy and Emissions Plan, and achievements.*)

The planned increase in GHG pollution will reduce the effectiveness of [*insert name of municipality*]'s climate adaptation and mitigation efforts. It will decrease the effectiveness of electrification programs (deep building retrofits, EV programs) due to increased GHGs associated with electricity, discourage development of distributed renewable energy initiatives, delay municipal transition to the clean economy of the future, and prevent Ontario from meeting its GHG reduction commitment.

Ontario can phase-out its gas-fired power plants by 2030 by an integrated combination of energy efficiency investments, wind and solar energy and Quebec water power. The costs of the alternatives to gas-fired generation are <u>all less than</u> the price Ontario Power Generation's current price per kilowatt-hour (kWh) for power from nuclear plants (9.5 cents per kWh).

Ontario can increase its investments in quick-to-deploy and low-cost energy efficiency programs. Ontario can cost-effectively maximize its energy efficiency efforts by paying up to the same price for energy efficiency measures as it is currently paying for power from nuclear plants.

Ontario can become a leader in developing increasingly low-cost renewable energy resources rather than investing in high-cost nuclear re-builds. Ontario should support renewable energy projects that have costs that are below what we are paying for nuclear power and work with communities to make the most of these economic opportunities.

Quebec has offered Ontario <u>low-cost</u> 24/7 power from its massive water power system at less than onehalf the cost of the planned re-buildings of the aging Darlington and Bruce Nuclear Stations.

In addition, Quebec's system of hydro-electric reservoirs can be used like a giant battery to provide load balancing/back-up for Ontario's intermittent sources of renewable energy.

Ontario can benefit from making long-term electricity deals with its green energy-rich neighbour.

The phase-out of Ontario's gas-fired power plants will help [*Insert name of municipality*] and the Province of Ontario to achieve their greenhouse gas pollution reduction goals.

# Municipal Resolution

WHEREAS: The Government of Ontario is planning to increase electricity generation and greenhouse gas pollution from Ontario's gas-fired power plants by more than 300% by 2025 and by more than 400% by 2040, reversing more than a third of the greenhouse gas pollution reductions achieved by phasing out our coal-fired power plants;

AND WHEREAS: Greenhouse gas pollution is causing temperatures in Canada to rise at more than double the rate of the rest of the world, causing impacts to the operations and citizens of the [insert name of municipality];

AND WHEREAS: The [*insert name of municipality*] has declared a Climate Emergency and is taking measures to mitigate and adapt to the climate impacts caused by increasing greenhouse gas pollution;

AND WHEREAS: There are feasible, cost-effective alternatives to increasing gas-fired electricity generation without increasing greenhouse gas pollution at costs well below the current price for Ontario's nuclear energy (9.5 cents/kWh), including:

- energy efficiency investments;
- low-cost, distributed, renewable energy, providing employment in Ontario communities and restoring our leadership in this industry;
- the purchase of low-cost power offered by the Province of Quebec from its existing hydroelectric generating stations; and
- using Quebec's system of reservoirs like a giant battery to back-up made-in-Ontario renewable power, eliminating the need to use gas-fired power plants for this purpose;

THEREFORE BE IT RESOLVED that the [insert name of municipality] requests the Government of Ontario to place an interim cap of 2.5 megatonnes per year on the greenhouse gas pollution from Ontario's gas-fired power plants and develop and implement a plan to phase-out all gas-fired electricity generation by 2030 to help Ontario and [insert name of municipality] meet their climate targets.

AND BE IT FINALLY RESOLVED that this resolution be sent to the Premier of Ontario, the Minister of Energy, Northern Development and Mines, the Minister of the Environment, Conservation and Parks, all local MPPs and the Association of Municipalities of Ontario.

	THE CORPORATION OF THE TOWN OF COBOURG
	STAFF REPORT
COBOURG	
TO:	Mayor and Council Members
FROM:	lan D. Davey
TITLE:	Treasurer / Director of Corporate Services
DATE OF MEETING:	December 7, 2020
TITLE / SUBJECT:	Third Quarter 2020 – Operating Budget Variance Report
REPORT DATE:	November 23, 2020
1.0 STRATEGIC PLA	N

- 1.0 <u>STRATEGIC PLAN</u> Not applicable
- 2.0 <u>PUBLIC ENGAGEMENT</u> Not applicable

# 3.0 <u>RECOMMENDATION</u>

That Council receive the Third Quarter 2020 Operating Budget Variance Report for information purposes.

# 4.0 <u>ORIGIN</u>

This budget variance report covers the period from January 1, 2020 through September 30, 2020 and is intended for information purposes. When reviewing this report, please keep in mind that seasonality plays a significant role in some of the departmental variances being shown. Also please keep in mind that most of the Pandemic financial impacts did not occur until March 13, 2020 so they will be more fully reflected in this variance report for the third quarter as well as the fourth quarter.

# 5.0 BACKGROUND

The 2020 Operating Budget was approved by Council on February 3, 2020 by Resolution 22 - 20. The purpose of this report is to provide a comparison of the actual results to September 30, 2020 to the approved 2020 operating budget.

The report for the second quarter of 2019 dated November 15, 2019 as presented at Council on November 15, 2019 has been attached for your reference and comparison purposes.

# 6.0 <u>ANALYSIS</u>

The **first** page of the report is a summary of the **Revenue and Expenditures** by category.

The **revenues** represent those items specifically noted within each category of the municipal operating budget. The first column represents the total annual budget, the second, third and fourth columns are the actual cumulative revenues recorded to the end of each quarter, the fifth column is the remaining amount to reach budget over the final quarter of the year and the sixth column is the percentage required to meet budget.

Approximately 55.10% of the total budgeted revenue from sources other than property taxes have been received to the end of September 2020. The Other Direct Revenue is showing as a negative amount at September 30, 2020 as a result of two significant property tax appeals having been processed to date. The first involved the Walmart property and the second was for the Home Depot property. Both appeals involved multiple years.

The impact of the pandemic is reflected in the Parks and Recreation, Culture and Community and Commercial and Economic lines as these are all impact significantly by User Fees. The third quarter has shown some improvement with some of these facilities such as the campground, marina and the Cobourg Community Centre being able to open on a limited basis at varying points in the second half of 2020. It is clear however that there will continue to be a significant shortfall on the revenue side as a result of the second wave of the pandemic.

Property tax collections remain strong through the first three quarters of 2020 despite the deferral options provided to taxpayers as most opted to stay current on their 2020 payments.

The **expenditures** portion of page 1 has the same columns with the first column representing the total annual budget, the second, third and fourth columns are the actual cumulative expenditures to the end of each quarter, the fifth column is the budget available for the remainder of 2020 and the sixth column represents the remaining funds as a percentage of the total annual budget.

Approximately 66% of the total budgeted expenditures have been spent as of September 30, 2020. The reduction in staffing levels, particularly in the Parks and Recreation section, is reflected in the actual expenditures to September 30, 2020.

The difference between the total budgeted revenue of \$15,059,887 and the total budgeted expenditures of \$39,746,879 is shown at the bottom of the page in the amount of **\$24,686,992** and represents the **Municipal Tax Levy** which agrees to the approved operating budget.

The **second** page of the report provides a further breakdown of the **revenue** received to September 30, 2020 by department which supports the figures shown on the summary page (Page 1).

The remaining pages, 3 to 5, provide a similar departmental breakdown of **expenditures** made to September 30, 2020 by department and support the expenditure amounts as shown on the summary page (Page 1).

A 2020 **capital projects** status report was provided to Council as a separate report as part of the financial update to Council on the impact of the pandemic as presented on October 20, 2020 and this will be updated again as part of the 2021 capital budget approval process.

- 7.0 <u>FINANCIAL IMPLICATIONS/BUDGET IMPACT</u> Not applicable.
- 8.0 CONCLUSION

This report has been provided to Council and Members of the Public for information purposes.

If there are specific questions on any of this information, I would be pleased to provide an answer to them.

- 9.0 <u>POLICIES AFFECTING THE PROPOSAL</u> Not applicable
- 10.0 COMMUNICATION RESULTS

The report is a public document prepared internally and intended as high level overview of the results of operations of the municipality for the first three quarters of 2020 and is available to anyone wanting to review it.

# 11.0 ATTACHMENTS

Third Quarter 2020 – Operating Budget Variance Report Third Quarter 2019 – Operating Budget Variance Report

# 12.0 AUTHORIZATION ACKNOWLEDGMENT

Respectfully submitted,

lan D. Davey, BBA CPA CA Treasurer / Director of Corporate Services

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Tracey Vaughan Chief Administrative Officer

Council operating budget report Q3 2020

# **OPERATING BUDGET**

# **VARIANCE REPORT**

**THIRD QUARTER – 2020** 

# JANUARY 1, 2020 to SEPTEMBER 30, 2020

Prepared and submitted by: Ian D. Davey BBA CPA CA Treasurer/Director of Corporate Services November 23, 2020

## **BUDGET VARIANCE REPORT**

# FOR THE PERIOD ENDED SEPTEMBER 30, 2020

SUMMARY					\$	%
	ANNUAL	YTD	YTD			REMAINING
REVENUE	BUDGET	MARCH 31/20	JUNE 30/20	SEPT 30/20	BUDGET	BUDGET
General government	198,500.00	EA 571 00	72 024 02	447 044 00	04 400 00	40.00
Protection services	3,455,132.00	54,571.02	73,834.02	•	•	40.90
Public Works		732,468.77	1,723,010.11	3,000,430.60		13.16
Environmental	880,500.00	81,624.14	96,761.83		•	77.10
	6,535,755.00	1,496,310.74	2,718,244.45		2,644,417.38	40.46
Parks & Recreation	2,848,040.00	295,060.63	422,780.67	1,017,715.70	1,830,324.30	64.27
Culture & Community	203,050.00	36,179.06	27,774.73		179,021.57	88.17
Planning & Residential	130,000.00	34,014.63	55,029.83		41,660.37	32.05
Commercial & Economic	172,000.00	15,391.92	15,942.92	•	93,580.43	54.41
Other Direct Revenue	636,910.00	150,465.00	-268,306.00	-120,706.00	757,616.00	118.95
	15,059,887.00	2,896,085.91	5,133,378.56	8,419,187.76	6,761,405.24	44.90
EXPENDITURES General government Protection	3,484,696.00 13,288,638.00	783,911.00 3,330,416.96	1,539,739.15 6,448,040.33	2,392,507.32 9,662,232.03	1,092,188.68 3,626,405.97	31.34 27.29
Public Works	5,856,481.00	1,335,825.56	2,352,315.51	3,665,076.91	2,191,404.09	37.42
Environmental	6,659,680.00	1,284,757.10	2,848,215.23	4,480,869.64	2,178,810.36	32.72
Social & Family	31,000.00	23,923.84	12.094.84	19,574.42	11,425.58	36.86
Parks & Recreation	6,750,536.00	1,100,220.92	2,220,483.36	3,691,353.91	3,059,182.09	45.32
Culture & Community	1,932,497.00	664,454.05	991,753.81	1,379,765.78	552,731.22	28.60
Planning & Residential	585,773.00	118,061.47	240,014.09	372,807.25	212,965.75	36.36
Commercial & Economic	805,594.00	125,901.03	271,506.53	383,421.52	422,172.48	52.41
Capital Levy	351,984.00	87,996.00	175,992.00	263,988.00	87,996.00	25.00
	39,746,879.00	8,855,467.93	16,924,162.85	26,047,608.78	13,435,282.22	33.80

MUNICIPAL LEVY

24,686,992.00 \_\_\_\_\_

# BUDGET VARIANCE REPORT

# FOR THE PERIOD ENDED SEPTEMBER 30, 2020

REVENUE

REVENUE					\$	%
	ANNUAL	YTD	YTD	YTD	REMAINING	REMAINING
	BUDGET	MARCH 31/20	JUNE 30/20	SEPT 30/20	BUDGET	BUDGET
GENERAL GOVERNMENT			00112 00.20	01	000001	DODOLI
Clerks	171,300	49,566.02	64,909.02	101,901.02	69,398.98	40.51
Finance	19,000	5,005.00	8,925.00	15,410.00	3,590.00	18.89
	190,300	54,571.02	73,834.02	117,311.02	72,988.98	38.35
PROTECTION SERVICES						
Fire	13,500	3,505.50	3,805.50	3,880.50	9,619.50	71.26
Police	65,000	9,979.43	10,102.92	18,779.33	46,220.67	71.11
Police - Business Services	2,947,632	643,042.53	1,558,397.90	2,342,289.56	605,342.44	20.54
Building Department	410,000	72,941.31	141,653.79	624,081.21	-214,081.21	-52.21
Property Standards	19,000	3,000.00	9,050.00			
Toperty Standards			9,050.00	11,400.00	7,600.00	40.00
	3,455,132	732,468.77	1,723,010.11	3,000,430.60	454,701.40	13.16
PUBLIC WORKS	*******		************************			
Engineering review fees	70,000	0.00	6,926.00	64,680.72	5,319.28	7.60
Parking enforcement	687,500	55,153.29	61,839.62	105,594.86	581,905.14	84.64
Transit	123,000					
italisit	123,000	26,470.85	27,996.21	31,329.61	91,670.39	74.53
	880,500	81,624.14	96,761.83	201,605.19	678,894.81	77.10
ENVIRONMENTAL	***************************************		***********	**********************	******************	=============
WPCP 1	6,535,755	1,496,310.74	2,718,244.45	3,891,337.62	3.817.510.55	58.41
					=	=======================================
PARKS & RECREATION						
Parks Administration	156,000	980.00	555.00	16,496.00	139,504.00	89.43
Marina	707,540	-1,363.00	32,199.18	401,923.17	305,616.83	43.19
Trailer Park	313,000	1,512.00	1,044.00	181,299.85	131,700.15	42.08
Dredging	105,000	0.00	44,647.20	44,647.20	60,352.80	57.48
Arena	26,200	9,825.00	12,100.00	13,600.00	12,600.00	48.09
Cobourg Community Centre	1,400,570	267,466.18	295,257.62	311,561.81	1,089,008.19	77.75
Seniors Activity Centre	102,730	16,640.45	36,977.67	48,187.67	54,542.33	53.09
Legion Fields	37,000	0.00	0.00	0.00	37,000.00	100.00
						100.00
	2,848,040	295,060.63	422,780.67	1,017,715.70	1,830,324.30	64.27
CULTURE & COMMUNITY	<b> </b>	******				
Concert Hall	181,050	20,563.57	12,454.24	8,177.94	172,872.06	95.48
Market Building	22,000	15,615.49	15,320.49	15,850.49	6,149.51	27.95
-	203,050	36,179.06	27,774.73	24,028.43	179,021.57	
	200,000			24,020.43	==	00.17
PLANNING & RESIDENTIAL						
Planning	115,000	32,814.63	48,554.83	76,264.63	38,735.37	33.68
Comm. of Adjustment	15,000	1,200.00	6,475.00	12,075.00	2,925.00	19.50
	130,000	34,014.63	55,029.83	88,339.63	41,660.37	32.05
COMMERCIAL & ECONOMIC						
Venture 13	127,500	15,337.50	15,887.50	23,637.50	103,862.50	81.46
Tourism	44,500	54.42	55.42	54,782.07	-10,282.07	-23.11
		v-1.7∠		·····	-10,202.07	-2.3.11
	172,000	15,391.92	15,942.92	78,419.57	93,580.43	54.41
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Operating Budget Variance Report - Page 2

### BUDGET VARIANCE REPORT

# FOR THE PERIOD ENDED SEPTEMBER 30, 2020

## EXPENDITURES

ANNUAL         YTD         YTD         YTD         REMAINING BUIDGET         REMAINING BUIDGET           GENERAL GOVERNMENT Canol         355,930         77,734.34         188,625.35         285,312.11         70,617.89         19.84           CAO         260,877         11,451.39         210,376.44         32,334.38         228,492.62         78,930.90         77,784.34         188,625.35         285,312.11         70,617.89         19.84           Clerks         444,184         109,167.58         192,953.95         295,222.22         188,981.78         39.03           Information Technology         340,530         79,384.24         162,948.98         243,051.75         97,478.25         226.65           Communications         7220,040         -36,000.00         -72,000.00         -108,000.00         35,00.00         25.00           Prisonnel         517,558         89,914.17         20,140.17         390,396.52         137,91.14.8         26.51           Police         763.496         182,853.15         40,241.02         52,988.56         13,44         396.53           Court Security         2,995,435         652,554.80         1,365.973.81         1,239,018.81         21,403.81         854.966.81         24.50           Police	EXPENDITURES					\$	%
GENERAL GOVERNMENT Cauncil         355,930         77,734.34         188,625.35         285,312.11         70,617.89         19.84           CAO         260,977         11,461.92         102,953.95         295,222.22         186,861.78         30.03           Finance         679,206         192,862.12         361,161.75         595,875.09         120,730.91         17,78           Information Technology         340,530         79,854.24         182,156.98         243,051.75         97,478.25         28.63           Communications         255,514         99,746.21         20,161.4         255,558.91         25,554.91         11,519           Victoria Hall         722,047         145,827.150         311,014.30         476,330.49         245,666.51         34.02           Financial         144,000         -36,000.00         -72,000.00         -108,000.00         -36,000.00         25,000         217,191.48         26.51           Health & Safety         12,850         3,354.95         3,354.95         3,354.95         9,495.05         73.89           Strip File         2.96,435         652,554.80         1,359,073.16         2,392,607.32         1,092,186.68         31.34           Police Service Board         5.763.486         1,452,427.13							
Council         355,930         77,73.34         188.623.35         285,312.11         7017.89         19.84           CAO         260,977         11.467.39         210,376         32.383.38         228.492.22         87.59         93.03           Finance         679,206         192.865.365         255,222.22         18.861.78         39.03           Communications         79.854.24         182,545.96         255,551.91         27.574.91         11.57.7           Victoria Hall         722,047         145,827.160         311.014.30         476,380.49         256,561.1         34.02           Financial         -144,000         -36,000.00         -72.000         -0168,000.00         -36,000.00         25.000           Personnel         517.558         99.314.17         208,146.17         390.365.22         137.191.48         25.51           Police         5.783.486         1.642.822.13         3.082.400.41         4.524.467.52         122.801.88         21.40.438.19         854.996.81         24.54           Police Service Board         5.783.486         1.642.225.265         367.478.83         124.527.78         53.372.22         22.12         22.22         22.22         22.22         22.22         22.22         22.22         22.22		BUDGET	MARCH 31/20	JUNE 30/20	SEPT 30/20	BUDGET	BUDGET
Council         355,930         77,73.34         188.623.35         285,312.11         7017.89         19.84           CAO         260,977         11.467.39         210,376         32.383.38         228.492.22         87.59         93.03           Finance         679,206         192.865.365         255,222.22         18.861.78         39.03           Communications         79.854.24         182,545.96         255,551.91         27.574.91         11.57.7           Victoria Hall         722,047         145,827.160         311.014.30         476,380.49         256,561.1         34.02           Financial         -144,000         -36,000.00         -72.000         -0168,000.00         -36,000.00         25.000           Personnel         517.558         99.314.17         208,146.17         390.365.22         137.191.48         25.51           Police         5.783.486         1.642.822.13         3.082.400.41         4.524.467.52         122.801.88         21.40.438.19         854.996.81         24.54           Police Service Board         5.783.486         1.642.225.265         367.478.83         124.527.78         53.372.22         22.12         22.22         22.22         22.22         22.22         22.22         22.22         22.22	GENERAL GOVERNMENT						
CAO         220.977         11,451.39         21,037.64         32,384.38         228,492.62         87,59           Clerkis         444,144         109,075.68         192,953.95         595.292.22         188,961.76         590.03           Information Technology         340.850.7         386.424         162,248.98         240.051.76         97,478.25         28.63           Uctoria Hall         722,047         145,821.50         311.044.30         476.380.40         245,666.51         34.02           Financel         617,583         99,914.17         208,146.17         380.386.52         137,191.45         245.65           Protectron SErvices         12,850         3,354.95         3,354.95         3,484.56         31.34           Prote Service Board         87,763,486         1,642,822.13         3,082,430.41         4,524,467.62         1,230,108.33         21.50           Police Service Board         87,467,188,881.5         40,021.02         52,381.244         43.20         24.840.46         43.23         43.64         43.05           Corm Security         295,127         207,960.27         364,407.66         472,271.62         128.495.44         43.20         24.36.53         34.578.44         39.53         22.02         23.778.44		355 930	77 734 34	188,625,35	285.312.11	70.617.89	19.84
Clerks         440,164         100,167,58         192,953,95         295,222,22         188,961,78         39,03           Finance         679,206         192,265,315         196,161,67         188,961,78         39,03         17,78           Information Technology         340,830         79,854,24         162,548,98         243,061,75         97,478,25         28,651         311,014,30         275,631,061,42         225,666,51         314,07         340,000,00         25,606,51         340,02         77,6380,49         245,666,51         340,02         25,606,51         340,02         25,606,51         340,02         25,606,51         340,02         25,606,51         33,000,00         25,00         73,89         1,052,173,81,15         2,392,507,32         1,092,188,66         311,34           Protec         5,763,486         1,662,822,13         3,082,430,41         4,524,467,62         1,238,138         21,50         73,88         34,578,44         39,53         21,50         73,64,46         36,50,78,4         2,140,438,19         864,996,61         28,54         96,16         23,25,07,32         1,092,188,66         31,34         92,51         30,50,21,50,32         1,01,61,32         2,150         73,44,46         44,52,467,62         1,23,61,41,83,51         1,62,54,467,62         1,23,5						•	
Finance         679,206         192,663,21         361,951,67         558,475.09         122,030,91         17,78           Information Technology         360,500         79,846,24         162,248,98         243,061,75         97,478,25         28,63         11,67           Victoria Hall         722,047         145,821,50         311,014,30         478,380,40         246,566,51         34,02           Financial         -144,000         -36,000,00         -72,000,00         -108,000,00         -36,000,00         25,00           Personnel         517,553         99,543,5         2,334,945         3,344,95         3,344,95         3,344,95         3,344,95         3,344,95         3,344,95         3,344,95         3,344,95         3,344,95         3,344,95         3,344,95         3,344,95         3,457,85         9,496,61         22,54           Police         5,763,468         1,42,222,13         3,082,430,41         4,524,467,62         1,239,018,38         21,50         22,82         1,239,018,38         21,50         22,82         1,239,018,38         21,50         22,41,620         22,82,163         3,144         524,57,78         35,372,22         22,21         12,839,018,38         22,55,78,48         1,228,56,78,48         1,228,57,78         35,500         1,273,							
Information Technology         340,530         79,864.24         162,548.88         243,051.75         97,478.25         28,654.19           Communications         225,551.4         99,746.22         162,106.14         225,599.81         225,564.19         11.57           Victoria Hall         722,047         146,821.50         311,014.30         476,380.49         245,666.51         34.02           Personnel         517,658         99,914.17         208,146.17         380,386.52         137,191.48         26,551           Health & Safety         1,2800         3,354.95         3,354.95         3,354.95         3,354.95         3,134           Police         5,763,468         1,462,422.13         3,082,430.41         4,524.467.62         1,239,018.38         21.50           Police Service Board         87,467         18,889.15         40,261.02         52,888.66         3,478.44         39,53           Communications Centre         0         0,00         0,00         1,000,07         124,049.3         50,00           Minal Control         110,152         3,330,416.96         6,448,040.33         9,652,230.3         3,62,459.47         43,342         43,430         56,231           By-Law Enforcement         40,000         67,121.83 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
Communications         255,514         99,749.62         162,105.14         225,593.91         225,554.91         11.57           Victoria Hall         722,047         145,821.50         311.014.30         476,380.49         245,666.51         34.02           Presonnel         517,558         99,914.17         208,146.17         380,386.52         137,191.48         26.51           Health & Safety         12,850         3,354.95         3,354.95         3,354.95         3,354.95         3,495.05         73.89           PROTECTION SERVICES         Fire         2,995,435         652,554.80         1,365,907.84         2,140,438.19         854,996.81         28.54           Police         5,763,466         1,642,822.13         3,022,430.41         4,524,467.62         1,239,018.38         21.50           Police Facilities         159,900         32,663.95         75,683.36         1,24527.78         357.222.22.12         124,927.78         357.222.22.12         124,927.78         357.222.22.12         124,950.07         124,050.07         124,049.93         50.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>28.63</td>							28.63
Victoria Hall         722,047         145,821.50         311,014.30         476,380.90         245,666.51         34.02           Financial         -144,000         -36,000.00         -72,000.00         -36,000.00         -56,000.00				,	•		11.57
Financial         -144,000         -36,000.00         -72,000.00         -108,000.00         -36,000.00         25,000           Personnel         517,558         99,914.17         206,146.17         30,366.52         137,191.48         26,51           Main         12,850         3,354.95         3,354.95         3,354.95         3,354.95         9,495.05         73,89           State         3,484,696         783,911.00         1,539,739.15         2,392,507.32         1,092,188.68         311.34           Protectrion SERVICES         Fire         2,995,435         652,554.80         1,365,907.84         2,140,438.19         854,996.81         28,54           Police         5,763,486         1,642,822.13         3,082,430.41         4,524,467.62         1,239,018.38         21.50           Court Security         296,127         207,960.27         364,407,66         472,271.62         -176,144.62         -59.48           Police Facilities         159,000         32,863.95         75,683.38         124,557.78         353,722.22         22,12           Buisiness Services         2,947,632         53,130.73         1,059,150.41         1674,143.05         43,40.52         43,83           Properly Standards         39,333         12,028,94							34.02
Personnel         517,558         99,914.17         208,146,17         380,366,52         137,191.48         26.51           Health & Safety         12,850         3,354,95         3,354,95         3,354,95         9,495,05         73,89           Status         3,484,696         783,911.00         1,539,739.15         2,392,507.32         1,092,188,68         31.34           PROTECTION SERVICES         Fire         2,995,435         652,554.80         1,365,907,84         2,140,438.19         854,996.81         28.54           Police         5,763,486         1,642,822.13         3,082,430.41         4,524,467.62         1,239,018.38         21.55         2.291,763.22         22.22         22.21         22.863.65         34,577.84         353,722.2         22.22         22.21         22.863.25         75,693.38         124,527.78         35,372.22         22.21         22.00         22.00         0.00	Financial				-108,000.00	-36,000.00	25.00
Health & Safety         12,850         3,354.95         3,354.95         3,354.95         9,495.05         73.89           PROTECTION SERVICES	Personnel					137,191.48	26.51
PROTECTION SERVICES	Health & Safety		3,354.95	3,354.95	3,354.95	9,495.05	73.89
PROTECTION SERVICES         Fire         2.995,435         652,554.80         1.365,907.84         2.140,438.19         854,996.81         28.54           Police         5.763,486         1.642,822.13         3.082,430.41         4.524,476.52         1.239,018.38         21.50           Police Service Board         87,467         18.888.15         40,261.02         52.888.56         34,578.44         39.53           Court Security         296,127         207,960.27         364,407.66         472,271.62         -176,144.62         -59.48           Police Facilities         159,900         32.863.95         75,683.38         1273,448.40         43.20           Communications Centre         0         0.00		3,484,696	783,911.00	1,539,739.15	2,392,507.32		
Fire         2.995,435         662,554.80         1.365,907.84         2.140,438.19         854,996.81         28.54           Police         5.763,486         1.642,822.13         3.082,430.41         4.524,467.62         1.239,018.38         21.50           Police Service Board         67,467         18.888.15         40,261.02         52,888.56         34,578.44         39.53           Court Security         296,127         207,980.27         364,407.66         472,271.62         -176,144.62         -59.48           Police Facilities         159,900         32,863.96         75,683.81         124,527.78         353,722.22         221.12           Business Services         2.947,632         536,130.73         1.059,150.41         1,674,183.80         1,273,448.40         43.20           Communications Centre         0         0.0					**********************		
Police         5,763,486         1,642,822,13         3,082,430,41         4,524,467,62         1,239,018,38         21,60           Police Service Board         87,467         18,888,15         40,261,02         52,888,56         34,578,44         39,53           Court Security         296,127         207,960,27         364,407,66         472,271,68         35,372,22         22,22         22,22         22,22         22,247,632         538,130,73         1,059,150,41         1,674,183,60         1,273,448,40         43,20           Communications Centre         0         0.00	PROTECTION SERVICES						
Police Service Board         87,467         18,888.15         40,261.02         52,888.56         34,578.44         39.53           Court Security         296,127         207,950.27         364,407.66         472,271.62         -176,144.62         -59,48           Police Facilities         159,900         32,863.35         75,683.38         124,527.78         35,372.22         22,12         22,21           Business Services         2,947,632         538,130.73         1,059,150.41         1,674,183.60         1,273,448.40         43,20           Communications Centre         0         0.00 </td <td>Fire</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Fire						
Court Security         286,127         207,960.27         364,407,66         472,271,62         -176,144,62         -59,48           Police Facilities         159,900         32,863,95         75,683,38         124,527,78         35,372,22         22,12           Business Services         2,947,632         538,130,71         1,059,150,41         1,674,183,60         1,273,448,40         43,20           Communications Centre         0         0.03         3.65         3.63         3.43         3.63         3.44         3.63         3.43         3.62         3.65         3.003         3.65         3.64         41.22,72         3.62         4.56         3.63         3.63         3.63         3.63	Police						
Police Facilities         159.900         32,863.95         75,683.38         124,527.78         35,372.22         22.12           Business Services         2,947,632         538,130.73         1,059,150.41         1,674,183.60         1,273,448.40         43.20           Communications Centre         0         0.00         0.00         0.00         0.00         0.00         0.00           Conservation Authority         248,100         62,025.00         124,050.07         124,049.93         50.00           Animal Control         101,632         32,033.80         57,291.48         44,340.52         43.63           Building Department         410,000         67,121.63         136,679.46         272,938.84         137,061.16         33.43           Property Standards         93,353         12,028.94         27,123.23         42,654.71         50,698.29         54.31           Emergency Management         136,466         43,122.86         65,256.89         95,672.322.03         3,626,405.97         27.29           13,288,638         3,330,416.96         6,448,040.33         9,662,232.03         3,626,405.97         27.29           Fingineering         402,258         68,280.69         130,011.91         218,540.18         183,717.82         45.67		•					
Business Services         2,947,632         538,130.73         1,059,150.41         1,674,183.60         1,273,448.40         43.20           Communications Centre         0         0.00<	2						
Communications Centre Conservation Authority         0         0.00 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Conservation Authority Animal Control         248,100         62,025.00         124,050.07         124,050.07         124,049.93         50.00           Animal Control         101,632         32,033.80         57,291.48         57,291.48         44,340.52         43.63           Building Department         410,000         67,121.63         136,679.46         272,938.84         137,061.16         33.43           Property Standards         93,353         12,028.94         27,123.23         42,654.71         50,698.29         54.31           By-Law Enforcement         136,456         43,122.86         65,266.89         95,476.45         40,979.55         30.03           By-Law Enforcement         49,050         20,864.70         49,798.48         81,043.11         -31,993.11         -65.23           PUBLIC WORKS         Image: Standards         3,30,416.96         6,448,040.33         9,662,232.03         3,626,405.97         27.29           Bridges         1,150         266.56         286.56         88.344         76.82         9.01           Public Works         2,284,891         412,879.03         820,432.37         1,194,821.85         1,090,069.15         47.71           Bridges         1,150         266.56         286.56         88.244			,				
Animal Control         101,632         32,033,80         57,291,48         57,291,48         44,340,52         43,63           Building Department         410,000         67,121,63         136,679,46         272,938,84         137,061,16         33,43           Property Standards         93,353         12,028,94         27,123,23         42,654,71         50,698,29         54,31           Emergency Management         136,456         43,122,86         65,256,89         95,476,45         40,979,55         30,03           By-Law Enforcement         49,050         20,864,70         49,798,48         81,043,11         -31,993,11         -65,23           I3,288,638         3,330,416,96         6,448,040,33         9,662,232,03         3,626,405.97         27,29           I3,288,638         3,330,416,96         64,48,040,33         9,662,232,03         3,626,405.97         27,29           PUBLIC WORKS         2,284,891         412,879,03         820,432,37         1,194,821,85         1,090,069,15         47,71           Bridges         1,150         266,56         266,56         286,56         883,44         76.82           Roadside Grass         0         303,06         5,448,49         15,995,33         -15,995,33         0.00							
Building Department Property Standards         410,000         67,121.63         136,679.46         272,938.84         137,061.16         33.43           Property Standards         93,353         12,028.94         27,123.23         42,654.71         50,698.29         54.31           Emergency Management         136,456         43,122.86         65,256.89         95,476.45         40,979.55         30.03           By-Law Enforcement         132,288,638         3,330,416.96         6,448,040.33         9,662,232.03         3,626,405.97         27.29           PUBLIC WORKS         Image and the standard standa							
Property Standards Emergency Management         93,353         12,028,94         27,123,23         42,654.71         50,698,29         54.31           Emergency Management         136,456         43,122,86         65,256.89         95,476.45         40,979.55         30.03           By-Law Enforcement         49,050         20,864.70         49,798.48         81,043.11         -31,993.11         -65.23           I3,288,638         3,330,416.96         6,448,040.33         9,662,232.03         3,626,405.97         27.29           Figineering         402,258         68,280.69         130,011.91         218,540.18         183,717.82         45.67           GIS         184,557         44,546.68         87,956.34         167,930.47         16,626.53         9.01           Public Works         2,284,891         412,879.03         820,432.37         1,194,821.85         1,090,069.15         47.71           Bridges         1,150         266.56         266.56         283.44         76.82           Roadside Grass         0         0.00         0.00         0.00         0.00         0.00           Storm Drain System         50,000         22,236.04         83,242.52         150,799.70         -201.60           Roadside Litter <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
Emergency Management By-Law Enforcement         136,456         43,122.86         65,256.89         95,476.45         40,979.55         30.03           By-Law Enforcement         49,050         20,864.70         49,798.48         81,043.11         -31,993.11         -65.23           13,288,638         3,330,416.96         6,448,040.33         9,662,232.03         3,626,405.97         27.29           PUBLIC WORKS           Engineering         402,258         68,280.69         130,011.91         218,540.18         183,717.82         45.67           GIS         184,557         44,546.68         87,956.34         167,930.47         16,626.53         9.01           Public Works         2,284,891         412,879.03         820,422.37         1,194,821.85         1,090,069.15         47.71           Bridges         1,150         266.56         24.94.45         -77.80							
By-Law Enforcement         49,050         20,864.70         49,798.48         81,043.11         -31,993.11         -65.23           13,288,638         3,330,416.96         6,448,040.33         9,662,232.03         3,626,405.97         27.29           PUBLIC WORKS         Engineering         402,258         68,280.69         130,011.91         218,540.18         183,717.82         45.67           GIS         184,557         44,546.68         87,956.34         167,930.47         16,626.53         9.01           Public Works         2,284,891         412,879.03         820,432.37         1,194,821.85         1,090,069.15         47.71           Bridges         1,150         266.56         266.56         286.44         76.82           Roadside Grass         0         303.06         5,484.89         15,995.33         0.00           Forestry (moved to parks)         0         0.00         0.00         0.00         0.00         0.00           Roadside Litter         31,100         5,227.29         44,669.72         55,294.45         -24,194.45         -77.80           Hardtop Maintenance         130,000         51,104.57         83,213.77         172,171.07         -36,171.07         -26.60           Winter Maintenance							
PUBLIC WORKS         13.288.638         3.330,416.96         6.448,040.33         9.662,232.03         3.626,405.97         27.29           PUBLIC WORKS         Engineering         402,258         68,280.69         130,011.91         218,540.18         183,717.82         45.67           GIS         184,557         44,646.68         87,956.34         167,930.47         16,626.53         9.01           Public Works         2,284,891         412,879.03         820,432.37         1,194,821.85         1,090,069.15         47.71           Bridges         1,150         266.56         266.56         286.56         883.44         76.82           Roadside Grass         0         303.06         5,484.89         15,995.33         -15,995.33         0.00           Storm Drain System         50,000         22,836.04         83,242.52         150,799.70         -100,799.70         -201.60           Roadside Litter         31,100         5,227.29         44,669.72         55,294.45         -24,194.45         -77.80           Hardtop Maintenance         93,500         15,085.23         41,049.36         51,975.95         41,524.05         44.41           Safety Devices         136,000         51,70.71         -266.60         Winter Maintenance							
PUBLIC WORKS         Engineering         402,258         68,280.69         130,011.91         218,540.18         183,717.82         45.67           GIS         184,557         44,546.68         87,956.34         167,930.47         16,626.53         9.01           Public Works         2,284,891         412,879.03         820,432.37         1,194,821.85         1,090,069.15         47.71           Bridges         1,150         266.56         266.56         266.56         883.44         76.82           Roadside Grass         0         303.06         5,484.89         15,995.33         -15,995.33         0.00           Forestry (moved to parks)         0         0.00         0.00         0.00         0.00         0.00         0.00           Roadside Litter         31,100         5,227.29         44,669.72         55,294.45         -24,194.45         -77.80           Hardtop Maintenance         93,500         15,085.23         41,049.36         51,975.95         41,524.05         44.41           Safety Devices         136,000         51,975.00         256,350.00         440,197.82         72,502.18         14.14           Sidewalks         49,500         8,247.25         25,185.53         173,510.71         -226,0375.52	By-Law Enforcement	49,050	20,864.70	49,798.48	81,043.11	-31,993.11	-65.23
Engineering402,25868,280.69130,011.91218,540.18183,717.8245.67GIS184,55744,546.6887,956.34167,930.4716,626.539.01Public Works2,284,891412,879.03820,432.371,194,821.851,090,069.1547.71Bridges1,150266.56266.56266.56883.4476.82Roadside Grass0303.065,484.8915,995.33-15,995.330.00Forestry (moved to parks)00.000.000.000.000.00Storm Drain System50,00022,836.0483,242.52150,799.70-100,799.70-201.60Roadside Litter31,1005,227.2944,669.7255,294.45-24,194.45-77.80Hardtop Maintenance93,50015,085.2341,049.3651,975.9541,524.0544.41Safety Devices136,00051,104.5783,213.77172,171.07-36,171.07-26.60Winter Maintenance160,500179,736.33186,131.40186,875.52-26,375.52-16.43Long-term debt512,700128,750.00256,350.00440,197.8272,502.1814.14Sidewalks49,5008,247.2525,185.53173,510.71-124,010.71-250.53Parking Lots137,27540,058.2354,278.1592,467.4844,807.5232.64Parking enforcement550,22530,718.6531,776.7439,286.37510,938.6392.86Transit875,526223,233.		13,288,638	3,330,416.96	6,448,040.33	9,662,232.03	, ,	
Engineering402,25868,280.69130,011.91218,540.18183,717.8245.67GIS184,55744,546.6887,956.34167,930.4716,626.539.01Public Works2,284,891412,879.03820,432.371,194,821.851,090,069.1547.71Bridges1,150266.56266.56266.56883.4476.82Roadside Grass0303.065,484.8915,995.33-15,995.330.00Forestry (moved to parks)00.000.000.000.000.00Storm Drain System50,00022,836.0483,242.52150,799.70-100,799.70-201.60Roadside Litter31,1005,227.2944,669.7255,294.45-24,194.45-77.80Hardtop Maintenance93,50015,085.2341,049.3651,975.9541,524.0544.41Safety Devices136,00051,104.5783,213.77172,171.07-36,171.07-26.60Winter Maintenance160,500179,736.33186,131.40186,875.52-26,375.52-16.43Long-term debt512,700128,750.00256,350.00440,197.8272,502.1814.14Sidewalks49,5008,247.2525,185.53173,510.71-124,010.71-250.53Parking Lots137,27540,058.2354,278.1592,467.4844,807.5232.64Parking enforcement550,22530,718.6531,776.7439,286.37510,938.6392.86Transit875,526223,233.							
GIS         184,557         44,546.68         87,956.34         167,930.47         16,626.53         9.01           Public Works         2,284,891         412,879.03         820,432.37         1,194,821.85         1,090,069.15         47.71           Bridges         1,150         266.56         266.56         266.56         883.44         76.82           Roadside Grass         0         303.06         5,484.89         15,995.33         -15,995.33         0.00           Forestry (moved to parks)         0         0.00         0.00         0.00         0.00         0.00         0.00           Storm Drain System         50,000         22,836.04         83,242.52         150,799.70         -100,799.70         -201.60           Roadside Litter         31,100         5,227.29         44,669.72         55,294.45         -24,194.45         -77.80           Hardtop Maintenance         93,500         15,085.23         41,049.36         51,975.95         41,524.05         44.41           Safety Devices         136,000         51,104.57         83,213.77         172,171.07         -36,171.07         -26.60           Winter Maintenance         160,500         179,736.33         186,131.40         186,875.52         -26,375.52 <td< td=""><td></td><td>402 258</td><td>68 280 69</td><td>130 011 91</td><td>218 540 18</td><td>183 717 82</td><td>45.67</td></td<>		402 258	68 280 69	130 011 91	218 540 18	183 717 82	45.67
Public Works         2,284,891         412,879.03         820,432.37         1,194,821.85         1,090,069.15         47.71           Bridges         1,150         266.56         266.56         266.56         883.44         76.82           Roadside Grass         0         303.06         5,484.89         15,995.33         -15,995.33         0.00           Forestry (moved to parks)         0         0.00         0.00         0.00         0.00         0.00           Storm Drain System         50,000         22,836.04         83,242.52         150,799.70         -100,799.70         -201.60           Roadside Litter         31,100         5,227.29         44,669.72         55,294.45         -24,194.45         -77.80           Hardtop Maintenance         93,500         15,085.23         41,049.36         51,975.95         41,524.05         44.41           Safety Devices         136,000         51,104.57         83,213.77         172,171.07         -36,171.07         -266.00           Winter Maintenance         160,500         179,736.33         186,131.40         186,875.52         -26,375.52         -16.43           Long-term debt         512,700         128,750.00         256,350.00         440,197.82         72,502.18         14.14				•	,		
Bridges         1,150         266.56         266.56         266.56         883.44         76.82           Roadside Grass         0         303.06         5,484.89         15,995.33         -15,995.33         0.00           Forestry (moved to parks)         0         0.00         0.00         0.00         0.00         0.00           Storm Drain System         50,000         22,836.04         83,242.52         150,799.70         -100,799.70         -201.60           Roadside Litter         31,100         5,227.29         44,669.72         55,294.45         -24,194.45         -77.80           Hardtop Maintenance         93,500         15,085.23         41,049.36         51,975.95         41,524.05         44.41           Safety Devices         136,000         51,104.57         83,213.77         172,171.07         -36,171.07         -26.60           Winter Maintenance         160,500         179,736.33         186,131.40         186,875.52         -26,375.52         -16.43           Long-term debt         512,700         128,750.00         256,350.00         440,197.82         72,502.18         14.14           Sidewalks         49,500         8,247.25         25,185.53         173,510.71         -124,010.71         -250.53     <							
Roadside Grass0303.065,484.8915,995.33-15,995.330.00Forestry (moved to parks)00.000.000.000.000.000.00Storm Drain System50,00022,836.0483,242.52150,799.70-100,799.70-201.60Roadside Litter31,1005,227.2944,669.7255,294.45-24,194.45-77.80Hardtop Maintenance93,50015,085.2341,049.3651,975.9541,524.0544.41Safety Devices136,00051,104.5783,213.77172,171.07-36,171.07-26.60Winter Maintenance160,500179,736.33186,131.40186,875.52-26,375.52-16.43Long-term debt512,700128,750.00256,350.00440,197.8272,502.1814.14Sidewalks49,5008,247.2525,185.53173,510.71-124,010.71-250.53Parking enforcement550,22530,718.6531,776.7439,286.37510,938.6392.86Transit875,526223,233.63342,440.50497,285.50378,240.5043.20Crossing Guards77,99917,869.8217,869.8222,433.0055,566.0071.24Street Lighting309,30086,682.50141,955.93185,224.95124,075.0540.11							
Forestry (moved to parks)00.000.000.000.000.000.00Storm Drain System50,00022,836.0483,242.52150,799.70-100,799.70-201.60Roadside Litter31,1005,227.2944,669.7255,294.45-24,194.45-77.80Hardtop Maintenance93,50015,085.2341,049.3651,975.9541,524.0544.41Safety Devices136,00051,104.5783,213.77172,171.07-36,171.07-26.60Winter Maintenance160,500179,736.33186,131.40186,875.52-26,375.52-16.43Long-term debt512,700128,750.00256,350.00440,197.8272,502.1814.14Sidewalks49,5008,247.2525,185.53173,510.71-124,010.71-250.53Parking Lots137,27540,058.2354,278.1592,467.4844,807.5232.64Parking enforcement550,22530,718.6531,776.7439,286.37510,938.6392.86Transit875,526223,233.63342,440.50497,285.50378,240.5043.20Crossing Guards77,99917,869.8217,869.8222,433.0055,566.0071.24Street Lighting309,30086,682.50141,955.93185,224.95124,075.0540.11							
Storm Drain System         50,000         22,836.04         83,242.52         150,799.70         -100,799.70         -201.60           Roadside Litter         31,100         5,227.29         44,669.72         55,294.45         -24,194.45         -77.80           Hardtop Maintenance         93,500         15,085.23         41,049.36         51,975.95         41,524.05         44.41           Safety Devices         136,000         51,104.57         83,213.77         172,171.07         -36,171.07         -26.60           Winter Maintenance         160,500         179,736.33         186,131.40         186,875.52         -26,375.52         -16.43           Long-term debt         512,700         128,750.00         256,350.00         440,197.82         72,502.18         14.14           Sidewalks         49,500         8,247.25         25,185.53         173,510.71         -124,010.71         -250.53           Parking Lots         137,275         40,058.23         54,278.15         92,467.48         44,807.52         32.64           Parking enforcement         550,225         30,718.65         31,776.74         39,286.37         510,938.63         92.86           Transit         875,526         223,233.63         342,440.50         497,285.50							
Roadside Litter         31,100         5,227.29         44,669.72         55,294.45         -24,194.45         -77.80           Hardtop Maintenance         93,500         15,085.23         41,049.36         51,975.95         41,524.05         44.41           Safety Devices         136,000         51,104.57         83,213.77         172,171.07         -36,171.07         -26.60           Winter Maintenance         160,500         179,736.33         186,131.40         186,875.52         -26,375.52         -16.43           Long-term debt         512,700         128,750.00         256,350.00         440,197.82         72,502.18         14.14           Sidewalks         49,500         8,247.25         25,185.53         173,510.71         -124,010.71         -250.53           Parking Lots         137,275         40,058.23         54,278.15         92,467.48         44,807.52         32.64           Parking enforcement         550,225         30,718.65         31,776.74         39,286.37         510,938.63         92.86           Transit         875,526         223,233.63         342,440.50         497,285.50         378,240.50         43.20           Crossing Guards         77,999         17,869.82         17,869.82         22,433.00         55,		-					
Hardtop Maintenance93,50015,085.2341,049.3651,975.9541,524.0544.41Safety Devices136,00051,104.5783,213.77172,171.07-36,171.07-26.60Winter Maintenance160,500179,736.33186,131.40186,875.52-26,375.52-16.43Long-term debt512,700128,750.00256,350.00440,197.8272,502.1814.14Sidewalks49,5008,247.2525,185.53173,510.71-124,010.71-250.53Parking Lots137,27540,058.2354,278.1592,467.4844,807.5232.64Parking enforcement550,22530,718.6531,776.7439,286.37510,938.6392.86Transit875,526223,233.63342,440.50497,285.50378,240.5043.20Crossing Guards77,99917,869.8217,869.8222,433.0055,566.0071.24Street Lighting309,30086,682.50141,955.93185,224.95124,075.0540.11							
Safety Devices         136,000         51,104.57         83,213.77         172,171.07         -36,171.07         -26.60           Winter Maintenance         160,500         179,736.33         186,131.40         186,875.52         -26,375.52         -16.43           Long-term debt         512,700         128,750.00         256,350.00         440,197.82         72,502.18         14.14           Sidewalks         49,500         8,247.25         25,185.53         173,510.71         -124,010.71         -250.53           Parking Lots         137,275         40,058.23         54,278.15         92,467.48         44,807.52         32.64           Parking enforcement         550,225         30,718.65         31,776.74         39,286.37         510,938.63         92.86           Transit         875,526         223,233.63         342,440.50         497,285.50         378,240.50         43.20           Crossing Guards         77,999         17,869.82         17,869.82         22,433.00         55,566.00         71.24           Street Lighting         309,300         86,682.50         141,955.93         185,224.95         124,075.05         40.11				,			
Winter Maintenance         160,500         179,736.33         186,131.40         186,875.52         -26,375.52         -16.43           Long-term debt         512,700         128,750.00         256,350.00         440,197.82         72,502.18         14.14           Sidewalks         49,500         8,247.25         25,185.53         173,510.71         -124,010.71         -250.53           Parking Lots         137,275         40,058.23         54,278.15         92,467.48         44,807.52         32.64           Parking enforcement         550,225         30,718.65         31,776.74         39,286.37         510,938.63         92.86           Transit         875,526         223,233.63         342,440.50         497,285.50         378,240.50         43.20           Crossing Guards         77,999         17,869.82         17,869.82         22,433.00         55,566.00         71.24           Street Lighting         309,300         86,682.50         141,955.93         185,224.95         124,075.05         40.11				83,213.77	172,171.07		
Long-term debt512,700128,750.00256,350.00440,197.8272,502.1814.14Sidewalks49,5008,247.2525,185.53173,510.71-124,010.71-250.53Parking Lots137,27540,058.2354,278.1592,467.4844,807.5232.64Parking enforcement550,22530,718.6531,776.7439,286.37510,938.6392.86Transit875,526223,233.63342,440.50497,285.50378,240.5043.20Crossing Guards77,99917,869.8217,869.8222,433.0055,566.0071.24Street Lighting309,30086,682.50141,955.93185,224.95124,075.0540.11		160,500	179,736.33			-26,375.52	-16.43
Parking Lots         137,275         40,058.23         54,278.15         92,467.48         44,807.52         32.64           Parking enforcement         550,225         30,718.65         31,776.74         39,286.37         510,938.63         92.86           Transit         875,526         223,233.63         342,440.50         497,285.50         378,240.50         43.20           Crossing Guards         77,999         17,869.82         17,869.82         22,433.00         55,566.00         71.24           Street Lighting         309,300         86,682.50         141,955.93         185,224.95         124,075.05         40.11           5,856,481         1,335,825.56         2,352,315.51         3,665,076.91         2,191,404.09         37.42	Long-term debt			256,350.00	440,197.82	72,502.18	14.14
Parking Lots         137,275         40,058.23         54,278.15         92,467.48         44,807.52         32.64           Parking enforcement         550,225         30,718.65         31,776.74         39,286.37         510,938.63         92.86           Transit         875,526         223,233.63         342,440.50         497,285.50         378,240.50         43.20           Crossing Guards         77,999         17,869.82         17,869.82         22,433.00         55,566.00         71.24           Street Lighting         309,300         86,682.50         141,955.93         185,224.95         124,075.05         40.11				25,185.53	173,510.71	-124,010.71	-250.53
Parking enforcement Transit         550,225         30,718.65         31,776.74         39,286.37         510,938.63         92.86           Transit         875,526         223,233.63         342,440.50         497,285.50         378,240.50         43.20           Crossing Guards         77,999         17,869.82         17,869.82         22,433.00         55,566.00         71.24           Street Lighting         309,300         86,682.50         141,955.93         185,224.95         124,075.05         40.11				54,278.15	92,467.48	44,807.52	32.64
Crossing Guards         77,999         17,869.82         17,869.82         22,433.00         55,566.00         71.24           Street Lighting         309,300         86,682.50         141,955.93         185,224.95         124,075.05         40.11           5,856,481         1,335,825.56         2,352,315.51         3,665,076.91         2,191,404.09         37.42		550,225	30,718.65	31,776.74	39,286.37	510,938.63	
Street Lighting         309,300         86,682.50         141,955.93         185,224.95         124,075.05         40.11           5,856,481         1,335,825.56         2,352,315.51         3,665,076.91         2,191,404.09         37.42							
5,856,481 1,335,825.56 2,352,315.51 3,665,076.91 2,191,404.09 37.42					•		
	Street Lighting	309,300	86,682.50	141,955.93	185,224.95	124,075.05	40.11
		5,856,481	1,335,825.56	2,352,315.51	3,665,076.91		

Operating Budget Variance Report - Page 3

### BUDGET VARIANCE REPORT

### FOR THE PERIOD ENDED SEPT 30, 2020

EXPENDITURES					\$	%
EXPENDITORES	ANNUAL	YTD	YTD	YTD	REMAINING	REMAINING
	BUDGET	MARCH 31/20	JUNE 30/20	SEPT 30/20	BUDGET	BUDGET
ENVIRONMENTAL						
WPCP 1	1,742,320	281,086.80	718,321.38	1,125,895.06	616,424.94	35.38
WPCP 2	1,443,851	217,737.25	544,579.98	920,754.27	523,096.73	36.23
Sanitary Sewer Pumphouses	68,544	11,788.61	25,526.51 128,589.03	37,802.05 225,900.73	30,741.95 314,434.27	44.85 58.19
Sanitary Sewer System Transfer to Sanitary Reserve	540,335 2,740,705	56,601.04 685,176.25	1,370,352.50	2,055,528.75	685,176.25	25.00
Storm Sewer Pumphouses	28,925	4,303.22	7,208.34	13,654.53	15,270.47	52.79
Garbage Collection	6,000	5,813.93	9,137.49	12,713.59	-6,713.59	-111.89
Landfill - long-term debt	89,000	22,250.00	44,500.00	88,620.66	379.34	0.43
	6,659,680	1,284,757.10	2,848,215.23	4,480,869.64	2,178,810.36	32.72
SOCIAL & FAMILY SERVICES						
St Peter's Court	0	0.00		0.00	0.00	0.00
Greenwood Coalition	6,000	6,000.00	6,000.00	6,000.00	0.00	0.00
Northumberland Food Bank	0	0.00	0.00	7,000.00	-7,000.00	0.00
Physician Recruitment	17,100	0.00	17,100.00	17,100.00	0.00	0.00
Tfr from reserve	-17,100	0.00	-17,100.00	-17,100.00	0.00	0.00
Northumberland Hospice	60,000	0.00	60,000.00	60,000.00	0.00	0.00
Trf from reserve	-60,000	0.00	-60,000.00	-60,000.00	0.00	0.00
Affordable Housing	165,000	17,923.84	43,073.07	46,462.36	118,537.64	71.84
Trf from reserve	-140,000	0.00	-36,978.23	-39,887.94	-100,112.06	71.51
	31,000	23,923.84	12,094.84	19,574.42	11,425.58	36.86
DADKS & DECORATION			***************************************			============
PARKS & RECREATION	1.630.655	222 514 20	442 074 29	710,026.28	920,628.72	56.46
Parks Administration Horticulture	70,200	222,514.30 46,719.79	443,974.28 95,784.88	134,507.25	-64.307.25	-91.61
Parks Maintenance	252,900	78,427.18	146,248.31	258,065.35	-5,165.35	-2.04
Forestry Services	248,429	43,776.47	69,937.29	130,495.05	117,933.95	47.47
Parks Athletic Fields	31,500	459.82	541.62	9,327.56	22,172.44	70.39
Parks Turf Maintenance	12,000	1,419.55	5,909.83	18,154.82	-6,154.82	-51.29
Subtotal	2,245,684	393,317.11	762,396.21	1,260,576.31	985,107.69	43.87
Centennial Pool	24,000	933.23	2,858.74	13,062.72	10,937.28	45.57
Outdoor Rink / Fountain	43,300	7,495.53	18,383.86	20,607.09	22,692.91	52.41
Parks - long-term debt	89,000	22,250.00	44,500.00	66,750.00	22,250.00	25.00
Marina	707,540	70,411.70	166,786.98	479,745.29	227,794.71	32.20
Trailer Park	184,413	13,259.80	31,531.90	63,184.54	121,228.46	65.74
Beach Washrooms	48,000	2,467.64	3,342.43	3,411.13	44,588.87	92.89
Harbour / Walkway	199,840	11,778.18	27,563.78	118,873.06	80,966.94	40.52
Dredging	148,055	13,338.69	61,809.51	67,425.21	80,629.79	54.46
Arena	115,250	39,262.83	110,917.86	151,773.40	-36,523.40	-31.69
Cobourg Community Centre	2,631,277	468,616.90	887,602.90	1,352,805.93	1,278,471.07	48.59
Seniors Activity Centre	233,372	41,475.76	72,284.27	99,278.57	134,093.43	57.46
Legion Fields	39,800	5,313.55	9,904.92	14,210.66	25,589.34	64.29
Acquatics / Lifeguards	204,805	51,250.00	102,500.00	102,500.00	102,305.00	49.95
Transfer from Reserves	-163,800	-40,950.00	-81,900.00	-122,850.00	-40,950.00	25.00
	6,750,536	1,100,220.92	2,220,483.36	3,691,353.91	3,059,182.09	45.32
CULTURE & COMMUNITY						
Cultural Administration	110,858	16,958.80	33,818.49	56,620.72	54,237.28	48.93
Organizational grants	49,575	28,023.00	28,023.00	32,360.75	17,214.25	34.72
Special Events	340,289	61,209.60	83,827.03	140,741.50	199,547.50	58.64
Concert Hall	375,225	66,796.41	115,394.55	166,672.21	208,552.79	55.58
Library	932,700	440,000.00	662,315.04	902,015.04	30,684.96	3.29
Market Building	18,250	2,002.90	4,367.24	5,409.83	12,840.17	70.36
Art Gallery	125,000	42,500.00	63,750.00	85,000.00	40,000.00	32.00
Concert Band of Cobourg	20,600	16,963.34	20,258.46	20,945.73	-345.73	-1.68
Library - Long Term Debt	-40,000	-10,000.00	-20,000.00	-30,000.00	-10,000.00	25.00
	1,932,497	664,454.05	991,753.81	1,379,765.78	552,731.22	28.60

Operating Budget Variance Report Page 4

# BUDGET VARIANCE REPORT

### FOR THE PERIOD ENDED SEPTEMBER 30, 2020

EXPENDITURES	ANNUAL	YTD	YTD	YTD	\$ REMAINING	% REMAINING
	BUDGET	MARCH 31/20	JUNE 30/20	SEPT 30/20	BUDGET	BUDGET
PLANNING & RESIDENTIAL	DUDGET	MARCH 51/20	JUNE 30/20	SEF1 30/20	BUDGET	DUDGET
Planning	383,834	85.244.65	157,785.43	253,599.73	120 224 27	33.93
3	,			,	130,234.27	
Comm. of Adjustment	79,557	10,800.62	23,411.91	35,878.42	43,678.58	54.90
Heritage Committee	122,382	22,016.20	58,816.75	83,329.10	39,052.90	31.91
	585,773	118,061.47	240,014.09	372,807.25	212,965.75	36.36
COMMERCIAL & ECONOMIC						
Economic Development	185,224	34,282.79	71,514.56	115,154.12	70.069.88	37.83
Venture 13	344,136	61,114.61	135,216.27	188,294.51	155,841.49	45.28
Tourism	256,734	24,477.80	55,486.90	66,661.66	190,072.34	74.03
Henley Arcade	4,600	1,814.99	2,523.89	3,225.60	1,374.40	29.88
Old Firehall Theatre	7,625	1,406.25	2,812.50	5,109.15	2,515.85	32.99
Dressler House	7,275	2,804.59	3,952.41	4,976.48	2,298.52	31.59
	805,594	125,901.03	271,506.53	383,421.52	422,172.48	52.41
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Operating Budget Variance Report - Page 5

<b>O</b> 梁O	THE CORPORATION OF THE TOWN OF COBOURG
COBOURG	STAFF REPORT
TO:	Mayor and Council Members
FROM: TITLE:	Ian D. Davey Treasurer / Director of Corporate Services
DATE OF MEETING:	November 15, 2019
TITLE / SUBJECT:	Third Quarter 2019 – Operating Budget Variance Report
REPORT DATE:	November 15, 2019

- 1.0 <u>STRATEGIC PLAN</u> Not applicable
- 2.0 <u>PUBLIC ENGAGEMENT</u> Not applicable
- 3.0 <u>RECOMMENDATION</u> That Council receive the Third Quarter 2019 Operating Budget Variance Report for information purposes.
- 4.0 ORIGIN

This budget variance report covers the period from January 1, 2019 through September 30, 2019 and is intended for information purposes. When reviewing this report, please keep in mind that seasonality may play a role in some of the departmental variances being shown.

5.0 BACKGROUND

The 2019 Operating Budget was approved by Council on April 8, 2019 by Resolution 98 - 19. The purpose of this report is to provide a comparison of the actual results to the end of the third quarter of 2019 to the approved annual operating budget.

The report to the end of the fourth quarter of 2019 will be provided to Council at a meeting in February 2020. A separate report is being prepared to report on the status of the 2019 capital projects.

# 6.0 <u>ANALYSIS</u>

The **first** page of the report is a summary of the **Revenue and Expenditures** by category.

The **revenues** represent those items specifically noted within each category of the municipal operating budget. The first column represents the total annual budget, the second column is the actual revenue recorded to the end of March 2019, the third column is the actual revenue recorded to the end of June 2019, the fourth column is the actual revenue recorded to the end of September and the fifth column is the remaining amount to reach budget over the remainder of the year and the sixth column is the percentage required to meet budget.

Approximately 77% of the total budgeted revenue from sources other than property taxes have been received to the end of September 2019.

The **expenditures** portion of page 1 has the same columns with the first column representing the total annual budget, the second column is the actual expenditure to March 31, 2019, the third column is the actual expenditure to June 30, 2019, the fourth column is the actual expenditure to September 30, 2019 the fifth column is the budget available for the remainder of 2019 and the sixth column represents the remaining funds as a percentage of the total annual budget.

Approximately 72% of the total budgeted expenditures have been spent as of September 30, 2019.

The difference between the total budgeted revenue of \$14,375,614 and the total budgeted expenditures of \$38,361,143 is shown at the bottom of the page in the amount of **\$23,985,529** and represents the **Municipal Tax Levy** which agrees to the approved operating budget.

The **second** page of the report provides a further breakdown of the **revenue** received to September 30, 2019 by department which supports the figures shown on the summary page (Page 1).

The remaining pages, 3 to 5, provide a similar departmental breakdown of **expenditures** made to September 30, 2019 by department and support the expenditure amounts as shown on the summary page (Page 1).

A **capital projects** report will be provided to Council at a later date and has not been included with this report.

# 7.0 <u>FINANCIAL IMPLICATIONS/BUDGET IMPACT</u> Not applicable.

# 8.0 <u>CONCLUSION</u>

This report has been provided to Council and Members of the Public for information purposes.

If there are specific questions on any of this information, I would be pleased to provide an answer to them.

# 9.0 <u>POLICIES AFFECTING THE PROPOSAL</u> Not applicable

# 10.0 COMMUNICATION RESULTS

The report is a public document prepared internally and intended as high level overview of the results of operations of the municipality to the end of the third quarter of 2019 and is available to anyone wanting to review it.

11.0 <u>ATTACHMENTS</u> Third Quarter 2019 – Operating Budget Variance Report

# 12.0 AUTHORIZATION ACKNOWLEDGMENT

Respectfully submitted,

Ian D. Davey, BBA CPACA Treasurer / Director of Corporate Services

Council operating budget report Q3 2019



# OPERATING BUDGET VARIANCE REPORT

# **THIRD QUARTER – 2019**

# JANUARY 1, 2019 to SEPTEMBER 30, 2019

Prepared and submitted by: Ian D. Davey BBA CPA CA Treasurer / Director of Corporate Services November 15, 2019

## BUDGET VARIANCE REPORT

# FOR THE PERIOD ENDED SEPTEMBER 30, 2019

SUMMARY	ANNUAL BUDGET	2019 YTD MARCH 31/19	YTE	YTE	REMAINING	% REMAINING BUDGET
REVENUE				021100/10	DODGET	DODGET
General government	195,700.00	42,482.00	92,098.90	138,938.89	56,761.11	29.00
Protection services	2,945,858.00	666,040.50				-4.24
Public Works	834,900.00	95,094.87	244,301.79			24.24
Environmental	6,209,232.00	1,198,678.52	2,184,127.49		1,937,157.45	31.20
Parks & Recreation	2,979,649.00	378,955.70	1,125,052.84		977,293.03	32.80
Culture & Community	188,850.00	34,055.67	75,144.42		79,428.64	42.06
Planning & Residential	85,000.00	46,460.00	83,425.00		-87,050.00	-102.41
Commercial & Economic	187,325.00	11,663.27	66,523.52		76,444.36	40.81
Other Direct Revenue	749,100.00	114,567.26	350,372.09		134,775.55	17.99
	14,375,614.00	2,587,997.79	5,774,170.59	10,508,894.27	3,252,395.28	22.62
EXPENDITURES						
General government	3,503,628.00	771,871.15	1 720 000 09	2 641 264 46	000 000 04	04.04
Protection	12,684,447.00	2,990,342.21	1,729,000.98 5,964,561.96	2,641,361.16	862,266.84	24.61
Public Works	5,444,827.00	1,427,071.76		9,568,628.74	3,115,818.26	24.56
Environmental	6,365,157.00	1,280,486.12	2,499,099.77	3,449,701.58	1,995,125.42	36.64
Social & Family	196,500.00	0.00	2,807,221.70	4,400,588.46	1,964,568.54	30.86
Parks & Recreation	6,802,764.00	1,217,939.56	0.00 2,868,489.34	22,412.12	174,087.88	88.59
Culture & Community	1,821,169.00	544,500.51		4,904,337.68	1,898,426.32	27.91
Planning & Residential	541,097.00	142,969.83	1,056,430.47	1,542,276.60	278,892.40	15.31
Commercial & Economic	847,554.00	177,815.22	266,222.65	416,654.27	124,442.73	23.00
Capital Levy	154,000.00		377,778.12	646,800.96	200,753.04	23.69
Capital Levy		38,500.00	77,000.00	115,500.00	38,500.00	25.00
¢.	38,361,143.00	8,591,496.36	17,568,804.99	27,592,761.57	10,652,881.43	27.77
					## <b>##</b> ################################	

MUNICIPAL LEVY

23,985,529.00 =========================

# BUDGET VARIANCE REPORT

# FOR THE PERIOD ENDED SEPTEMBER 30, 2019

REVENUE	ANNUAL BUDGET	2019 YTD MARCH 31/19	2019 YTD JUNE 30/19	2019 YTD	\$ REMAINING	% REMAINING
GENERAL GOVERNMENT	BODGET	MARCH 31/19	JUNE 30/19	SEPT 30/19	BUDGET	BUDGET
Clerks	177,700	39,157.00	82,158.90	124,023.89	53,676.11	30.21
Finance	18,000	3,325.00	9,940.00	14,915.00	3,085.00	17.14
						17.14
	195,700	42,482.00	92,098.90	138,938.89	56,761.11	29.00
PROTECTION SERVICES						
Fire	13,500	3,224.75	1,464.75	1,859.75	11,640.25	86.22
Police	65,000	12,733.15	25,017.89	37,730.11	27,269.89	41.95
Police - Business Services	2,438,358	627,462.35	1,791,629.86	2,813,364.01	-375,006.01	-15.38
Building Department	410,000	20,920.25	77,954.13	206,201.81	203,798.19	49.71
Property Standards	19,000	1,700.00	7,430.00	11,480.00	7,520.00	39.58
	2,945,858	666,040.50	1,903,496.63	3,070,635.68	-124,777.68	-4.24
PUBLIC WORKS			****	*****		======
Engineering review fees	60,000	0.00	10,000.00	97,121,81	-37,121.81	-61.87
Parking enforcement	615,000	62,202.17	163,438.19	431,375.47	183,624.53	29.86
Transit	159,900	32,892.70	70,863.60	104,039.90	55,860.10	34.93
	834,900	95,094.87	244,301.79	632,537.18	202,362.82	24.24
ENVIRONMENTAL						
WPCP 1	6,209,232	1,198,678.52	2,184,127.49	4,272,074.55	1,937,157.45	31.20
PARKS & RECREATION				*****		
Parks Administration	141,000	1,558.00	65,186.00	119,538.21	21,461.79	15.22
Marina	760,140	10,367.90	324,029.68	588,533.95	171,606.05	22.58
Trailer Park	310,700	1,848.00	94,600.95	304,474.43	6,225.57	2.00
Dredging	147,000	0.00	0.00	67,400.00	79,600.00	54.15
Arena	146,900	47,750.20	51,362.35	74,218.81	72,681.19	49.48
Cobourg Community Centre	1,345,699	297,079.98	544,830.95	759,863.68	585,835.32	43.53
Seniors Activity Centre	86,210	20,351.62	39,865.49	58,524.84	27,685.16	32.11
Legion Fields	42,000	0.00	5,177.42	29,802.05	12,197.95	29.04
						23.04
	2,979,649	378,955.70	1,125,052.84	2,002,355.97	977,293.03	32.80
CULTURE & COMMUNITY				******		
Concert Hall	166,850	24,300.67	60,149.42	94,046.36	72,803.64	43.63
Market Building	22,000	9,755.00	14,995.00	15,375.00	6,625.00	30.11
-		34,055.67	75,144.42		79,428.64	42.06
		****				
PLANNING & RESIDENTIAL	75 000	44 540 00	70 475 00	454 705 00	70 705 00	400.00
Planning	75,000	41,510.00	78,475.00	154,725.00	-79,725.00	-106.30
Comm. of Adjustment	10,000	4,950.00	4,950.00	17,325.00	-7,325.00	-73.25
	85,000	46,460.00	83,425.00	172,050.00	-87,050.00	-102.41
		***************************************	***************************************	***************************************		
Venture 13	149,825	11,650.00	35,794.01	78,081.51	71,743.49	47.88
Tourism	37,500	13.27	30,729.51	32,799.33	4,700.67	12.54
	187,325	11,663.27	66,523.52	110,880.84	76,444.16 ==	40.81 ======

Operating Budget Variance Report - Page 2

# BUDGET VARIANCE REPORT

# FOR THE PERIOD ENDED SEPTEMBER 30, 2019

EXPENDITURES		2019	2019	2010	¢	0/
	ANNUAL	YTD		2019 YTD	\$ REMAINING	% REMAINING
	BUDGET					BUDGET
GENERAL GOVERNMENT						
Council	373,948	86,806.96		250,772.40	123,175.60	32.94
CAO	249,378	58,671.55	118,689.93	181,948.52	67,429.48	27.04
Clerks	464,326	120,213.98	213,613.23	341,146.61	123,179.39	26.53
Finance	661,388	164,002.47		535,101.59	126,286.41	19.09
Information Technology	319,976	76,207.69		257,563.36	62,412.64	19.51
Communications	209,179	39,079.03	97,865.58	152,065.70	57,113.30	27.30
Victoria Hall	686,118	140,680.79	353,012.89	564,049.04	122,068.96	17.79
Financial	144,500	48,026.85	211,246.83	175,990.25	-31,490.25	-21.79
Personnel	381,965	33,681.83	64,762.61	171,513.80	210,451.20	55.10
Health & Safety	12,850	4,500.00	11,209.89	11,209.89	1,640.11	12.76
	3,503,628	771,871.15	1,729,000.98	2,641,361.16	862,266.84	24.61
PROTECTION SERVICES					***********	
Fire	2,940,731	694 494 49	4 407 500 57			
Police		684,104.40	1,427,592.57	2,235,414.47	705,316.53	23.98
Police Service Board	5,668,111 81,015	1,351,030.38	2,726,495.34	4,354,309.91	1,313,801.09	23.18
Court Security	359,612	17,681.45 234,568.98	42,261.42	91,285.70	-10,270.70	-12.68
Police Facilities	155,800		452,295.64	725,213.61	-365,601.61	-101.67
Business Services	2,438,358	17,212.09	76,625.57	119,441.97	36,358.03	23.34
Communications Centre	2,430,338	419,975.62	851,798.16	1,391,590.11	1,046,767.89	42.93
Conservation Authority	248,903	0.00	0.00	0.00	0.00	0.00
Animal Control	99,748	124,451.45 24,787.00	124,451.45	248,902.89	0.11	0.00
Building Department	410,000	56,594.97	24,786.91 114,744.78	24,786.91	74,961.09	75.15
Property Standards	96,921	15,345.18		183,152.37	226,847.63	55.33
Emergency Management	129,645	28,987.25	32,745.89	56,539.30	40,381.70	41.66
By-Law Enforcement	55,603	15,603.44	58,851.22	90,789.12	38,855.88	29.97
	*****************		31,913.01	47,202.38	8,400.62	15.11
	12,684,447 	2,990,342.21	5,964,561.96	9,568,628.74	3,115,818.26	24.56
PUBLIC WORKS						
Engineering	371,398	34,692.54	86,727.71	159,725.83	211,672.17	56.99
GIS	191,719	119,877.70	132,337.12	162,091.30	29,627.70	56.99 15.45
Public Works	2,127,878	515,194.09	849,746.52	1,008,301.36	1,119,576.64	52.61
Bridges	1,150	0.00	6,216.04	7,276.45	-6,126.45	-532.73
Roadside Grass	0	0.00	3,385.38	14,085.41	-14,085.41	0.00
Forestry (moved to parks)	0	0.00	0.00	0.00	0.00	0.00
Storm Drain System	60,000	3,815.25	39,566.62	78,400.79	-18,400.79	-30.67
Roadside Litter	41,100	7,723.50	30,825.72	52,033.05	-10,933.05	-26.60
Hardtop Maintenance	93,000	12,355.58	22,782.42	64,721.78	28,278.22	30.41
Safety Devices	135,650	37,286.91	75,946.45	159,089.28	-23,439.28	-17.28
Winter Maintenance	181,500	261,661.79	282,999.66	293,976.10	-112,476.10	-61.97
Long-term debt	309,000	77,250.00	154,500.00	231,750.00	77,250.00	25.00
Sidewalks	51,800	3,897.15	26,068.43	111,145.15	-59,345.15	-114.57
Parking Lots	134,670	35,689.63	73,440.13	100,079.72	34,590.28	25.69
Parking enforcement	480,330	35,571.11	52,931.79	84,737.56	395,592.44	82.36
Transit	841,444	186,721.57	401,795.46	600,688.17	240,755.83	28.61
Crossing Guards	77,458	20,390.06	42,481.17	50,690.50	26,767.50	34.56
Street Lighting	346,730	74,944.88	217,349.15	270,909.13	75,820.87	21.87
	5,444,827	1,427,071.76	2,499,099.77	3,449,701.58		36.64
				***************************************		

Operating Budget Variance Report - Page 3

#### TOWN OF COBOURG

## BUDGET VARIANCE REPORT

## FOR THE PERIOD ENDED SEPTEMBER 30, 2019

EXPENDITURES		2019	2019	2019	\$	%
	ANNUAL	,				REMAINING
	BUDGET	MARCH 31/19	JUNE 30/1	9 SEPT 30/19		BUDGET
ENVIRONMENTAL WPCP 1	(					
WPCP 1 WPCP 2	1,658,213	273,655.28				28.59
	1,462,113	260,703.98				34.87
Sanitary Sewer Pumphouses	68,200	11,717.28				1.95
Sanitary Sewer System Transfer to Sanitary Reserve	512,835	63,497.78		-		59.01
Storm Sewer Pumphouses	2,507,871	626,967.75				25.00
Garbage Collection	30,325	14,481.46				47.43
	7,100	389.59				73.10
Landfill - long-term debt	118,500	29,073.00	58,701.00	88,329.00	30,171.00	25.46
	6,365,157	1,280,486.12	2,807,221.70	4,400,588.46	1,964,568.54	30.86
	*********************		*******	*****************		==========
SOCIAL & FAMILY SERVICES						
St Peter's Court	21,500	0.00	0.00	22,412.12	-912.12	-4.24
Physician Recruitment	0	0.00	0.00	0.00	0.00	0.00
Northumberland Hospice	0	0.00	0.00	0.00	0.00	0.00
Affordable Housing	175,000	0.00	0.00	1,042.53	173,957.47	99.40
	196,500	0.00	0.00	22,412.12	173,045.35	88.06
		*****************	****************	******		==========
PARKS & RECREATION						
Parks Administration	1,590,579	277,230.62	513,571.41	767,553.08	823,025.92	51.74
Horticulture	70,000	22,599.01	101,366.03	187,946.86	-117,946.86	-168.50
Parks Maintenance	234,900	40,144.39	206,462.49	492,337.05	-257,437.05	-109.59
Forestry Services	201,558	28,698.26	60,898.93	131,875.42	69,682.58	34.57
Parks Athletic Fields	26,500	2,317.84	7,043.44	29,772.83	-3,272.83	-12.35
Parks Turf Maintenance	8,000	1,056.93	10,445.77	22,119.60	-14,119.60	-176.50
Subtotal	2,131,537	372,047.05	899,788	1,631,605	499,932	23.45
Centennial Pool	16,500	1,434.57	10,771.21	14,346.41	2,153.59	13.05
Outdoor Rink / Fountain	28,500	9,058.61	20,428.08	23,822.96	4,677.04	16.41
Parks - long-term debt	263,200	76,532.57	144,266.36	157,032.13	106,167.87	40.34
Marina	760,140	73,647.45	245,442.93	541,808.48	218,331.52	28.72
Trailer Park	164,905	12,558.12	40,048.19	103,518.71	61,386.29	37.23
Beach Washrooms	69,300	42.74	4,709.95	38,149.42	31,150.58	44.95
Harbour / Walkway	201,692	772.17	32,027.16	97,215.78	104,476.22	51.80
Dredging	147,000	26,173.98	58,977.39	92,468.06	54,531.94	37.10
Arena	332,899	82,241.78	214,336.97	210,329.47	122,569.53	36.82
Cobourg Community Centre	2,330,911	474,776.37	1,003,180.64	1,660,633.61	670,277.39	28.76
Seniors Activity Centre	196,280	34,121.97	65,902.20	100,256.38	96,023.62	48.92
Legion Fields	49,900	2,532.18	24,610.19	53,186.95	-3,286.95	-6.59
Acquatics / Lifeguards	224,300	52,000.00	104,000.00	179,964.48	44,335.52	19.77
Transfer from Reserves	-114,300	0.00	0.00		-114,300.00	100.00
	6,802,764	1,217,939.56	2,868,489.34	4,904,337.68	1,898,426.32	27.91
CULTURE & COMMUNITY						=======
Cultural Administration	101 000	40.050.00	22 500 00	04 400 40		
Organizational grants	101,929	18,258.92	33,566.29	64,136.40	37,792.60	37.08
	50,946	0.00	37,055.14	41,400.44	9,545.56	18.74
Special Events Concert Hall	290,430	29,102.27	107,663.13	175,097.25	115,332.75	39.71
Library	359,659	64,658.81	141,358.70	244,524.68	115,134.32	32.01
Market Building	904,505	416,000.00	633,820.10	902,319.76	2,185.24	0.24
Art Gallery	18,200	1,910.17	4,952.73	9,719.40	8,480.60	46.60
Concert Band of Cobourg	115,000	23,750.00	80,000.00	86,250.00	28,750.00	25.00
Library - Long Term Debt	20,500	820.34	18,014.38	18,828.67	1,671.33	8.15
LIDIALY - LONG TENNI DEDL	-40,000	-10,000.00	-20,000.00	-30,000.00	-10,000.00	25.00
	1,821,169	544,500.51	1,056,430.47	1,542,276.60	308,892.40	16.96

Operating Budget Variance Report Page 4

## BUDGET VARIANCE REPORT

# FOR THE PERIOD ENDED SEPTEMBER 30, 2019

EXPENDITURES	ANNUAL BUDGET	2019 YTD MARCH 31/19	2019 YTD JUNE 30/19	2019 YTD SEPT 30/19	\$ REMAINING BUDGET	% REMAINING
PLANNING & RESIDENTIAL Planning	407,769	101,102.74	198,926.93	316,507.01	91.261.99	BUDGET
Comm. of Adjustment Heritage Committee	73,839 59,489	12,720.73 29,146.36	28,237.66 39,058.06	41,747.00 58,400.26	32,092.00	43.46 1.83
	541,097	142,969.83	266,222.65	416,654.27		23.00
COMMERCIAL & ECONOMIC		*************************	***************************************			
Economic Development	230,703	37,884.41	81,300.57	117,717.18	112,985.82	48.97
Venture 13 Tourism	347,279 249,772	107,765.48 27,908.89	197,751.33	317,395.99	29,883.01	8.60
Henley Arcade	3,500	1,391.22	83,049.56 3,252.33	189,357.19 3,943.22	60,414.81 -443.22	24.19 -12.66
Old Firehall Theatre Dressler House	6,500 9,800	1,375.00	6,010.39	7,597.20	-1,097.20	-16.88
		1,490.22 	6,413.94	10,790.18	-990.18	-10.10
-	847,554	177,815.22	377,778.12	646,800.96	200,753.04	23.69

COBOURG	THE CORPORATION OF THE TOWN OF COBOURG STAFF REPORT
TO:	Mayor and Council Members
FROM: TITLE:	Ian D. Davey, BBA CPA CA Treasurer / Director of Corporate Services
DATE OF MEETING:	December 7, 2020
TITLE / SUBJECT:	202 Second Street Parking Lot – Lease Agreement
REPORT DATE:	November 27, 2020

- 1.0 <u>STRATEGIC PLAN</u> N/A
- 2.0 <u>PUBLIC ENGAGEMENT</u> N/A

#### 3.0 RECOMMENDATION

That Council receive the report for information purposes and further that a bylaw be prepared to authorize the Mayor and Municipal Clerk to execute an agreement with Cobourg Harbourpark Properties Inc. (Harbourpark) for the lease of a vacant lot known municipally as 202 Second Street being at the intersection of Second Street and Albert Street.

#### 4.0 ORIGIN

The Corporation of the Town of Cobourg leases the property located at the corner of Second Street and Albert Street for the purpose of providing a municipal parking lot consisting of approximately 184 parking spaces. The current lease has been on a month to month basis.

Earlier this year, the Town was contacted by the owner requesting a review of the terms of this agreement. This request was reviewed with Council in Closed Session and Council authorized the CAO and Treasurer to negotiate a renewal of the lease.

## 5.0 BACKGROUND

The parking lot has been leased by the Town for the purpose of providing a municipal parking lot since 2008. The site is held for development by the owners and in recent years the lease agreement has been on a month to month basis.

#### 6.0 ANALYSIS

The following agreement has been negotiated with the owner:

- a) The monthly rental rate will be increased from \$2,500 per month to \$3,500 for the months of September to December 2020 dating back to the date of the original request from the owner.
- b) The term of the new lease will be for two years from January 1, 2021 through December 31, 2022 at the rate of \$3,500 per month.
- c) The owner will be responsible to pay all realty taxes on the property.
- d) The lease will be for the entire area of the property.
- e) The owner will have the right to utilize the leased premises on the July and August long-weekends for paid parking or parking for fundraising purposes. The owner will honour monthly and weekly parking passes which have been issued by the Town during these periods.

#### 7.0 FINANCIAL IMPLICATIONS/BUDGET IMPACT

The increase in this rental expense will be reflected in the 2021 and 2022 municipal operating budgets and will result in an annual increase in parking related expenses of \$12,000 per annum.

# 8.0 <u>CONCLUSION</u>

That Council direct that a by-law be prepared authorizing the Mayor and Municipal Clerk to execute an agreement with Cobourg Harbourpark Properties Inc. for the lease of space located at 202 Second Street, Cobourg for use as a municipal parking lot.

9.0 <u>POLICIES AFFECTING THE PROPOSAL</u> N/A

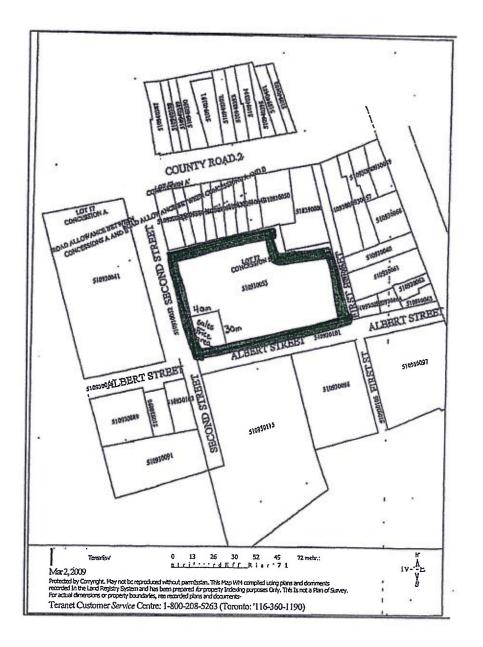
## 10.0 <u>COMMUNICATION RESULTS</u> N/A

11.0 <u>ATTACHMENTS</u> A diagram illustrating the approximate area occupied by the parking lot.

12.0 AUTHORIZATION ACKNOWLEDGMENT

Ian D. Davey, BBA CPA 6A Treasurer / Director of Corporate Services

Tracey Vaughan Chief Administrative Officer SCHEDULE "A"



#### SCHEDULE "B"

#### LEGAL DESCRIPTION OF LEASED PREMISES

#### PIN: 51093 - 0053 (LT)

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PT LT 2 EIS THIRD ST BLK B PL CADDY (FORMERLY LT 17 CON B HAMILTON) COBOURG; PT LT 3 EIS THIRD ST BLK B PL CADDY (FORMERLY LT 17 CON B HAMILTON) COBOURG; PT BLK B PL CADDY (FORMERLY LT 17 CON B, HAMILTON) COBOURG PT 1, 39R10656; COBOURG

	THE CORPORATION OF THE TOWN OF COBOURG STAFF REPORT							
COBOURG	STAFF REPORT							
TO:	Mayor and Council							
FROM: TITLE:	Jennifer Heslinga Senior Financial Analyst							
DATE OF MEETING:	December 7, 2020							
TITLE / SUBJECT:	Financial Report – Cash in Lieu of Parkland Reserve 2019							
REPORT DATE:	November 17, 2020 File #:							

- 1.0 <u>STRATEGIC PLAN</u> N/A
- 2.0 <u>PUBLIC ENGAGEMENT</u> N/A

# 3.0 <u>RECOMMENDATION</u>

That this report be received for information purposes and that a copy of the report be made available to the public on the municipal website.

#### 4.0 <u>ORIGIN</u>

Amendments to Section 42 (17) of the Planning Act require that "The Treasurer of the municipality shall each year, on or before the date specified by council, give the council a financial statement relating to the special account".

## 5.0 BACKGROUND

The special account is the Cash in Lieu of Parkland Reserve account in our records.

This account is used to track funds collected by developers, and monitors funds spent on the development of parkland assets. These funds spent could consist of either capital expenditures, or ongoing operating expenditures relating to parkland within the Town of Cobourg.

#### 6.0 ANALYSIS

The attached report illustrates the balance at the start of 2019 in the amount of \$(12,202.86), the amount collected under the Planning Act of \$41,530.00, along with the interest earned on the balance of the reserve of \$276. This provided a net funds available for the year of \$29,603.14.

There was \$49,694.88 spent from the reserve during the year, which was the result of playground development at Peter Delanty park. This project was fully funded by the reserve and was provided a budget of \$60,000. There was another \$100,000 that was budgeted for Cooey Park Development in 2019, however there were no actual expenditures spent in 2019 for this project.

The net result from funds available less expenditures spent during the year left the reserve in a deficit position of \$20,091.74.

As of November 2020, the reserve fund is back in a surplus position as a result of 2020 contributions from developers.

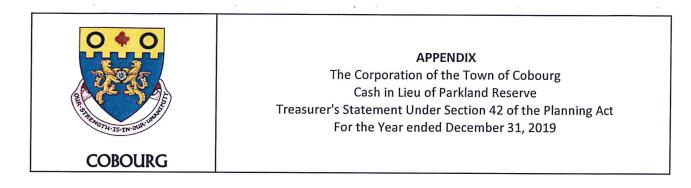
## 7.0 FINANCIAL IMPLICATIONS/BUDGET IMPACT N/A

## 12.0 AUTHORIZATION/SIGNATURES

Jennifer Heslinga, BCom CPA CA Senior Financial Analyst

lan D. Davey, BBA CPA CA Treasurer / Director of Corporate Services

Tracey Vaughan Chief Administrative Officer



Opening Balance, January 1, 2019 (deficit)	-\$ 12,202.86
Cash in lieu collected in 2019	\$ 41,530.00
Interest earned in 2019	\$ 276.00
Total Funds Available	\$ 29,603.14

Funds Spent in 2019:

	Budgeted Project Total	Other Funding	Parkland Cash in Lieu	
Cooey Park Development- capital Playspace equipment- capital	\$ 100,000.00 \$ 60,000.00	N/A N/A	\$ - \$ 49,694.88	
Total	\$ 160,000.00		\$ 49,694.88	-\$ 49,694.88

Ending Balance, December 31, 2019 (deficit)

-\$ 20,091.74

	THE CORPORATION OF THE						
COBOURG	STAFF REPORT						
TO:	Mayor and Council						
FROM: TITLE:	Jennifer Heslinga Senior Financial Analyst						
DATE OF MEETING:	December 7, 2020						
TITLE / SUBJECT:	Financial Report – Development Charge Reserve Funds 2019						
REPORT DATE:	November 17, 2020	File #:					

- 1.0 <u>STRATEGIC PLAN</u> N/A
- 2.0 <u>PUBLIC ENGAGEMENT</u> N/A

#### 3.0 RECOMMENDATION

That this report be received for information purposes and that a copy of the report be made available to the public on the municipal website.

## 4.0 ORIGIN

The Development Charges Act, 1997 (D.C.A) requires development charge collections (and associated interest) to be placed in separate reserve funds. Section 43 of the Act requires that the Treasurer of the municipality shall each year on or before such date as the council may direct, give the council a financial statement relating to the development charge by-laws and reserve funds.

## 5.0 BACKGROUND

The Town of Cobourg has two dedicated reserve funds set up for residential and non-residential developments. These reserve funds are used to track collections received from developers, interest earned, and expenditures spent on operating and capital activities. Expenditures to be funded from these reserves are included in the Town's operating and capital budgets.

#### 6.0 <u>ANALYSIS</u>

#### Appendix A:

The Residential Development Charge Reserve fund collected \$964,263 in 2019 from developers. The Town also contributed \$50,000 to the reserve fund in 2019 for non-statutory exemptions from prior years, in accordance with budget. The Reserve earned \$186,501 in interest. There was a total budget of \$2,022,850 to be spent from the reserve, however only \$1,185,508.94 was actually withdrawn to reflect the actual spending in 2019. The variance of budget to actual is the result of the ongoing Kerr Street capital project. Reserve funds will be withdrawn, and in accordance with budget as the Kerr Street project reaches completion.

The Non-Residential Development Charge Reserve fund collected \$32,908 in 2019 from developers, and earned \$10,165 in interest. There was a total budget of \$99,150 to be spent from the reserve, however only \$17,586.10 was withdrawn to reflect actual spending in 2019. Similarly, the variance between actual and budget is the result of ongoing capital projects for Densmore Road and Kerr Street.

#### Appendix B:

The Residential and Non-residential Development Charge Reserve funds are broken down to reflect impact on each service category with percentages taken from the development charges study for the Town of Cobourg. This analysis illustrates each function's involvement in the collection of fees, and their use of funds as a general overhead projection for the whole Town.

#### 7.0 <u>FINANCIAL IMPLICATIONS/BUDGET IMPACT</u> N/A

#### 12.0 AUTHORIZATION/SIGNATURES

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Jennifer Héslinga, BCom CPA CA Senior Financial Analyst

lan D. Davey, BBA CPA CA Treasurer / Director of Corporate Services

Tracey Vaughan Chief Administrative Officer

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Residential Development Charges Opening Balance, January 1, 2019

D/C collected in 2019

#### APPENDIX A THE CORPORATION OF THE TOWN OF COBOURG DEVELOPMENT CHARGE RESERVE FUNDS FOR THE YEAR ENDING DECEMBER 31, 2019

Contribution to Reserve- non-sta Interest earned in 2019	ory exemptions from prior years		\$ 50,000.00 \$ 186,501.00
Total Funds Available			\$ 8,953,578.30
Funds Spent in 2019:			
	Budgeted	Residential	
	D/C Reserve Gas Tax Reserve Sewer Reserve		
Kerr St Extension	698,250.00 \$ 37,677.95 \$ 23,750		
Densmore Road Reconstruction	855,000.00 \$ 95,000.		
Fire- Bunker Gear Replacement	11,400.00	\$ 14,935.94	
Cobourg Public Library	38,000.00	\$ 38,000.00	
Library Debt	38,000.00	\$ 38,000.00	
Parks Debt	262,200.00	\$ 262,200.00	
CCC Building	120,000.00	\$ 120,000.00	
Total	2,022,850.00 \$ 37,677.95 \$118,750.	00 \$ 570,322.05 \$ 1,185,508.94	-\$ 1,185,508.94
Ending Balance, December 31, 2019			\$ 7,768,069.36
Non-Residential Development Charg Opening Balance, January 1, 2019 D/C collected in 2019 Interest earned in 2019 Total Funds Available			<ul> <li>\$ 421,814.80</li> <li>\$ 32,908.00</li> <li>\$ 10,165.00</li> <li>\$ 464,887.80</li> </ul>
Funds Spent in 2019:			
	Budgeted	Non-Residential	
	D/C Reserve Gas Tax Reserve Sewer Reserve	ve Other Funding D/C	
Kerr St Extension		00 \$ 30,016.95 \$ -	
Densmore Road Reconstruction	45,000.00 \$ 5,000.0	10-10-	
Fire- Bunker Gear Replacement	600.00	\$ 786.10	
Cobourg Public Library	1,000.00	\$ 1,000.00	
Library Debt	2,000.00	\$ 2,000.00	
Parks Debt	13,800.00	\$ 13,800.00	
	99,150.00 \$ 1,983.05 \$ 6,250.0	00 \$ 30,016.95 \$ 17,586.10	-\$ 17,586.10
Ending Balance, December 31, 2019			\$ 447,301.70

GRAND TOTAL BALANCE

\$ 8,215,371.06

\$ 7,752,814.30

\$ 964,263.00



APPENDIX B THE CORPORATION OF THE TOWN OF COBOURG DEVELOPMENT CHARGE ANALYSIS FOR THE YEAR ENDING DECEMBER 31, 2019

FUNCTION/	PROJECT	%	BALANCE JAN 1/19	BUDGETED EXPEND	RESIDENTIAL D/C FEES COLLECTED	INTEREST CREDITED	RESIDENTIAL SUBTOTAL DEC 31/19	%	BALANCE JAN 1/19	BUDGETED EXPEND	NON-RESIDENTIAL D/C FEES COLLECTED	INTEREST CREDITED	RESIDENTIAL SUBTOTAL DEC 31/19	GRAND TOTAL BALANCE
<b>ADMINISTR</b> Growth F	ATION Related Studies	2.17%	45,588.09		22,009.51	890.70	68,488.30	3.38% -	99,367.24		1,112.29	-	- 98,254.95	- 29,766.65
PROTECTIO	N													
Fire	-Facilities	1.89%	360,340.28		19,169.57	7,040.31	386,550.17	1.76% -	27,017.96		579.18		- 26,438.78	360,111.39
	-Vehicles	0.67%	236,118.25		6,795.56	4,613.27	247,527.08	1.39%	18,668.62		457.42	269.05	19,395.09	266,922.17
	-Protection Gear	0.18%	30,614.96	- 14,935.94	1,825.67	598.15	18,102.84	0.39%	2,638.49	- 786.10	128.34	38.03	2,018.76	20,121.60
Police	-Equipment	0.10%	23,571.57		1,014.26	460.54	25,046.38	0.13%	3,783.34		42.78	54.53	3,880.64	28,927.02
	-Facilities	2.91%	404,264.44		29,515.05	7,898.50	441,677.99	3.87%	21,206.55		1,273.54	305.63	22,785.72	464,463.71
ROAD SERV	ICES													
	Vorks Facilities	0.98%	487,562.44		9,939.78	9,525.97	507,028.19	1.27%	24,801.02		417.93	357.43	25,576.38	532,604.57
-Vehicles	5	1.31%	50,263.50		13,286.85	982.05	64,532.40	1.70%	37,593.35		559.44	541.79	38,694.58	103,226.98
-Roads		46.02%	4,855,338.71	- 712,373.00	466,763.83	94,863.38	4,704,592.92	59.80%	323,987.21		19,678.98	4,669.30	348,335.49	5,052,928.41
-Parking	Facilities	0.55%	24,838.61		5,578.45	485.30	30,902.35	0.77%	4,360.94		253.39	62.85	4,677.19	35,579.53
TRANSIT SEI	RVICES													
-Vehicles			231,134.93		-	4,515.90	235,650.83		30,358.71		-	437.53	30,796.24	266,447.07
SANITARY S	EWAGE													
-Sanitary	Sewage Treatment	3.35%	2,401,923.66		33,977.81	46,928.67	2,482,830.14	5.85%	230,576.44		1,925.12	3,323.07	235,824.62	2,718,654.76
PARKS & RE	CREATION													
	d Development	8.70%	227,476.59	- 262,200.00	88,240.88	4,444.43	57,961.90	3.81% -	1,666.95	-13,800.00	1,253.79		- 14,213.15	43,748.74
-Maior Ir	ndoor Facilities	23.01%	- 1,663,593.80	- 120,000.00	233,381.92		- 1,550,211.89	10.08% -	137,616.07		3,317.13		- 134,298.95	- 1,684,510.83
-Parks Ve		0.60%	82,130.70	120,000.000	6,085.58	1,604.67	89,820.94	0.26%	99.09		85.56	1.43	186.08	90,007.02
-Marina		1.84%	29,616.16		18,662.44	578.64	48,857.24	2.92%	5,759.55		960.91	83.01	6,803.47	55,660.71
LIBRARIES														
-Facilities	c	1.16%	- 129,167.57	- 38,000.00	11,765.45		- 155,402.12	0.53% -	17 832 54	- 2,000.00	174.41	-	- 19,658.13	- 175,060.24
-Collectio		4.56%		- 38,000.00	46,250.39	1,070.54	64,113.72	2.09%	,	- 1,000.00	687.78	21.36	1,191.40	65,305.12
concern		1.5070	51,752.70	30,000.00	10,200.00	1,0,0.04	01,110.72	2.0370	1,102.20	1,000.00	007.70	21.50	1,131.40	00,000.12
TOTALS		100.00%	7,752,814.30	- 1.185.508.94	1,014,263.00	186,501.00	7,768,069.36	100.00%	421.814.80	-17,586.10	32,908.00	10,165.00	447,301.70	8,215,371.06
			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,	, ,		,,		,==	,		-,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	

	THE CORPORATION OF THE	TOWN OF COBOURG					
	STAFF REPORT						
COBOURG	Committee of tl	he Whole					
TO:	Mayor and Council Members						
FROM: TITLE:	Jamie Kramer, CHRP, CCIP™ Accessibility Coordinator						
DATE OF MEETING:	January 4, 2020						
TITLE / SUBJECT:	Indigenous Land Acknowledgment for the Town of Cobourg						
REPORT DATE:	December 20, 2020						

## 1.0 STRATEGIC PLAN

Pillar - PEOPLE – The Town of Cobourg supports and cares for the Social and Physical Well-Being of its Citizens.

Pillar – PLACES – The Town protects, preserves, and promotes its natural assets, heritage, arts, culture, and tourism.

Pillar – PROGRAMS – The Town provides efficient and effective corporate, community, and business and recreational services for its residents, businesses, and visitors.

Pillar – PARTNERSHIP – The Town engages in strong, sustainable publicprivate partnerships to improve the quality of life for everyone.

Pillar – PROSPERITY – The Town plans for, markets, and develops assets for economic growth and financial security.

## 2.0 PUBLIC ENGAGEMENT

Alderville First Nations provided the Land Acknowledgement as well as more input and understanding into using Land Acknowledgments.

The Nogojiwanong (Peterborough) Friendship Centre was contacted for further information and resources.

#### 3.0 <u>RECOMMENDATION</u>

THAT Council receive the Land Acknowledgement, created by Alderville First Nations, for their use; and

FURTHER THAT Council incorporate the Town of Cobourg's traditional Indigenous land acknowledgement statement in all Council related meetings; and

FURTHER THAT Council incorporate the Town of Cobourg's traditional Indigenous land acknowledgement statement in all Board and Advisory Committee meetings; and

FURTHER THAT Council incorporate the Town of Cobourg's traditional Indigenous land acknowledgement statement in all public meetings and ceremonies; and

FURTHER THAT all Town of Cobourg require their , municipal staff, Councillors, volunteers, and to attend Indigenous Awareness and Understanding Training, developed by the Town of Cobourg and/or provided by the Town of Cobourg and/or comparable to the training provided by the Town of Cobourg;

FURTHER THAT Council direct Staff to incorporate appropriate actions from the Truth and Reconciliation Commission's Calls to Action into the development of the EDI Strategy; and

FURTHER THAT Council begin to use the Land Acknowledgement on January 4, 2021 at the first Committee of the Whole meeting for 2021.

#### 4.0 ORIGIN AND LEGISLATION

On May 13, 2019, Council resolved:

THAT Council adopt a traditional land acknowledgement statement to be read at the beginning of its meetings; and

FURTHER THAT Council direct Staff to consult with Alderville First Nations to draft a traditional land acknowledgement statement that reflects the traditional territory of the Anishnabek, Huron-Wendat, Haudenosaunee (Iroquois), Ojibway/Chippewa peoples, as well as this territory that is covered by the Williams Treaty.

The Government of Canada created the Truth and Reconciliation Commission of Canada (TRC) after 2007.<sup>1</sup> The Truth and Reconciliation Commission (TRC) provided those directly or indirectly affected by the legacy of the <u>Indian</u> <u>Residential Schools</u> system with an opportunity to share their stories and experiences.

The Indian Residential Schools Settlement Agreement, the largest class-action settlement in Canadian history, began to be implemented in 2007. One of the

<sup>&</sup>lt;sup>1</sup> Government of Canada; Indigenous and Northern Affairs Canada. "Truth and Reconciliation Commission of Canada." *Government of Canada; Indigenous and Northern Affairs Canada*, 19 Feb. 2019, <u>www rcaanc-cirnac.gc.ca/eng/1450124405592/1529106060525</u>.

elements of the agreement was the establishment of the Truth and Reconciliation Commission of Canada to facilitate reconciliation among former students, their families, their communities and all Canadians.

The <u>official mandate</u> (PDF) of the TRC is found in Schedule "N" of the Settlement Agreement which includes the principles that guided the commission in its important work.

Between 2007 and 2015, the Government of Canada provided about \$72 million to support the TRC's work. The TRC spent 6 years travelling to all parts of Canada and heard from more than 6,500 witnesses. The TRC also hosted 7 national events across Canada to engage the Canadian public, educate people about the history and legacy of the residential schools system, and share and honour the experiences of former students and their families.

The TRC created a historical record of the residential schools system. As part of this process, the Government of Canada provided over 5 million records to the TRC. The National Centre for Truth and Reconciliation at the University of Manitoba now houses all of the documents collected by the TRC.

In June 2015, the TRC held its closing event in Ottawa and presented the executive summary of the findings contained in its multi-volume final report, including 94 "calls to action" (or recommendations) to further reconciliation between Canadians and Indigenous peoples.

In December 2015, the TRC released its entire 6-volume final report. All Canadians are encouraged to read the summary or the final report to learn more about the terrible history of Indian Residential Schools and its sad legacy.

To read the reports, please visit the <u>National Centre for Truth and</u> <u>Reconciliation</u> website. <u>CBC has an interactive aspect entitled "Beyond 94"</u> to showcase where the government and other organizations are in terms of implementing the Calls to Action.

#### 5.0 BACKGROUND

Giving thanks, respect, and honouring the land and ancestors was and continues to be a common practice within Indigenous communities. The process of showing appreciation and giving thanks has a long history on these lands.

As a member of Canadian society, we are all treaty people. Treaties are binding agreements to guide the relationships, with the settlement of "Canada." Treaties are the legal basis for acquiring land by settlers and they allowed for the settlement of Canada.<sup>2</sup>

The Truth and Reconciliation Commission was formed as a means of reckoning with the devastating legacy of forced assimilation and abuse left by the residential school system. From 2008 to 2014, the Truth and Reconciliation Commission heard stories from thousands of residential school survivors. In

<sup>&</sup>lt;sup>2</sup> King, Thomas. 2013. *The Inconvenient Indian: A Curious Account of Native Peoples in North America*. Toronto: Ontario Penguin Random House Canada

June 2015, the commission released a report based on those hearings. From that came the 94 Calls to Action: individual instructions to guide governments, communities, and faith groups down the road to reconciliation.

Land Acknowledgments are a small yet significant way to show respect and acknowledge the presence of Indigenous peoples past, present, and future.

The <u>Williams Treaties First Nations</u> include the Mississaugas of Alderville, Curve Lake, Hiawatha, Scugog Island and the Chippewas of Beausoleil, Georgina Island, and Rama. These seven First Nations are signatories to various 18th and 19th century treaties that covered lands in different parts of south central Ontario. In 1923, the Chippewas and Mississaugas signed the Williams Treaties and together, over 90 years later, the Williams Treaties First Nations have joined to ensure their rights to and the relationship with the land is respected. In 2018 the Williams Treaties First Nations settled a longstanding dispute with the Crown about the making, terms, interpretation and implementation of the 1923 Williams Treaties.

#### **Pronunciation Guide:**

- Anishnabeg: Awe Nish Nah Beck
- Haudenosaunee: Hoe De Nah Show Nee
- Chippewa: Chip A Wah
- Wendat: When Dat
- Métis: May Tee

#### 6.0 ANALYSIS

This report responds to the above resolution requested by Council.

The Town of Cobourg extends its thanks and appreciation to Alderville First Nations for providing the Land Acknowledgement for our use.

Land Acknowledgements are an important starting point for Indigenous Reconciliation in Canada. When Land Acknowledgements are given, it is important to pause, be present, reflect, and consider how our place here, these lands, and how colonization and the oppression of Indigenous Persons has privileged some over others.

The Land Acknowledgement for the Town of Cobourg has been attached as **Appendix A**. The guide for understanding and using Land Acknowledgements, that has been adapted from the City of Toronto, is attached as **Appendix B**.

It is important to note that as we continue on our journey and continue to partner with Alderville and other Indigenous organizations, the Land Acknowledgement may evolve.

#### Next Steps on the Path to Reconciliation

The next steps from this are incorporating aspects of the Calls to Action and teachings from the Indigenous community into the way we govern and interact with the communities.

There are more actions to take beyond this, including conducting training, education, and awareness for Staff, Council, volunteers, Boards, Advisory Committees, and third party vendors. Training on Indigenous Awareness and Inclusion should be conducted for all staff on a rolling and ongoing basis at the Town of Cobourg.

This will provide everyone with the tools and resources for cultural competency that cannot be created in-house. Training would be conducted by Indigenous Awareness Canada, and as noted in the Council Report on the EDI Strategy, would be starting with Leadership and Town Council then slowly dispersing throughout the Town of Cobourg.

Alongside the training is the need for education and awareness campaigns to bring forward more ideas and engagement within the community to promote inclusion, understanding, and more cultural awareness.

Further, there is a need to incorporate Indigenous Relations, teachings, and understanding, as well as aspects of the Calls to Action in the full EDI Strategy beyond the Land Acknowledgement.

#### 7.0 FINANCIAL IMPLICATIONS/STAFFING/BUDGET IMPACT

There are no financial implications associated with implementing a Land Acknowledgement; however, there are financial implications to ensuring that there is enough education, understanding, and awareness to allow for the Land Acknowledgement to be the first step to Reconciliation.

In the Council Report for the EDI Strategy, budget was allocated for Indigenous Awareness training for Council and Leadership and this will be expanded upon for all Staff, volunteers, Boards, and Advisory Committees, upon the completion of the EDI Strategy.

The cost of providing Indigenous Awareness and Education training will be included in the budget for the EDI Strategy once it has been completed.

#### 8.0 CONCLUSION

The Land Acknowledgement of the Town of Cobourg is the first step in creating reconciliation in our community.

By approving the Land Acknowledgement and its use, the Town of Cobourg is committing to reconciliation with our Indigenous Persons. This combined with training and education, as well as incorporating the Truth and Reconciliation Calls to Action into the EDI Strategy, will create the foundation of reconciliation in the Town of Cobourg.

## 9.0 AUTHORIZATION ACKNOWLEDGMENT (SENIOR MANAGEMENT/CAO)

amie V. Kramer

Jamie Kramer Accessibility Coordinator

Brent Larmer Municipal Clerk/Manager of Legislative Services

Tracey Vaughan Chief Administrative Officer



# Land Acknowledgement Guide

# Purpose of this Document

Town of Cobourg staff, volunteers, Board members, Advisory Committee members, and Councillors, can use this document to guide their practice and actions around the use of the Town of Cobourg's Land Acknowledgement. A Land Acknowledgement is a first step in the Reconciliation process, done to acknowledge and honour the First Peoples that have lived here for thousands of years, and the enduring presence of Indigenous Persons in the area for time immemorial.

When a land acknowledgement is being given, Town of Cobourg staff, volunteers, Board members, Advisory Committee members, and Councillors, will pause, be present, reflect, and consider how to impact change in their work. This can include conscious thought on our place here, these lands, and how colonization and the oppression of Indigenous Persons has privileged some over others.

Indigenous Persons typically give thanks, appreciation, and respect for all in creation, including their ancestors, communities, other beings, clans, allied nations, and Mother Earth at the start of gatherings, ceremonies, and events. For settler Canadians moving toward implementing this teaching, it is also about public Acknowledgement of this respect towards and recognition of Indigenous Peoples, practices, and ways of knowing.

# Thank you to the City of Toronto for allowing us to use their Land Acknowledgement Guide as a resource.

# Outcomes from Using this Document and Land Acknowledgement

Town of Cobourg staff and partners will:

- 1. Reflect on their relationship to these lands.
- 2. Gain a better understanding of the treaties that cover Cobourg and Northumberland County.
- 3. Have a greater understanding of the phrase "we are all Treaty people."
- 4. Understand the important of honouring and giving respect to First Peoples, here with us today and their ancestors.
- 5. Have a better sense of ways and practices to create good relationships and connections with various Indigenous communities, especially that of our neighbours Alderville.

# Town of Cobourg's Land Acknowledgement

On May 13, 2019, Council resolved:

THAT Council adopt a traditional land acknowledgement statement to be read at the beginning of its meetings; and

FURTHER THAT Council direct Staff to consult with Alderville First Nations to draft a traditional land acknowledgement statement that reflects the traditional territory of the Anishnabek, Huron-Wendat, Haudenosaunee (Iroquois), Ojibway/Chippewa peoples, as well as this territory that is covered by the Williams Treaty.

Town of Cobourg Staff worked with Alderville First Nations to create a Land Acknowledgement for the Town of Cobourg. In addition, Staff conferred with the Nogojiwanong (Peterborough) Friendship Centre was contacted for further information and resources.

# Land Acknowledgement for the Town of Cobourg

We respectfully acknowledge that we are located in the traditional and treaty territory of the Michi Saagiig (Mississauga) and Chippewa Nations, collectively known as the Williams Treaties First Nations, which include: Curve Lake, Hiawatha, Alderville, Scugog Island, Rama, Beausoleil, and Georgina Island First Nations.

We respectfully acknowledge that the Williams Treaties First Nations have been stewards and caretakers of these lands and waters, and that today remain vigilant over their health and integrity for generations to come.

We are all Treaty people.

## Pronunciation Guide Pronunciation Guide:

- Anishnabeg: Awe Nish Nah Beck
- Haudenosaunee: Hoe De Nah Show Nee
- Chippewa: Chip A Wah
- Wendat: When Dat
- Métis: May Tee

# Importance of Land Acknowledgements<sup>1</sup>

Land acknowledgement is a way that people insert an awareness of Indigenous presence and land rights in everyday life. This is often done at the beginning of ceremonies, lectures, or any

<sup>&</sup>lt;sup>1</sup> Jones, Allison. "NativeLand.ca - Territory Acknowledgement." Native, 2019, native-land.ca/resources/territory-acknowledgement/.

public event. It can be a subtle way to recognize the history of colonialism and a need for change in settler colonial societies.

It is important that Land Acknowledgements do not become a token gesture rather than a meaningful practice. All settlers, including recent arrivals, have a responsibility to consider what it means to acknowledge the history and legacy of colonialism. When pausing to reflect while giving a Land Acknowledgement, it is important to consider:

- 1. What are some privileges settlers enjoy today because of colonialism?
- 2. How can individuals develop relationships with peoples whose land they are living on in the contemporary Canadian geopolitical landscape?
- 3. What are you doing beyond acknowledging the land where you live, work, play, or hold events?
- 4. What might you be doing that perpetuates settler colonial futurity rather than considering alternative ways forward for Canada?
- 5. Do you have an understanding of the on-going violence and the trauma that is part of the structure of colonialism?

Land Acknowledgements are a small part of disrupting and dismantling colonial structures.

# Truth and Reconciliation

The Truth and Reconciliation Commission (TRC) spent five years travelling across Canada, hearing stories about Residential School experiences and their effects. The TRC created many documents detailing their findings; most importantly, the 94 Calls to Action that urge all levels of government, including Indigenous, to work together to repair the harm done and to move forward with reconciliation. Covering hundreds of years of history, thousands of stories heard, and many published reports, it can be hard to fully comprehend the work done.

The 94 Calls to Action from the Truth and Reconciliation Commission are divided into two sections: legacy and reconciliation. These recommendations were created to "redress the legacy of residential schools and advance the process of Canadian reconciliation"[ii], and now are serving as a barometer for Canada's reconciliation progress.

Reconciliation is a complicated thing, and involves many people, stories, and initiatives. As a country, Canada is now moving in the right direction, in the hopes that it will "inspire Aboriginal and non-Aboriginal peoples to transform Canadian society so that our children and grandchildren can live together in dignity, peace, and prosperity on these lands that we now share"[iii]. The Truth and Reconciliation Commission's work is only the beginning.

Read the Calls to Action and get involved in creating Reconciliation.

# Land Acknowledgement

We respectfully acknowledge that we are located in the traditional and treaty territory of the Michi Saagiig (Mississauga) and Chippewa Nations, collectively known as the Williams Treaties First Nations, which include: Curve Lake, Hiawatha, Alderville, Scugog Island, Rama, Beausoleil, and Georgina Island First Nations.

We respectfully acknowledge that the Williams Treaties First Nations have been stewards and caretakers of these lands and waters, and that today remain vigilant over their health and integrity for generations to come. We are all Treaty people.

020	THE CORPORATION OF THE TOWN OF COBOURG
COBOURG	STAFF REPORT
то:	Mayor and Town Council Members
FROM:	Jamie Kramer, CHRP, CCIP™, Accessibility Coordinator
DATE OF MEETING:	December 7, 2020
TITLE/SUBJECT:	Equity, Diversity, and Inclusion Strategy
REPORT DATE:	November 23, 2020
FILE #:	

# 1.0 STRATEGIC PLAN

Pillar - PEOPLE – The Town of Cobourg supports and cares for the Social and Physical Well-Being of its Citizens.

Pillar – PLACES – The Town protects, preserves, and promotes its natural assets, heritage, arts, culture, and tourism.

Pillar – PROGRAMS – The Town provides efficient and effective corporate, community, and business and recreational services for its residents, businesses, and visitors.

Pillar – PARTNERSHIP – The Town engages in strong, sustainable public-private partnerships to improve the quality of life for everyone.

Pillar – PROSPERITY – The Town plans for, markets, and develops assets for economic growth and financial security.

# 2.0 PUBLIC ENGAGEMENT

Specific organizations were contacted to provide insight and input into the draft Terms of Reference for the Equity, Diversity, and Inclusion Committee of Council including:

- Alderville First Nations,
- Big Brothers, Big Sisters Northumberland,
- Canadian Mental Health Association (Haliburton, Kawartha, Pine Ridge),

- Community Living-West,
- Cornerstone Northumberland,
- Horizons of Friendship,
- Multicultural First Aid,
- New Canadians Centre,
- Northumberland Community Legal Centre (Legal Aid Ontario),
- Settlement Services through Northumberland County, and
- Queer Collective.

The public were also provided the opportunity to provide comments and insights not only into the Terms of Reference but the beginning stages of the EDI Strategy as well during this time period.

As a reminder, the public is always encouraged to participate in discussion around equity, diversity, and inclusion at the Town of Cobourg by emailing the Accessibility Coordinator at <u>diversity@cobourg.ca</u>.

## 3.0 RECOMMENDATION

THAT Council receive this Memo from the Accessibility Coordinator for information purposes; and

FURTHER THAT Council approves the final version of the Terms of Reference for the Equity, Diversity, and Inclusion Advisory Committee of Council; and

FURTHER THAT Council authorize the preparation of a By-law to amend By-Law No. 008-2019 to include the Terms of Reference for the Equity, Diversity, and Inclusion Advisory Committee of Council; and

FURTHER THAT Council appoints two (2) Councillors to sit as Voting Members of the Equity, Diversity, and Inclusion Advisory Committee of Council; and

FURTHER THAT Council directs Staff to begin the application process for the Equity, Diversity, and Inclusion Advisory Committee of Council; and

FURTHER THAT Council direct Staff to consult with the Equity, Diversity, and Inclusion Advisory Committee of Council on matters pertaining to the Equity, Diversity, and Inclusion Strategy for the Town of Cobourg, including public participation; and

FURTHER THAT Council sign the Declaration to join the Coalition of Inclusive Municipalities on January 4, 2021 as a commemoration to World Braille Day; and

FURTHER THAT Council direct Staff to bring forward initial budget amounts to be presented at the 2021 Budget review process for Council deliberations; and

FURTHER THAT Council participate in the "Leadership Interviews" as a part of the development of this strategy in the coming months.

# 4.0 ORIGIN AND LEGISLATION

## **Council Resolutions**

On June 29, 2020, Municipal Council passed the following Resolution:

WHEREAS at the Committee of the Whole Meeting on June 22, 2020 Council considered a Notice of Motion from Councillor Emily Chorley and Councillor Adam Bureau, regarding an Equity and Inclusion Policy for the Town of Cobourg; and

WHEREAS the Black Lives Matter movement has highlighted the need for a reaffirmed commitment to confronting racism and removing systemic barriers to equality; and

WHEREAS fostering an inclusive and welcoming community is a key tenant of the Town of Cobourg's annual 'Pride Month'; and

WHEREAS municipal government can play a leading role in helping to achieve gender equality;

NOW THEREFORE BE IT RESOLVED THAT Council instruct Staff to draft an Equity and Inclusion Policy; and

FURTHER THAT the policy specifically address the Inclusion of Black, Indigenous and People of Colour, women, people with disabilities, newcomers to Canada, the Lesbian, Gay, Bisexual, Trans, Queer, Two-Spirit, Intersex, and Asexual peoples, as well as those who identify as pansexual, questioning, non-binary, and other gender and sexual minorities (2SLGBTQIAP+) community and other visible minorities; and

FURTHER THAT the policy draws upon resources such as 'Advancing Equity and Inclusion: A Guide for Municipalities' and FCM's 'Diverse Voices Toolkit'; and

FURTHER THAT the policy includes annual commitments to Equity and Inclusion training for Town of Cobourg Staff, volunteers and Members of Council, engagement of citizens and advisory committees, and communications on progress; and

FURTHER THAT Council direct Staff to form an Ad Hoc Committee or a suitable alternative with a terms of reference or terms of engagement consisting of citizen members from these diverse minority populations in order to provide input on the development of the Equity and Inclusion Policy, due back to Council on August 24, 2020 Meeting; and

FURTHER THAT the draft policy be presented to Council for consideration by December 7th, 2020.

On September 14, 2020, Municipal Council passed the following Resolution:

WHEREAS at the Committee of the Whole Meeting on September 14, 2020 Council considered a memo from the Municipal Clerk/Manager of Legislative Services regarding Diversity, Inclusion and Equity within the Town of Cobourg; and

FURTHER THAT Municipal Council on June 29, 2020 provided Staff with a direction to draft and present a Diversity, Equity and Inclusion Policy for the Town of Cobourg that will encourage, promote, and insist upon awareness, equality, and acceptance by all residents and Municipal Staff in the Corporation of the Town of Cobourg; and

FURTHER THAT Staff recommend that the Municipal Council not only provide direction for a Diversity, Equity and Inclusion Policy, but that Council engage and establish a leadership approach in responding to a call for more municipal action on supporting Diversity, Inclusion and Equity across the jurisdiction on the Town of Cobourg Community;

NOW THEREFORE BE IT RESOLVED THAT Council direct Staff to create supporting governance structures with internal and external stakeholders from the Black, Indigenous and People of Colour, women, people with disabilities, newcomers to Canada, the Lesbian, Gay, Bisexual, Trans, Queer, Two-Spirit, Intersex, and Asexual peoples, as well as those who identify as pansexual, questioning, non-binary, and other gender and sexual minorities (2SLGBTQIAP+) community and other visible minorities; in order to identify and develop priorities, strategies and initiatives to support the Equity, Diversity and Inclusion effort in the Town of Cobourg; and

FURTHER THAT Council direct Staff to engage Cobourg's diverse community to help create potential draft terms of reference to advise Council and make recommendations to provide a monitoring and measuring role to help ensure that the Town applies a Diversity, Equity and Inclusion lens to its policies, services and programs; and

FURTHER THAT Council direct Staff to make an application to join the Coalition of Inclusive Municipalities (CIM) as a commitment to investing time and resources toward creating a more welcoming and inclusive community in which the CIM network brings together municipalities that want to improve their policies against racism, discrimination, exclusion and intolerance and together, the municipalities undertake initiatives to eliminate all forms of discrimination with a view to building open and inclusive societies; and

FURTHER THAT Council direct Staff to bring forward a report to a December Council Meeting or an earlier meeting presenting a status update on the recommendations approved and outlined within the Staff Report.

On November 2, 2020, Municipal Council passed the following Resolution:

THAT Council receive this Memo from the Accessibility Coordinator for information purposes; and

FURTHER THAT Council reviews the draft Terms of Reference for the Equity, Diversity, and Inclusion Committee of Council and provide input, as necessary; and

FURTHER THAT Council directs Staff to begin broad public engagement with the residents of Cobourg on the Terms of Reference for the Equity, Diversity, and Inclusion Committee of Council; and

FURTHER THAT Council direct Staff to bring forward a final version of the Terms of Reference for the Equity, Diversity, and Inclusion Committee of Council to a future Council meeting prior to the end of 2020; and

FURTHER THAT Council receive the timeline for the Equity, Diversity, and Inclusion Strategy development for information purposes; and

FURTHER THAT Council participate in the "Initial Benchmarking" step of the development of this strategy.

## **Canadian and Ontario Legislation**

Canada along with its provinces and territories has an exceptional system of human rights laws and ratified international treaties. Nevertheless, as in other parts of the world, racism and discrimination continue to raise barriers against the development of individuals and groups. Racism and discrimination divide communities, pose a serious threat to peaceful coexistence and exchange among and within communities, imperil democratic and participatory citizenship, and entrench and aggravate inequalities within society. Racism and discrimination continue to perpetuate the historical disadvantage experienced by Aboriginal peoples and other diverse groups, many of whom are members of Canada's most economically and socially marginalized communities.

The **Canadian Charter of Rights and Freedoms** stipulates: "Every individual is equal before and under the law and has the right to the equal protection and equal benefit of the law without discrimination and, in particular, without discrimination based on race, national or ethnic origin, colour, religion, sex, age or mental or physical disability".

Under the **Canadian Human Rights Act**, "all individuals should have an opportunity equal with other individuals to make for themselves the lives that they are able and wish to have and to have their needs accommodated, consistent with their duties and obligations as members of society, without being hindered in or prevented from doing so by discriminatory practices based on race, national or ethnic origin, colour, religion, age, sex, sexual orientation, marital status, family status, disability or conviction for an offence for which a pardon has been granted."

The **Citizenship Act** provides that all Canadians, whether by birth or by choice, enjoy equal status, are entitled to the same rights, powers and privileges and are subject to the same obligations, duties, and liabilities.

The **Canadian Multiculturalism Act** provides that the "Government of Canada recognizes the Diversity of Canadians as regards race, national or ethnic origin, colour, and religion as a fundamental characteristic of Canadian society and is committed to a policy of multiculturalism designed to preserve and enhance the multicultural heritage of Canadians while working to achieve the equality of all Canadians in the economic, social, cultural and political life of Canada," (Preamble), affirms that multiculturalism "reflects the cultural and racial Diversity of Canadian society and acknowledges the freedom of all members of Canadian society to preserve, enhance and share their cultural heritage" (section 3(1)(a)) and that it represents "a fundamental characteristic of the Canadian heritage and identity and that it provides an invaluable resource in the shaping of Canada's future" (section 3(1)(b)).

Provincial and territorial human rights codes are premised on the principle that all human beings are equal in worth and dignity, and are entitled to equal protection of the law, as well as that every person has a right to full and equal recognition and exercise of their human rights and freedoms, without distinction, exclusion or preference based on some or all of the following grounds: race, colour, ancestry, ethnic origin, sex, pregnancy, sexual orientation, civil, marital or family status, age, religion, political belief,

language, ethnic or national origin, social condition, or disability. Discrimination exists where such a distinction, exclusion or preference has the effect of nullifying or impairing such rights, and human rights codes prohibit discrimination and harassment.

# 5.0 BACKGROUND

This report responds to part of the above resolutions as requested by Council.

Employers use Diversity and Inclusion initiatives for a variety of reasons including legislative compliance obligations, increasing innovation, and to increase the bottom line with a more diverse workforce. Using Demographic and Labour Market information from the 2016 Canadian Census through Statistics Canada<sup>1</sup>, it is clear that there are marginalized, underrepresented, and underserved groups living in the Town of Cobourg.

In 2016, it was reported that almost 4,000 residents of Cobourg moved to the city from cities within the province of Ontario in the last five (5) years with almost 1,500 in the last year.<sup>2</sup> With the rising cost of housing<sup>3</sup> and the COVID-19 pandemic<sup>4</sup>, there are many people moving out of, and away from, Toronto to some of the smaller communities to either commute into the city or retire. As Toronto is one of the most diverse cities in Canada, this could increase the diverse population in Cobourg in the near future. Many persons, including a few from the Legislative Services department, are choosing to move East of Toronto to smaller communities like Cobourg where their money will go further.

The 2016 Census shows us that 4.4% of the population in Cobourg identifies as a Racialized Person (Visible Minority) and 2.3% of the population identifies as an Indigenous Person (Aboriginal).<sup>5</sup> In Northumberland County, the population is 3.4% and 2.7%, for Racialized Persons (Visible Minorities) and Indigenous Persons (Aboriginals), respectively.

<sup>&</sup>lt;sup>1</sup> Statistics Canada. 2017. Cobourg, T [Census subdivision], Ontario and Ontario [Province] (table). Census Profile. 2016 Census. Statistics Canada Catalogue no. 98-316-X2016001. Ottawa. Released November 29, 2017.

https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E (accessed September 28, 2020).

<sup>&</sup>lt;sup>2</sup> Ibid.

<sup>&</sup>lt;sup>3</sup> Khoo, Isabelle. "Here's How Much Young People Need To Make To Survive In Toronto." Toronto Storeys, 10 Dec. 2019, <u>http://www.torontostoreys.com/cost-of-living-toronto-2019/</u>.

<sup>&</sup>lt;sup>4</sup> Peters, Diane. "Why COVID-19 Has City-Dwellers Trying to Get out of Dodge." TVO.org, 18 June 2020, www.tvo.org/article/why-covid-19-has-city-dwellers-trying-to-get-out-of-dodge.

<sup>&</sup>lt;sup>5</sup> Statistics Canada. 2017. Cobourg, T [Census subdivision], Ontario and Ontario [Province] (table). Census Profile. 2016 Census. Statistics Canada Catalogue no. 98-316-X2016001. Ottawa. Released November 29, 2017.

https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E (accessed September 28, 2020).

Even with the seemingly "homogenous" community, it is important to celebrate differences that do occur. The importance to encourage and celebrate diversity in "homogeneous" communities allows for Cobourg to<sup>6</sup>:

- 1. **Remove Other-ness**: This includes acknowledging and respect the cultures and traditions across the world, not just what we see in our community. To do this, we have to move beyond the symbolic celebrations of awareness months such as Black History Month to create true experiences for citizens.
- 2. **Challenge Assumptions**: Take what people know, or think they know about the world, and introduce new ideas and opinions which challenge the assumptions they have grown up with and honed over their lives. Most people are adaptable and accepting by nature who may need a little nudge to accept something from their norm.
- Look outside the Bubble: Expand the worldview of Cobourg to be inclusive of outside opinions, worldviews, and information that shapes the world around us. We should be able to present facts and arguments from marginalized, underrepresented, and underserved communities to those who may not hear these viewpoints elsewhere.
- 4. Celebrate the Diversity around Us: Few communities, including Cobourg and the greater Northumberland County, are entirely homogenous. This means that we should be seeking out and celebrating the uniqueness and differences in our communities, especially the "invisible" diversity elements.

By embracing diversity in the community, it means creating an environment that allows people to bring their unique thoughts and identities to enhance the cultural and diversity competence of the Town of Cobourg. The Town of Cobourg would only gain from having a diverse workplace and a welcoming community. The development of the Equity, Diversity, and Inclusion Strategy would provide the building blocks for creating an inclusive and welcoming community.

While there are activities being done within each department, these are uncoordinated which limits the impact and efficiency of them on the Town of Cobourg. As there are no facets in place that have a broad overview of the Town of Cobourg, there is a potential that staff members, and the community as a whole, are under-reporting cases of harassment and discrimination.

Without an EDI Strategy, there is a limited ability to measure the business value or the return on investment for those smaller facets of diversity that are being conducted. This also gives us a lack of reliable insight into employee experience as well as how the citizens understand equity, diversity, and inclusion.

<sup>&</sup>lt;sup>6</sup> Peters, Kylie. "Promoting Diversity in Homogeneous Communities." YALSA Blog, 2016, http://yalsa.ala.org/blog/2016/12/17/promoting-diversity-in-homogeneous-communities/.

The EDI Strategy will work to empower our Mayor and Town Council and our Leadership team, to be able to have meaningful discussions around equity, diversity, and inclusion both in the workplace and the boundaries of Cobourg.

# 6.0 ANALYSIS

Based on the Council Report and Resolution passed by Council, there were three (3) objectives to assist with creating this update and the overall Diversity, Inclusion, and Equity Policy and Plan.

- 1. Start to Listen (Public Engagement),
- 2. Joining the Coalition of Inclusive Municipalities, and;
- 3. The Development of an Equity, Diversity, and Inclusion Strategy.

## Start to Listen (Public Engagement)

The first aspect of the report to Council was to start to listen to the community and key stakeholders and rights holders about how to create an inclusive culture.

There were two (2) steps outlined in the Staff Memo for this option, which included:

- 1. Create the Terms of Reference for an Advisory Committee for Council, and
- 2. Community Open Dialogue and Feedback.

## Create the Terms of Reference for an Advisory Committee for Council

At the Committee of the Whole meeting on October 26, 2020, a draft version of the Terms of Reference for an Equity, Diversity, and Inclusion Advisory Committee of Council. After this meeting, input from Councillors, other community organizations, and citizens on Engage Cobourg.

In addition, further organizations were reached out to based on their scope of mandate as well as the location they provide services to. As many organizations provide services to Cobourg but have head offices in areas outside of Cobourg. These organizations were asked to provide input via email and/or registration on the Engage Cobourg website and are listed in the "Public Engagement" section of this Council Report.

The final version of these Terms of Reference are attached as **Appendix A**. The Engage Cobourg incorporated the Terms of Reference and general dialogue for understanding issues around equity, diversity, and inclusion in the Town of Cobourg. This was visited a total of 172 times with 4 Engaged Visitors, 43 Informed Visitors, and 123 Aware Visitors. Every participant that said they would like to be involved was sent a personalized email inviting them to stay tuned with the final version of the Equity, Diversity, and Inclusion Advisory Committee of Council Terms of Reference and would be sent the information to apply to be a part of the committee.

This Advisory Committee of Council will start receiving applications once the Terms of Reference are approved and Council will appoint the full Committee by the end of February 2021. While the Mandate and information for the Advisory Committee has been outlined, the goal is to have this Advisory Committee provide insight and information to Council, and Staff, to have a diverse and inclusive lens applied to all Town initiatives moving forward.

To ensure needs of all community members will be met, select Staff members from Northumberland County have been requested to sit as non-voting members (resources) on the Committee to provide context and insight, as well as to combine efforts for specific strategies and projects. The goal of this Committee is to be as collaborative as possible when creating an equitable, diverse, and inclusive Cobourg.

## Community Open Dialogue and Feedback

As part of the opportunity to "Start to Listen", Staff used Engage Cobourg to begin the conversation about any obstacles, challenges, or opportunities to create a more equitable, diverse, and inclusive town. This information was collected at the same time as the Terms of Reference to begin the dialogue for public engagement.

Staff outlined in the initial report to Council on September 14<sup>th</sup> the option to create an outreach that allowed the community to "express and write their feelings, a quote, or draw/provide an image...through an online portal or physical location." Due to the rise of COVID-19 cases during the months between September and November this was done completely online to ensure a safe environment. Should cases drop and it is safe to conduct these types of engagement in person again in 2021, this will be incorporated into the public engagement options for the EDI Strategy at that time.

Staff with the assistance of Town Council and the Equity, Diversity, and Inclusion Committee of Council for the Town of Cobourg will determine a safe location for this, as well as how it will be monitored and issues raised addressed.

Staff will continue to listen to the community. Once the EDI Committee of Council has been formed, a Town Hall/Public Session will be hosted, either in-person, virtually, or hybrid, to encourage citizens to make their voices heard. The way that public participation will take place will depend heavily on COVID-19 restrictions, cases, and advice from Health professionals.

As previously stated in the Council Report, the public is always welcome to address issues, concerns, or opportunities around equity, diversity, and inclusion by emailing the Accessibility Coordinator at <u>diversity@cobourg.ca</u>.

## Join the Coalition of Inclusive Municipalities

The Coalition of Inclusive Municipalities is a network through the Canadian Commission for UNESCO (United Nations Educational, Scientific and Cultural Organization). This network brings together municipalities that want to improve their policies against racism, discrimination, exclusion and intolerance. Its strength lies in the shared experiences of its members. Together, the municipalities undertake initiatives to eliminate all forms of discrimination with a view to building open and inclusive societies.

In the guide for <u>New and Established Members of the Coalition of Inclusive</u> <u>Municipalities</u>, there is a recommendation for new signatory members to sign the declaration to become a member of the Coalition of Inclusive Municipalities on an internationally recognized day. The next of these is January 4<sup>th</sup>, which is World Braille Day. It is the recommendation of Staff that the Mayor and Town Council not only sign the declaration to join the Coalition of Inclusive Municipalities on this day, but also

proclaim World Braille Day as a significant day to raise awareness at the Town of Cobourg.

Once becoming a signatory member, the Town of Cobourg is responsible for undertaking actions that address ten (10) Common Commitments. These are the following:

- 1. Increasing vigilance against systemic and individual discrimination.
- 2. Monitoring discrimination in the municipality and taking action to address it.
- 3. Supporting individuals who experience discrimination.
- 4. Providing police services that are exemplary institutions for fighting discrimination.
- 5. Providing equal opportunities as a municipal employer, service providers, and contractor.
- 6. Supporting measures that promote equity in the labour market.
- 7. Challenging discrimination and promoting diversity and equal opportunities in housing.
- 8. Involving citizens by giving them a voice in anti-racism initiatives and decisionmaking.
- 9. Challenging discrimination and promoting diversity and equal opportunities in education and other forms of learning.
- 10. Promoting the respect, knowledge, and appreciate of cultural diversity and the inclusion of Indigenous and Racialized communities in the cultural fabric of the municipality.

By signing on, the Town of Cobourg is agreeing to create a Plan of Action for these ten (10) Commitments, which will be our EDI Strategy. It is Staff recommendation that we focus on three (3) of these actions while we develop our EDI Strategy and work to incorporate more as we continue on our journey. The three (3) that are being recommended by Staff are:

- 1. Increasing vigilance against systemic and individual discrimination.
- 2. Monitoring discrimination in the municipality and taking action to address it.
- 3. Involving citizens by giving them a voice in anti-racism initiatives and decisionmaking.

These initial commitments will begin through further public engagement as well as with the assistance of the newly formed Equity, Diversity, and Inclusion Advisory Committee of Council. More information will be provided in 2021 on the full scope of engagement with the public to increase Staff's awareness of the types of discrimination faced by members of the public, as well as our Staff members.

Beginning with these three commitments, the Town of Cobourg will be able to lay a greater foundation to incorporate the remaining seven (7) in the future. While all are important and will have a part to play in the EDI Strategy, the amount of resources and ability to address some of the larger systemic issues will only come with time and further resources. The first three (3) that are being recommended will lay the foundation and framework for how to best implement and address the remaining seven (7).

Once the Town of Cobourg's EDI Strategy is complete, we will be requested on a yearly basis to provide CCUNESCO with updates on how we are meeting our requirements under the ten (10) Common Commitments. This Annual Report will also be shared with the Equity, Diversity, and Inclusion Advisory Committee of Council as well as Town Council and the public to demonstrate where we are on the journey and what steps are still to be made. This first report will be completed in 2021 along with the start of the implementation of the EDI Strategy.

It should be noted that by focusing on these three (3) commitments, it does not preclude us from having strategies or recommendations for the other seven (7) commitments in our EDI Strategy. As with these types of commitments, they are intertwine and work together to create a holistic approach to the Town of Cobourg's approach to racism and discrimination.

## Development of an Equity, Diversity, and Inclusion Strategy

At the Council meeting on November 4<sup>th</sup>, the following development process for an EDI Strategy was approved by Council:

- 1. Initial Internal Benchmarking: Using the <u>Global Diversity and Inclusion</u> <u>Benchmarks (GDIB)</u>, and the corresponding <u>GDIB Assessment Checklist</u>, determine the Town of Cobourg's current level of diversity and culture of inclusion.
- 2. **External Benchmarking**: Review other Equity, Diversity, and Inclusion Strategies and Plans from other municipalities, non-profit, and for-profit organizations to see the scope of goals and objectives.
- 3. **Community Engagement and Feedback**: Conduct community engagement and listening sessions to learn about the important topics that should be addressed for the community in Cobourg.
- 4. Leadership Interviews: Interviews with those in top leadership and management positions should be conducted, including with Council, to determine cultural competence as well as their understanding of topics related to Equity, Diversity, and Inclusion through their unique experience and lens.
- 5. **Document Review**: All documents, policies, and processes should be reviewed under an Inclusion, Diversity, Equity, and Accessibility (IDEA) lens to provide insights into any unintentional organizational or systemic barriers at the Town of Cobourg.
- 6. **Census and Engagement Survey**: Survey the current workforce to learn more about the Diversity within the workplace as well as how engaged and included they feel.
- 7. **Confidential Internal Focus Groups**: Conduct confidential focus groups with employees to learn more about the obstacles and opportunities for Equity, Diversity, and Inclusion at the Town of Cobourg.
- 8. **Strategy Development**: Work with appropriate stakeholders and rights holders to develop the Inclusion and Diversity Strategy/Plan.
- 9. Implementation: Implementing the Equity, Diversity, and Inclusion Strategy.

As noted, this entire process will take approximately eight (8) to ten (10) months, with the hopes of having a completed Equity, Diversity, and Inclusion Strategy to present to Council by August 2021 with the aim to begin the implementation process in the Fall of 2021. This is assuming there are no delays due to unforeseen circumstances (such as another lockdown due to COVID-19) and appropriate budgetary allotments provided.

The following information is an update on the steps that have been taken already and what is to come in the future for the EDI Strategy to stay within the timeline. This EDI Strategy will meet the requirements under the Coalition of Inclusive Municipalities for a Plan of Action.

An aggregate and high level report of all the information collected throughout the entirety of the process will be provided at a later date to Town Council along with some recommended actions for the future. This will allow for all of the steps and information to work together to create a full picture rather than making assumptions or estimations about what will work moving forward based on only pieces of the information.

#### Initial Internal Benchmarking

**Purpose**: Using the <u>Global Diversity and Inclusion Benchmarks (GDIB)</u>, and the corresponding <u>GDIB Assessment Checklist</u>, determine the Town of Cobourg's current level of diversity and culture of inclusion.

The Global Diversity and Inclusion Benchmarks (GDIB)<sup>7</sup> helps organizations determine strategy and measure progress in managing Diversity and fostering Inclusion. The GDIB Model uses four (4) broad groups and fourteen (14) categories to cover the important elements that need to be addressed to create a Diversity and Inclusion Initiative.

The GDIB has five (5) levels of assessment which are as follows:

- Level 5: Best Practice: Demonstrating current best practices in D&I; exemplary for other organizations globally.
- Level 4: Progressive: Implementing D&I systemically; showing improved results and outcomes.
- Level 3: Proactive: A clear awareness of the value of D&I; starting the implement D&I systemically.
- Level 2: Reactive: A compliance mindset; actions are taken primarily to comply with relevant laws and social pressures.
- Level 1: Inactive: No D&I work has begun; Diversity and a culture of Inclusion are not part of organizational goals.

The Town of Cobourg has received permission from the authors to use this as their metric analysis for the EDI Strategy moving forward.

<sup>&</sup>lt;sup>7</sup> "From Global Diversity & Inclusion Benchmarks: Standards for Organizations Around the World © 2017 Julie O'Mara and Alan Richter. Used with permission. All Rights Reserved.

Using the <u>GDIB Assessment Checklists</u>, the Town of Cobourg will assess their initial levels of equity, diversity, and inclusion in the workplace. Using a mixture of Councillors, Directors, Managers, Supervisors, and Individual Contributors, many persons from the Town of Cobourg were able to participate in this activity. This will include the Fire Department, Police Department, the Cobourg Public Library, and Union representatives.

As the goal of this system is to come to a consensus, only a sample of Staff members from all levels were able to participate; however, through the Inclusion Survey and Confidential Internal Focus Groups, all Staff members will be asked on the topics in a multitude of ways. This will allow us to understand the full depth of where the Town of Cobourg is on its journey and how Staff understands Equity, Diversity, and Inclusion.

We are still working to collect this information and will use it to shape the future direction of the EDI Strategy. It should be noted that the expectation is that the Town of Cobourg will be on the lower end of the spectrum as there hasn't been a collective effort towards EDI at the Town of Cobourg previously. There are many departments that are making efforts towards EDI in their respective area and that will mean some of the categories have higher levels of activity than others but overall there is a lower level of activity.

While completing the Checklist Assessments, it will be requested of the individuals participating to place an asterisk next to the practices that they wanted to see implemented in the future as goals. These will be taken into consideration during the recommendation and action planning phase of the EDI Strategy; however, it may be that we take smaller steps to work towards those larger goals in the future.

#### External Benchmarking

**Purpose**: Review other Equity, Diversity, and Inclusion Strategies and Plans from other municipalities, non-profit, and for-profit organizations to see the scope of goals and objectives.

There are different levels of specificity and commitment to Diversity and Inclusion in Diversity and Inclusion Action Plans/Strategies. Municipal government plans generally have an internal focus. The non-profit and for-profit organizations tend to acknowledge the need to have an additional client/customer focus. The Town of Cobourg should aim to do both with their Equity, Diversity, and Inclusion Strategy; however, the variety in the level of commitment will come based on the type of resources that are available, including personnel and budgetary commitments.

The hope was to use similar comparators as with the other external comparators that are used; however, it should be noted that based on preliminary research many small municipalities or comparable demographic and size municipalities have not undertaken this type of work. This further proves that Cobourg will be a leader in this space and may mean that larger areas will need to be used as benchmarks. Where it is applicable, a note on the size of the municipality/organization will be factored in to understand the differences in resources.

Many of the EDI plans and strategies for different municipalities have between forty (40) to sixty (60) action items across a multitude of objectives and goals. The municipalities and/or regions that have these strategies have significantly higher populations overall and also higher populations of Racialized Persons. The amount of complexity depends

on the not only how long the municipality/region has been focusing on diversity but also the size of the personnel working on the project.

While there may be some initiatives that the Town of Cobourg can take based on these other strategies, we are not far enough along on the process to start further along on the journey than we actually are. When that happens, EDI Strategies tend to fail because the expectation is much higher than what can actually be delivered.

#### Community Engagement and Feedback

**Purpose**: Conduct community engagement and listening sessions to learn about the important topics that should be addressed for the community in Cobourg.

As noted in the "Public Engagement" section of this document, the public will be engaged on the Terms of Reference for the EDI Committee of Council. There will be a notice that members of the public can email in any barriers, obstacles, complaints, or compliments to the Town at <u>diversity@cobourg.ca</u>.

More strategic public engagement will be undertaken during the next phases of developing the plan. The information gathered during the next few months will help direct the way in which Staff engages the public as well as reviews documents and information internally. The public engagement will use the principles of the International Association for Public Participation's Engagement Spectrum as well as best practices for engaging marginalized and "hard to reach" communities.

Some of these best practice techniques include:

- Hosting events at community centres,
- Providing information or accommodations for child care,
- Hosting events along a bus route,
- Ensuring that these events do not fall on a religious or cultural holiday or event,
- Having language interpreters, including sign language interpretation, available,
- Ensuring the location is barrier-free and accessible for Persons with Disabilities,
- Pairing up persons who are new to the public engagement process with those who have done it before, and
- Allowing people to participate in multiple ways for the same topic (i.e. in person, online, email, survey, etc.).

All of these ideas will be taken into consideration during the creation and implementation of public engagement for the EDI Strategy. As noted at the Committee of the Whole meeting on October 26, 2020, it is important to provide anonymous and/or confidential ways for people to participate and engage with this topic to allow for safety of the persons who are participating. Measures and steps will be made to ensure this is available and an option during the course of public engagement.

#### Next Steps on the Timeline

There will be two (2) aspects of the process that will start in the near future simultaneously:

1. Leadership Interviews: Interviews with those in top leadership and management positions should be conducted, including with Council, to determine

cultural competence as well as their understanding of topics related to Equity, Diversity, and Inclusion through their unique experience and lens.

2. **Document Review**: All documents, policies, and processes should be reviewed under an Inclusion, Diversity, Equity, and Accessibility (IDEA) lens to provide insights into any unintentional organizational or systemic barriers at the Town of Cobourg.

The Document Review process will work in tandem with the Corporate Policy Review Protocol process that was discussed at the Committee of the Whole meeting on November 16<sup>th</sup>, 2020.

These next steps will provide insights into what leadership views as the important areas of EDI as well as looking at the documents, policies, and procedures to make sure they are having the intended impact on Staff. These two (2) aspects will help with the future of the EDI Strategy but the direct responses and data captured will remain confidential to protect the privacy of those who are involved in the process.

While we are completing these tasks, we will also be creating the information for:

- 1. Census and Engagement Survey: Survey the current workforce to learn more about the Diversity within the workplace as well as how engaged and included they feel.
- 2. **Confidential Internal Focus Groups**: Conduct confidential focus groups with employees to learn more about the obstacles and opportunities for Equity, Diversity, and Inclusion at the Town of Cobourg.

The information for these steps will be presented at a future Council date for information and consideration. As a note, the information from the different steps will be presented at one time together to provide the most context and information as these steps are to work together to create a full understanding of the scope of Equity, Diversity, and Inclusion at the Town of Cobourg.

#### Additional Consideration #1: Intercultural Development Inventory® (IDI®)

As part of the leadership interviews, it would be beneficial to also have leadership receive information about their cultural competency by using the Intercultural Development Inventory® (IDI®). This tool assesses intercultural competence—the capability to shift cultural perspective and appropriately adapt behavior to cultural differences and commonalities. As part of it, leaders take the assessment and then work with a trained facilitator to develop an action plan to encourage cultural competency growth.

There are two (2) options to participating in the IDI®s. The first option is to find a trained facilitator to conduct these, which could cost around \$18,000 to \$20,000 to conduct with just our current leadership and Town Council. This is a good short-term solution; however, will cost more money in the long run, especially if there are changes within the Management team. The second option is to train two (2) facilitators within the Town of Cobourg to conduct the IDI® assessments in-house. After the initial cost for the training, which is approximately \$2,400 CAD per person (\$1,800 USD per person), the

assessment only costs approximately \$30 CAD per person (\$21 USD per person) which includes receiving the group aggregate assessment information for the IDI®. Please note that these are approximate numbers as the prices are listed in USD and the CAD exchange rate was used on October 30, 2020.

While currently we are proposing to use it for Leadership and Town Council, going through with Option #2 would allow for more insights into the leadership team on an ongoing basis, especially as we continue on the EDI journey. It would also allow all Advisory Committees, Board, and Supervisors/Managers to have the assessment done to understand their cultural competency in the future. The initial costs of using the IDI for Leadership and Town Council would be approximately \$5,500 CAD.

#### Additional Consideration #2: Training, Education, and Awareness

Another key component of beginning an EDI Strategy and journey is to conduct training with the appropriate groups on appropriate topics. The main goal currently is to raise awareness for Leadership and Town Council in order to abide by a "top down" approach to inclusion, which works best in organizations to ensure that all staff understand the importance of the strategy and information.

Additional training on Indigenous Awareness and Inclusion should also be conducted for Leadership and Town Council to provide them with the tools and resources for cultural competency that cannot be created in-house. This would include training from Indigenous Awareness Canada, which would cost a total of \$4,300 for all Leaders and Town Council, as well as a few select other individuals.

Further, anti-racism training should be conducted as well through a third party. The Canadian Race Relations Foundation (CRRF) provides a half-day anti-racism workshop that aims to develop capacity for equity, offering a safe space for discussion and conversation about equity, race, and human rights, while simultaneously helping participants navigate differences, diversity, power relationships and conflict. The cost for Leadership and Town Council to participate is \$1,350.

Other training will be done in-house through the expertise and knowledge of the Accessibility Coordinator and Human Resources, as required. This will include Diversity and Inclusion Fundamentals, Unconscious Bias, Accessibility, and Human Rights training among others.

More training will be conducted for all staff members on an ongoing basis, throughout the creation of the EDI Strategy as well as the implementation.

## 7.0 FINANCIAL IMPLICATIONS/STAFFING/BUDGET IMPACT

As costs may be realized throughout the project, they will be brought on a case by case and project by project basis during the course of developing the EDI Strategy.

Currently, we are requesting a budget of \$12,000 for initial training and professional development for leadership and Town Council. This is to account for the conversion rates from USD to CAD for the IDI® to make sure that we have our bases covered.

As noted above, EDI Strategies are the most successful when there is stronger cultural competency within the leadership team, which can be developed over time and with assistance. The goal is to conduct the majority of this training for leadership in the first six (6) months of 2021.

The work of this will be done by the Accessibility Coordinator and will not impact the current staffing of the Legislative Services department.

All 2021 budget requests will be brought forward and presented by Staff at the December 8, 2020 Divisional Budget Meetings for Council consideration and deliberation.

## 8.0 CONCLUSION

Staff has undertaken the first steps in creating an EDI Strategy that will set the Town of Cobourg apart from other smaller municipalities while enhancing the livelihood of those who live here and will live here in the future. It also starts the process of the Town of Cobourg becoming a competitive employer with larger municipalities as more and more persons, especially younger persons, value the corporate social responsibility of an organization when determining where to work.

As the months go on, there will be more data and information collected to provide insights into how the Town of Cobourg can move forward with Equity, Diversity, and Inclusion. This information, in combination with joining the Coalition of Inclusive Municipalities, will start the process of listening to our citizens about their needs related to Equity, Diversity, and Inclusion and work towards being an inclusive employer.

## 9.0 AUTHORIZATION ACKNOWLEDGEMENT (SENIOR MANAGEMENT/CAO)

amie V. Kramer

Jamie Kramer Accessibility Coordinator

Brent Larmer Municipal Clerk/Manager, Legislative Services

Tracey Vaughan Chief Administrative Officer

# Equity, Diversity, and Inclusion Advisory Committee of Council Terms of Reference

The Town of Cobourg's municipal Council directed Staff to engage Cobourg's diverse community to help create potential draft terms of reference to advise Council and make recommendations to provide a monitoring and measuring role to help ensure that the Town applies an equity, diversity, and inclusion lens to its policies, services, celebrations, events, and programs.

## Preface

The Equity, Diversity, and Inclusion Advisory Committee of Council recognizes the Town of Cobourg's multicultural heritage and the mix of national, ethnic, and racial origins which exist in our population.

The Equity, Diversity, and Inclusion Advisory Committee of Council through its role of monitoring and measuring is dedicated to promote and foster inclusion and to address issues of discrimination based on:

- Race,
- National or ethnic origin,
- Colour,
- Religion or faith or other forms of conscientiously held beliefs,
- Sex,
- Sexuality (including sexual orientation),
- Language and linguistic origin,
- Gender identity and gender expression,
- Age (children, youth, adult, seniors),
- Mental or physical disability,
- Family status (including marital status), and
- For those persons who identify as First Nations with or without status, Métis, and/or Inuit.

This Committee is committed to the promotion of equity, racial acceptance, and multicultural education where citizens are empowered to achieve their full potential in our community. Further, the Committee is committed to creating safe spaces for all persons to voice their opinions and understanding and to work together to create inclusion in Cobourg.

The Equity, Diversity, and Inclusion Advisory Committee of Council works from a Decolonization and Anti-Oppression Framework. A glossary of terms to assist with this understanding have been provided at the end of the Terms of Reference.

## Updates to the Terms of Reference

The Terms of Reference are to be seen as a "living document" and as such can be amended, updated, or refined through motions and approvals by a majority of the members, with specific approval from Town Council, outside of the regularly scheduled review of advisory committees.

## Mandate

The Equity, Diversity, and Inclusion Advisory Committee of Council will provide support to staff in the drafting and implementation of an Equity, Diversity, and Inclusion Strategy and shall provide a forum for consultation, feedback, and discussion on matters of equity, diversity, and inclusion in the Town of Cobourg. This will allow the Equity, Diversity, and Inclusion Advisory Committee of Council to monitor and measure the role of EDI at the Town of Cobourg both internally and externally.

The mandate of the Equity, Diversity, and Inclusion Advisory Committee of Council is:

- 1. To develop and recommend to the Mayor and Members of Town Council policies and programs which will create an atmosphere conducive to harmonious community relations within the Town of Cobourg.
- 2. To provide feedback and input to the Mayor and Members of Town Council on an ongoing and annual basis regarding actions, policies, practices, and outcomes in relation to the mandate.
- 3. To act as a visible lead agent on communicating and recommending to Council any actions needed to ensure the Town is fully compliant with the *Ontario Human Rights Code*.
- 4. To assist marginalized, underrepresented, and underserved groups through its appropriate sub-committees to develop programs for the improvement of equity, diversity, and inclusion at the Town of Cobourg.
- 5. To make recommendations regarding municipal programs and services provided by the Town of Cobourg, to provide equitable access to all residents, and to encourage and assist in the education and cultural awareness of Town of Cobourg staff.
- 6. To make recommendations regarding municipal policies and programs to pursue employment equity.

## Membership Composition

The Committee recognizes that many persons may be a member of more than one of the marginalized, underrepresented, and underserved groups, which brings a unique perspective. Further, the Committee understands that one person cannot speak for a group as a whole and will actively work against tokenism.

## Voting Members

The Committee shall be comprised of a minimum of seven (7) and maximum of nine (9) voting members from the community representing a broad range of marginalized, underrepresented,

and underserved groups. Best efforts will be made to have a cross-section of representative identities.

At least one member should have Indigenous ancestry, whether they are status or non-status.

Other voting members include up to two (2) members of Town Council.

#### Non-Voting Members

The Committee shall also include non-voting members from the following agencies, where applicable:

- 1. One member of Cobourg who does not identify with any of the list of protected classes,
- 2. One representative working with culture issues in the municipality from the Town of Cobourg,
- 3. One representative from Cobourg Police who preferably has personal knowledge related to a variety of equity, diversity, and inclusion issues,
- 4. One representative from the County of Northumberland to discuss shared and overlapping services and resources,
- 5. One representative from organization(s) who fall within the stipulated sectors depending on the initiatives being discussed who will be invited on an ad hoc basis, and
- One post-secondary student attending Fleming College Cobourg Campus, Loyalist College, Ontario Tech University, Gates College of Business, Culinary, & Healthcare, or another other college/university that is affiliated with Venture 13.

The Equity, Diversity, and Inclusion Advisory Committee of Council welcomes participation from the community at large through delegations as non-voting members to provide information and/or input to the Committee and/or specific initiatives.

Additional Town staff and representatives of diverse groups will be invited to attend meetings as needed to provide expertise related to a specific project.

#### **Member Qualifications**

Members must be Cobourg residents, rights holders living in the boundaries of the Williams Treaties, and/or individuals who work for organizations that provide services to Cobourg residents.

The following qualifications will be considered for appointing members to the Equity, Diversity, and Inclusion Advisory Committee of Council:

- Experience working in teams, with community groups, boards, or organizations,
- Knowledge of equity, diversity, and inclusion matters,
- Living or lived experience as a member of the identified groups, and
- Commitment as a change-agent in equity, diversity, and inclusion matters in the community.

Unlike the other Advisory Committees of Council, the Equity, Diversity, and Inclusion Advisory Committee of Council has an age requirement of fifteen (15) to allow for the Youth perspective.

## **Appointments and Elections**

## **Appointment Policies**

Town of Cobourg's Advisory Committees and Local Boards are governed by our <u>Terms of</u> <u>Reference</u> and <u>Procedural Bylaws</u>, and our <u>Advisory Committee Policy and Procedures</u>.

There will be a separate application for the Equity, Diversity, and Inclusion Advisory Committee of Council that allows persons to voluntarily self-identify.

The Town of Cobourg typically recruits for Advisory Committee and Local Board members on two (2) specific occasions:

- 1. Immediately after a Municipal Election, and
- 2. As vacancies occur throughout the year.

## Term of Office

Members of Advisory Committees shall be appointed for a four (4) year term that corresponds with the term of Council, expiring on November 30 of the year in which a municipal election is held, unless provided otherwise in their Terms of Reference or by a resolution of Council. Committee members may be appointed to the same Committee upon reapplication for a maximum of eight (8) consecutive years and may reapply after an absence of one (1) year from that Committee.

## Elections

The newly appointed Committee shall elect a Chairperson and Vice-Chairperson as soon as practicable. In the interim, the member of Council or designate shall assume the role of Chairperson.

## Meetings

Meetings, consultations, and events will be conducted in an accessible way to accommodate as many needs as possible.

## Frequency

The Equity, Diversity, and Inclusion Advisory Committee of Council will meet monthly on the second Thursday of the month at 6:00 p.m. at Victoria Hall.

Members will be offered the option to call in via phone or video to attend meetings virtually.

## Reporting

#### **Reports to Council**

The Equity, Diversity, and Inclusion Advisory Committee of Council reports to Town Council through the Chairperson and/or their designate, which can include one of the Town Councillors.

All sub-committees report directly to the Equity, Diversity, and Inclusion Advisory Committee of Council.

All recommended action items from the Committee shall be provided to the Clerk, or designate, in the form of a Memo/Staff Report in order to include the item in the Agenda of the next Council meeting.

## **Glossary of Terms**

#### Anti-Oppression

Anti-Oppression is the work of actively challenging and removing oppression perpetuated by power inequalities in society, both systemic oppression and individual expressions of oppression. Anti-Oppression is a way of naming oppression that happens based on a person's identities.

#### Decolonization

Decolonization is the work of supporting Indigenous sovereignty and land repatriation, abolishing slavery, and dismantling imperialism.

#### Discrimination

Discrimination is the treatment or consideration based on class or category rather than individual merit and that can be used to privilege (special treatment in favour of) as well as disadvantage (special treatment against) a particular group or individual.

#### Diversity

Diversity is about the individual. It is about the variety of unique dimensions, qualities and characteristics we all possess.

#### Equity

Equity refers to the fair and respectful treatment of all people. We will proactively address systemic issues that will create a level playing field and equal access to opportunities. We will also do everything we can to identify and eliminate unfair biases, stereotypes or barriers that may limit full participation in our education system. A barrier is anything that keeps someone from participating fully in all aspects of society.

#### Inclusion

Inclusion is about the collective. It is about creating a culture that strives for equity and embraces, respects, accepts and values difference.

#### Oppression

Oppression is the use of power or privilege by a socially, politically, economically, culturally dominant group (or groups) to empower (take away or reduce power), marginalize, silence, or otherwise subordinate one social group or category.

#### Systemic Oppression

Systemic Oppression consists of practices, policies, laws, and standards that disadvantage a particular group or category of people.

#### Tokenism

Tokenism is the practice of making only a perfunctory or symbolic effort to do a particular thing, especially by recruiting a small number of people from underrepresented groups in order to give the appearance of sexual or racial equality within a workforce, institutions, society, committees, and structures.

	THE CORPORATION OF THE TOWN OF COBOURG		
		PLANNING REPORT	
TO:		Members of Council	
FROM:		Glenn J. McGlashon, MCIP, RPP	
		Director of Planning & Development	
DATE OF MEETING:		December 7, 2020	
REPORT TITLE/SUBJECT:		Application for Approval of a Draft Plan of Subdivision – Lands West of Canadian Tire Vandyk – West Park Village Limited	
DATE OF REPORT:		November 19, 2020	

## 1.0 <u>CORPORATE STRATEGIC PLAN OBJECTIVE</u>

N/A

## 2.0 PUBLIC ENGAGEMENT

Applications for Official Plan Amendment, Zoning By-law Amendment, Draft Plan of Subdivision and Site Plan Approval were originally submitted by VANDYK Development Group in 2013 for the Subject Lands.

The Municipality followed the Statutory notice requirements of the Planning Act R.S.O 1990, c.P. 13, as amended, with respect to these applications, including the scheduling of a Public Meeting. A Public Meeting of Council regarding the Official Plan Amendment, Zoning By-law Amendment and Draft Plan of Subdivision was held in June 2014. Based on all information available, Cobourg Municipal Council approved the Official Plan Amendment, Zoning By-law Amendment, Zoning By-law Amendment and Draft Plan of Subdivision Conditions as proposed in July 2014. In July of 2019, the conditions of draft plan approval for the subdivision expired and, thus, a new application for approval of a draft plan of subdivision is required.

On June 29, 2020, Council formally received a new application for approval of a draft plan of subdivision. The application was referred to the Planning Department for a report, and a Public Meeting was held on September 29, 2020 in accordance with the provisions of the *Planning Act, RSO 1990, c.P.13*, as amended. The applicant also convened a virtual Public Information Meeting/Open House on August 17, 2020 in accordance with Council's procedures for public engagement.

Section 51 (20) of the *Planning Act* prescribes Statutory notice requirements for a complete Draft Plan of Subdivision application, and for the scheduling of a Public Meeting. Notice of a complete plan of subdivision application and notice of a public meeting can be provided together. The Municipality is required to give notice by *either*.

- a) publication in a newspaper that is of sufficient circulation in the area which the application applies; *or*
- b) personal or ordinary service mail to every land owner within 120 metres of the subject land, and by posting a notice, clearly visible from a public highway or other place the public has access on the subject land, or a location chosen by the municipality.

The Municipality's notification procedures for complete applications and public meetings included both a) and b) above, including the posting of signs on the two frontages of the property, which met and exceeded the notice requirements prescribed by the *Planning Act*. In addition, the Town provided an information and application receipt memo to Council for information purposes in open session and posted relevant information regarding the development on its Planning Applications page of the municipal website (Planning & Development). Members of the public on record as making submissions to the Town will be notified when the application and this Report are being considered by Council for consideration.

## 3.0 <u>RECOMMENDATION</u>

THAT Council receive this Report for information purposes; and,

THAT the By-law attached as <u>Appendix IV</u> be endorsed by Council which grants draft plan of subdivision approval to Vandyk – West Park Village Limited for the development of the 3.7 ha (9.1 ac) parcel of land west of Canadian Tire for 62 townhouse units, 10 semi-detached units, a 0.6 ha (1.5 ac) commercial block, a 0.12 ha (0.3 ac) public parkette block, and an emergency/pedestrian-only access block, subject to the conditions outlined in <u>Schedule "A"</u> of the By-law.

## 4.0 <u>ORIGIN</u>

An application for approval of a draft plan of subdivision was submitted by Vandyk -West Park Village Limited in June of 2020. At its meeting held on June 29, 2020, Council moved that the applications be received and referred to the Planning Department for a report, and further directed that the Public Meeting be scheduled. A virtual Open House was convened by Vandyk on August 17, 2020 and a Public Meeting of Council was convened on September 29, 2020 regarding this application. A number of public submissions have been received by the Municipality regarding the application. In accordance with the *Planning Act*, if Council has not made a decision within 120 days of its receipt as a Complete Application by Council (by October 27, 2020), the applicant may appeal the application to the Local Planning Appeal Tribunal (LPAT).

#### 5.0 <u>BACKGROUND</u>

5.1 <u>Owner</u>

Vandyk - West Park Village Limited

5.2 Applicant/Agent

Justin Mamone -- Vandyk - West Park Village Limited Paul Demczak, Batory

5.3 Property Address

The subject lands front onto Elgin Street West/County Road #2 (to the north) and Greenly Drive (to the south) and are located just west of Canadian Tire (there is no municipal address -- see <u>Figure 1</u> – Site Location Map below).

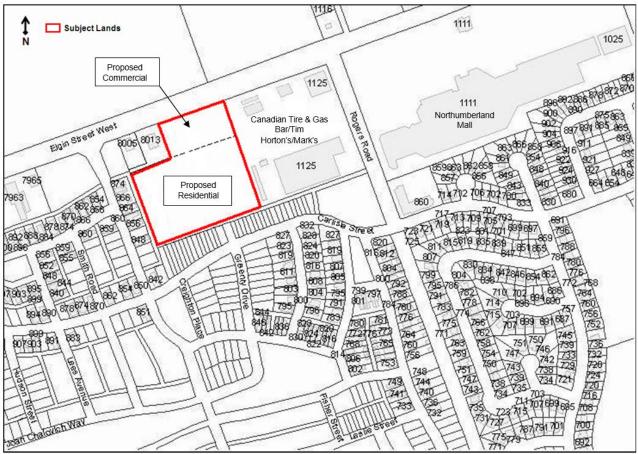


Figure 1 – Site Location Map

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#### 5.4 Existing Land Uses

The subject lands are currently vacant, however site clearing and underground services have been installed by Vandyk for the residential component as part of a Pre-Servicing Agreement with the Town of Cobourg approved by Council in 2018.

#### 5.5 <u>Surrounding Land Uses</u>

The land uses in the vicinity of the subject property generally consist of a mix of residential, commercial and rural land uses.

North:	rural agriculture
East:	Canadian Tire & CT gas bar, Tim Horton's, and Mark's WorkWearhouse
South:	townhouses and single detached dwellings
West:	carpet store, truck repair operation, and townhouses, semi-detached
	and single detached dwellings

#### 5.6 <u>Proposal</u>

As indicated in Section 2.0 above, applications for Official Plan Amendment, Zoning By-law Amendment, Draft Plan of Subdivision and Site Plan Approval were originally submitted by VANDYK Development Group in 2013 for the Subject Lands. Cobourg Municipal Council approved the Official Plan Amendment, Zoning By-law Amendment and draft plan of subdivision conditions in July 2014. In July of 2019, the conditions of draft plan approval for the subdivision expired and, thus, a new application for approval of a draft plan of subdivision is required. The proposed draft plan of subdivision is the same as what was previously draft approved by Council in 2014. Given the Official Plan and Zoning By-law provisions were approved by Council in 2014 to permit residential and commercial development and are in effect, no other land use permissions are required from the Municipality at this time.

The subject lands form a portion of the northern section of the New Amherst Community Secondary Plan area, north of the West Park Village neighbourhood. The proposal by Vandyk is broken into two segments (refer to <u>Figure 3</u> – Draft Plan of Subdivision below):

- The northern 0.6 ha (1.5 ac) of land adjacent to Elgin Street West/County Road 2 is proposed for commercial usage of up to 1,400 sq m (15,000 sq ft) to take advantage of the major arterial road frontage and exposure;
- 2. The remaining 3.1 ha (7.6 ac) of land to the south is proposed for 62 townhouse dwellings and 10 semi-detached dwelling units on a municipal road loop. A 0.12 ha (0.3 ac) landscaped parkette is proposed in the centre of the neighbourhood to act as a central public focal point and open space amenity area. A pedestrian/emergency vehicle-only access connection is planned between the residential and commercial land uses.

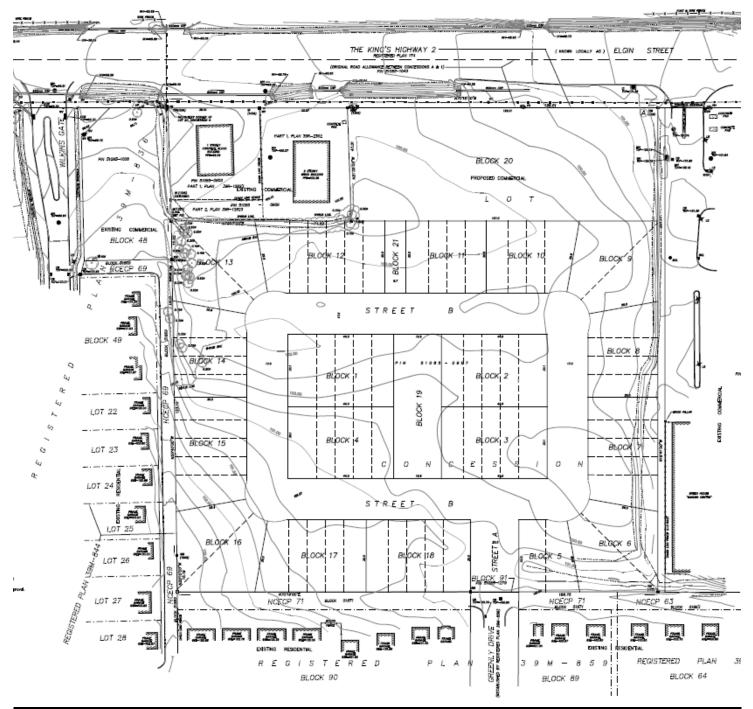
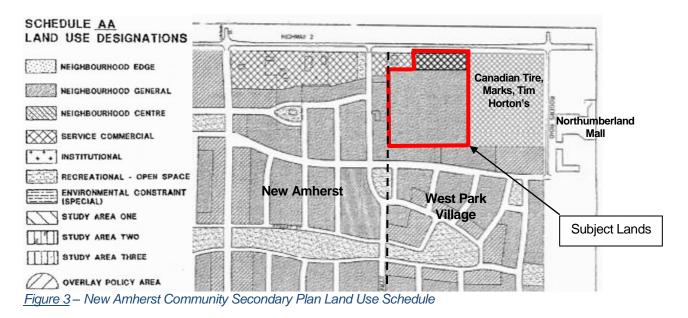


Figure 2 – Draft Plan of Subdivision

The subject lands are presently designated "Neighbourhood General" and "Service Commercial" in the New Amherst Community Secondary Plan and zoned "Neighbourhood Residential 2 Exception 1 Holding [NR2-1(H)] Zone" and "District Commercial Exception 27 Holding [DC-27(H)] Zone" in the Comprehensive Zoning Bylaw. The commercial land use designations permit a range of service commercial uses that reflect a highway commercial function and the residential designations permit single detached, semi-detached, townhouse, and multiple dwelling units (up to 4-unit buildings) with a minimum density of 37 units and a maximum density of 114 units allowed on the subject lands. Refer to <u>Figure 3</u> -- New Amherst Community Secondary Plan Land Use Schedule below.



The applicant submitted supporting studies in conjunction with the proposal, including:

- Planning & Urban Design Rationale Report, BATORY Urban Planning & Project Management, May, 2020;
- Public Consultation Strategy, BATORY Urban Planning & Project Management, May, 2020;
- Traffic Impact Study (Response to Comments) and Public Response Letter (September 29, 2020), Trans-Plan Transportation Inc., September, 2020;
- Environmental Noise Analysis, Valcoustics Canada Ltd., April, 2020;
- Stormwater Management Report, Masongsong Associates Engineering Limited, May, 2020.

The above reports were circulated to and reviewed by municipal departmental staff and partner review agencies, including the Ganaraska Region Conservation Authority (the "GRCA") and County of Northumberland (the "County"), as part of the development proposal review process.

For the purposes of the land use planning review and due to size, only the Planning & Urban Design Rationale Report and the Traffic Impact Study (Response to Comments)

& the Public Response Letter have been appended to this Report. The following Appendices are attached:

- <u>Appendix I</u> BATORY Planning & Urban Design Rationale Report (hereinafter referred to as the "BATORY Planning Report");
- <u>Appendix II</u> Traffic Impact Study (TIS) Response to Comments & Public Response Letter (the "Trans-Plan Traffic Reports"); and,
- <u>Appendix III</u> Public Meeting Notes
- <u>Appendix IV</u> -- Draft Plan Approval By-law & Draft Plan of Subdivision Conditions

Copies of the relevant background reports may be found on the Planning & Development webpage at <u>https://www.cobourg.ca/en/business-and-development/Planning-Applications.aspx</u>.

## 6.0 <u>ANALYSIS</u>

In considering the subject application, an understanding of the applicable provincial legislation and local policies is beneficial when reviewing applications for approval of a draft plan of subdivision. The following provides an overview of the relevant background and commentary where required.

The background reports submitted with the subject application, particularly the BATORY Planning Report, provide an overview of the subject application relative to relevant provincial and local policies and provide conclusions and opinions relating to conformity therewith. It is not the intent of this Planning Report to duplicate the review and analysis provided in these reports, however the following sections provide a general 'high-level' summary of the relevant background and commentary submitted by the applicant from a municipal planning staff perspective and are intended to complement and be read in conjunction with the submitted reports.

#### 6.1 Planning Act, RSO 1990, c.P. 13, as amended

In accordance with the approval process of the *Planning Act*, the requirements for considering an application for approval of a draft plan of subdivision include public notification, convening a Public Meeting, imposing draft conditions, and awaiting an appeal period. The Municipality is required to have regard to various criteria during the evaluation of a draft plan of subdivision as contained in Section 51(24) of the Planning Act. Section 2.0 (pgs. 7-8) of the BATORY Planning Report provides an overview of the applicable criteria:

a) the effect of the proposed subdivision on matters of provincial interest, as reflected in Section 2 of the Act, the Provincial Policy Statement (PPS) and the Growth Plan for the Greater Golden Horseshoe (GP);

Further reference to and discussion on these matters is found below and in Section 6.2.

• Page 7

b) whether the proposed subdivision is premature or in the public interest;

The Draft Plan of Subdivision is located within an urban, serviced area of the municipality and is located within the "built boundary" as established by the Place to Grow Growth Plan for the Greater Golden Horseshoe, 2019 (the "Growth Plan"). The development of the subject lands represents a logical and compatible continuation of the existing phases of development within the greater West Park Village/New Amherst neighbourhood. Conditions of draft plan approval will include provisions relating to servicing, stormwater management, urban design/streetscapes, landscaping, pedestrian connections, performance security and other technical matters to ensure the development meets all relevant municipal and agency policies, guidelines, and standards prior to final approval of the Plan of Subdivision and a Subdivision Agreement by Council (refer to <u>Appendix IV</u>).

c) whether the plan conforms to the Official Plan (OP) and adjacent plan of subdivision;

Discussion on Official Plan conformity is found in Sections 6.3 and 6.4. The proposed draft plan of subdivision is comprised of a density and development form that is compatible with the existing neighbourhood. The proposed commercial complex appropriately reflects its context on a major arterial road and is designed to be compatible with the adjacent land uses.

d) the suitability of the land for the subdivision;

The subject land is relatively flat and is comprised of silty sand soils and till. Generally, the site is well-suited for the development proposed.

e) the adequacy of highways in the vicinity of the subdivision;

In summary, the Trans-Plan Traffic Reports, dated April 2020 and updated in September 2020 in response to resident concerns, concluded that the existing municipal street pattern and transportation system in the vicinity of the subdivision lands are satisfactory to accommodate the proposed residential enclave. In particular, with the inclusion of future site traffic and growth conditions, the intersections of Carlisle Street and Roger's Road, Carlisle and Greenly Drive, and Carlisle and Wilkins Gate are all expected to continue operating at an acceptable level of service for all movements during the peak hours. According to the Reports, the proposed townhouses are expected to have minimal traffic impacts on the surrounding intersections and road network and that future traffic volumes derived from the residential enclave will be acceptable for the local residential roadways.

Additional discussion and commentary on the transportation and traffic impact study are found in Section 6.4 vi) below.

f) the dimensions and shapes of the proposed lots;

The dimensions and shapes of the proposed lots in the draft plan of subdivision are regular and appropriate for the area.

g) the restrictions on the lands to be subdivided or adjoining lands;

The lands are subject to the policies and regulations of the New Amherst Community Secondary Plan and implementing Zoning By-law, both of which are in force and effect and permit the proposed development. The development form is consistent with the surrounding commercial and residential development. A comprehensive set of draft plan conditions will be imposed to ensure that the development complies with all applicable municipal and agency standards, and shall include the execution of Cost-Sharing Agreements with the developer to the west (New Amherst Ltd.) and the County of Northumberland and the registration of a Subdivision Agreement with the Town of Cobourg.

h) conservation of natural resources and flood control;

The subject lands have been cleared as part of the pre-servicing process and are devoid of any significant vegetation. A subdivision and park planting plan will be required as a condition of draft plan of subdivision approval for the central parkette block.

With respect to flood control, the applicant has submitted a Stormwater Management Report, prepared by Masongsong Associates Engineering, to demonstrate that stormwater run-off and management systems are feasible to service the subject lands. The Masongsong Report considered drainage flows from the subject lands both pre- and postdevelopment, and proposes an underground stormwater management facility to be located beneath the commercial component to capture and treat runoff from the subdivision lands before exiting into the Elgin Street West storm system. In accordance with a Cost-Sharing Agreement with the County of Northumberland, the proponent will be responsible for constructing a new underground storm sewer in place of the ditch along the south side of Elgin Street West to beyond New Amherst Blvd. All infrastructure costs associated with servicing the site will be borne by the proponent, save for any cost-sharing with the County. The technical stormwater management design details will be finalized as part of the conditions of draft plan approval to the satisfaction of applicable authorities and prior to final approval by Council.

i) the adequacy of utilities and municipal services;

Utilities and municipal services to the site are adequate, and any infrastructure improvements required to service the Subject Lands will be further assessed prior to final approval of the draft plan of subdivision as a condition of development.

j) the adequacy of school sites;

Originally, the New Amherst Community Secondary Plan identified a 2.32 ha (5.73 ac) public elementary school site attached to the community park in the south-west quadrant of the WPV lands. A number of years ago, the KPRD School Board confirmed that it did not require the school site for future student accommodation and it has since been removed from the plans. The public and separate School Boards have indicated that their current schools in the area can adequately serve the proposed development. The Conseil scolaire catholique MonAvenir School Board has acquired a site on the west side of New Amherst Blvd for a new elementary school.

k) the area of land to be dedicated for public purposes;

The existing and planned West Park Village/New Amherst neighbourhoods include generous public park lands and connecting links to external trail systems. A 0.12 ha (0.3 ac) landscaped central parkette will be dedicated to the Municipality for public parkland purposes to act as a central focal point for the residential enclave and provide open space opportunities for residents in the immediate neighbourhood.

I) the efficient use and conservation of energy;

The density of the proposal, at approx. 23 units/ha and 50 persons and jobs/ha represents a desirable compact built form and an efficient use of infrastructure. The subdivision design is comprised of a short, looping street pattern, with quick and easy access to the public open space network and nearby commercial uses, which will promote walk-ability. The proposed development supports the Town of Cobourg's sustainability strategy by reducing the consumption of land, creating livable, healthy and productive environments, and promoting the reduction of GHG's with a design that is supportive of transit use and active transportation modes of travel. Further sustainable design features for the proposed buildings will be captured as a condition of draft approval and evaluated prior to final approval by Council.

m) the interrelationship between the design of the plan of subdivision and site plan control matters relating to development on the lands.

The plan of subdivision will be subject to detailed conditions of approval which must be satisfied prior to final approval by the Municipality, while the commercial block will be subject to the Municipality's Site Plan Approval (SPA) requirements. Both tools are effective and work well together in ensuring the appropriate development of the subject lands.

As referenced above, the Municipality shall have regard to matters of Provincial interest under Section 2 of the Act, including such applicable matters as: the adequate provision and efficient use of infrastructure; orderly development of safe and healthy communities; accessibility for persons with disabilities; adequate provision of educational, health, social, cultural and recreational facilities; adequate provision of a full range of housing; protection of public health and safety; appropriate location for growth and development; and, promotion of sustainable and pedestrian-friendly design, and be transit supportive.

#### Comment/Opinion

Municipal planning staff has reviewed the applications in light of the aforementioned items of Provincial interest. The proposed draft plan of subdivision represents an orderly, staged development pattern on full municipal services and is comprised of an appropriate density and mix of housing types which is consistent with Provincial Policy and in compliance with the existing, approved Official Plan and Zoning By-law. The street layout provides ample opportunities for safe pedestrian movement and connections to an abundance of public open

spaces and adjacent commercial shops and services. The arrangement of dwellings around the perimeter of the site is compatible with adjacent land uses with appropriate buffering (ie. fencing) to be implemented as part of conditions of draft approval (*Appendix IV*). In my planning opinion, the proposed draft plan of subdivision has appropriate regard to matters of Provincial interest under Sections 2 and 51 of the *Planning Act*. Section 6.2 below provides further commentary of the proposal relative to matters of Provincial interest.

#### 6.2 Provincial Policy Statement (PPS), 2020 & Growth Plan, 2019

The *Planning Act* requires that the Council of a local Municipality shall make decisions on development applications which are consistent with the Provincial Policy Statement (PPS) and conform to the Growth Plan. The PPS was issued by the Ministry of Municipal Affairs and Housing under the *Planning Act* and the Growth Plan was issued under the *Places To Grow Act*.

The BATORY Planning Report provides an in-depth overview of the key policies and principles as outlined by the Province in Sections 2.2, 2.3, 2.4, 2.5 and 2.6 (pages 9-15).

In general, the primary directives of the documents include such issues as:

- fostering the development of complete communities which are strong, sustainable, liveable, healthy and vibrant;
- promoting efficient, cost-effective and transit-supportive land use and development patterns to minimize land consumption and servicing costs and support active transportation;
- facilitating intensification, redevelopment and compact built form;
- directing growth and development to urban settlement areas with full municipal services;
- > improving accessibility for persons with disabilities and older persons; and,
- protecting public health and safety;

The Growth Plan directs that the vast majority of growth will be directed to settlement areas that have a delineated built boundary, have existing or planned municipal water and wastewater systems, and can support the achievement of complete communities. In addition, the Plan provides direction for an urban form that will optimize infrastructure, particularly along transit and transportation corridors, to support the achievement of complete communities through a more compact built form. The urban built form shall include a diverse range and mix of housing options to accommodate the needs of the community, with convenient access to a range of transportation and public open space options, including the safe, comfortable and convenient use of active transportation and publicly-accessible parks, trails, and other recreational facilities.

## Comment/Opinion

The subject site is located within an urban, serviced settlement area and is considered part of the "built boundary" of the Town of Cobourg as established by the Growth Plan and the municipal Official Plan (on the north-western tip of the built boundary). Accordingly, the proposed development is considered *intensification* within the existing built-up area of the municipality, and is not a *greenfield* site as defined in the Growth Plan.

In accordance with applicable Provincial and County policies, the Town of Cobourg is expected to grow by approx. 6,000 residents (to 26,105) and approx. 1,700 employees by 2034. Approx. 3,000 new households are predicted to be required accommodate this growth, with a large component (~1,300) being in the form of medium density units. A minimum of 39% of this residential growth (~2,340 people, ~1,170 households, ~507 medium density units) shall occur within the urban built boundary of the Town of Cobourg. The population growth attributed to this specific plan of subdivision (~150 residents and ~30-40 employees) would count towards achieving the Town's and County's residential and employment *intensification* targets as per the County Official Plan and Provincial Growth Plan.

Based on my review of the application for approval of a draft plan of subdivision, including the supporting background information, it is my opinion that the application is consistent with the PPS and conforms to the Growth Plan. Specifically, the proposal provides for orderly intensification within the urban, serviced area of the municipality and makes effective use of existing infrastructure which will serve to reduce costs and the consumption of land. The draft plan includes provision for a mix of housing types of a medium density nature to satisfy the needs of current and future residents in the community, and would offer new employment opportunities and contribute to a diversified economic base. The subject lands offer convenient access to existing commercial services, open spaces and transit, thus contributing to the concept of a complete community.

Therefore, I concur with the conclusions and opinions contained in the BATORY Planning Report regarding conformity to matters of Provincial interest as reflected in the PPS and Growth Plan.

#### 6.3 <u>County of Northumberland Official Plan, 2016</u>

The County of Northumberland Official Plan (the "County OP") was approved by the Ministry of Municipal Affairs and Housing on July 29, 2015 and finally approved by the Ontario Municipal Board on November 23, 2016. In general, the purpose of the County OP is to:

- Establish a broad, upper tier policy framework intended to guide local municipalities in the preparation of their Official Plans, Official Plan Amendments and zoning by-laws;
- Implement the PPS and Growth Plan at the County level; and,
- Establish a framework for coordination and cooperation amongst local municipalities and the County on planning and development issues that cross municipal boundaries.

The County OP is not intended to duplicate the policies of local Official Plans, and recognizes that certain land use planning responsibilities are vested with local municipalities. Accordingly, the County OP provides over-arching guidance necessary to formulate detailed strategies, policies and land use designations at the local level. Thus, the land use designations and policies in the Cobourg OP essentially remain intact, but would need to be monitored and regularly updated to ensure conformity with the County OP.

The County OP encourages each of the six (6) urban areas in the County to become complete communities, including the provision of convenient access to an appropriate mix of jobs, local services, a full range of housing, and community infrastructure including affordable housing, schools, health, transit, recreation and open space for their residents. From this perspective, it is the objective of the County OP to:

- Protect, enhance and maintain existing urban areas as diverse, livable, safe, thriving and attractive communities;
- Promote the efficient use of land and infrastructure by directing most development to urban areas where full services are available;
- Encourage a range of complementary and compatible land uses in residential areas, including community facilities, schools, small-scale commercial uses and recreational open space areas;
- Provide opportunities for a diversified economic base, including an appropriate mix of employment and institutional uses to meet long term needs;
- Establish an integrated transportation system that safely and efficiently accommodates various modes of transportation including public transit, cycling and walking;
- Provide for an interconnected system of public spaces that offer convenient and comfortable access and promote safe and healthy environments; and,
- Encourage a high standard of urban design;

#### Comment/Opinion

It is my opinion that the proposed draft plan of subdivision provides a desirable residential enclave at a density which is appropriate for its locational context and is consistent with the Province's goal of intensifying growth within urban serviced settlement areas. In addition, the proposal integrates well with adjacent forms of housing that exist in the general neighbourhood. The plan promotes the efficient use of existing infrastructure and proposes innovative "green" techniques to accommodate stormwater runoff. The Subject Lands are located in close proximity to existing services, public open spaces, transit facilities and, once developed per the draft plan if approved, will enhance connectivity and walkability in the neighbourhood.

As referenced in Section 6.2 above, the residential component of the draft plan of subdivision comprised of 62 townhouse units and 10 semi-detached units would result in approx. 150 residents and 30-40 employees and would assist in achieving the Town's and County's residential and employment intensification targets as set out in the County Official Plan and Provincial Growth Plan.

Based on my review of the application and supporting documentation, I concur with the conclusions of the BATORY Planning Report and it is my planning opinion that the application would conform to the County Official Plan.

#### 6.4 <u>Town of Cobourg Official Plan, 2017</u>

The Official Plan is a broad policy document that establishes an overall planning framework or vision for the community, including policies for maintaining and enhancing the existing community structure and for managing change, and for guiding the municipality in implementing the planning process through a variety of mechanisms and approaches.

Section 2.8 (pgs. 16-20) of the BATORY Planning Report provides a detailed overview and analysis of relevant OP and Secondary Plan policies and provides opinion on conformity with municipal policies.

#### i. <u>General</u>

Consistent with Provincial and County policies noted above, some of the key objectives of the Official Plan include the promotion of compact, walkable and mixed use neighbourhoods, the effective use of existing municipal piped infrastructure, transit and other services, high quality design, and integrating new development with existing neighbourhoods. Additionally, the policies of the Plan direct that new development in the community shall include a high diversity of housing types, including semi-detached and townhouse unit types, at a density that accommodates all economic and age groups. Streets are to be designed to promote walking and ease of connectivity to

public open spaces and adjacent non-residential uses. More intensive development is encouraged along major transit and transportation corridors to promote alternative forms of transportation, including transit and active transportation modes. Compatibility and high quality architectural design are also important principles of the Plan.

## Comment/Opinion

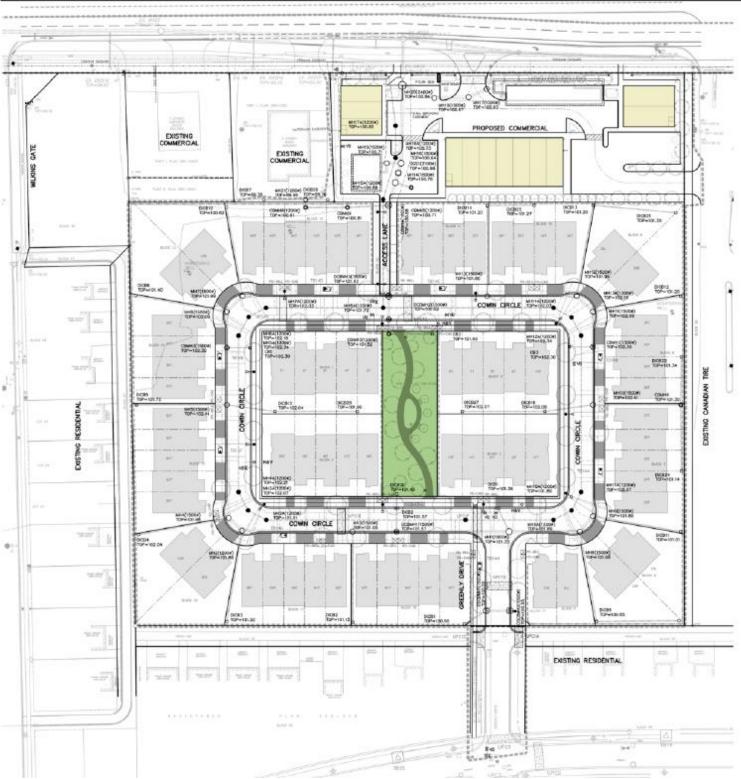
The proposed subdivision is designed as a residential enclave which is contained within a municipal road loop system in the southern section and centred by a public open space parkette (see *Figure 4* – *Overall Development Plan* below). New dwellings will be designed to meet the community urban design objectives of the Municipality, with recessed garages and protruding front porches wherever possible, along with boulevard trees to enhance the streetscape. The parkette will be designed with multipurpose pathways, seating areas and landscaping to optimize open space and connectivity opportunities and promote a quality image for the enclave (See *Figure 5* – *Conceptual Residential Renderings*). A pedestrian and emergency vehicle-only access pathway is planned between the residential and commercial components to enhance connectivity throughout the enclave, provide opportunities for active forms of transportation and maintain public safety (see *Figure 6* – *Pedestrian Connectivity*).

As indicated in Section 6.1 I) of this Report above, the density of the proposal is 23 units/ha and approx. 50 persons and jobs/ha, with the residential density falling within the middle of the density range of 12 u/ha – 37 u/ha permitted for the subject site under the existing land use categories. The proposed built form and density is appropriate for the site context and would form an effective and compatible transition between the higher-intensity commercial uses along Elgin Street West and the existing residential neighbourhood to the south and west.

The proposed municipal street extension from Carlisle Street forms an appropriate extension of the existing residential street pattern and is supported by traffic data and expert analysis which concludes that the existing street system and intersections are capable of accommodating the increased volumes associated with the additional residences and future growth. In addition, the design will assist in maximizing accessibility and walkability, particularly with respect to safe, accessible and convenient access to public open spaces, municipal transit and the Elgin Street West commercial corridor.

The northern commercial block is oriented to the major arterial road and is designed in a manner which is compatible with adjacent commercial and residential uses while achieving the Municipality's urban design goals of creating an attractive urban street form (see <u>Figure 7</u> – Commercial Site Plan). The design of the commercial buildings will be attractive and functional for the site's context (refer to <u>Figure 8</u> – Conceptual Commercial Rendering).

In both scenarios above, conditions of draft plan approval (<u>Appendix IV</u>) will be required for the residential component and Site Plan Approval will be required for the



# commercial component to ensure that the Municipality's community design objectives are satisfied prior to final approval.

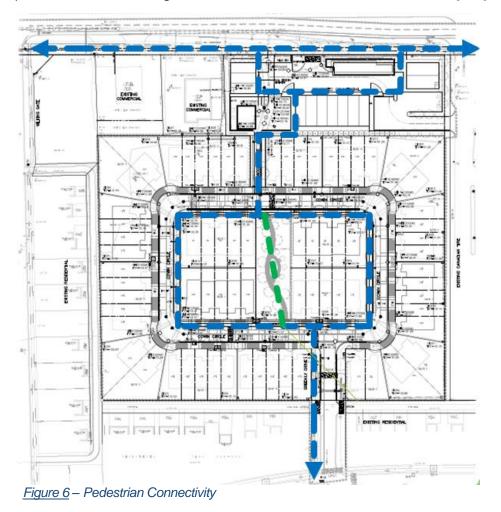
<u>Figure 4</u> – Overall Development Plan

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Figure 5 – Conceptual Residential Rendering

\*Actual building design subject to change



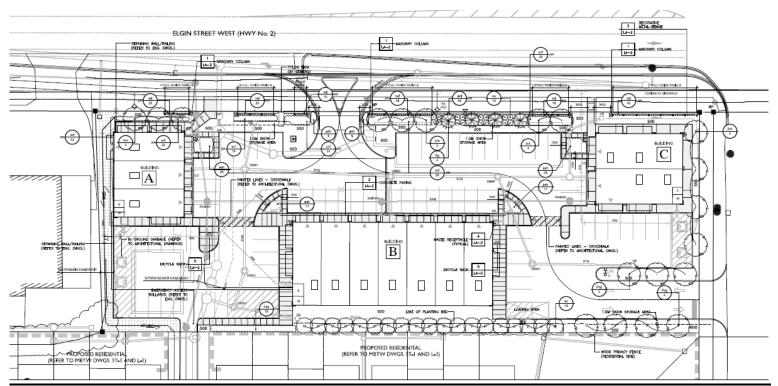


Figure 7 – Commercial Site Plan



Figure 8 – Conceptual Commercial Rendering

\*Actual building design subject to change

#### ii. <u>Affordable Housing</u>

Section 3.2.5 of the Official Plan outlines the general policies associated with affordable housing. A key principle includes the need to provide choice and options in the community with respect to secure, adequate and affordable housing "which contributes to a community characterized by inclusiveness". In particular, the policies of the Plan encourage the development of neighbourhoods with a mix of housing types, styles and densities, including an adequate supply of affordable rental and ownership housing, to respond to the varied needs of the population and promote a strong sense of place for its residents. Furthermore, the Official Plan emphasizes compact development which is connected, sustainable, transit-supportive, accessible and friendly to alternative forms of transportation.

## Comment/Opinion

The proposed draft plan of subdivision has been designed to accommodate the needs of new residents with a range of housing opportunities, including a mix of semidetached and townhouse unit types. The site will benefit by being situated in close proximity to a transit route, an active transportation corridor and existing and planned commercial services and open spaces, which is conducive to those without vehicles. While the Municipality cannot impose affordable housing units on a developer under current legislation, it is my planning opinion that the development offers an alternative housing type in the market at a different price point than the traditional single detached unit, which may be more attractive and attainable for moderate income households.

#### iii. New Amherst Community Secondary Plan

The subject lands are located within the New Amherst Community Secondary Plan as approved by Official Plan Amendment No. 49 in 1997. The New Amherst Community Secondary Plan reflects a comprehensive master-planned community based on the principles of new urbanism (neighbourhood oriented, pedestrian-friendly, compact, connected, high quality design, ample public open spaces).

Some of the key objectives of the Secondary Plan include ensuring continuity of neighbourhoods through orderly, staged development patterns and to integrate the community with existing and future development. The formation of internal and external linkages is encouraged to increase walkability and create a pedestrian-friendly, transit supportive environment. In addition, the community shall "include a high diversity in housing types and densities that service all economic and age groups". Compatibility and high quality architectural design are also important principles of the Plan. Streets and lot patterns are to be designed to be permeable so as to promote walking and ease of connectivity to public open spaces and adjacent non-residential uses.

The BATORY Planning Report provides a summary of the relevant policies of the New Amherst Community Secondary Plan in Section 2.8 (pages 17-19).

#### Comment/Opinion

The land use designation applicable to the site is "Neighbourhood General" in the New Amherst Community Secondary Plan. In general, the predominant form of housing permitted within this category is single detached, semi-detached, townhouses and other multi-residential unit types. The minimum permitted density in the Neighbourhood General designation is 12 units/hectare with a maximum of 37 units/hectare, or between 37 and 114 units for the subject site. The proposed density is approx. 23 u/ha, or the mid-point of this range, and conforms to this policy criterion.

Both the primary Official Plan and Secondary Plan encourage a mix of housing types and densities which exhibit high quality design within new residential developments. Medium density residential uses are to be intermixed with low density development in a compatible manner, and act as a physical transition between higher density residential or commercial development and low density uses. Street patterns and open space areas are to be designed to maximize connectivity internally and externally to promote active transportation.

The proposed townhouse and semi-detached unit housing forms integrate well into the existing land use fabric of the surrounding area, which is characterized by a mix of townhouses, semi-detached units and single detached residential units as well as commercial development. Physical buffering from adjacent commercial development, as well as the adjacent 'laneway-based' residential development, in the form of fencing is an important design consideration and can be addressed via conditions of draft plan approval. The design of the public street and open spaces on the draft plan will ensure optimum connectivity and accessibility internal and external to the neighbourhood.

The Secondary Plan encourages commercial areas to be situated in close proximity to residential areas to adequately service the local needs of the residents as well as the traveling public. In particular, the lands adjacent to Elgin Street West have been strategically designated as "Service Commercial" to target commercial uses and take advantage of vehicular traffic along the major arterial. This commercial area is intended to service both the needs of the WPV/New Amherst communities and the local and greater regional market area in a manner which is consistent with existing commercial uses and is compatible with adjacent residential land uses.

The subdivision layout has been designed to provide safe and convenient access to and from this commercial area not only for the traveling public but also for the residents in the area. A pedestrian and emergency-only access pathway connection is planned between the residential neighbourhood and the commercial complex to optimize connectivity and active transportation modes. Adequate buffering in the form of fencing and landscaping will be considered at the final approval and SPA stage to ensure compatibility between the residential and commercial land uses. The provision of public parkland within the New Amherst Community Secondary Plan area follows the new urbanism philosophy of integrating a large number of parks of different shapes and sizes throughout the community. Overall, the parkland dedication within the greater Secondary Plan amounts to over 13% of the development area -- well in excess of the 5% maximum allowed by the *Planning Act*. Although the approved Secondary Plan Land Use Schedule does not identify any public parkland within the proposed development lands, Vandyk is proposing a 0.12 ha (0.3 ac) central parkette block to not only act as a neighbourhood focal point for public open space purposes but also serve as an important connecting link through the neighbourhood. The proposed parkette is planned to provide passive open space options for the residents in the immediate area, including landscaping, pathways, decorative gardens, seating areas, refuse containers and small areas for free play.

The internal road system for the New Amherst Community area includes a series of collector and local roads, rear laneways, pedestrian and active transportation links and transit linkages. Rogers Road, Wilkins Gate, New Amherst Boulevard, Kerr Street and Carlisle Street are designated as collector roads which are designed to collect and funnel traffic to and from the subdivision and adjacent collector and arterial roads, particularly Elgin Street West. In the case of the proposed draft plan of subdivision, the extension of Greenly Drive will direct internal residential traffic from the enclave to Carlisle Street (a collector road), with the majority of traffic turning east towards Rogers Road (also a collector road). The Trans-Plan Traffic Report concluded that there will be minimal impacts to the existing road system and intersections as a result of the anticipated traffic volumes derived from the residential subdivision. Further commentary is outlined in Section vi) below.

Based on a review of the proposed draft plan and supporting documentation, it is my planning opinion that the proposal conforms to the New Amherst Community Secondary Plan.

#### iv. Urban Design

A detailed review of the Community Design and Improvement policies of the OP and the Urban and Landscape Design Guidelines has been conducted by BATORY and is found in Section 3.0 (pgs. 21-24) of the BATORY Planning Report. It is the opinion of BATORY that the proposed development plan conforms to the applicable municipal policies and guidelines. Some of the policies and guidelines relate to building design, orientation and architectural detailing, and can be addressed through conditions of draft plan approval and Site Plan Approval. Others, including housing variety and choice, are being satisfied by the proposal with the inclusion of a mix of semis and towns.

The commercial development is designed to reflect the transitional context of the streetscape, with buildings oriented to the arterial road to create a strong street edge and more urban feel. Extensive landscaping and mitigating measures (buffering) will

be employed to enhance curb appeal and maximize compatibility between dissimilar land uses.

## Comment/Opinion

From a community urban and landscape design perspective, it is my opinion that the proposed draft plan of subdivision is appropriate and desirable. The street and lot layout is compact and permeable which, when combined with the central park feature, will assist in maximizing accessibility and walkability, particularly with respect to linkages to other parts of the neighbourhood, the parkland trail network and convenient commercial services. The housing style and mix, comprised of a combination of semi-detached and townhouse units, is compatible with the scale and character of the surrounding neighbourhood.

Given the site's proximity to existing intensive commercial land uses, the subject site is very conducive to the introduction of commercial uses along Elgin Street West and compact and dense residential development in the interior, which will provide an effective transition between the commercial corridor and the greater West Park Village/New Amherst neighbourhood.

Following a review of the BATORY Planning Report and the proposed draft plan of subdivision, it is my planning opinion that the proposal appropriately satisfies the community design policies and guidelines of the Official Plan and Urban & Landscape Design Guidelines. The draft plan of subdivision will be subject to draft conditions and subdivision/site plan review, and further evaluation of the proposal relative to the Municipality's community design principles will occur prior to final approval by Council.

#### v. <u>Sustainability</u>

The Cobourg Official Plan contains a number of references to sustainable community design, including the Vision, Section 2.7 – Community Design Principles, Section 4.0 Greenlands System and Section 5.0 Community Design & Improvement (to name a few), however the key initiative is found under Section 4.8 – Sustainability Strategy.

The purpose of the Strategy is to foster a "*culture of conservation*" which reflects the principle of sustainable development – "*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*". The policies contained within the Strategy, and the supporting guidelines in the Town's Urban & Landscape Design Guidelines, are aimed at encouraging development which is based on this principle and set the framework for the creation of an Integrated Community Sustainability Plan (ICSP).

In particular, the Town shall encourage development designed to:

- reduce the consumption of energy, land and other non-renewable resources including support for energy efficient building and opportunities for cogeneration;
- ii) minimize the waste of materials, water and other limited resources;
- iii) create livable, healthy and productive environments;
- iv) reduce greenhouse gases; and,
- v) enhance biodiversity, ecological function, and the natural heritage system, including the provision of wildlife habitat and linkages.

#### Comment/Opinion

The draft plan of subdivision has been designed to generally adhere to the key directions of the Town's sustainability strategy, including the implementation of compact development form, efficient use of existing infrastructure, a mix of land uses and housing types, a density and street pattern which supports transit and active transportation (thus potentially reducing the dependency on vehicles), a centralized open space area with connected pathways and trails for social, physical and environmental benefits, and green infrastructure and stormwater management practices. Opportunities also exist for enhanced sustainability measures to be considered for the new dwellings during the final subdivision review process.

In my planning opinion, the draft plan of subdivision appropriately captures and responds well to the principles of sustainable development in conformance to the policies of the Official Plan and Urban & Landscape Design Guidelines.

#### vi. <u>Transportation</u>

A detailed review of the Town and County transportation network was conducted by Trans-Plan Transportation Engineering (see <u>Appendix II</u> affixed to this Report) and reviewed by the Cobourg Engineering Department and County Transportation and Project Engineering staff. The transportation analysis included assessments of roads, intersections, existing and future demands/impacts, and improvements and timing thereof in the area of Rogers Road, Carlisle Street, Wilkins Gate and Elgin Street West/County Road #2. The evaluation also included the future County Road #2 improvements planned by the County and the full build-out and occupancy of Northumberland Mall. In addition, traffic adjustments were factored into the analysis to account for the reduced traffic volumes associated with the pandemic using comparator data from other jurisdictions and existing pre-pandemic traffic analyses.

The collective residential communities of West Park Village and New Amherst were comprehensively planned and approved in 1997 to direct internal subdivision traffic to Elgin Street West (a major regional arterial road under the jurisdiction of the County of

Northumberland, also known as County Road #2) and Kerr Street (a future major cross-town arterial road under the jurisdiction of the Town of Cobourg) via a number of internal collector and local roads. Given that Elgin Street West is a major regional highway link with heavy traffic volumes, the number of roadways and driveways accessing this arterial are restricted by the County for traffic flow and safety reasons. Internal traffic from the West Park Village and New Amherst neighbourhoods (and the residential neighbourhoods east of Rogers Road) is channeled to New Amherst Boulevard, Wilkins Gate and Roger's Road.

Accordingly, the plan of subdivision proposes the northward extension of Greenly Drive from Carlisle Street into the subject lands as a municipally owned and maintained public street. Based on the Trans-Plan Traffic Reports, traffic flow from the subject lands will utilize Carlisle Street and will primarily move in an easterly direction to Roger's Road, with lesser volumes turning west towards Wilkins Gate and New Amherst Boulevard and very little volume flowing south of Carlisle Street. A pedestrian and emergency vehicle-only access will connect the residential neighbourhood to the commercial complex, however regular vehicular traffic from the residential enclave will not be permitted to access the commercial block or Elgin Street West based on county road access restrictions.

The Trans-Plan Traffic Reports utilized traffic counts in May of 2020 (adjusted for the pandemic) and September of 2020 (during Phase 3 Provincial Re-opening) for weekday AM, PM and Saturday peak hours at study area intersections, including:

- Elgin Street West/Wilkins Gate;
- Elgin Street West/Rogers Road;
- Carlisle Street/Rogers Road;
- Carlisle Street/Greenly Drive;
- Carlisle Street/Wilkins Gate;
- Elgin Street West/Canadian Tire driveway.

The traffic analyses conducted by Trans-Plan concluded that the existing municipal street pattern and intersections in the vicinity of the subdivision lands are satisfactory to accommodate the proposed residential enclave with minimal impacts anticipated. In particular, with the inclusion of future site traffic and growth conditions, the intersections of Carlisle Street and Roger's Road, Carlisle and Greenly Drive, and Carlisle and Wilkins Gate are all expected to continue operating at an acceptable level of service for all movements during the peak morning and afternoon hours. The study did, however, recommend that "no parking" signs be installed on Greenly Drive north of Carlisle Street to ensure adequate sightlines for vehicles exiting the rear laneways.

As indicated in Section 6.1 e) above, the Town may wish to monitor traffic operations in the area of Carlisle Street and Greenly Drive and Rogers Road post-development and, if necessary, evaluate potential improvements such as parking restrictions, sightline enhancements, Highway Traffic Act enforcement and a 4-way stop should they meet warrants based on accepted transportation engineering practices.

With respect to Elgin Street West, it is considered a major regional arterial connecting link between Cobourg and Port Hope and falls under the jurisdiction of the County. As part of the initial design and draft approval of the subdivision in 2013/14, and based on the County's own transportation analysis as part of its Environmental Assessment (EA) process for the ultimate design and reconstruction of County Road #2 and the Trans-Plan Traffic Reports, the County has restricted access from the commercial block to Elgin Street West via a right-in/right-out only driveway (with auxiliary eastbound right-turn lane) and a shared vehicular access driveway easement with the Canadian Tire commercial complex to the east which was pre-planned as part of its development approvals.

The traffic analyses concluded that there will be increased traffic volumes and congestion at the shared commercial driveway intersection with Canadian Tire under future conditions (including the commercial traffic volumes and future growth in 2025) resulting in longer queue's and delays, with the intersection operating at a LoS rating of 'E' and 'F' during peak PM and Sat. peak hours respectively<sup>1</sup>.

The traffic consultant has also advised that a new connection (two-way or one-way right-out only egress) between the residential enclave and Elgin Street West is <u>not</u> recommended due to:

- In the case of a two-way roadway/driveway onto Elgin Street West, insufficient intersection spacing requirements between Wilkins Gate and the Canadian Tire driveway;
- in the case of a two-way roadway/driveway onto Elgin Street West, the potential for an increase in traffic on Greenly Drive as a result of a tendency for vehicles to move south from the commercial complex into the neighbourhood;
- in the case of a right-out only roadway/driveway onto Elgin Street West, an increased traffic hazard as a result of multiple access points situated in close proximity to one another on a major arterial road;
- the fact that the Carlisle Street and Greenly Drive intersection is expected to operate well within acceptable limits (LoS A) under future conditions and therefore a second access/exit from the residential enclave is not warranted.

The County has commented that any additional traffic volumes from the residential subdivision to Elgin Street West will exacerbate the already strained service levels on this major arterial roadway therefore it will not permit any residential traffic from this subdivision on Elgin Street West/County Road #2. The West Park Village/New

<sup>&</sup>lt;sup>1</sup> LoS 'E' – Very long traffic delays occur, operations approach the capacity of the intersection;

LoS 'F' - Saturation occurs, with vehicle demand exceeding capacity, very long traffic delays occur

Amherst Community was planned and designed to accommodate its traffic volumes via collector roads (Roger's Road, Wilkins Gate and New Amherst Boulevard, 2 of which are signalized at Elgin Street West) and the addition of an additional access point from the residential subdivision onto Elgin Street West is not warranted or recommended by the County.

Based on the transportation documentation submitted, and feedback provided by Cobourg Engineering and County Transportation and Project Engineering staff, it is my planning opinion that the proposal has adequately satisfied the Official Plan in demonstrating that the development and its traffic volumes will not impose adverse impacts on the existing transportation system or the surrounding neighbourhood.

# vii. Municipal Servicing Infrastructure

A Stormwater Management Report was prepared by Masongsong Associates Engineering in support of the draft plan of subdivision. The Masongsong Report and other engineering documentation submitted with the application demonstrates that the draft plan of subdivision can be serviced with infrastructure in accordance with relevant criteria of authorities having jurisdiction.

Specifically, the site can be serviced by extensions of existing watermain, sanitary sewer, electrical and other utility services that are normally supplied in an urban, serviced environment. The management of rainwater runoff for the development is to be implemented through a combination of conventional piped and green infrastructure, including Low Impact Development (LID) in the form of underground storage chambers to promote infiltration, and the installation of a new storm sewer pipe along the south side of Elgin Street West to outlet west of New Amherst Boulevard and eventually into the New Amherst Community stormwater system. No runoff from the development will spill onto abutting properties.

# Comment/Opinion

The Masongsong Report and related engineering documentation confirms that the necessary infrastructure is in place to service the Subject Lands, and that stormwater runoff can be contained on the site and accommodated via a combination of conventional and innovative "green" infrastructure designed to meet all relevant criteria of authorities having jurisdiction (GRCA, Town Engineering/Public Works, County). Final engineering design parameters will be subject to further detailed review by the Municipality as part of clearance of draft plan of subdivision conditions.

# viii. Other Policy Considerations

The proponent submitted an Environmental Noise Assessment, prepared by Valcoustics Canada Ltd., with the application. This study is required by provincial and local policies and regulations to address issues to meet provincial requirements governing transportation and stationary noise source impacts on residential land uses

from abutting sources. The noise study recommends noise mitigating measures in the form of solid noise fencing, rooftop parapet barriers (on the proposed commercial buildings), warning clauses, and provisions for air conditioning.

# Comment/Opinion

The aforementioned study was required to meet provincial and local policies and regulations for noise attenuation, and can be addressed as part of the development approvals process and conditions of approval for the residential and commercial components respectively. Therefore, it is my planning opinion that the proposal conforms to the standards and requirements of the Province and Cobourg Official Plan, subject to conditions.

# 6.5 <u>Zoning By-law:</u>

Section 4.0 (pgs. 25-27) of the BATORY Planning Report provides a summary of the zone provisions and a zoning analysis. The residential component of the draft plan of subdivision is presently zoned "Neighbourhood Residential Holding (NR2-H) Zone" which is identical to the zoning on the lands within the majority of the WPV/New Amherst communities. The NR2 Zone permits a number of low to medium density, ground-oriented dwelling types, including semi-detached and townhouse units.

The commercial component is zoned "District Commercial Exception 27 Holding [DC-27(H)] Zone" in the Comprehensive Zoning By-law which permits a number of service commercial type uses such as office, personal service, clinic/wellness centres, institutional, eating establishments, convenience, education, vehicle-related and similar uses.

A Holding (H) Zone applies to the zone categories as a mechanism to ensure that the necessary approvals and documentation are provided to the Municipality and other authorities having jurisdiction prior to final approval of the draft plan by Council and registration of the applicable Agreements, after which the 'H' is removed. The BATORY Planning Report concludes that the proposed draft plan of subdivision complies with all applicable provisions of the NR2 and DC-27 Zones.

# Comment/Opinion

It is my planning opinion that the proposed draft plan of subdivision complies with the Zoning By-law without amendment, is appropriate for the development of the site as proposed, and represents good planning.

#### 6.6 <u>Agency Comments</u>

The application for approval of a draft plan of subdivision was circulated to municipal departments and external partner review agencies, including Engineering/Public Works, Police, Fire, Parks, Lakefront Utility Services Inc., the Ganaraska Region

Conservation Authority (GRCA) and the County of Northumberland. No major concerns or comments were submitted with respect to draft approval of the proposed draft plan of subdivision, however Cobourg Police Services (CPS) advised that monitoring of construction traffic and targeted enforcement of Highway Traffic Act violations will likely be required during and after construction on both Elgin Street West and Carlisle Street. A number of technical engineering items relating to stormwater management and servicing were also identified by the County, GRCA and Cobourg Engineering/Public Works which can be addressed in the draft plan conditions and prior to final approval by Council. Other external commenting agencies expressed no concerns and provided their standard condition(s) of draft plan approval.

# Comment/Opinion

The Departmental and Agency comments submitted demonstrate that approval of the proposed draft plan of subdivision is warranted, subject to conditions which will need to be addressed by the proponent for consideration and clearance at the detailed subdivision review stage of the approvals process.

## 6.7 <u>Public Submissions</u>

A number of submissions were made to the Municipality by members of the public regarding the subject application prior to, during and after the Statutory Public Meeting held by Cobourg Municipal Council on September 29, 2020. The submissions primarily identified concerns over the ongoing condition of the site and traffic impact, parking, and safety issues, with some suggesting that a second access point to Elgin Street West be incorporated into the plan and/or a reduction in density implemented. A copy of the Public Meeting Notes are attached as <u>Appendix III</u>. The following provides a general overview of the key issues submitted and commentary in response:

# i) <u>Traffic Impact and Congestion</u>

In response to the public submissions regarding traffic and congestion, the proponent conducted further traffic analyses in September of 2020 with the intention of responding to the issues and concerns of the public. The follow-up traffic analysis by Trans-Plan is found in <u>Appendix II</u> and summary commentary is outlined in Section 6.4 vi) of this Report. Prior to and following the Public Meeting, municipal and County staff reviewed and discussed the aforementioned concerns with the proponent and its consultant team.

In summary, the Trans-Plan Traffic Reports concluded that the transportation network in the vicinity of the subject site, particularly the intersections of Carlisle Street/Greenly Drive, Carlisle and Wilkins Gate and Carlisle and Rogers Road, is adequate to handle the traffic generated by the proposed residential development and that there would be minimal impacts on the surrounding road network as a result of the development. It was recommended that parking restrictions be imposed on Greenly Drive to address potential sightline and safety issues associated with the rear laneways of the abutting townhouses. Cobourg Engineering/Public Works Department staff commented that the traffic analysis and conclusions for the residential development are satisfactory.

As indicated in this Report, the Town should consider monitoring traffic operations in the area, particularly Carlisle Street and Greenly Drive and Carlisle Street and Rogers Road, both during and post-construction to determine if any enforcement measures and/or improvements are warranted based on accepted transportation engineering practices.

# ii) <u>Secondary Access/Outlet</u>

In response to comments from the public and Council regarding the possibility of providing a second access or outlet to Elgin Street West, Trans-Plan recommends against this option due to the high likelihood of exacerbating traffic and safety impacts on Elgin Street West. In the opinion of the traffic consultant, a second access to accommodate the residential enclave to Elgin Street West is not justified and that a single access road into the residential enclave will not impose any significant adverse impacts on Carlisle Street or the greater transportation network. County and Town engineering staff concur with the findings of the Trans-Plan Traffic Reports.

# iii) Increased Traffic, Rear Laneway Concerns & No Sidewalks on Greenly Drive

A petition was submitted which expresses concerns regarding increased traffic on Greenly Drive, access and sightline issues with the rear laneways, and lack of sidewalks on Greenly.

Discussion regarding traffic volumes on Greenly and Carlisle and the recommendation for "no parking" adjacent to the rear laneways is found in item ii) above and earlier in this Report. Although there are no sidewalks currently on Greenly Drive, the developer will be installing sidewalks internal to the subdivision with a sidewalk connection to Carlisle Street as part of the subdivision works, the engineering details for which will be finalized during the subdivision review and clearance of draft plan conditions stage prior to final approval by Council.

iv) <u>Density</u>

Some submissions recommended that the number of dwelling units is too high and should be reduced, possibly to around 25. As identified in this Report, the proposed density of the subdivision at 23 u/ha is in the middle of the permitted density range of the existing Official Plan and Zoning By-law, and would serve to satisfy Provincial and County policy directives governing intensification within an existing, serviced built-up area. The development design and housing types are appropriate for the site context and are compatible with the surrounding neighbourhood. This, coupled with the aforementioned traffic analysis, does not support a reduction in density on the subject site.

# v) <u>Parking</u>

The Zoning By-law currently permits semi-detached and townhouse units on the subject lands. While the By-law requires that a minimum of 1.5 parking spaces be provided on-site for each townhouse unit, in a freehold lot scenario this is rounded up to 2.0 parking spaces/unit (equivalent to semi-detached units). Thus, as is common in all residential developments in the community, it is anticipated that at least one parking space will be accommodated within a garage and an equivalent number on the driveway. On-street parking within the enclave will be permitted as per other neighbourhoods and regulated in accordance with the Town's street parking by-laws. The site and adjacent streets could be monitored by the Municipality post-construction for any signs of excess parking overflow and operational issues, and options could be explored by the Town should the need arise.

# vi) <u>Site Condition</u>

It is acknowledged that the current state of the subject lands is unsightly and in need of improvement. If the draft plan of subdivision is approved, the process is one step closer to facilitating the completion of the development of the site.

vii) <u>Fire Safety Issues</u>

A concern was expressed that the proximity of the development to the existing gas station and the use of a single access into the residential neighbourhood poses a threat to public safety in the event of a spill or fire. The Fire Department is an integral part of the Municipality's Development Review Team and has reviewed the development plans in relation to their area of jurisdiction. The Fire Chief indicated that he is satisfied with the design and his Department's response capabilities in the event of a major incident. The draft plan of subdivision is designed with an emergency access lane between the commercial lands and the residential development which is satisfactory to enable secondary emergency vehicle access if required.

In addition, there was concern expressed over the rear laneway in the townhouse development fronting onto Carlisle Street and, while not related to the subject application, it has been confirmed by the Fire Chief that this laneway is not a Fire Route required under the Ontario Building Code or Fire Code and as a private driveway does not require a turn-around. There are other examples of townhouse developments throughout the municipality with rear laneways that do not have a 2<sup>nd</sup> exit or a turn-around. The continuation of the laneway into the adjacent New Amherst neighbourhood was not pre-planned or required, and would require approval from the condominium corporation for an access and maintenance easement.

# viii) Ability of Fire Apparatus to Serve the Residential Development

See vii) above.

# ix) Condition of the Elgin Street West Ditch (standing/freezing water)

Although engineering details are still to be finalized as part of the subdivision review process and prior to final approval, the developer will be required to enter into a Cost-Sharing Agreement (CSA) with the County and construct new piped infrastructure and urbanize the south side of Elgin Street West, including the installation of curbs, gutter and multi-purpose path, which will eliminate the current ditch cross-section (a small swale may exist to collect minor run-off from abutting properties before discharging into the County road storm sewer system). Concerns relating to standing water (West Nile) and freezing water (safety) should be alleviated in this area post-construction.

# x) <u>Canadian Tire Parking Lot Flooding</u>

The Canadian Tire parking lot and building rooftops were deliberately designed by the landowner's stormwater engineers to 'hold-back' water from major storm events in light of the site's intense development pattern and resulting imperviousness. This industry-accepted on-site stormwater management approach is designed to prevent downstream flooding, but results in the site being temporarily flooded with an engineered (pre-planned) volume of water of up to 300 mm until the water slowly releases into the storm system. Other similar storage techniques which are typically employed to manage and control stormwater on-site include stormwater ponds, underground stormwater chambers, Stormceptors, and infiltration galleries.

# xi) Rogers Road (north of Elgin Street West)

As an alternative to extending Rogers Road north of Elgin Street, a resident suggested that a new intersection be installed north of the Vandyk subdivision lands and a roadway built northward to access the new hotel west of Home Depot and provide a north entrance/exit for the new homes in the subdivision.

The Trans-Plan Traffic Reports advised that the introduction of a new intersection and roadway between Rogers Road and Wilkins Gate would not meet the intersection spacing requirements for arterial roads pursuant to the Transportation Association of Canada (TAC) Geometric Design Guide, 2017. In addition, it should be noted that a new entrance/exit for the residential enclave was not recommended by Trans-Plan not only due to traffic concerns on Elgin Street West but also given the fact that commercial and other external traffic would have the ability to travel south through the subdivision, thus generating more traffic at Greenly Drive and Carlisle Street. Oneway, exit-only traffic from the subdivision to Elgin Street West is also not recommended by Trans-Plan or the County for traffic impact and safety reasons.

Finally, the lands north of the subdivision site are located in the Township of Hamilton, are designated and used for prime agricultural purposes, and are not planned in the County or Township Official Plans for urban development or roadway connection purposes over the 20 year planning horizon. The Rogers Road extension, on the other hand, is planned for and approved in the Cobourg West Business Park Secondary

Plan of the Cobourg Official Plan and is appropriately spaced and configured to accommodate the long-term transportation needs of the community. If another roadway is to connect to Elgin Street West from the north in the long term future, it would likely be located opposite Wilkins Gate.

# xii) Option of Acquiring the Former Truck Repair Property

A question was posed if the developer has contemplated acquiring the former truck repair property to provide a better intersection while creating a second entrance/exit, or tie the area into a re-positioned Wilkins Gate, perhaps with a traffic circle.

The developer has no interest in acquiring additional property, nor can the Municipality force the developer to do so. Additionally, the owners of the former truck repair property and the property to its west have other development plans for the respective properties in the future. As indicated above, another intersection with Elgin Street West and/or a second entrance/exit into the subdivision in this area is not justified or supported by traffic data or TAC standards, nor would Cobourg Engineering/Public Works or County Transportation and Project Engineering staff recommend the acquisition of additional land and/or the re-positioning/re-configuration of Wilkins Gate.

# xiii) Impasse of Town and County Governments to Permit a Second Entrance/Exit

County of Northumberland transportation and engineering staff is an integral member of the Municipality's Development Review Team. Given that there are roads in the community under both jurisdictions, Town and County staff work collaboratively and take an inter-municipal approach in all aspects of development review and special project planning and engineering in the municipality, particularly relating to transportation matters. The assessment of the subdivision and its impacts on the transportation network in the area of the subject site, including the alternative road/access concept to Elgin Street West, was undertaken with due regard for each other's transportation system and needs. The conclusions and recommendations summarized within this Report have been endorsed by both County and Town engineering staff.

# xiv) <u>Site Run-off onto Adjacent Properties</u>

As is standard practice with new developments throughout the municipality, the entire site will be designed to capture its own stormwater runoff and discharge into its underground stormwater management system. To achieve positive drainage to the storm system, the site needs to be raised around the perimeter with the use of retaining walls along the property lines. There is to be no run-off directed to abutting properties. Abutting sites including laneways are also responsible to collect and drain their own run-off.

## xv) Master Drainage Plan

A Master Drainage Plan (MDP) study is currently underway led by the County of Northumberland in consultation with the Township of Hamilton, the Town of Cobourg and the Ganaraska Region Conservation Authority (GRCA). According to the GRCA, the MDP pertains to a separate sub-watershed which is located to the north of Elgin Street West and west of the New Amherst lands, thus the MDP does not impact the draft plan of subdivision lands.

## 6.8 Draft Plan Conditions

Based on comments received by the Development Review Team and other authorities having jurisdiction, a comprehensive set of draft plan conditions of approval have been prepared which will need to be satisfied and cleared prior to final approval of the draft plan by Council. The draft plan conditions are outlined in <u>Schedule A</u> of <u>Appendix IV</u>.

# 7.0 FINANCIAL/BUDGET IMPLICATIONS

There are no anticipated negative financial implications imposed on the Municipality as a result of this application. The developer will be responsible for all infrastructure costs associated with servicing the site. The applicant submitted the requisite \$10,045.00 in application fees and deposit. A further application for Clearance of Draft Plan Conditions of Approval by the owner will be required following approval of the draft plan of subdivision, if granted by Council, as part of the final subdivision review stage of the process.

# 8.0 POLICIES AFFECTING THE PROPOSAL

The primary policies affecting this application relate to the Provincial Policy Statement (PPS), A Place To Grow Growth Plan, County Official Plan, and the Cobourg Official Plan and New Amherst Community Secondary Plan.

# 9.0 <u>COMMUNICATION RESULTS</u>

This Report is intended to communicate the results of the evaluation of the application by municipal staff and partner review agencies, and to provide a recommendation for Council's consideration.

# 10.0 <u>CONCLUSIONS</u>

Based on an evaluation of the applications relative to the applicable Provincial and Municipal policy and regulatory framework, it is my planning opinion that the proposed draft plan of subdivision is appropriate, desirable and represents good planning for the following reasons:

- i) The proposal will satisfy the key policy and regulatory directives of the Planning Act, Provincial Policy Statement, A Place To Grow Growth Plan, County of Northumberland Official Plan and the Cobourg Official Plan, most notably relating to the provision of a mix of land uses and complementary housing in an urban, serviced and built-up area of the municipality at a density that is comparable to and compatible with existing development within West Park Village/New Amherst communities and is transit-supportive;
- ii) The proposed draft plan of subdivision will contribute to the designated intensification targets for the municipality in accordance with the policy direction of the County Official Plan and Growth Plan;
- iii) The proposed commercial/residential development conforms to the policies of the New Amherst Community Secondary Plan, and satisfies the community design objectives and principles of the Official Plan and Urban and Landscape Design Guidelines;
- iv) The proposed draft plan complies with the existing Neighbourhood Residential 2 (NR2) Zone and District Commercial Exception 27 Zone provisions;
- The proposed commercial/residential development is of a size, scale and design which is compatible with adjacent land uses and is appropriate for this infill site;
- vi) The inclusion of appropriate conditions to draft plan of subdivision approval as outlined in <u>Appendix IV</u> will ensure that the development meets all of the applicable standards and requirements of the Municipality and external authorities having jurisdiction, including the registration of a Subdivision Agreement, prior to final approval of the Plan and the release of the Holding (H) Symbol by Council.

# 11.0 ATTACHMENTS

Appendix I– BATORY Planning & Urban Design Rationale Report,Appendix II– Traffic Impact Study (TIS) Response to Comments & Public Response Letter,Appendix III– Public Meeting Notes; and,Appendix IV-- Draft Plan Approval By-law & Draft Plan of Subdivision Conditions

# **Report Prepared By:**

Glenn J. McGlashon, MCIP, RPP Director of Planning & Development



Report Reviewed & Approved By:

Tracey Vaughan Chief Administrative Officer



# PLANNING & URBAN DESIGN RATIONALE

May 2020

Subject Address: Concession A, Part Lot 23 Plan 39R13261 Part 1 Cobourg, ON





# 1.0 Background

#### 1.1 Introduction

Batory Management has been retained as the planning consultant for the development of vacant lands, located on the south side of Elgin Street West, between Rogers Road and Wilkins Gate in the Town of Cobourg.

Through a proposed draft plan of subdivision, the developer intends to develop the subject lands into two distinct land use segments; commercial uses on the northern portion of the lands, fronting onto Elgin Street West, and residential uses on the southern portion of the lands with access from Carlisle Street. The residential portion of the development will include a total of 72 residential townhouse units as well as a central park block, which will be accessed through a single vehicular access point from Carlisle Street. For the commercial portion of the site, a service retail plaza consisting of 3 stand- alone commercial buildings and associated parking areas is proposed, with access from Elgin Street West.

The following Planning and Urban Design Rationale provides an overview and justification of the proposed development on the subject lands.

#### 1.2 Location and Size of the Subject Site

Located on the south side of Elgin Street West between Rogers Road and Wilkins Gate in the Town of Cobourg, the subject lands are irregular in shape and are currently vacant. The applicant seeks to development the lands with commercial uses on the northern portion of the lands and residential uses on the southern portion of the lands. The subject site is 3.7 hectares (37,028 m<sup>2</sup>) in size with frontage on Elgin Street West. The site's frontage along Elgin Street West is approximately 129 metres (423 feet) As noted, the site is currently vacant.



Figure 1 – Aerial Photo



# 1.3 Land Use Context

The subject lands are located within the Town of Cobourg urban environment and are bounded by the following residential, commercial, and rural land uses:

- To the north: Elgin Street West; rural agricultural uses; scrap metal drop-off
- To the south: Residential townhouses and single detached dwellings
- To the west: Carpet store and truck repair service uses; residential townhouses, semidetached and single detached dwellings
- To the east: Canadian tire retail store and gas station, Tim Horton's restaurant, Mark's clothing retail store.











Figure 2 - Context Photos (existing and surrounding the site)

# 1.4 Transportation and Road Classification

While the site has frontage on Elgin Street West, it is also intended to have access to Carlisle Street to the south through an extension of Greenly Drive to a new proposed road within the site. On Schedule E of the Cobourg Official Plan, Elgin Street West is a designated Arterial Road, and is also planned for a pedestrian / bicycle path. The maximum intended width of the right of way is 30 metres. On Schedule DD of the New Amherst Community Secondary Plan, Carlisle Street is a collector Road, with a maximum intended right of way width of 26 metres. Route 1 and 2 of the Cobourg Bus Transit stop is also located to the east of the subject site, at the intersection of Rogers Road and Elgin Street West.



Figure 3 – Cobourg Transit Map



# 1.5 The Proposed Development

The proposal involves the development of the existing vacant lands. The developer intends to develop the subject lands into two distinct land use segments of commercial and residential uses through a draft plan of subdivision. Applications for original Official Plan Amendment, Zoning Amendment, and Draft Plan of Subdivision on the subject lands were filed July 22, 2013. The approval of these applications was completed on July 14, 2014. The existing Official Plan designation and site specific Zoning on the property has been in place since this time. For the Draft Plan of Subdivision, a 2-year extension was granted (June 26, 2017 to July 14, 2019), although this had lapsed on July 15, 2019. The applicant is seeking an approval to the proposed draft plan of subdivision with would essentially renew the previously approved plan.

The proposed commercial uses on the northern lands front onto Elgin Street West and are approximately 0.6 hectares (1.5 acres) in size. The commercial block is intended for up to 1,400 square metres (15,000 square feet) with up to three stand-alone commercial buildings and associated parking. The proposed residential blocks on the southern portion of the subject site are approximately 3.1 hectares (7.6 acres) in size, and is proposed for 62 townhouse units and 10 semi-detached units on a municipal loop road. The access to the site is proposed from an extension to Greenly Drive to the south. At the centre of the residential development is a proposed parkette, which is 0.12 hectares (0.3 acres) in size and is intended to function as a central public focal point and open space area.

The proposed residential lotting pattern of the townhouse and semi-detached lots are intended to provide an appropriate lot fabric context within the existing low-rise neighbourhood to the south and west of the subject site. The built form of both the residential and commercial blocks is also intended to enhance the existing streetscape and complete the build-out of this portion of the New Amhest Community.

# 1.6 Amenity Space

The new residential dwelling units will have individual private rear-yard amenity areas. A central parkette is also proposed as part of the Plan of Subdivision, which will service the immediate neighbourhood. Pedestrian and emergency access connections are proposed through the site, from the commercial block to the north, through the central parkette and to the southern extension of Greenly Drive.



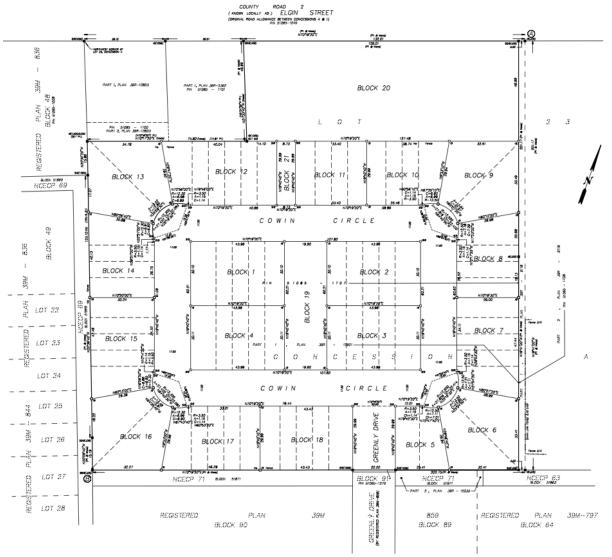


Figure 4 – Draft Plan

# 1.7 Accessibility, Parking & Loading

For the residential units, a sole access point will be provided from Carlisle Street through an extension to Greenly Drive. Parking is provided on each lot with a private garage and driveway parking spaces.

The commercial use block will have sole vehicular access from Elgin Street West and will also be provided with surface parking and opportunities for future commercial loading spaces, which will require future Site Plan design and approvals.



## 2.0 Planning Policies, Regulations, and Analysis

This section of the Planning Justification Report will provide an analysis of the proposed development in the context of the following provincial and local documents:

- Planning Act
- Provincial Policy Statement (PPS) (2014)
- Provincial Policy Statement (2020)
- A Place to Grow: Growth Plan for the Greater Golden Horseshoe
- County of Northumberland Official Plan
- Cobourg Official Plan, 2010
- New Amherst Secondary Plan
- Design Guidelines
- Cobourg Zoning By-law

#### 2.1 Planning Act

In accordance with the approval process of the Planning Act, the Municipality is required to have regard to various criteria during the evaluation of a draft plan of subdivision as contained in Section 51(24) of the Planning Act, including the following applicable matters:

- a) the effect of development of the proposed subdivision on matters of provincial interest as referred to in section 2;
- b) whether the proposed subdivision is premature or in the public interest;
- c) whether the plan conforms to the official plan and adjacent plans of subdivision, if any;
- d) the suitability of the land for the purposes for which it is to be subdivided;
- e) the number, width, location and proposed grades and elevations of highways, and the adequacy of them, and the highways linking the highways in the proposed subdivision with
- f) the dimensions and shapes of the proposed lots;
- g) the restrictions or proposed restrictions, if any, on the land proposed to be subdivided or the buildings and structures proposed to be erected on it and the restrictions, if any, on adjoining land;
- h) conservation of natural resources and flood control;
- i) the adequacy of utilities and municipal services;
- j) the adequacy of school sites;
- k) the area of land, if any, within the proposed subdivision that, exclusive of highways, is to be conveyed or dedicated for public purposes;
- I) the extent to which the plan's design optimizes the available supply, means of supplying, efficient use and conservation of energy; and
- m) the interrelationship between the design of the proposed plan of subdivision and site plan control matters relating to any development on the land, if the land is also located within a site plan control area designated under subsection 41 (2) of this Act



#### Planning Act - Section 51(24) Analysis

In our opinion, the proposed development meets all of the applicable criteria under Section 51(24) of the Planning Act. Specifically:

- The proposed development and Plan of Subdivision meets of objectives and policy of the Growth Plan and Provincial Policy Statement, as further outlined in subsequent sections of this report.
- The development of the subject lands represents the compatible continuation of the existing phases of development within the New Amherst neighbourhood.
- The proposed development conforms to the Cobourg Official Plan. The proposed draft plan of subdivision proposes a public street and lotting design, which is compatible with the existing built form and a similar density to the surrounding subdivision. The proposed commercial block is appropriate with frontage n an arterial road and is compatible with adjacent land uses.
- The subject site is relatively flat and contains no natural heritage features; it is well suited for development.
- The development of the proposed plan of subdivision will be accessed through the extension of Greenly Drive, which is a municipal street. This proposed extension was originally contemplated through previous subdivision plans to allow for the development of the subject site. As the site grading is relatively flat, the street connections will integrate appropriately throughout the site, and the original traffic report demonstrates the site will function appropriately within the context of the existing road network.
- The dimensions and shapes of the proposed lots are compatible for the neighbourhood.
- The lands are subject to the New Amherst Community Secondary Plan policies and applicable municipal design guidelines and engineering standards. The subject site is one of the last undeveloped parcels in the New Amherst community. The proposed plan will be subject to conditions of draft approval and the applicable cost-sharing agreement to permit the development.
- The subject lands do not contain any natural heritage features. A Stormwater Management Report has been submitted with the applications which has identified options for managing stormwater and will be included as part of the conditions of draft plan approval.
- There are adequate services and utilities to service the proposed development
- The existing schools in the area can adequately serve the proposed development.
- The proposed development includes the dedication of a 0.12 ha (0.3 ac) landscaped central parkette for public parkland purposes. While the proposed parkette will primarily serve the residents in the immediate neighbourhood, it will be connected to the greater trail network in the greater community and be accessible to all residents.
- The proposed density represents a desirable compact built form and an efficient use of resources. The subdivision design is comprised of a short, looping street pattern, with access to the public open space network and nearby commercial amenities.
- The commercial block will be subject to a future site plan approval with the Town of Cobourg to control the orderly development of the block. The plan of subdivision will be controlled by conditions of draft approval and a Subdivision Agreement approved by the Municipality.



# 2.2 Provincial Policy Statement (2014)

The Provincial Policy Statement (2014) provides direction on matters of provincial interest primarily related to land use planning and development. The policies within the PPS apply province-wide and are issued under section 3 of the Planning Act. As an integral part of the Ontario's policy led planning system, all decisions affecting planning matters within the province, "shall be consistent" with the PPS. Among other things, the PPS encourages the wise management of land, protecting public health and safety, and promoting the quality of the natural environment.

The following PPS policies are of particular relevance and importance to the redevelopment of the subject lands:

Policy 1.1.1 provides that healthy, liveable and safe communities are to be sustained by promoting efficient development and land use patterns and accommodating an appropriate range and mix of residential, employment (including industrial and commercial), institutional, recreation, park and open space, and other uses.

Section 1.1.3 of the PPS outlines the importance of settlement areas and the importance of wise land use and resource management within settlement areas.

- Section 1.1.3.1 states: "Settlement areas shall be the focus of growth and development, and their vitality and regeneration shall be promoted."
- Section 1.1.3.2 continues to state: "Land use patterns within settlement areas shall be based on:
  - a) Densities and a mix of land uses which:
    - 1) Efficiently use land resources
      - 2) Are appropriate for, and efficiently use, the infrastructure and public service facilities which are planned or available, and avoid the need for their unjustified and/or uneconomical expansion;
      - 3) Minimize negative impacts to air quality and climate change, and promote energy efficiency;
      - 4) Support active transportation;
      - 5) Are transit-supportive, where transit is planned, exists or may be developed; and
      - 6) Are freight-supportive; and
    - b) A range of uses and opportunities for intensification and redevelopment in accordance with the criteria in policy 1.1.3.3, where this can be accommodated.
- Section 1.1.3.3 directs planning authorities to identify direct growth to appropriate intensification locations. Specifically, Section 1.1.3.3 states:

"Planning authorities shall identify appropriate locations and promote opportunities for intensification and redevelopment where this can be accommodated taking into account existing building stock or areas, including brownfield sites, and the availability of suitable existing or planned infrastructure and public service facilities required to accommodate projected needs."



- Section 1.1.3.5 outlines minimum intensification and redevelopment targets within built-up areas: "Planning authorities shall establish and implement minimum targets for intensification and redevelopment within built-up areas, based on local conditions. However, where provincial targets are established through provincial plans, the provincial target shall represent the minimum target for affected areas."
- Section 1.4.3 states:

"Planning authorities shall provide for an appropriate range and mix of housing types and densities to meet projected requirements of current and future residents of the regional market area by:

- b) Permitting and facilitating:
  - 1) All forms of housing required to meet the social, health, well-being requirements of current and future residents, including special needs requirements; and
  - 2) All forms of residential intensification, including second units, and redevelopment in accordance with policy 1.1.3.3
- c) Directing the development of new housing towards locations where appropriate levels of infrastructure and public service facilities are or will be available to support current and projected needs;
- d) promoting densities for new housing which efficiently use land, resources, infrastructure and public service facilities, and support the use of active transportation and transit in areas where it exists or is to be developed;
- Policy 1.6.2 states that "The use of existing infrastructure and public service facilities should be optimized, wherever feasible, before consideration is given to developing new infrastructure and public service facilities."
- Section 1.6.6.2 outlines that intensification within settlement areas where municipal services currently exist should be promoted:

"Municipal sewage services and municipal water services are the preferred form of servicing for settlement areas. Intensification and redevelopment within settlement areas on existing municipal sewage services and municipal water services should be promoted, wherever feasible."

• Section 1.6.6.7 outlines:

"Planning for stormwater management shall:

- a) Minimize, or, where possible, prevent increases in contaminant loads;
- b) Minimize changes in water balance and erosion;
- c) Not increase risks to human health and safety and property damage;
- d) Maximize the extent and function of vegetative and pervious surfaces; and
- e) Promote stormwater management best practices, including stormwater attenuation and re-use, and low impact development.
- In addition to municipal service infrastructure, the PPS is also focused on transportation of people and goods. Specifically, the PPS aims to minimize the length and number of vehicles.



- Section 1.6.7.4 states: "A land use pattern, density and mix of uses should be promoted that minimize the length and number of vehicle trips and support current and future use of transit and active transportation."
- With respect to air quality and climate change section 1.8.1 states: "Planning authorities shall support energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and climate change adaptation through land use and development patterns which:
  - a) promote compact form and a structure of nodes and corridors;
  - b) promote the use of active transportation and transit in and between residential, employment (including commercial and industrial) and institutional uses and other areas;
  - f) promote design and orientation which:
    - 1) Maximizes energy efficiency and conservation, and considers the mitigating effects of vegetation;
  - g) Maximize vegetation within settlement areas, where feasible.

#### 2.3 PPS Analysis

The proposed development of commercial uses as well as 72 residential townhouse and semidetached dwellings contemplates an urban form that is consistent with the vision of the PPS. The subject land is located within the urban area and will provide for additional commercial uses and residential units within an area wherein this form of development is anticipated. The proposed development will utilize existing urban water and waste disposal services.

The intensification proposed on the site is supportive of policy directions of the PPS, which supports intensification in built-up urban areas which are well-served by municipal infrastructure, particularly transit. In this regard, the proposed commercial and residential development will reanimate an underutilized site by introducing commercial uses along a collector road and adding additional housing within an existing community.

The proposed development is consistent with the PPS, and specifically with respect to the provision of housing. Policy 1.4.3 requires provision to be made for an appropriate range of housing types and densities to meet the projected requirements of current and future residents by, among other matters, facilitating all forms of residential intensification and redevelopment and promoting densities for new housing which efficiently use land, resources, infrastructure and public service facilities. The proposed semidetached and townhouse built form is appropriate on the subject site in the context of the surrounding built form and due to its location and neighbourhing built forms.

The PPS clearly indicates that full municipal services is the preferred avenue by which urban development is to be accommodated and that the utilization of said services should be optimized. The use of the area's existing municipal infrastructure clearly responds to the direction of the servicing policies of the PPS. Further, the development does not contain any significant natural features nor will the proposed development adversely affect any features within the general area. As such, the proposed development plan conforms to the PPS.



# 2.4 Provincial Policy Statement (2020)

On February 28, 2020, the Ministry of Municipal Affairs and Housing released the Provincial Policy Statement ("PPS"), 2020. It will come into effect on May 1, 2020. All decisions on or after that date under the Planning Act, or that affect a planning matter, will be required to be consistent with the new PPS.

PPS 2020 continues the long-established approach within provincial planning policy to promote the efficient use of land, focusing growth within settlement areas, promoting a mix of housing, employment, recreation, and transportation choices that increase the use of active transportation and transit before other modes of travel.

Building on PPS 2014, PPS 2020 expressly encourages planning authorities: "to permit and facilitate a range of housing options, including new development as well as residential intensification, to respond to current and future needs".

Policy 1.4.3 of PPS 2020 sets out that planning authorities shall provide for an appropriate range and mix of housing options and densities by, "requiring transit-supportive development and prioritizing intensification, including potential air rights development, in proximity to transit including corridors and stations".

It is our opinion that the proposed development is consistent with both the Provincial Policy Statement 2014 and the Provincial Policy Statement 2020, in particular, the policies relating to residential intensification and the efficient use of land and infrastructure.

# 2.5 A Place to Grow: Growth Plan for the Greater Golden Horseshoe

In May 2019, the Ontario government published A Place to Grow to strategically manage and direct growth within the Greater Golden Horseshoe. The policies within A Place to Grow provide direction on matters such as housing, infrastructure, and natural resources. As an essential part of Ontario's planning led decision-making hierarchy, A Place to Grow replaces the Growth Plan (2017) and helps implement the vision of the Provincial Policy Statement. Decisions involving planning matters within the Province of Ontario must be consistent with A Place to Grow. A Place to Grow provides land use direction until the year 2041.

The following sections of A Place to Grow are of particular relevance to the proposed development on the subject lands.

1.2.1 Guiding Principles - The successful realization of this vision for the GGH centres on effective collaboration amongst the Province, other levels of government, First Nations and Métis communities, residents, private and non- profit sectors across all industries, and other stakeholders. The policies of this Plan regarding how land is developed, resources are managed and protected, and public dollars are invested are based on the following principles:

- Support the achievement of complete communities that are designed to support healthy and active living and meet people's needs for daily living throughout an entire lifetime.
- Prioritize intensification and higher densities to make efficient use of landand infrastructure and support transit viability.



 Support a range and mix of housing options, including second units and affordable housing, to serve all sizes, incomes, and ages of households. Improve the integration of land use planning with planning and investmentin infrastructure and public service facilities, including integrated service delivery through community hubs, by all levels of government. Provide for different approaches to manage growth that recognize the diversity of communities in the GGH.

Section 2.2.1.1 states:

"Population and employment forecasts contained in Schedule 3 will be used for planning and managing growth in the GGH to the horizon of this Plan in accordance with the policies in subsection 5.2.4."

The policies continue to direct this growth in section 2.2.1.2:

"Forecasted growth to the horizon of this Plan will be allocated based on the following:

- a) The vast majority of growth will be directed to settlement areas that:
  - i. Have a delineated built boundary;
  - ii. Have existing or planned municipal water and wastewater systems; and
  - iii. Can support the achievement of complete communities;
- c) Within settlement areas, growth will be focused in:
  - i. Delineated built-up areas;
  - iii. Located with existing or planned transit, with a priority on higher order transit where it exists or is planned; and
  - iv. Areas with existing or planned public service facilities;

Section 2.2.1.3 states:

"Upper- and single-tier municipalities will undertake integrated planning to manage forecasted growth to the horizon of this plan, which will:

- a) Establish a hierarchy of settlement areas, and of areas within settlement areas, in accordance with policy 2.2.1.2;
- b) Be supported by planning for infrastructure and public service facilities by considering the full life cycle costs of these assets and developing options to pay for these costs over the long-term;
- c) Provide direction for an urban form that will optimize infrastructure, particularly along transit and transportation corridors, to support the achievement of complete communities through a more compact built form;

A Place to Grow recognizes that to build complete communities, a range of housing types, transportation options and recreational facilities must be available. Section 2.2.1.4 states:

"Applying the policies of this Plan will support the achievement of complete communities that:

- c) Provide a diverse range and mix of housing options, including second units and affordable housing, to accommodate people at all stages of life, and to accommodate the needs of all household sizes and incomes;
- d) expand convenient access to:
  - i. a range of transportation options, including options for the safe, comfortable and convenient use of active transportation;



- iii. an appropriate supply of safe, publicly accessible open spaces, parks, trails, and other recreational facilities; and
- e) provide for a more compact built form and a vibrant public realm, including public open spaces;"

Most of the growth within the Greater Golden Horseshoe is directed to delineated built-up areas, which refers to lands within the built boundaries of municipalities. To help realize the desired intensification targets for the Greater Golden Horseshoe, Policy 2.2.2.3 instructs municipalities to create strategies to achieve the minimum intensification target as directed by A Place to Grow. In addition to its support of achieving the desired intensification targets, Policy 2.2.2.3 is intended to direct growth to strategic locations, support the development of complete communities, and encourage investment in infrastructure and public service facilities.

Section 2.2.5 of the policy addresses employment. Specifically, the policy recognizes the importance of employment uses for current and future needs. The following sections within Section 2.2.5 are of particular relevance:

- 1) Economic development and competitiveness in the GGH will be promoted by:
  - a) making more efficient use of existing employment areas and vacant and underutilized employment lands and increasing employment densities;
  - ensuring the availability of sufficient land, in appropriate locations, for a variety of employment to accommodate forecasted employment growth to the horizon of this Plan;
  - c) planning to better connect areas with high employment densities to transit; and
  - d) integrating and aligning land use planning and economic development goals and strategies to retain and attract investment and employment.

Section 2.2.6 of the policy addresses housing. Specifically, the policy recognizes the importance of a diverse housing stock for current and future needs. The following sections within Section 2.2.6 are of particular relevance:

- 1) Upper- and single-tier municipalities, in consultation with lower-tier municipalities, the Province, and other appropriate stakeholders, will:
  - a) Upper- and single-tier municipalities, in consultation with lower-tier municipalities, the Province, and other appropriate stakeholders, will:
    - a) support housing choice through the achievement of the minimum intensification and density targets in this Plan, as well as the other policies of this Plan by:
      - i. identifying a diverse range and mix of housing options and densities, including second units and affordable housing to meet projected needs of current and future residents; and
      - ii. establishing targets for affordable ownership housing and rental housing;
- 2) Notwithstanding policy 1.4.1 of the PPS, 2014, in implementing policy 2.2.6.1, municipalities will support the achievement of complete communities by:
  - a) Planning to accommodate forecasted growth to the horizon of this Plan;



- b) Planning to achieve the minimum intensification and density targets in this plan;
- c) Considering the range and mix of housing options and densities of the existing housing stock; and
- d) Planning to diversify the overall housing stock across the municipality

# 2.6 A Place to Grow Analysis

While A Place to Grow recognizes the importance of a diverse housing stock that meets the current and future demands, and the Plan also acknowledges the need to locate employment on vacant and underutilized lands and increasing employment densities.

The development opportunity of the subject lands into commercial employment uses and residential semi-detached and townhouse dwellings is consistent with the vision and objective of A Place to Grow. Specifically, A Place to Grow encourages strategic growth; within the delineated built up areas with direct access to existing infrastructure, services, transportation, and employment opportunities.

The proposed development seeks to redevelop land within the Town of Cobourg's delineated built up area that will make use of existing municipal infrastructure and services. In addition, the proposed development conforms to the policies within A Place to Grow that encourage to development of a diverse housing stock. To that end, the redevelopment of the subject lands will provide a range and mix of housing options. The proposed redevelopment opportunity will assist the Town achieve its required minimum intensification target and promote the development of complete communities, as noted in the Growth Plan. Further, the proposed development will increase the employment density along Elgin Street West, and is also located within close proximity to existing public transit.

# 2.7 County of Northumberland Official Plan

The County of Northumberland Official Plan identifies that the subject lands are located within the existing Built Boundary and are specifically designated as an Urban Area. Residential and Commercial development is permitted within the Urban Area. The County Official Pan directs growth to existing Urban Areas.

The County of Northumberland commissioned a Growth Management Strategy in consultation with the member Municipalities and adopted the study in December of 2009. The key objective of the Growth Management Strategy is to provide appropriate policy direction and establish minimum growth and density targets for the County as a region and for individual municipalities in accordance with the Provincial Policy Statement and Growth Plan. The recommended minimum greenfield density target for Cobourg is 35 persons and jobs/hectare.

The policies of the County Official Plan provide the direction that growth and development will occur in Urban Areas. These policies also promote development of existing areas on vacant or underutilized lands, and specifically along roads with adequate services. The proposed development is consistent with the policies of the County Official Plan. The intensification of these



lands will assist the County in attaining intensification targets for the Urban Area. The proposal further demonstrates the County's initiative to provide more compact forms of housing and intensity of commercial uses.

# 2.8 Cobourg Official Plan (2010); Approved by OMB in 2017

The subject lands are designated Neighbourhood General and Service Commercial in the New Amherst Community Secondary Plan Schedule `AA' Land Use. Residential uses, such as the proposed semi-detached and townhome dwellings are permitted within the Neighbourhood General designation, while commercial uses are permitted within the Service Commercial Designation that applies to the subject lands. The following policies are of particular relevance to the redevelopment of the subject lands:

Section 3.2.2, Growth Management Related Structural Elements states: "The Town's Urban Settlement Area Boundary (Schedule "A") is fixed, and no changes to the boundary are anticipated during the planning period. Any such change in the future would only be considered in the context of a comprehensive review.

The following structural elements form the basis for the Town's growth management strategy. *i)* Built Boundary: Schedule "A" identifies the "Built Boundary" as determined by the Province. Lands within the boundary are considered to be those parts of the Town that are already developed as of June 2006. Any development within the Built Boundary is considered intensification and contributes to the intensification target in Section 3.2.3 of the Official Plan."

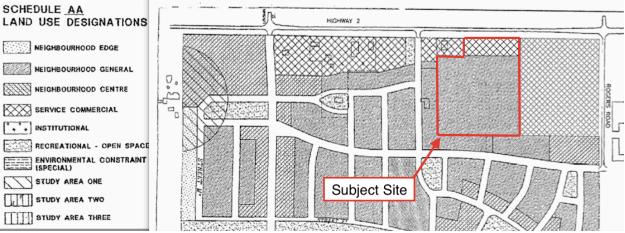


Figure 5 - Cobourg Official Plan Map

Section on 3.4.3.2, New Residential Areas states: "In new residential areas or significant redevelopment areas, applications for development shall be evaluated based on their conformity with the Growth Management Strategy in Section 3.2 and all other applicable policies of this Plan and the following criteria:

*i)* a mix of development forms and densities;

ii) medium density residential uses are encouraged and shall be:



a) intermixed with low density development in smaller groups;

b) primarily street oriented in design; and,

c) located adjacent to collector and arterial roads, park and greenland areas,

community facilities and commercial areas and/or as a physical transition between high and low density residential development.

*iii) the road pattern is a modified, rectilinear grid pattern which provides for the maximum possible degree of connectivity internally, and externally with the existing developed areas and abutting arterial and collector roads with short blocks to promote active transportation modes; and,* 

*iv)* the development incorporates linkages to the Town's greenland system and, incorporates private or public open space features or areas including Village Squares which serve as focal points for the residential development and/or structural elements which define the character and structure of the area."

Section 5 contains policy related to Community Design and Improvement, which provides principles of development within the Town of Cobourg. Section 5.3 relates to Gateway Areas as identified in the Town.

i) ... "Further development in these areas shall conform to the following:

a) buildings and structures shall incorporate architectural, landscaping or other features which emphasize the unique nature of the community;

b) buildings or structures are sited and massed toward the major intersection; and, c) parking areas shall be at the rear or side of buildings

*ii) The Town shall incorporate features such as landscaping and signage in the road allowance to clearly identify gateway areas.*"

Section 9.10 relates to Secondary Plans, which provide a more detailed policy direction than the Official Plan with respect to specific issues.

"iii) Secondary Plans shall generally conform to, and be designed to implement the policies of this Plan. However, where there is a conflict between the policies of the Official Plan and the Secondary Plan, the Secondary Plan policies will supersede those of the Official Plan for the area which is the subject of the Secondary Plan."

The New Amherst Community Secondary Plan contained in Section 13 of the Town of Cobourg Official Plan is intended to apply to subject lands. The New Amherst Community Secondary Plan was adopted as Amendment No. 49 to the Official Plan for the Town of Cobourg and was approved by the Ontario Municipal Board on September 29, 1998. The New Amherst Community Secondary Plan will be discussed further in Section 4.5 of this report.

#### New Amherst Community Secondary Plan

The subject lands are currently designated Neighbourhood General in the New Amherst Community Secondary Plan Schedule 'AA' Land Use Designations.

The objectives of the Secondary Plan are outlined in section 13.2.3.which states:

#### a) Land Use

*i)* To ensure continuity of neighbourhoods by developing the lands within the New Amherst Community in a staged manner through a series of development blocks.



ii) To ensure that the development provides for a diversity of housing needs, through its mixed use design and provides, within walking distance, commercial, open space and employment opportunities.

*iii)* To integrate the New Amherst Community with existing and future development in the Town of Cobourg through road linkages, common public transit routes and pedestrian/bicycle path networks.

#### b) Residential Areas

*i)* To create a high quality residential community with a safe, healthy, functional environment. *ii)* To provide a range of housing types and densities, including affordable housing, to meet the needs of future residents in accordance with Section 1.2 of the Provincial Policy StatementTo provide a choice of lifestyles to enrich the New Amherst Community.

#### c) Commercial Uses

*i)* To promote economic growth and employment opportunities within the New Amherst Community through the establishment of neighbourhood commercial areas in close proximity to residential areas that service local community needs.

ii) To provide potential for commercial development to ensure a high degree and diversity of services to community residents as well as other public traveling through and to the area.
iii) To allocate commercial lands within the development so as to ensure that commercial establishments benefit from the close proximity of a residential client base and to provide a high degree of choice in terms of "setting" to potential commercial developments."

The Neighbourhood General designation policies are outlined in section 13.6 of the Official Plan. Permitted uses include:

"Low density residential uses identified in Section 13.5.2 (Neighbourhood Edge) as well as medium density residential uses including triplex, quadruplex, townhouse and similar dwelling units. In addition, institutional uses which are compatible with the permitted uses in the Neighbourhood General designation, are permitted. One garden suite building shall be permitted on each lot used for single, semi-detached and townhouses subject to the regulations of the Zoning By-law."

#### Section 13.6.3 include the following policies:

a) the Neighbourhood General designations shall provide a variety of low and medium density housing types to locate throughout the lands in the Neighbourhood General designation. The Zoning By-law may establish restrictions on the percentage of neighbourhood which can be used for any particular housing types.

b) Medium density housing is encouraged to locate on the lands immediately adjacent to the Neighbourhood Centre designation to provide a transition between the more compact development areas, and the surrounding lands designated as Neighbourhood General.
c) The predominant form of housing shall be single detached, semis, duplexes, triplexes, quadruples and townhouses. The overall net density shall not exceed 37 units per hectare with a minimum density of 12 units per net hectare.

The Service Commercial designation policies are outlined in section 13.8 of the Official Pan. Permitted uses include:



"The land uses within the Service Commercial designation shall be limited to service oriented commercial uses which rely heavily upon vehicular traffic for their economic existence including, but not limited to hotels, motels, eating establishments (including drive-in/take-out restaurants), motor vehicle service stations and car washes, automotive dealerships, specialized automotive repair and sales, recreational vehicle sales and service establishments. Limit of specialized retail commercial establishments such as building supply outlets, nursery sales/commercial greenhouses, or other similar retail uses shall also be permitted within the Service Commercial Designation. In addition, mixed use development may be permitted in accordance with the provisions of 3.9 of the Official Plan."

Section 13.8.3, considers the following policy regarding Service Commercial Land Uses: Policies a) The design of development within the Service Commercial designation shall consider the following;

- The access/egress of vehicular traffic to/from the development shall not impede traffic flow along adjacent streets. A minimum number of joint access points is recommended.
- Adequate buffer using vegetation, fencing and separation distances shall be provided where a Service Commercial establishment adjoins Neighbourhood General uses.
- Outdoor storage areas will be fenced and suitably screened from adjacent land uses. Temporary storage of materials may be permitted for display/promotional purposes without screening provided vehicular traffic flow is not impeded and minimum parking requirements are complied with.
- The type, design and location of signs used by Service Commercial establishments shall be incorporated into the landscaping design plan for the development and shall, to the extent feasible, be compatible with surrounding Neighbourhood Centre uses and not be visually intrusive with Neighbourhood General uses.
- The impact of the proposed development on storm water quality and quantity.

The above considerations shall be addressed through site plan control.

# 2.9 Official Plan Analysis

The land uses of the proposed commercial and residential draft plan of subdivision on the site meets the general land use objectives of the Official Plan as well as the objectives of the New Amherst Community Secondary Plan. Given the site's context and adjacent land use designations, the proposed development is an appropriate development intensity and scale. The subject land is located within the Town's built boundary and is an appropriate form of intensification within the context of the Official Plan. The proposed development will assist in achieving the Town's intensification targets within the Built-up Area.

The proposed block and lotting pattern contemplated in the draft plan of subdivision is consistent with the Official Plan designation and applicable policies. The proposed siting of the townhouse blocks and semi-detached blocks are also compatible with the physical character of the existing neighbourhood. The massing and scale of built form that is proposed on the subject site is also intended to be a compatible development within the character of the neighbourhood. The units are street oriented and appropriately connect with the existing development in the area. A parkette is proposed in the centre of the residential component providing an open space link and central



amenity area for residents. Existing municipal infrastructure will be utilized by the development as well as existing community and open space amenities.

The proposed draft plan of subdivision also meets the key objective of the Secondary Plan, as the development pattern integrates appropriately with the existing development in the community. The development provides linkages to encourage walkability to create a pedestrian friendly environment. The development also provides a diversity of housing types and is intended to provide for compatibility and high quality architecture. The density of the proposed residential component of the draft plan of subdivision is approximately 24 units per hectare, which is in the mid-point of the range provided in the Plan. The commercial block of the proposed plan of subdivision to appropriately located along Elgin Street West, which complements the existing and adjacent commercial uses and is compatible with adjacent residential uses.

In our opinion, the proposed development largely conforms with the policies of the Town of Cobourg Official Plan.



# 3.0 Urban & Landscape Design Analysis

From an urban design perspective, it is our opinion that the proposal is contextually appropriate and represents a high-quality addition to the New Amherst Community. Accordingly, the proposed built form is consistent with the applicable built form policies of the Official Plan, New Amherst Community Secondary Plan, and the objectives of the Urban and Landscape Design Guidelines.

The following provides a review of the proposed development against the applicable guidelines recommended by the Official Plan and Urban and Landscape Design Guidelines:

#### Official Plan - Section 5 Community Design and Improvement

Section 5 of the Official Plan provides general design policies. These general design policies include a consideration of streetscapes, streetscape design, landscape design and safe community design, and each of these elements includes policy for new community development.

The Street System is to be designed to reflect an interconnected Street System, which facilitates continuous and direct movement within and between the development areas and the existing community.

 The proposed street pattern includes an extension to Greenly Drive and direct public access to Carlisle Street. An internal looped road and an access lane to the commercial development which connects to Elgin Street/Hwy 2 provides for an interconnected street system and facilitates this continuous and direct movement within the subdivision and existing community.

With respect to Streetscape design the follow areas area considered:

- No Reverse Lotting
  - All lots within the proposed development will front along a public street
- Unobstructed Road Frontage adjacent to Public Open Space
  - The park space to be provided in the centre of the development fronts on the public road system both on the north and south side of the park.
- Pavement and Right-of-Way Widths Reflect the Function of the Street
  - Access Road A is a 19.9 metre width right-of-way. The internal looped road has a 17 metre right-of-way. These right of way widths reflect the function of the applicable streets.
- Setting of parking areas and massing of buildings should create a high quality streetscape and sense of enclosure.
  - The siting of both the residential and commercial buildings provide a sense of enclosure and allow for a high quality streetscape throughout the development.
- Garages will be designed so that they are not the dominate feature and they shall not project beyond the facades of the residents and dominate the frontage of the lot.
  - The garages will be adequately designed to meet this objective.
- Parking areas for non-residential uses should be designed to reduce the visual impact both on the adjoining streetscape and non-users by screening of the lot at the street, locating the building and the parking in a manner which reduces the impact on the street, reducing the scale of the large parking areas by subdividing them into smaller areas and providing joint access where feasible.



• The parking area for the proposed commercial development is intended to achieve these objectives; the siting of the buildings will break up the parking on the site.



Figure 6 – North Elevation

- Landscape Design: Landscaping provides definition of the street and the public open space, frames views, and focal points and provides direction for pedestrian movement and demarcation of areas for different functions.
  - The landscape design of the draft plan of subdivision will provide a sense of place, focusing upon the central parkette and clear trail system and sightlines throughout the development. The commercial areas will also be landscaped which will provide an enhanced streetscape.
- Safe Community and Design; A series of policies are designed to promote safety and securities for public spaces and to minimize potential crime. These include the following: opportunity for visual overlook and ease of public access to adjacent parks and open spaces.
  - The looped road system provides access and together with the internal park space provides pedestrian access, which will ensure appropriate sightlines are provided throughout the development.
- Clear Unobstructed Views of Parks and Open Spaces
  - The open area with frontage on both the north and south side of the Street B loop and the direct connection to the commercial area will provide for unobstructed views of parks and open spaces.
- Appropriate Lighting, Visibility and Opportunity for Informal Surveillance for Walkways, Parking Lots, Parking Garages and Open Space Areas:



- The nature of the design ensures that visibility and visual surveillance are available. The lighting design will be developed in such a way that it will ensure the public areas will be adequately lit.
- Landscape Elements Maintain Views for Safety and Surveillance
  - The landscape elements have been designed in order to provide a sense of community as well as ensuring that there is safe surveillance of the public areas including sidewalks, the park space, and access to the commercial area.
- Sharing of Such Facilities as Parking and Walkways for increased use of Public Presence
  - The development incorporates sidewalks as well as internal park space with access to commercial area and access to Carlyle Street to the south.
- Promote a Sense of Community Ownership for Public Spaces
  - The design with the centralized park facility provide a sense of cohesion and community ownership.
- Provisions of Views Into, Out Of, and Through Publicly Accessible Park Space
  - The design of the commercial area provides for visibility from the Canadian Tire access with shared access facility, the access for Hwy 2 and the access lane from the residential development. In addition the park space provides the opportunity for views and publicly accessible interior spaces.
- Precludes Entrapment or the Perception of Entrapment
  - The design has been specifically prepared in order to ensure that the public spaces are visible and accessible.

#### Urban and Landscape Design Guidelines

The Town of Cobourg have adopted Urban and Landscape Design Guidelines in order to ensure that development achieves a high level of design and compliments the existing design character of the areas. The Vision and Guiding Principles identifies that, "*New residential development which will primarily occur through a mix of intensification and greenfield development with a variety of housing types and densities. Any intensification will be designed in keeping with the existing stable residential neighbourhoods where it is located within or adjacent to such areas."* 

Section 2.2 outlines a series of design principles and they include:

Encourage compact mix use development

• The proposed development is a mixed use with both commercial residential land uses that efficiently utilize the subject lands.

#### Promote Active Transportation

• The linkage and connectivity within the plan of subdivision and the mixed use nature of the development will encourage pedestrians, cyclists, and use of transit.



Promote Sustainable Development

• The mixed use nature of the development and diversity of built forms will assist in promoting sustainable objectives of the guidelines.

Principle of Providing Variety of Housing

• The proposed development provides both townhouse and semi-detached housing which complement adjacent built forms.

Vital Setting for Employment Uses

• The proposed employment / commercial uses along with the residential uses in the draft plan of subdivision achieves the objectives of this guideline.

Create and Celebrate Public Spaces

• The central parkette within the subdivision creates an opportunity for interaction of residents and provides further linkages throughout the greater community.

Promote Healthy Lifestyles and Physical, Mental and Spiritual Well-Being

• The proposed mix of uses, housing types and improved linkages will promote this guiding principle for healthy lifestyle opportunities.

Section 4 of the Urban and Landscape Design Guidelines specifically provides direction on new building design, landscaping, and surface runoff. This section further discusses site layout and building orientation, universal design principles, signage, landscaping, storage servicing and loading, parking, as well as matters relating to building design.

The commercial development is designed to reflect the context of the streetscape on Elgin Street West, with buildings oriented to the arterial road to create a street edge and more urban environment. The residential lotting pattern and anticipated built form of residential units will frame the internal street and provide for high quality design and building orientation as outlined by the design guidelines. The housing mix of townhouse and semi-detached homes is compatible with the scale and character of the existing neighbourhood. Landscaping will be utilized to enhance curb appeal and maximize compatibility between land uses. The central park and pedestrian linkages will assist in accessibility and walkability in the immediate neighbourhood. Surface runoff has been designed in the existing stormwater management reports submitted on the subject development.

Final details associated with implementing the Municipality's community design principles including signage, landscape details, loading and parking and building details will be secured through the Subdivision and Site Plan Approval processes. It is our opinion that the proposed draft plan of subdivision is appropriate and desirable from a design and landscape perspective and meets the overall intent of the guidelines.



# 4.0 Zoning

The in-force zoning by-law applying to the site is Town of Cobourg Zoning By-law 85-2003, as amended. Under the Town of Cobourg Zoning By-law 85-2003, as amended, the site is currently zoned District Commercial Exception 27 Holding Zone (DC-27(H)), and Neighbourhood Residential 2 Exception 1 Holding Zone (NR2-1(H)).

#### **District Commercial Zone**

Under the District Commercial zoning label, the following uses are permitted:

- auction centre use
- bakery retail outlet
- building supply use
- call centre
- clinic use
- communications production use including radio and television studios
- conference centre
- convenience commercial
- driving school use
- dry cleaning distribution
   establishment
- eating establishment, including banquet hall facilities
- education and training use
- equipment rental use
- fresh fruit, vegetable and flower sales use
- institutional use
- light industrial within an enclosed building
- motel or hotel use

- nursery or garden centre use
- office use
- personal service use
- place of entertainment use
- private and commercial club use
- public use in accordance with the provisions of Section 5.3.2
- residential use as a secondary use in a commercial building
- taxi establishment use
- undertaker's establishment use
- vehicle service station use
- vehicle fuelling station use
- vehicle sales use
- vehicle rental use
- vehicular service and supply use, including specialty repair facilities, but excluding vehicle body repair facilities
- vehicle wash
- veterinary clinic use and domestic animal grooming use
- wellness centre use

The following are permitted accessory uses under the District Commercial Zoning:

- i. accessory uses to the Permitted Uses under Section 14.1.1;
- ii. open storage;
- iii. wholesale use;
- iv. service and repair use;
- v. automatic banking units.

The following are prohibited uses under the District Commercial Zoning:

- i. department store use;
- ii. supermarket or bulk food use;
- iii. retail commercial use, other than those identified in Section 14.1.1 and 14.1.2;

The District Commercial Zone is subject to the following provisions, as noted in the Zoning By-law:

- Lot Area Minimum 740m2
- Lot Frontage Minimum 25m



- Lot Coverage Maximum 30%
- Front Yard Minimum 3m
- Rear Yard Minimum 7.5m
- Interior Side Yard Minimum 4.5m where no rear yard access
- Landscaped Open Space Minimum 15%
- Building Height Maximum 4 Storeys
- Floor Space Index Maximum 1.0

Additionally, exception 27 permits the following uses:

• Office use for the presentation, display and sale of new dwelling units.

Prohibited uses under exception 27 include the following:

- nursery or garden centre use;
- vehicle sales, service, supply, rental, wash and fueling uses.

The regulations of Section 14.1 shall apply to the uses permitted in the DC-27 Zone with the exception of the following:

• Rear Yard: 5.5 m minimum

#### Neighbourhood Residential Zone

Under the Neighbourhood Residential 2 zoning label, the following uses are permitted:

- i. accessory use, including a garden suite use;
- ii. day nursery use;
- iii. group home use in accordance with the provisions of Section 5.22;
- iv. home occupation use;
- v. public use in accordance with the provisions of Section 5.3.2;
- vi. residential use.

The following are permitted buildings and structures as noted under the Neighbourhood Residential 2 Exception 1 Zone:

- i. one semi-detached dwelling on one lot;
- ii. one unit of a semi-detached dwelling on one lot;
- iii. one townhouse dwelling on one lot;
- iv. one unit of a townhouse dwelling on one lot;
- v. accessory buildings and structures for the permitted uses.

The Neighbourhood Residential 2 Zone is subject to the following provisions:

Neighbourhood Residential 2	Townhouse Dwellings	Semi-Detached
Provision	Required	Required
Lot Frontage (min)	7.0m/unit	7.6m
Front Yard (min)	4.5m	4.5m
Driveway Width (max)	3.5m	3.5m
Garage Width (max)	3.5m	3.5m
Exterior Side Yard (min)	2.4m	2.4m



Side Yard (min)	1.2m (end units)	1.2m
Rear Yard (min)	7.5m	7.5m
Building Height (max)	11m	11m
Lot Coverage (max)	50%	50%

Additionally, exception 1 is subject to the following regulations:

- Minimum required front yard for semi-detached and townhouse dwellings 1.5m
- Minimum required rear yard for semi-detached and townhouse dwellings 6.0m
- Maximum lot coverage for semi-detached and townhouse dwellings 65%

#### Holding Symbol

The Holding (H) Symbol that applies to the subject site is subject on the following clause to remove the Holding Zone:

The Holding (H) Symbol shall not be removed until the Owner(s) has received approval of all applicable plans, drawings, and other related documentation by the Municipality, and after a Subdivision Agreement has been entered into pursuant to the Municipality's Subdivision Control requirements. The Agreement shall pertain to clauses including but not limited to: plans and/or other documentation which addresses site servicing, grading and other infrastructure; architectural, building and landscape design; fencing and other buffering measures; noise mitigation; traffic impacts and related improvements; pedestrian connections; parkland dedication and improvement; and, performance measures (re: regulations for construction and access).

#### **Zoning Analysis**

It is our opinion that the proposed Draft Plan of Subdivision meets all of the noted provisions and permitted uses of Town of Cobourg Zoning By-law 85-2003, as amended. The applicable commercial Block is intended to meet the uses and provisions noted within the District Commercial Exception 27 Holding Zone (DC-27(H)), and the residential blocks are intended to meet the uses and provisions noted within the Neighbourhood Residential 2 Exception 1 Holding Zone (NR2-1(H)).

The Holding Zone is intended to be removed as the developer works through the Draft Plan of Subdivision approval conditions. Furthermore, the commercial block will be required to achieve site plan approval prior to any development proceeding.



#### 5.0 Supporting Plans and Studies

#### Draft Plan of Subdivision

A Draft Plan of Subdivision has been prepared by Ivan B. Wallace Surveyors, which identifies the siting and configuration of the proposed blocks within the plan of subdivision, including the delineation between the commercial blocks and the residential blocks. The proposed subdivision development will also include a central parkette, pedestrian linkages, as well a new looped road within the subject site and a new connection to Greenly Drive.

#### **Transportation Analysis**

A Traffic Study was completed by Trans-Plan Inc, which identifies the proposed retail/commercial uses and residential development that is contemplated in the plan of subdivision. The report identified the proposed access at Elgin Street West, as well as the proposed connection at Greenly Drive / Carlisle Street, and the findings indicate minimal traffic impacts to the existing street networks including the nearby intersections and access points.

#### Servicing and Engineering Report

A SWM and Servicing Report has been prepared by Masongsong Engineering. Water service will be provided by a connection to the existing 300mm watermain along Elgin Street West. Sanitary service is to be provided through a connection to the existing 200mm diameter sewer along Greenly Drive. Appropriate quality control of stormwater measured are to be provided and will be appropriately managed through the development.

#### Noise Impact Report

A Noise Analysis of the site was completed by Valcoustics Canada Ltd., which analyzed potential impact to the proposed residential dwellings from road traffic on Elgin Street West. The report determined mitigation measures to be implemented including air conditioning units for certain blocks, exterior wall and window construction meeting non-acoustical requirements of the OBC, as well as sound barriers for certain blocks. Additional measures for the commercial development block include rooftop mechanical screens and sound barriers, as well as a sound barrier along the western portion of the north property line.



#### 6.0 Planning Conclusion

The landowner seeks to develop an underutilized vacant parcel in Cobourg's New Amherst neighbourhood located on the south side of Elgin Street West, between Rogers Road and Wilkins Gate. The proposed development will make use of existing infrastructure, services, and existing community amenities.

The proposed commercial and residential Draft Plan of Subdivision of the site is consistent with numerous policy directions articulated in the PPS, the Growth Plan, the County of Northumberland Official Plan, the Town of Cobourg Official Plan, and the existing Zoning By-law, all of which support the development on the existing vacant site which is well served by municipal infrastructure and community services and facilities. The development of an underutilized vacant site with a high quality residential development as well as new commercial services, represents an appropriate and desirable form of development.

From an urban design perspective, the proposed development will fit harmoniously within the existing built form context for both the residential and commercial uses. Furthermore, the proposed development conforms with policies of the Official Plan and New Amherst Secondary Plan, and is generally in keeping with the Town of Cobourg Design Guidelines. The proposed plan is also consistent with the previous approvals in 2014 regarding the Official Plan Amendment, Zoning By-law Amendment, and Draft Plan approval that were contemplated at that time. As the previous draft plan approvals have expired, the proposed draft plan will renew the approval and bring the site into conformity with the previous approvals.

The proposed redevelopment opportunity of the subject lands represents good land use planning and the application for Draft Plan of Subdivision should be approved.

Respectfully submitted by,

Paul Demczak, MCIP, RPP Principal, Batory Management

### **TRAFFIC IMPACT STUDY** (RESPONSE TO COMMENTS)

Proposed Residential and Commercial Development Greenly Drive Town of Cobourg, ON

September 2020

**Prepared for** VANDYK Group of Companies

### TRANS-PLAN Transportation Engineering

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September 29, 2020

Mr. Justin Mamone, BES, MCIP, RPP VANDYK Group of Companies 1944 Fowler Drive Mississauga, ON L5K 0A1

#### Re: <u>Proposed Residential and Commercial Development, Greenly Drive, Cobourg, ON – Traffic</u> <u>Impact Study, Response to Comments</u>

Dear Mr. Mamone,

TRANS-PLAN is pleased to submit this Traffic Impact Study in support of the proposed residential and commercial development located at Greenly Drive in the Town of Cobourg. The proposed development consists of two land parcels, consisting of residential dwellings on the south parcel and a commercial plaza on the north parcel.

The study findings indicate that the surrounding road network can accommodate the traffic generated by the proposed development. The residential parcel is expected to have minimal impacts on the surrounding road network and the future traffic at Greenly Drive at Carlisle Street is acceptable. We recommend the east and west approaches of the private condominium laneway intersection (south of the site) on Greenly Drive to operate as a minor road (stop-controlled); and the north and south approaches operate as a major road (free-flow). Additionally, "no parking" signage should be installed on Greenly Drive between Carlisle Street and the site.

The future commercial site traffic can be accommodated by the proposed driveway and surrounding road network. Traffic activity at Elgin Street West and Rogers Road is expected function acceptably after buildout of the proposed development. No roadway improvements on Elgin Street West (other than the proposed design features) or signal timing adjustments are necessary. Details are provided herein.

Sincerely,

Anil Seegobin, P.Eng. Partner, Engineer

Trans-Plan Transportation Inc. Transportation Consultants



Jonathan Li, B.Eng. Transportation E.I.T.

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#### 1. INTRODUCTION

Trans-Plan has been retained by VANDYK Group of Companies to complete a Traffic Impact Study for a proposed residential and commercial development located at Greenly Drive in the Town of Cobourg. This Traffic Impact Study includes the following study components:

- A review and assessment of the existing road network
- An assessment of boundary roadway operations under future background conditions, including a review of traffic growth, area developments and planned roadway improvements in the study area
- An assessment of site-generated traffic impacts on the study area intersections under future background and total traffic conditions
- Recommendations to mitigate any identified traffic impacts on the boundary roadways, resulting from the proposed development
- The determination of roadway and intersection improvements, as required, to accommodate the proposed development

This study responds to the submission comments received from our previous Traffic Impact Study, dated April 21, 2020, prepared by Trans-Plan.

#### 2. **RESPONSE TO COMMENTS**

Submission comments were received from the Town of Cobourg and Northumberland County in the letter dated August 27, 2020 from the Town's Building & Planning Department. The comments are shown below in bold along with our responses:

#### Town of Cobourg:

#### "Update all traffic counts (dated 2013) and provide analysis; review impacts to Rogers Road/Carlisle Street, Carlisle/Greenly, Wilkins Gate/Carlisle, Wilkins Gate/Elgin Street West and Rogers Road/Elgin Street West including traffic count and LOS review to 5 year future time horizon and include future traffic from re-development of Northumberland Mall."

<u>Response:</u> New (2020) traffic counts were conducted at the study area intersection and driveways for our analysis, including the Carlisle Road at Rogers Road, and Carlisle Road at Wilkins Gate intersections. Details of the new traffic counts are provided in Section 5.2. The future traffic from the Northumberland Mall redevelopment was also included in our analysis, based on its Transportation Impact Study dated July 17<sup>th</sup>, 2019, prepared by LEA Consulting Ltd, to be discussed in Section 6.3.

#### **Northumberland County:**

"Section 3.0 – refers to Husson Site plan – is there a new one under the new consultant's name and are there any changes? – I don't think there are, but just confirming they are relying on the most up to date Site Plan."

<u>Response</u>: The attached site plan showing 72 proposed townhouse units is the most recent version.

"Section 4.3 – Growth Adjustment Factor – Relying on data from LEA consulting from 2019, and shows lower Saturday peak on May 25, 2019 compared to 2013. This doesn't seem correct. Elgin Street construction may have been started at this time and it was also a long weekend, so that could be the



## reason for less traffic. Some increase in the Saturday peak hour should be applied. The traffic counts on Elgin at Burnham that the County completed were 16,200 in 2013 and 17,200 in 2018 so there's definitely an increase in traffic, and I would expect an increase in turning movements at this intersection."

<u>Response:</u> New (2020) traffic counts for existing conditions were conducted, but LEA's counts were referenced to determine if adjustment due to the COVID-19 pandemic was required. We note that Victoria Day was on Monday May 20, 2019 and thus LEA's Saturday count did not fall on the long weekend. Also, based on the "Public Notice: 2019 Road Construction Program" from the Northumberland County website, the 2019 construction on County Road 2 did not affected the study area. Details of the updated traffic counts and pre-pandemic vs. pandemic volume comparisons are provided in Section 5.2 and 5.3.

### "Page 9 – Elgin Street W and Canadian Tire Driveway – will be LOS F in future conditions, provide how you propose to get vehicles to use Elgin and Rogers instead of this entrance? Would require vehicles to drive through parking lot to get to Rogers Road. Does not seem like a viable solution."

<u>Response:</u> While higher delays are expected at the driveway, it is typical of driveway connections to arterial roads. We recommend the driveway to remain as is (i.e. no improvements) because improvements such as signalization would not be warranted based on OTM Book 12 and TAC 2017 recommendations. As delays increase, drivers are likely to use the available alternative routes such as the Rogers Road signal despite the detour, which is acceptable.

### "Page 10 – in paragraph for future condition – horizon year 2025 says LOS of 0.67 and should be LOS B, based on the table."

<u>Response</u>: The discrepancy is corrected and an updated capacity analysis based on our new (2020) counts is discussed in Section 9.

#### 3. STUDY AREA CONTEXT

#### 3.1 Site Location

The subject site, shown in Figure 1, is a vacant parcel of land located along the south side of Elgin Street West. It is located approximately 300m west of the Elgin Street West and Rogers Road major intersection. The site is bounded by private residential laneways and local municipal roadways to the south. Greenly Drive currently forms a termination point at the southern site boundary.

The surrounding land uses mainly consist of low-density residential dwellings, located south and west of the site. Adjacent east of the site is a Canadian Tire retail (commercial) store. The lands north of the site, opposite from Elgin Street West, are vacant.

#### 3.2 Road Network

The study area roadways in the immediate vicinity of the site are described as follows:

**Elgin Street West**, also known as **County Road 2**, is an arterial road under the jurisdiction of Northumberland County. It runs in an east-west direction and has four travel lanes: two in each direction. The posted speed limit within the vicinity of the study area is 50km/h.

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Wilkins Gate, Greenly Drive, and Carlisle Street are local roadways under the jurisdiction of the Town of Cobourg. Wilkins Gate and Greenly Drive run in north-south directions and Carlisle Street runs in an east-west direction. Both roadways have two travel lanes: one in each direction. The speed limit is not posted and is assumed to be 50km/h.

**Rogers Road** is a local roadway under the jurisdiction of the Town of Cobourg. It runs in a north-south direction and has two travel lanes: one in each direction, plus a two-way centre left turn lane. The speed limit is not posted and is assumed to be 50km/h.

#### 4. PROPOSED DEVELOPMENT

The site plans, prepared by Husson Engineering + Management, are shown in Figure 2 and Figure 3. The proposed development consists of two land parcels: one for low-density residential dwellings and one for a commercial plaza. The proposed commercial plaza is located on the north parcel, along Elgin Road West, and the proposed residential dwellings are on the south parcel.

The development statistics are as follows:

- 72 residential dwelling units, provided by 13 townhouse buildings and 5 semi-detached buildings
- Three (3) commercial buildings, as follows:
  - Building A (Retail Use): 2,900 sq.ft. of GFA
  - Building B (Retail Use): 6,300 sq.ft. of GFA
  - Building C (Fast-Food Restaurant with Drive-Thru): 2,200 sq.ft. of GFA
- One (1) new municipal roadway, known as Cowin Circle, that is designed as a ring road

The residential dwelling driveways are proposed on Cowin Circle. Greenly Drive is proposed to be extended beyond its existing northerly termination point to connect with Cowin Circle. The proposed commercial plaza is accessed via two driveways: one proposed right-in / right-out ("RIRO") access on Elgin Street West and an internal connection with the adjacent Canadian Tire property.

An auxiliary eastbound right turn lane is proposed on Elgin Street West to serve the proposed RIRO driveway and the adjacent Canadian Tire driveway. The auxiliary lane will begin prior to the RIRO driveway and terminate at the Canadian Tire driveway.

The laneway connecting the residential and commercial parcels (shown as "access lane" on the site plan) is intended to be an emergency access only and regular vehicular traffic is not permitted. It can be utilized as a pedestrian connection, however.

#### 5. EXISTING CONDITIONS

#### 5.1 Study Area Intersections and Driveways

The study area intersections and driveways reviewed in our analysis are as follows:

- 1. Elgin Street West and Wilkins Gate (unsignalized / stop-controlled intersection)
- 2. Elgin Street West and Proposed Commercial Site Driveway (unsignalized / stop-controlled driveway)
- 3. Elgin Street West and Canadian Tire Driveway (unsignalized / stop-controlled driveway)
- 4. Elgin Street West and Rogers Road (signalized intersection)



- 5. Carlisle Street and Rogers Road (unsignalized / stop-controlled intersection)
- 6. Carlisle Street and Greenly Drive / Cowin Circle (unsignalized / stop-controlled driveway)
- 7. Carlisle Street and Wilkins Gate (unsignalized / stop-controlled intersection)

The existing roadway characteristics of the study area are shown in Figure 4, and were confirmed based on a site visit conducted by Trans-Plan on Wednesday March 18, 2020.

#### 5.2 Traffic Counts

Trans-Plan conducted new (2020) turning movement counts (TMC) at the study area intersections and driveways, during the Phase 3 Provincial Reopening of the current COVID-19 pandemic. The count dates, times and peak hours are shown in Table 1. The detailed TMC data is provided in Appendix A.

Location	Count Date	Count Hours	Peak Hours
Intersections			
Elgin Street West	Wednesday September 16, 2020	7:00am – 9:30am 3:00pm – 6:00pm	8:15am – 9:15am 4:00pm – 5:00pm
and Wilkins Gate	Saturday September 19, 2020	11:00am – 3:00pm	1:00pm – 2:00pm
Elgin Street West	Wednesday September 16, 2020	7:00am – 9:30am 3:00pm – 6:00pm	8:30am – 9:30am 3:15pm – 4:15pm
and Rogers Road	Saturday September 19, 2020	11:00am – 3:00pm	12:00pm – 1:00pm
Carlisle Street and	Wednesday September 16, 2020	7:00am – 9:30am 3:00pm – 6:00pm	8:00am – 9:00am 4:00pm – 5:00pm
Rogers Road	Saturday September 19, 2020	11:00am – 3:00pm	12:30pm – 1:30pm
Carlisle Street and	Wednesday September 16, 2020	7:00am – 9:30am 3:00pm – 6:00pm	8:00am – 9:00am 4:00pm – 5:00pm
Greenly Drive	Saturday September 19, 2020	11:00am – 3:00pm	12:45pm – 1:45pm
Carlisle Street and	Wednesday September 16, 2020	7:00am – 9:30am 3:00pm – 6:00pm	7:30am – 8:30am 3:30pm – 4:30pm
Wilkins Gate	Saturday September 19, 2020	11:00am – 3:00pm	11:15pm – 12:15pm
Driveways			
Elgin Street West and Canadian Tire	Wednesday September 16, 2020	7:00am – 9:30am 3:00pm – 6:00pm	8:15am – 9:15am 3:00am – 4:00pm
Driveway	Saturday September 26, 2020	11:00am – 3:00pm	1:15pm – 2:15pm

Table 1 – Intersection Turning Movement Count Details

The surveyed existing traffic volumes, for the weekday AM, PM, and Saturday peak hours, are shown in Figure 5.

#### 5.3 Traffic Adjustment for Pandemic

Since our 2020 TMC volumes may be affected by the pandemic, adjustment factors to scale-up the surveyed volumes were evaluated, based on past comparisons of pre-pandemic vs. pandemic TMCs. From



our experience, there is a wide variance depending on the municipality, as demonstrated by the comparisons shown in Table 2.

Municipality &	Peak	Traffic Volumes,	, All Movements	% Difference
Location	Hour	Pre-pandemic	Pandemic	% Difference
City of Richmond Hill,	AM	2112 (1)	1320 <sup>(2)</sup>	Pre-pandemic count is 60% higher
Yonge Street at Bostwick Crescent	PM	2452 <sup>(1)</sup>	2060 (2)	Pre-pandemic count is 19% higher
City of Hamilton,	AM	871 <sup>(3)</sup>	736 <sup>(4)</sup>	Pre-pandemic count is 18% higher
Barton Street East at Chapple Street	PM	1243 <sup>(3)</sup>	1275 <sup>(4)</sup>	Pre-pandemic count is 3% lower
Town of Cobourg,	PM	1768 <sup>(5)</sup>	1556 <sup>(6)</sup>	Pre-pandemic count is 14% higher
Elgin Street West at Rogers Road	SAT	1617 <sup>(5)</sup>	1801 <sup>(6)</sup>	Pre-pandemic count is 10% lower
Town of Cobourg,	PM	718 <sup>(5)</sup>	561 <sup>(6)</sup>	Pre-pandemic count is 28% higher
Carlisle Street at Rogers Road	SAT	560 <sup>(5)</sup>	593 <sup>(6)</sup>	Pre-pandemic count is 6% lower

Table 2 – Pre-Pandemic vs. Pandemic Traffic Volumes

Sources:

- (2) TMC by Trans-Plan, dated August 11, 2020
- (3) TMC from City of Hamilton, dated September 25, 2018
- (4) TMC by Trans-Plan, dated May 7, 2020
- (5) TMCs by LEA Consulting Ltd., dated May 24 & 25, 2019
- (6) TMCs by Trans-Plan, dated September 16 & 19, 2020

Based on the above comparisons, the following adjustment factors were applied:

- Weekday AM Peak Hour: An adjustment factor of +39% was applied to the Elgin Street West corridor, taken at the average percent difference during the AM from the City of Richmond Hill and City of Hamilton.
- Weekday PM Peak Hour: Adjustment factors of +14% and +28% were applied to the Elgin Street West and Carlisle Street corridors, respectively, based on the comparisons between our pandemic TMCs and LEA's pre-pandemic TMCs (from TIS for Northumberland Mall dated July 17<sup>th</sup>, 2019, prepared by LEA Consulting Ltd.) during the PM.
- **Saturday Peak Hour:** No adjustment factor was applied for the SAT peak hour because the prepandemic volumes are lower than the pandemic volumes.

While there were concerns regarding LEA's pre-pandemic TMC on Saturday May 25, 2019, we note that Victoria Day was on Monday May 20, 2019 and thus it did not fall on the long weekend. Also, based on review of "Public Notice: 2019 Road Construction Program" from the Northumberland County website, the County Road 2 construction in 2019 was between Colton Street and Union Road (approximately 28km east of the site) which does not impact the study area. Therefore, the volumes should be valid.

The adjusted existing traffic volumes, for the weekday AM, PM, and SAT peak hours, are shown in Figure 6 and were balanced (increased) for corridor volume consistency, where appropriate.

<sup>(1)</sup> TMC from York Region, dated February 4, 2020



#### 5.4 Signal Timing Plans

The signal timing plan for Elgin Street West and Rogers Road was obtained from Northumberland County.

#### 5.5 Peak Hour Factors

The peak hour factors (PHF) are based on Trans-Plan's 2020 TMCs at the study area intersections and driveways, and are shown below in Table 3. The PHF of the proposed commercial site driveway was assumed to be 0.92.

No.	Study Area Intersections and Driveways	Weekday AM Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour
1	Elgin Street West and Wilkins Gate	0.92	0.98	0.88
2	Elgin Street West and Proposed Commercial Site Driveway	0.92	0.92	0.92
3	Elgin Street West and Canadian Tire Driveway	0.95	0.90	0.99
4	Elgin Street West and Rogers Road	0.89	0.91	0.98
5	Carlisle Street and Rogers Road	0.96	0.92	0.92
6	Carlisle Street and Greenly Drive / Cowin Circle	0.88	0.79	0.93
7	Carlisle Street and Wilkins Gate	0.92	0.91	0.82

#### Table 3 – Peak Hour Factors, Study Area Intersections and Driveways

#### 6. FUTURE BACKGROUND CONDITIONS

The future study area roadway characteristics, with the inclusion of the proposed auxiliary lane on Elgin Street West, is shown in Figure 7. The future background traffic volumes, for the weekday AM and PM and SAT peak hours, are shown in Figure 8 and were determined based on review of the following:

- Horizon Year(s)
- Background Growth Rate along the Elgin Street West Corridor
- Background Developments within or nearby the study area
- Planned Roadway Improvements within the study area

#### 6.1 Horizon Years

A 5-year horizon period (i.e. year 2025) was utilized for our analysis of future traffic conditions.

#### 6.2 Background Growth Rate

The County Road 2 Class EA for Hamilton Road to William Street / Burnham Street ("EA Study"), dated May 2016 and prepared by HDR Inc., indicated a growth rate of 1.8 percent per annum for the Elgin Street West corridor. An excerpt of the EA Study is provided in Appendix B. The growth rate (compounded annually) was applied to the Elgin Street West corridor in our analysis of future conditions.



#### 6.3 Background Developments

To address the Town's comments, the future traffic of the proposed commercial addition and driveway relocation at Northumberland Mall is included into our analysis, based on trips from its Transportation Impact Study (TIS), dated July 17<sup>th</sup>, 2019; prepared by LEA Consulting Ltd. The background trips affecting the study area intersections and LEA's TIS excerpts are provided in Appendix C.

#### 6.4 Roadway Improvements

The Elgin Road West corridor (County Road 2), within the study area and beyond, is planned to undergo roadway improvements. The construction timeline is unavailable, based on review of the Northumberland County website, but the roadway improvements were included into our analysis of future conditions. The conceptual plan and profile drawings provided in the County Road 2 Class EA for Hamilton Road to William Street / Burnham Street ("EA Study"), dated May 2016 and prepared by HDR Inc., were reviewed. The drawing excerpts are provided in Appendix B.

Based on the drawings in the EA Study, in contrast to the existing roadway characteristics, the following design features are planned:

- Elgin Street West and Wilkins Gate: The addition of an exclusive eastbound right-turn lane, compared to a shared through / right turn lane in existing conditions.
- Elgin Street West beyond 75m west of Wilkins Gate: An additional through lane for each direction (two through lanes total per direction), compared to the one through lane per direction in existing conditions.

As shown in the site plan, an auxiliary eastbound right-turn lane is also proposed on Elgin Street West at the proposed commercial site driveway and the adjacent Canadian Tire driveway. The future study area roadway characteristics are shown in Figure 7 and were included into our analysis of future traffic conditions.

#### 7. SITE TRAFFIC

#### 7.1 Trip Generation

The site trips for the proposed development were generated using the Institute of Transportation Engineers ("ITE") Trip Generation manuals, 10<sup>th</sup> Edition. The site trip generation using the applicable ITE Land Use Codes ("LUC") are shown in Table 4.



Land Use	Size	Wee	kday AN Hour	1 Peak	Wee	kday PM Hour	Peak	SA	T Peak H	our
		In	Out	Total	In	Out	Total	In	Out	Total
				ential Pa		Out	TOtal		Out	TOtal
Multifamily	72 units		Reside							
Housing	Distribution	23%	77%	100%	63%	37%	100%	50% <sup>(1)</sup>	50% <sup>(1)</sup>	100%
(Low-Rise)	Equation			X) – 0.51					.08(X) – :	
LUC 220	Rate	0.12	0.37	0.49	0.38	0.23	0.61	0.31	0.32	0.63
	Residential Trips	8	27	35	28	16	44	22	23	45
	•		Comm	ercial Pa	rcel					
Shopping	9.2 x 1,000 sq.ft.									
Centre	Distribution	54%	46%	100%	50%	50%	100%	52%	48%	100%
LUC 820	Equation	T = 2.	76(X) + 1	77.28 <sup>(2)</sup>	Ln(T) =	0.72Ln(X	() + 3.02	Ln(T) =	0.79Ln(X	() + 2.79
(Buildings A	Rate	6.05	5.15	11.20	5.49	5.49	10.98	5.31	4.91	10.22
& B)	Total Trips	56	47	103	50	51	101	49	45	94
	Trip Reduction (5%)	-3	-2	-4	-2	-3	-4	-3	-2	-5
	Reduced Trips	53	45	98	48	48	96	46	43	89
	Pass-by Trips (25%)	12	12	24	12	12	24	11	11	22
	New Trips	41	33	74	36	36	72	35	32	67
Fast-Food	2.2 x 1,000 sq.ft.									
with Drive-	Distribution	51%	49%	100%	52%	48%	100%	51%	49%	100%
Thru	Equation	Not Given		1	Not Give	n	1	Not Give	n	
LUC 934	Rate	20.50	19.69	40.19	16.99			27.98	26.88	54.86
(Building C)	Total Trips	45	43	88	37	35	72	62	59	121
	Trip Reduction (5%)	-2	-2	-4	-2	-2	-4	-3	-3	-6
	Reduced Trips	43	41	84	35	33	68	59	56	115
	Pass-by Trips (50%)	21	21	42	17	17	34	29	29	58
	New Trips	22	20	42	18	16	34	30	27	57
Total New	Commercial Trips	63	53	116	54	52	106	65	59	124
Total Pass-l	by Commercial Trips	33	33	66	29	29	58	40	40	80

#### Table 4 – Site Trip Generation, Residential and Commercial Parcels

Note:

(1) Directional distribution was unavailable in the ITE Manual and was assumed

(2) Based on the equation provided for the "Peak Hour of Generator"

The residential parcel is expected to generate approximately 35, 44 and 45 two-way trips in the weekday AM, PM, and SAT peak hours, respectively, as shown in Figure 9.

A minor trip reduction of 5 percent was applied due to internal interactions with the proposed residential dwelling units and the adjacent commercial properties. The commercial parcel is expected to generate approximately 116, 106 and 124 new two-way trips in the weekday AM and PM and SAT peak hours, respectively, as shown in Figure 10.



Pass-by trip percentages of 25 percent and 50 percent, respectively, were applied to LUC 820 (i.e. Buildings A & B) and LUC 934 (i.e. Building C). The percentages were approximated based on the pass-by trip data in the ITE Trip Generation Handbook, 3<sup>rd</sup> Edition. The commercial parcel is expected to generate approximately 66, 58 and 80 two-way pass-by trips in the weekday AM and PM and SAT peak hours, respectively, as shown in Figure 11.

#### 7.2 Trip Distribution and Assignment

The residential and commercial site trips were distributed to the surrounding road network based on existing travel patterns. Most traffic from the proposed residential dwellings are expected to access to / from the east leg of the intersection, based on existing turning volumes at Greenly Drive and Carlisle Street.

For the commercial parcel, a portion of the trips were distributed to the adjacent Canadian Tire driveways, due to the proposed internal connection. The existing directional split on Elgin Street West at the proposed commercial site driveway is approximately 50% eastbound / 50% westbound during the weekday AM and PM peak hours, and approximately 53% eastbound / 47% westbound during the SAT peak hour.

#### 8. FUTURE TOTAL TRAFFIC CONDITIONS

The future 2025 total traffic volumes for the weekday AM, PM, and SAT peak hours, shown in Figure 12, were obtained by adding the site trips and pass-by trips to the future 2025 background volumes.

#### 9. CAPACITY ANALYSIS

#### 9.1 Analysis Methodology

A capacity analysis was performed for the study area intersections and driveways using Synchro 10 analysis software. The following traffic conditions, during the weekday AM, PM, and SAT peak hours, were analyzed:

- Existing Traffic Conditions (2020)
- Future Background Traffic Conditions (2025)
- Future Total Traffic Conditions (2025)

According to the Northumberland County Transportation Master Plan (TMP), dated March 2017, a v/c ratio of 0.7 or LOS of D is generally considered as the threshold for traffic congestion. The congested movements, if any, are identified.

#### 9.2 Analysis Results

The detailed capacity analysis results are shown in Table 5 and the congested movements (if any) are noted below. The Synchro 10 output sheets and level of service (LOS) definitions are provided in Appendix D and Appendix E, respectively.



The results for each study area intersection and driveway are summarized as follows:

#### Elgin Street West & Wilkins Gate

#### **Existing Conditions**

The northbound left movement (stop-controlled approach) currently operates acceptably with a LOS of C or better and delays of up to 20 seconds, during the peak hours.

#### Future Conditions – Horizon Year 2025

The northbound left movement (stop-controlled approach) is expected to continue operating acceptably with a LOS of C and delays of up to 24 seconds under future total conditions. The Elgin Street West and New Amherst Boulevard / Loveshin Road traffic signal can provide a more efficient alternative route for left turn vehicles as the delays increase.

#### Elgin Street West & Proposed Commercial Site Driveway

#### Future Conditions – Horizon Year 2025

The proposed commercial site driveway is expected to operate with a good LOS of B and minimal delays of up to 11 seconds for outbound vehicles.

#### Elgin Street West & Canadian Tire Driveway

#### Existing Conditions

The northbound left movement (outbound approach) currently operates acceptably with a LOS of C and delays up to 23 seconds, during the weekday AM and SAT peak hours. It operates with a LOS of D and a delay of 28 seconds, during the weekday PM peak hour.

#### Future Conditions – Horizon Year 2025

Under future total conditions, the northbound left movement (outbound approach) is expected to operate acceptably with a LOS of C during the weekday AM peak hour. It is expected to operate with LOS's of E and F, during the SAT and weekday PM peak hours, respectively, and delays of 42 and 56 seconds. While higher delays are expected, it is typical of unsignalized driveway connections to arterial roadways.

We recommend leaving the driveway as is (i.e. no improvements) because improvements such as signalization would not be warranted based on OTM Book 12 and TAC 2017 recommendations. OTM Book 12 states that the minimum distance between signalized intersections for roads with a posted speed limit of 60km/h (or less) is 215m, whereas the distance between the driveway and the Elgin Street West at Rogers Road signal is approximately 195m. TAC 2017 also recommends spacing of 400m between signals for arterial roads with a speed of 50km/h. As delays increase, drivers are likely to use the available alternative routes such as the Rogers Road signal despite the detour, which is acceptable.

#### Elgin Street West & Rogers Road

#### **Existing Conditions**

The overall intersection currently operates acceptably during the peak hours, with an overall LOS of A and v/c ratios of up to 0.56. All individual movements operate with reserve capacity.



#### Future Conditions – Horizon Year 2025

The intersection is expected to continue operating acceptably in the weekday AM, PM, and SAT peak hours, under future total traffic conditions. In the weekday PM and SAT peak hours, the overall intersection is expected to operate with a v/c ratio of 0.65 and the westbound left turn movement is expected to operate with a v/c ratio of 0.70.

While the movement is considered congested according to the Northumberland County TMP, a v/c ratio of 0.70 is generally acceptable and well under the critical threshold of other municipalities and counties (e.g. v/c ratio of 0.85).

#### Carlisle Street & Rogers Road

#### Existing Conditions

The intersection currently operates acceptably with a LOS of B or better across all movements, during the weekday AM, PM, and SAT peak hours.

#### Future Conditions – Horizon Year 2025

The intersection is expected to continue operating acceptably with a LOS of C or better, and delays of up to 16 seconds across all movements, during the weekday AM, PM, and SAT peak hours.

#### Carlisle Street & Greenly Drive / Cowin Circle

#### Existing Conditions

The intersection currently operates well with a LOS of A and minimal delays across all movements, during the weekday AM, PM, and SAT peak hours.

#### Future Conditions – Horizon Year 2025

With the inclusion of future site traffic, the intersection is expected to continue operating with minimal delays and a LOS of A for all movements, during the peak hours. Overall, the proposed townhouses are expected to have minimal traffic impacts on the intersection and the surrounding road network.

#### **Carlisle Street & Wilkins Gate**

#### **Existing Conditions**

The intersection currently operates well with a LOS of A and minimal delays across all movements, during the weekday AM, PM, and SAT peak hours.

#### *Future Conditions – Horizon Year 2025*

The intersection is expected to continue operating with minimal delays and a LOS of A for all movements, during the peak hours.

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Table 5 - Capacity Analysis Results, Existing and Future Traffic Conditions

TRANS-PLAN



#### 10. TRANSPORTATION IMPROVEMENT RECOMMENDATIONS

#### 10.1 Stop Control of Private Condominium Laneway Approaches

We recommend the east and west approaches of the private condominium laneway intersection with Greenly Drive (located between the southerly site boundary and Carlisle Street) to operate as a minor street (stop-controlled). The north and south approaches at the intersection should operate as the major street (free-flow).

#### 10.2 No Parking Signage on Greenly Avenue

Concerns were expressed from the local community in the letter dated July 30, 2020, regarding the lack of a second exit for fire trucks / emergency vehicles from the private condominium laneway. As a result, we recommend "no parking" signage to be installed along Greenly Drive, between the site and Carlisle Street, to prevent potential obstructions if truck reverse movements are required from the laneway.

#### 10.3 Concerns of Increased Traffic from Local Community

Another concern expressed from the local community was regarding increased traffic on Greenly Drive and Carlisle Street due to the proposed development. The letter suggested that a direct connection from the proposed townhouses to Elgin Street West would be beneficial.

However, we do not recommend a new roadway connection because the new intersection on Elgin Street West would not meet the minimum spacing requirements in the Transportation Association of Canada (TAC) Geometric Design Guide 2017, due to the proximity to Wilkins Gate and the adjacent Canadian Tire driveway. The lack of spacing would result in deficient storage and deceleration distance for left turning vehicles from Elgin Street West. The proposed commercial site driveway is acceptable because it is restricted to right-in / right-out movements, instead of full-moves.

As per TAC, the typical minimum intersection spacing on minor arterial roads is 200m, generally only applicable in areas of intense existing development or restrictive physical controls where feasible alternative do not exist. Major arterials would require an even greater distance. Elgin Street West is identified as a County Arterial Road in the Northumberland County Official Plan (OP) and better matches the characteristics of a major arterial. The distance from the new potential road to Wilkins Gate is approximately 190m (assuming an extension of Greenly Drive) which is not adequate for a major arterial. The existing Canadian Tire full-moves driveway, with greater traffic volumes than Wilkins Gate, is also approximately 80m east of the new potential road, so it is not recommended to shift the new potential intersection further east to meet the requirement.

We also do not recommend a potential vehicular connection between the commercial and residential parcels because the connection would increase traffic on Greenly Drive rather than decrease it. Because the commercial parcel generates about 4 to 5 times more traffic than the proposed townhouse units (new and pass-by trips combined, see Section 7.1), a vehicular connection would attract traffic from south of the site. The current proposal of separating the commercial and residential parcels restricts the high commercial traffic volumes to Elgin Street West, minimizing impacts to Greenly Drive and Carlisle Street.

Lastly, our capacity analysis (from Section 9) indicates that the Carlisle Street and Greenly Drive intersection is expected to operate well (LOS of A) under future conditions, with minimal delays for all



approaches. We conclude that the future traffic volumes on Greenly Drive and Carlisle Street with the proposed townhouses are acceptable for the local residential roadways.

#### 11. SUMMARY AND CONCLUSIONS

#### 11.1 Summary

This Traffic Impact Study prepared in support of the proposed residential and commercial development at Greenly Drive, Cobourg, is summarized as follows:

#### Proposed Development & Site Statistics

- Two (2) land parcels are proposed; the south parcel consists of low-density residential dwellings and the north parcel consists of a commercial plaza.
- 72 residential dwelling units, provided by 13 townhouse buildings and 5 semi-detached buildings, are proposed on the residential parcel.
- Three (3) commercial buildings are proposed on the commercial parcel, as follows:
  - Building A (Retail Use): 2,900 sq.ft. of GFA
  - Building B (Retail Use): 6,300 sq.ft. of GFA
  - Building C (Fast-Food Restaurant with Drive-Thru): 2,200 sq.ft. of GFA
- One (1) new municipal roadway, known as Cowin Circle, is designed as a ring road on the residential parcel. The dwelling unit driveways are proposed on Cowin Circle. The new municipal roadway is proposed to connect with the existing northerly termination point of Greenly Drive.
- One (1) right-in / right-out driveway is proposed on Elgin Street West to provide vehicular access to the proposed commercial plaza. An internal connection is also proposed to connect the commercial plaza with the adjacent Canadian Tire property.
- An auxiliary eastbound right turn lane is proposed on Elgin Street West to serve the proposed RIRO driveway and the adjacent Canadian Tire driveway. The auxiliary lane will begin prior to the RIRO driveway and terminate at the Canadian Tire driveway.

#### Traffic Impact Study

- New (2020) study area TMCs were conducted at the study area intersections and driveways, during the Phase 3 Provincial Reopening of the current COVID-19 pandemic. Adjustment factors were applied to scale up the surveyed volumes, where appropriate.
- A background growth rate of 1.8 percent per annum was applied to the Elgin Street West (also known as County Road 2) corridor, based on review of the County Road 2 Class EA from Hamilton Road to William Street / Burnham Street.
- The future traffic from the proposed Northumberland Mall redevelopment was included into our analysis as a background development.
- The planned roadway improvements noted in the County Road 2 Class EA for Hamilton Road to William Street / Burnham Street were incorporated into the analysis of future traffic conditions. The proposed eastbound right-turn auxiliary lane at the proposed commercial site driveway and the adjacent Canadian Tire driveway was also included.



- The site trips were generated utilizing the formulas in the Institute of Transportation Engineers (ITE) Trip Generation manuals, 10<sup>th</sup> Edition. Pass-by trip adjustments were applied to the proposed commercial buildings. The trips were distributed to the surrounding road network based on existing travel patterns.
- The proposed residential dwellings are expected to have minimal traffic impacts on the surrounding road network. The Carlisle Street and Greenly Drive intersection is expected to operate with minimal delays under future traffic conditions.
- The proposed right-in / right-out commercial site driveway is expected to operate with minimal delays under future traffic conditions.
- The Elgin Street West and Rogers Road intersection is expected to operate acceptably under future traffic conditions. The westbound left movement is expected to approach the threshold for congestion (i.e. v/c ratio of 0.70) in the weekday PM and SAT peak hours. However, a v/c ratio of 0.70 is generally acceptable and well under the critical threshold in other municipalities and counties (i.e. a v/c ratio of 0.85).
- The northbound left movement (outbound approach) at the Elgin Street West and Canadian Tire driveway is expected to operate with higher delays in the weekday PM and SAT peak hours, but it is typical of full-moves driveway connections to arterial roadways. We recommend the driveway to remain as is (i.e. no improvements) because improvements such as signalization would not be warranted, due to signal spacing requirements not being met. As delays increase, drivers are likely to use available alternative routes, which is acceptable.
- It is recommended that the east and west approaches of the Greenly Drive and private condominium laneway (south of the site) operate as a minor street (stop-controlled).
- "No parking" signage is recommended on Greenly Drive, to prevent obstructions if fire trucks / emergency vehicles are required to reverse from the private condominium laneways.
- A new roadway connection from the residential parcel to Elgin Street West is not recommended, because the new intersection on Elgin Street West would not meet the TAC 2017 spacing requirements.

#### 11.2 Conclusions

Overall, the surrounding road network can accommodate the additional site traffic under future traffic conditions. We recommend the east and west approaches of the Greenly Drive and private condominium laneway intersection (south of the site) to operate as a minor street (stop-controlled) in the future, and "no parking" signage to be installed on Greenly Drive between the site and Carlisle Street.

Respectfully submitted,

Anil Seegobin, P.Eng. Partner, Engineer

Trans-Plan Transportation Inc. Transportation Consultants

Jonathan Li, B.Eng. Transportation E.I.T.

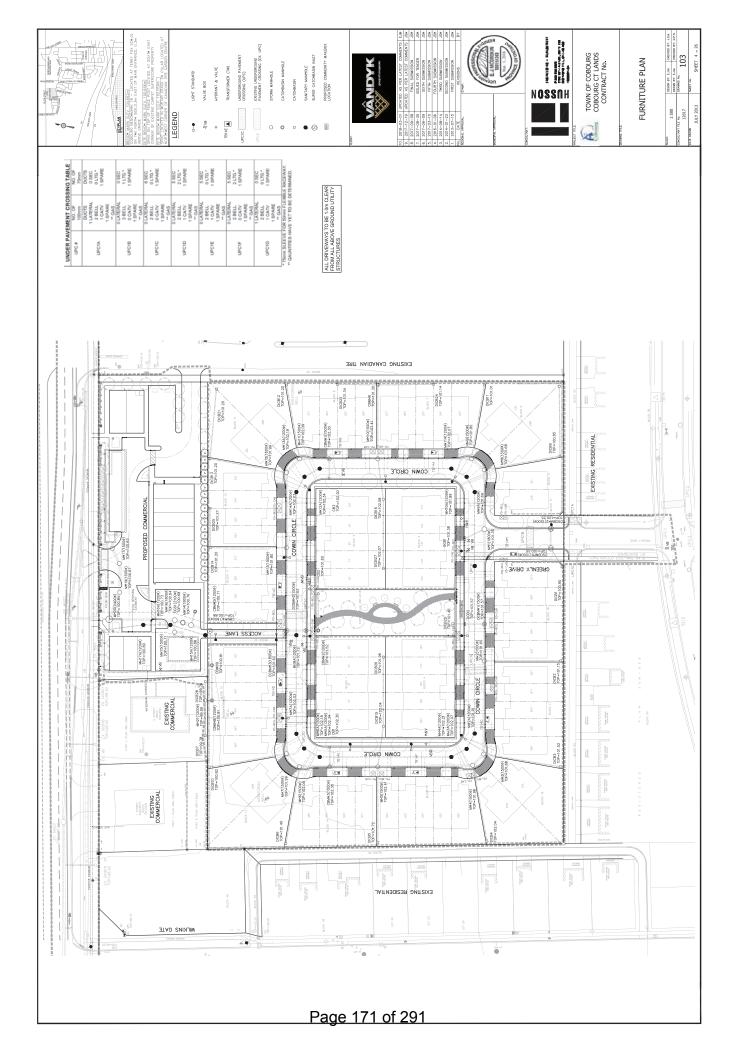


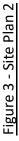
Traffic Impact Study Proposed Residential and Commercial Development Greenly Drive, Cobourg, ON

#### Figure 1 – Site Location



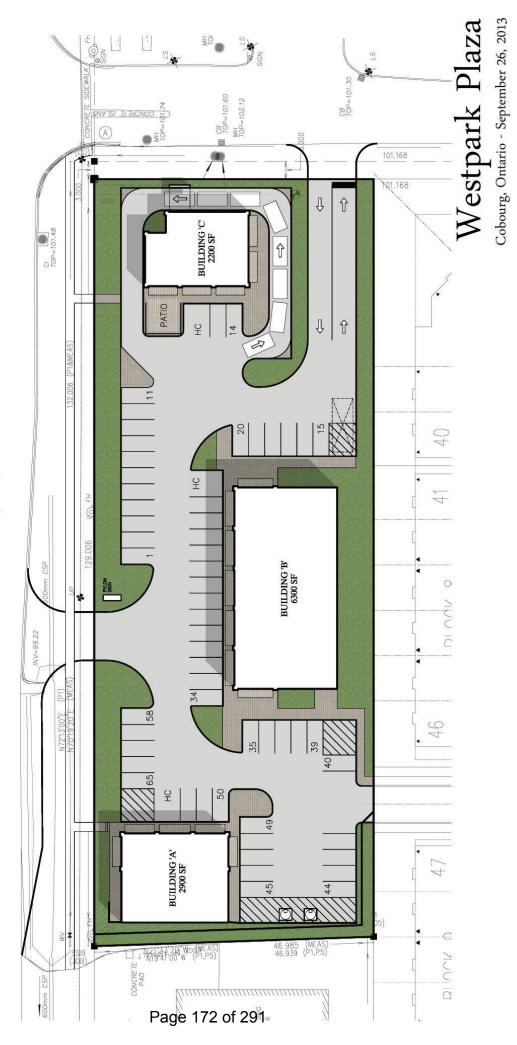
Source: Google Earth







ELGIN STREET

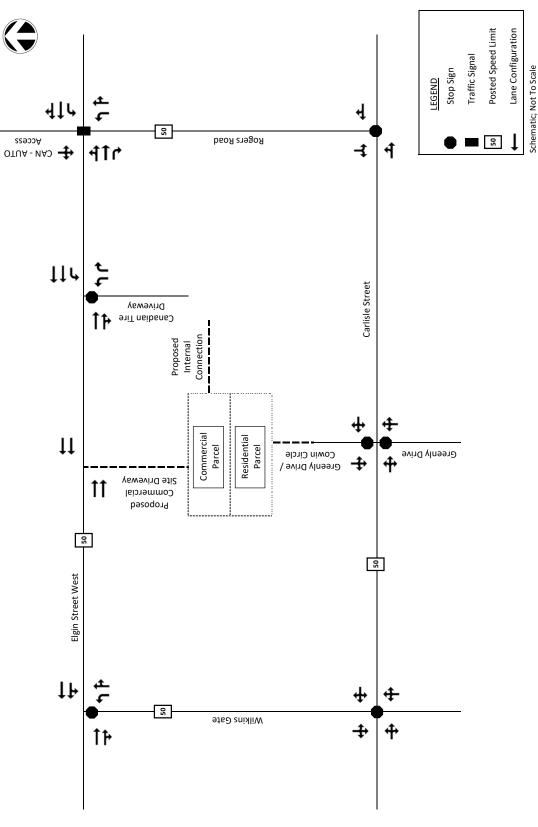






Proposed Residential and Commercial Development Greenly Drive, Cobourg, ON

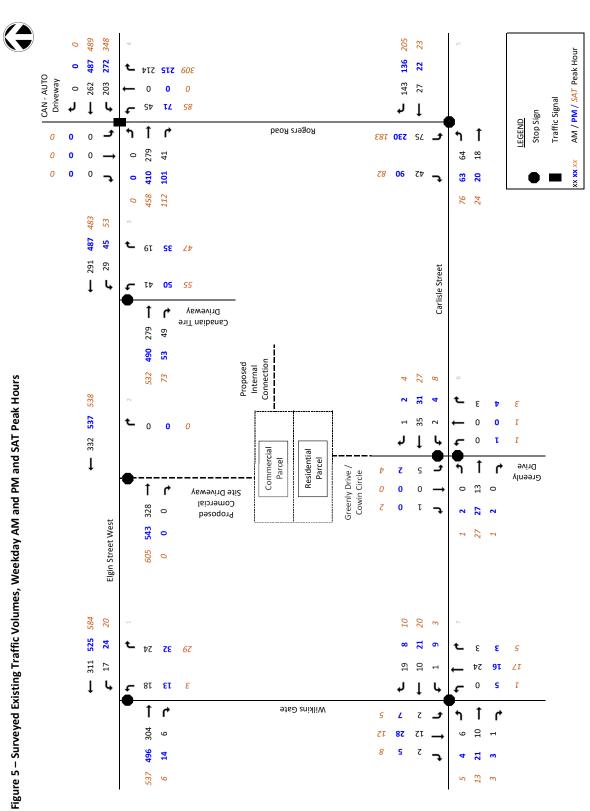
Figure 4 – Existing Study Area Roadway Characteristics





Proposed Residential and Commercial Development Greenly Drive, Cobourg, ON

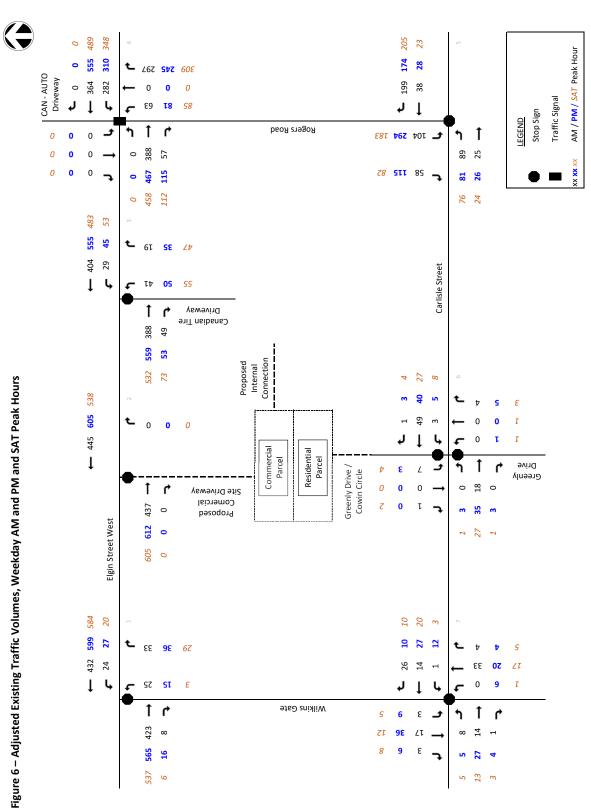
Figure 5 – Surveyed Existing Traffic Volumes, Weekday AM and PM and SAT Peak Hours





Proposed Residential and Commercial Development Greenly Drive, Cobourg, ON

Figure 6 – Adjusted Existing Traffic Volumes, Weekday AM and PM and SAT Peak Hours

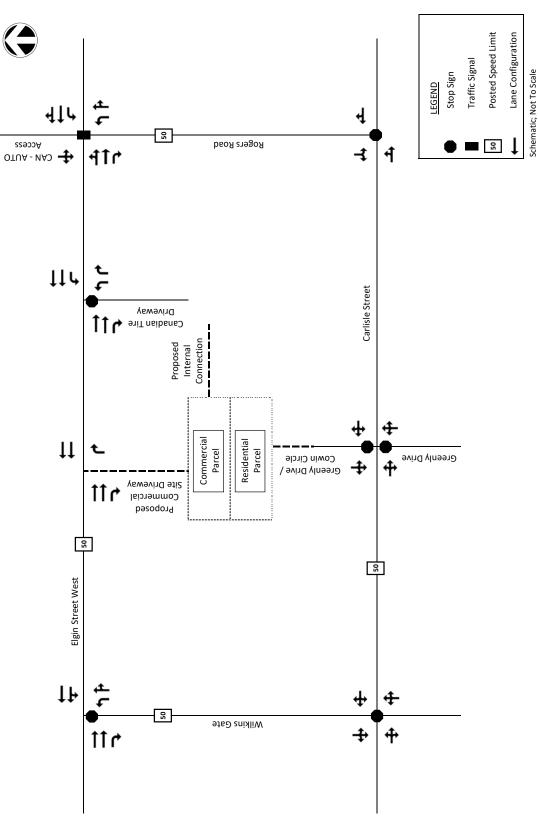






Proposed Residential and Commercial Development Greenly Drive, Cobourg, ON

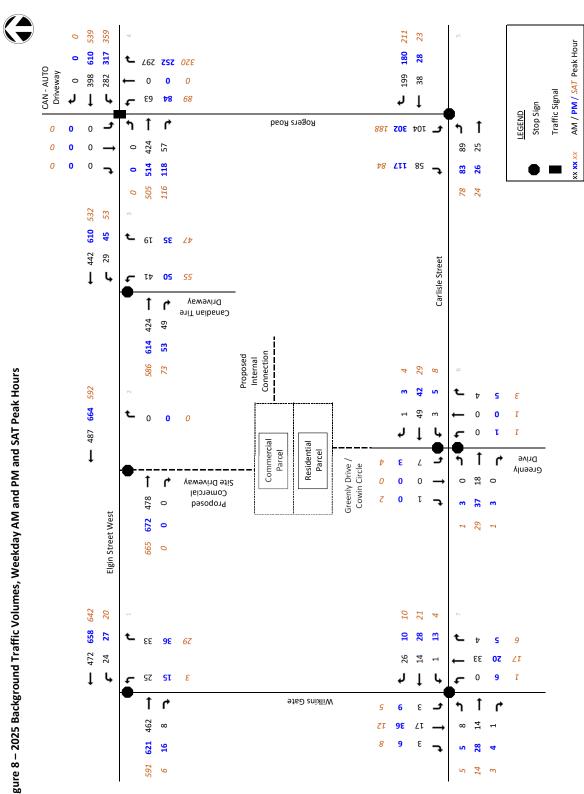
Figure 7 – Future Study Area Roadway Characteristics





Proposed Residential and Commercial Development Greenly Drive, Cobourg, ON

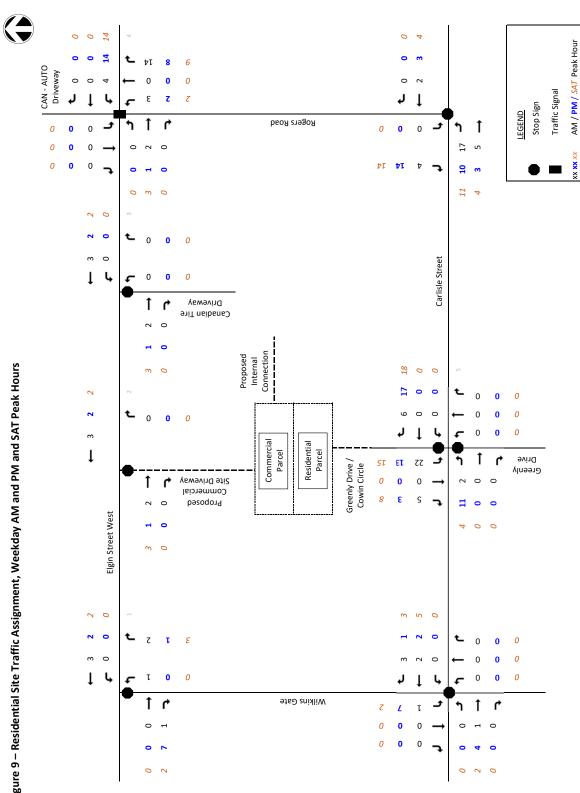
Figure 8 – 2025 Background Traffic Volumes, Weekday AM and PM and SAT Peak Hours





Proposed Residential and Commercial Development Greenly Drive, Cobourg, ON

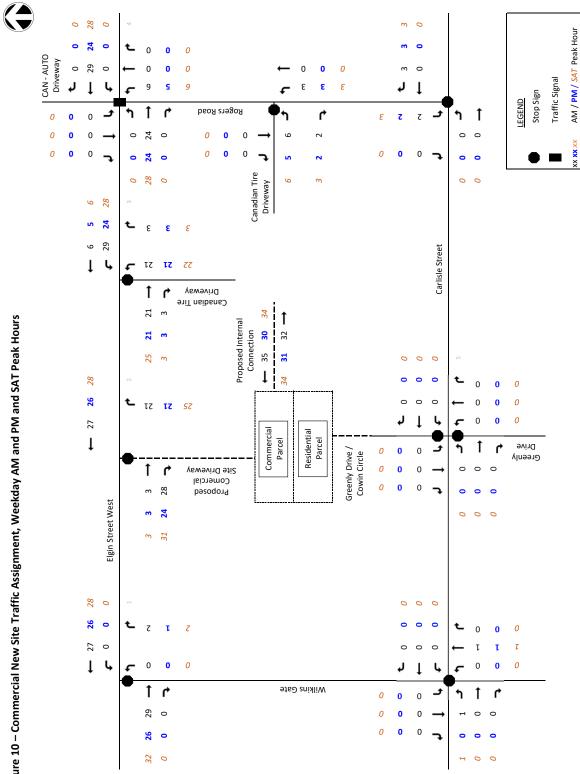
Figure 9 – Residential Site Traffic Assignment, Weekday AM and PM and SAT Peak Hours





Proposed Residential and Commercial Development Greenly Drive, Cobourg, ON

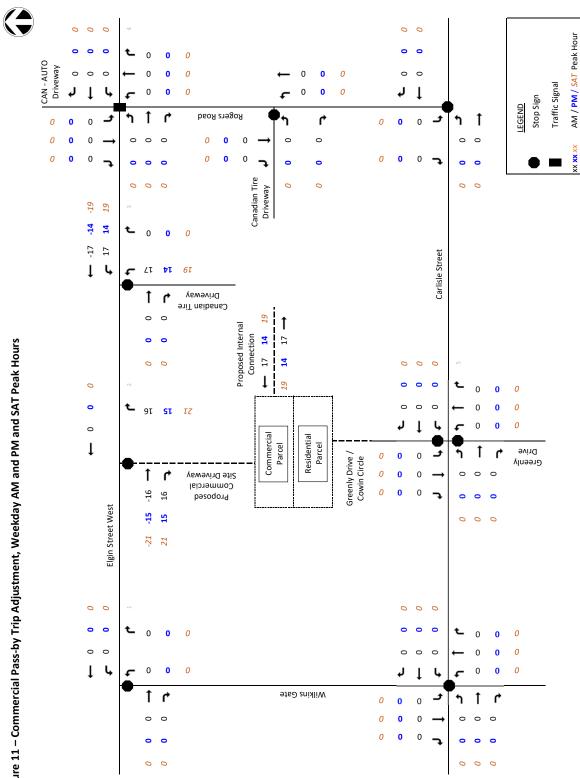
Figure 10 – Commercial New Site Traffic Assignment, Weekday AM and PM and SAT Peak Hours





Proposed Residential and Commercial Development Greenly Drive, Cobourg, ON

Figure 11 – Commercial Pass-by Trip Adjustment, Weekday AM and PM and SAT Peak Hours

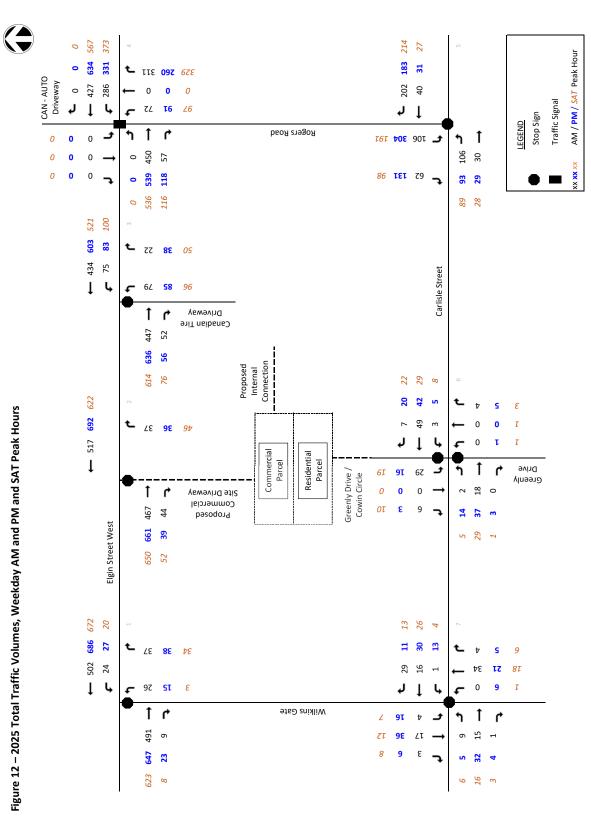




# TRAFFIC IMPACT STUDY

Proposed Residential and Commercial Development Greenly Drive, Cobourg, ON

Figure 12 – 2025 Total Traffic Volumes, Weekday AM and PM and SAT Peak Hours





#### APPENDICES

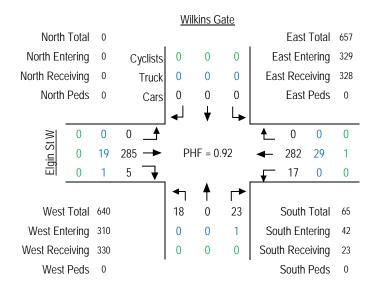
- Appendix A Turning Movement Counts and Signal Timing Plans
- Appendix B County Road 2 Class EA, Excerpts
- Appendix C Background Development Information
- Appendix D Capacity Analysis Sheets
- Appendix E Level of Service Definitions



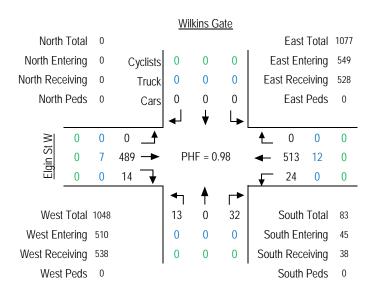


Intersection: Elgin St W & Wilkins Gate Municipality: Cobourg, Ontario

AM Peak Hour: 8:15 to 9:15

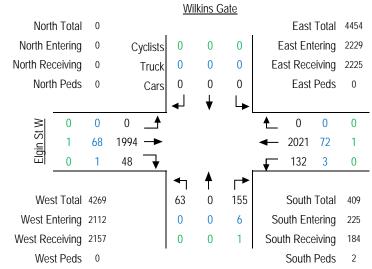


#### PM Peak Hour: 16:00 to 17:00



#### North Total East Total North Entering East Entering Cyclists East Receiving North Receiving Truck North Peds East Peds Cars ♠ Elgin St W ₽ f West Total South Total West Entering South Entering West Receiving South Receiving West Peds South Peds

#### Total 5-Hour Count





## Date: Wednesday September 16, 2020

## MD Peak Hour: - to -

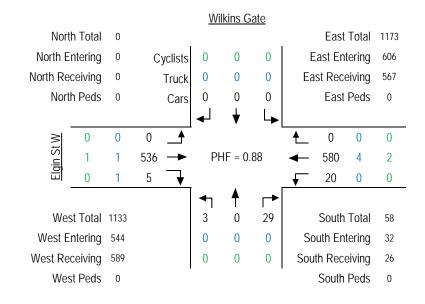
Wilkins Gate



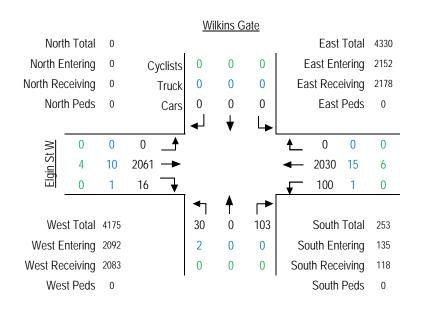




Intersection: Elgin St W & Wilkins Gate Municipality: Cobourg, Ontario Count Time: 11:00pm - 3:00pm Date: Saturday September 19, 2020



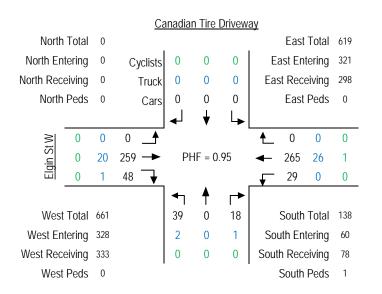
#### SAT Peak Hour: 13:00 to 14:00



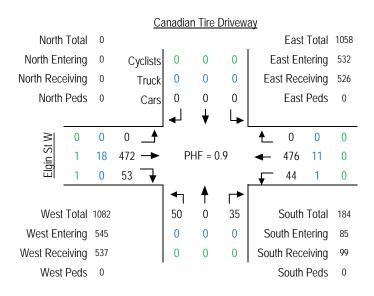


Intersection: Elgin St W & Canadian Tire Driveway Municipality: Cobourg, Ontario

AM Peak Hour: 8:15 to 9:15

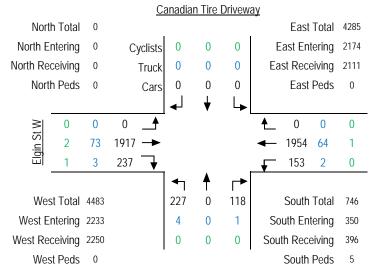


#### PM Peak Hour: 15:00 to 16:00



Canadian Tire Driveway East Total North Total 0 0 North Entering 0 0 East Entering Cyclists 0 0 0 North Receiving 0 0 0 East Receiving Truck 0 0 North Peds 0 0 0 0 East Peds 0 Cars 0 0 0 ♠ 0 0 0 Elgin St W 0 0 0 0 0 0 0 0 0 0 0 0 ₽ f West Total 0 0 0 0 South Total 0 West Entering 0 0 0 South Entering 0 0 West Receiving 0 0 0 South Receiving 0 0 West Peds 0 South Peds 0

#### **Total 5-Hour Count**



Intersection ID:

Date: Wednesday September 16, 2020

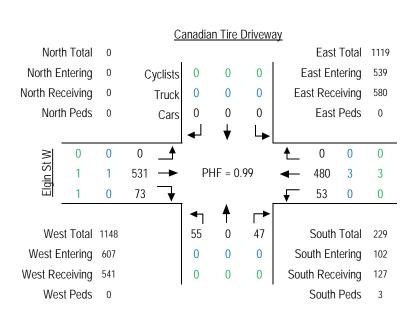
#### MD Peak Hour: - to -

 $\bigcirc$ 





Intersection: Elgin Street West & Canadian Tire Driveway Municipality: Cobourg, Ontario Count Time: 11:00pm - 3:00pm Date: Saturday September 26, 2020



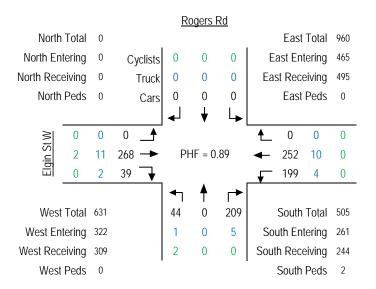
#### SAT Peak Hour: 13:15 to 14:15

			<u>C</u>	Canadia	n Tire	Drivewa	<u>ay</u>			
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North E	ntering	0	Cyclists	0	0	0	Eas	st Ent	ering	2095
North Red	ceiving	0	Truck	0	0	0	East	Rece	iving	2108
Nort	n Peds	0	Cars	0	0	0		East	Peds	0
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Elg	1	0	268 🔻	_			<b>√</b>	191	0	0
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Wes	t Total	4292		202	0	192	S	South	Total	855
West E	ntering	2185		0	0	0	Sout	th Ent	ering	395
West Red	ceiving	2107		1	0	0	South	Rece	iving	460
Wes	t Peds	1					S	South I	Peds	5

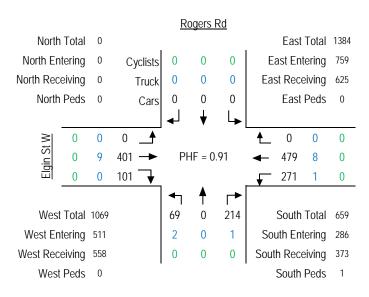


Intersection: Elgin St W & Rogers Rd Municipality: Cobourg, Ontario

AM Peak Hour: 8:30 to 9:30



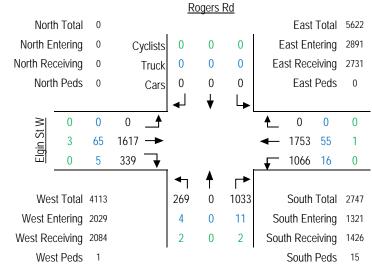
#### PM Peak Hour: 15:15 to 16:15



0 0 East Entering North Entering Cyclists 0 0 0 East Receiving North Receiving 0 0 Truck 0 0 0 North Peds 0 0 0 0 East Peds 0 Cars 0 0 0 0 ♠ 0 0 Elgin St W 0 0 0 0 0 0 0 0 0 0 0 0 ₽ f \_ West Total South Total 0 0 0 0 0 West Entering 0 0 0 South Entering 0 0 West Receiving 0 0 0 South Receiving 0 0

South Peds

#### Total 5-Hour Count



#### Intersection ID:

North Total

West Peds

0

0

Date: Wednesday September 16, 2020

#### MD Peak Hour: - to -

Rogers Rd



East Total

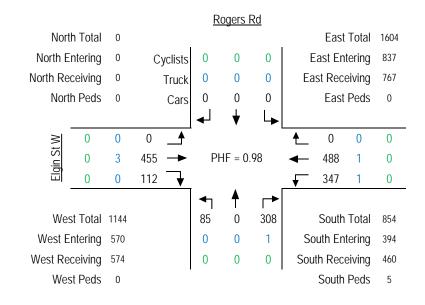
0

0

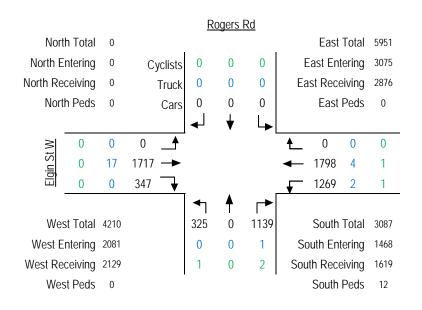




Intersection: Elgin St W & Rogers Rd Municipality: Cobourg, Ontario Count Time: 11:00pm - 3:00pm Date: Saturday September 19, 2020



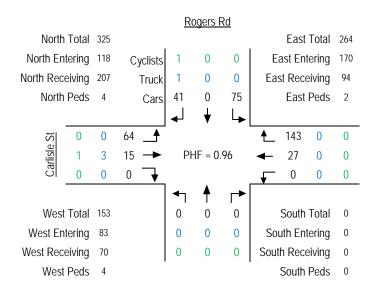
#### SAT Peak Hour: 12:00 to 13:00



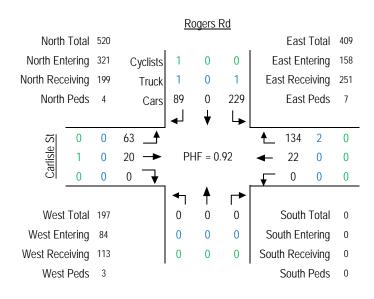


Intersection: Carlisle St & Rogers Rd Municipality: Cobourg, Ontario

AM Peak Hour: 8:00 to 9:00

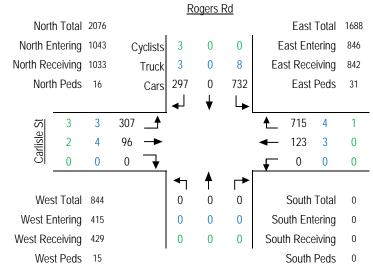


#### PM Peak Hour: 16:00 to 17:00



#### North Total East Total 0 0 North Entering 0 0 East Entering Cyclists 0 0 0 North Receiving 0 0 East Receiving Truck 0 0 0 North Peds 0 0 0 0 East Peds 0 Cars 0 0 0 0 ♠ 0 0 Carlisle St 0 0 0 0 0 0 0 0 0 0 0 0 ₽ f \_ 0 South Total West Total 0 0 0 0 West Entering 0 0 0 South Entering 0 0 West Receiving 0 0 0 South Receiving 0 0 West Peds 0 South Peds 0

#### **Total 5-Hour Count**





Intersection ID:

Date: Wednesday September 16, 2020

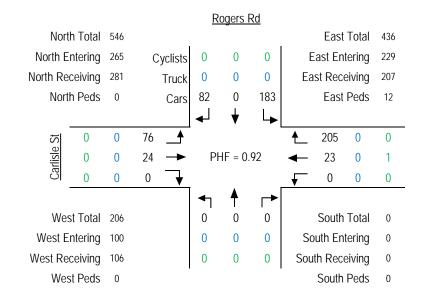
#### MD Peak Hour: - to -

Rogers Rd

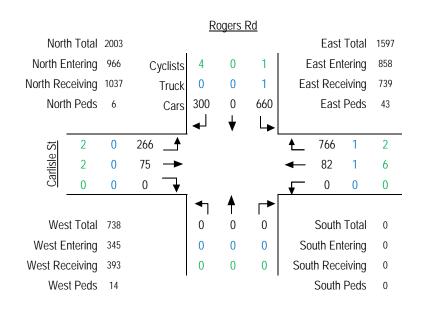




Intersection: Carlisle St & Rogers Rd Municipality: Cobourg, Ontario Count Time: 11:00pm - 3:00pm Date: Saturday September 19, 2020



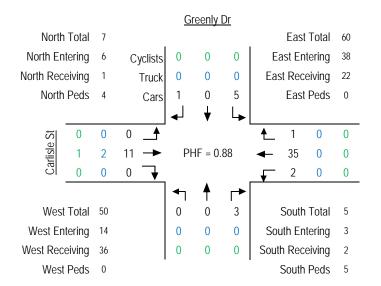
#### SAT Peak Hour: 12:30 to 13:30



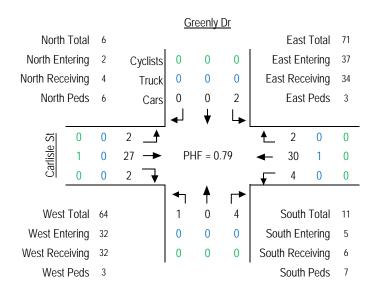


Intersection: Carlisle St & Greenly Dr Municipality: Cobourg, Ontario

AM Peak Hour: 8:00 to 9:00



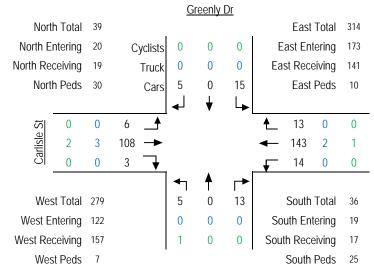
#### PM Peak Hour: 16:00 to 17:00



North Total East Total North Entering East Entering Cyclists East Receiving North Receiving Truck North Peds East Peds Cars ♠ Carlisle St ₽ f \_ South Total West Total West Entering South Entering West Receiving South Receiving 

South Peds

#### Total 5-Hour Count



Intersection ID:

West Peds

Date: Wednesday September 16, 2020

#### MD Peak Hour: - to -

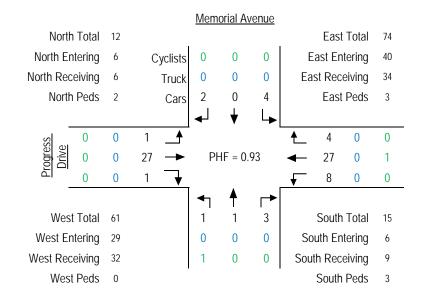
Greenly Dr



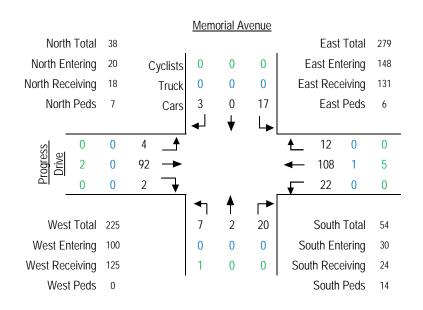




Intersection: Carlisle St & Greenly Dr Municipality: Cobourg, Ontario Count Time: 11:00pm - 3:00pm Date: Saturday September 19, 2020



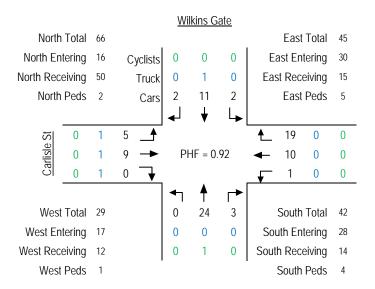
#### SAT Peak Hour: 12:45 to 13:45



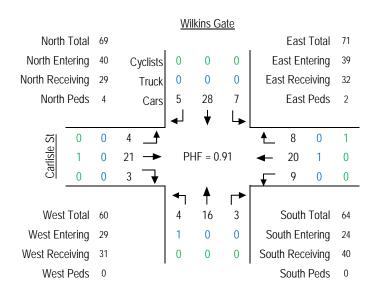


Intersection: Carlisle St & Wilkins Gate Municipality: Cobourg, Ontario

AM Peak Hour: 7:30 to 8:30



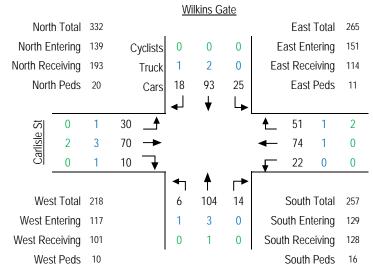
#### PM Peak Hour: 15:30 to 16:30



#### North Entering 0 0 East Entering Cyclists 0 0 0 East Receiving North Receiving 0 0 Truck 0 0 0 North Peds 0 0 0 0 East Peds 0 Cars 0 0 0 0 ♠ 0 0 Carlisle St 0 0 0 0 0 0 0 0 0 0 0 0 ₽ f \_ 0 South Total West Total 0 0 0 0 West Entering 0 0 0 South Entering 0 0 West Receiving 0 0 0 South Receiving 0 0

South Peds

#### Total 5-Hour Count



#### Intersection ID:

North Total

West Peds

0

0

Date: Wednesday September 16, 2020

#### MD Peak Hour: - to -

Wilkins Gate

 $\bigcirc$ 

East Total

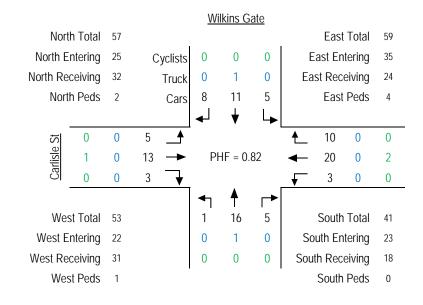
0

0





Intersection: Carlisle St & Wilkins Gate Municipality: Cobourg, Ontario Count Time: 11:00pm - 3:00pm Date: Saturday September 19, 2020



#### SAT Peak Hour: 11:15 to 12:15

				W	ilkins G	<u>ate</u>				
North	n Total	177						East	Total	208
North E	ntering	78	Cyclists	0	0	0	E	ast En	tering	120
North Red	ceiving	99	Truck	0	2	0	Eas	st Rec	eiving	88
North	n Peds	8	Cars	23	41	12		East	Peds	10
				◄┘	♦	L				
St	0	0	23	_		-	▲	20	1	0
Carlisle St	3	0	64				←	77	0	6
Ca	0	0	11 귝				√	16	0	0
-				<b>  ◄</b>	<b>≜</b>					
Wes	t Total	216		8	52	9		South	Total	143
West Er	ntering	101		1	1	0	So	uth En	tering	73
West Red	ceiving	115		0	2	0	Sout	h Rec	eiving	70
Wes	t Peds	6						South	Peds	15

<b>a</b> -	10500	المست	100	Pr	ogra	mmed	LEP.	AUL	)ata						/200 3:40P	
	section Nam	ne: Elgi	n anc	l North	umber	and Mall		Inter	section	n Alia	s: 100			10.1	5.401	
Accéss	Code: 9999	Channel	: 5	Address	:0 Rev	ision: 3.30d	I			Acci	ess Da	ta	Port 2	Comn	1:1200	Baud
Phas	se Data													Comn		
	al Basic Timing						Vehi	cal Densi	ty Timir	185	Time	B4	Cars B	efore T	ime Tz	
Phas			Ma	xi Maxi	2 Yello	w All Red	Add	led Initial	Max_I	nitial	Reduc	tion	Reduc	tion I	Reduce	, 
2	20 8	5.0 5.0	45 15		4.1	2.1	***	0.0	0		0		0		0	0.0
6	20	5.0 5.0	10 45		4.1 4.1	2.4 . 2.1		0.0 0.0	0 0		0		0		0	0.0
Pedestr	rian Timing	Ex	lended	Actuated	·····	Control				Miscel	llaneous	····			0	0.0
	Ped Fla	song	Ped Hear	Rest		Non-Ac			Recall	Non		-	Car C	Conditio	nal S	No imultaneo
		Valk <sup>C</sup> No	0	in Walk		ze Respons			-	Lock	Entry	Pass	age	Servic		Gap Out
4		No	0	Yes No	Yellov Inactiv		I Max None		0	Yes Yes	Yes Yes	N N		No		No
6	10 15	No	0	Yes	Yellov			Non	0	No	Yes	N N		No No		No No
	al Sequence			Vehical I	Detector I	Phase Assign	nment									
Defau	ult Data	***					Assig	ned		Sw	itched					
				D.e.	L D (		Pha	se N	Mode	Р	hase	Ex	tend	Delay		
Pedestr	ian Detector		L	Dera	ult Data	1		<u>[0] 11</u>	*~							
	an Detector ault Data							Special	Detecto	r Phase		nent sign		Crede 1	1	
								***					Mode	Switch Phase		tend Dela
[ ]mit '	Data							Defaul	t Data	1						
	Tal Control						Г									
	p Time: 5sec	Stortun	Statos F	Jach	Red Rev	and Acao		Remot		1		C	hannel	Flas Cole		Flash
	Ped Clear: Yes	_				e Sequence:		Test A =		T211.		с.	mannei	COR	31	Alternat
	connector Input								Flash	Flash		n.	foult	Data	No	
	_		0		Int				Entry	Exit		De	laun	~ 414	= 1NU .	Flash
-ABCC	connector Outri	ut Madae	- A	R	ing Res	ons Select		Phase	Entry Phase			De	laun	~ 414	- 110 .	Flash
	connector Output		s: 0	R	1 Rin	- C	ìon 1		Phase	Phase	Tonk	De	laun	~ 414	10	Flash
D conn	nector Input Mc	odes: 0	:: 0	R	1 Rin 2 Rin	g l Ring g 2 Ring	ion 1 2	Phase Default	Phase	Phase	lash	De	laun	~ 414	- 110	Flash
D conn	-	odes: 0	£ 0	R	1 Rin	g l Ring g 2 Ring ne Non	ion 1 2 e		Phase	Phase	lash	De	laun	~ 414	- 110	Flash
D conn	nector Input Mo nector Output M	odes: 0	.: 0	R	1 Rin 2 Rin 3 No	g l Ring g 2 Ring ne Non	ion 1 2 e	Default	Phase Data	Phase	lash		Laun		- 110	Flash
D conn	nector Input Mo nector Output M	odes: 0 fodes: 0		Marana a sa	1 Rin 2 Rin 3 No 4 No	g l Ring g 2 Ring ne Non ne Non	ion    1 2    1 e    1	Default - Overla	Phase Data	Phase - No F						Flash
D conn	nector Input Mo nector Output M	odes: 0 fodes: 0	:: 0 В	R	1 Rin 2 Rin 3 No	g l Ring g 2 Ring ne Non ne Non	ion    1 2    1 e    1	Default	Phase Data	Phase	lash 	  M	N	0	- 140 P	Flash
D conn	nector Input Mc nector Output M aps	odes: 0 1odes: 0 A s)	В	C	1 Rin 2 Rin 3 No 4 No D E	g l Ring g 2 Ring ne Non ne Non	ion 1 2 e e G	Default - Overla H I	Phase Data ps J	Phase - No F	L	 M	N	0	P	Flash
D conn	nector Input Mc nector Output M aps	odes: 0 fodes: 0		C	1 Rin 2 Rin 3 No 4 No	g l Ring g 2 Ring ne Non ne Non F F	ion 1 2 e e G H	Default - Overla H I H I	Phase Data psJ	Phase - No F K K	L	M	N	0	P	Flash
D conn D conn	nector Input Mo nector Output M ups Phase(	odes: 0 fodes: 0 A s) A	B	C	1 Rin 2 Rin 3 No 4 No D E D E	g l Ring g 2 Ring ne Non ne Non F F 0	ion 1 2 e e G H 0 (	Default - Overla H I H I O O	Phase Data ps J J 0	Phase - No F K K 0	L L 0	M M 0	N N 0	0 0 0	P P 0	
D conn	nector Input Mo nector Output M aps Phase( Trail Green	odes: 0 fodes: 0 A s) A 0 4.0	B B 0	C C 0	1 Rin 2 Rin 3 No 4 No D E D E 0 0	g 1 Ring g 2 Ring ne Non ne Non F F 0 0 4.0	ion	Default - Overla H I H I	Phase Data ps J 0 4.0	Phase - No F K K	L L 0 4.0	M M 0 4.0	N N 0 4.0	O O 0 4.0	P P 0 4.0	
D conn	nector Input Mo nector Output M aps Phase( Trail Green Trail Yellow	odes: 0 fodes: 0 A s) A 0 4.0	B B 0 4.0	C C 0 4.0	1         Rin           2         Rin           3         No           4         No           D         E           D         E           0         0           4.0         4	g 1 Ring g 2 Ring ne Non ne Non F F 0 0 4.0	ion	<b>Default</b> - Overla H I D 0 4.0 4.0 2.0 2.0	Phase Data ps J 0 4.0	Phase - No F - K K 0 4.0	L L 0	M M 0 4.0 2.0	N N 0 4.0 2.0	O O 0 4.0 2.0	P P 0 4.0 2.0	
D conn	nector Input Mo nector Output M aps Phase( Trail Green Trail Yellow Trail Red	odes: 0 fodes: 0 A s) A 0 4.0 2.0 0	B B 0 4.0 2.0	C C 0 4.0 2.0 0	1       Rin         2       Rin         3       No         4       No         D       E         D       E         0       0         4.0       4         2.0       2.0	g 1 Ring g 2 Ring ne Non ne Non F F 0 0 4.0 0 2.0	ion 1 2 e e G I G I G I G I 4.0 4 2.0 2	<b>Default</b> - Overla H I D 0 4.0 4.0 2.0 2.0 0 0	Phase <b>Data</b> ps J J 0 4.0 2.0	Phase - No F - K K 0 4.0 2.0	L L 0 4.0 2.0	M M 0 4.0	N N 0 4.0	O O 0 4.0 2.0 0	P P 0 4.0 2.0 0	
D conn D conn Overla	nector Input Mo nector Output M aps Phase( Trail Green Trail Yellow Trail Red Plus Green	odes: 0 fodes: 0 A s) A 0 4.0 2.0 0	B B 4.0 2.0 0	C C 0 4.0 2.0 0	1       Rin         2       Rin         3       No         4       No         4       No         D       E         D       E         0       0         4.0       4         2.0       2         0       0	g 1 Ring g 2 Ring ne Non ne Non F F 0 0 4.0 0 2.0 0	ion 1 2 e e e d G I G I 4.0 4 2.0 2 0 0	<b>Default</b> - Overla H I D 0 4.0 4.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Phase Data ps J 4.0 2.0 0 0	Phase - No F - No F - K - K 0 4.0 2.0 0 0 0	L D 4.0 2.0 0	M M 0 4.0 2.0 0	N N 0 4.0 2.0 0	O O 0 4.0 2.0	P P 0 4.0 2.0	
D conn	nector Input Mo nector Output M aps Phase( Trail Green Trail Yellow Trail Red Plus Green	odes: 0 fodes: 0 A s) A 0 4.0 2.0 0	B B 4.0 2.0 0 0	C C 0 4.0 2.0 0 0	1       Rin         2       Rin         3       No         4       No         4       No         D       E         D       E         0       0         0       0         0       0	g 1 Ring g 2 Ring ne Non ne Non F F 0 0 0 0 0	ion 1 2 e e G I G I G I G I C 4.0 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0	<b>Default</b> - Overla H I D 0 4.0 4.0 0 0 0 0 0 0 0 0	Phase <b>Data</b> ps J J 0 4.0 0 0 0 Phase	Phase - No F K K 0 4.0 2.0 0 0 5e(s)	L 0 4.0 2.0 0 0	M 0 4.0 2.0 0 0	N N 0 4.0 2.0 0 0	O O 4.0 2.0 0 0	P P 0 4.0 2.0 0 0	
D conn D conn Overla Ring Phase	nector Input Mo nector Output M aps Phase( Trail Green Trail Yellow Trail Red Plus Green Minus Green Minus Green Next Ring Phase	odes: 0 fodes: 0 A s) A 0 4.0 2.0 0 0	B B 4.0 2.0 0 0	C C 0 4.0 2.0 0 0	1       Rin         2       Rin         3       No         4       No         D       E         D       E         0       0         0       0         0       0         3       3	g 1 Ring g 2 Ring ne Non ne Non F F 0 0 0 1.0 0 0 0 1.0 0 0 1.0 0 0 1.0 0 0 1.0 1.0	ion 1 2 e e G 4.0 4.0 4.0 2.0 0 0 0 0 0 0 0 0 0 0 0 0 0	<b>Default</b> - Overla H I D 0 4.0 4.0 2.0 2.0 0 0 8	Phase Data ps J J J 0 4.0 2.0 0 0 Phas 9	Phase - No F - No F - K - K 0 4.0 2.0 0 0 5e(s) 10	L L 4.0 2.0 0 0	M 0 4.0 2.0 0 0	N N 0 4.0 2.0 0 0	O O 0 4.0 2.0 0 0	P P 0 4.0 2.0 0 0	16
D conn D conn Overla Ring	nector Input Mo nector Output M aps Phase( Trail Green Trail Yellow Trail Red Plus Green Minus Green Next	edes: 0 fodes: 0 A S) A 0 4.0 2.0 0 0	B B 4.0 2.0 0	C C 0 4.0 2.0 0 0	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	ion 1 2 e e G I G I G I G I C 4.0 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0	<b>Default</b> - Overla H I D 0 4.0 4.0 0 0 0 0 8 3	Phase <b>Data</b> ps J J 0 4.0 0 0 0 Phase	Phase - No F K K 0 4.0 2.0 0 0 5e(s)	L 0 4.0 2.0 0 0	M 0 4.0 2.0 0 0	N N 0 4.0 2.0 0 0	O O 4.0 2.0 0 0	P P 0 4.0 2.0 0 0	



lane per direction. The annual growth rate used is 1.8% to reflect average growth based on the observed traffic patterns.

# 2.1.3 Future Conditions

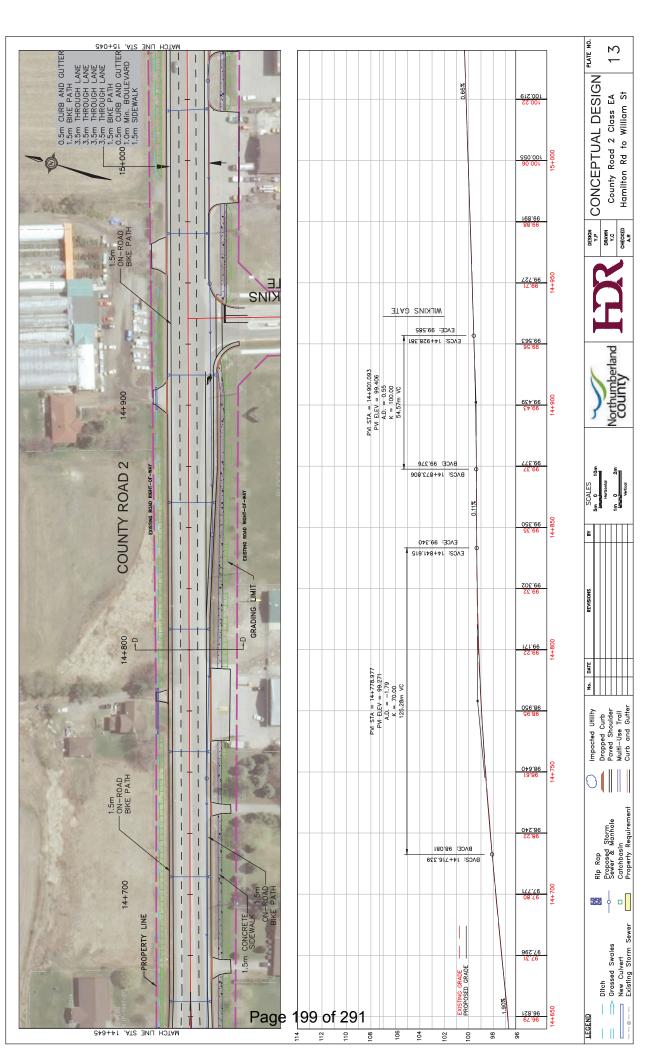
The future traffic conditions were forecast for 2021 and 2031. Using the same methodology for existing conditions and applying a growth rate of 1.8% per annum, future traffic volumes were forecast and analyzed. The 1.8% per annum growth rate was modelled based on existing travel demand on County Road 2, which is considered a more representative estimate for the study corridor than using aggregated population forecasts for the entire County.

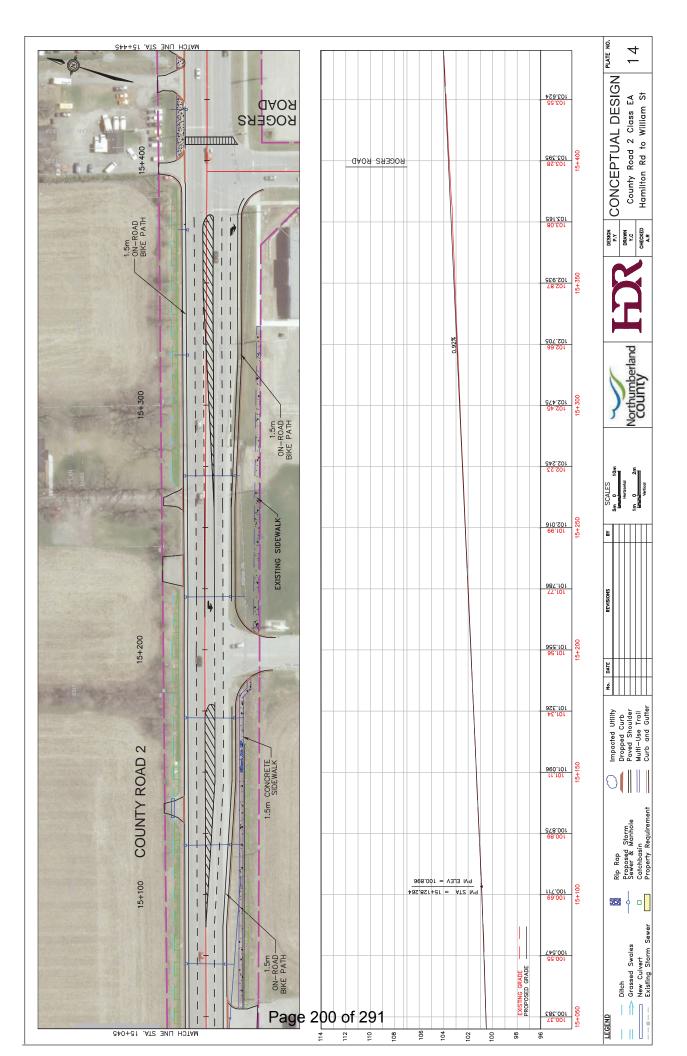
# 2.1.3.1 2031 AADT Forecasts

With 1.8% growth rate maintained over the next 20 years, the AADT traffic will increase by 175% and County Road 2 will approach the 0.85 volume to capacity threshold in the PM peak period from 2:00PM to 4:00PM. This is shown in **Table 2-2**.

# 2.1.3.2 2031 SADT Forecasts

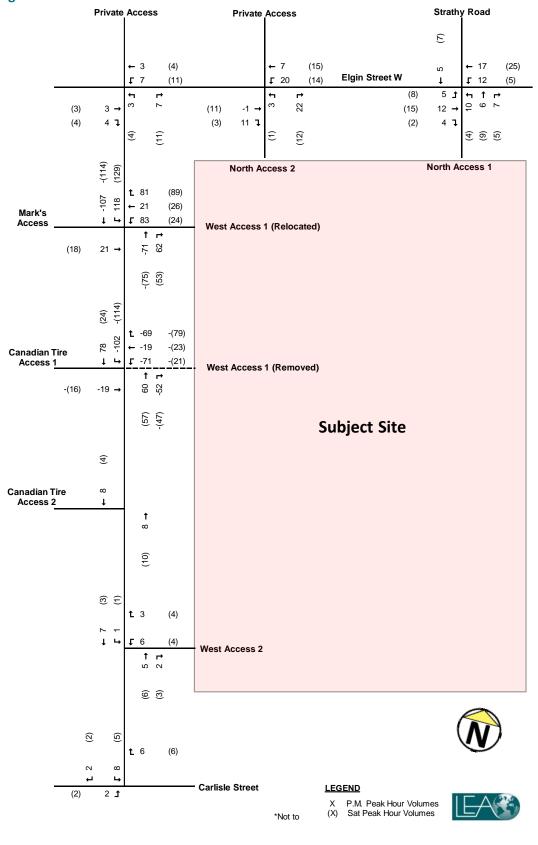
The assessment of the SADT traffic reveals a similar pattern. A 1.8% growth rate was applied to the SADT conditions for the 2031 traffic forecast as presented in **Table 2-3**. The 2031 summer traffic forecast shows deterioration in traffic performance. County Road 2 will be congested in the afternoon peak period from 12:00 to 4:00 PM with the volume to capacity ratios reaching 0.88, which just exceeds the 0.85 threshold at the end of the 20 year horizon.







#### Transportation Impact Assessment



#### Figure 4.2: Net Site Traffic



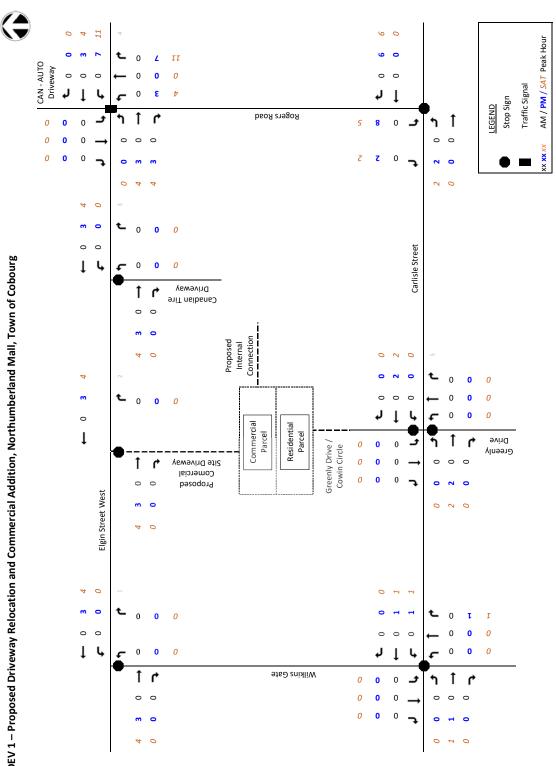
CANADA | INDIA | AFRICA | MIDDLE EAST Page 202 of 291



TRAFFIC IMPACT STUDY

Proposed Residential and Commercial Development Greenly Drive, Cobourg, ON

DEV 1 – Proposed Driveway Relocation and Commercial Addition, Northumberland Mall, Town of Cobourg



Note: The weekday AM peak hour volumes were unavailable from the study prepared by LEA Consulting Ltd, thus the development was assumed to have negligible traffic impacts during the weekday AM peak hour Source: Figure 4.2 of Transportation impact Study, Proposed Driveway Relocation and Commercial Addition, Northumberland Mall, Town of Cobourg, dated July 17th, 2019; prepared by LEA Consulting Ltd.



HCM Unsignalized Intersection Capacity Analysis 1: Wilkins Gate & Elgin Street West	ntersec gin Stre	ction C: eet We	apacit)	/ Analy	sis.		<existing> AM Peak Hour 09-28-2020</existing>	
	t	1	\$	Ļ	∢	•		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	<b>₹</b>			4 <b>t</b>	F	*-		
Traffic Volume (veh/h)	423	œ	24	432	25	33		
Future Volume (Veh/h)	423	œ	24	432	25	33		
Sign Control	Free			Free	Stop			
Grade	%0			%0	%0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly flow rate (vph)	460	6	26	470	27	36		
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			469		752	234		
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol			469		752	234		
tC, single (s)			4.1		6.8	7.0		
tC, 2 stage (s)								
tF (s)			2.2		3.5	3.3		
p0 queue free %			98		92	95		
cM capacity (veh/h)			1103		342	761		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2		
Volume Total	307	162	183	313	27	36		
Volume Left	0	0	26	0	27	0		
Volume Right	0	6	0	0	0	36		
cSH	1700	1700	1103	1700	342	761		
Volume to Capacity	0.18	0.10	0.02	0.18	0.08	0.05		
Queue Length 95th (m)	0.0	0.0	0.6	0.0	2.0	1.2		
Control Delay (s)	0.0	0.0	1.4	0.0	16.4	10.0		
Lane LOS			A		ပ	А		
Approach Delay (s)	0.0		0.5		12.7			
Approach LOS					8			
Intersection Summary								
Average Delay			1.0					
Intersection Capacity Utilization Analysis Dariod (min)	u		37.9% 15	ы С	ICU Level of Service	Service	А	
			2					

HCM Unsignalized Intersection Capacity Analysis 2: Proposed Commercial Site Driveway & Elgin Street West	nterseo ercial S	tion C ite Driv	apacit <u>.</u> /eway	/ Analy & Elgi	/sis n Stree	et West	<existing> AM Peak Hour 09-28-2020</existing>
	Ť	1	\$	Ļ	•	×.	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	×		ŧ		×	
Traffic Volume (veh/h)	437	0	0	445	0	.0	
Future Volume (Veh/h)	437	0	0	445	0	0	
Sign Control	Free			Free	Stop		
Grade	%0			%0	%0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	475	0	0	484	0	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)				288			
pX, platoon unblocked							
vC, conflicting volume			475		717	238	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			475		717	238	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			100		100	100	
cM capacity (veh/h)			1098		369	770	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	
Volume Total	238	238	0	242	242	0	
Volume Left	0	0	0	0	0	0	
Volume Right	0	0	0	0	0	0	
cSH SH	1700	1700	1700	1700	1700	1700	
Volume to Capacity	0.14	0.14	0.00	0.14	0.14	0.00	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Lane LOS						A	
Approach Delay (s)	0.0			0.0		0.0	
Approach LOS						A	

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∢

ICU Level of Service

0.0 15.6% 15

Intersection Summary Average Delay Intersection Capacity Utilization Analysis Period (min)

Proposed Residential and Commercial Development, Greenly Drive, Cobourg, ON Trans-Plan

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Matrix         File         Not		t	1	4	ţ	4	•				Ť	۲	1
1         1	Movement	EBT	EBR	WBL	WBT	NBL	NBR			Lane Group	EBT	EBR	WBL
(h)         388         4         1         19         Tatler Wourne (m)           (n)         388         0         29         24         1         19         Tatler Wourne (m)           (n)         108         005         056	Lane Configurations	44		۴	ŧ	r	×.			Lane Configurations			۴
Initial         File         Funder Manage         Funder Manage           0%	Traffic Volume (veh/h)	388	49	29	404	41	19			Traffic Volume (vph)		57	282
Free 0         Free 0         500 000	Future Volume (Veh/h)	388	49	29	404	41	19			Future Volume (vph)			282
0%         0%<	Sign Control	Free			Free	Stop				Turn Type	NA	Perm	Perm
0         0.05         0.56         0.55         0.56         0.55         0.56         0.55         0.56         0.55         0.56         0.55         0.56         0.55         0.56         0.55         0.56         0.	Grade	%0			%0	%0				Protected Phases	2		
1)         408         52         31         425         43         20           0         None	Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95			Permitted Phases		2	9
Search Phase         Monum Initial (s)           None         None         None         None         None Sait (s)         Total Spit (s)           None         194         Total Spit (s)         Total Spit (s)         Total Spit (s)         Total Spit (s)           None         40         708         230         None Spit (s)         Total Spit (s)           None         40         708         230         None Spit (s)         Total Spit (s)           None         40         708         230         Attended (s)         Total Spit (s)           None         40         708         230         None Spit (s)         None Spit (s)           None         41         63         70         23         Attended (s)         None Spit (s)           None         41         63         70         23         Attended (s)         None Spit (s)           None         21         23         33         33         Attended (s)         None Spit (s)           None         21         23         33         Attended (s)         None Spit (s)           None         31         103         31         32         Attended (s)         None Spit (s)           None         31 </td <td>Hourly flow rate (vph)</td> <td>408</td> <td>52</td> <td>31</td> <td>425</td> <td>43</td> <td>20</td> <td></td> <td></td> <td>Detector Phase</td> <td>2</td> <td>2</td> <td>9</td>	Hourly flow rate (vph)	408	52	31	425	43	20			Detector Phase	2	2	9
Minum Spit Si           None         None           None         None           Si         Si Si Si Si Si Si Si Si Si Si Si Si Si S	Pedestrians									Switch Phase			
None         None <th< td=""><td>Lane Width (m)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Minimum Initial (s)</td><td>20.0</td><td>20.0</td><td></td></th<>	Lane Width (m)									Minimum Initial (s)	20.0	20.0	
None         Nue         Nue         Class Shift (s)           0         194         460         785         735         735         735         735         735         735         735         735         735         736 <t< td=""><td>Walking Speed (m/s)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Minimum Split (s)</td><td>31.2</td><td></td><td></td></t<>	Walking Speed (m/s)									Minimum Split (s)	31.2		
None         None <th< td=""><td>Percent Blockage</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Total Split (s)</td><td>45.0</td><td></td><td></td></th<>	Percent Blockage									Total Split (s)	45.0		
None         None <th< td=""><td>Right turn flare (veh)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Total Split (%)</td><td>75.0%</td><td>75.0%</td><td></td></th<>	Right turn flare (veh)									Total Split (%)	75.0%	75.0%	
0       194         0       100         0       100         0       100         0       100         111       100         111       100         111       100         111       100         111       1111         1111       111	Median type	None			None					Yellow Time (s)	4.1		
0         194           ed         460         78         230           ed         460         78         230           ed         460         78         230           ed         460         78         230           ed         78         230         53           ed         78         230         54           ed         78         230         54           ed         78         230         54           ed         78         23         33           ed         97         200         200           ed         31         212         32         743           ed         31         212         213         33           ed         97         200         200         200           ed         1112         723         78         201           ed         73         18         20         200           ed         70         21         21         20           ed         111         112         110         210         200           ed         111         100         110         100 <td>Median storage veh)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>All-Red Time (s)</td> <td>2.1</td> <td></td> <td></td>	Median storage veh)									All-Red Time (s)	2.1		
ed         440         706         230         Total Lost Time (s)           n         460         708         230         Last 430         Last 430           n         460         708         230         Last 400         Last 400           n         410         69         70         Recall Mode         Recall Mode           1         6.9         7.0         7.0         Recall Mode         Recall Mode           1112         132         33         33         Recall Mode         Recall Mode           1112         132         32         783         783         Recall Mode           1112         138         31         212         212         43         Control Desy           0         0         0         0         0         20         Recall Mode           1111         111         232         783         Recall Mode         Recall Mode           1111         212         212         212         43         20         Recall Mode           1112         100         112         100         212         212         212         212         212         212         212         212         212         212	Upstream signal (m)				194					Lost Time Adjust (s)	0.0	0.0	0.0
me         4.0         7.08         2.30         Leaduagy commany           0         1         2         3         2         2           1         1         6         7.0         230         Actuated of Cencily           1         1         6         7.0         230         Actuated of Cencily           1         2         3         3         Actuated of Cencily         Actuated of Cencily           1         1         2         3         3         Actuated of Cencily         Actuated of Cencily           1         1         8         3         3         Actuated of Cencily         Actuated of Cencily           1         1         8         3         3         Actuated of Cencily         Actuated of Cencily           1         1         1         1         1         1         1         1           1         0         3         1         1         0         1         1           1         0         1         1         1         1         0         1         0           1         0         1         1         1         0         0         0         0         0 <td>pX. platoon unblocked</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Total Lost Time (s)</td> <td>6.2</td> <td></td> <td></td>	pX. platoon unblocked									Total Lost Time (s)	6.2		
oli         Lead-La         Optimize7           1         5/9         7/0         200           4.1         6/9         708         230           4.1         6/9         708         230           4.1         6/9         708         230           4.1         6/9         708         230           2         3.5         3.3         200           2         3.5         7/3         200           212         3.5         7/3         200           212         1112         3.5         7/3           212         13         10         200         200           212         13         11         200         200           111         2         13         200         203           201         0         0         200         200           112         1700         112         1700         1100           112         1700         112         203         203           201         0.0         0         203         203           201         0.0         103         203         203           201         0.0 </td <td>vC. conflicting volume</td> <td></td> <td></td> <td>460</td> <td></td> <td>708</td> <td>230</td> <td></td> <td></td> <td>Lead/Lag</td> <td></td> <td></td> <td></td>	vC. conflicting volume			460		708	230			Lead/Lag			
Intercent of the state of the stat	vC1 stane 1 conf vol									Lead-Lan Ontimize?			
460         708         230         At End one           4.1         6.9         7.0         23           4.1         6.9         7.0         20         At End one           7         2         3.5         3.3         Control Delay         Control Delay           97         88         97         Control Delay         Control Delay         Control Delay           1112         352         763         NB         NB         NB         Control Delay           212         188         31         212         23         20         Control Delay           212         188         31         212         213         20         Control Delay           213         13         212         213         20         Control Delay         Control Delay           210         0         13         212         203         Control Delay         Control Delay           210         0         10         10         203         003         003         Control Delay           210         0         112         700         112         203         Control Delay           210         0         0         10         0	vC2 starte 2 conf vol									Recall Mode	C-Max		C-Max C-Max
4.1         6.9         7.0         Address of Calible           2         3.5         3.3         Address of Calible         Address of Calible           2         3.5         3.3         Control Delay         Control Delay           2         3.5         3.3         Control Delay         Control Delay           2         3.5         763         NB         NB         Control Delay           2         3         2.12         2.13         NB         Control Delay           2         1         0         0         0         Control Delay           2         1         0         2.03         0.03         Control Delay           2         1         0         0         0.03         Control Delay           2         1         0         0         0.03         Control Delay <td></td> <td></td> <td></td> <td>160</td> <td></td> <td>208</td> <td>230</td> <td></td> <td></td> <td>Act Effect Graan (s)</td> <td>20 1</td> <td></td> <td>20 1</td>				160		208	230			Act Effect Graan (s)	20 1		20 1
Notice     Notice     Notice     Notice     Notice       22     35     33     Notice     Notice     Notice       23     35     35     33     Notice     Notice       21     352     763     Notice     Notice     Notice       21     1112     352     763     Notice     Notice       21     18     No     No     37     No     No       21     13     13     13     No     No     No       700     100     10     10     10     No     No       701     0.0     0     3     0     No     No       701     0.0     0     11     0.3     No       701     0.0     0.0     14.5     No       701     0.0     0.0     14.5     No       701     10     1     1.5     No       701     10     1.4     No     No       701     10	to single (s)			11		00/	0.5			Act Link Of Datio	0.4F		
22         35         33         33           7         88         97         Control Delay           7112         352         763         Control Delay           1112         352         763         Control Delay           1112         352         763         Control Delay           212         188         31         212         24         Control Delay           213         18         31         212         23         Control Delay           213         13         212         23         20         Control Delay           0         52         0         0         20         Control Delay           0         52         0         0         20         Control Delay           0         52         0         0         20         Control Delay           0         0         10         0         20         Control Delay           0         0         0         0         20         Control Delay           0         0         0         10         20         Control Delay           0         0         0         0         20         Control Delay				-;-		0.7	N. /			Actuated ground	0.00		
12         3.3         3.3         3.3         3.3         3.3         3.3         3.3         3.3         3.3         3.3         3.3         3.3         1010 Uelsy         1010 Uelsy         1010 Uelsy         1010 Uelsy         1011 Uelsy	ILU, Z SIAGE (S)			0		Ľ				NC RAIIO	0.19		
1112     352     763     713       EB1     EB     W1     W2     W3     N1     N2       272     188     M2     W2     M3     N2     M3       0     0     31     212     213     N3     M3       10     10     31     212     213     M3     M3       10     0     31     0     0     43     0       10     01     01     10     10     10     10       110     01     01     01     01     00     00       0     0     0     0     0     106     106       110     0.0     0     0     0     106     107       0.0     0     0     0     0     0     106       0.0     0     0     0     0     145     Maturetor       0.0     0.0     0.0     0.0     0.0     Contentor       0.0     0.0     0.0     0.0     0.0     Maturetor       0.0     0.0     0.0     0.0     Maturetor     Maturetor       0.0     0.0     0.0     0.0     0.0     Maturetor       0.0     0.0     0.0     <	(F (S)			77		3.5	3.3 				C.4		
1112     352     763     Total Delay       EB     EB     EB     WB     WB     WB     NB     Constrained       272     188     31     212     43     20       0     52     0     0     21     43     20       100     112     1700     112     1700     1700     1700       1100     1112     1700     1700     352     763     Constrained       0     52     0     0     0     20     Constrained     Constrained       0     1112     1700     112     1700     33     0.6     Constrained       0     0     0     0     0     0     20     Constrained     Constrained       0     0     0     0     0     0     Constrained     Constrained       0     0     0     13     0     0.16     9     Constrained       0     0     0     0     16.6     9     Constrained       0     0     0     16.6     9     Constrained       0     0     16.6     9     Constrained     Constrained       0     0     0     16.6     0     Constrained <td>p0 queue free %</td> <td></td> <td></td> <td><i>L</i>6</td> <td></td> <td>8</td> <td>79</td> <td></td> <td></td> <td>Queue Delay</td> <td>0.0</td> <td></td> <td></td>	p0 queue free %			<i>L</i> 6		8	79			Queue Delay	0.0		
EB1         EB2         WB1         WB2         WB3         NB1         NB2         COS           272         188         31         212         212         43         20         Aproach Delay           0         0         31         212         212         43         20         Aproach Delay           0         0         31         0         0         32         0         20           100         20         1112         1700         130         20         20         Aproach Delay           100         1112         1700         10         20         20         20         Aproach Delay           016         0.11         0.03         35         0.6         Adroach Sumar         Cycle Length. 60         Adroach Sumar           010         0.0         0.1         6.0         9.8         Maran         Cycle Length. 60	cM capacity (veh/h)			1112		352	763			Total Delay	4.5	1.4	9.7
212     188     31     212     43     02       0     0     31     0     43     20       170     100     110     10     0     43     20       170     112     1700     100     100     32     763       170     103     013     013     013     013     013       016     011     033     013     013     013     015       010     00     07     00     00     33     0.6       010     00     01     6.0     98     Aduated cycle Lang       010     010     01     013     013     015     016       010     010     01     6.5     98     Aduated cycle Lang       010     010     010     14.5     Aduated cycle Lang       011     012     0.6     14.5     Aduated cycle Lang       011     12     14.5     Aduated cycle Lang     Maximum Ve Ratu       011     14.5     Aduated cycle Lang     Maximum Ve Ratu       011     14.5     Aduated cycle Lang     Maximum Ve Ratu       112     Aduated Cycle Lang     Aduated cycle Lang     Maximum Ve Ratu       112     Aduated Cycle Lang	Direction Lane #	FR 1	FR 3	1 A/R 1	MR 2	1//R 2	NR 1	NR 2		ros	A	A	A
710         710         71         71         71         710	Volumo Total	177	100	21	217	212	CV	200		Approach Delay	4.1		
0         22         0         0         32         10         110         1112         1100         112         100         322         763         Difference         Difference <thdifference< th="">         Differenco</thdifference<>		717	00		7 1 7	7 17	6 <del>1</del>	70		Approach LOS	A		
7700     700     700     700     700     700     700     700       710     710     710     710     710     700     52     763       01     0.11     0.03     0.13     0.12     0.03     33     0.6       00     0.0     8.3     0.0     0.6     9.8     763     763       0.0     0.0     8.3     0.6     9.8     763     763       0.0     0.0     1.4     5     8     7610       0.0     0.6     14.5     7     763     763       0.0     0.6     14.5     7     763     763       0.1     1.4     1.4     1.4     1.4     1.4       1.1     1.2     2.0%     1.4     700     763       1.1     1.2     2.0%     1.4     700     763       1.1     1.2     2.0%     1.4     700     700       1.1     1.1     1.1     1.1     1.1     1.1       1.1     1.1     1.1     1.1     1.1     1.1       1.1     1.1     1.1     1.1     1.1     1.1       1.1     1.1     1.1     1.1     1.1     1.1       1.1	Voluine ceit		2	5			0 <sup>4</sup> C	0 6		Intersection Summary	1		
0.16 0.11 0.12 1.0 1.2 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4		0021	70011	1110	0021	0 1700	26.0	0.7		Ciolo Longhi 20			
0.0     0.1     0.0     0.1     0.1     0.0       0.0     0.0     0.1     0.1     0.1     0.0       0.0     0.0     83     0.0     0.6     98       0.0     0.0     83     0.0     16.5     9.8       0.0     0.0     83     0.0     16.5     7.0       0.0     0.6     7.4     7.0     7.0       0.0     0.6     14.5     7.0     7.0       0.0     0.6     14.5     7.0     7.0       0.0     0.6     14.5     7.0     7.0       1.1     1.2     7.0     7.0       1.2     2.0%     1.1     7.0       1.2     1.2     1.2     7.0       1.3     1.2     1.2     7.0       1.4     1.2     1.2     7.0       1.5     1.1     1.2     1.1	Voltana ta Canaajta		100	7 1 1	001		200	50/			4h- 70		
00         0.0         0.0         0.0         0.0         0.0         3.3         0.6         0.0         0.0         3.3         0.6         Naturation         Naturat	Volume to Capacity	0.10	0.11	0.03	0.13	0.13	0.12	0.03		Actuated Cycle Lengt	11L: 00		1.000
00         00         03         00         166         98         Contral Cycle 60           00         0         A         C         A         Contral Cycle 40           00         0.6         14.5         Contral Cycle 40         Maximum Vc Ratur           00         0.6         14.5         Contral Cycle 40         Maximum Vc Ratur           00         0.6         14.5         Control Type: Actual 40         Maximum Vc Ratur           01         0.6         14.5         Maximum Vc Ratur         Maximum Vc Ratur           12         2.0         Splits and Phases:         Splits and Phases:         Splits and Phases:           15         CU Level of Service         A         Splits and Phases:         Splits and Phases:	Uneue Length 95th (m)	0.0	0.0	0.7	0.0	0.0	3.3	0.0		UITSET: U (U%), Kerere	renced to phase.	EBI and	0:WBIL
A         C         A         Control Types Actual Maximum Vc Raitor           0.0         0.6         14.5         Namimum Vc Raitor           B         Namimum Vc Raitor         Namimum Vc Raitor           1         B         Intersection Gpacity           1.2         29.0%         ICU Level of Service         A           15         ICU Level of Service         A	Control Delay (s)	0.0	0.0	8.3	0.0	0.0	16.6	9.8		Natural Cycle: 60			
0.0         0.6         14.5         Maximum vic Ration           B         B         Intersection Signal D           1         12         Intersection Capacity           29,0%         ICU Level of Service         A           15         ICU Level of Service         A	Lane LOS			A			ပ	A		Control Type: Actuate	ted-Coordinated		
12 Intersection Signal D hitersection Signal D hardrage (min 29,0% ICU Level of Service A 15 Intersection Signal D hardrage (min hardrage (min	Approach Delay (s)	0.0		0.6			14.5			Maximum v/c Ratio: 0.	0.67		
1.2 Intersection Capacity Analysis Period (mil) 29.0% ICU Level of Service A Splits and Phases. 15 ICU Level of Service A Serv	Approach LOS						8			Intersection Signal De	Telay: 7.6		
1.2 Analysis Period (mi) 29.0% ICU Level of Service A Splits and Phases: 15 ■ 15 EVEL Evel of Service A Splits and Phases:	0									Intersection Capacity I	v Utilization 55.89	<b>、</b> 0	
12 29.0% ICU Level of Service A Splits and Phases: 15 45s	Intersection summary									Analysis Period (min)	) 15		
29.0% ICU Level of Service A Splits and Phases:	Average Delay			1.2						to and a section of the section of t			
15 1	Intersection Capacity Utilizati	uc		29.0%	Ō	U Level of	<sup>c</sup> Service		А	Sulits and Phases.	4- Roners Road	R Floin S	treet We
1	Analysis Period (min)			15								2	
45 s										1 1 02 (R)			
										45 s			

limings 4: Rogers Road & Elgin Street West	lgin St	reet W	est				<pre><existing> AM Peak Hour</existing></pre>
	1	1	\$	ŧ	•	×.	
ane Group	EBT	EBR	WBL	WBT	NBL	NBR	
ane Configurations	ŧ	*	٢	ŧ	۴	×	
raffic Volume (vph)	388	57	282	364	63	297	
uture Volume (vph)	388	57	282	364	63	297	
urn Type	Ν	Perm	Perm	NA	Prot	Perm	
Protected Phases	2			9	4		
ermitted Phases		2	9			4	
Detector Phase	2	2	9	9	4	4	
Witch Phase	0.00	0.00	0.00	0.00	Q	Ca	
Ainimum Shiit (s)	31.2	31.2	31.2	31.2	14.5	0.0	
otal Split (s)	45.0	45.0	45.0	45.0	15.0	15.0	
otal Split (%)	75.0%	75.0%	75.0%	75.0%		25.0%	
'ellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1	
vII-Red Time (s)	2.1	2.1	2.1	2.1	2.4	2.4	
.ost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
otal Lost Time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
ead/Lag							
ead-Lag Optimize?		:	:	:	:	:	
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	
vot Effot Green (s)	39.1	39.1	39.1	39.1	8.2	8.2	
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.14	0.14	
/c Ratio	0.19	0.06	0.53	0.18	0.30	0.67	
control Delay	4.5	4. L	1.6	4.4	26.9	10.8	
Dueue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
otal Delay	4.5	1.4	9.7	4.4	26.9	10.8	
OS	<	A	A	A	U I	B	
vpproach Delay	4.1			6.7	13.6		
vpproach LOS	A			A	8		
ntersection Summary							
Sycle Length: 60							
ctuated Cycle Length: 60							
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green	phase 2:	EBT and	6:WBTL,	Start of G	reen		
latural Cycle: 60							
control Type: Actuated-Coordinated	linated						
Aaximum v/c Ratio: 0.67				1.1		•	
ntersection Signal Uelay: 7.6 ntersection Canacity Hillization 55 8%	ND EE 20%				Intersection LUS: A	LUS: A * Sanvira R	
Analysis Period (min) 15	00000			2		2200	
	6						
plits and Phases: 4: Roye	I S KUdu d	s Eigin Si	4: ROJELS ROAU & EIGITI SILEEL WEST				
🚽 Ø2 (R)							<b>1 1 1 1 1 1 1 1 1 1</b>
45 s							15 s

🐨 02 (R)	104
45 s	15 s
• 06 (R)	
45 5	

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HCM Signalized Intersection Capacity Analysis 4: Rogers Road & Elgin Street West	ection Ctre	n Capi	acity A est	nalysis			<existing> AM Peak Hour 09-28-2020</existing>
	t	1	\$	Ļ	•	•	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
	ŧ	×.	F	ŧ	F	۴.	
	388	57	282	364	63	297	
ch)	388	57	282	364	63	297	
(	006	1900	1900	1900	1900	1900	
()	6.2	6.2	6.2	6.2	6.5	6.5	
ie Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00	
	8.	0.85	1.00	1.00	1.00	0.85	
	1.00	1.00	0.95	1.00	0.95	1.00	
rot)	3433	1521	1750	3433	1750	1566	
	1.00	1.00	0.50	1.00	0.95	1.00	
Satd. Flow (perm) 3	3433	1521	919	3433	1750	1566	
or, PHF (	0.89	0.89	0.89	0.89	0.89	0.89	
	436	64	317	409	5	334	
	0.0	77 9		0 00,	-	780	
(hq	436	42	317	409	1	46	
Heavy Vehicles (%)	4%	5%	2%	4%	2%	2%	
Turn Type	NA	Perm	Perm	NA	Prot	Perm	
Protected Phases	2			9	4		
		2	9			4	
_	39.1	39.1	39.1	39.1	8.2	8.2	
s)	39.1	39.1	39.1	39.1	8.2	8.2	
	0.65	0.65	0.65	0.65	0.14	0.14	
Clearance Time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	
(hqh) (	2237	166	598	2237	239	214	
	0.13			0.12	c0.04		
Perm		0.03	c0.35			0.03	
	0.19	0.04	0.53	0.18	0.30	0.21	
Uniform Delay, d1	4.2	3.7	5.6	4.1	23.3	23.0	
	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.1	3.3	0.2	0.7	0.5	
Delay (s)	4.4	3.8	8.9	4.3	24.0	23.5	
Level of Service	A	A	A	A	ပ	U	
Approach Delay (s)	4.3			6.3	23.6		
Approach LOS	A			A	ပ		
Intersection Summary							
HCM 2000 Control Delay			10.0	오	M 2000 L	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	ntio		0.49				
Actuated Cycle Length (s)			60.09	Sur	Sum of lost time (s)	ime (s)	12.7
Intersection Capacity Utilization			55.8%		ICU Level of Service	Service	۵
Analvsis Period (min)			15				
r Critical Lane Groin							

HCM Unsignalized Intersection Capacity Analysis 5: Carlisle Street & Rogers Road	tersec ogers	tion C Road	apacit	y Analy	/sis		<existing> AM Peak Hour 09-28-2020</existing>
	1	Ť	Ŧ	~	۶	*	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		÷	£,		×		
Sign Control		Stop	Stop		Stop		
Traffic Volume (vph)	68	25	38	199	104	58	
Future Volume (vph)	89	25	38	199	104	58	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly flow rate (vph)	93	26	40	207	108	09	
Direction. Lane #	EB 1	WB 1	SB 1				
Volume Total (vph)	119	247	168				
Volume Left (vph)	93	0	108				
Volume Right (vph)	0	207	09				
Hadj (s)	0.22	-0.50	-0.07				
Departure Headway (s)	4.8	4.0	4.6				
Degree Utilization, x	0.16	0.27	0.22				
Capacity (veh/h)	708	864	728				
Control Delay (s)	8.7	8.4	8.9				
Approach Delay (s)	8.7	8.4	8.9				
Approach LOS	A	A	A				
Intersection Summary							
Delay			8.6				
Level of Service			A				
Intersection Capacity Utilization	Ę		39.8%	2	ICU Level of Service	Service	А
Analysis Period (min)			15				

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HCM Unsignalized Intersection Capacity Analysis 6: Greenly Drive & Carlisle Street	tterseo arlisle	ction C Street	apacity	/ Analy	/sis			₩	<existing> AM Peak Hour 09-28-2020</existing>	⊳ AM	Peak F	<b>ak Hour</b> 09-28-2020
	1	Ť	1	\$	Ļ	~	1	+	٠	۶	-	$\mathbf{F}$
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		¢			¢			¢			¢	
Traffic Volume (veh/h)	0	18	0	č	49		0	0	4	7	0	<del>, -</del>
Future Volume (Veh/h)	0	18	0	č	49		0	0	4	٢	0	
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)	0	20	0	ŝ	56		0	0	2	œ	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	57			20			84	83	20	88	82	56
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	57			20			84	83	20	88	82	56
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			100			100	100	100	66	100	100
cM capacity (veh/h)	1560			1609			906	810	1064	897	810	1016
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	20	99	2	6								
Volume Left	0	ŝ	0	œ								
Volume Right	0	-	£	-								
cSH	1560	1609	1064	606								
Volume to Capacity	0.00	0.00	0.00	0.01								
Queue Length 95th (m)	0.0	0.0	0.1	0.2								
Control Delay (s)	0.0	0.4	8.4	0.6								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	0.4	8.4	0.6								1
Approach LOS			A	A								
Intersection Summary												
Average Delay Intersection Capacity Utilization	_		1.5 17.9%	Q	ICU Level of Service	f Service			A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 7: Wilkins Gate & Carlisle Street	ersect isle S	tion Ca treet	apacity	/ Analy	/sis			Ψ	<pre><existing> AM Peak Hour</existing></pre>	J> AM	Peak I 09-21	ak Hour 09-28-2020
,	•	t	1	5	Ŧ	~	1	+	٠	۶	-	$\left  \mathbf{v} \right $
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		¢			<del>4</del>			¢			¢	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	œ	14		<del>.</del>	14	26	0	33	4	ę	17	ę
Future Volume (vph)	œ	14			14	26	0	33	4	ŝ	17	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	6	15			15	28	0	36	4	S	18	ŝ
Direction, Lane # E	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	25	44	40	24								
Volume Left (vph)	6		0	ę								
Volume Right (vph)	-	28	4	c								
	0.32	-0.38	-0.06	0.05								
Departure Headway (s)	4.4	3.7	4.0	4.1								
Degree Utilization, x	0.03	0.05	0.04	0.03								
Capacity (veh/h)	800	954	871	850								
Control Delay (s)	7.5	6.9	7.2	7.3								
Approach Delay (s)	7.5	6.9	7.2	7.3								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.2									
Level of Service			A									
Intersection Capacity Utilization			15.8%	Ō	ICU Level of Service	f Service			A			
Analysis Period (min)			15									

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HCM Unsignalized Intersection Capacity Analysis 1: Wilkins Gate & Elgin Street West	Stree	on Ca t Wes	ipacity st	Analy	.si		<existing> PM Peak Hour 09-28-2020</existing>
I	, t	~	\$	Ļ	1	•	
Movement E	EBT E	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	<del>ر</del> ي د			44	F	×	
Traffic Volume (veh/h)	65	16	27	599	15	36	
Future Volume (Veh/h) E	565	16	27	599	15	36	
Sign Control FI	Free			Free	Stop		
	%0			%0	%0		
Peak Hour Factor 0	0.98 (	0.98	0.98	0.98	0.98	0.98	
Hourly flow rate (vph)	577	16	28	611	15	37	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
	None			None			
Median storage veh)							
Upstream signal (m)							
pX, platoon unblocked							
vC, conflicting volume			593		946	296	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			593		946	296	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			79		94	95	
cM capacity (veh/h)			993		256	706	
Direction, Lane # EI	EB 1 E	EB 2	WB 1	WB 2	NB 1	NB 2	
Volume Total 3	385	208	232	407	15	37	
Volume Left	0	0	28	0	15	0	
e Right		16	0	0	0	37	
		1700	993	1700	256	706	
		0.12	0.03	0.24	0.06	0.05	
ith (m)	0.0	0.0	0.7	0.0	1.5	1.3	
lay (s)	0.0	0.0	1.3	0.0	19.9	10.4	
Lane LOS			A		ပ	в	
/ (s)	0.0		0.5		13.1		
Approach LOS					8		
Intersection Summary							
Average Delay			0.8				
Intersection Capacity Utilization		4	46.4% 1E	C	ICU Level of Service	Service	А
			2				

I Intersection Capacity Analysis nercial Site Driveway & Elgin Street West	ction C Site Driv	apacit veway	y Anal & Elgi	ysis n Stree	et West	<existing> PM Peak Hour 09-28-2020</existing>
Ť	۲	5	ŧ	4	×.	
EBT	EBR	WBL	WBT	NBL	NBR	
ŧ	*		ŧ		×	
612	0	0	605	0	0	
612	0	0	605	0	0	
Free			Free	Stop		
%0			%0	%0		
0.92	0.92	0.92	0.92	0.92	0.92	
665	0	0	658	0	0	
None			None			
			288			
		665		994	332	
		<b>ç</b> 99		994	332	
		4.1		6.8	6.9	
		4		1	4	
		2.2		3.5	3.3	
		100		100	100	
		934		245	669	
EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	
332	332	0	329	329	0	
0	0	0	0	0	0	
0	0	0	0	0	0	
1700	1700	1700	1700	1700	1700	
0.20	0.20	0.00	0.19	0.19	0.00	
0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	
					A	
0.0			0.0		0.0	
					A	
		00				

HCM Unsignalized Intersection Capacity Analysis 2: Proposed Commercial Site Driveway & Elgin Street West	ersec cial Si	tion C te Dri	apacit veway	y Anal & Elgi	ysis n Stre	et West	V
	t	1	5	ŧ	•	Ł	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	*-		ŧ		×	
Traffic Volume (veh/h)	612	0	0	605	0	0	
Future Volume (Veh/h)	612	0	0	605	0	0	
Sign Control	Free			Free	Stop		
Grade	%0			%0	%0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	665	0	0	658	0	0	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
	None			None			
Median storage veh)							
Upstream signal (m)				288			
pX, platoon unblocked							
vC, conflicting volume			665		994	332	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			665		994	332	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			100		100	100	
cM capacity (veh/h)			934		245	699	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	
Volume Total	332	332	0	329	329	0	
Volume Left	0	0	0	0	0	0	
Volume Right	0	0	0	0	0	0	
cSH	1700	1700	1700	1700	1700	1700	
Volume to Capacity	0.20	0.20	0.00	0.19	0.19	0.00	
Control Dolov (c)	0.0	0.0	0.0	0.0	0.0	0.0	
CUIII UI DEIAY (3)	0.0	0.0	0.0	0.0	0.0	0.0	
Annroach Delay (c)	00			00			
Approach LOS	2			2		9.9 P	
C							
Intersection Summary							
Average Delay			0.0	9	o lovo I II	ICITI and of Condeo	
Analysis Period (min)			15	2	חבמפור		
have a second second from the							

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Image: Field Service of the	EI         EI         MI         MI         MI         MI           (eMh)         539         53         45         55         50         35           (eMh)         539         53         45         55         50         35         5           (eMh)         539         53         45         55         50         35         5         5           (Mh)         539         53         45         56         30         35         5         5         35           (Mh)         51         59         30         630         50         33         5         5         35         5         35         5         35         5         36         5         36         5         33         5         5         33         5         5         33         5         5         33         5         5         33         5         5         33         5         5         33         5         5         33         5         5         33         5         5         33         5         5         5         33         5         5         5         33         5         5         5		10.00	5	2000						מ
EI         WB         WB         NB         NB           (br)         559         53         55         50         35           (br)         559         53         45         555         50         35           (br)         579         50         617         56         39         000           (br)         671         59         50         617         56         39           (br)         673         69         030         030         030         030           (br)         610         103         340         104         104         104           (br)         104         106         103         340         104         104         104           (br)         640         103         340         104         104         104         104           (br)         640         103         340         104         104         104         104           (br)         640         103         340         104         104         104           (br)         41         63         64         104         104         104           (br)         640         1	EI         EI         MI         MI         MI         MI           (enh)         59         53         5         <		t	۲	\$	Ļ	•	×.			Ť
Inters         Intersection	Intersection         1 <t< th=""><th>Movement</th><th>EBT</th><th>EBR</th><th>WBL</th><th>WBT</th><th>NBL</th><th>NBR</th><th></th><th>Lane Group</th><th>EB1</th></t<>	Movement	EBT	EBR	WBL	WBT	NBL	NBR		Lane Group	EB1
(weh)         595         53         45         555         50         35           (weh)         596         53         45         555         50         35           (weh)         621         59         50         617         56         39           (weh)         621         59         50         617         56         39           (weh)         621         59         50         617         56         39           (weh)         Mone         Mone         Mone         Mone         Mone           (weh)         194         100         194         100         1059         340           (it)         194         100         1059         340         100         1059         340           (it)         194         100         105         340         100         105         105         105         106         105         106 <t< td=""><td>(with)         559         13         45         555         10         35           (with)         579         15         16         50         35           (with)         621         59         50         617         56         39           (with)         621         59         50         617         56         39           (with)         621         59         50         617         56         39           (with)         More         Nore         Nore         Nore         Nore           (with)         194         103         340         103         340           (with)         194         103         340         103         340           (with)         110         134         103         340         103         340           (with)         111         013         340         103         340         103           (with)         111         103         340         103         103         103           (with)         111         103         340         103         103         103           (with)         111         103         103         103<td>Lane Configurations</td><td><b>4</b>₽</td><td></td><td>۴</td><td>ŧ</td><td>۴</td><td>ĸ</td><td></td><td>Lane Configurations</td><td>¥</td></td></t<>	(with)         559         13         45         555         10         35           (with)         579         15         16         50         35           (with)         621         59         50         617         56         39           (with)         621         59         50         617         56         39           (with)         621         59         50         617         56         39           (with)         More         Nore         Nore         Nore         Nore           (with)         194         103         340         103         340           (with)         194         103         340         103         340           (with)         110         134         103         340         103         340           (with)         111         013         340         103         340         103           (with)         111         103         340         103         103         103           (with)         111         103         340         103         103         103           (with)         111         103         103         103 <td>Lane Configurations</td> <td><b>4</b>₽</td> <td></td> <td>۴</td> <td>ŧ</td> <td>۴</td> <td>ĸ</td> <td></td> <td>Lane Configurations</td> <td>¥</td>	Lane Configurations	<b>4</b> ₽		۴	ŧ	۴	ĸ		Lane Configurations	¥
Methyll         Ego         35         55         50         35           (rpl)         621         59         50         617         56         39           (rpl)         621         59         50         617         56         39           (rpl)         621         59         50         617         56         39           (rpl)         617         56         39         600         600         600           (rpl)         194         None         None         None         None         104           (rol)         104         100         104         100         104         100         104         100         104         100         104         100         104         100         104         100         104         100         104         104         100         104         104         104         104         104         104         104         104         104         104         104         104         104         104         104         104         104         105         104         105         104         105         104         105         104         105         104         105	Victority         Fies         50         35         50         35           (Var)         0.39         0.99         0.99         0.99         0.99           (Var)         0.31         50         0.17         56         39           (Var)         0.39         0.99         0.99         0.99         0.99           (Var)         0.31         0.40         0.99         0.99         0.99           (Var)         0.41         0.69         1.91         0.60         0.99           (Var)         1.94         1.06         1.04         0.69         0.94           (Var)         1.94         1.06         1.05         3.40         0.05           (Var)         4.01         6.80         1.05         3.40         0.05           (Var)         4.01         1.05         3.40         0.05         0.05           (Var)         4.01         1.05         3.40         0.05         0.05           (Var)         4.11         6.80         1.05         3.40         0.05           (Var)         4.11         6.80         1.05         3.40         0.05           (Var)         4.11         6.80	Traffic Volume (veh/h)	559	23	45	555	20	35		Traffic Volume (vph)	46
File         File         Sign           0%         0%         0%         0%         0%           (ms)         6.1         5         0%         0%         0%           (ms)         6.1         5         0%         0%         0%           (ms)         6.1         5         0         0%         0%           (ms)         ms         ms         ms         ms           (ms)         ms         ms         ms         ms         ms <tr< td=""><td>Tiele         Tiele         Stop           0         0         0         0         0         0         0           (ms)         621         59         0         11         56         39           (ms)         621         59         0         11         56         39           (ms)         More         More         More         More         More           (ms)         10         10         10         10         10           (ms)         10         10         10         10         10           (ms)         10         10         10         10         10           (ms)         10         10         10         1</td><td>Future Volume (Veh/h)</td><td>559</td><td>53</td><td>45</td><td>555</td><td>20</td><td>35</td><td></td><td>Future Volume (vph)</td><td>467</td></tr<>	Tiele         Tiele         Stop           0         0         0         0         0         0         0           (ms)         621         59         0         11         56         39           (ms)         621         59         0         11         56         39           (ms)         More         More         More         More         More           (ms)         10         10         10         10         10           (ms)         10         10         10         10         10           (ms)         10         10         10         10         10           (ms)         10         10         10         1	Future Volume (Veh/h)	559	53	45	555	20	35		Future Volume (vph)	467
000000000000000000000000000000000000	(Iph)         000         000         000         000         000           (Iph)         621         59         617         56         39           (Iph)         621         59         617         56         39           (Iph)         Anne         Anne         Anne         Anne           (Iph)         None         None         None         Anne           (Iph)         None         194         100         Anne           (Iph)         194         100         340         Anne           (Iph)         194         100         340         Anne           (Iph)         4.1         6.80         1051         340           (Iph)         1.1         2.2         3.3         340           (Iph)         1.1         2.66         39         340           (Iph)         0.1         0.0         0         0         340           (Iph)         0.1	Sign Control	Free			Free	Stop			Turn Type	Z
(m)         0.30         0.90         0.90         0.90         0.90           (m)         6.21         59         50         617         56         39           (m)         6.21         59         50         617         56         39           (m)         None         None         None         None         None           (m)         14         100         14         100         None         None           (m)         14         100         134         100         None         None<	(m)         0.30         0.90         0.90         0.90         0.90           (m3)         (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)         (m3)         (m3)         (m3)           (m3)	Grade	%0			%0	%0			Protected Phases	
(ph)         521         59         50         617         56         39           (ms)         None	(rph)         6.21         59         50         617         56         39           (ms)         None         None         None         None         None         None           (mo)         None         194         100         104         100         104           (mo)         104         100         103         340         100         104           (mo)         104         100         103         340         100         104           (mo)         104         100         103         340         100         104           (mo)         680         1051         340         100         104         100         104           (mo)         680         1051         340         100         105         340         106         105         106           (mo)         411         680         1051         340         106         105         106         106         105         106         106         106         106         106         106         106         106         106         106         106         106         106         106         106         106         106         106         106 <td>Peak Hour Factor</td> <td>06.0</td> <td>0.00</td> <td>0.90</td> <td>0.90</td> <td>0.90</td> <td>0.90</td> <td></td> <td>Permitted Phases</td> <td></td>	Peak Hour Factor	06.0	0.00	0.90	0.90	0.90	0.90		Permitted Phases	
(Ints)         (Ints)         Qase       None       None         Vision       None       None         Vision       None       None         Vision       194         Vision       194         Vision       194         Vision       194         Vision       194         Vision       194         Vision       680       1053       340         Vision       212       662       340         Minh       203       365       360         Minh       203       363       360       360         Minh       203       363       360       360       360         Minh       203       303       36       30       300         Minh       203       303       36       30       30         Minh <td>(tris)         (tris)           (ce)         None         None           (ce)         None         None           (ce)         None         None           (ce)         194         (ce)           (ce)         104         (ce)           (ce)         104         (ce)           (ce)         103         340           (ce)         104         105         340           (ce)         103         340         340           (ce)         103         340         340           (ce)         103         340         340           (ce)         103         340         340           (ce)</td> <td>Hourly flow rate (vph)</td> <td>621</td> <td>59</td> <td>20</td> <td>617</td> <td>56</td> <td>39</td> <td></td> <td>Detector Phase</td> <td></td>	(tris)         (tris)           (ce)         None         None           (ce)         None         None           (ce)         None         None           (ce)         194         (ce)           (ce)         104         (ce)           (ce)         104         (ce)           (ce)         103         340           (ce)         104         105         340           (ce)         103         340         340           (ce)         103         340         340           (ce)         103         340         340           (ce)         103         340         340           (ce)	Hourly flow rate (vph)	621	59	20	617	56	39		Detector Phase	
(ns)       None       None         (eit)       None       None         (eit)       194         (in)       194       340         (in)       105       340         (in)       105       340         (in)       105       340         (in)       106       107       108       212       662         (in)       103       103       203       305       103         (in)       104       102       108       203       108	(In Item)         None         None           (In Item)         None         None           (In Item)         194           (In Item)         193           (In Item)         680           (In Item)         631           (In Item)         633           (In Item)         643           (In Item)         643 <td>Pedestrians</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Switch Phase</td> <td></td>	Pedestrians								Switch Phase	
(ms)         None         None         None           Res         None         None         None           (im)         14         None         None           (im)         14         100         100           (im)         14         100         100           (im)         131         100         100           (im)         680         1059         340           (im)         680         1051         340           (im)         680         1051         340           (im)         68         103         340           (im)         68         103         340           (im)         68         103         340           (im)         61         14         69           (im)         94         14         94           (im)         0         0         0         0           (im)         10         0         56         0           (im)         110         126         0.0         0           (im)         0         0         0         0         0           (im)         0         0         0	(ms)         (ms)           ge         None         None           (11)         194           (11)         194           (11)         194           (11)         194           (11)         194           (11)         194           (11)         194           (11)         193           (12)         193           (13)         194           (14)         100           (15)         105           (16)         105           (17)         10           (14)         10           (14)         10           (16)         11           (17)         11           (14)         11           (14)         11           (14)         11           (14)         11           (14)         11           (14)         11           (14)         11           (14)         11           (14)         11           (14)         11           (14)         11           (14)         11           (14)         11	Lane Width (m)								Minimum Initial (s)	20.0
Ref     None     None       (vel)     194       (vel)     194       (vel)     194       (vol)     680     1059       olume     680     1059       olume     680     1059       olume     680     1051       not vol     4,1     6,8       not vol     14,1     6,8       not vol     14,1     2,6       not vol     2,2     3,5       edy     2,1     6,62       edy     0,0     0,0       11,00     140     0,0       0,0     0,0     10,0       0,0     0,0     10,3       0,0     0,0     10,3       1,1     0,0     10,0       1,0     1,0     1,0       1,0     1,0     1,0       1,0     1,0     1,0       1,0     1,0     1,0       1,0     1,0	More         More           veb         194           veb         194           veb         194           veb         100           veb         194           veb         100           olume         680         1009           olume         680         100           olume         4.1         6.8           olume         7.3         3.3           olume         7.4         94           bit         93         8           bit         93         93           bit         0.3         0.3           olume         0.3         0.3           olume         0.3         0.3           bit         0.3         0.3           bit	Walking Speed (m/s)								Minimum Split (s)	31.2
(int)         None         None           vev)         194           vev)         194           it(n)         680         1053         340           it(n)         680         1051         340           it(n)         411         68         69           it(n)         411         68         69           it(n)         98         212         84           it(n)         98         212         62           it(n)         0.0         0.0         0.0         0.0           it(n)         0.0         0.0         0.0         0.0           it(n)         0.0         0.0         0.0         0.0           it(n) <t< td=""><td>(iet)         None         None           vent         194           vent         194           vent         194           vent         194           vent         680         1099           vent         680         1091           vent         680         1091           vent         680         1091           vent         680         1051           vent         41         68           vent         91         14           vent         91         182           vent         170         193           vent         170</td><td>Percent Blockage</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Total Split (s)</td><td>45.(</td></t<>	(iet)         None         None           vent         194           vent         194           vent         194           vent         194           vent         680         1099           vent         680         1091           vent         680         1091           vent         680         1091           vent         680         1051           vent         41         68           vent         91         14           vent         91         182           vent         170         193           vent         170	Percent Blockage								Total Split (s)	45.(
None         None           velo         14           ution         14           ution         14           ution         14           ution         18           ution         680         105           ution         41         68           ution         41         68           ution         41         68           vol         14         68           ution         41         68           ution         14         266           ution         14         266           ution         1700         1700           ution         1700         1700         1700           ution         0.0         0         0           ution         0.0         0.0         108           ution         1700         1700         1700           ution         100         0.0         0.0           ution         1700         1700 <td>None         None         None           veb)         14         10           l(m)         14         10           locked         109         340           locked         109         340           locked         109         340           locked         11         10           locked         109         340           notoin         14         10           notoin         10         10           notoin         14         10           notoin         14         14           14         26         33           11         26         12         62           11         26         10         0         12           11         26         10         10         21           11         11         26         10         10           11         11         26         10         10           11         11</td> <td>Right turn flare (veh)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Total Split (%)</td> <td>75.0%</td>	None         None         None           veb)         14         10           l(m)         14         10           locked         109         340           locked         109         340           locked         109         340           locked         11         10           locked         109         340           notoin         14         10           notoin         10         10           notoin         14         10           notoin         14         14           14         26         33           11         26         12         62           11         26         10         0         12           11         26         10         10         21           11         11         26         10         10           11         11         26         10         10           11         11	Right turn flare (veh)								Total Split (%)	75.0%
vel)       194         li(i)       19         vol       680       109         olune       680       109         olune       680       1051         ni vol       11       68       69         ni vol       98       212       662         ni vol       212       662       39         station       212       662       39         station       212       662       39         station       213       662       39         station       214       266       39         station       213       662       39         station       214       206       39         station       218       018       212       662         station       213       662       39         statin	194         10         Induce       680       103       340         outwoil       680       105       340         outwoil       680       105       340         Mit vol       680       1051       340         Mit vol       680       212       662         #       EB1       EB2       WB1       NB2         #       0       0       0       0       0       0         Mit vol       100       00       00       00       00       00         Mit (m)       00       01       03       03       03       03         Mit (m)       00       01       03       03       03       03         Mit (m)       00       01       03       03       03       03         Mit (m)       00       01       03	Median type	None			None				Yellow Time (s)	4
I (n)     194       I (n)     100       I (n)     680     1059     340       Int vol     680     1051     340       Int vol     680     1051     340       I (n)     680     1051     340       I (n)     680     1051     340       I (n)     10     105     340       I (n)     21     65     35       I (n)     908     212     652       I (n)     908     212     652       I (n)     100     100     210     662       I (n)     100     100     212     662       I (n)     100     100     216     662       I (n)     100 <td< td=""><td>I(n)     194       Incolume     680     1059     340       Incolume     680     1059     340       Incolume     41     680     1051     340       Incolume     41     680     1051     340       Incolume     41     68     69     33       Incolume     41     68     53     33       Incolume     22     35     33       Incolume     23     33     33       Incolume     24     24     34       Incolume     38     38     39       Incolume     39     30     39       Incolume     39     30     39       Incolume     30     30     39       Incolume     30     30     39       Incolume     30     30     39       Incolume     30     30     30       Incolue     30</td><td>Median storage veh)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>All-Red Time (s)</td><td>2.</td></td<>	I(n)     194       Incolume     680     1059     340       Incolume     680     1059     340       Incolume     41     680     1051     340       Incolume     41     680     1051     340       Incolume     41     68     69     33       Incolume     41     68     53     33       Incolume     22     35     33       Incolume     23     33     33       Incolume     24     24     34       Incolume     38     38     39       Incolume     39     30     39       Incolume     39     30     39       Incolume     30     30     39       Incolume     30     30     39       Incolume     30     30     39       Incolume     30     30     30       Incolue     30	Median storage veh)								All-Red Time (s)	2.
Incked         1.00           olume         680         1059         340           olume         680         1051         340           olume         680         212         68           olume         22         35         33           bit         981         NB1         NB2           bit         22         36         39           bit         266         39         30           bit         1700         1700         214         025           bit         0         0         0         33           bit         0         0         0         34           bit         0         0         0         0           bit         0         0         0         0           bit	Incked         1.00           olume         680         1059         340           olume         680         1051         340           olume         680         1051         340           off         680         1051         340           off         680         1051         340           off         680         1051         340           virt         680         1051         340           virt         680         1051         340           virt         680         1051         642           virt         222         542         94           virt         281         81         82         33           virt         0         0         56         39           virt         0         0         0         56           virt         0.0         0.0         0.0         0.0           virt         0.0         0.0         0.0         0.0           virt         0.0         0.0         0.0         0.0           virt         0.0         0.0         0.0         0           virt         0.0         0.0	Upstream signal (m)				194				Lost Time Adjust (s)	0.0
Othme         680         1059         340           nt vol         41         680         1051         340           nt vol         41         680         1051         340           nt vol         41         68         1051         340           nt vol         41         68         69         1051         340           k         1         68         69         1051         340           k         22         35         35         33         33           k         1         68         71         66         39           hth)         266         50         308         56         39           t         13         266         50         39         56           t         266         50         308         56         39           t         13         266         50         39         56           t         0         0         0         0         36           t         10         0         10         10         15           t         10         0         212         662         39           t <td>Othme         680         1051         340           nit vol         1         6         1051         340           vol         41         68         69         1051         340           k         22         35         33         33         33           k         21         68         71         94         41         44           k         21         62         39         39         33         33         33           k         13         14         266         39         39         39         39           k         13         18         18         18         39</td> <td>pX, platoon unblocked</td> <td></td> <td></td> <td></td> <td></td> <td>1.00</td> <td></td> <td></td> <td>Total Lost Time (s)</td> <td>6.2</td>	Othme         680         1051         340           nit vol         1         6         1051         340           vol         41         68         69         1051         340           k         22         35         33         33         33           k         21         68         71         94         41         44           k         21         62         39         39         33         33         33           k         13         14         266         39         39         39         39           k         13         18         18         18         39	pX, platoon unblocked					1.00			Total Lost Time (s)	6.2
mr vol       680       1051       340         nu vol       680       1051       340         k       41       68       69         k       22       35       33         k       908       212       662         min)       908       100       212       662         min       91       91       92       90         min       91       92       93       93         min       1700       1700       212       662         min       0       0       0       10       10         min       0       0       0       15       15         min       0       0       0       16       16         min       0       0       0       16       16         min       0       0       0       16       16 <tr< td=""><td>mr vol         All         680         1051         340           nor vol         41         680         1051         340           41         680         1051         340         100           8         22         35         33         33           8         22         35         33         33           8         22         35         33         33           8         21         662         36         33           8         212         662         39         36           414         266         50         308         56         39           610         100         50         0         56         39           611         200         0         0         39         56           610         100         100         100         39         56           610         0.0         0         0         39         56           610         0.0         0         0         39         5           610         0.0         0         0         0         5           610         0.0         0         0</td><td>vC. conflicting volume</td><td></td><td></td><td>680</td><td></td><td>1059</td><td>340</td><td></td><td>Lead/Lag</td><td></td></tr<>	mr vol         All         680         1051         340           nor vol         41         680         1051         340           41         680         1051         340         100           8         22         35         33         33           8         22         35         33         33           8         22         35         33         33           8         21         662         36         33           8         212         662         39         36           414         266         50         308         56         39           610         100         50         0         56         39           611         200         0         0         39         56           610         100         100         100         39         56           610         0.0         0         0         39         56           610         0.0         0         0         39         5           610         0.0         0         0         0         5           610         0.0         0         0	vC. conflicting volume			680		1059	340		Lead/Lag	
Ind vol         41         68         69           Vol         41         68         69           41         68         69         33           41         22         35         33           41         266         90         212         65           41         266         50         36         39           414         266         50         30         56         39           60         50         30         56         39         56         39           61         0         50         0         56         39         56         39           61         0.0         0.0         10         100         212         66         39           61         0.0         0.0         13         0.0         39         56         39           61         0.0         0.0         13         0.0         0.0         39         50           61         0.0         0.0         0.0         1.0         1.0         1.0         1.0           61         0.0         0.0         0.0         1.0         1.0         1.0         1.0         1.	Mr (vol         131         340           Vol         41         68         69           A         1         68         69           A         22         35         33           A         98         71         69           A         98         74         94           A         98         21         84           A         98         21         84           A         14         266         50         308         56         39           A         414         266         50         308         56         39           A         0         0         56         0         39         56           B         0         0         0         56         0         56           C         170         170         180         120         562           Sh(m)         0.0         0         21         66         56           Sh(m)         0.0         0         21         66         56           Sh(m)         0.0         0         21         66         56           A         17         17	vC1, stage 1 conf vol								Lead-Lag Optimize?	
Ival     680     1051     340       4.1     6.8     6.9       4.1     6.8     6.9       4.1     6.8     6.9       4.1     6.8     6.9       4.1     2.2     3.5     3.3       4.1     2.6     3.1     9.4       4.1     2.6     3.0     3.0     5.6       4.1     2.6     5.0     3.0     5.6       7.1     9.8     7.00     5.6     3.9       6     5.0     3.0     5.6     3.9       7.1     2.6     5.0     3.0     5.6       7.1     1.0     7.00     2.12     6.62       8     7.00     0.0     0.100     2.12     6.62       9.1     0.10     0.10     0.10     0.0     3.0       9.1     0.1     0.0     0.0     2.15     6.2       9.1     0.0     0.0     2.15     6.2     0.0       9.1     0.1     0.0     0.0     0.0     0.15       9.1     0.1     0.0     0.1     0.0     0.1       9.1     0.0     0.1     0.1     0.1     0.1       9.1     0.1     0.1     0.1     0.1 <td< td=""><td>Ivol         680         1051         340           4.1         6.8         6.9         3.3           6         94         74         94           1         2.2         3.5         3.3           6         94         74         94           1         2.2         3.5         3.3           6         94         74         94           1         2.12         6.62         94           1         1.2         6.62         9           1         1.2         6.63         94           1.1         2.65         90         0         56         39           1.1         0.6         0.7         0.7         0.39         56         39           2.15         5.62         0         0         0         39         56         56           2.16         0.18         0.18         0.25         0.65         56         56           2.16         0.0         0.13         0.24         10.8         56         56           2.17         0.0         0.14         0.0         0.14         10.8         57           2.16         0.</td><td>vC2, stage 2 conf vol</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Recall Mode</td><td>C-Ma)</td></td<>	Ivol         680         1051         340           4.1         6.8         6.9         3.3           6         94         74         94           1         2.2         3.5         3.3           6         94         74         94           1         2.2         3.5         3.3           6         94         74         94           1         2.12         6.62         94           1         1.2         6.62         9           1         1.2         6.63         94           1.1         2.65         90         0         56         39           1.1         0.6         0.7         0.7         0.39         56         39           2.15         5.62         0         0         0         39         56         56           2.16         0.18         0.18         0.25         0.65         56         56           2.16         0.0         0.13         0.24         10.8         56         56           2.17         0.0         0.14         0.0         0.14         10.8         57           2.16         0.	vC2, stage 2 conf vol								Recall Mode	C-Ma)
4.1     6.8     6.9       6     22     35     33       6     94     74     94       1(h)     22     35     33       #     EB1     EB2     WB1     WB2     WB3       #     414     266     50     308     56     39       11     266     50     308     56     39       1100     1700     1700     0     0     0       1100     1700     00     0     15       1100     1700     00     00     212     662       81h(m)     0.0     0     15     00       1100     1700     1700     212     662       81h(m)     0.0     0.18     0.16     0.16       92     0     0     0     15       91h(m)     0.0     0.14     00     00       92     15     0     0     15       93     0     0.0     0.18     0.16       94     0     0     0     15       95     0     0     0     15       96     0     0     0     27       97     0     0     0     0	4.1     6.8     6.9       6     22     35     33       6     94     74     94       1h(h)     908     212     662       #     EB1     EB2     WB1     WB2     WB3     NB1     NB2       41     2.6     50     308     308     56     39       60     59     0     0     56     30       61     10     0.0     212     662       70     59     0     0     39       61     0.16     0.0     0.0     212     662       61     0.16     0.0     0.0     0.0     0.0       51     0.16     0.0     0.0     0.0     0.0       51     0.0     0.0     1.4     0.18     0.18       51     0.0     0.0     1.4     0.18     0.18       51     0.0     0.0     279     10.8       51     0.0     0.0     279     10.8       51     0.0     0.0     0.14     0.18       51     0.0     0.0     279     10.8       51     0.0     0.0     279     10.8       51     0.0     0.0     0.0 </td <td>vCu, unblocked vol</td> <td></td> <td></td> <td>680</td> <td></td> <td>1051</td> <td>340</td> <td></td> <td>Act Effct Green (s)</td> <td>39.(</td>	vCu, unblocked vol			680		1051	340		Act Effct Green (s)	39.(
k     22     35     33       kill)     908     74     94       ihl)     908     212     662       #     EB1     EB2     WB1     WB2       #     414     266     50     308     56       0     9     50     0     5     39       1100     1700     908     1700     18     0.5       1100     1700     908     1700     212     662       55     0     0     0     5     39       56     0     0     0     23     0.6       51     0.18     0.18     0.18     0.6       51     0.0     0.13     0.13     0.7     1.5       51     0.0     0.14     0.0     0.7     1.6       62     0     0.7     1.9     1.8       7     0.0     0.7     20.9     1.8       7     0     0.7     20.9     1.8       665     1.7     20.9     1.8       7     0     0.7     2.09       80     1.7     2.09     1.8       665     1.7     2.09       7     0     3.35	k       22       35       33         k       94       74       94         fth)       908       212       662         #       414       266       50       308       NB1       NB2         414       266       50       308       56       39         city       0       50       0       56       39         city       0.3       0       0       56       0         sth(m)       0.0       0.18       0.18       0.24       0.16         sth(m)       0.0       0.13       0.0       39       0.0         sth(m)       0.0       0.14       0.0       0.0       39         sth(m)       0.0       0.14       0.0       0.0       15         sth(m)       0.0       0.14       0.0       0.0       15         sth(m)       0.0       0.0       0.0       10       16         sth       1       2.0       0.0       0.0       16         sth(m)       0.0       0.0       0.0       10       10         sth(m)       1.0       0.0       0.0       10       10      d	tC, single (s)			4.1		6.8	6.9		Actuated g/C Ratio	0.6
6         22         33         33           ir(h)         98         74         94           ir(h)         98         74         94           ir(h)         98         212         63           ir(h)         98         213         81         NB           ir(h)         0         50         213         63           ir(h)         0         56         39         56           ir(h)         0         56         39         56           ir(h)         0         56         0         39           ir(h)         0.24         0.16         0.00         212         66           51         0.24         0.16         0.00         212         60           51         0.2         0.16         0.00         212         60           51         0.0         0.0         1.0         10.8         1.5           6(s)         0.0         0.14         0.0         0.0         1.9         1.8           7(s)         0.0         0.14         0.0         0.0         1.9         1.8           7(s)         0.0         0.1         1.0         1.9 </td <td>6         22         35         33           11         94         74         94           11         12         81         81         81           411         266         50         308         56         39           11         11         266         50         308         56         39           11         26         50         308         56         39         36           11         26         50         308         56         0         39           261         0.0         59         0         0         56         0           261         0.16         0.06         170         170         39         26           261         0.0         11         0.0         0         3         15         45           261         0.0         0.14         0.0         21         66         39           27         0.0         0.1         0.0         0.1         10         30           27         0.0         0.0         0.1         0.0         10         10           28         0.0         0         0         10</td> <td>tC, 2 stage (s)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>v/c Ratio</td> <td>0.23</td>	6         22         35         33           11         94         74         94           11         12         81         81         81           411         266         50         308         56         39           11         11         266         50         308         56         39           11         26         50         308         56         39         36           11         26         50         308         56         0         39           261         0.0         59         0         0         56         0           261         0.16         0.06         170         170         39         26           261         0.0         11         0.0         0         3         15         45           261         0.0         0.14         0.0         21         66         39           27         0.0         0.1         0.0         0.1         10         30           27         0.0         0.0         0.1         0.0         10         10           28         0.0         0         0         10	tC, 2 stage (s)								v/c Ratio	0.23
6         94         74         94           rh(h)         908         212         662           #         EB1         EB2         WB1         WB2         WB3         NB1         NB2           #         EB1         EB2         WB1         WB2         WB3         NB1         NB2           #         EB1         EB2         WB1         WB2         WB3         NB1         NB2           11         265         30         308         56         39         50         39           110         1700         1700         100         0.0         0.0         0.0         303         50         30           acty         0.0         0.0         10.0         0.0         212         662         306         50         30           301         0.0         0.0         10.0         0.0         213         662         0.0         30         30         30         30         30           4(s)         0.0         0.0         0.10         2.19         10.8         30         30         30         30           1/(s)         0.0         0.1         0.0         0.1         0.	6         94         74         94           rh/h)         908         212         662           #         EB1         EB2         WB3         NB3         NB           4         14         265         303         305         50         30           0         0         50         0         55         39         NB         NB           10         59         0         50         30         56         39         NB         NB           11         266         308         308         30         56         39         NB         NB           10         59         0         0         56         39         NB         NB         NB           11         16         00         170         170         39         NB         NB           51         10         10         00         13         13         NB         NB           51         0.0         0.14         0.0         0.0         27.9         10.8           61         10.0         10.0         10.8         10.8         10.8         10.8         10.8           61         0.0	tF (s)			2.2		3.5	3.3		Control Delay	4.6
(h1)     908     212     662       #     EB1     EB2     WB1     WB2     WB3     NB1     NB2       414     266     50     308     308     56     39       0     5     0     0     5     0       1700     1700     1700     908     1700     1700     212     662       85h(m)     0.24     0.16     0.0     0     212     662       85h(m)     0.0     0.13     0.12     662     06       85h(m)     0.0     0.14     0.0     212     662       95h(m)     0.0     0.14     0.0     0.16     15       97     0.0     0.14     0.0     0.0     219     662       97     0.0     0.0     219     0.8     15       97     0.0     0.14     0.0     0.18     0.18     0.9       97     0.0     0.13     0.19     0.18     0.18       170     1.1     20.9     0     0.16     0.18       171     20.9     0     0     2.9     0       171     20.9     0     0     0.18     0.18       171     20.9     0     0 </td <td>(h1)         908         212         662           #         EB1         EB2         WB1         WB2         MB1         NB2           411         266         50         308         56         39           0         0         50         0         56         39           100         1700         908         1700         120         56         39           51         0         0         5         39         56         39           610         1700         1700         212         662         39           511         0.24         0.16         0.06         213         662           511         0.23         0.0         0.13         0.13         0.24         0.05           511         0.24         0.16         0.06         130         120         100           511         0.0         0.0         14         0.0         0.0         20         0.0           62         0.0         0.0         0.0         0.0         0.0         0.0         0.0           610         0.0         0.0         0.0         0.0         0.0         0.0         0.0</td> <td>p0 queue free %</td> <td></td> <td></td> <td>94</td> <td></td> <td>74</td> <td>94</td> <td></td> <td>Queue Delay</td> <td>0.0</td>	(h1)         908         212         662           #         EB1         EB2         WB1         WB2         MB1         NB2           411         266         50         308         56         39           0         0         50         0         56         39           100         1700         908         1700         120         56         39           51         0         0         5         39         56         39           610         1700         1700         212         662         39           511         0.24         0.16         0.06         213         662           511         0.23         0.0         0.13         0.13         0.24         0.05           511         0.24         0.16         0.06         130         120         100           511         0.0         0.0         14         0.0         0.0         20         0.0           62         0.0         0.0         0.0         0.0         0.0         0.0         0.0           610         0.0         0.0         0.0         0.0         0.0         0.0         0.0	p0 queue free %			94		74	94		Queue Delay	0.0
#         EB1         EB2         WB1         WB2         WB3         NB1         NB2           414         266         50         308         56         39           0         5         0         0         56         39           10         1700         1700         968         1700         1700         212         662           51         0.0         0.0         212         662         50         50         50           51         0.16         0.06         0.18         0.100         212         662           51         0.0         0.0         1.4         0.0         27.9         15           61         0.0         0.14         0.0         0.0         27.9         16           61         0.0         0.0         27.9         16         0.0         17           61         0.0         0.0         27.9         16         0.0         17         17           62         0.0         0.0         27.9         19         18         16         16           61         0.0         0.0         27.9         19         18         16         16	#         EB1         EB2         WB1         WB2         WB3         NB1         NB2           414         266         50         308         56         39           0         59         0         0         56         0           10         100         100         908         1700         124           261         0.18         0.18         0.24         0.06           351         0.24         0.16         0.06         39           351         0.24         0.16         0.06         13         0.24           351         0.0         0.13         0.18         0.24         0.05           351         0.0         0.14         0.0         0.0         13         0.0           4(s)         0.0         0.14         0.0         0.0         13         13           4(s)         0.0         0.0         0.0         10         10         10           4(s)         0.0         0.0         0.0         10         10         10           4(s)         0.0         0.0         0.0         10         10         10         10           4(s) <td< td=""><td>cM capacity (veh/h)</td><td></td><td></td><td>908</td><td></td><td>212</td><td>662</td><td></td><td>Total Delay</td><td>4.0</td></td<>	cM capacity (veh/h)			908		212	662		Total Delay	4.0
414     266     50     308     56     39       0     59     0     0     56     0       10     59     0     0     56     0       114     246     50     308     308     56     39       10     59     0     0     55     0     39       117     0     170     170     221     662       516     0.0     18     0.25     662       516     0.0     13     0.18     0.25     662       516     0.0     1.4     0.0     82     1.5       517     0.0     0.0     27.9     10.8       51     0.0     0.0     27.9     10.8       61     0.0     0.0     27.9     10.8       7     0.0     0.7     20.9       61     0.0     0.7     20.9       7     0.0     0.7     20.9       8     1.7     20.9     2       7     0.0     0.7     2.0       8     1.7     2.0     0.7       8     0.0     0.7     2.0       9     10.8     2.0     0.9       10.8     0.0     0.7 </td <td>414     266     50     308     56     39       0     0     50     0     56     0       10     0     59     100     100     39       100     100     100     100     10     39       55h     0     0     0     56     0       55h     0     0     0     56     0       55h     0     10     10     21     39       55h     0     0     14     00     18     0.5       51h     0.0     0.1     10     0.0     82     15       51h     0.0     0.1     1.6     0.6     18     0.8       51h     0.0     0.1     1.0     0.0     82     15       51h     0.0     0.0     1.4     0.0     0.1     1.8       61     0.0     0.0     1.4     0.0     1.8     1.0       7(5)     0.0     0.1     2.0     1.0     2.0     0       7(5)     0.0     0.1     2.0     0.0     0.1     2.0       7(5)     0.0     0.1     0.1     2.0     0.0     0.1       7(5)     0.0     0.1     2.0</td> <td>Direction Lane #</td> <td>FB 1</td> <td>FB 2</td> <td>WB 1</td> <td>WB 2</td> <td>WB3</td> <td>NB 1</td> <td>NR 2</td> <td>LOS</td> <td></td>	414     266     50     308     56     39       0     0     50     0     56     0       10     0     59     100     100     39       100     100     100     100     10     39       55h     0     0     0     56     0       55h     0     0     0     56     0       55h     0     10     10     21     39       55h     0     0     14     00     18     0.5       51h     0.0     0.1     10     0.0     82     15       51h     0.0     0.1     1.6     0.6     18     0.8       51h     0.0     0.1     1.0     0.0     82     15       51h     0.0     0.0     1.4     0.0     0.1     1.8       61     0.0     0.0     1.4     0.0     1.8     1.0       7(5)     0.0     0.1     2.0     1.0     2.0     0       7(5)     0.0     0.1     2.0     0.0     0.1     2.0       7(5)     0.0     0.1     0.1     2.0     0.0     0.1       7(5)     0.0     0.1     2.0	Direction Lane #	FB 1	FB 2	WB 1	WB 2	WB3	NB 1	NR 2	LOS	
0         0         50         0         56         0           10         59         0         0         56         0           10         1700         1700         1700         212         662           10         0.0         0.14         0.0         212         662           10         0.0         0.14         0.0         212         662           11         0.0         0.18         0.16         0.06           13h(m)         0.0         0.14         0.0         0.0         82           10         0.0         0.0         27.9         10.8         10.8           10         0.0         0.0         27.9         10.8         10.8           10         0.0         0.1         20.9         10.8         10.8           10         0.0         0.1         20.9         10.8         10.8           10         0.0         0.1         20.9         10.8         10.8           10         0.0         0.1         20.9         10.8         10.8           10         0.0         0.1         20.9         10.8         10.8           11	0         0         50         0         56         0           10         59         0         0         56         0           10         59         0         0         56         0           110         0.16         0.06         110         130         25         662           51         0.24         0.16         0.06         130         25         0.06           51         0.0         0.13         0.13         0.25         0.65           51         0.0         0.14         0.0         0.27         10.8           51         0.0         0.0         27         10.8         10.8           7(5)         0.0         0.7         20         B         B           7(5)         0.0         0.7         20         B         B           7(5)         0.0         0.7         20         B         B           7(5)         0.0         0.7         20         C         C           7(5)         0.0         0.7         20         B         B           pacity Ulilization         33%         fCU Level of Service         A	Volume Total	414	266	50	308	308	56	30	Approach Delay	4.0
0         59         0         0         39           acity         1700         1700         1700         1700         212         662           b5h         0.1         0.0         0.0         1.4         0.18         0.16         0.06           55h         0.0         0.0         1.4         0.18         0.18         0.16         0.05           51h         0.0         0.0         1.4         0.0         0.0         27.9         10.8           55h         0.0         0.0         27.9         10.8         10.8         10.8           7         0.0         0.7         2.0         0.0         27.9         10.8           7         0.0         0.7         2.0         0.9         2.0         0.0           7         20.9         B         0.0         0.7         2.0         0.0           7         20.9         0.1         2.0         0.5         0.5         0.5         0.5           7         2.0         0.1         2.0         0.6         0.7         0.7         0.7         0.7           7         2.0         0.0         0.7         2.0         0.7 <td>0         59         0         0         0         39           city         100         700         98         1700         212         662           5h(m)         0.0         0.0         130         212         662           5h(m)         0.0         0.14         0.0         82         15           5h         0.0         0.0         13         9.0         10.8         10.8           5h         0.0         0.0         14         0.0         82         15           5h         0.0         0.0         27.9         10.8         10.8         10.8           5h         0.0         0.0         27.9         10.8         10.8         10.8           (5)         0.0         0.1         20.9         10.8         10.8         10.8           (5)         0.0         0.1         27.9         10.8         10.8         10.8           (5)         0.0         0.1         20.9         20.9         20.8         10.8           (5)         0.0         0.1         20.9         20.9         20.8         10.8           (5)         0.0         0.1         20.9         &lt;</td> <td>Volume Left</td> <td>0</td> <td>0</td> <td>20</td> <td>0</td> <td>0</td> <td>26</td> <td>0</td> <td>Approacn LUS</td> <td></td>	0         59         0         0         0         39           city         100         700         98         1700         212         662           5h(m)         0.0         0.0         130         212         662           5h(m)         0.0         0.14         0.0         82         15           5h         0.0         0.0         13         9.0         10.8         10.8           5h         0.0         0.0         14         0.0         82         15           5h         0.0         0.0         27.9         10.8         10.8         10.8           5h         0.0         0.0         27.9         10.8         10.8         10.8           (5)         0.0         0.1         20.9         10.8         10.8         10.8           (5)         0.0         0.1         27.9         10.8         10.8         10.8           (5)         0.0         0.1         20.9         20.9         20.8         10.8           (5)         0.0         0.1         20.9         20.9         20.8         10.8           (5)         0.0         0.1         20.9         <	Volume Left	0	0	20	0	0	26	0	Approacn LUS	
1700         1700         908         1700         212         662           acity         0.24         0.16         0.06         0.18         0.26         0.06           \$5)         0.0         0.0         9.2         0.06         0.18         0.26         0.06           \$5)         0.0         0.0         9.2         0.0         0.0         27.9         10.8           \$5)         0.0         0.0         27.9         10.8         0.6         0.79         10.8           \$(s)         0.0         0.7         0.0         27.9         10.8         0.0         0.7         20.9           \$(s)         0.0         0.7         20.9         B         0.0         0.1         20.9         B           \$(s)         1.0         0.7         20.9         B         C         C         C           \$(s)         1.7         20.9         0.0         1.7         20.9         C         C         C           \$(s)         1.7         20.9         0.0         0.1         2.1         C         C         C         C         C         C         C         C         C         C         C	1700     1700     1700     908     1700     212     662       55h (m)     0.24     0.16     0.06     0.18     0.18     0.26     0.06       5)     0.0     0.0     1.4     0.0     0.0     279     10.8       5)     0.0     0.0     1.4     0.0     0.0     279     10.8       6(s)     0.0     0.79     1.08     0.79     0.79     10.8       7(s)     0.0     0.7     2.09     B       7(s)     0.0     0.7     2.09     B       7(s)     1.7     2.09     B       7(s)     1.7     2.03     C       7     1.7     1.7     C       7     1.7     1.7     1.7       7     1.7     1.7     1.7       7     1.7     1.7     1.7       8     1.1     1.7     1.7	Volume Right	0	59	0	0	0	0	39	Intersection Summary	
city 0.24 0.16 0.06 0.18 0.18 0.26 0.06 55h (m) 0.0 0.0 1.4 0.0 0.0 8/2 1.5 5) 0.0 0.0 1.4 0.0 0.0 7/9 10.8 7 (5) 0.0 0.0 7 2 0.9 B 7 (5) 0.0 0.7 2.0.9 B 7 mmary 1.7 2.0.9 7 mmary 1.7 2.0.9 7 mmary 1.7 2.0.9 B 7 mmary 1.7 2.0.	acity 0.24 0.16 0.06 0.18 0.18 0.26 0.06 Sisth(m) 0.0 0.0 1.4 0.0 0.0 8.2 1.5 s) 0.0 0.0 1.4 0.0 0.0 8.2 1.5 A A D B B y (s) 0.0 0.0 7 2.09 mmary 1. mmary 1. pacity Utilization 33.8% ICU Level of Service A	cSH	1700	1700	908	1700	1700	212	662	Cycle Length: 60	
A5th (m)     0.0     0.0     1.4     0.0     0.2     1.5       (s)     0.0     0.0     9.2     0.0     0.0     27.9     10.8       y (s)     0.0     0.7     0.0     0.7     10.8       x (s)     0.0     0.7     20.9     B       x (s)     0.0     0.7     20.9     C       x (s)     1.7     C     C       A     1.7     20.9     A       A     1.7     C     C       A     1.7     CU Level of Service     A	Sh1 (m)     0.0     0.0     1.4     0.0     0.2     1.5       s)     0.0     0.0     2.7     9     10.8       x (s)     0.0     0.0     2.7     9     10.8       y (s)     0.0     0.7     9     10.8       x (s)     0.0     0.7     9     10.8       y (s)     0.0     0.7     20.9     10.8       mary     1.7     20.9     20       pacity Utilization     33.8%     ICU Level of Service     A	Volume to Capacity	0.24	0.16	0.06	0.18	0.18	0.26	0.06	Actuated Cycle Length: 60	
s) 0.0 0.0 9.2 0.0 0.0 27.9 10.8 y (s) 0.0 0.7 2.0.9 mmary 1.7 2.0.9 c c A pacity Utilization 33.8% ICU Level of Service A	s) 0.0 0.0 9.2 0.0 0.0 27.9 10.8 v (s) 0.0 0.7 20.9 B mmary 1.7 20.9 C mmary 1.7 20.9 C mmary 1.7 2.0 P mmary 1.7 2.0 P mmary 1.7 2.0 P mmary 1.7 2.0 P mmary 1.7 1.7 2.0 P mmary 1.7 2.	Queue Length 95th (m)	0.0	0.0	1.4	0.0	0.0	8.2	1.5	Offset: 0 (0%), Referenced to phase	phase
v (s) 0.0 0.7 20.9 B mary 1.7 20.9 C mary 1.7 cu Level of Service A	v (s) 0.0 0.7 20.9 B v (s) 0.0 0.7 20.9 C v v v v v v v v v v v v v v v v v v	Control Delay (s)	0.0	0.0	9.2	0.0	0.0	27.9	10.8	Natural Cycle: 60	
y (s) 0.0 0.7 20.9 C mmary 1.7 1.7 pacity Utilization 33.8% ICU Level of Service A	v (s) 0.0 0.7 20.9 c mmary 1.7 1.7 pacity Utilization 33.8% ICU Level of Service A	Lane LOS			A			۵	в	Control Type: Actuated-Coordinated	dinated
mmary 1.7 pacity Utilization 33.8% ICU Level of Service A	mmary C pacity Utilization 33.8% ICU Level of Service A ((min) 15	Approach Delay (s)	0.0		0.7			20.9		Maximum v/c Ratio: 0.60	
mmary 1.7 pacity Utilization 33.8% ICU Level of Service A	mmary 1.7 1.7 pacity Utilization 33.8% ICU Level of Service A 1(min) 15	Approach LOS						ပ		Intersection Signal Delay: 7.5	
1.7 1.7 33.8% ICU Level of Service A	1.7 1.7 1.2 Level of Service A 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	Intersection Summary								Intersection Capacity Utilization 56.3	on 56.
33.8% ICU Level of Service A	33.8% ICU Level of Service A 15	Autoroco Dolou			5					Analysis Period (min) 15	
		Avelage Delay	ç		/00 00	Ξ	1 I or to I of	Condoo	<		
	22	Andricic Deried (min)	5		33.8%	<u>ز</u>	n Level OI	Service	A	Splits and Phases: 4: Rogers Roa	ers Roa
22					2					1	
										** 102 (K)	

Timings 4: Rogers Road & Elgin Street West	gin Str	eet We	est				<existing> PM Peak Hour 09-28-2020</existing>
	t	۲	\$	ŧ	•	×.	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	×	۴	ŧ	۴	×	
Traffic Volume (vph)	467	115	310	555	81	245	
Future Volume (vph)	467	115	310	555	81	245	
Turn Type	NA	Perm	Perm	NA	Prot	Perm	
Protected Phases	2			9	4		
Permitted Phases		2	9			4	
Detector Phase Switch Phase	2	2	9	9	4	4	
Minimum Initial (s)	20.0	20.0	20.0	20.0	8.0	8.0	
Minimum Split (s)	31.2	31.2	31.2	31.2	14.5	14.5	
Total Split (s)	45.0	45.0	45.0	45.0	15.0	15.0	
	75.0%	75.0%	75.0%	75.0%	25.0%	25.0%	
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.1	2.1	2.1	2.1	2.4	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
Lead/Lag							
Lead-Lag Optimize?							
	C-Max		C-Max	C-Max	None	None	
Act Effct Green (s)	39.0	39.0	39.0	39.0	8.3	8.3	
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.14	0.14	
v/c Ratio	0.23	0.12	0.60	0.27	0.37	0.60	
Control Delay	4.6	1.2	11.8	4.8	28.4	9.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	4.6	1:2	11.8	4.8	28.4	9.9	
LOS	A	A	8	A	U I	A	
Approach Delay	4.0			7.3	14.5		
Approach LOS	A			A	8		
Intersection Summary							
Cycle Length: 60							
Actuated Cycle Length: 60							
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green	hase 2:E	BT and 6	:WBTL, 3	Start of G	reen		
Natural Cycle: 60							
Control Type: Actuated-Coordinated	nated						
Maximum v/c Ratio: 0.60							
Intersection Signal Delay: 7.5				Int	Intersection LOS: A	LOS: A	
Intersection Capacity Utilization 56.3%	ר 56.3%			2	U Level o	ICU Level of Service B	
anaiysis Perioo (min) is							
Splits and Phases: 4: Rogers Road & Elgin Street West	s Road 8	Elgin Str	eet West				•
🚽 🖉 (R)							104
45 s							15 s
4							

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Street	
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gers	
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Phases:	
pue	
Splits a	
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🐨 Ø2 (R)	V04
45 s	15 s
🖤 Ø6 (R)	
45 s	

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	t	۴	\$	Ļ	•	•	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
-ane Configurations	ŧ	*	*	ŧ	*	×	
Fraffic Volume (vph)	467	115	310	555	81	245	
<sup>-</sup> uture Volume (vph)	467	115	310	555	81	245	
deal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Fotal Lost time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
-ane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00	
Lt .	1.00	0.85	1.00	1.00	1.00	0.85	
Fit Protected	1.00	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (prot)	3500	1597	1785	3500	1733	1597	
-It Permitted	1.00	1.00	0.46	1.00	0.95	1.00	
Satd. Flow (perm)	3500	1597	869	3500	1733	1597	
Deak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	513	126	341	610	89	269	
RTOR Reduction (vph)	0	44	0	0	0	232	
ane Group Flow (vph)-	513	82	341	610	89	37	
Heavy Vehicles (%)	2%	%0	%0	2%	3%	0%	
Furn Type	NA	Perm	Perm	NA	Prot	Perm	
Protected Phases	2			9	4		
<sup>D</sup> ermitted Phases		2	9			4	
Actuated Green, G (s)	39.0	39.0	39.0	39.0	8.3	8.3	
Effective Green, g (s)	39.0	39.0	39.0	39.0	8.3	8.3	
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.14	0.14	
Clearance Time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
/ehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	
-ane Grp Cap (vph)	2275	1038	564	22.75	239	220	
//s Ratio Prot	0.15			0.17	c0.05		
//s Ratio Perm		0.05	c0.39			0.02	
//c Ratio	0.23	0.08	09.0	0.27	0.37	0.17	
Jniform Delay, d1	4.3	3.9	6.1	4.5	23.5	22.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	
ncremental Delay, d2	0.2	0.1	4.8	0.3	1.0	0.4	
Delay (s)	4.5	4.0	10.8	4.7	24.5	23.2	
evel of Service	A	A	8	A	ပ	U	
Approach Delay (s)	4.4			6.9	23.5		
Approach LOS	A			A	U		
ntersection Summary							
HCM 2000 Control Delav			9.1	F	3M 2000 L	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	ty ratio		0.56				
Actuated Cycle Length (s)			0.09	Su	Sum of lost time (s)	ime (s)	12.7
ntersection Capacity Utilization	on		56.3%	101	ICU Level of Service	Service	в
Analysis Period (min)			15				

Delay Level of Service Intersection Capacity Utilization Analysis Period (min)

HCM Unsignalized Intersection Capacity Analysis 5: Carlisle Street & Rogers Road	itersec ogers	tion C Road	apacit	y Analy	/sis		<existing> PM Peak Hour 09-28-2020</existing>
	1	Ť	Ŧ	~	۶	*	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		ţ	£,		⊁		
Sign Control		Stop	Stop		Stop		
Traffic Volume (vph)	81	26	28	174	294	115	
Future Volume (vph)	81	26	28	174	294	115	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	88	28	30	189	320	125	
Direction, Lane #	EB 1	WB 1	SB 1				
Volume Total (vph)	116	219	445				
Volume Left (vph)	88	0	320				
Volume Right (vph)	0	189	125				
Hadj (s)	0.15	-0.50	-0.02				
Departure Headway (s)	5.5	4.7	4.7				
Degree Utilization, x	0.18	0.29	0.58				
Capacity (veh/h)	596	702	727				
Control Delay (s)	9.7	9.6	14.1				
Approach Delay (s)	<i>T.</i> 6	9.6	14.1				
Approach LOS	A	A	8				
Intersection Summary							
Delay			12.2				
Level of Service			в				
Intersection Capacity Utilization	E		51.4%	Ū	ICU Level of Service	Service	А
Analysis Period (min)			15				

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MorenentEIENWIENEI <t< th=""><th>HCM Unsignalized Intersection Capacity Analysis 6: Greenly Drive &amp; Carlisle Street</th><th>Interse Carlisle</th><th>Stree</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>7-60</th><th>0702-82-60</th></t<>	HCM Unsignalized Intersection Capacity Analysis 6: Greenly Drive & Carlisle Street	Interse Carlisle	Stree									7-60	0702-82-60
EBL         EBT         EBR         WBL         WBT         WBF         NBL         NBT         NBT         NBT         NBT         SB1         SB1 <th></th> <th>1</th> <th>Ť</th> <th>1</th> <th>\$</th> <th>Ļ</th> <th>~</th> <th>•</th> <th>-</th> <th>٠</th> <th>۶</th> <th>-</th> <th><math>\mathbf{\hat{z}}</math></th>		1	Ť	1	\$	Ļ	~	•	-	٠	۶	-	$\mathbf{\hat{z}}$
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Lane Configurations		¢			¢			¢			¢	
	Traffic Volume (veh/h)	ć	35	č	Ð	40	ć	-	0	£	m	0	0
	Future Volume (Veh/h)	č	35	ć	2	40	ć	-	0	2	m	0	0
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Sign Control		Free			Free			Stop			Stop	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Grade		%0			%0			%0			%0	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Hourly flow rate (vph)	4	44	4	9	51	4	-	0	9	4	0	0
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Pedestrians								2			2	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Lane Width (m)								3.5			3.5	
$ \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Walking Speed (m/s)								1.2			1.2	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Percent Blockage								0			0	
None         None         None           64         57         50         121         125         48         127         125           64         57         50         121         125         48         127         125           64         57         50         121         126         62         7.1         65           10         57         50         121         126         62         7.1         65           100         100         100         100         100         99         100         100           158         1567         851         7/2         125         83         7/2         12           52         61         7         4         4         6         9         9         100           1567         996         839         7/2         12         12         12         12         12           52         61         7         4         4         6         9         10         100           1568         1567         996         839         7/2         12         12         12         12           1581         16	Right turn flare (veh)												
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Median type		None			None							
57 $50$ 121       125       48       127       125 $60$ $57$ $50$ 121       125       48       127       125 $41$ $41$ $71$ $65$ $62$ $71$ $65$ $121$ $125$ $125$ $125$ $125$ $125$ $125$ $125$ $125$ $125$ $125$ $125$ $125$ $125$ $125$ $125$ $125$ $125$ $125$ $100$	Median storage veh)												
ed $57$ $50$ $121$ $125$ $48$ $127$ $125$ $61$ $51$ $50$ $121$ $125$ $48$ $127$ $125$ $41$ $41$ $7.1$ $65$ $62$ $7.1$ $65$ $100$ $100$ $100$ $100$ $100$ $99$ $100$ $100$ $100$ $100$ $100$ $99$ $100$ $100$ $100$ $100$ $100$ $99$ $100$ $100$ $100$ $100$ $99$ $100$ $100$ $100$ $100$ $100$ $99$ $891$ $100$ $010$ $000$ $000$ $000$ $100$ $010$ $000$ $000$ $000$ $100$ $010$ $000$ $000$ $000$ $100$ $010$ $000$ $100$ $010$ $000$ $100$ $010$ $000$ $100$ $010$ $100$ $1.3\%$ $1.3\%$ $100$ $1.3\%$ $1.3\%$ $100$ $0.1$ $0.1$ $100$ $0.1$ 100    <	Upstream signal (m)												
	pX, platoon unblocked												
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	vC, conflicting volume	57			20			121	125	48	127	125	55
	vC1, stage 1 conf vol												
57     50     121     125     48     127     125       41     41     71     65     62     71     65       22     22     22     35     40     33     35     40       100     100     100     100     99     100     100       158     1567     851     762     102     100       158     1567     851     762     102     100       52     61     7     4     4     6       4     6     7     4     4     6       158     1567     996     839     762     1       158     1567     996     839     762     1       158     1567     996     839     762     1       158     1567     996     839     762     1       158     1567     996     839     762     1       158     1567     93     762     1     7       158     1567     996     839     762     1       158     1567     996     839     7     7       158     1567     93     7     7     7       160	vC2, stage 2 conf vol												
	vCu, unblocked vol	57			20			121	125	48	127	125	55
22 22 22 3.5 40 3.3 3.5 40 100 100 100 100 100 100 100 100 100	tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
22     22     35     40     33     35     40       100     156     851     762     100     100     100       158     156     851     722     1055     839     762       52     61     7     4     7     4       4     6     1     4     7     4       156     930     839     762     7055     839     762       158     16     7     4     5     7     7       158     16     0     00     00     00     10       00     00     00     00     00     00       01     01     01     02     01     00       05     07     86     93     7     7       10     01     02     01     00     10       05     07     86     93     7     7       10     10     10     10     10     1       11     1     1     1     1     1       11     1     1     1     1     1       11     1     1     1     1     1       12     1     1     1	tC, 2 stage (s)												
100         100 <td>tF (s)</td> <td>2.2</td> <td></td> <td></td> <td>2.2</td> <td></td> <td></td> <td>3.5</td> <td>4.0</td> <td>3.3</td> <td>3.5</td> <td>4.0</td> <td>3.3</td>	tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
158     1567     851     762     839     762       EB1     WB1     NB1     SB1     SB1     762     839     762       52     61     7     4     6     1     4       4     6     1     4       100     0.00     0.01     0.00       101     0.1     0.0     0.01     0.00       102     0.1     8.3     8.3       103     0.0     0.01     0.00       104     A     A     A       10     1.1     4       101     1.4     A       102     0.01     0.01     0.01       103     1.4     A       104     1.4     A       105     1.4     A       106     1.4     A       107     1.4     A       108     1.4     A       114     A     A       114     1.4       114     1.4       114     1.4       114     1.4       114     1.4       114     1.4       114     1.4       114     1.4       114     1.4       114 <tr< td=""><td>p0 queue free %</td><td>100</td><td></td><td></td><td>100</td><td></td><td></td><td>100</td><td>100</td><td>66</td><td>100</td><td>100</td><td>100</td></tr<>	p0 queue free %	100			100			100	100	66	100	100	100
EB 1         WB 1         SB 1         SB 1           52         61         7         4           4         6         1         4           1558         1567         996         839           0.00         0.00         0.00         0.00           0.1         0.2         0.1         0.2           0.6         0.7         8.6         9.3           0.6         0.7         8.6         9.3           0.6         0.7         8.6         9.3           0.6         0.7         8.6         9.3           1.4         A         A         A           1.5         1.4         A         A	cM capacity (veh/h)	1558			1567			851	762	1025	839	762	1016
S2         61         7         4           4         6         1         4           4         6         1         4           1568         1567         96         839           0.00         0.00         001         0.00           0.1         0.1         0.2         0.1           0.6         0.7         8.6         9.3           0.6         0.7         8.6         9.3           0.6         0.7         8.6         9.3           0.6         0.7         8.6         9.3           0.6         0.7         8.6         9.3           1.4         A         A         A           1.4         A         A         A           1.4         A         A         A           1.4         1.4         5.7         5.3	Direction, Lane #	EB 1	WB 1	NB 1	SB1								
4 6 1 4 4 7 6 0 1558 1567 996 839 0.00 0.00 001 0.00 0.1 0.1 0.2 0.1 0.6 0.7 8.6 9.3 A A A 0.6 0.7 8.6 9.3 A A A 1.4 1.4 CU Level of Service 1.35 1.4 1.4 CU Level of Service	Volume Total	52	61	2	4								
4         6         0           1588         1567         996         839           0.00         0.01         0.00         0.01           0.10         0.01         0.00         0.01           0.1         0.1         0.2         0.1           0.6         0.7         8.6         9.3           0.6         0.7         8.6         9.3           0.6         0.7         8.6         9.3           0.6         0.7         8.6         9.3           1.4         A         A         A           1.3         A         A         A           1.3         K         0.1         1.4	Volume Left	4	9		4								
1558 1567 996 839 0.00 0.00 0.00 0.1 0.2 0.1 0.6 0.7 8.6 9.3 0.6 0.7 8.6 9.3 0.6 0.7 8.6 9.3 1.4 A A A A 1.4 CU Level of Service	Volume Right	4	4	9	0								
0.30 0.00 0.01 0.00 0.1 0.1 0.2 0.1 0.6 0.7 8.6 9.3 0.6 0.7 8.6 9.3 1.4 A A A A A A A A A A A A A A A A A A A	cSH	1558	1567	966	839								
0.1 0.1 0.2 0.1 0.6 0.7 8.6 9.3 0.6 0.7 8.6 9.3 0.6 0.7 8.6 9.3 A A 1.4 A 1.4 CU Level of Service	Volume to Capacity	0.00	0.00	0.01	0.00								
0.6 0.7 8.6 9.3 A A A 0.6 0.7 8.6 9.3 A A A A Unitication 1.3% CU Level of Service	Queue Length 95th (m)	0.1	0.1	0.2	0.1								
A A A 0.6 0.7 8.6 9.3 A A 1.4 A 1.4 CU Level of Service	Control Delay (s)	0.6	0.7	8.6	9.3								
0.6 0.7 8.6 9.3 ary 1 A A by Ullization 1.4 CU Level of Service	Lane LOS	A	A	A	A								
/ A A 1.4 Utilization 14.3% ICU Level of Service	Approach Delay (s)	0.6	0.7	8.6	9.3								
r 1.4 Utilization 14.3% ICU Level of Service 14.3%	Approach LOS			A	A								
1.4 1.4 Utilization 14.3% ICU Level of Service	Intersection Summary												
Utilization 14.3% ICU Level of Service	Averade Delav			1 4									
	Interection Canacity Hilliza	tion		1/1 20%	2	n lava I I	f Samira			<			
	Americal Dariod (min)	101		14.070	2		2011100			c			

Delay Level of Service Intersection Capacity Utilization Analysis Period (min)

HCM Unsignalized Intersection Capacity Analysis 7: Wilkins Gate & Carlisle Street	nterseo Irlisle S	ction C Street	apacit	y Analy	/sis			Ψ	<existing> PM Peak Hour 09-28-2020</existing>	⊳ PM	Peak I 09-28	ak Hour 09-28-2020
	٠	Ť	1	5	Ŧ	~	*	+	٠	۶	-	$\mathbf{k}$
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		¢			¢			¢			¢	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	ъ	27	4	12	27	10	9	20	4	6	36	9
Future Volume (vph)	ഹ	27	4	12	27	10	9	20	4	6	36	9
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	30	4	13	30	11	7	22	4	10	40	7
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	39	54	33	57								
Volume Left (vph)	ъ	13	7	10								
Volume Right (vph)	4	11	4	7								
Hadj (s)	-0.04	-0.03	0.04	-0.04								
Departure Headway (s)	4.1	4.1	4.2	4.1								
Degree Utilization, x	0.04	0.06	0.04	0.06								
Capacity (veh/h)	849	852	826	855								
Control Delay (s)	7.3	7.4	7.4	7.4								
Approach Delay (s)	7.3	7.4	7.4	7.4								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.4									
Level of Service			A									
Intersection Capacity Utilization	E		14.7%	C	ICU Level of Service	f Service			A			

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HCM Unsignalized Intersection Capacity Analysis 1: Wilkins Gate & Elgin Street West	tersec n Stre	tion Câ	apacity st	Analy	.sis	7	<pre><existing> SAT Peak Hour</existing></pre>
	t	1	\$	Ļ	•	•	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ			4	F	¥;	
Traffic Volume (veh/h)	537	9	20	584	c	29	
Future Volume (Veh/h)	537	9	20	584	m	29	
Sign Control	Free			Free	Stop		
Grade	%0			%0	%0		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	
Hourly flow rate (vph)	610	7	23	664	3	33	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
	None			None			
Median storage veh)							
Upstream signal (m)							
pX, platoon unblocked							
vC, conflicting volume			617		992	308	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			617		992	308	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			98		66	95	
cM capacity (veh/h)			973		241	693	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	
Volume Total	407	210	244	443	m	33	
Volume Left	0	0	23	0	ę	0	
Volume Right	0	7	0	0	0	33	
cSH	1700	1700	973	1700	241	693	
Volume to Capacity	0.24	0.12	0.02	0.26	0.01	0.05	
Queue Length 95th (m)	0.0	0.0	0.6	0.0	0.3	1.2	
Control Delay (s)	0.0	0.0	1.0	0.0	20.2	10.5	
Lane LOS			A		ပ	в	
Approach Delay (s)	0.0		0.4		11.3		
Approach LOS					в		
Intersection Summary							
Average Delay			0.5				
Intersection Capacity Utilization			40.7% 15	ICU	ICU Level of Service	Service	А
			2				

HCM Unsignalized Intersection Capacity Analysis 2: Proposed Commercial Site Driveway & Elgin Street West	ntersec rcial S	tion Ca ite Driv	apacit) /eway	/ Analy & Elgii	/sis 1 Stree		<existing> SAT Peak Hour 09-28-2020</existing>
	Ť	1	\$	Ļ	4	×.	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	×.		ŧ		×	
Traffic Volume (veh/h)	605	0	0	538	0	.0	
Future Volume (Veh/h)	605	0	0	538	0	0	
Sign Control	Free			Free	Stop		
Grade	%0			%0	%0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	658	0	0	585	0	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)				288			
pX, platoon unblocked							
vC, conflicting volume			658		950	329	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			658		950	329	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			100		100	100	
cM capacity (veh/h)			939		262	673	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	
Volume Total	329	329	0	292	292	0	
Volume Left	0	0	0	0	0	0	
Volume Right	0	0	0	0	0	0	
cSH	1700	1700	1700	1700	1700	1700	
Volume to Capacity	0.19	0.19	0.00	0.17	0.17	0.00	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Lane LOS						А	
Approach Delay (s)	0.0			0.0		0.0	
Approach LOS						Α	
Intersection Summary							

NBK	×.	0	0			0.92	0										329			329	6.9		3.3	100	673	NB 1	0	0	0	1700	0.00	0.0	0.0	A	0.0	A			f Service		
NBL		0	0	Stop	%0	0.92	0										950			950	6.8		3.5	100	262	WB 2	292	0	0	1700	0.17	0.0	0.0						ICU Level of Service		
WBI	ŧ	538	538	Free	%0	0.92	585						None		288											WB 1	292	0	0	1700	0.17	0.0	0.0		0.0				2		
WBL		0	0			0.92	0										658			658	4.1		2.2	100	939	EB 3	0	0	0	1700	0.00	0.0	0.0					0.0	20.1%	15	
EBK	×.	0	0			0.92	0																			EB 2	329	0	0	1700	0.19	0.0	0.0								
EBI	ŧ	605	605	Free	%0	0.92	658						None													EB 1	329	0	0	1700	0.19	0.0	0.0		0.0				u		
INIOVEITIENL	Lane Configurations	Traffic Volume (veh/h)	Future Volume (Veh/h)	Sign Control	Grade	Peak Hour Factor	Hourly flow rate (vph)	Pedestrians	Lane Width (m)	Walking Speed (m/s)	Percent Blockage	Right turn flare (veh)	Median type	Median storage veh)	Upstream signal (m)	pX, platoon unblocked	vC, conflicting volume	vC1, stage 1 conf vol	vC2, stage 2 conf vol	vCu, unblocked vol	tC, single (s)	tC, 2 stage (s)	tF (s)	p0 queue free %	cM capacity (veh/h)	Direction, Lane #	Volume Total	Volume Left	Volume Right	cSH	Volume to Capacity	Queue Length 95th (m)	Control Delay (s)	Lane LOS	Approach Delay (s)	Approach LOS	Intersection Summary	Average Delav	Intersection Capacity Utilization	Analysis Period (min)	

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	1	~		• L					t		-	Ļ
Movement	EBT	EBR W	WBL W	WBT N	NBL NE	NBR		Lane Group	EBT	EBR	WBL	WBT
Lane Configurations	<b>₹</b>			+	r	ĸ.		Lane Configurations	ŧ	¥.	۶	ŧ
Traffic Volume (veh/h)	532	73	53	183	55	47		Traffic Volume (vph)	458	112	348	489
Future Volume (Veh/h)	532	73			22	47		Future Volume (vph)	458	112	348	489
Sign Control	Free		Ĩ		Stop			Turn Type	NA	Perm	Perm	NA
Grade								Protected Phases	2			9
Peak Hour Factor		0.99 0	0.99 0.			0.99		Permitted Phases		2	9	
Hourly flow rate (vph)	537			488	56	47		Detector Phase	2	2	9	9
Pedestrians								Switch Phase				
Lane Width (m)								Minimum Initial (s)	20.0	20.0	20.0	20.0
Walking Speed (m/s)								Minimum Split (s)	31.2	31.2	31.2	31.2
Percent Blockage								Total Split (s)	45.0	45.0	45.0	45.0
Right turn flare (veh)								Total Split (%)	75.0%	75.0%	75.0%	75.0% 25
	None		ž	None				Yellow Time (s)	4.1	4.1	4.1	4.1
Median storage veh)								All-Red Time (s)	2.1	2.1	2.1	2.1
Upstream signal (m)				194				Lost Time Adjust (s)	0.0	0.0	0.0	0.0
pX, platoon unblocked								Total Lost Time (s)	6.2	6.2	6.2	6.2
vC, conflicting volume		5	611	-	926 3	306		Lead/Lag				
vC1, stage 1 conf vol								Lead-Lag Optimize?				
vC2, stage 2 conf vol								Recall Mode	C-Max	C-Max	C-Max	C-Max
vCu, unblocked vol		-	611		926 3	306		Act Effct Green (s)	39.1	39.1	39.1	39.1
tC, single (s)			4.1			6.9		Actuated g/C Ratio	0.65	0.65	0.65	0.65
tC, 2 stage (s)								v/c Ratio	0.20	0.11	09.0	0.21
tF (s)			2.2			3.3		Control Delay	4.5	1.2	11.4	4.6
p0 queue free %			94			93		Oueue Delay	0.0	0.0	0.0	0.0
cM capacity (veh/h)		9.	978		256 6	969		Total Delay	4.5	1.2	11.4	4.6
Direction Leve #	CD 1		1//D 1 1///		DIN COM	-		TOS	A	A	в	A
				5		_	D 2	Approach Delay	3.9			7.4
Volume Total	200	502	7 40		244	20	4/ A	Approach LOS	A			A
Volutie celt		0 2	+ +			8		Intersection Summary				
				Ì			4.6	Ovela Landth: 60		l	l	
Volume to Canacity							200	Actuated Ovela Length: 60				
Otherine to capacity							10:0 2 L	Address Office terrigin. W Officet: 0.10%) Peferenced to obace 2-FBT and 6-MBTL Start of Crea	th nhace 3-F	TRT and	S-MRTI	Start of Gro
	0.0						10.6	Matural Curlo: 40	ו ומ לוומזה דיד		0. WU I L	
CUIIUN DELAY (S)	0.0						C.0	Natural Cycle: 00 Control Tyme: Actuated Conrelinated	ordinated			
Annroach Dolay (c)	00				-	17.2	G	Mavimum u/c Datio: 0.64	MINING			
	0.0		0.7			<i>. .</i>		Intercotion Stand Dolou: 7.0	7 0			Into
						S		Intersection Capacity Hilitzation 58.4%	r.u ation 58 /0%			
Intersection Summary								Analysis Doriod (min) 15				2
Average Delay			1.8									
Intersection Capacity Utilization		33.	33.7%	ICU L	ICU Level of Service	rvice	А	Sulits and Phases 4. Ro	4. Roners Road & Floin Street West	, Floin St	Pet West	
Analysis Period (min)			15								001100	
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eet West	'est				<existing> SAT Peak Hour 09-28-2020</existing>
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EBR	WBL	WBT	NBL	NBR	
*-	F	ŧ	۴	×	
112	348	489	85	309	
112	348	489	85	309	
Perm	Perm	NA	Prot	Perm	
		9	4		
2	9			4	
2	9	9	4	4	
	000		0	0	
ZU.U	20.0	20.02	0.8	0.0 1	
31.2	31.2	31.2	14.5	14.5	
45.0	45.0	45.0	15.0	15.0	
%0.C/	%0.C/	%0.C/	%0.CZ	0%.0.CZ	
- <del>-</del>	- <del>-</del>	- <del>1</del>	- <del>'</del> +	4. I	
- 0	- 00		1.1		
6.9	6.9	0.0	0.0 9	0.0	
4	4	1	5	2	
C-May	C-Mav	C-Mav	Mono	Mono	
39.1	39 1	39 1	8.2	8.2	
0.65	0.45	0.45	0.14	0.14	
0.11	0.60	0.21	0.36	0.64	
1.2	11.4	4.6	28.0	10.3	
0.0	0.0	0.0	0.0	0.0	
1.2	11.4	4.6	28.0	10.3	
A	в	A	ပ	в	
		7.4	14.1		
		A	в		
EBT and	6:WBTL,	EBT and 6:WBTL, Start of Green	heen		
			Intercaction I OS- A		
		2	U Level (	ICU Level of Service B	
Eloin C	Elain Stroot Moet	-			
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💎 🖉 (R)		▲\bg4	
45 s		15 s	
💎 Ø6 (R)			
45 s			

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T. NUGELS LADAU & LIGHT OFFEET VEST	0						
	Ť	۶	\$	ŧ	4	•	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	×.	۴	ŧ	۴	×	
Traffic Volume (vph)	458	112	348	489	85.	309	
Future Volume (vph)	458	112	348	489	85	309	
ldeal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00	
Fit	1.00	0.85	1.00	1.00	1.00	0.85	
Fit Protected	1.00	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (prot)	3535	1597	1785	3570	1785	1597	
FIL Permitted	1.00 26.26	1.00	0.48	1.00 26.70	17.05	1.00 1E07	
	0000	1400	404	0/00	007	1397	
Peak-nour ractor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	
Adj. Flow (vpn)	46/	1.14	355	449	/8	315 870	
	) i	0 <del>1</del>			- i	717	
Lane Group Flow (vph)	46/	/4	355	449	/8	43	
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	
Turn Type	NA	Perm	Perm	NA	Prot	Perm	
Protected Phases	2			9	4		
Permitted Phases		2	9			4	
Actuated Green, G (s)	39.1	39.1	39.1	39.1	8.2	8.2	
Effective Green, g (s)	39.1	39.1	39.1	39.1	8.2	8.2	
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.14	0.14	
Clearance Time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2303	1040	592	2326	243	218	
v/s Ratio Prot	0.13			0.14	c0.05		
v/s Ratio Perm		0.05	c0.39			0.03	
v/c Ratio	0.20	0.07	09.0	0.21	0.36	0.20	
Uniform Delay, d1	4.2	3.8	6.0	4.2	23.5	23.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.1	4.4	0.2	0.9	0.4	
Delay (s)	4.4	4.0	10.4	4.4	24.4	23.4	
Level of Service	A	A	в	A	ပ	c	
Approach Delay (s)	4.3			6.9	23.6		
Approach LOS	A			A	U		
Intersection Summary							
HCM 2000 Control Delay			9.8	F	3M 2000 L	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	ty ratio		0.56				
Actuated Cycle Length (s)			60.0	Su	Sum of lost time (s)	time (s)	12.7
Intersection Capacity Utilization	on		58.4%	D	ICU Level of Service	Service	в
Analysis Period (min)			15				
			2				

HCM Unsignalized Intersection Capacity Analysis 5: Carlisle Street & Rogers Road	itersec ogers	tion C Road	apacity	/ Analy	'sis		<existing> SAT Peak Hour 09-28-2020</existing>
	1	† 1	Ļ	~	۶	•	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		÷	£,		×		
Sign Control		Stop	Stop		Stop		
Traffic Volume (vph)	76	24	23	205	183	82	
Future Volume (vph)	76	24	23	205	183	82	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	83	26	25	223	199	89	
Direction, Lane #	EB 1	WB 1	SB 1				
Volume Total (vph)	109	248	288				
Volume Left (vph)	83	0	199				
Volume Right (vph)	0	223	89				
Hadj (s)	0.15	-0.54	-0.05				
Departure Headway (s)	5.1	4.2	4.7				
Degree Utilization, x	0.15	0.29	0.37				
Capacity (veh/h)	658	795	730				
Control Delay (s)	9.0	9.0	10.4				
Approach Delay (s)	0.6	0.6	10.4				
Approach LOS	A	A	в				
Intersection Summary							
Delay			9.6				
Level of Service			A				
Intersection Capacity Utilization	E		44.5%	C	ICU Level of Service	Service	A
Analysis Period (min)			15				

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		¢			¢			¢			¢	
Traffic Volume (veh/h)	-	27	-	œ	27	4	-		m	4	0	2
Future Volume (Veh/h)	-	27	-	œ	27	4	<del></del>		ć	4	0	2
Sign Control		Free			Free			Stop			Stop	
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)	-	29	-	6	29	4	-	-	m	4	0	7
Pedestrians												
Malking Sheed (m/s)												
Percent Blockane												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	33			30			82	82	30	84	81	31
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	33			30			82	82	30	84	81	31
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			66			100	100	100	100	100	100
cM capacity (veh/h)	1592			1596			904	806	1051	006	808	1049
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	31	42	2	9								
Volume Left		6		4								
Volume Right		4	m	2								
cSH	1592	1596	961	945								
Volume to Capacity	0.00	0.01	0.01	0.01								
Cueue Lengin 95th (m)	0.0	- , ,	- 0 0	7.0								
Control Delay (s)	0.2	1.6	80. s	80. s								
Lane LOS	A C	A 1	A o	A o								
Approach LOS	0.2	0.	0.0	0.0								
			¢	£								
Intersection Summary												
Average Delay			2.0									
Intersection Capacity Utilization	ation		15.4%	2	U Level o	ICU Level of Service			A			
Analysis Period (min)			<u>61</u>									

7: Wilkins Gate & Carlisle Street	lisle S	street							09-28-2020		09-28-2020	
	•	1	1	5	Ŧ	~	-	+	٠	۶	-	$\mathbf{\hat{v}}$
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		¢			¢			¢			¢	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	ß	13	m	m	20	10	-	17	ß	പ	12	œ
Future Volume (vph)	ى	13	ŝ	°	20	10		17	2	2	12	8
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)	9	16	4	4	24	12		21	9	9	15	10
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	26	40	28	31								
Volume Left (vph)	9	4	-	9								
Volume Right (vph)	4	12	9	10								
	-0.05	-0.16	-0.04	-0.09								
Departure Headway (s)	4.0	3.9	4.0	4.0								
Degree Utilization, x	0.03	0.04	0.03	0.03								
Capacity (veh/h)	876	906	868	885								
Control Delay (s)	7.1	7.1	7.2	7.1								
Approach Delay (s)	7.1	7.1	7.2	7.1								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.1									
Level of Service			A									
Intersection Capacity Utilization			13.3%	2	ICU Level of Service	f Service			A			
Analysis Period (min)			15									

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HCM Unsignalized Intersection Capacity Analysis 1: Wilkins Gate & Elgin Street West	tersect n Stre	ion Cá et We	apacity st	Analy	sis.		<2025 Background> AM Peak Hour 09-28-2020
	Ť	1	\$	Ļ	4	*	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	×.		44	r	×.	
Traffic Volume (veh/h)	462		24	472	25	33.	
Future Volume (Veh/h)	462	œ	24	472	25	33	
Sign Control	Free			Free	Stop		
Grade	%0			%0	%0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	502	6	26	513	27	36	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
	None			None			
ae veh)							
Unstream signal (m)							
yn ronflirting volume			Б11		810	<b>7</b> 51	
			5		200	107	
VCT, stage L WIII VU							
VCZ, sidye z will vol			7 7 L		010	214	
VCu, unblocked vol			L C		8 10	۲۵۲ ۲۵۲	
tC, single (s)			4.1		6.8	0.7	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			98		91	95	
cM capacity (veh/h)			1065		314	743	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	NB 2
Volume Total	251	251	6	197	342	27	36
Volume Left	0	0	0	26	0	27	0
Volume Right	0	0	6	0	0	0	36
cSH	1700	1700	1700	1065	1700	314	743
Volume to Capacity	0.15	0.15	0.01	0.02	0.20	0.09	0.05
Queue Length 95th (m)	0.0	0.0	0.0	9.0	0.0	2.2	1.2
Control Delay (s)	0.0	0.0	0.0	1.3	0.0	17.6	10.1
Lane LOS				A		ပ	۵
Approach Delay (s)	0.0			0.5		13.3	
Approach LOS						8	
Intersection Summary							
Averade Delav			10				
Intersection Capacity Utilization			39.8%	ICU	ICU Level of Service	Service	A
Analysis Period (min)			15				

HCM Unsignalized Intersection Capacity Analysis 2: Proposed Commercial Site Driveway & Elgin Street West	Intersed ercial S	ction C ite Driv	apacity /eway	y Analy & Elgii	/sis n Stree	et Wes	<2025 Background> AM Peak Hour t
	Ť	1	5	Ŧ	1	٠	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	×		ŧ		×	
Traffic Volume (veh/h)	478	0	0	487	0	0	
Future Volume (Veh/h)	478	0	0	487	0	0	
Sign Control	Free			Free	Stop		
Grade	%0			%0	%0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	520	0	0	529	0	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)				288			
pX, platoon unblocked							
vC, conflicting volume			520		784	260	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			520		784	260	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			100		100	100	
cM capacity (veh/h)			1056		334	745	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	
Volume Total	260	260	0	264	264	0	
Volume Left	0	0	0	0	0	0	
Volume Right	0	0	0	0	0	0	
CSH	1700	1700	1700	1700	1700	1700	
Volume to Capacity	0.15	0.15	0.00	0.16	0.16	0.00	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Lane LOS						A	
Approach Delay (s)	0.0			0.0		0.0	
Approach LOS						A	

Commercial Site Driveway & Elgin Street West	rcial Si	ite Driv	reway	& Elgii	n Stree	et West	>	09-28-2020
	Ť	1	\$	ŧ	1	•		
	EBT	EBR	WBL	WBT	NBL	NBR		
SL	ŧ	×		ŧ		×		
(h/h)	478	0	0	487	0	0		
eh/h)	478	0	0	487	0	0		
					Chan			

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∢

ICU Level of Service

0.0 16.8% 15

Intersection Summary Average Delay Intersection Capacity Utilization Analysis Period (min)

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<2025 Background> AM Peak Hour 09-28-2020																																									<b>▲</b>	1 1 1/1 15 S		-
~	•	NBR	<b>*_</b> roc	167	Perm		V	4 4	Ŧ	80	14.5	15.0	25.0%	4.1	2.4	0.0	6.5			None	8.2	0.14	0.67	10.8	0.0	10.8	ю										-05: A	ICU Level of Service B						
	*	NBL	<b>/ -</b> (	03	Prot	4	F	V	Ŧ	08	14.5	15.0			2.4	0.0	6.5				8.2	0.14	0.30	26.9	0.0	26.9	12.6	0.51 R	c				een				Intersection LOS: A	J Level u						
	Ŧ	WBT	<b>‡</b>	390 208	NA	9	5	4	5	0.00	21.0	45.0			2.1	0.0	6.2			C-Max	39.1	0.65	0.20	4.5	0.0	4.5	A 0 4	٥.۶ ۵	c				start of Gr				Inte	ור						
est	5	WBL	<b>-</b> - 4	707	Perm	5	4	0 4	þ	0.00	21.2	45.0			2.1	0.0	6.2				39.1	0.65	0.55	10.3	0.0	10.3	ю						:WBTL, S							eet West				
eet We	*	EBR	*-	72 72	Perm	5	ç	7 0	7	0.00	21.0	45.0			2.1	0.0	6.2				39.1	0.65	0.06	1.4	0.0	1.4	A						BT and 6							Elgin Str				
gin Str	Ť	EBT	<b>t</b>	424 424	NA PAP	6	7	ç	7	0.00	31.2	45.0			2.1	0.0	6.2				39.1	0.65	0.21	4.5	0.0	4.5	A c	4 'Z	c				hase 2:E		nated		11 00	0%9.CC L		s Road &				
Timings 4: Rogers Road & Elgin Street West		Lane Group	Lane Configurations	Fidure Volume (vph)	Turn Type	Protected Phases	Dormittod Dhoroe	Petitilieu Flases Detector Dhase	Control Pliase	Owitori Fridoe Minimum Initial (s)	Minimum Calif (c)	Total Solit (s)	Total Split (%)	Yellow Time (s)	All-Red Time (s)	Lost Time Adjust (s)	Total Lost Time (s)	Lead/Lag	Lead-Lag Optimize?	Recall Mode	Act Effct Green (s)	Actuated g/C Ratio	v/c Ratio	Control Delay	Queue Delay	Total Delay	LUS Annmarh Dalav	Approach LOS		Intersection Summary	Cycle Length: 60	Actuated Cycle Length: 60	Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green	Natural Cycle: 60	Control Type: Actuated-Coordinated	Maximum V/C Ratio: U.o/	Intersection Signal Delay: 7.6	Intersection Capacity Utilization 55.8%	Analysis Period (min) 15	Splits and Phases: 4: Rogers Road & Elgin Street West		45 s	4	
<2025 Background> AM Peak Hour 09-28-2020																											NB 1 NB 2	43	43	0	336	0.13	3.5	17.3	, C	14.9	B			ce A				
	*	NBR	<b>*</b> _	10				0.620										223			223			3.3			WB 3					-								of Servic				
alysis est	*	. NBL		4 4		200°		0.73										740			740	6.9		3.5	87	336	WB 2					-								ICU Level of Service				
Capacity Analysis jin Street West	ŧ	WBT	<b>*</b>			%0		0.73 AAF						None		194										_	WB 1	31							A r	C:0								
bapac in Str	•	WBL	2	72 0C	i i		0.05	24.0	5									498			498	4.1		2.2	16	1076	EB3	52	0	52	1700	0.03	0.0	0.0					1.1	28.4%	c]			

HCM Unsignalized Intersection Cap 3: Canadian Tire Driveway & Elgin S

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p0 queue free % cM capacity (veh/h) tF (s)

0 1700 0.13 0.0 0.0

0.0

Approach Delay (s) Approach LOS

Intersection Summary Average Delay Intersection Capacity Utilization Analysis Period (min)

EB1 223 0 0 1700 0.13 0.13 0.0

Direction, Lane # Volume Total Volume Eteft Volume Right CSH Volume Logati 95th (m) Control Delay (s) Lane LOS

EB 2 223 0

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EBR 1 EBT 424 424 424 Free 0.95 446 †.

Mov

0.95 52

None

Lane Configurations Traitic Volume (Veh/h) Sign Control Sign Control Grade Heak Hour Factor Hourly flow rate (vph) Pedestrians Right um flare (veh) Making Speed (ms) Percent Blockag Right um flare (veh) Median type Right um flare (veh) Median type Median type Median type C, conflicting volume vC, steps 2 conf vol vC, steps

49 49

<ol> <li>אינטלבוס ואטמת מ בוטוון טוובכו איכסו</li> </ol>							
	t	۲	1	ŧ	•	•	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	4	*	۶	ŧ	F	×	
Fraffic Volume (vph)	424	57	282	398	63	297	
<sup>-</sup> uture Volume (vph)	424	57	282	398	63	297	
deal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Fotal Lost time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
-ane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00	
nt -	1.00	0.85	1.00	1.00	1.00	0.85	
Fit Protected	1.00	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1521	1750	3433	1750	1566	
FIt Permitted	1.00	1.00	0.48	1.00	0.95	1.00	
Satd. Flow (perm)	3433	1521	884	3433	1750	1566	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	
Adj. Flow (vph)	476	64	317	447	71	334	
RTOR Reduction (vph)	0	22	0	0	0	288	
-ane Group Flow (vph)	476	42	317	447	71	46	
Heavy Vehicles (%)	4%	5%	2%	4%	2%	2%	
Furn Type	NA	Perm	Perm	NA	Prot	Perm	
Protected Phases	2			9	4		
Permitted Phases		2	9			4	
Actuated Green, G (s)	39.1	39.1	39.1	39.1	8.2	8.2	
Effective Green, g (s)	39.1	39.1	39.1	39.1	8.2	8.2	
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.14	0.14	
Clearance Time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
/ehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2237	166	576	2237	239	214	
//s Ratio Prot	0.14			0.13	c0.04		
<pre>//s Ratio Perm</pre>		0.03	c0.36			0.03	
v/c Ratio	0.21	0.04	0.55	0.20	0.30	0.21	
Uniform Delay, d1	4.2	3.7	5.7	4.2	23.3	23.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	
ncremental Delay, d2	0.2	0.1	3.8	0.2	0.7	0.5	
Delay (s)	4.4	3.8	9.4	4.4	24.0	23.5	
Level of Service	A	A	A	A	J	J	
Approach Delay (s)	4.4			6.5	23.6		
Approach LOS	A			A	ပ		
ntersection Summary							
HCM 2000 Control Delav			6.6	Ĭ	CM 2000 L	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	icity ratio		0.51				
Actuated Cvcle Length (s)	- f		60.09	S	Sum of lost time (s)	time (s)	12.7
ntersection Canacity Httilization	ation		55, 8%		ICH Level of Service	- Service	
Analysis Doriod (min)			11	2		00000	3
			2				

<ol> <li>Carlisle Street &amp; Rogers Road</li> </ol>	5000	5					N2-20-20 ND-50
	*	t	Ŧ	~	۶	$\mathbf{F}$	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		÷	24		۶		
Sign Control		Stop	Stop		Stop		
Traffic Volume (vph)	89	25	38	199	104	58	
Future Volume (vph)	89	25	38	199	104	58	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly flow rate (vph)	93	26	40	207	108	90	
Direction, Lane #	EB 1	WB 1	SB 1				
Volume Total (vph)	119	247	168				
Volume Left (vph)	93	0	108				
Volume Right (vph)	0	207	90				
Hadj (s)	0.22	-0.50	-0.07				
Departure Headway (s)	4.8	4.0	4.6				
Degree Utilization, x	0.16	0.27	0.22				
Capacity (veh/h)	708	864	728				
Control Delay (s)	8.7	8.4	8.9				
Approach Delay (s)	8.7	8.4	8.9				
Approach LOS	A	A	A				
Intersection Summary							
Delay			8.6				
Level of Service			A				
Intersection Capacity Utilization	u		39.8%	⊇	ICU Level of Service	f Service	A
A set of a barrent function							

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HCM Unsignalized Intersection Capacity Analysis 6: Greenly Drive & Carlisle Street	ersec rlisle	tion C Street	apacity	/ Anal)	/sis		<2025	Back	<2025 Background> AM Peak Hour 09-28-2020	t⊳ AM	Peak I 09-28	ak Hour 09-28-2020
	•	Ť	1	\$	Ŧ	~	1	+	٠	۶	-	$\mathbf{k}$
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		¢			¢			<del>4</del>			¢	
Traffic Volume (veh/h)	0	18	0	ĉ	49		0	0	4	7	0	<u>_</u>
Future Volume (Veh/h)	0	18	0	ę	49	-	0	0	4	7	0	<i>.</i>
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
Hourry now rate (vpn) Dodoctrianc	-	Ş	0	v	8	-	-	0	£	×	-	-
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	57			20			84	83	20	88	82	56
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	57			20			84	83	20	88	82	56
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			100			100	100	100	66	100	100
cM capacity (veh/h)	1560			1609			906	810	1064	897	810	1016
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	20	09	2	6								
Volume Left	0	°	0	8								
ne Right	0		2									
	1560	1609	1064	606								
	0.00	0.00	0.00	0.01								
Queue Lengin 95th (m)	0.0	0.0		7.0								
Lontrol Delay (s)	0.0	0.4	8.4	0.4								
Annrnach Delav (s)	00	4 U	84	4 C 6								
Approach LOS			A	A								
Intersection Summary												
Averado Delav			15									
Intersection Capacity Utilization Analysis Period (min)			17.9%	10	J Level o	ICU Level of Service			A			
			2									

HCM Unsignalized Intersection Capacity Analysis 7: Wilkins Gate & Carlisle Street	ersec isle S	tion C.	apacity	/ Analy	/sis		<2025	Back	<2025 Background> AM Peak Hour 09-28-2020	I> AM	Peak I 09-28	ak Hour 09-28-2020
		1	1	5	Ļ	~	1	-	•	≯	-	$ \mathbf{v} $
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		¢			<del>4</del>			¢			¢	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	œ	14	<del>.</del>	<del>.</del>	14	26	0	33	4	ę	17	ę
Future Volume (vph)	œ	14	-	-	14	26	0	33	4	ç	17	ę
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	6	15			15	28	0	36	4	ŝ	18	33
Direction, Lane # E	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	25	44	40	24								
Volume Left (vph)	6	-	0	ę								
Volume Right (vph)	-	28	4	ŝ								
	0.32	-0.38	-0.06	0.05								
Departure Headway (s)	4.4	3.7	4.0	4.1								
	0.03	0.05	0.04	0.03								
Capacity (veh/h)	800	954	871	850								
Control Delay (s)	7.5	6.9	7.2	7.3								
Approach Delay (s)	7.5	6.9	7.2	7.3								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.2									
Level of Service			A									
Intersection Capacity Utilization			15.8%	Ū	ICU Level of Service	f Service			A			
Analysis Period (min)			15									

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HCM Unsignalized Intersection Capacity Analysis 1: Wilkins Gate & Elgin Street West	ersection Stree	on Ca et Wes	apacity	Analy	sis.		<2025 Background> PM Peak Hour 09-28-2020
	†	~	\$	Ļ	1	*	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	*-		4t	r	ĸ	
Traffic Volume (veh/h)	621	16	27	658	15	36	
Future Volume (Veh/h)	621	16	27	658	15	36	
Sign Control	Free			Free	Stop		
Grade	%0			%0	%0		
Peak Hour Factor		0.98	0.98	0.98	0.98	0.98	
Hourly flow rate (vph)	634	16	28	671	15	37	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
	None			None			
ae veh)							
Upstream signal (m)							
nX nlatoon unblocked							
vC conflicting volume			650		10.26	317	
			8		0701	20	
VCT, stage 1 cutil vol							
VCZ, sidye z will vu			100		10.01	140	
VCu, unblocked vol			000		9701	31/	
tC, single (s)			4.1		9.9	6.9	
tC, 2 stage (s)			0		1	0	
tF (s)			2.2		3.5	3.3	
p0 queue free %			67		93	95	
cM capacity (veh/h)			946		227	685	
Direction, Lane #	EB 1 E	EB 2	EB 3	WB 1	WB 2	NB 1	NB 2
Volume Total	317	317	16	252	447	15	37
Volume Left	0	0	0	28	0	15	0
Volume Right		0	16	0	0	0	37
cSH		1700	1700	946	1700	227	685
Volume to Capacity		0.19	0.01	0.03	0.26	0.07	0.05
Queue Length 95th (m)	0.0	0.0	0.0	0.7	0.0	1.7	1.4
Control Delay (s)	0.0	0.0	0.0	1.3	0.0	22.0	10.6
Lane LOS				A		ပ	В
Approach Delay (s)	0.0			0.5		13.8	
Approach LOS						8	
Intersection Summary							
Average Delay			0.7				
Intersection Capacity Utilization		7	48.0%	ICU	ICU Level of Service	Service	Α
Analysis Period (min)			15				

HCM Unsignalized Intersection Capacity Analysis 2: Proposed Commercial Site Driveway & Elgin Street West	tersec cial Si	tion C ite Driv	apacity /eway	/ Analy & Elgir	rsis n Stree	et West	<2025 Background> PM Peak Hour
	Ť	1	\$	Ļ	∢	*	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	¥,	• ــ•	¢	ŧ	¢	• ــ•	
Iramc volume (vervn)	0/7	0	0	664	0	0	
Future Volume (Veh/h)	672	0	0	664	0	0	
Sign Control	Free			Free	Stop		
Grade	%0			%0	%0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	730	0	0	722	0	0	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
	None			None			
Median storage veh)							
Upstream signal (m)				288			
pX, platoon unblocked							
vC, conflicting volume			730		1091	365	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			730		1091	365	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			100		100	100	
cM capacity (veh/h)			883		213	638	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	
Volume Total	365	365	0	361	361	0	
Volume Left	0	0	0	0	0	0	
Volume Right	0	0	0	0	0	0	
cSH	1700	1700	1700	1700	1700	1700	
Volume to Capacity	0.21	0.21	0.00	0.21	0.21	0.00	
Cueue Lerigin 93in (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Larre LOS Annrosch Dolau (e)	0					¥ C	
Approach LOS	2			5		P. A	
Intersection Summary							
Average Delay Intersection Capacity Utilization Analysis Period (min)			0.0 21.9% 15	ICI	ICU Level of Service	Service	A
1							

Herical     Her	mmercial Site Driveway & Elgin Street West	site Dri	veway	& Elgii	n Stree	et West	09-28-2020
EBR WBL WBT NBL C 0 664 0 0 0 664 0 Free Stop 0% 0% 0% 0% 0% 0%		1	1	ŧ	¥	4	
EBR WBL WBT NBL ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑	t	•	٠		-		
↑         ↓         ↓         0           0         0         664         0           0         0         664         0           0         0         664         0           0         0         664         0           0         0         664         0           0         0         664         0           0         0         0%         0%           0         0         032         092           0         0         722         0	EBT		WBL	WBT	NBL	NBR	
0 0 664 0 0 0 664 0 Free Stop 0% 0% 0% 0% 0% 0%	ŧ	¥		ŧ		*-	
0 0 664 0 Free Stop 0% 0% 0.92 0.92 0.92 0 0 722 0	672	0	0	664	0	0	
Free Stop 0% 0% 0.92 0.92 0.92 0 0 722 0	672	0	0	664	0	0	
0% 0% 0% 0.92 0.92 0.92 0.92 0 0 722 0	Free			Free	Stop		
0.92 0.92 0.92 0.92 0 0 722 0	%0			%0	%0		
0 0 722	0.92	0.92	0.92	0.92	0.92	0.92	
	730	0	0	722	0	0	

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3: Canadian Tire Driveway & Elgin Street West	veway	& Elgin	stree	t West	<u>n</u>	V	.020 Dau		4: Rogers Road & Elgin Street West	Elgin Str	eet We	st			
	Ť	1	5	Ļ	*	*				Ť	*	1	Ţ		
Movement	EBT	EBR	WBL	WBT	NBL	NBR			Lane Group	EBT	EBR	WBL \	WBT	NBL NBR	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Lane Configurations	ŧ	×.	F	ŧ	r	ĸ			Lane Configurations	ŧ	ĸ	r	ŧ		
Traffic Volume (veh/h)	614	53	45	610	20	35			Traffic Volume (vph)	514	118	317	610	84 252	2
Future Volume (Veh/h)	614	53	45	610	20	35			Future Volume (vph)	514		317		84 252	2
Sign Control	Free			Free	Stop				Turn Type	NA	Perm	Perm	NA	Prot Perm	L
Grade	%0			%0	%0				Protected Phases	2			9	4	
Peak Hour Factor	06.0	06.0	0.90	0.90	0.90	0.90			Permitted Phases		2	9			4
Hourly flow rate (vph)	682	59	50	678	56	39			Detector Phase	2	2	9	9	4	4
Pedestrians									Switch Phase						
Lane Width (m)									Minimum Initial (s)	20.0	20.0	20.0	20.0	8.0 8.0	0
Walking Speed (m/s)									Minimum Split (s)	31.2	31.2			14.5 14.5	
Percent Blockage									Total Split (s)	45.0	45.0				
Right turn flare (veh)									Total Solit (%)				2	2	9
Median type	None			None					Yellow Time (s)			4.1			
Median storage veh)									All-Red Time (s)	2.1		2.1	2.1		4
I Instream signal (m)				194					Lost Time Adlust (s)	00	00	00	0.0		
					0 08				Totall oct Time (c)	6.9	6.9	6.9	6.2		
vC. conflicting volume			741		1121	341				0.1	4.0	7.0	4.0		
			Ę		1711	5			Load Lan Ontimize?						
VC1, stage 1 cutt Vol VC2 stage 2 conf vol									Decall Mode	C-Mav	C-Mav	C-Mav	C-May N	Anna Mona	
			741		1081	141			Act Effet Green (s)						
t cindle (c)			11		8.4	6.0			Actuated of Patio	0.45	0.45			0.14 0.14	
to, 2 trans (s)			Ā		0.0				V/C Ratio	0.05	0.12				
tF (c)			00		35	33			Control Delay	4.7	1 2			28.7 9.9	
n) anene free %			777		C.C	94				00	0.0	0.0			
cM ranacity (vah/h)			648		100	661			Total Delay	C 0	1 0	12.6	, 0 2	78.7 0.0	
civi capacity (verifit)									LOS	A	7 A	0.02 21			A
Direction, Lane #	EB 1	EB 2					NB 1 NB 2		Annroach Delav	41	:	2			
Volume Total	341	341	59	50	339	339	56 39		Annroach I OS	Ā				p œ	
Volume Left	0	0	0	20	0	0				:			:	2	
Volume Right	0	0	59	0	0				Intersection Summary						
cSH	1700	1700	1700	862	1700				Cycle Length: 60						
Volume to Capacity	0.20	0.20	0.03	0.06	0.20	0.20 0			Actuated Cycle Length: 60						
Queue Length 95th (m)	0.0	0.0	0.0	1.5	0.0		8.9 1.5		Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green	I to phase 2:E	BT and 6:	WBTL, Sta	irt of Gree	L	
Control Delay (s)	0.0	0.0	0.0	9.4	0.0	0.0	30.0 10.8		Natural Cycle: 60						
Lane LOS				A			D		Control Type: Actuated-Coordinated	ordinated					
Approach Delay (s)	0.0			0.6		2	22.1		Maximum v/c Ratio: 0.65						
Approach LOS							с С		Intersection Signal Delay: 7.8	7.8			Inters	Intersection LOS: A	A
Internation Cummon.									Intersection Capacity Utilization 56.6%	ation 56.6%			ICUL	ICU Level of Service B	ice B
									Analysis Period (min) 15						
Average Delay			1.6												
Intersection Capacity Utilization	u		33.6%	ICU	ICU Level of Service	Service		А	Splits and Phases: 4: Rogers Road & Elgin Street West	ogers Road &	Elgin Stre	et West			
Analysis Period (min)			<u>q</u> [							5					
									🐨 Ø2 (R)						Y04
									45 S						158
									45 s						

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HCM Signalized Intersection Capacity Analysis 4: Rogers Road & Elgin Street West	ersectio Igin Str	n Cap eet W	acity A est	nalysis	0	V	<2025 Background> PM Peak Hour 09-28-2020
	Ť	1	\$	ŧ	∢	•	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	*-	۴	ŧ	F	×.	
Traffic Volume (vph)	514	118	317	610	84	252	
Future Volume (vph)	514	118	317	610	84	252	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.2 0.0E	6.2	6.2 1 00	6.2 0.05	6.5	6.5	
	00.1	0.10	0.1	0.4.0	9.9		
F.T. Elt Drotoctod	<u>.</u> 6	0.80	0.1	00.1	0.05	0.85	
Pit Floteded	2500	1507	1705	2500	17.22	1507	
Satu. Flow (prou) Flt Permitted	1 00	1,401	0 44	1 00	0.95	1.90	
Satd. Flow (perm)	3500	1597	827	3500	1733	1597	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	565	130	348	670	92	277	
RTOR Reduction (vph)	0	46	0	0	0	239	
Lane Group Flow (vph)	565	85	348	670	92	38	
Heavy Vehicles (%)	2%	%0	%0	2%	3%	%0	
Turn Type	NA	Perm	Perm	NA	Prot	Perm	
Protected Phases	2			9	4		
Permitted Phases		2	9			4	
Actuated Green, G (s)	39.0	39.0	39.0	39.0	8.3	8.3	
Effective Green, g (s)	39.0	39.0	39.0	39.0	8.3	8.3	
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.14	0.14	
Clearance Time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2275	1038	537	2275	239	220	
v/s Ratio Prot	0.16			0.19	c0.05		
v/s Ratio Perm		0.05	c0.42			0.02	
v/c Ratio	0.25	0.08	0.65	0.29	0.38	0.17	
Uniform Delay, d1	4.4	3.9	6.3	4.5	23.5	22.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.2	5.9	0.3	1.0	0.4	
Delay (s)	4.6	4.0	12.3	4.9	24.6	23.2	
Level of Service	A	A	в	A	ပ	J	
Approach Delay (s)	4.5			7.4	23.5		
Approach LOS	A			A	ပ		
Intersection Summary							
HCM 2000 Control Delay			9.3	H	M 2000 L	HCM 2000 Level of Service	vice A
HCM 2000 Volume to Capacity ratio	y ratio		09.0				
Actuated Cycle Length (s)			0.09	Su	Sum of lost time (s)	time (s)	12.7
Intersection Capacity Utilization	u		56.6%		ICU Level of Service	Service	В
Analysis Period (min)			15				
c Critical Lane Group							

HCM Unsignalized Intersection Capacity Analysis 5: Carlisle Street & Rogers Road	tersec ogers	tion C Road	apacit	/ Analy	/sis		<2025 Background> PM Peak Hour 09-28-2020
	•	t	Ŧ	~	۶	$\mathbf{k}$	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		÷	£,		×		
Sign Control		Stop	Stop		Stop		
Traffic Volume (vph)	83	26	28	180	302	117	
Future Volume (vph)	83	26	28	180	302	117	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	6	28	30	196	328	127	
Direction. Lane #	EB 1	WB 1	SB 1				
Volume Total (voh)	118	226	455				
Volume Left (vph)	6	0	328				
Volume Right (vph)	0	196	127				
Hadj (s)	0.15	-0.51	-0.02				
Departure Headway (s)	5.5	4.7	4.8				
Degree Utilization, x	0.18	0.30	0.60				
Capacity (veh/h)	591	695	723				
Control Delay (s)	9.8	9.7	14.7				
Approach Delay (s)	9.8	9.7	14.7				
Approach LOS	A	A	в				
Intersection Summary							
Delay			12.5				
Level of Service			B				
Intersection Capacity Utilization	_		52.4%	Ū	ICU Level of Service	Service	A
Analysis Period (min)			15				

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Movement     EBL     BT       Lane Configurations     ⊕       Lane Configurations     ⊕       Lane Configurations     ⊕       Future Volume (veNh)     3       Sign Control     0.79       Cade     0.79       Deak Hour Factor     0.79       Annik Nik zink (km)     4										
	/	\$	Ļ	~	•	-	۰.	۶	-	¥
	- EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
			¢			¢			¢	
	3	2	42	ć		0	2	m	0	0
		2	42	ę	<del>.                                    </del>	0	2	ć	0	0
			Free			Stop			Stop	
			%0			%0			%0	
	9 0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
	4	9	53	4	-	0	9	4	0	0
						2			2	
						3.5			3.5	
						1.7			1.7	
						C			C	
Mono			Mono							
59		53			126	130	51	132	130	57
59		53			126	130	51	132	130	57
4.1		4.1			7.1	6.5	6.2	7.1	6.5	6.2
2.2		22			3.5	4.0	3.3	3.5	4.0	3.3
100		100			100	100	66	100	100	100
1555		1563			845	757	1021	832	757	1013
FR 1 WB 1	NR 1	SR 1								
		4								
		r c								
000 000		832								
		0.00								
0.1 0.1	0.2	0.1								
0.6 0.7		9.3								
A	A	A								
0.6 0.7	7 8.7	9.3								
	A	A								
	1.3									
ntersection Capacity Utilization	14.5%	Ũ	ICU Level of Service	Service			A			

Delay Level of Service Intersection Capacity Utilization Analysis Period (min)

HCM Unsignalized Intersection Capacity Analysis 7: Wilkins Gate & Carlisle Street	Interse arlisle 3	ction C Street	apacity	/ Analy	/sis		<2025	i Back	<2025 Background> PM Peak Hour <sup>09-28-2020</sup>	I> PM	Peak I 09-28	ak Hour 09-28-2020
	1	t	1	5	Ŧ	~	*	+	٠	۶	-	$\mathbf{F}$
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	28	4	13	28	10	9	20	ъ	6	36	9
Future Volume (vph)	2	28	4	13	28	10	9	20	2	6	36	9
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	31	4	14	31	11	7	22	2	10	40	7
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	40	56	34	57								
Volume Left (vph)	2	14	7	10								
Volume Right (vph)	4	1	2	7								
Hadj (s)	-0.03	-0.02	0.02	-0.04								
Departure Headway (s)	4.1	4.1	4.2	4.1								
Degree Utilization, x	0.05	0.06	0.04	0.06								
Capacity (veh/h)	848	850	828	852								
Control Delay (s)	7.3	7.4	7.4	7.4								
Approach Delay (s)	7.3	7.4	7.4	7.4								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.4									
Level of Service			A									
Intersection Capacity Utilization	ion		15.1%	⊇	ICU Level of Service	f Service			A			
Analysis Period (min)			15									

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HCM Unsignalized Intersection Capacity Analysis 1: Wilkins Gate & Elgin Street West	tersect in Stre	tion Ca et We	apacity st	Analy	sis.	v	<2025 Background> SAT Peak Hour 09-28-2020
	t	1	\$	Ļ	4	*	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	×		4t	۶	*	
Traffic Volume (veh/h)	591	9	20	642	ŝ	29	
Future Volume (Veh/h)	591	9	20	642	ę	29	
Sign Control	Free			Free	Stop		
Grade	%0			%0	%0		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	
Hourly flow rate (vph)	672	2	23	730	ę	33	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None			None			
Median storage veh)							
Instream signal (m)							
			01.		1000	100	
vC, conflicting volume			6/9		1083	336	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			679		1083	336	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			98		66	95	
cM capacity (veh/h)			923		210	666	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	NB 2
Volume Total	336	336	7	266	487	m	33
Volume Left	0	0	0	23	0	ę	0
Volume Right	0	0	7	0	0	0	33
cSH	1700	1700	1700	923	1700	210	666
Volume to Capacity	0.20	0.20	0.00	0.02	0.29	0.01	0.05
Queue Length 95th (m)	0.0	0.0	0.0	9.0	0.0	0.3	1.2
Control Delay (s)	0.0	0.0	0.0	1.0	0.0	22.4	10.7
Lane LOS				A		ပ	В
Approach Delay (s)	0.0			0.4		11.7	
Approach LOS						8	
Intersection Summary							
Average Delay			0.5				
Intersection Capacity Utilization	c		42.2%	ICU	ICU Level of Service	Service	A
Analysis Period (min)			15				

<2025 Background> SAT Peak Hour st 09-28-2020 HCM Unsignalized Intersection Capacity Analysis <2 2: Proposed Commercial Site Driveway & Elgin Street West

*	NBR	×	0	0			0.92	0										362			362	6.9		3.3	100	641	NB 1	0	0	0	1700	0.00	0.0	0.0	A	0.0	A
4	NBL		0	0	Stop	%0	0.92	0										1044			1044	6.8		3.5	100	228	WB 2	322	0	0	1700	0.19	0.0	0.0			
ŧ	WBT	ŧ	592	592	Free	%0	0.92	643						None		288											WB 1	322	0	0	1700	0.19	0.0	0.0		0.0	
1	WBL		0	0			0.92	0										723			723	4.1		2.2	100	889	EB 3	0	0	0	1700	0.00	0.0	0.0			
1	EBR	*	0	0			0.92	0																			EB 2	362	0	0	1700	0.21	0.0	0.0			
t	EBT	ŧ	665	665	Free	%0	0.92	723						None													EB 1	362	0	0	1700	0.21	0.0	0.0		0.0	
	Movement	Lane Configurations	Traffic Volume (veh/h)	Future Volume (Veh/h)	Sign Control	Grade	Peak Hour Factor	Hourly flow rate (vph)	Pedestrians	Lane Width (m)	Walking Speed (m/s)	Percent Blockage	Right turn flare (veh)	Median type	Median storage veh)	Upstream signal (m)	pX, platoon unblocked	vC, conflicting volume	vC1, stage 1 conf vol	vC2, stage 2 conf vol	vCu, unblocked vol	tC, single (s)	tC, 2 stage (s)	tF (s)	p0 queue free %	cM capacity (veh/h)	Direction, Lane #	Volume Total	Volume Left	Volume Right	cSH	Volume to Capacity	Queue Length 95th (m)	Control Delay (s)	Lane LOS	Approach Delay (s)	Approach LOS

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ICU Level of Service

0.0 21.7% 15

Average Delay Intersection Capacity Utilization Analysis Period (min)

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A A A A A A A A A A A A A A A A A A A	A A A A A A A A A A A A A A	NBL         NBR           55         47           55         47           55         47           56         47           66         47           68         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           970         700           98         56           91         700           92         245           91         181           181         181           181         181	MBL         MBR           55         47           55         47           55         47           56         47           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           968         296           970         90           970         90           970         90           970         90           970         90           970         90           970         90           970         90           970         90           970         90           970         90	MBI         NBR           WBI         NBR           WBI         NBR           WBI         NBR           S32         55         47           532         55         47           532         55         47           533         56         47           533         56         47           638         099         699           006         968         296           648         296         69           54         26         47           77         93         70         70           54         266         56         47           54         266         56         47           77         93         170         700           54         266         56         47           54         266         56         47           77         93         1700         700         24           77         93         18.1         18.1         17           933         1700         0.00         24.5         10.5           6         0.0         24.5         10.5         <		Lane Group EBT EBR WBL WBT	EBI EBR WBL V	Lane Contigurations A 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	1 505 116 359	NA Perm Perm	2	2 6	Detector Phase 2 2 6 6		) 20.0 20.0 20.0	t (s) 31.2 31.2 31.2 31.2	Total Split (s) 45.0 45.0 45.0 15.0 Trajal Split (%) 75.0% 75.0% 75.0% 25.0%	s) 4.1 4.1 4.1 4.1 4.1 4.1	2.1	t (s) 0.0 0.0 0.0	Time (s) 6.2 6.2 6.2	Lead/Lag	Dptimize?	C-Max C-Max C-Max C	37.U 0.65	0.22 0.11	4.6 1.2 13.3	y 0.0	A B B	Approach Delay 4.0 8.1	Approach LOS A A	Intersection Summary	Cycle Length: 60	Actuated Cycle Length: 60	Offset: 0 (0%), Referenced to phase 2.EBT and 6.WBTL, Start of Green	Natural Cycle: 60	Control Type: Actuated-Coordinated		Intersection Signal Delay: 8.1 Intersection LOS: A	on 59.0%			Solits and Dhases. 4: Roners Road & Floin Street West
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Splits and Phases: 4: Rogers Road & Elgin Street West	2 (R)		
Splits and Phase	🚽 Ø2 (R)	45 s	4

\* •04

🌾 Ø6 (R)	45 s		

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EBT EBT 505 505 505 505 505 100 100 100 100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 10000 1000000	WBL 359 359 359 359 100 100 0.98 868 80.98 80 80 80 80 80 80 80 80 80 80 80 80 80	WBT VWBT 539 539 539 539 1000 1.00 1.00 1.00 1.00 0.95 550 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.9	NIBL NIBL 89 89 89 89 89 6.5 1100 11.00 11.00 11.00 11.09 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0	NBR NBR 320 320 1900 6.5 6.5 1.00 1.00 1.00 1.00 1.00 1.100	
EBT E BT E		WBT A 539 539 539 539 539 0.95 0.95 1.00 1.00 1.00 1.00 0.98 0.9		NBR 7 320 9900 6.5 1.597 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.00000 1.00000 1.00000000	
(x) (x) (x) (x) (x) (x) (x) (x)		↑ 539 539 539 62 62 1.00 1.00 1.00 1.00 3570 0.98 550 0.98 550 0.98 550 0.8 8 0.08 550 0.08 8 550 0.08 8 550 0.08 8 550 0.08 8 550 0.08 8 550 0.08 550 0.09 550 0.09 550 0.09 550 0.09 550 0.09 550 500 50 50 500 50 50 500 50 50 50 50		₹ 320 320 6.5 6.5 1.00 1.00 1.01 1.00 1.57	
(p) 505 505 505 505 505 6.2 6.2 6.2 1.00 7.0 515 (p) 515 (p) 1.% 7 8 (p) 7 1.0 7 1.00 7 1.00 7 1.00 7 1.00 7 1.00 7 7 1.00 7 7 8 35.35 1.00 7 7 8 35.35 1.00 7 7 8 35.35 1.00 7 7 8 35.35 1.00 7 7 8 35.35 1.00 7 7 8 35.35 1.00 7 7 8 35.35 1.00 7 7 8 35.35 1.00 7 7 8 35.35 1.00 7 7 1.00 7 7 8 35.35 1.00 7 7 8 35.35 7 1.00 7 7 8 35.35 7 1.00 7 7 1.00 7 7 7 1.00 7 7 7 7 7 7 7 8 7 8 7 8 7 7 7 7 8 7 8		539 539 1900 1900 0.95 1.00 3570 3570 3570 0.98 550 0.88 0.88 0.08 0.08 0.08 0.08 0.08		320 320 65 65 1.00 0.85 1.10 1.10 1.00 1.01 1.00	
Jh)         505           1900         1           1900         1           100         1           100         1           100         1           100         1           100         1           100         1      1		539 1900 6.2 6.2 6.2 1.00 1.00 1.00 1.00 1.00 550 550 550 0% NA		320 900 1-00 1.00 0.85 1.00 1.00 1.00 1.00	
1900 95 0.52 0.65 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0		1900 6.2 0.95 1.00 1.00 3570 550 550 550 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.9		900 6.5 1.00 1.85 1.00 1.00 1.00 1.00	
6.2 6.2 0.05 1.00 1.00 1.00 1.00 1.00 1.00 1.00		6.2 0.95 1.00 1.00 3570 3570 3570 0.98 0.98 550 0.98 0.98 0.98 0.98 0.98 0.0%		6.5 1.00 1.00 1.00 1597 1.00	
0.95 0.95 1.00 1.00 1.00 3535 3535 3535 1.00 8 (ph) 1.9 1 1% 0 NA 1 2 1%		0.95 1.00 3570 1.00 1.00 1.00 550 0.98 550 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.9		1.00 0.85 1.00 1.00	
100 100 3535 3535 3535 3535 100 8535 1100 100 815 100 100 100 100 100 100 100 100 100 1	_	1.00 1.00 3570 3570 1.00 0.98 0.98 550 0.98 0.98 0.98 0.98 0.98 0.98 NA		0.85 1.00 1.00 1.00	
100 100 100 100 100 100 100 100 100 100		1.00 3570 3570 550 0.98 0.98 0.98 0.98 0.8 0 NA		1.00 1597 1597	
3535 3 360 100 100 100 100 100 100 100 100 100 1		3570 3570 550 550 0% NA		1597 1.00 1597	
1.00 1.00 353 315 315 (vph) 515 6) 135 6) 136 215 0 136 215 215 215 215 215 215 215 215 215 215		1.00 3570 550 0 850 0% NA 8		1.00	
PHF         3:35         7           R(ph)         0         8           (vph)         0         15           (vph)         515         1           (vph)         1%         1           (vph)         1%         2		3570 0.98 550 0% 0% NA NA		1597	
0.98 515 0 515 1% NA F 2		0.98 550 0 0% NA			
515 0 0 515 1% NA F 2 F	<u>م</u>	550 0 0% NA		0.98	
) 0 515 1% NA P	<u>م</u>	550 0% NA		327	
() 515 1% NA P		550 0% NA		282	
1% NA Pi 2	٩	0% NA		45	
NA 2		NA A		0%	
2		4	Prot 1	Perm	
		2	4		
				4	
39.0		39.0	8.3	8.3	
s) 39.0		39.0	8.3	8.3	
0.65 (	0	0.65	0.14	0.14	
6.2		6.2	6.5	6.5	
Vehicle Extension (s) 3.0 3.0	3.0	3.0	3.0	3.0	
(hdh)	564		246	220	
v/s Ratio Prot 0.15		0.15	c0.05		
	0			0.03	
v/c Ratio 0.22 0.07	0.65	0.24	0.37	0.21	
		4.3	23.5	22.9	
-	-	1.00	1.00	1.00	
ital Delay, d2 0.2		0.2	0.9	0.5	
Delay (s) 4.5 4.0	12.1	4.6	24.4	23.4	
Level of Service A A		A	ပ	c	
Approach Delay (s) 4.4		7.6	23.6		
Approach LOS A		A	ပ		
Intersection Summary					
HCM 2000 Control Delay	10.0	HCI	M 2000 Le	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60				
Actuated Cycle Length (s)	0.09	Sun	Sum of lost time (s)		12.7
Intersection Capacity Utilization	59.0%	ICU	ICU Level of Service	ervice	В
Analvsis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis 5: Carlisle Street & Rogers Road	ersec	tion Ca Road	apacity	/ Analy	sis	<2	<2025 Background> SAT Peak Hour 09-28-2020
	•	Ť	Ŧ	~	۶	*	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		÷	£,		۶		
Sign Control		Stop	Stop		Stop		
Traffic Volume (vph)	78	24	23	211	188	84	
Future Volume (vph)	78	24	23	211	188	84	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	85	26	25	229	204	91	
Direction, Lane #	EB 1	WB 1	SB 1				
Volume Total (vph)	111	254	295				
Volume Left (vph)	85	0	204				
Volume Right (vph)	0	229	91				
	0.15	-0.54	-0.05				
Departure Headway (s)	5.1	4.3	4.7				
Degree Utilization, x	0.16	0.30	0.38				
Capacity (veh/h)	653	791	727				
Control Delay (s)	9.0	9.1	10.6				
Approach Delay (s)	9.0	9.1	10.6				
Approach LOS	A	A	в				
Intersection Summary							
Delay			9.8				
Level of Service			A				
Intersection Capacity Utilization			45.4%	ICI	ICU Level of Service	Service	A
Analysis Period (min)			15				

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HCM Unsignalized Intersection Capacity Analysis 6: Greenly Drive & Carlisle Street	erseo irlisle	stion C Street	apacity	/ Analy	/sis	v	<2025	Backg	<2025 Background> SAT Peak Hour 09-28-2020	<ul><li>SAT</li></ul>	Peak 09-2	<b>ak Hour</b> 09-28-2020
	*	Ť	1	\$	Ŧ	~	4	-	*	۶	-	$\mathbf{\hat{v}}$
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		¢			¢			¢			¢	
Traffic Volume (veh/h)		29		œ	29	4		. <del></del>	m	4	0	2
Future Volume (Veh/h)		29		œ	29	4		-	с	4	0	2
Sign Control		Free			Free			Stop			Stop	
Grade	00 0	%0	00 0	000	%0	00.0	000	%0	0000	000	%0	000
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
Hourry riow rate (vpn) Pedestrians	-	<u>s</u>	-	7	γ.	4	-	-	Ŷ	4	0	7
Lane Width (m)												Ľ
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	35			32			86	86	32	88	85	33
vC1, stage 1 conf vol												
vC2, stage 2 conf vol				1								
vCu, unblocked vol	35			32			86	86	32	88	85	33
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			66			100	100	100	100	100	100
cM capacity (veh/h)	1589			1593			868	802	1048	894	804	1046
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	33	44	5	9								
Volume Left		6		4								
Volume Right	-	4	č	2								
	1589	1593	958	940								
	0.00	0.01	0.01	0.01								1
Queue Lengin 95th (m)	0.0	 	0.1	7.0								
Control Delay (s)	0.2	۹.۲ ۲.۵	× ×	8.9								
Lane LUS Annroach Dalav (s)	¥ C	ч Ч	Υa	₹ 0								
Approach LOS	4	3	P A	A								
:												
Intersection Summary												
Average Delay Intersection Capacity Utilization			1.9 15.6%	Ō	U Level a	ICU Level of Service			A			
Analysis Period (min)			<u>c</u>									

EBI	7: Wilkins Gate & Carlisle Street	lisle S	street									09-2	09-28-2020
		•	t	1	\$	Ŧ	~	1	+	٠	۶	-	$\mathbf{F}$
Lations $4$ $7$ $4$ $4$ $4$ $4$ $4$ $4$ $4$ $4$ $4$ $4$ $4$ $4$ $4$ $2$ $1$ $1$ $1$ $6$ $6$ $1$ $3$ $4$ $21$ $10$ $1$ $17$ $6$ $6$ $17$ $6$ $17$ $6$ $17$ $6$ $17$ $6$ $17$ $6$ $17$ $6$ $17$ $6$ $17$ $6$ $17$ $6$ $17$ $6$ $17$ $6$ $17$ $6$ $17$ $6$ $17$ $6$ $17$ $17$ $7$ $17$ $7$ $17$ $7$ $17$ $17$ $7$ $17$		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Stop         Stop         Stop         Stop         Stop         Stop         Constrained         Stop	Lane Configurations		¢			¢			¢			¢	
e (vph)         5         14         3         4         21         10         1         17         6           e (vph)         5         14         3         4         21         10         1         17         6           e (vph)         6         17         4         5         26         12         17         6           ate (vph)         6         17         4         5         26         12         1         21         23         032         032         032         032         032         032         032         032         033         040         9         1 </td <td>Sign Control</td> <td></td> <td>Stop</td> <td></td> <td></td> <td>Stop</td> <td></td> <td></td> <td>Stop</td> <td></td> <td></td> <td>Stop</td> <td></td>	Sign Control		Stop			Stop			Stop			Stop	
Olume (vph)         5         14         3         4         21         10         1         17         6           our factor         082         083	Traffic Volume (vph)	2	14	ę	4	21	10		17	9	ഹ	12	œ
ur Factor         0.82	Future Volume (vph)	2	14	ç	4	21	10		17	9	വ	12	00
owrate (pt)         6         17         4         5         26         12         1         21           Lame#         EB1         WB1         NB1         SB1         1         21         21           Left (pph)         6         7         10         6         31         6         1         21         21           Right (pph)         27         43         29         31         6         7         10           Right (pph)         6         7         10         6         0.09         8         7         10           Right (pph)         30         0.14         0.06         0.09         802         0.03         10         1		0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Lane#         EB1         WB1         NB1         SB1           Total (sph)         27         43         29         31           Left (sph)         6         5         1         6           Right (sph)         6         5         1         6           Right (sph)         -0.04         -0.14         -0.06         -0.09           et Headway (s)         4.0         -0.14         -0.06         -0.03           Ulitization, x         0.03         0.03         0.03         0.03           Ulitization, x         87.4         9.0         30.03         0.03           Ulitization, x         87.4         9.0         30.3         0.03           Delay (s)         7.1         7.1         7.1         7.1           Delay (s)         7.1         <	Hourly flow rate (vph)	9	17	4	2	26	12		21	7	9	15	10
Total (pph)     27     43     29     31       Left (vph)     6     5     1     6       Right (vph)     6     5     1     10       Right (vph)     -0.04     -0.14     -0.06     -0.09       Be hankway (s)     -0.04     -0.14     -0.05     -0.03       Ulifization, x     0.03     0.03     0.03       Ulifization, x     0.03     0.03     0.03       Delay (s)     7.1     7.1     7.1       Service     7     7 <td< td=""><td></td><td>EB 1</td><td>WB 1</td><td>NB 1</td><td>SB 1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>		EB 1	WB 1	NB 1	SB 1								
Left (yph) 6 5 1 6 Right (yph) 6 5 1 6 Right (yph) 0.04 0.14 0.06 0.09 e Headway (s) 4.0 3.9 4.0 6.00 Utilization, x 0.03 0.05 0.03 0.03 (verbh) 874 902 889 882 (verbh) 874 903 0.03 (verbh) 874 902 889 882 (verbh) 874 903 0.03 (verbh) 874 903 9.03 (verbh) 874 903 9.03 (verbh) 874 9.03 (verb	Volume Total (vph)	27	43	29	31								
Right (sph)         4         12         7         10           Right (sph)         -0.04         -0.14         -0.06         -0.09           e Headway (s)         -0.04         -0.14         -0.06         -0.09           Ullitization, x         0.03         0.05         0.03         0.03           (wh/h)         874         902         869         882           (aehh)         7.1         7.1         7.1         7.1           Delay (s)         7.1         7.1         7.1         7.1           Delay (s)         7.1         7.1         7.1         7.1           h LOS         A         A         A         A           h LOS         A         A         A         A           ion Summary         7.1         7.1         7.1         7.1           Service         7         7.1         7.1         7.1         7.1           Ion Summary         7.1         7.1         7.1         7.1         7.1           Service         7         7.1         7.1         7.1         7.1         7.1           Ion Summary         7.1         7.1         7.1         7.1         7.1	Volume Left (vph)	9	ъ	-	9								
-0.04         -0.14         -0.06         -0.09           eHeadway (s)         4.0         30         4.0           interation, x         0.03         0.03         0.03           (verbh)         874         902         862           Dalay (s)         7.1         7.1         7.1           No Summary         A         A         A           Service         A         A         A           Ion Capacity Unilization         13.3%         ICU Level of Service           Ion Capacity Unilization         13.3%         ICU Level of Service	Volume Right (vph)	4	12	7	10								
ture Headway (s)         4.0         3.9         4.0         4.0           e Unitration, x         0.03         0.03         0.03         0.03           e Unitration, x         0.03         0.03         0.03         0.03           a Unitration, x         0.03         0.03         0.03         0.03           a Delay (s)         7.1         7.1         7.1         7.1           ach LOS         A         A         A         A           action Summary         7.1         7.1         7.1         7.1           action Summary         7.1         6         Service         A           action Compact         13.3%         ICU Level of Service         2.1		-0.04	-0.14	-0.06	-0.09								
e Utilization, x 0.03 0.05 0.03 0.03 bity (verbr) 874 902 869 882 a) Delay (s) 7.1 7.1 7.1 7.1 a) Delay (s) 7.1 7.1 7.1 7.1 a) Delay (s) 7.1 7.1 7.1 a) Delay (s) 7.1 7.1 7.1 ach LOS A A A A ach LOS A A A A ach Color Sammary 7.1 ach Color Capacity Utilization 13.3% ICU Level of Service action Capacity Utilization 13.3% ICU Level of Service	Departure Headway (s)	4.0	3.9	4.0	4.0								
Sty (ve/h/h)         874         902         869         882           SI Belay (s)         7.1         7.1         7.1         7.1           SI Delay (s)         7.1         7.1         7.1         7.1           An Delay (s)         7.1         7.1         7.1         7.1           ach Delay (s)         A         A         A         A           action Summary         7.1         7.1         7.1         7.1           action Capacity Unitization         1.3.5%         1.0.0.1.evel or Service         7.1		0.03	0.05	0.03	0.03								
IDelay(s)         7.1         7.1         7.1         7.1           ach Delay(s)         7.1         7.1         7.1         7.1           ach Delay(s)         7.1         7.1         7.1         7.1           ach Delay(s)         7.1         7.1         7.1         7.1           ach LOS         A         A         A         A           action Summary         7.1         7.1         7.1           of Service         7.1         7.1         7.1           action Cappacity Utilization         13.3%         ICU Level of Service           action Compared Control         15.         15.	Capacity (veh/h)	874	902	869	882								
ach Delay (s) 7.1 7.1 7.1 7.1 ach LOS A A A action Summary 7.1 of Service 7.1 con Capacity Utilization 13.3% ICU Level of Service action Capacity Utilization 13.5% ICU Level of Service	Control Delay (s)	7.1	7.1	7.1	7.1								
ach LOS A A A A a action Summary 7.1 of Service 7.1 A action Capacity Utilization 13.3% ICU Level of Service 13.3% action 13.5% action (control) 15.5% action (control) 15.5\% action (control) 15.5\% action (c	Approach Delay (s)	7.1	7.1	7.1	7.1								
ection Summary 7.1 of Service 7.1 action Capacity Utilization 13.3% ICU Level of Service 13.3%	Approach LOS	A	A	A	A								
7.1 of Service 7.1 action Capacity Utilization 13.3% ICU Level of Service 15 15	Intersection Summary												
A 13.3% ICU Level of Service 15	Delay			7.1									
13.3% ICU Level of Service 15	Level of Service			A									
	Intersection Capacity Utilization			13.3%	D	U Level of	Service			A			
	Analysis Period (min)			15									

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HCM Unsignalized Intersection Capacity Analysis 1: Wilkins Gate & Elgin Street West	tersec in Stre	tion C tet We	apacit) st	/ Analy	'sis		<2025 Total> AM Peak Hour 09-28-2020
	t	1	\$	ŧ	•	•	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	×.		đ∱	۴	¥.	
Traffic Volume (veh/h)	491	6	24	502	26	37	
Future Volume (Veh/h)	491	6	24	502	26	37	
Sign Control	Free			Free	Stop		
Grade	%0			%0	%0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	534	10	26	546	28	40	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
	None			None			
de veh)							
Upstream signal (m)							
pX. platoon unblocked							
vC. conflicting volume			544		850	767	
			5		6	107	
VCT, stage L WIII VU							
VCZ, sidge z will vu			E AA		OED	L70	
VCu, unblocked vol			544		668	70/	
tC, single (s)			4.1		6.8	0.7	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			79		6	94	
cM capacity (veh/h)			1035		292	725	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	NB 2
Volume Total	267	267	10	208	364	28	40
Volume Left	0	0	0	26	0	28	0
Volume Right	0	0	10	0	0	0	40
cSH	1700	1700	1700	1035	1700	292	725
Volume to Capacity	0.16	0.16	0.01	0.03	0.21	0.10	0.06
Queue Length 95th (m)	0.0	0.0	0.0	9.0	0.0	2.5	1.4
Control Delay (s)	0.0	0.0	0.0	1.3	0.0	18.6	10.3
Lane LOS				A		ပ	۵
Approach Delay (s)	0.0			0.5		13.7	
Approach LOS						в	
Intersection Summary							
Average Delay			10				
Intersection Capacity Utilization	_		41.5%	ы С	ICU Level of Service	Service	A
Analysis Period (min)			15				

HCM Unsignalized Intersection Capacity Analysis 2: Proposed Commercial Site Driveway & Elgin Street West	ntersec ercial S	tion C. ite Driv	apacit <u>.</u> /eway	y Analy & Elgi	/sis n Stree	et West	<2025 Total> AM Peak Hour 09-28-2020
	t	1	5	Ŧ	1	•	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	×.		ŧ		×	
Traffic Volume (veh/h)	467	44	0	517	0	37	
Future Volume (Veh/h)	467	44	0	517	0	37	
Sign Control	Free			Free	Stop		
Grade	%0			%0	%0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	508	48	0	562	0	40	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None			None			
Median storage veh)							
Upstream signal (m)				288			
pX, platoon unblocked							
vC, conflicting volume			556		789	254	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			556		789	254	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			100		100	95	
cM capacity (veh/h)			1025		332	752	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	
Volume Total	254	254	48	281	281	40	
Volume Left	0	0	0	0	0	0	
Volume Right	0	0	48	0	0	40	
cSH	1700	1700	1700	1700	1700	752	
Volume to Capacity	0.15	0.15	0.03	0.17	0.17	0.05	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	1.3	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.1	
Lane LOS						В	

MOVERNEIL	EB	EBK	WBL	MDI	NBL	NDH
Lane Configurations	ŧ	×		ŧ		~
Traffic Volume (veh/h)	467	44	0	517	0	37
Future Volume (Veh/h)	467	44	0	517	0	37
Sign Control	Free			Free	Stop	
Grade	%0			%0	%0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	508	48	0	562	0	40
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				288		
pX, platoon unblocked						
vC, conflicting volume			556		789	254
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			556		789	254
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.5
p0 queue free %			100		100	36
cM capacity (veh/h)			1025		332	752
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	254	254	48	281	281	40
Volume Left	0	0	0	0	0	0
Volume Right	0	0	48	0	0	40
cSH	1700	1700	1700	1700	1700	752
Volume to Capacity	0.15	0.15	0.03	0.17	0.17	0.05
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	<u> </u>
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.1
Lane LOS						
Approach Delay (s)	0.0			0.0		10.1
Approach LOS						
Intersection Summary						
Average Delay			0.3	3		
Intersection Capacity Utilization Analysis Period (min)			22.9% 15	2	ICU Level of Servi	f Servi
			2			

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Morement EBI EBR A ame Conjurations A 15 furter Volume (veh/h) 447 52 Sign Control (veh/h) 447 52 Sign Control (veh/h) 447 52 Sign Control 0.95 each Hour Factor 0.95 each Hour				,	4						1
EBT 447 447 647 647 0.95 471 871 871		*	Ļ	~						Ť	<b>`</b> .
447 447 166 0% 0.95 471 A71	<b>بر</b>	WBL V	WBT	NBL	NBR				Lane Group		ш
0 441 417 60% 0.95 471 471 None			<b>*</b>	<b>F</b>	<b>*_</b> {				Lane Configurations		_
9 447 095 471 A71 None	22	۲) ۲	434	6/	28				Irame Volume (vpn)		_
0.95 0.95 471 None	70			14	77				Future Volume (vpn)		
0.95 471 None			- 166						Directord Director		ĭ z c
471 A71				0.05	O OF				Dermitted Dhases		
None		04.0	457	83	23				Detector Phase		0
(s) (h)				3	2				Switch Phase		
(s) (h)									Minimum Initial (s)	20.0	2
(4									Minimum Split (s)	31.2	
e (veh)									Total Split (s)	45.0	0
									Total Split (%)	75.0%	6 75.
		2	None						Yellow Time (s)	4.1	_
Aedian storage veh)									All-Red Time (s)	2.1	_
Jpstream signal (m)			194						Lost Time Adjust (s)	s) 0.0	_
X, platoon unblocked									Total Lost Time (s)	6.2	~
C, conflicting volume		526		858	236				Lead/Lag		
C1, stage 1 conf vol									Lead-Lag Optimize?		
rC2, stage 2 conf vol									Recall Mode	S	Ċ
/Cu, unblocked vol		526		858	236				Act Effct Green (s)	39.1	3
C, single (s)		4.1		6.9	7.0				Actuated g/C Ratio		
C, 2 stage (s)									v/c Ratio	0.23	0
F (s)		2.2		3.5	3.3				Control Delay	4.	~
o0 queue free %		92		69	76				Queue Delay	0.0	_
cM capacity (veh/h)	1	1051		269	757				Total Delay	4.	4.6
Direction. Lane # EB 1 EB 2		FB3 M	WB1 V	WB2 V	WB 3	NB 1	NB 2		LOS		A
236							23		Approach Delay	4.3	~ ~
	0	0	79	0	0	83	0		Approduit EUS		Ŧ
me Right 0					0	0	23		Intersection Summary	ary	
1700		1700 1			1700	269	757		Cycle Length: 60		
0.14 (				0.13	0.13	0.31	0.03		Actuated Cycle Length: 60	ngth: 60	
th (m) 0.0	0.0	0.0	1.9	0.0	0.0	10.2	0.8		Offset: 0 (0%), Referenced to phase 2:EBT	erenced to phase	2:EBT
lay (s) 0.0		0.0	8.7	0.0	0.0	24.3	9.9		Natural Cycle: 60		
			A			ပ	A		Control Type: Actuated-Coordinated	ated-Coordinatec	
Approach Delay (s) 0.0			1.3			21.2			Maximum v/c Ratio: 0.68	0.68	
Approach LOS						ပ			Intersection Signal Delay: 7.9	Delay: 7.9	
ntersection Summary									Intersection Capacity Utilization 55.8%	ity Utilization 55.8	%
		3 6							Analysis Period (min) 15	in) 15	
average Deray atorsoction Canacity Hillization	00	20 00/	5	CTLL over of Sonrico	Control			<			
Increation capacity Junzation Analysis Dariod (min)	ŝ	.770 15	2					r	Splits and Phases:	4: Rogers Road & Elo	d & El
		2									

k Elgin Street West	reet W	/est				<2025 Total> AM Peak Hour 09-28-2020
Ť	1	>	ŧ	*	•	
EBT	EBR	WBL	WBT	NBL	NBR	
ŧ	*	*	ŧ	۶	ĸ	
450	57	286	427	72	311	
450	57	286	427	72	311	
NA	Perm	Perm	NA	Prot	Perm	
2			9	4		
	2	9			4	
2	2	9	9	4	4	
0.00	0.00	0.00	0.00	0	00	
31.2	31.2	31.2	31.2	14.5	14.5	
45.0	45.0	45.0	45.0	15.0	15.0	
75.0%	75.0%	75.0%	75.0%	25.0%	25.0%	
4.1	4.1	4.1	4.1	4.1	4.1	
2.1	2.1	2.1	2.1	2.4	2.4	
0.0	0.0	0.0	0.0	0.0	0.0	
6.2	6.2	6.2	6.2	6.5	6.5	
:	1	1		:	:	
C-Max	C-Max	C-Max	C-Max	None	None	
39.1	39. I	39. I	39.1	8.2	8.2	
0.65	0.65	0.65	0.65	0.14	0.14	
0.23	0.06	0.58	0.21	0.34	0.68	
4.6	4. L		4.6	21.1	11.0	
0.0	0.0	0.0	0.0	0.0	0.0	
4.6	1.4	11.1	4.6	27.7	11.0	
A	A	8	A	ပ	œ	
4.3			7.2	14.2		
A			A	в		
0						
d to phase 2:EBT and 6:WBTL, Start of Green	EBT and	6:WBTL,	Start of C	Green		
a na ta a la a a a						
oorairiatea						
7.9			-	Intersection LOS: A	LOS: A	
zation 55.8%			2	CU Level (	ICU Level of Service B	
Anners Road & Floin Street West	s Floin S	treet Wes	+			
nnon ciphon	x Ligilio	11 CCL MCC	_			,

gers Road & Elç

🚽 🖉 Ø 2 (R)	**@4
45 s	15 s
♦ • Ø 6 (R)	
45 s	

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HCM Signalized Intersection Capacity Analysis 4: Rogers Road & Elgin Street West	rsectio	n Cap set W <sub>t</sub>	acity A ∋st	nalysis			<2025 Total> AM Peak Hour 09-28-2020
	Ť	1	\$	Ļ	1	•	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	×	۴	ŧ	r	×	
Traffic Volume (vph)	450	57	286	427	72	311	
Future Volume (vph)	450	57	286	427	72	311	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	1.00	0.85	
Fit Protected	1.00	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1521	1750	3433	1750	1566	
Fit Permitted Satd Flow (nerm)	3433	1521	0.47	3433	0.95	1566	
Peak-hnur factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	
Adi Flow (voh)	506	64	321	480	6.6	349	
RTOR Reduction (vph)	0	52	0	0	; 0	301	
Lane Group Flow (vph)	506	42	321	480	81	48	
Heavy Vehicles (%)	4%	5%	2%	4%	2%	2%	
Turn Type	NA	Perm	Perm	NA	Prot	Perm	
Protected Phases	2			9	4		
Permitted Phases		2	9			4	
Actuated Green, G (s)	39.1	39.1	39.1	39.1	8.2	8.2	
Effective Green, g (s)	39.1	39.1	39.1	39.1	8.2	8.2	
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.14	0.14	
Clearance Time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2237	166	559	2237	239	214	
v/s Ratio Prot	0.15			0.14	c0.05		
v/s Ratio Perm		0.03	c0.37			0.03	
v/c Ratio	0.23	0.04	0.57	0.21	0.34	0.22	
Uniform Delay, d1	4.3	3.7	5.8	4.2	23.4	23.1	
Progression Factor	00.1	0.1	00.1	00.1	00.1	00.1	
Incremental Delay, d2	0.2	0.1	4.2	0.2	0.8	0.5	
Delay (S)	4.5	3.8	10.1	4.5	24.3	23.6	
Level of Service	A	A	в	A	ပ	U	
Approach Delay (s)	4.4			6.7	23.7		
Approach LOS	A			A	ပ		
Intersection Summary							
HCM 2000 Control Delay			10.0	H	M 2000 L	HCM 2000 Level of Service	В
HCM 2000 Volume to Capacity ratio	r ratio		0.53				
Actuated Cycle Length (s)			0:09	Sur	Sum of lost time (s)	ime (s)	12.7
Intersection Capacity Utilization	Ę		55.8%	ы С	ICU Level of Service	Service	B
Analysis Period (min)			15				
c Critical Lane Group							

HCM Unsignalized Intersection Capacity Analysis 5: Carlisle Street & Rogers Road	ersec ogers	tion C Road	apacity	/ Analy	sis	<202	<2025 Total> AM Peak Hour 09-28-2020
	•	Ť	Ŧ	~	۶	<b>*</b>	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		÷	æ,		×		
Sign Control		Stop	Stop		Stop		
Traffic Volume (vph)	106	30	40	202	106	62	
Future Volume (vph)	106	30	40	202	106	62	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly flow rate (vph)	110	31	42	210	110	65	
Direction, Lane #	EB 1	WB 1	SB 1				
Volume Total (vph)	141	252	175				
Volume Left (vph)	110	0	110				
Volume Right (vph)	0	210	65				
	0.22	-0.50	-0.08				
Departure Headway (s)	4.8	4.0	4.7				
Degree Utilization, x	0.19	0.28	0.23				
Capacity (veh/h)	703	851	717				
Control Delay (s)	8.9	8.6	9.1				
Approach Delay (s)	8.9	8.6	9.1				
Approach LOS	A	A	A				
Intersection Summary							
Delay			8.8				
Level of Service			A				
Intersection Capacity Utilization			41.7%	ICI	ICU Level of Service	Service	A
Analysis Period (min)			15				

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HCM Unsignalized Intersection Capacity Analysis 6: Greenly Drive & Carlisle Street	tersec arlisle	stion C. Street	apacity	/ Analy	/sis			<202	<2025 Total> AM Peak Hour 09-28-2020	> AM	Peak <sup>09-2</sup>	ak Hour 09-28-2020
	•	t	1	\$	ŧ	~	*	-	٠	۶	-	$\mathbf{F}$
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		¢			¢			¢			¢	
Traffic Volume (veh/h)	2	18	0	m	49	7	0	0	4	29	0	9
Future Volume (Veh/h)	2	18	0	ę	49	7	0	0	4	29	0	9
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)	2	20	0	3	56	8	0	0	2	33	0	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	64			20			<i>L</i> 6	94	20	95	60	90
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												Ľ
vCu, unblocked vol	64			20			79	94	20	95	06	90
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			100			100	100	100	96	100	66
cM capacity (veh/h)	1551			1609			882	<i>L6L</i>	1064	886	801	1011
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	22	67	2	40								
Volume Left	2	°,	0	33								
Volume Right	0	œ	ß	2								
cSH	1551	1609	1064	906								
Volume to Capacity	0.00	0.00	0.00	0.04								
Queue Length 95th (m)	0.0	0.0	0.1	1.1								
Control Delay (s)	0.7	0.3	8.4	9.2								
Lane LOS	A	A	A	A								
Approach Delay (s)	0.7	0.3	8.4	9.2								1
Approach LOS			A	A								
Intersection Summary												
Average Delav			3.3									
Intersection Capacity Utilization	Ę		19.0%	D	J Level o	ICU Level of Service			A			Ĺ
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 7: Wilkins Gate & Carlisle Street	ersec isle S	tion Ca treet	apacity	/ Analy	/sis			<202	<2025 Total> AM Peak Hour 09-28-2020	I> AM	Peak I 09-28	<b>ak Hour</b> 09-28-2020
	-	t	1	8	Ŧ	~	1	+	*	۶	-	$\mathbf{F}$
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		¢			<del>4</del>			¢			¢	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	6	15			16	29	0	34	4	4	17	ę
Future Volume (vph)	6	15			16	29	0	34	4	4	17	ŝ
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	16	-	-	17	32	0	37	4	4	18	ŝ
Direction, Lane # E	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	27	50	41	25								
Volume Left (vph)	10		0	4								
Volume Right (vph)	-	32	4	ę								
	0.32	-0.38	-0.06	0.06								
Departure Headway (s)	4.4	3.7	4.0	4.2								
Degree Utilization, x	0.03	0.05	0.05	0.03								
Capacity (veh/h)	<i>L6L</i>	953	866	844								
Control Delay (s)	7.6	6.9	7.2	7.3								
Approach Delay (s)	7.6	6.9	7.2	7.3								
Approach LOS	A	A	۷	۷								
Intersection Summary												
Delay			7.2									
Level of Service			A									
Intersection Capacity Utilization			17.5%	D	ICU Level of Service	<sup>5</sup> Service			A			
Analysis Period (min)			15									

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HCM Unsignalized Intersection Capacity Analysis 1: Wilkins Gate & Elgin Street West	ersect 1 Stre	ion Ca et We	apacity st	Analy	sis.		<2025 Total> PM Peak Hour 09-28-2020	
	t	1	\$	Ļ	<	•		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	ŧ	*-		4†	F	×.		
Traffic Volume (veh/h)	647	23	27	686	15	88		
Future Volume (Veh/h)	647	23	27	686	15	œ		
Sign Control	Free			Free	Stop			
Grade	%0			%0	%0			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98		
Hourly flow rate (vph)	660	23	28	700	15	39		
Pedestrians								
Lane Width (m)								
Walking Speed (m/s)								
Percent Blockage								
Right turn flare (veh)								
	None			None				
de veh)								
Upstream signal (m)								
pX. platoon unblocked								
vC. conflicting volume			683		1066	330		
vC1 stage 1 conf vol								
vC2 starte 2 ronf vol								
vCir inblocked vol			683		1066	330		
t cindle (c)			41		8.9	6.0		
to, single (s) to 2 stane (s)			Ŧ		0.0	6-0		
+E /c)					3 0	с с С		
IF (3) PO anono froc 9/			7:7		0.0	0.0		
pu queue Iree %			16		43 24 1	44		
cM capacity (veh/h)			919		214	6/2		
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	NB 2	
Volume Total	330	330	23	261	467	15	39	
Volume Left	0	0	0	28	0	15	0	
Volume Right	0	0	23	0	0	0	39	
CSH	1700	1700	1700	919	1700	214	672	
Volume to Capacity	0.19	0.19	0.01	0.03	0.27	0.07	0.06	
Queue Length 95th (m)	0.0	0.0	0.0	0.8	0.0	1.8	1.5	
Control Delay (s)	0.0	0.0	0.0	1.3	0.0	23.1	10.7	
Lane LOS				A		ပ	۵	
Approach Delay (s)	0.0			0.4		14.1		
Approach LOS						в		
Intersection Summary								
Average Delay			0.7					
Intersection Capacity Utilization			48.7%	ICU	ICU Level of Service	Service	А	
Analysis Period (min)			15					

HCM Unsignalized Intersection Capacity Analysis 2: Proposed Commercial Site Driveway & Elgin Street West	tersec rcial S	tion C ite Dri	apacity /eway	/ Anal) & Elgii	/sis 1 Stree	et West	<2025 Total> PM Peak Hour 09-28-2020
	Ť	1	\$	Ļ	∢	•	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	×		ŧ		×	
Traffic Volume (veh/h)	661	39	0	692	0	36	
Future Volume (Veh/h)	661	39	0	692	0	36	
Sign Control	Free			Free	Stop		
Grade	%0			%0	%0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	718	42	0	752	0	39	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None			None			
Median storage veh)							
Upstream signal (m)				288			
pX, platoon unblocked							
vC, conflicting volume			760		1094	359	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			760		1094	359	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			100		100	94	
cM capacity (veh/h)			861		212	643	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	
Volume Total	359	359	42	376	376	39	
Volume Left	0	0	0	0	0	0	
Volume Right	0	0	42	0	0	39	
cSH	1700	1700	1700	1700	1700	643	
Volume to Capacity	0.21	0.21	0.02	0.22	0.22	0.06	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	11.0	
	0.0	0.0	0.0	0.0	0.0	0.1	
Approach Delav (s)	0.0			0.0		11.0	
Approach LOS						в	
Intersection Summary							
Averane Delav			0 3				
Intersection Canacity Hillization			28.3%	C	ICIT evel of Service	Service	A
			15	2		222	

•	NBR	×	36	36			0.92	39										359			359	6.9		3.3	94	643	NB 1	39	0	39	643	0.06	1.5	11.0	в	11.0	в			ICILLEVEL of Service		
1	NBL		0	0	Stop	%0	0.92	0										1094			1094	6.8		3.5	100	212	WB 2	376	0	0	1700	0.22	0.0	0.0						n level 1		
Į Į	WBT	ŧ	692	692	Free	%0	0.92	752						None		288											WB 1	376	0	0	1700	0.22	0.0	0.0		0.0					2	
5	WBL		0	0			0.92	0										760			760	4.1		2.2	100	861	EB 3	42	0	42	1700	0.02	0.0	0.0					0.2	0.3 28.3%	15	2
1	EBR	×	39	39			0.92	42																			EB 2	359	0	0	1700	0.21	0.0	0.0								
t	EBT	ŧ	661	661	Free	%0	0.92	718						None													EB 1	359	0	0	1700	0.21	0.0	0.0		0.0				5		
	Movement	Lane Configurations	Traffic Volume (veh/h)	Future Volume (Veh/h)	Sign Control	Grade	Peak Hour Factor	Hourly flow rate (vph)	Pedestrians	Lane Width (m)	Walking Speed (m/s)	Percent Blockage	Right turn flare (veh)	Median type	Median storage veh)	Upstream signal (m)	pX, platoon unblocked	vC, conflicting volume	vC1, stage 1 conf vol	vC2, stage 2 conf vol	vCu, unblocked vol	tC, single (s)	tC, 2 stage (s)	tF (s)	p0 queue free %	cM capacity (veh/h)	Direction, Lane #	Volume Total	Volume Left	Volume Right	cSH	Volume to Capacity	Queue Length 95th (m)	Control Delay (s)	Lane LOS	Approach Delay (s)	Approach LOS	Intersection Summary		Average Delay Intersection Canacity Utilization	Analysis Period (min)	

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WR         NR         NR<		5			1		4				
EB         WB         WB<		t	-	*	,	r					†
Nore         Nore <th< th=""><th>Movement</th><th>EBT</th><th>EBR</th><th>WBL</th><th>WBT</th><th>NBL</th><th>NBR</th><th></th><th></th><th>Lane Group</th><th>EBT EI</th></th<>	Movement	EBT	EBR	WBL	WBT	NBL	NBR			Lane Group	EBT EI
58         58         63         38         39         1000         1000         1000         300           700         0.90         0.90         0.90         0.90         0.90         300           701         6.2         5.0         9         4.0         200         300           701         6.2         6.0         9         0.90         0.90         300           701         6.2         5.0         9         4.0         200         300           701         6.2         7.00         1.91         200         2.00         4.1         2.00         4.1           701         6.0         7.00         351         7.00         <	Lane Configurations	ŧ	×.	۶	ŧ	۶	×.			Lane Configurations	ŧ
Fig         Sig         Sig         Sig         Altere Volterier         Sig	Traffic Volume (veh/h)	636	56	8	603	85	38			Traffic Volume (vph)	539 1
Free         500         Other         Free         Statute         Numerical	Future Volume (Veh/h)	636	56	83	603	85	38			Future Volume (vph)	
000         000 <td>Sign Control</td> <td>Free</td> <td></td> <td></td> <td>Free</td> <td>Stop</td> <td></td> <td></td> <td></td> <td>Turn Type</td> <td>NA Pe</td>	Sign Control	Free			Free	Stop				Turn Type	NA Pe
000         000 <td>Grade</td> <td>%0</td> <td></td> <td></td> <td>%0</td> <td>%0</td> <td></td> <td></td> <td></td> <td>Protected Phases</td> <td>2</td>	Grade	%0			%0	%0				Protected Phases	2
701         52         50         44         42         Selector Phase         2           None	Peak Hour Factor	0.90	0.90	0.90	0.90	0.00	0.90			Permitted Phases	
None         None <th< td=""><td>Hourly flow rate (vph)</td><td>707</td><td>62</td><td>92</td><td>670</td><td>94</td><td>42</td><td></td><td></td><td>Detector Phase</td><td>2</td></th<>	Hourly flow rate (vph)	707	62	92	670	94	42			Detector Phase	2
None         None <th< td=""><td>Pedestrians</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Switch Phase</td><td></td></th<>	Pedestrians									Switch Phase	
Nore         Nore <th< td=""><td>Lane Width (m)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Minimum Initial (s)</td><td></td></th<>	Lane Width (m)									Minimum Initial (s)	
Nore         Nore <th< td=""><td>Walking Speed (m/s)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Minimum Split (s)</td><td>31.2 37</td></th<>	Walking Speed (m/s)									Minimum Split (s)	31.2 37
None         None         None         Coloral Split (\$5)         7505           143         143         148         141         20         21           144         143         09         21         20         21           145         120         354         20         20         20           146         120         354         20         20         20           147         140         120         354         20         20           149         120         354         20         20         20           141         68         69         69         69         69         66           22         35         33         34         42         20	Percent Blockage									Total Split (s)	45.0 4!
None         None <th< td=""><td>Right turn flare (veh)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Total Split (%)</td><td>75.0% 75.0</td></th<>	Right turn flare (veh)									Total Split (%)	75.0% 75.0
19         119         109         109         101	Median type	None			None					Yellow Time (s)	4.1
194	Median storage veh)									All-Red Time (s)	2.1
109         109         109         100 <td>Upstream signal (m)</td> <td></td> <td></td> <td></td> <td>194</td> <td></td> <td></td> <td></td> <td></td> <td>Lost Time Adjust (s)</td> <td>0.0</td>	Upstream signal (m)				194					Lost Time Adjust (s)	0.0
160         123         354         ieadLag         ieadLag <td>nX. platoon unblocked</td> <td></td> <td></td> <td></td> <td></td> <td>0.99</td> <td></td> <td></td> <td></td> <td>Total Lost Time (s)</td> <td>6.2</td>	nX. platoon unblocked					0.99				Total Lost Time (s)	6.2
Figure         Figure<	vC. conflicting volume			769		1226	354			Lead/Lag	4
769         700           4.1         6.8         6.9         Act Eft (Green (S) 39)         390           4.1         6.8         6.9         Act and a g (C Raino 0.06)         0.66	vC1. stage 1 conf vol									Lead-Lag Optimize?	
769         1200         354         Add Eftd. Green (\$)         390           4.1         6.8         6.9         Add Eftd. Green (\$)         390           2.2         3.5         3.3         Add Eftd. Green (\$)         390           841         94         Add Eftd. Green (\$)         390           841         159         649         Control Diaty         48           841         159         649         Control Diaty         48           841         841         159         649         Control Diaty         43           354         6         9         335         94         42         43           364         6         9         10         120         140         43           0         0         0         0         14         43           100         100         0         14         42           00         0         1700         1700         1700         1700           11         0         1         1         2         2         2           0         0         0         0         2         2         2           0         0         1	vC2. stage 2 conf vol									Recall Mode	C-Max C-N
4.1         6.8         6.9           2         3.5         4.1         3.3           2         3.5         3.5         0.0           2         3.5         3.5         0.0           8.1         1.59         6.49         Control Delay           9.1         0         0         0         0.4           0         0         0         0         0.4           1.700         1.700         1.700         1.700         1.700           1.700         1.00         0.0         0.42         Control Delay           0         0         0         0         0.42         Control Delay           0.01         0.0         0.0         0.42         Control Delay           0.021         0.21         0.21         0.42         Control Delay           0.01         0.0         0.0         0.0         0.0         Control Delay           0.021         0.21         0.01         0.0         Contr	vCu, unblocked vol			769		1200	354			Act Effct Green (s)	
12         3.5         3.3         Anticipation         Anticipatio	tC. single (s)			4.1		6.8	6.9			Actuated o/C Ratio	0.65 0.
22         3.5         3.3         Control Delay           89         41         94         Control Delay           81         159         647         101           81         159         647         101           84         159         647         101           91         159         647         101           92         0         94         0           0         0         2         335         34           1700         1700         1700         1700         160           1700         1700         1700         1700         164           0         0         0         0         44           0         1700         1700         159         0.66           0.21         0.21         0.21         0.74         177           0         0         2         3         10.9         1016           0         1         0.0         2         1         1           1         1         1         1         1         1         1           1         1         1         1         1         1         1 <td>tC, 2 stage (s)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>v/c Ratio</td> <td>0.26 0.</td>	tC, 2 stage (s)									v/c Ratio	0.26 0.
89         11         94         Dueue Delay           841         159         649         1000	tF (s)			2.2		3.5	3.3			Control Delay	4.8
R1         159         649         Total Delay           EB1         ED2         EB3         WB1         NB2         WB2         WB3         NB1         NB2           354         354         62         92         0         94         42         Approach Delay           0         0         0         0         0         0         0         42         Approach Delay           1700	p0 queue free %			89		41	94			Queue Delay	0.0
EB1         EB2         EB3         WB1         NB2         WB3         NB1         NB2         NB3         NB1         NB3         NB3 <td>cM capacity (veh/h)</td> <td></td> <td></td> <td>841</td> <td></td> <td>159</td> <td>649</td> <td></td> <td></td> <td>Total Delay</td> <td>4.8</td>	cM capacity (veh/h)			841		159	649			Total Delay	4.8
354         22         92         00         94         02           0         0         0         2         33         34         42           10         0         0         2         3         35         34         42           10         0         0         2         0         0         42         Approach Delay           10         0         0         0         0         44         2         2           10         0         0         0         0         44         2         44           0.0         10         10         0         0         44         2         44           0.0         0         0         0         0         44         2         44           0.1         0.2         0.3         0.4         17         44         44           0.0         0         0         0         5.3         10.9         44         44           0.0         0         0         0         5.3         10.9         44         44           0.0         12         1.1         7         4.2         44         44         44<	Diroction Lano #	5D 1	CD 3	CD 2	1 U/D 1	C 2///	1//D 2	ND 1	ND 3	LOS	A
0         0         2         0         3         4         4         4           0         0         0         0         4         4         4         4         4           0         0         0         0         0         4	Volume Total	264	25.4	47 47	6	2.2F	2.2F	NO NO	2 01	Approach Delay	4.2
0         62         0         62         0         42           1700         1003         Reflexing to the state of the state	Volume Left	t C		0	66		0	64	0	Approach LOS	A
1700         1700 <th< td=""><td>Volume Right</td><td>0</td><td>0</td><td>69</td><td>0</td><td>0</td><td>0</td><td>C</td><td>42</td><td>Intersection Summary</td><td></td></th<>	Volume Right	0	0	69	0	0	0	C	42	Intersection Summary	
0.21         0.21         0.24         0.14         0.20         0.25         0.05         0.05         0.05         0.05         Naturated Systement           0.0         0.0         0.0         0.0         29         0.0         0.0         5.3         1.17           0.0         0.0         0.0         0.0         5.3         1.09         Naturated Systement           0.0         0.0         0.0         0.0         5.3         10.9         Naturated Systement           0.0         1.2         4.2         B         0.0         Control Types Actual           0.0         1.2         4.23         B         Naturated Systement         Naturated Systement           0.0         1.2         4.23         B         Naturated Systement         Naturated Systement           1.1         1.2         4.23         B         Naturated Systement         Naturated Systement           1.1         1.2         4.23         B         Naturated Systement         Naturated Systement           1.1         1.1         1.1         1.2         4.23         Naturated Systement         Naturated Systement           1.1         1.1         1.1         1.1         1.1         Natur	cSH	1700	1700	1700	841	1700	1700	159	649	Cycle Length: 60	
0.0         0.0         0.0         2.9         0.0         0.0         5.3         1.7           0.0         0.0         0.0         9.8         0.0         5.3         10.9         Matrix (yet; 60           0.0         0.0         0.0         0.0         5.3         10.9         Matrix (yet; 60           0.0         1.2         4.2.3         B         Matrix (yet; 60         Control Type: Actual           0.0         1.2         4.2.3         F         B         Matrix (yet; 60           0.1         1.2         4.2.3         F         B         Matrix (yet; 60           0.1         1.2         4.2.3         F         B         Matrix (red)           1.1         1.3         4.3         F         B         Matrix (red)           1.1         3.6.%         CU Level of Service         A         Splits and Phases.           1.5         1.5         A <td< td=""><td>Volume to Capacity</td><td>0.21</td><td>0.21</td><td>0.04</td><td>0.11</td><td>0.20</td><td>0.20</td><td>0.59</td><td>0.06</td><td>Actuated Cycle Length: 6</td><td>0</td></td<>	Volume to Capacity	0.21	0.21	0.04	0.11	0.20	0.20	0.59	0.06	Actuated Cycle Length: 6	0
00         00         98         00         56.3         10.9         Natural Cycle: 60           0         A         F         B         Oontof Yape         Actual Cycle: 60           0.0         1.2         42.3         Dontof Yape         Natural Cycle: 60           0.0         1.2         42.3         Natural Cycle: 60         Natural Cycle: 60           0.0         1.2         42.3         Dontof Yape         Natural Cycle: 60           0.1         1.2         42.3         Difference         Natural Cycle: 60           1.1         1.2         42.3         Difference         Difference           1.1         3.5%         CU Level of Service         A         Splits and Phases:           15         15         Actual         Actual         Splits and Phases:	Queue Length 95th (m)	0.0	0.0	0.0	2.9	0.0	0.0	25.1	1.7	Offset: 0 (0%), Reference	ed to phase 2:EBT
A         F         B         Control Type: Actual Maximum Vc Eator.           0.0         1.2         4.3         Control Type: Actual Maximum Vc Eator.           0.0         1.2         4.3         Intersection Signal Intersection Signal Analysis Period (min 36.9%           36.9%         ICU Level of Service         A           15         Splits and Phases:	Control Delay (s)	0.0	0.0	0.0	9.8	0.0	0.0	56.3	10.9	Natural Cycle: 60	
0.0         1.2         42.3         Maximum vc Ration           0         E         Maximum vc Ration           1         E         Intersection Signal D           10         4.0         Ration Specific           36.9%         ICU Level of Service         A           15         CU Level of Service         A	Lane LOS				A			ш	В	Control Type: Actuated-0	oordinated
E Intersection Signal D Intersection Signal D Intersection Signal D Intersection Capacity Analysis Period (mi) 36.9% ICU Level of Service A Splits and Phases: 75	Approach Delay (s)	0.0			1.2			42.3		Maximum v/c Ratio: 0.70	
4.0 Intersection Capacity Analysis Period (min 36.9% ICU Level of Service A Splits and Phases: 15	Approach LOS							ш		Intersection Signal Delay	: 8.4
4.0 Analysis Period (mi) 36.9% ICU Level of Service A Splits and Phases. 15	Interaction Cummons									Intersection Capacity Uti	ization 57.4%
4.0 Splits and Phases: 15 15 CU Level of Service A Splits and Phases:										Analysis Period (min) 15	
36.9% ICU Level of Service A Splits and Phases: 15	Average Delay			4.0							
15	Intersection Capacity Utilizati	uo		36.9%	<u>ت</u>	U Level of	Service		A		Rogers Road & Elc
	Analysis Period (min)			<u>q</u> [							2
										45 s	
										•	

Timings 4: Rogers Road & Elgin Street West	gin Str	eet W	est			V	<2025 Total> PM Peak Hour 09-28-2020
	t	۲	5	ŧ	4	•	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	×	۴	ŧ	۴	×	
Traffic Volume (vph)	539	118	331	634	91	260	
Future Volume (vph)	539	118	331	634	91	260	
Turn Type	NA	Perm	Perm	NA	Prot	Perm	
Protected Phases	2			9	4		
Permitted Phases		2	9			4	
Detector Phase	2	2	9	9	4	4	
Switch Phase							
Vinimum Initial (s)	20.0	20.0	20.0	20.0	8.0	8.0	
Vinimum Split (s)	31.2	31.2	31.2	31.2	14.5	14.5	
Total Split (s)	45.0	45.0	45.0			15.0	
Total Split (%)	75.0%	75.0%	75.0%			25.0%	
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.1	2.1	2.1	2.1	2.4	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
Lead/Lag							
timize?							
		C-Max	C-Max	C-Max	None	None	
Act Effct Green (s)	39.0	39.0	39.0	39.0	8.3	8.3	
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.14	0.14	
//c Ratio	0.26	0.12	0.70	0.31	0.42	0.61	
Control Delay	4.8	1.2	16.4	5.1	29.5	10.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	4.8	1.2	16.4	5.1	29.5	10.0	
LOS	A	A	8	A	ပ	в	
Approach Delay	4.2			8.9	15.1		
Approach LOS	A			A	в		
Intersection Summary							
Cycle Length: 60							
Actuated Cycle Length: 60							
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green	hase 2:E	BT and (	5:WBTL,	Start of G	een.		
Natural Cycle: 60							
Control Type: Actuated-Coordinated	nated						
Maximum v/c Ratio: 0.70							
Intersection Signal Delay: 8.4				int.	Intersection LOS: A	LOS: A	
Intersection Capacity Utilization 57.4%	57.4%				J Level of	ICU Level of Service B	
Analysis Period (min) 15							
Splits and Phases: 4: Rogers Road & Elgin Street West	Road &	Elain Sti	reet West				
		þ					
🐨 02 (R)							704
45 S							15 S

🕶 🕶 Ø2 (R)	**************************************	
45 s	15 s	
🕶 06 (R)		
45 s		_

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HCM Signalized Intersection Capacity Analysis 4: Rogers Road & Elgin Street West	sectio in Str	n Cap eet Wi	acity A est	nalysis			<2025 Total> PM Peak Hour 09-28-2020
	t	1	\$	ŧ	∢	•	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	*	۶	ŧ	<b>,</b>	×	
Traffic Volume (vph)	539	118	331	634	91	260	
Future Volume (vph)	539	118	331	634	91	260	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	1.00	0.85	
	1.00	1.00	0.95	1.00	0.95	1.00	
rot)	3500	1597	1785	3500	1733	1597	
Fit Permitted	1.00	1.00	0.43	1.00	0.95	1.00	
Satd. Flow (perm)	3500	/6GL	408	3500	1/33	159/	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	592	130	364	697	100	286	
RTOR Reduction (vph)	0	46	0	0	0	246	
Lane Group Flow (vph)	592	85	364	697	100	40	
Heavy Vehicles (%)	2%	0%	%0	2%	3%	0%	
Turn Type	NA	Perm	Perm	NA	Prot	Perm	
Protected Phases	2			9	4		
Permitted Phases		2	9			4	
Actuated Green, G (s)	39.0	39.0	39.0	39.0	8.3	8.3	
Effective Green, g (s)	39.0	39.0	39.0	39.0	8.3	8.3	
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.14	0.14	
Clearance Time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
	3.0	3.0	3.0	3.0	3.0	3.0	
(hdh)	22.75	1038	523	22.75	239	220	
v/s Ratio Prot	0.17			0.20	c0.06		
v/s Ratio Perm		0.05	c0.45			0.02	
v/c Ratio	0.26	0.08	0.70	0.31	0.42	0.18	
Uniform Delay, d1	4.4	3.9	6.7	4.6	23.6	22.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.2	7.5	0.3	1.2	0.4	
Delay (s)	4.7	4.0	14.2	4.9	24.8	23.2	
Level of Service	A	A	в	A	U	с	
Approach Delay (s)	4.6			8.1	23.6		
Approach LOS	A			A	ပ		
Intersection Summary							
HCM 2000 Control Delay			9.7	H	M 2000 L(	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	ratio		0.65				
Actuated Cycle Length (s)			60.09	Sul	Sum of lost time (s)	me (s)	12.7
Intersection Capacity Utilization			57.4%		ICU Level of Service	Service	а
Analysis Period (min)			15				
c Critical Lane Group							

HCM Unsignalized Intersection Capacity Analysis 5: Carlisle Street & Rogers Road	tersec ogers	tion C Road	apacity	/ Analy	/sis	<202	<2025 Total> PM Peak Hour 09-28-2020
	•	t	Ŧ	~	۶	<b>*</b>	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		÷	\$		×		
Sign Control		Stop	Stop		Stop		
Traffic Volume (vph)	93	29	31	183	304	131	
Future Volume (vph)	93	29	31	183	304	131	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	101	32	34	199	330	142	
Direction. Lane #	EB 1	WB 1	SB 1				
Volume Total (vph)	133	233	472				
Volume Left (vph)	101	0	330				
Volume Right (vph)	0	199	142				
Hadj (s)	0.15	-0.50	-0.04				
Departure Headway (s)	5.6	4.9	4.8				
Degree Utilization, x	0.21	0.31	0.63				
Capacity (veh/h)	583	681	717				
Control Delay (s)	10.1	10.1	15.7				
Approach Delay (s)	10.1	10.1	15.7				
Approach LOS	в	8	ပ				
Intersection Summary							
Delay			13.3				
Level of Service			в				
Intersection Capacity Utilization	-		54.4%	D	ICU Level of Service	Service	A
Analysis Period (min)			15				

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		¢			¢			¢			¢	
Fraffic Volume (veh/h)	14	37	m	2	42	20		0	£	16	0	m
Future Volume (Veh/h)	14	37	m	2	42	20		0	2	16	0	ŝ
Sign Control		Free			Free			Stop			Stop	
Grade		%0			%0			%0			%0	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	18	47	4	9	53	25		0	9	20	0	4
Pedestrians								2			2	
Lane Width (m)								3.5			3.5	
Walking Speed (m/s)								1.2			1.2	
Percent Blockage								C			C	
Right turn flare (veh)												
Median type		Anne			Anne							
Median storade veh)												
troom clanol (m)												
pX, platoon unblocked												
vC, conflicting volume	80			53			168	179	51	170	168	68
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	8			53			168	179	51	170	168	68
C, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
IC, 2 stage (s)												
F (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
o0 queue free %	66			100			100	100	66	797	100	100
cM capacity (veh/h)	1528			1563			784	705	1021	780	714	1000
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
/olume Total	69	84	-	24								
/olume Left	18	9	-	20								
/olume Right	4	25	9	4								
SH	1528	1563	679	810								
/olume to Capacity	0.01	0.00	0.01	0.03								
Queue Length 95th (m)	0.3	0.1	0.2	0.7								
Control Delay (s)	2.0	0.5	8.7	9.6								
-ane LOS	A	A	A	A								
Approach Delav (s)	2.0	0.5	8.7	9.6								
Approach LOS			A	A								
ntoreortion Summaru												
roco Dolou			70									
Average Delay			0.2 /01 11	Ē	Contract of Contract	Condoo						
			- 1 M						<			

HCM Unsignalized Intersection Capacity Analysis 7: Wilkins Gate & Carlisle Street	terseo rlisle S	tion C Street	apacity	/ Analy	/sis			<202	5 Tota	<pre>PM</pre>	<2025 Total> PM Peak Hour 09-28-2020	ak Hour 09-28-2020
	•	Ť	۲	\$	ŧ	~	4	+	٠	۶	-	$\mathbf{k}$
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	32	4	13	30	11	9	21	ъ	16	36	9
Future Volume (vph)	2	32	4	13	30	1	9	21	2	16	36	9
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	35	4	14	33	12	7	23	2	18	40	7
Direction. Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	44	59	35	65								
Volume Left (vph)	2	14	٢	18								Ľ
Volume Right (vph)	4	12	2	7								
Hadj (s)	-0.03	-0.03	0.02	-0.01								
Departure Headway (s)	4.1	4.1	4.2	4.2								
Degree Utilization, x	0.05	0.07	0.04	0.07								
Capacity (veh/h)	841	845	822	842								
Control Delay (s)	7.4	7.4	7.4	7.5								
Approach Delay (s)	7.4	7.4	7.4	7.5								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.4									
Level of Service			A									
Intersection Capacity Utilization	Ę		16.8%	⊇	ICU Level of Service	<sup>5</sup> Service			A			
Analysis Period (min)			15									

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HCM Unsignalized Intersection Capacity Analysis 1: Wilkins Gate & Elgin Street West	ersection Stree	on Ca t We	apacity	Analy	sis.		<2025 Total> SAT Peak Hour 09-28-2020
	†	~	\$	ţ	1	•	
Movement		EBR	WBL	WBT	NBL	NBR	
	<b>t</b>	×.	00	<b>4</b>	<b>- 1</b>	€.	
	623 777	~ ~	28	7/9	γ	\$4	
ne (ven/n)	023	×	R	0/7	γ	34	
ontrol	Free			Pree	Stop		
Glaue Dook Hour Footor		00 0	00 0	00 O	0.00	00 0	
(Ho	708	8.0	0.00	00.0	0.00 2	0.00 20	
	00/	~	62	5	r	4C	
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
	None			None			
Median storage veh)							
Upstream signal (m)							
pX, platoon unblocked							
vC, conflicting volume			717		1136	354	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			717		1136	354	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			79		98	94	
cM capacity (veh/h)			893		194	648	
Direction, Lane # E		EB 2	EB 3		WB 2	NB 1	NB 2
_	354	354	6	278	509	e	39
Volume Left	0	0	0	23	0	°	0
ne Right		0	6	0	0	0	39
		1700	1700	893	1700	194	648
		0.21	0.01	0.03	0.30	0.02	0.06
öth (m)	0.0	0.0	0.0	0.6	0.0	0.4	1.5
ilay (s)	0.0	0:0	0.0	1.0	0.0	23.9	10.9
				A		ပ	В
/ (s)	0.0			0.4		11.8	
Approach LOS						в	
Intersection Summary							
Average Delay			0.5				
Intersection Capacity Utilization Analysis Period (min)		~	43.0% 15	ICU	ICU Level of Service	Service	٨

HCM Unsignalized Intersection Capacity Analysis 2: Proposed Commercial Site Driveway & Elgin Street West	tersec rcial S	tion C ite Driv	apacit /eway	/ Anal & Elgi	ysis n Stre	et West	<2025 Tot
	Ť	1	\$	Ļ	•	•	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	×		ŧ		*	
Traffic Volume (veh/h)	650	52	0	622	0	46	
Future Volume (Veh/h)	650	52	0	622	0	46	
Sign Control	Free			Free	Stop		
Grade	%0			%0	%0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	707	57	0	676	0	50	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None			None			
Median storage veh)							
Upstream signal (m)				288			
pX, platoon unblocked							
vC, conflicting volume			764		1045	354	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			764		1045	354	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			100		100	92	
cM capacity (veh/h)			858		228	649	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	
Volume Total	354	354	57	338	338	50	
Volume Left	0	0	0	0	0	0	
Volume Right	0	0	57	0	0	50	
cSH	1700	1700	1700	1700	1700	649	
Volume to Capacity	0.21	0.21	0.03	0.20	0.20	0.08	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	2.0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	11.0	
Lane LOS						В	
Approach Delay (s)	0:0			0.0		11.0	
Approach LOS						в	
Intersection Summary							
Average Delay			0.4				
Intersection Capacity Utilization	ç		28.0%	2	U Level o	ICU Level of Service	A
Analysis Period (min)			15				

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ERI         ERI         WBI         WBI         NBI         NBI           0         614         6         100         221         96         50           0         614         6         100         221         96         50           0.99         0.99         0.99         0.99         0.99         0.99           0.09         0.99         0.99         0.99         0.99         0.99           0.09         0.99         0.99         0.99         0.99         0.99           0.09         0.99         0.99         0.99         0.99         0.99           0.09         0.99         0.99         0.99         0.99         0.99           0.09         0.99         1065         310         1.94         1.94           1.1         6.97         1065         310         1.94         1.94           1.1         6.97         1065         310         1.94         1.94           1.1         6.97         1065         310         1.94         1.94           1.1         6.97         1065         310         1.94         1.94           1.1         6.97         1065	EBT         EBR         WBL         WBT         NBL           (h)         614         76         100         521         %           (h)         699         0.99         0.99         0.99         0.99           (h)         520         77         101         526         97           (h)         500         77         101         526         97           (h)         697         108         697         1085           (h)         697         108         49         49           (h)         697         108         49         49           (h)         101         6.8         49         49           (h)         101         101         0.3         0.0           (h)         101         101         0.3         0.0           (h)         101         0.1         0.1         0.1           (h)         101	<ul> <li>✓</li> <li>↓</li> <li>✓</li> <li>/&gt;</li> <li>↑</li> </ul>	•			
Image         Image <th< th=""><th>Image: Hole of the second se</th><th>. EBR WBL WBT</th><th></th><th></th><th></th><th>Lane Group</th></th<>	Image: Hole of the second se	. EBR WBL WBT				Lane Group
m         611         76         100         521         96         50           m         Free         Sup         935         035         035         035           m         free         Sup         101         526         97         51           m         free         Sup         101         526         97         51           m         Mone         None         None         None         None           m         194         103         536         310           m         697         108         310         108         310           m         697         108         310         MB         22         33         33           m         697         108         310         108         310         108         51           m         697         108         310         MB         22         33         31           m         697         108         31         108         31         108         108           m         697         108         31         697         109         21         109           m         101         101 <td><math display="block"> \begin{array}{cccccccccccccccccccccccccccccccccccc</math></td> <td>** *</td> <td></td> <td></td> <td></td> <td>Lane Configurations</td>	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	** *				Lane Configurations
In         614         76         100         521         96         50           0.520         77         101         526         97         51           0.520         77         101         526         97         51           0.520         77         101         526         97         51           0.6         0%         0%         0%         0%         0%           0.6         0%         0%         0%         0%         0%           0.0         0%         198         310         1         1           0         0         108         310         1         1         1           0         41         687         1085         310         1         1           1         697         1085         310         1         1         1           1         687         1083         310         1         1         1           1         697         1083         310         1         1         1           1         101         23         33         1         1         1           1         101         23	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	76 100 521				Traffic Volume (vph)
Free         Free         Stop           0 95         0 79         0 79         0 79           0 95         0 79         0 79         0 79           0 95         0 79         0 79         0 79           0 95         0 79         0 79         0 79           0 1         5 20         7         5 1           1 1         5 20         7         5 1           1 1         1 10         5 20         3 10           1 1         6 7         1 085         3 10           1 1         6 7         1 085         3 10           1 1         6 8         5 9         1 085         3 10           1 1         6 8         5 9         9         9 7           1 1         6 8         5 9         5 10         9           1 1         1 08         3 10         1 10         2 2           1 1         6 8         5 9         5 10         0 7           1 1         1 0         1 0         0 0         0 7           1 1         1 0         2 3         3 1         1 1           1 1         1 0         1 0         1 0         1 0	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	76 100 521				Future Volume (vph)
00%         00%         00%         00%         00%           620         77         101         326         97         51           0         620         77         101         326         97         51           0         None         None         None         None         None         104           10         20         1085         310         104         104         104           11         697         1085         310         104         104         104           11         697         1085         310         104         104         104         104           11         697         1085         310         104         22         33         23 </td <td><math display="block"> \begin{array}{cccccccccccccccccccccccccccccccccccc</math></td> <td>Free</td> <td>Q.</td> <td></td> <td></td> <td>Turn Type</td>	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Free	Q.			Turn Type
0.090     0.99     0.99     0.99     0.99     0.99     0.99       0     None     None     None     None       194     194       0     0     194       194     194       194     194       194     194       194     194       194     194       194     194       194     195       194     1085       194     1085       194     1085       194     1085       194     1085       194     1085       194     1085       194     108       194     108       194     108       194     101       195     108       199     191       199     191       190     191       100     101       101     101       101     101       101     101       101     101       101     101       101     101       101     101       101     101       101     101       101     101       112     101       1	0.99         0.99         0.99         0.99         0.99         0.99         0.99         0.91         0.11         526         97         0 <th0< th="">         0         <th0< th="">         0</th0<></th0<>	%0				Protected Phases
1)     620     77     101     526     97     51       10     None     None     None     None       194     194       697     1085     310       697     1085     310       697     1085     310       697     1085     310       697     1085     310       697     1085     310       697     1085     310       697     1085     310       697     1085     310       697     101     60       909     191     62       70     70     71       71     71     72       72     33     77       730     310     71       730     310     70       730     310     70       730     310     70       730     310     70       730     310     70       731     312     89       731     312     99       731     312     99       731     90     90       731     91     90       731     91     90       731     71	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0.99 0.99 0.99				Permitted Phases
None         None         None           194         194           6         697         1085         310           6         697         1085         310           6         697         1085         310           6         697         1085         310           6         697         1085         310           6         697         1085         310           7         108         310         32           909         191         692         33           909         191         692         33           10         310         77         101         263         93           11         692         33         51         697         51           10         0         0         101         263         263         93           1700         1700         101         263         93         105           1700         100         00         00         263         106           1700         101         263         263         105           1700         100         00         264         105	None None 194 None 194 None 194 None 194 1055 105 105 105 105 105 105 10	77 101 526				Detector Phase
None         None         None           194         194           697         1085         310           697         1085         310           697         1085         310           697         1085         310           697         1085         310           697         1085         310           697         1085         310           697         1085         310           697         1085         310           22         35         33           89         99         93           90         191         697           101         203         203           103         101         203           103         101         203           100         0         0           100         101         203           101         105         031           101         105         031           101         0         0           101         0         0           102         0         0           103         0         0           100	None         None           194         194           ed         697         1085           ed         997         1085           1         22         35           1         10         10           1         10         10         10           1         10         10         10         10           1         10         10         10         10           1         10         10         10         0           1         10         10         10         0           1         10         10         0         0         0           1         1         1         1         1         1           1         1         1         1         1         1           1         1         1         1         1         1           1         1         1         1					Switch Phase
None     None     None       194     198     310       ed     697     1085     310       ed     999     191     693       909     191     693     51       910     71     101     263     263       910     71     101     263     263       910     71     101     263     263       910     70     101     0     51       910     71     101     263     263       910     70     101     67     007       910     70     101     67     007       911     915     67     007       910     101     00     201       911     67     93       912     105     017       913     105     106       914     97     51       915     00     00 </td <td>) None None None 194 ed 697 1085 194 697 1085 194 697 1085 4,1 68 697 1085 4,1 68 999 191 191 20 191 20 192 20 193 20 193 20 191 20 193 20 194 20 194 20 194 20 194 20 1</td> <td></td> <td></td> <td></td> <td></td> <td>Minimum Initial (s)</td>	) None None None 194 ed 697 1085 194 697 1085 194 697 1085 4,1 68 697 1085 4,1 68 999 191 191 20 191 20 192 20 193 20 193 20 191 20 193 20 194 20 194 20 194 20 194 20 1					Minimum Initial (s)
None         None         None           194         194           194         198           194         198           194         198           194         1085           19         310           19         4.1           697         1085           198         310           191         692           22         35           23         33           23         33           99         191           697         1085           101         23           310         77           101         23           310         11           11         11           11         11           11         11           11         11           11         11           11         11           11         11           11         11           11         11           11         11           11         11           11         12           11         13           11         19	None         None           194         194           194         198           194         198           195         697         1085           194         697         1085           195         697         1085           196         697         1085           197         6.8         4.9           198         4.1         6.8           199         89         49           100         7.7         101         2.3           101         7.7         101         2.3           101         0.0         0.0         0.1         0.15           110         1700         1700         1700         1.15           101         0.0         0.0         0.1         0.15           101         0.0         0.0         0.0         0.15         0.16           101         0.0         0.0         0.0         0.16         1.15           101         0.0         0.0         0.0         0.15         0.15					Minimum Split (s)
None         None           194         194           697         1085         310           697         1085         310           697         1085         310           697         1085         310           697         1085         310           697         1085         310           697         1085         310           697         1085         310           697         1085         310           697         1085         310           71         68         59           909         191         692           71         101         263         263           71         101         263         263           71         101         263         263           71         101         263         07           71         101         263         07           717         101         263         07           717         101         263         07           700         0         0         263           701         100         0         264	None         None           194         194           ed         697         1085           ed         697         1085           ed         4.1         6.8           101         6.97         1085           102         4.1         6.8           103         2.2         3.5           104         89         49           105         909         101           103         101         2.3           103         101         2.3           103         101         101           103         101         101           103         101         101           103         103         101         0           103         0.18         0.10         0.0           101         0.0         0.0         0.0           101         0.0         0.0         0.0           101         0.0         0.0         0.0           101         0.0         1.5         0.0           101         0.0         0.0         0.0           101         0.0         1.5					Total Split (s)
None         None           13         19           14         1085         310           15         1085         310           16         697         1085         310           17         108         310         1           18         697         1085         310           19         697         1085         310           10         10         108         310           11         68         69         108           11         68         69         108           11         68         19         68           10         101         263         263           10         11         101         263           10         11         101         263           10         11         101         263           10         11         101         692           110         103         101         105           110         103         101         692           110         103         101         692           110         0         0         0         0           <	None         None           ed         794           ed         697         1085           ed         4.1         6.8           194         4.1         6.8           195         4.1         6.8           195         4.1         6.8           195         1085         49           194         101         2.3           105         101         2.3           101         2.2         3.5           102         2.3         49           103         2.1         101           103         2.1         101         2.3           101         2.1         101         2.3         49           101         2.1         2.3         3.5         49           101         2.1         2.3         2.3         2.3           102         2.1         2.3         0.0         0.0           103         0.0         0.0         0.0         0.0           103         0.0         0.0         1.5         0.0           103         0.0         0.0         0.0         0.0           100         0.0					Total Split (%)
194     194       196     697     1085     310       196     697     1085     310       191     697     1085     310       101     697     1085     310       101     697     1085     310       101     697     1085     310       101     69     310     50       101     69     313     313       101     203     191     692       101     203     70     191     692       101     203     203     97     51       101     203     101     203     651       101     203     00     00     51       101     203     01     01     692       1100     010     010     010     692       1100     010     00     203     194       101     203     01     692       1100     010     010     194       1100     15     312       1100     16     19       1100     19     692       1100     19     692       1100     19     692       1100     20    19	194         194           194         697         1085           194         697         1085           194         697         1085           194         637         1085           195         4.1         6.8           194         6.97         1085           195         6.97         101           196         909         191           197         909         191           108         101         77         101         263           109         10         77         101         263         191           101         100         77         101         263         100         101           101         101         77         0         100         0         0         115         115         115           101         0.0         0.0         0.0         9.5         0.0         115         115         115           101         0.0         0.0         0.0         115         115         115         115					Yellow Time (s)
0     194       ed     697     1085     310       10     697     1085     310       11     697     1085     310       11     697     1085     310       11     697     1085     310       11     69     310     310       12     35     33     33       909     191     692       909     191     692       909     191     692       1310     310     77     101       1310     310     77     101     263       1310     310     77     101     263       1310     310     77     101     263       11700     170     101     0     0       0     0     0     0     0       0.18     0.18     0.10     0.10     0       0.18     0.19     0.02     1.9       0.19     0.0     0.0     0.0       0.10     0.0     0.0     2.04       0.11     0.15     0.1     0.0       0.10     0.0     0.0     2.04       0.0     0     0     2.04       0.0     1.5     <	194         194           ed         697         1085           ed         999         49           ed         909         191           ed         909         191           ed         10         77         101         23           a         310         310         77         101         23           a         0         0         77         101         23         0           a         100         1700         1700         15         0.15         0           a         0.0         0.0         0.0         0.16         0.15         0           a         0.0         0.0         0.0         1.15         1.15         4					All-Red Time (s)
ed e 697 1085 310 41 697 1085 310 41 697 1085 310 41 68 69 22 35 33 22 35 33 22 35 33 22 35 33 909 191 692 191 692 100 00 00 31 012 015 017 100 00 00 31 012 015 017 100 00 00 31 012 015 017 100 00 00 32 00 00 51 100 00 00 32 000 191 692 100 100 00 31 012 015 017 11 015 015 017 007 12 312 312 312 313 313 313 313 313	ed 697 1085 1 697 1085 697 1085 4.1 68 4.1 0.8 72 70 77 101 00 71 01 00 71 01 70 00 71 015 71 015	194				Lost Time Adjust (s)
697         1085         310           697         1085         310           697         1085         310           697         1085         310           41         6.8         6.9           89         49         3.8           909         191         6.92           89         191         6.92           80         191         6.92           10         101         2.63         2.63           10         101         2.63         2.63           10         101         2.63         2.63           10         101         2.63         2.63           10         101         2.63         0.7           10         0         0         0           10         0         0         0           10         0         0         0.0           10         0         0         10.6           10         0         0         0.16           0         0         0         0.16           0         0         0         0.16           0         0         0         0.10.6	NB         697         1085           1         697         1085           4.1         68         4.1         68           89         4.1         68         49           89         99         191         8           81         89         81         49           903         101         23         35           103         0         77         0         0           103         0         1101         23         0         0           109         1700         1700         1010         0         0         0           101         0         0         101         0         0         0         0         0         0           101         0.0         0.0         0.0         3.0         0.0         0					Total Lost Time (s)
a 697 1085 310 4.1 6.8 6.9 4.1 6.8 6.9 4.1 6.8 6.9 2.2 3.5 3.3 909 191 6.92 2.3 3.3 97 51 310 310 77 101 2.63 2.63 97 51 310 310 77 101 2.63 2.63 97 51 310 310 77 101 2.63 2.63 97 51 1700 1700 1700 191 6.92 1700 1700 190 0.0 2.04 1.9 0.18 0.05 0.11 0.15 0.15 0.51 0.07 (m) 0.0 0.0 0.0 2.04 1.9 0.0 0.0 0.0 2.04 1.9 0.0 1.5 312 1.5 312 91 91 91 91 91 91 91 91 91 91	al         697         1088           4.1         6.9         49           4.1         6.8         4.1           5.2         3.5         89         49           909         191         909         191           81         8.2         8.3         81         49           909         101         77         101         2.3           910         10         77         101         2.3           910         1700         1700         1700         1.15         1.15           (m)         0.0         0.0         0.0         9.5         0.0         1.15           (m)         0.0         0.0         0.0         9.5         0.0         1.15         4.15					Lead/Lag
A 697 1085 310 41 68 69 41 68 69 22 35 33 22 35 33 99 49 93 90 191 692 90 191 692 810 77 101 263 263 97 51 71 01 263 263 97 51 71 0 0 0 0 77 0 0 97 51 71 0 10 10 10 0 97 100 191 692 71 0 10 100 190 191 692 71 0 10 0 0 0 204 19 72 018 018 005 011 015 015 051 007 73 00 00 00 204 19 74 19 70 15 312 8 73 312 8 74 19 75 312 8 75 312 8 70 11 015 015 015 051 007 70 11 015 015 051 007 71 10 10 10 10 10 10 10 10 10 10 10 10 10	Image: Constraint of the second state of th					Lead-Lag Optimize?
697     1085     310       4.1     6.8     6.9       4.1     6.8     6.9       22     35     33       89     49     93       909     191     6.92       80     191     6.92       81     180     203     97       10     7     101     2.63     97       10     7     101     2.63     97       100     7     101     2.63     97       1100     710     101     2.63     97       1100     0.7     0     0     7       1100     0.6     0.1     0.1     0.1       1100     0.6     0.1     0.1     0.7       0.0     0.7     0     0     1.9       0.0     0.0     0.0     1.9     6.51       0.0     0.0     0.0     1.9     6.51       0.0     0.0     0.0     1.9     6.51       0.0     1.5     312     0.7       0.0     1.5     312     0.7       0.0     1.5     312     0.7       0.0     1.5     312     0.7       0.0     1.5     312     0.7  <	697         1085           4.1         6.8           4.1         6.8           4.1         6.8           4.1         6.8           2.2         3.5           89         49           89         49           89         909           910         77           910         77           910         77           910         77           910         101           910         77           910         101           910         101           910         0.0           910         0.0           910         0.0           910         0.0           910         0.0           910         0.0           910         0.0           910         0.0           910         0.0           911         1.5           101         1.5           101         1.5					Recall Mode
4.1     6.8     6.9       22     35     33       89     49     93       89     49     93       909     191     692       81     83     81     82       909     191     692       310     77     101     263       10     0     77     0     97       10     101     263     263     97       100     0     77     0     0     97       100     0     77     0     0     91       1700     1700     1700     191     692       1700     1700     100     0     0       0     0     70     101     642       0.0     0     0     19     692       0.0     0     0     19     692       0.0     0     0     19     692       0.0     0     19     692     10       0.0     0     19     692     10       0.0     15     0     10     19       0.0     15     312     10       0.1     15     312     10       0.1     15     312	4.1 68 4.1 68 22 35 89 49 89 49 89 49 89 49 909 191 70 101 263 710 101 263 710 0 77 0 0 710 0 715 0 71	-				Act Effct Green (s)
22     35     33       89     49     93       89     49     93       909     191     692       81     81     88     88       909     191     692       310     310     71     101     263       310     310     71     101     263     263       909     170     101     263     263     97       1700     1700     170     191     692       1700     1700     1700     191     692       1700     1700     100     00     00       0.18     0.18     0.16     0.10     19       0.18     0.18     0.05     0.11     0.150     19       0.10     0.0     0.0     0.0     204     19       0.0     0.0     0.0     204     19       0.0     1.5     312     10.6       0.0     1.5     312     312       0.1     3.15     312     31       0.1     3.16     3.16     3.16	22 3.5 89 49 909 191 89 89 49 909 191 800 77 101 233 0 0 77 00 23 170 170 170 0 0 0 77 00 0 170 0 170 0 0 170 0 170 0 170 0 0 0 0 0 0 0 0 0 0 0 1.5 0 0 1.5					Actuated g/C Ratio
2.2 3.5 3.3 9.9 49 93 9.9 191 62 3 EB1 EB2 EB3 WB1 WB2 WB3 NB1 NB2 10 17 101 263 263 97 51 10 0 77 101 263 263 97 51 10 0 77 0 10 99 1700 191 692 1700 1700 1700 909 1700 191 692 1700 100 00 00 10 0 19 692 1700 0.0 00 0.0 204 1.9 0.0 0.0 0.0 0.0 204 1.9 0.0 0.0 0.0 0.0 2.4 1.9 0.0 0.0 0.0 0.0 2.4 1.9 0.0 1.5 0.1 0.16 0.5 1.5 312 0.0 1.5 0.1 0.10 0.0 2.4 1.9 0.0 1.15 1.12 312 0.0 1.15 1.12 1.12 312 0.0 1.15 1.12 1.12 312 0.0 1.15 1.12 1.12 1.12 312 0.0 1.15 1.12 1.12 1.12 312 0.0 1.15 1.12 1.12 312 0.0 1.15 1.12 1.12 1.12 1.12 1.12 1.12 1.12	22 35 89 49 909 191 909 191 910 310 77 101 263 0 0 171 101 263 0 0 77 0 0 170 170 99 170 0 170 0 170 99 170 0 170 0 170 99 170 0 0.18 0.18 0.19 0.15 0.19 0.0 0 170 0 95 0.0 15 0.0 115					v/c Ratio
89         49         93           80         191         692           81         B2         EB3         WB1         WB2         WB3         NB1         NB2           80         10         7         101         263         97         51           310         77         101         263         97         51           10         0         7         101         263         97         51           100         710         101         263         97         51           110         0.16         0.170         171         0.15         0.17           0.18         0.160         0.03         10.01         0.01         0.02         10.1           0.10         0.0         0.0         9.1         0.15         0.11         0.15           0.10         0.0         0.0         0.0         42.0         10.6         10.6           0.0         0.0         9.1         0.15         0.1         0.1         0.1           0.11         0.10         0.0         42.0         10.6         10.6         10.6           0.0         1         3.12         31.2 <td>89         49           909         191           EB1         EB2         EB3         WB1         WB2         191           310         310         77         101         263         0           0         0         77         101         263         0         0           10         0         0         77         0         0         0         101         263           1700         1700         1700         1700         1700         0</td> <td></td> <td></td> <td></td> <td></td> <td>Control Delay</td>	89         49           909         191           EB1         EB2         EB3         WB1         WB2         191           310         310         77         101         263         0           0         0         77         101         263         0         0           10         0         0         77         0         0         0         101         263           1700         1700         1700         1700         1700         0					Control Delay
909         191         692           EB1         EB2         EB3         WB1         WB2         WB3         NB1         NB2           310         310         77         101         263         263         97         51           310         310         77         101         263         263         97         51           1700         1700         1700         101         263         263         97         51           1700         1700         1700         1700         191         692         1700         191         692           1700         1700         0         0         0         0         51         007           0.0         0.0         0.0         95         0.0         007         41         9           0.0         0.0         0.0         95         0.0         0.0         42.0         10.6           0.0         1.5         31.2         31.2         31.2         9         10.6           0.0         0.0         0.0         42.0         10.6         9         10.6         10.6           0.0         1.5         31.2         31.2	909         191           EB1         EB2         EB3         WB1         WB2         V           310         310         77         101         2.63           310         310         77         101         2.63           0         0         77         0         0         0           1700         1700         1700         99         1700         1.15           (m)         0.0         0.0         0.0         9.5         0.0           0.0         0.0         0.0         9.5         0.0           1.1         0.15         0.0         9.5         0.0           1.0         0.0         0.0         9.5         0.0           0.0         0.0         0.0         9.5         0.0           1.5         4         1.5         4					Queue Delay
#         EB1         EB2         EB3         WB1         WB2         WB3         NB1         NB2           310         310         77         101         2.63         97         51           0         0         7         101         2.63         263         97         51           0         0         7         101         2.63         263         97         51           0         0         7         0         0         0         51         00           1700         1700         1700         191         692         00         203         11           0         0.0         0.0         0.0         0.0         204         1.9         203           0.0         0.0         0.0         0.0         204         1.9         203           0.0         0.0         0.0         0.0         204         1.9         203           1.5         312         B         1.9         3.1         B         3.1           1.5         312         3         3.1         3.1         3.1         3.1	#         EB1         EB2         EB3         WB1         WB2         V           310         310         77         101         263           0         0         0         77         101         263           0         0         77         101         263           17         17         0         0         0           17         0         700         1700         1700           17         0.18         0.78         0.17         0           0         1700         1700         1700         1700           17         0         0.0         30         0.16         0.15           55         0.0         0.0         3.0         0.0         0.0           5         0.0         0.0         1.5         0.0         0.0           6(s)         0.0         0.0         1.5         0.0         A           (s)         0.0         0.0         1.5         0.0         A					Total Delay
310     310     77     101     263     263     97     51       0     0     0     101     0     0     97     0       1     0     100     100     0     0     51       1700     1700     100     100     0     51       1700     1700     100     100     101     692       1700     0.18     0.05     0.11     0.15     0.51     0.07       5h     0.0     0.0     20.4     1.9     1.9       5h     0.0     0.0     20.4     1.9       5h     0.0     0.0     20.4     1.9       61     0.0     0.0     20.4     1.9       7     0.0     0.0     20.4     1.9       7     0.0     0.0     20.4     1.9       7     0.0     0.0     20.4     1.9       7     0.0     1.5     31.2     10.6       7     0.0     1.5     31.2     10.6       7     0.0     1.1     31.2     3.8       7     3.8     CU Level of Service     A	310         310         77         101         263           0         0         7         101         263           0         0         7         101         263           0         170         170         170         9         0           261y         0.18         0.18         0.05         0.11         0.15           25h(m)         0.0         0.0         0.0         3.0         0.0           5)         0.0         0.0         0.0         9.5         0.0           6(s)         0.0         0.0         1.5         0.0           7         1.5         A         A	EB2 EB3 WB1		NB 1	NB 2	FOS
0         0         101         0         97         0           10         0         77         0         0         51         692           11         0         0         77         0         0         51         692           11         0.18         0.76         0.10         170         196         692         691           55         0.18         0.76         0.11         0.15         0.51         0.07           56         0.18         0.05         0.11         0.12         0.12         0.14         19           51         0.0         0.0         20.4         1.9         692         607         607           51         0.0         0.0         20.4         1.9         692         692         692           51         0.0         0.0         20.4         1.9         692         692         692           6         0.0         0.0         20.4         1.9         692         692         692         692         692         692         692         692         692         692         692         692         692         692         692         692         69	0         0         0         101         0         0         101         0         0         101         0         0         101         0         0         101         0         0         0         101         0         0         0         101         0	310 77 101		70	51	Approach Delay
0         0         77         0         0         71         0         0         71         0         51           1700         1700         1700         1700         1700         1700         1701         191         692           5h         0.18         0.18         0.03         31         0.15         0.51         0.07           5h         0.0         0.0         0.1         0.1         0.1         0.1         0.1         0.0           5h         0.0         0.0         0.0         0.0         2.1         0.7         0.7         10.6           5h         0.0         0.0         9.5         0.0         0.0         4.2         10.6           6h         0.0         0.0         9.5         0.0         0.0         4.2         10.6           6h         0.0         1.5         31.2         8         11.6         9         10.6           7         0.0         1.5         31.2         9         10.6         10.6         10.6         10.6         10.6         10.6         10.6         10.6         10.6         10.6         10.6         10.6         10.6         10.6         1	0         0         77         0         0           scity         1700         1700         909         1700           Shih(m)         0.18         0.18         0.05         0.11         0.15           Shih         0.0         0.0         0.0         3.0         0.0           Sh         0.0         0.0         0.0         9.5         0.0           Sh         0.0         0.0         0.0         9.5         0.0           Sh         0.0         0.0         0.0         9.5         0.0           Y(s)         0.0         0.0         1.15         7.5         0.0	0 0 101		79	0	Approach LUS
1700         170         1700 <th1< td=""><td>Leity 1700 1700 1700 909 1700 1 Leity 0.18 0.18 0.11 0.15 Shih (m) 0.0 0.0 0.0 30 0.0 Shih (m) 0.0 0.0 9.5 0.0 A A A A Maary 1.5 Timary</td><td>0 77 0</td><td></td><td>0</td><td>51</td><td>Intersection Summary</td></th1<>	Leity 1700 1700 1700 909 1700 1 Leity 0.18 0.18 0.11 0.15 Shih (m) 0.0 0.0 0.0 30 0.0 Shih (m) 0.0 0.0 9.5 0.0 A A A A Maary 1.5 Timary	0 77 0		0	51	Intersection Summary
city 0.18 0.18 0.05 0.11 0.15 0.15 0.51 0.07 5ht (m) 0.0 0.0 30 0.0 20.4 1.9 5) 0.0 0.0 3.2 0.0 0.0 20.4 1.9 5) 0.0 1.5 1.5 1.0 (s) 0.0 1.5 31.2 (s) 0.0 1.5 31.2 D mary 3.8 pecty Utilization 37.8% CU Level of Service A	scity 0.18 0.18 0.05 0.11 0.15 56th (m) 0.0 0.0 0.0 3.0 0.0 5) 0.0 0.0 0.0 3.5 0.0 5) 0.0 0.0 0.0 9.5 0.0 7 A 7 (5) 0.0 1.5 7 mary	1700 1700 909		191	692	Cycle Length: 60
Shi (m)     0.0     0.0     3.0     0.0     20.4     1.9       sh     0.0     0.0     0.0     9.5     0.0     0.0     42.0     10.6       r(s)     0.0     1.5     31.2     B     1.5     31.2     B       r(s)     0.0     1.5     31.2     B     3.8     1.5     1.5       r(s)     0.0     3.7     5.0     0.0     5.0     0.0     5.0     5.0       anary     3.8     CU Level of Service     A     A     A     A	Bih (m) 0.0 0.0 3.0 0.0 b) 0.0 0.0 0.0 9.5 0.0 A f(s) 0.0 11.5 mmary	0.18 0.05 0.11		0.51	0.07	Actuated Cycle Length: 60
s) 0.0 0.0 9.5 0.0 0.0 42.0 10.6 (s) 0.0 11.5 31.2 mmary 3.8% CU Level of Service A	s) 0.0 0.0 9.5 0.0 r(s) 0.0 11.5 mmary	0.0 0.0 3.0		20.4	1.9	Offset: 0 (0%), Referenced to pha
(s) 0.0 1.5 31.2 B mary 3.8% CU Level of Service A	/(s) 0.0 mmary	0.0 0.0 9.5		42.0	10.6	Natural Cycle: 60
/ (s) 0.0 1.5 31.2 D mary 3.8 CU Level of Service A	/ (s) 0.0 mmary	A		ш	В	Control Type: Actuated-Coordinat
mmary 3.8 CU Level of Service A	Approach LOS Intersection Summary			31.2		Maximum v/c Ratio: 0.70
mmary 3.8 3.8 3.8% ICU Level of Service A 2.0.01 37.8% ICU Level of Service A	Intersection Summary			Ω		Intersection Signal Delay: 8.7
3.8 3.8 Utilization 37.8% ICU Level of Service A						Intersection Capacity Utilization 5
Utilization 37.8% ICU Level of Service A		2.0				Analysis Period (min) 15
Utilization 3/.8% ICU Level of Service A	2.8	3.8				
	Utilization 37.8%	37.8%	rel of Service		А	Splits and Phases: 4: Rogers R
ci (inii) ci		Q				
						4E C

ïmings :: Rogers Road & Elgin Street West	gin Stı	eet W	est				<2025 Total> SAT Peak Hour 09-28-2020
	Ť	۲	1	ŧ	4	•	
ane Group	EBT	EBR	WBL	WBT	NBL	NBR	
ane Configurations	ŧ	*-	۴	ŧ	۴	¥.	
raffic Volume (vph)	536	116	373	567	67	329	
uture Volume (vph)	536	116	3/3	567	16	329	
urn Type motected Dhases	NA C	неш	негш	NA A		негш	
Interted Fhases ermitted Phases	v	2	9	5	Ŧ	4	
etector Phase	2	5	9	9	4	4	
witch Phase							
linimum Initial (s)	20.0	20.0	20.0	20.0	8.0	8.0	
finimum Split (s)	31.2	31.2	31.2	31.2	14.5	14.5	
otal Split (s)	45.0	45.0	45.0	45.0	15.0	15.0	
otal Split (%)	75.0%	75.0%	75.0%	75.0%	25.0%	25.0%	
ellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1	
II-Red Time (s)	2.1	2.1	2.1	2.1	2.4	2.4	
ost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
otal Lost Time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
ead/Lag							
timize?	:	:	:		:	:	
	C-Max	C-Max	C-Max	C-Max	None	None	
ct Effct Green (s)	39.0	39.0	39.0	39.0	8.3	8.3	
ctuated g/C Katio	0.65	0.65	0.65	0.65	0.14	0.14	
C Katio	0.24		0.70	G2.0	0.40	0.66	
ontrol Delay	4./	7.1	6.GI	4./	78.9	10.5 0.0	
tueue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
otal Delay	4.7	1.2	15.9	4.7	28.9	10.5	
OS	A	A	B	A	ပ	œ	
pproach Delay	4.1			9.2	14.7		
pproach LOS	A			A	B		
Itersection Summary							
ycle Length: 60							
ctuated Cycle Length: 60							
iffset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green	phase 2:	EBT and	6:WBTL,	Start of G	reen		
atural Cycle: ou	in a to a						
ontrol Type: Actuated-Coordinated	Inated						
idalinuti vic ratio. 0.70 itersection Signal Delav- 8.7				lot.	Intercention LOS. A	I OS A	
itersection Capacity Utilization 59.7%	in 59.7%			2	U Level o	ICU Level of Service B	
nalysis Period (min) 15							
plits and Phases: 4: Roger	rs Road 8	k Elgin St	4: Rogers Road & Elgin Street West				
- 07 (B)							*******
5 s							15 s

Str	
Elain	
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Road	
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Roa	5
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hases:	
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an	
Splits	
	-

Splits alla Flidses.	
🐨 Ø2 (R)	104
45 s	15 s
💎 Ø6 (R)	
45 s	

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HCM Signalized Intersection Capacity Analysis 4: Rogers Road & Elgin Street West	sectio in Str	n Cap eet W	acity A est	nalysi	(0		<2025 Total> SAT Peak Hour 09-28-2020
	Ť	1	\$	ŧ	1	•	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	ŧ	¥.,	F	ŧ	r	×	
Traffic Volume (vph)	536	116	373	567	76	329	
Future Volume (vph)	536	116	373	567	1000	329	
Ideal Flow (vpnpl)	0061	0061	0061	0061	1900	0061	
Total Lost time (s)	6.2 0.01	6.2	6.2	6.2	6.5	6.5	
Lane Util. Factor	0.95 1 20	00.1 10.0	00.1	0.4.0 00 t	00.1	1.00 0.01	
Frt Frt 51	00.1	0.85	1.00	00.1	1.00	0.85	
FIL Protected	1.00	1507	1705	1.00 25 70	1705	1.00	
Salu. Flow (prot) Elt Dormittod	1 00	1401	1/00	0/00	0.05	1.401	
Satd. Flow (perm)	3535	1597	841	3570	1785	1597	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	
Adj. Flow (vph)	547	118	381	579	66	336	
RTOR Reduction (vph)	0	41	0	0	0	290	
Lane Group Flow (vph)	547	LL	381	579	66	46	
Heavy Vehicles (%)	1%	%0	0%	0%	%0	%0	
Turn Type	NA	Perm	Perm	NA	Prot	Perm	
Protected Phases	2			9	4		
Permitted Phases		2	9			4	
Actuated Green, G (s)	39.0	39.0	39.0	39.0	8.3	8.3	
Effective Green, g (s)	39.0	39.0	39.0	39.0	8.3	8.3	
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.14	0.14	
Clearance Time (s)	6.2	6.2	6.2	6.2	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2297	1038	546	2320	246	220	
v/s Ratio Prot	0.15			0.16	c0.06		
v/s Ratio Perm		0.05	c0.45			0.03	
v/c Ratio	0.24	0.07	0.70	0.25	0.40	0.21	
Unitorm Delay, d1	4.3	3.9	1.00	4.4	23.6	22.9	
Progression Factor	00.1	00.1	00.1	00.1	1.00	1.00	
Incremental Delay, qZ	0.2 4 ¢	0.1	14.0	0.3	1.1	6:U	
Level of Service	o, ⊲	0.4	0. E	0. A	- <del>1</del>	1.02 C	
Approach Delav (s)	4.5			8.3	23.7		
Approach LOS	A			A	U		
Intersection Summary							
HCM 2000 Control Delav			10.3	H	M 2000 L	HCM 2000 Level of Service	8
HCM 2000 Volume to Capacity ratio	ratio		0.65				
Actuated Cycle Length (s)			0.09	Su	Sum of lost time (s)	me (s)	12.7
Intersection Capacity Utilization Analysis Period (min)			59.7% 15	10	ICU Level of Service	Service	۵
c Critical Lane Group			2				

HCM Unsignalized Intersection Capacity Analysis 5: Carlisle Street & Rogers Road	ersec	tion C. Road	apacity	/ Analy	sis	-	<2025 Total> SAT Peak Hour 09-28-2020
	•	t	Ŧ	~	۶	*	
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		÷	£,		×		
Sign Control		Stop	Stop		Stop		
Traffic Volume (vph)	89	28	27	214	191	98	
Future Volume (vph)	89	28	27	214	191	98	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	76	30	29	233	208	107	
Direction, Lane #	EB 1	WB 1	SB 1				
Volume Total (vph)	127	262	315				
Volume Left (vph)	<i>L</i> 6	0	208				
Volume Right (vph)	0	233	107				
	0.15	-0.53	-0.07				
Departure Headway (s)	5.2	4.3	4.7				
	0.18	0.32	0.41				
Capacity (veh/h)	643	773	720				
Control Delay (s)	9.3	9.4	11.1				
Approach Delay (s)	9.3	9.4	11.1				
Approach LOS	A	A	в				
Intersection Summary							
Delay			10.1				
Level of Service			8				
Intersection Capacity Utilization			47.6%	ICI	ICU Level of Service	Service	А
Analysis Period (min)			15				

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HCM Unsignalized Intersection Capacity Analysis 6: Greenly Drive & Carlisle Street	erseo	Intersection C Carlisle Street	apacity	/ Analy	'sis			<2025	<2025 Total> SAT Peak Hour 09-28-2020	• SAT	Peak I 09-28	<mark>ak Hour</mark> 09-28-2020
	1	Ť	1	\$	ŧ	~	4	+	٠	۶	-	$\mathbf{F}$
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		¢			¢			¢			¢	
Traffic Volume (veh/h)	2	29		œ	29	22			m	19	0	10
Future Volume (Veh/h)	Ω	29	-	∞	29	22	-	-	°.	19	0	10
Sign Control		Free			Free			Stop			Stop	
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)	ഹ	31		6	31	24			ę	20	0	1
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	55			32			114	114	32	106	103	43
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												Ľ
vCu, unblocked vol	55			32			114	114	32	106	103	43
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			66			100	100	100	98	100	66
cM capacity (veh/h)	1563			1593			853	773	1048	869	784	1033
Direction, Lane #	EB 1	WB1	NB 1	SB 1								
Volume Total	37	64	ъ	31								
Volume Left	£	6		20								
Volume Right	-	24	ę	1								
cSH	1563	1593	938	921								
Volume to Capacity	0.00	0.01	0.01	0.03								
Queue Length 95th (m)	0.1	0.1	0.1	0.8								
Control Delay (s)	1.0	1.1	8.9	0.6								
Lane LOS	A	A	A	A								
Approach Delay (s)	1.0	1.1	8.9	0.0								
Approach LOS			A	A								
Intersection Summary												
Average Delay			3.1						•			
Intersection Capacity Utilization			15.4%	2	J Level of	ICU Level of Service			A			
Analysis Period (min)			<u>c</u>									

HCM Unsignalized Intersection Capacity Analysis 7: Wilkins Gate & Carlisle Street	ersec lisle S	tion C: treet	apacity	/ Analy	/sis			<2025	<2025 Total> SAT Peak Hour 09-28-2020	<ul> <li>SAT</li> </ul>	Peak I 09-28	ak Hour 09-28-2020
	•	t	1	\$	Ŧ	~	4	+	٠	۶	-	$\mathbf{r}$
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		<del>4</del>			¢			¢			¢	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	16	m	4	26	13	-	18	9	7	12	œ
Future Volume (vph)	9	16	ŝ	4	26	13	-	18	9	7	12	œ
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)	7	20	4	5	32	16		22	7	6	15	10
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	31	53	30	34								
Volume Left (vph)	7	2	-	6								
Volume Right (vph)	4	16	7	10								
	-0.03	-0.16	-0.06	-0.06								
Departure Headway (s)	4.1	3.9	4.1	4.0								
Degree Utilization, x	0.03	0.06	0.03	0.04								
Capacity (veh/h)	866	902	859	867								
Control Delay (s)	7.2	7.1	7.2	7.2								
Approach Delay (s)	7.2	7.1	7.2	7.2								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.2									
Level of Service			A									
Intersection Capacity Utilization			14.4%	ICI	ICU Level of Service	<sup>e</sup> Service			A			
Analysis Period (min)			15									

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## **LEVEL OF SERVICE ANALYSIS AT SIGNALIZED INTERSECTIONS**

To assist in clarifying the arithmetic analysis associated with traffic engineering, it is often useful to refer to "Level of Service". The term Level of Service implies a qualitative measure of traffic flow at an intersection. It is dependent upon vehicle delay and vehicle queue lengths at the approaches. Specifically, Level of Service criteria are stated in terms of the average stopped delay per vehicle for a 15-minute analysis period. The following table describes the characteristics of each level:

Level of Service	Features	Stopped Delay per Vehicle (sec)
Α	At this level of service, almost no signal phase is fully utilized by traffic. Very seldom does a vehicle wait longer than one red indication. The approach appears open, turning movements are easily made and drivers have freedom of operation.	<u>&lt;5.0</u>
В	At this level, an occasional signal phase is fully utilized and many phases approach full use. Many drivers begin to feel somewhat restricted within platoons of vehicles approaching the intersection.	$> 5.0 \text{ and } \le 15.0$
С	At this level, the operation is stable though with more frequent fully utilized signal phases. Drivers feel more restricted and occasionally may have to wait more than one red signal indication, and queues may develop behind turning vehicles. This level is normally employed in urban intersection design.	> 15.0 and ≤ 25.0
D	At this level, the motorist experiences increasing restriction and instability of flow. There are substantial delays to approaching vehicles during short peaks within the peak period, but there are enough cycles with lower demand to permit occasional clearance of developing queues and prevent excessive backups.	> 25.0 and ≤ 40.0
E	At this level, capacity is reached. There are long queues of vehicles waiting upstream of the intersection and delays to vehicles may extend to several signal cycles.	$> 40.0 \text{ and} \le 60.0$
F	At this level, saturation occurs, with vehicle demand exceeding the available capacity.	> 60.0

# LEVEL OF SERVICE ANALYSIS AT UNSIGNALIZED INTERSECTIONS<sup>(1)</sup>

The term "level of service" implies a qualitative measure of traffic flow at an intersection. It is dependent upon the vehicle delay and vehicle queue lengths at approaches. The level of service at unsignalized intersections is often related to the delay accumulated by flows on the minor streets, caused by all other conflicting movements. The following table describes the characteristics of each level.

Level of Service	Features
А	Little or no traffic delay occurs. Approaches appear open, turning movements are easily made, and drivers have freedom of operation.
В	Short traffic delays occur. Many drivers begin to feel somewhat restricted in terms of freedom of operation.
С	Average traffic delays occur. Operations are generally stable, but drivers emerging from the minor street may experience difficulty in completing their movement. This may occasionally impact on the stability of flow on the major street.
D	Long traffic delays occur. Motorists emerging from the minor street experience significant restriction and frustration. Drivers on the major street will experience congestion and delay as drivers emerging from the minor street interfere with the major through movements.
E	Very long traffic delays occur. Operations approach the capacity of the intersection.
F	Saturation occurs, with vehicle demand exceeding the available capacity. Very long traffic delays occur.

 Highway Capacity Manual - Special Report No. 209, Transportation Research Board, 1985.



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 $\boxtimes$ 

admin@trans-plan.com trans-plan.com

September 29, 2020

Mr. Justin Mamone, BES, MCIP, RPP VANDYK Group of Companies 1944 Fowler Drive Mississauga, ON L5K 0A1

### Re: <u>Proposed Residential and Commercial Development, Greenly Drive, Cobourg, ON – Regarding</u> <u>Concerns of Increased Traffic</u>

Dear Mr. Mamone,

TRANS-PLAN has reviewed the concerns from the local community in the letter dated July 30, 2020, regarding the lack of a second exit from the private condominium laneways for fire trucks / emergency vehicles, and increased traffic on Greenly Drive north of Carlisle Street. We recommend "no parking" signage to be installed along Greenly Drive between Carlisle Street and the proposed Cowin Circle roadway, to minimize potential obstructions if truck reverse movements are required from the private laneway.

However, we do not recommend a new potential roadway connection from Greenly Drive and the proposed townhouses to Elgin Street West, because a new intersection would not meet spacing requirements for major arterial roads (based on the Transportation Association of Canada (TAC) Geometric Design Guide 2017) given the vicinity to Wilkins Gate and the existing Canadian Tire full-moves driveway. Spacing between intersections is required to provide sufficient storage and deceleration distance for left turn vehicles from Elgin Street West. The proposed commercial site driveway is acceptable because it is restricted to right-in / right-out movements. A vehicular connection between the townhouses and the proposed commercial plaza is also not recommended, because the plaza is expected to generate 4 to 5 times more traffic than the townhouses and a connection would increase traffic on Greenly Drive.

Based on our traffic analysis, the Carlisle Street and Greenly Drive intersection is expected to continue operating well with the added townhouse traffic. We conclude that the future traffic volumes on Greenly Drive with the proposed townhouses are acceptable for the local residential roadways.

Should you have any questions, please feel free to contact me.

Sincerely,

Anil Seegobin, P.Eng. Partner, Engineer

Trans-Plan Transportation Inc. Transportation Consultants



Jonathan Li, B.Eng. Transportation E.I.T.

### Page 245 of 291

### 9.4.2.1 Arterials

Along signalized arterial roads, vehicular traffic volumes are generally high. It is therefore desirable to provide spacing between signalized intersections that is consistent with the desired vehicular traffic progression speed and signal cycle lengths. By spacing the intersections uniformly, based on known or assumed running speeds and appropriate cycle lengths, signal progression in both directions can be achieved. Progression allows platoons of vehicles to travel through successive intersections without stopping. For a progression speed of about 50 km/h and a cycle length of 60 s, the corresponding desired spacing between signalized intersections is approximately 400 m. As speeds increase, the optimal intersection spacing increases proportionately.

Where an arterial corridor must accommodate a variety of road users (e.g., vehicles, cyclists, and pedestrians), vehicle operations and the consequent intersection designs must balance the various needs while recognizing that the priority of arterial roadways is generally servicing vehicular traffic movement.

A typical minimum intersection spacing along arterial roadways is 200 m, generally only applicable in areas of intense existing development or restrictive physical controls where feasible alternatives do not exist. The 200 m spacing allows for minimum lengths of back to back storage for left turning vehicles at the adjacent intersections.

The close spacing does not permit signal progression; therefore, it is normally preferable not to signalize the intersection that interferes with progression along a major arterial. Intersection spacing at or near the 200 m minimum is normally only acceptable along minor arterials, where optimizing traffic mobility is not as important as along major arterials.

Where intersection spacing along an arterial does not permit an adequate level of traffic service, many alternatives can be considered to improve traffic flow. These include, but are not limited to:

- Converting two-way to one-way operation
- Implementing cul-de-sacs for minor connecting roads
- Introducing channelization to restrict turning movements at selected intersections to right turns only.

The designer's options may be substantially limited by the policies of the local jurisdiction.

On divided arterial roads, a right-in, right-out intersection without a median opening may be permitted at least 100 m from an adjacent all-directional intersection. The distance is measured between the closest edges of pavement of the adjacent intersecting roads.

In retrofit situations, the desired spacing of intersections along an arterial is sometimes compromised in consideration of other design controls, such as the nature of existing adjacent development and the associated access needs.

### 9.4.2.2 Collectors

The typical minimum spacing between adjacent intersections along a collector road is 60 m.

### 9.4.2.3 Locals

Along local roads, the minimum spacing between four-legged intersections is normally 60 m. Where the adjacent intersections are three-legged, a minimum spacing of 40 m is acceptable.



# THE CORPORATION OF THE TOWN OF COBOURG PUBLIC MEETING

NOTES

September 29, 2020 Concert Hall, Victoria Hall, Cobourg

The Cobourg Municipal Council convened a Public Meeting this evening with the following persons in attendance:

Members present:	Mayor John Henderson Deputy Mayor Suzanne Seguin Councillor Nicole Beatty Councillor Aaron Burchat Councillor Adam Bureau Councillor Emily Chorley Councillor Brian Darling
Staff present:	Glenn McGlashon, Director of Planning and Development Laurie Wills, Director of Public Works Dean Hustwick, Director of Community Services Brent Larmer, Municipal Clerk/Manager of Legislative Services

# CALL TO ORDER

Chair, Councillor Beatty, Coordinator of Planning and Development Services called the Meeting to Order at 5:00 PM.

## **INTRODUCTION**

Chair, Councillor Beatty, Coordinator of Planning and Development Services, explained the general purpose of the Public Meeting, which is to hear submissions regarding the proposed Draft Plan of Subdivision comprised of sixty-two (62) freehold townhouse lots, ten (10) freehold semi-detached lots, a parkland block, a pedestrian walkway/emergency access block, and a service-commercial block on a 3.7 ha (12.1 ac) parcel of vacant land situated immediately west of Canadian Tire. The application includes a proposed municipal road extension of Greenly Drive with a connection to Carlisle Street. The Subject Lands are designated as "Neighbourhood General" and "Service Commercial" in the New Amherst Community Secondary Plan and zoned "Neighbourhood Residential 2 Exception 1 Holding [NR21(H)] Zone" and "District Page 247 of 291 Commercial Exception 27 Holding [DC-27(H)] Zone" in the Comprehensive Zoning Bylaw 85-2003.

# DECLARATION OF PECUINARY INTEREST

There were no Declarations of Pecuniary Interest declared by Members.

### **NOTIFICATION PROCEDURE**

The Deputy Clerk advised that the Notice published in the local newspaper, posted on the Municipal Website www.cobourg.ca and circulated to property owners in accordance with the provisions of the *Planning Act*.

### EXPLANATION OF A DRAFT PLAN OF SUBDIVISION

Glenn McGlashon, Director of Planning and Development, provided background information regarding the Application for Approval of Draft Plan of Subdivision 'CTC' Lands (west of Canadian Tire) Vandyk – West Park Village Limited that was received at the June 29th 2020 Regular Council Meeting.

Paul Demczak, Planner, Vandyk - West Park Village Limited, provided an overview and explanation of the application for approval of the proposed Draft Plan of Subdivision. (Vacant land situated immediately west of Canadian Tire). Mr. Demczack's presentation highlighted the location of the property, application history, public consultation and existing site condition. Mr. Demczack noted that the land will be sold in the future to another developer.

### PUBLIC SUBMISSIONS

Chair, Councillor Beatty, Coordinator of Planning and Development Services, explained the order of public submissions and requested all persons addressing the public meeting to state their name and address for the official record of the public meeting.

### The Town of Cobourg received the following Public Submissions

### Linda Whittenbols, Cobourg Resident Submission (808 Carlisle Street, Cobourg)

Linda Whittenbols provided comments in opposition of the development and raised concerns regarding the maintenance of the land, traffic congestion, parking issues, and the laneway access onto Greenly Drive.

### Francine Birket, Cobourg Resident Submission (8-740 Carlisle Street, Cobourg)

Francine Birket provided comments in opposition of the development and spoke to parking issues, traffic congestion on the laneway leading to Carlisle Street and the increase of traffic in the area. Ms. Birket provided recommendation and suggestions to extend Greenly Drive to Highway 2.

### Jackie Kirtley, Cobourg Resident Submission (800 Rurtherford Street, Cobourg)

Jackie Kirtley provided comments in opposition of the development and spoke to traffic congestion in the area, pedestrian safety concerns and parking issues on Carlisle Street.

### Jain McCaig, Cobourg Resident Submission (868 Wilkins Gate, Cobourg)

Jain McCaig provided comments in opposition of the development and raised concerns with the current state of the land and the number of proposed homes to be built. Ms. McCaig suggested that the number of proposed homes to be built on the land be reduced.

### WRITTEN COMMENTS/SUBMISSIONS RECEIVED BY THE MUNICIPAL CLERK AS OF PRINTING OF AGENDA

### David Cameron, Cobourg Resident - Attachment 'A' (807 Greenly Drive, Cobourg ON)

David Cameron provided written submissions raising concerns with the Draft Plan Subdivision speaking to the increase of traffic in the area of Carlisle Street and Greenly Drive, parking issues and safety concerns. Mr. Cameron provided recommendations and suggestions to expanding the allotment of parking and creating additional entrances and exits from the development.

### WRITTEN SUBMISSIONS RECIEVED FROM COMMENTING AGENCIES

Glenn McGlashon, Director of Planning and Development Services, advised of correspondence received from Ministry of Transportation. Mr. McGlashon noted that there were no comments or objection received from the Ministry of Transportation as it was outside their area of influence for Highway 401.

### APPLICANT RESPONSE

Paul Demczak, Planner, Vandyk - West Park Village Limited, noted that comments and concerns from residents will be reviewed before recommendation is brought back to the Committee.

## FURTHER NOTICE

Chair, Councillor Beatty, Coordinator of Planning and Development Services, advised that persons requiring notice of passage of the proposed approval of a Draft Plan of Subdivision are to advise the Municipal Clerk of their name and address to ensure receipt of notice.

### ADJOURNMENT

Moved by Councillor Darling

THAT the meeting be Adjourned (5:56 PM)

### THE CORPORATION OF THE TOWN OF COBOURG



# BY-LAW NUMBER <u>-2020</u>

### A BY-LAW TO APPROVE A DRAFT PLAN OF SUBDIVISION WITH CONDITIONS (LANDS WEST OF CANADIAN TIRE – VANDYK WEST PARK VILLAGE LIMITED)

**WHEREAS** the Council of the Corporation of the Town of Cobourg held a Public Meeting in accordance with the Planning Act, R.S.O. 1990, c.P. 13, as amended, on the 29<sup>th</sup> day of September, 2020 regarding an application by Justin Mamone on behalf of Vandyk West Park Village Limited to approve a Draft Plan of Subdivision on a 3.7 ha parcel of land west of Canadian Tire (hereinafter referred to as the "Subject Lands");

**AND WHEREAS** the Council of the Corporation of the Town of Cobourg duly considered all public submissions, the applicant's background documentation, the Director of Planning & Development's reports and all other relevant background information surrounding the subject matter, and deems it advisable to grant Draft Approval of the Plan of Subdivision, subject to detailed conditions;

**NOW THEREFORE** the Municipal Council of the Corporation of the Town of Cobourg, in accordance with the provisions of Section 51 of the Planning Act, R.S.O. 1990 as amended, hereby enacts as follows:

- Draft Approval of a Plan of Subdivision generally located on the 3.7 ha parcel of land located immediately west of Canadian Tire is hereby granted, subject to the conditions as affixed hereto as <u>Schedule "A"</u>;
- 2. THIS By-law will come into force and take effect upon final approval in accordance with the requirements of the Planning Act, R.S.O. 1990, c.P. 13, as amended.

READ and passed in Open Council on this day of , 2020.

Mayor

Municipal Clerk

Certified that this is a true copy of By-law - 2020 as enacted and passed by the Council of the Corporation of the Town of Cobourg on day of , 2020.

**Municipal Clerk** 

By-law No. -2020

# Schedule "A"

- 1. This approval applies to the Draft Plan of Subdivision, as shown in red on the Plan prepared by Ivan B. Wallace Ontario Land Surveyor Ltd., dated May 29, 2020 (attached hereto as **Figure 1**), and consisting of:
  - 18 Blocks comprised of 62 residential townhouse lots and 10 residential semidetached lots;
  - 1 commercial Block;
  - 1 park Block;
  - 1 emergency/pedestrian access Block (as shown on Figure 1);
  - associated public roads.

The Town of Cobourg Municipal Council has allocated sewage treatment capacity for the draft plan to a maximum of 72 residential units + 1,400 sq m (15,000 sq ft) commercial space on the condition that the owner enters into an allocation agreement with, and on terms satisfactory and at no cost to, the Town. The foregoing agreement shall be incorporated into the subdivision agreement.

- 2. The owner shall agree in writing to satisfy the requirements of the Town of Cobourg and any other municipality and/or approval authority that has jurisdiction, and subsequently enter into a subdivision agreement with the Town of Cobourg pursuant to the Planning Act, RSO 1990 c.P 13, as amended, which shall be registered on title to the subject lands once the plan of subdivision has been registered. Without limiting the generality of the foregoing, the owner shall agree in writing to satisfy all the requirements, financial and otherwise, of the Town and any other municipality and/or authority that has jurisdiction concerning matters internal and external to the draft plan, including but not limited to:
  - the provision, installation and staging of services (including utilities), drainage, grading, sedimentation controls, and road infrastructure;
  - stormwater management, including the design and conveyance of stormwater from lands internal and external to the draft plan, sustainable 'green' infrastructure, low-impact development stormwater systems and/or other sustainable drainage measures, all in accordance with the specifications and requirements of the Town of Cobourg and the Ganaraska Region Conservation Authority (GRCA);
  - the allocation, collection and treatment of wastewater in accordance with the specifications and requirements of the Town of Cobourg;
  - facilities for active transportation, including pedestrian and bicycle circulation (trails and sidewalks, connections);
  - urban built form, landscape and streetscape design measures, including designs which optimize an "eyes on the street" philosophy;
  - park design, streetscape and site landscaping;
  - fencing, screening and other buffering measures, including noise impact mitigation, where applicable;
  - consideration of the provision of housing which is affordable or attainable for moderate income households;
  - consideration of enhanced subdivision, site and building design measures with an emphasis on sustainability, accessibility and visitability;
  - site construction operations management planning;
  - Cost-Sharing Agreements, financial securities and other development performance measures as may be required to develop the site;
  - easements that may be required by the applicable authority;
  - on and off-street parking;
  - development performance measures and standards;
  - site design, servicing, landscaping and other development-related matters pertaining to the commercial block.

The Town of Cobourg reserves the right to modify, or 'red-line', at its discretion and in consultation with the owner, acting reasonably, the draft plan of subdivision and/or conditions

thereto prior to final approval based on an evaluation by the Town and relevant agencies of detailed engineering plans, reports, or other applicable documentation, particularly related to stormwater management, grading and servicing, and may impose special conditions in the subdivision agreement that it deems reasonable in accordance with the *Planning Act, R.S.O. 1990, c.P. 13*, as amended. The aforementioned modifications to the draft plan may include, but are not limited to, changes to the lotting and/or road design/pattern in order to satisfy the applicable policies, guidelines and standards of the Town of Cobourg and agencies.

All costs incurred by the Town and any other municipality and/or approval authority that has jurisdiction which are associated with the planning, design, peer review and inspection of said works shall be borne by the owner.

- 3. The owner shall agree in writing to satisfy the Town of Cobourg's urban design objectives of the Official Plan and the New Amherst Community Secondary Plan, including, but not limited to:
  - the creation of high quality, pedestrian-friendly streetscapes and landscapes;
  - the provision of attractive building designs and dwelling forms which will enhance the character of the neighbourhood and reflect the quality image of the community;
  - the careful design and placement of dwellings in relation to the street to enhance the sense of place and minimize the impact of garages;
  - the careful design and placement of commercial buildings in relation to the street and adjacent properties to create a strong street edge and form a compatible relationship with abutting land uses.

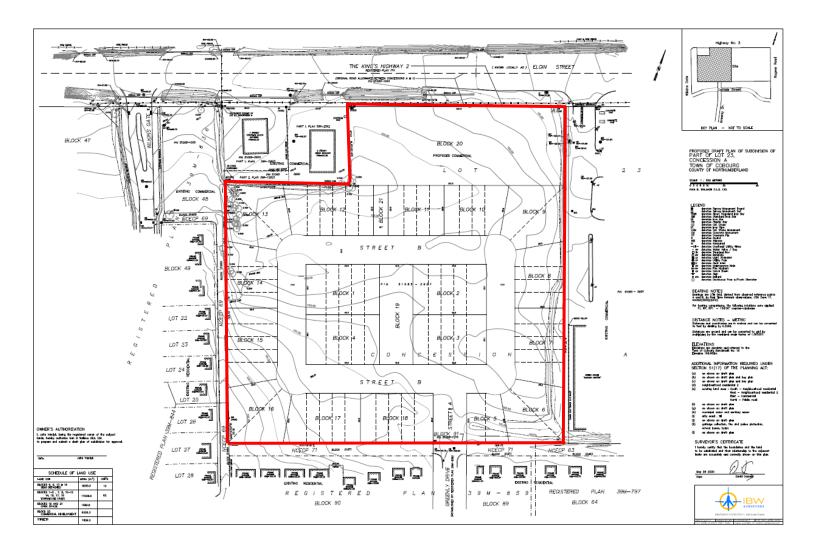
The development will be subject to architectural controls, and the Town will require the preparation of architectural plans and details which demonstrate that the aforementioned objectives will be achieved upon the implementation of the subdivision.

- 4. The owner shall convey the land on the plan identified for park purposes to the Town of Cobourg in accordance with Section 51.1(1) of The Planning Act, R.S.O. 1990, c.P. 13.
- 5. Prior to the final approval of the draft plan, the Town of Cobourg shall be satisfied that satisfactory arrangements, financial and otherwise, have been made with the appropriate utility authority for any utility facilities serving this draft plan of subdivision which are required by the appropriate utility authority to be installed underground. Any such easements as may be required for utility or drainage purposes shall be granted to the appropriate utility authority.
- 6. The road allowances included in this draft plan shall be shown and dedicated as public highways and the streets shall be named to the satisfaction of the Town of Cobourg and the County of Northumberland.
- 7. Prior to the final approval of the draft plan, the appropriate zoning shall be in place to the satisfaction of the Town of Cobourg.
- 8. Any necessary daylighting triangles, road widening, and access blocks shall be shown on the final plan and be dedicated to the appropriate authority; and that any dead ends and open sides of any road allowances created by this draft plan shall be terminated in 0.3 m reserves to be conveyed to, and held in trust, by the Town of Cobourg.
- 9. Prior to the final approval of the draft plan, Bell Canada shall confirm to the Town that satisfactory arrangements, financial and otherwise, have been made with Bell Canada for any Bell facilities serving this draft plan of subdivision which are required by the Town of Cobourg to be installed underground. The owner shall agree in the subdivision agreement, in words satisfactory to Bell Canada, to grant to Bell Canada any easements that may be required for telecommunication services and/or Fibre Optic digital switching equipment sites.
- 10. Prior to the final approval of the draft plan, Union/Enbridge Gas shall confirm to the Town that satisfactory arrangements, financial and otherwise, have been made with Union Gas for any gas facilities serving this draft plan of subdivision which are required by the Town of Cobourg to be installed. The owner shall agree in the subdivision agreement, in words satisfactory to Union/Enbridge Gas, to grant to Union/Enbridge Gas any easements that may be required for gas services and related facilities.

- 11. Prior to the final approval of the draft plan, Canada Post shall confirm to the Town that satisfactory arrangements, financial and otherwise, have been made with Canada Post for any postal facilities servicing this draft plan of subdivision which are required to be installed.
- 12. Prior to the final approval of the draft plan, the County of Northumberland shall confirm to the Town that satisfactory arrangements, financial and otherwise, have been made with the County of Northumberland regarding the following matters:
  - i) That the pavement structure for the public roadways within the plan of subdivision shall be designed to accommodate highway vehicle loading for waste collection vehicles.
  - ii) That the owner acknowledges and agrees that waste collection services within the subdivision shall not be provided until such time as the public roads are assumed for maintenance by the local municipality and shall advise all purchasers within the subdivision with an appropriate statement in all Offers and Agreements of Purchase and Sale of this requirement.
  - iii) That a Cost-Sharing Agreement be entered into between the Owner and the County of Northumberland to address the design, installation and staging of roads, services, drainage, grading and other infrastructure improvements within County Road No. 2/Elgin Street West.
- 13. Prior to the final approval of the draft plan, the County of Northumberland is to be satisfied that appropriate clauses are contained within the subdivision agreement which require the owner to implement or cause to be implemented the recommendations and measures contained within the plans and reports required and approved by the County;
- 14. Prior to the commencement of any grading, construction on site, or final registration of the plan, whichever occurs first, the owner shall submit to the Ganaraska Region Conservation Authority (GRCA) such reports, plans and/or other documentation associated with stormwater management, erosion/sedimentation control and other matters under the jurisdiction and authority of the GRCA to their satisfaction and approval. Notwithstanding the generality of the foregoing, the owner shall submit to the Ganaraska Region Conservation Authority (GRCA) reports, plans and/or other documentation which describes and confirms the following to the satisfaction of the GRCA:
  - (i) a detailed Stormwater Management Report supporting the detailed design which includes the following to the satisfaction of the GRCA:
    - a detailed hydraulic analysis of the proposed outlet structures from the stormwater management (SWM);
    - a hydrologic analysis including all design flow events, 2 to 100 year inclusive, routed through the SWM facilities;
    - a 100 year hydraulic gradeline analysis to confirm that basement elevations are not surcharged, and an overland flow analysis that identifies sags, any sewer oversizing required, and confirmation that flows can be conveyed safely to the SWM facilities within the municipal rights-of-way;
    - confirmation that all flows from the proposed development will be treated by the SWM facilities;
  - (ii) an Erosion and Siltation Control Report and Plan detailing the means by which erosion and sedimentation and their effects will be minimized and contained on the site during and after construction in accordance with Provincial Guidelines. The report will need to outline:
    - the protection measures required;
    - the timing of the removal of devices tied to areas that have been stabilized;
    - details for temporary outlet structures, decommissioning and sediment removal/disposal protocols following MOE-EPA Guidelines; and,

- all actions to be taken to prevent an increase in the concentration of solids in any water body as a result of on-site, or other related works, to comply with the Canada Fisheries Act;
- iii) Any other studies and/or drawings that the GRCA considers necessary to ensure the appropriate development of the subdivision lands in accordance with Provincial and GRCA policies and regulations.
- 15. Prior to the final approval of the draft plan, the GRCA is to be satisfied that appropriate clauses are contained within the subdivision agreement which require the owner to implement or cause to be implemented the recommendations and measures contained within the reports, plans and/or other documentation that the GRCA considers necessary to ensure the appropriate development of the subdivision lands in accordance with Provincial and GRCA policies and regulations.
- 16. Prior to the final approval of the draft plan, the GRCA is to be satisfied that appropriate clauses are contained within the subdivision agreement which require the owner to maintain all erosion and siltation control devices in good repair prior to and during the construction period in a manner satisfactory to the GRCA.
- 17. That the owner agrees to pay all GRCA detailed technical review fees in accordance with the current GRCA Fee Schedule, and further agree to obtain all necessary GRCA permits required under Ontario Regulation 168/06.
- 18. Prior to the final approval of the draft plan, Lakefront Utility Services Inc. (LUSI) and Lakefront Utilities Inc. (LUI) shall confirm to the Town that satisfactory arrangements, financial and otherwise, have been made with LUSI and LUI for any facilities serving this draft plan of subdivision which are required to be installed. The owner shall agree in the subdivision agreement, in words satisfactory to LUSI and LUI, to implement the requirements of LUSI and LUI and to grant to LUSI and LUI any easements that may be required for electrical and/or water services.
- 19. That prior to final approval of the draft plan, the owner shall provide confirmation to the Town of Cobourg from the designated Trustee or other body approved by the Town that a comprehensive Cost-Sharing Agreement has been entered into between the owner and the owner of adjacent lands to the west (known as "New Amherst Ltd.") to the satisfaction of the Town to confirm that the required contribution of funds, land and commitments for services will be in place and operative for the development of the subdivision lands on matters including, but not limited to, water services, sanitary sewage services, stormwater management facilities and transportation infrastructure internal and external to the New Amherst Community Secondary Plan area, and that satisfactory evidence has been provided to the Town to confirm that all financial obligations have been fulfilled.
- 20. That prior to final approval of the draft plan, the Town of Cobourg is to be advised in writing by Bell Canada how Condition #9 has been satisfied.
- 21. That prior to final approval of the draft plan, the Town of Cobourg is to be advised in writing by Union Gas how Condition #10 has been satisfied.
- 22. That prior to final approval of the draft plan, the Town of Cobourg is to be advised in writing by Canada Post how Condition #11 has been satisfied.
- 23. That prior to final approval of the draft plan, the Town of Cobourg is to be advised in writing by the County of Northumberland how Condition #'s12 and 13 have been satisfied.
- 24. That prior to final approval of the draft plan, the Town of Cobourg is to be advised in writing by the Ganaraska Region Conservation Authority how Condition #'s14, 15, 16 and 17 have been satisfied.
- 25. That prior to final approval of the draft plan, the Town of Cobourg is to be satisfied in writing by the Lakefront Utility Services Inc. and Lakefront Utilities Inc. how Condition #18 has been satisfied.

# Figure 1



	THE CORPORATION OF THE TOWN OF COBOURG
	PLANNING AND DEVELOPMENT ADVISORY COMMITTEE
TO:	Brent Larmer, Municipal Clerk/Manager of Legislative Services
FROM:	Adriane Miller, Recording Secretary
MEETING DATE:	November 24, 2020
SUBJECT:	Application for Approval of a Draft Plan of
	Subdivision – Lands West of Canadian Tire
	Vandyk – West Park Village Limited

The following Motion was adopted at the November 24, 2020 Planning and Development Advisory Committee Meeting:

# Moved by Member D.Wilcox

THAT Council be advised that the Planning & Development Advisory Committee (PDAC) has duly considered the Planning Report from the Director of Planning & Development regarding an application for approval of a draft plan of subdivision by Vandyk West Park Village Limited for a 72 unit residential development and up to 1,400 sq m of commercial space on the 3.7 ha parcel of land located west of Canadian Tire; and further,

THAT Council be advised that the PDAC endorses the conclusions and recommendations of the Planning Report.

<b>0</b> 20	THE CORPORATION OF THE TOWN OF COBOURG	
	STAFF REPORT	
COBOURG		
TO:	Mayor and Council	
FROM: TITLE:	Rob Franklin, MCIP, RPP Manager of Planning	
DATE OF MEETING:	December 7, 2020	
TITLE / SUBJECT:	Clearance of Conditions - Draft Plan of Subdivision <b>Pre-Servicing and Subdivision Agreement – Nickerson</b> <b>Woods D'Arcy Street, north of Nickerson Drive,</b> <b>Cobourg</b> LeBlanc Enterprises	
REPORT DATE:	November 26, 2020	File #: SUBCL-02-20 14T-140001

# 1.0 <u>STRATEGIC PLAN</u> N/A

# 2.0 RECOMMENDATION

The following actions are recommended:

THAT this Staff Report be received by Council for information purposes; and,

THAT the By-law in **Figure 4** of the Staff Report be endorsed and presented to Council which authorizes the Mayor and Municipal Clerk to execute a Pre-Servicing Agreement and a Subdivision Agreement with Leblanc Enterprises for the 23-unit residential freehold-condominium subdivision development located on a 2.0 ha parcel of land located on an extension of D'Arcy Street, north of Nickerson Drive, subject to the finalization of details by municipal staff and partner review agencies;

# 3.0 PUBLIC ENGAGEMENT

The initial application for Draft Plan of Subdivision by Leblanc Enterprises for a 23-unit residential "freehold-condominium" subdivision on a 2.0 ha (4.95 ac) area of land located on an extension of D'Arcy Street, north of Nickerson Drive, was received by Council in November 2014. The Notice of Complete Application was circulated on January 13, 2015 and the Public Meeting was held June 25, 2018

in accordance with the provisions of the Planning Act, R.S.O 1990, c.P. 13, as amended. The applicant also voluntarily convened a Public Information Meeting on April 23, 2015. Council granted draft approval of the Draft Plan with conditions on November 26, 2018, and a Notice of Decision was published on November 30, 2018. No appeals were lodged with the Municipality.

In January of 2020, Leblanc Enterprises submitted an application to clear conditions of Draft Plan of Subdivision approval for the development, referred to as "Nickerson Woods". The *Planning Act* does not prescribe any statutory public notice or engagement requirements for applications to clear conditions of Draft Plan of Subdivision Approval, as these particular applications are recognized as being a detailed, technical review of matters relating to a draft approved subdivision development, including requirements for servicing, grading, stormwater management, landscaping, utility coordination, and agency conditions to name a few.

Upon reviewing the submission, the Planning Department provided an information report to Council on February 18, 2020 regarding receipt of the complete application to clear conditions of Draft Plan approval. The application particulars, including the Notice of Application and site drawings, were posted on the Planning Applications page of the Planning & Development webpage. Additionally, any persons on record as submitting comments to the Town during the initial Draft Plan of Subdivision approval process were notified of the application and were provided information on where to access relevant plans and reports. Finally, approval of all Subdivision Agreements are considered by Council in open session.

# 4.0 <u>ORIGIN</u>

In January of 2020, the Planning Department received a complete application for clearance of Draft Plan of Subdivision conditions from Leblanc Enterprises for a 2.0 ha area of land generally located on an extension of D'Arcy Street, north of Nickerson Drive and referred to as "Nickerson Woods" (the "Subject Lands" – see **Figure 1 Location Map**). The application was received by Council on February 18, 2020 and was referred to the Planning Department for a Report.

# 5.0 <u>BACKGROUND</u>

The approved Draft Plan of Subdivision provides conditional approval for the creation of a twenty-three (23) freehold residential lots, accessed by a condominium laneway from the D'Arcy Street extension, north of Nickerson Drive (see **Figure 2 Draft Plan of Subdivision & Figure 3 Landscape Plan**).

The Subject Lands are designated as "Special Residential Area" in the Town of Cobourg Official Plan (2017), and zoned "Residential Type 2 Exception 16 Holding (R2-16 (H)] Zone", in the Comprehensive Zoning By-law No. 85-2003.

Included with the application are detailed plans, reports and other supporting documentation aimed at clearing the conditions of the Draft Plan of Subdivision approval and obtaining final approval for the residential subdivision consisting of twenty-three (23) freehold residential dwellings with an associated condominium laneway, visitor parking, park and open space lands, and stormwater storage facilities. This also included a request to enter into a Pre-Servicing Agreement and a Subdivision Agreement with the Municipality. The Development Review Team and relevant partner agencies have reviewed the submitted information and plans, and the Draft Plan of Subdivision is now in a position for approval subject to finalization of technical details and conditions.

The following plans and reports were submitted in support of the application:

- Draft Plan of Subdivision;
- Draft Plan of Condominium;
- Detailed Civil Engineering Plans and Details;
- Stormwater Management Report, including an Operation and Maintenance Manual;
- Erosion & Sedimentation Control Plan;
- Storm Sewer Design Sheet and Sanitary Sewer Design Sheets;
- Landscape Plans and Details;
- Landscape Design Brief;
- Soils Infiltration Report;
- Electrical Site Plan, Photometrics and Details;
- Homeowners Stewardship Brochure.

# 6.0 <u>ANALYSIS</u>

The initial Draft Plan of Subdivision for the subject development was draft approved with conditions by Council in November of 2018. In January of 2020, Leblanc Enterprises submitted an application to clear conditions of draft approval and the plans and reports have undergone extensive review by the Development Review Team (DRT) and partner review agencies. The technical aspects of the review have been completed and the application is now in a position to be approved by Council.

The following attachments are included for reference purposes:

Figure 1 – Location Map Figure 2 – Draft Plan of Subdivision Figure 3 – Landscape Plan Figure 4 – Agreement Authorization By-law

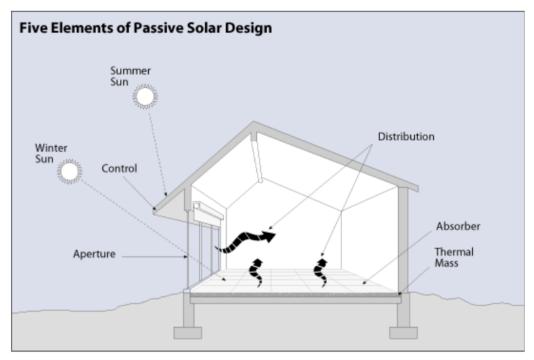
Summary of Key Points:

The following are the key points associated with the proposal:

- The approval applies to the Draft Plan of Subdivision, as shown on the Draft Plan prepared by RFA attached hereto as **Figure 2** which consists of:
  - twenty-three (23) freehold lots to be used for single detached residential dwellings; and,
  - a private condominium laneway from D'Arcy Street, including visitor parking, open space lands, an above-ground stormwater management facility and underground stormwater storage chambers,
  - A park block to be dedicated to the Town of Cobourg to link Nickerson Drive in the north-east to the Nickerson Woods natural area and trail.

<u>Note:</u> Reference to the municipal Staff Planning Report, dated June 13, 2018, is recommended for a complete analysis of the subject development and should be read in conjunction with this Report.

- The Nickerson Woods subdivision is a small, compact residential enclave consisting of bungalows based on the same high quality design principles which have been employed in the Parkview Hills subdivision, also developed by LeBlanc Enterprises. This will ensure that the development is sensitive to the surrounding context and result in an environment which will be compatible with the neighbourhood, will create an intimate streetscape and reflect the quality image of the community.
- The bungalow design style to be used throughout the enclave will minimize steps into the dwelling and stairs to other levels to provide for easier access for seniors or those with disabilities. Access ramps can be added to primary entryways if required. Garages will be enlarged to accommodate additional interior movement and a ramp instead of stairs. LeBlanc Enterprises has a long history of working with purchasers of their homes in order to address any mobility issues.
- LeBlanc Enterprises will be incorporating larger windows on the southern exposures of the dwellings to take advantage of passive solar energy gain in winter months. In summer months, the use of architectural features, such as roof overhangs, awnings and blinds, as well as strategic placement of deciduous trees and shrubs can provide a control mechanism for shade and cooling (see illustration below):



Graphic courtesy of <u>EERE</u>

- As part of its normal business practices, LeBlanc Enterprises regularly exceeds the minimum requirements of the Ontario Building Code for construction, insulation and heating/cooling systems, and utilize LED lighting as much as possible. Such building design features include:
  - High efficiency gas furnaces c/w digital thermostat
  - R-60 blown-in insulation in attic
  - R20 CI basement insulation
  - Qualified insulation in exterior studded walls above grade
  - Integrated Heat Recovery Ventilation (HRV) system
  - Optimal value engineered wood framing floor joists bonded to 5/8 OSB sub-floors with glue and screws
  - Quality pre-engineered roof trusses
  - Water efficient faucets and shower heads, low consumption toilets
- The development site is generally flat, however to ensure positive grades for servicing and drainage purposes, the elevation of the site will need to be raised. The subdivision engineering has been carefully planned to ensure that drainage from the rear of the dwellings on Nickerson Drive will flow properly through the site and be treated within the on-site stormwater management system before outletting to Midtown Creek. In addition, runoff originating from the site will be captured in the on-site stormwater management system and will not drain onto abutting residential properties. Overall, the subdivision is designed to improve the historical drainage patterns in the area and help reduce standing water, nuisance flooding and property damage.

- The servicing design includes the use of a combination of conventional (piped) and green "low impact" infrastructure in the form of an aboveground retention area, underground storage and infiltration chambers, permeable pavers and an intercepting swale along the south limit of the development site for stormwater management purposes.
- The development plans call for the preservation of a number of perimeter trees adjacent to the homes on Nickerson Drive along with additional buffer plantings in this area. In accordance with the recommendations of the Environmental Impact Study by Michalski Associates, the landscape plan proposes a natural edge buffer and re-vegetation area along the north side of the site adjacent to Nickerson Woods. It is important to note that there are some trees on the development site have been identified as being in poor health, are Ash trees, are of a younger, successional variety, or are impacted by grading, servicing and/or development encroachments and are proposed to be removed. The Landscape Plan in **Figure 3** illustrates the replanting of 187 trees as part of the development.
- In addition to tree protection and re-planting, much of the perimeter of the site abutting adjacent residential properties will be screened by 1.83 m high solid wood privacy fencing where one doesn't already exist and new trees in many locations as an added measure of buffering. A combination of enhanced landscaping with trees and shrubs, and a 1.83 m high chain link fencing has been proposed to buffer the Nickerson Woods creek area. Furthermore, extensive off-site plantings are proposed on Town-owned lands north of Lots 13-15 to restore the natural environment which has been disturbed in the past. An off-site natural wood chip pedestrian trail loop will extend from Nickerson Drive in the north-east sector, meander behind Lots 1-15 and connect with the D'Arcy Street extension for enhanced pedestrian movement and experience while respecting the natural sensitivity of the Woods. The trail design and location will facilitate additional pedestrian connections through Nickerson Woods in the future.
- The D'Arcy Street extension will be dedicated to the Town of Cobourg and constructed to urban standards, including concrete curb, gutter, underground infrastructure and utilities and a municipal sidewalk (east side) connection to Nickerson Drive.
- A 117.6 m<sup>2</sup> Park Block dedication along the north-east corner of the subdivision will be conveyed to the Municipality as a condition of the Subdivision Agreement to facilitate the trail link from Nickerson Drive over to D'Arcy Street.
- The proposal conforms to the Cobourg Official Plan, Urban & Landscape Design Guidelines, and Comprehensive Zoning By-law No. 85-2003, and

meets all applicable policies, guidelines and standards of the Municipality and external review agencies.

# 7.0 FINANCIAL IMPLICATIONS/BUDGET IMPACT

There are no anticipated negative financial implications imposed on the Municipality as a result of the applications. The Owner has submitted the requisite \$7,650.00 in application fees and deposits. The developer will be responsible for all costs associated with the legal documentation and registrations. The build-out of the subdivision would result in approx. \$394,000.00 in Development Charges and \$50,000.00 in Building Permit fees (2020 rates).

# 8.0 CONCLUSION

It is the opinion of the Planning Department that the application submitted by Leblanc Enterprises to clear conditions of Draft Plan of Subdivision Approval for the 23 unit residential enclave on a condominium laneway for the 2.0 ha parcel of land known as Nickerson Woods satisfies the requirements and conditions of the Municipality and partner review agencies, subject to the finalization of applicable details and technical conditions.

# 9.0 POLICIES AFFECTING THE PROPOSAL

The primary policies affecting this application relate to the Official Plan and the Elgin Densmore Secondary Plan (as amended by OPA No. 77), specifically the Residential Area policies, the Special Residential Area policies, the Environmental Constraint and Greenland policies, and the Community Design and Improvement policies of the Cobourg Official Plan.

# 10.0 COMMUNICATION RESULTS

This Report is intended to provide Council and the public with background and analysis of the application to clear conditions of draft plan approval, and to recommend that Council approve the application and By-laws attached to this Report (see Figure 4 Agreement Authorization By-law and Figure 5 Holding Removal By-law).

# **Report Prepared by:**



Rob Franklin, MCIP, RPP Manager of Planning

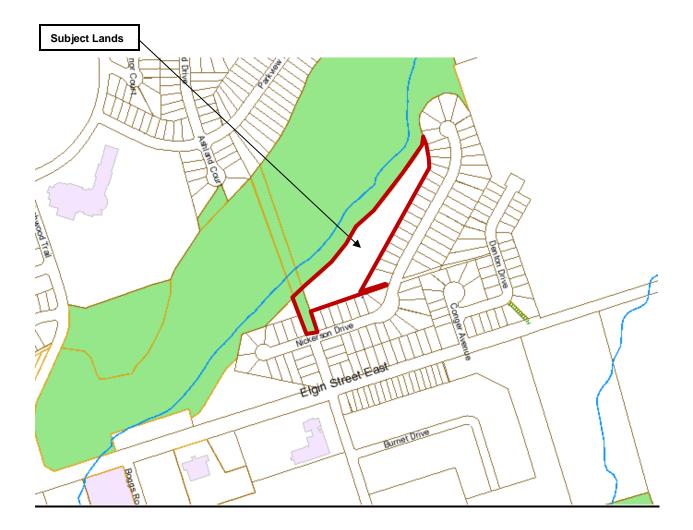
# **Report Reviewed and Approved by:**

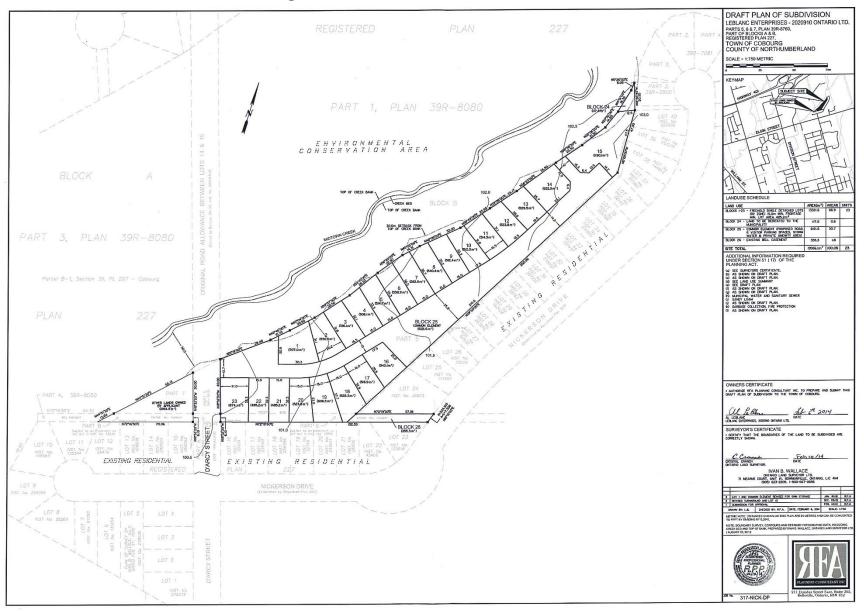
Glenn J. McGlashon, MCIP, RPP Director of Planning & Development



Report Reviewed and Approved by:

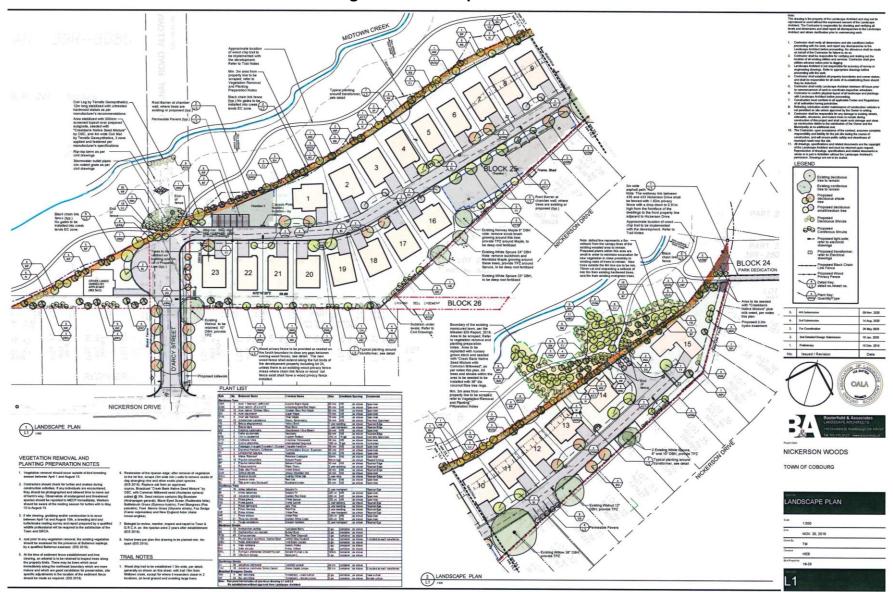
Tracey Vaughan Chief Administrative Officer



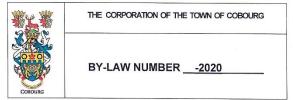


# Figure 2 Draft Plan of Subdivision

Figure 3 Landscape Plan



#### Figure 4 Agreement Authorizing By-law



A BY-LAW TO AUTHORIZE EXECUTION OF A PRE-SERVICING AGREEMENT AND SUBDIVISION AGREEMENT WITH LEBLANC ENTERPRISES AND THE CORPORATION OF THE TOWN OF COBOURG, (EXTENSION OF D'ARCY STREET, NORTH OF NICKERSON DRIVE – NICKERSON WOODS, COBOURG)

WHEREAS pursuant to Section 51(26) of the *Planning Act*, R. S. O. 1990, c. P. 13, as amended, which provides that a municipality has the authority to enter into one or more agreements as a condition of the approval of a plan of subdivision;

NOW THEREFORE the Municipal Council of the Corporation of the Town of Cobourg enacts as follows:

- That the Mayor and Municipal Clerk are hereby authorized and instructed to execute on behalf of the Corporation a Pre-Servicing Agreement and Subdivision Agreement with Leblanc Enterprises for a residential subdivision development consisting of 23 residential dwelling units, subject to the finalization of details by municipal staff and applicable agencies.
- THAT this By-law come into effect as of its final passing thereof, and shall expire two (2) years from the date of passing.

By-law read and passed in Open Council this 7th day of December, 2020.

MAYOR

MUNICIPAL CLERK

DEV Pre-Servicing & Subdivision Agreement, Leblanc Enterprises, Nickerson Woods, By-law No. -2020

	THE CORPORATION OF THE TOWN OF COBOURG
	COBOURG HERITAGE ADVISORY COMMITTEE
TO:	Brent Larmer, Municipal Clerk/Manager of Legislative Services
FROM:	Adriane Miller, Recording Secretary
MEETING DATE:	November 25, 2020
SUBJECT:	Amendment to Heritage Designation By-law 589 King Street West ("The Cedars")

Moved by Member N.Beatty

THAT the Cobourg Heritage Advisory Committee endorse the proposed Amendment to Schedule A of Designation By-law 16-93 approved under Part IV of the Heritage Act for the property known as 589 King Street West (The Cedars);

AND FURTHER THAT the Cobourg Heritage Advisory Committee recommends that Council authorize municipal staff to implement the required process to amend the Designation By-law in accordance with the requirements of the Heritage Act, including the issuance of a Notice of Intention to Amend Schedule A to Designating Bylaw 16-93, the preparation of a new Schedule A, and the registration of the necessary documents on title to recognize the new property limits for The Cedars on Lot 9, Plan 39M-936

COBOURG	THE CORPORATION OF THE TOWN OF COBOURG	
	STAFF RE	PORT
TO:	Members of Council	
FROM:	Dave Johnson	
TITLE:	Planner I - Heritage	
DATE OF MEETING:	November 25, 2020	
TITLE / SUBJECT:	Amendment to Heritage Designation By-law	
	589 King Street West ("The Ceda	ars")
REPORT DATE:	November 20, 2020	File #:

# 1.0 STRATEGIC PLAN

Places: The Town protects, preserves and promotes its natural assets, heritage, arts, culture and tourism.

# 2.0 RECOMMENDATION

**THAT** the Cobourg Heritage Advisory Committee endorse the proposed Amendment to Schedule A of Designation By-law 16-93 approved under Part IV of the *Heritage Act* for the property known as 589 King Street West (The Cedars);

**AND FURTHER THAT** the Cobourg Heritage Advisory Committee recommends that Council authorize municipal staff to implement the required process to amend the Designation By-law in accordance with the requirements of the *Heritage Act*, including the issuance of a Notice of Intention to Amend Schedule A to Designating Bylaw 16-93, the preparation of a new Schedule A, and the registration of the necessary documents on title to recognize the new property limits for The Cedars on Lot 9, Plan 39M-936.

# 3.0 <u>ORIGIN</u>

The subject property known as 589 King Street West is presently being prepared for a new 15-lot residential subdivision known as Cedar Shore Estates. The existing heritage structures have been incorporated into a new lot (Lot #9) on the plan of subdivision. The heritage structures and real property, referred to as "The Cedars", were designated under Part IV of the *Heritage Act* in 1993 however, with the registration of the new plan of subdivision, an

amendment to Schedule A of the heritage designating by-law is required to reflect its new property context. Refer to the following attachments:

- <u>Appendix A</u> Original Designation By-law No. 16-93;
- Appendix B Plan of Subdivision (M-Plan) 39M-936; and,
- <u>Appendix C</u> New Schedule A.

In order to proceed, the Town must issue a 30 day Notice of Intention to Amend the Designation By-law.

# 4.0 <u>BACKGROUND</u>

The subject property at 589 King Street West is a designated property on the Town of Cobourg's Register of Properties of Cultural Heritage Value or Interest under Part IV of the Ontario *Heritage Act*.

# Geographic Context



<u>Above</u>: The subject property is shaded in purple. The properties that are shaded in pink are non-designated properties that are listed on the Town of Cobourg's Register of Properties of Cultural Heritage Value and Interest.

Section 29 of the *Heritage Act* allows municipalities to designate real property within a municipality to be of cultural heritage value or interest if the property meets the prescribed criteria and established process outlined in the *Act*. The property is already designated and as such, the property meets the prescribed criteria as can be seen in Designating By-law 16-93 (Appendix A).

Given that the whole property is presently designated by by-law under the *Heritage Act*, and the fact that the existing heritage structures now form a lot on the newly registered plan of subdivision (Lot #9 on the M-Plan attached in <u>Appendix B</u>), the Municipality must follow the Section 29 process to amend Schedule A of the Designation By-law in order to accurately reflect the new property limits on which the heritage structures now sit.

# 5.0 <u>ANALYSIS</u>

E.I.E Corporation purchased the property some years ago to develop a residential subdivision called Cedar Shore Estates. The development underwent a comprehensive review and approvals process with the draft plan of subdivision being approved with conditions in 2016. The final plan of subdivision and subdivision agreement were approved by Council in 2018 and the documents were registered on title to the overall property in September of 2020. During these processes, the Town and the owner agreed to capture the existing heritage structures on a single lot (Lot #9 on the M-Plan) and collaborate on creating policies and architectural guidelines for the lots closest to the heritage resource, The Cedars, in order to ensure that new development in close proximity to the heritage property will be compatible and will not adversely impact the heritage resource.

The 1993 Designation By-law currently includes the entirety of the lands formerly known as 589 King Street West in its legal description. In light of the subdivision agreement and the new M-Plan registered on title, the heritage resource is now located wholly on Lot 9 of the new subdivision, see <u>Appendix</u> <u>B</u>. An amendment to the Designation By-law is now required to reflect the new property limit (see <u>Appendix C</u>).

Staff of consulted with the Town's solicitor and have outlined a process for the Town to follow.

- 1. Issue Notice of Intention to Amend Designation By-law
  - a. Necessary Consultation covered by the 30 day grace period for objection.
  - Notice is to indicate only the legal description of the property no changes to the Statement of Reasons for the Designation are proposed
- 2. Address any objections through S.29 (OHA) process
- 3. Pass Amending by-law
- 4. Register the amending by-law against Lot 9, Plan 39M-936
- 5. Prepare the application to delete the registration against all other lots.

Subject to Council approval, staff will issue the Notice of Intention on the Town website and local newspaper and follow the above process.

# 6.0 <u>CONCLUSION</u>

The property at 589 King Street West is presently subject to a heritage designation by-law that covers the entirety of the property. An amendment to Schedule A (legal description) is required to reflect the new property boundaries of the heritage resource, which will now be Lot 9, Plan 39M-936. As such, Heritage and Planning staff require authorization from Council to implement the Designation By-law amendment process, including a Notice of Intention to Amend the Designation By-law under the *Heritage Act* and the registration of the documentation on title.

# **Report Prepared By:**

Dave Johnson, Planner 1 – Heritage

# **Report Approved By:**

Glenn J. McGlashon, MCIP, RPP Director of Planning & Development



# THE ONTARIO HERITAGE ACT

RECORD OF DESIGNATION - TOWN OF COBOURG

Municipal Address:	1421 000 200 091-00 0000 The Cedars, 589 King Street West	
	Cobourg, Ontario	
Owner of Property:	Miss Suzanne Mess	
Address of Owner:	41 Waybourne Crescent	
	Toronto, Ontario M4N 2R4	
Date of Service of Notice of Intention to Designate:	AUGUST_3, 1988	
Dates of Publication of Notice of Intention:	1) AUGUST 3, 1988 2) AUGUST 10,1988	
	3) AUGUST 17, 1988	
Designation: <u>Yes</u>	Withdrawl	
Designating By-law:	No.: 127-88 repeated in	0
Amending by-law Reason for Designation:	Date: SEPTEMBER 6, 1988 # 16-93 FEBRUARY 15, 1993 Attached	0
Property Description:	Attached	
Dates of Publication of Withdrawal of Notice	1) 2) 3)	
Dates of Publication of Passing of Designating By-law:	1) SEPTEMBER 21, 1988 2) SEPTEMBER 28,1988 3) OCTOBER 5, 1988	
Date by-law registered:	October 11, 1988 Instrument No. 146808	
File No:	1079-73	

L.

#### THE CORPORATION OF THE TOWN OF COBOURG

BY-LAW NUMBER 16-93

A BY-LAW TO AMEND BY-LAW NUMBER 127-88, BEING A BY-LAW DESIGNATING THE LANDS AND PREMISES KNOWN MUNICIPALLY AS THE CEDARS, 589 KING STREET WEST, IN THE TOWN OF COBOURG, IN THE PROVINCE OF ONTARIO.

WHEREAS The Ontario Heritage Act, R.S.O. 1990, Chapter 0.18, Section 29(6) authorizes the Council of a municipality to enact by-laws to designate real property including all buildings and structures thereon, to be of historic or architectural value or interest;

2.000

AND WHEREAS the Municipal Council of the Corporation of the Town of Cobourg has enacted By-law No. 127-88 on the 6th day of September, 1988 designating the lands and premises known municipally as The Cedars, 589 King Street West, Cobourg, as being of historical or architectural value or interest;

AND WHEREAS the Municipal Council of the Corporation of the Town of Cobourg has caused to be served on the owner of the lands and premises known as 589 King Street West, Cobourg and upon the Ontario Heritage Foundation, notice of intention to amend By-law No. 127-88 designating the aforesaid real property and has caused such notice of amendment to be published in the same newspaper having general circulation in the municipality once for each of three consecutive weeks;

AND WHEREAS no notice of objection to the proposed amending by-law has been received;

NOW THEREFORE the Municipal Council of the Corporation of the Town of Cobourg enacts as follows:

- THAT Schedule "A" to By-law No. 127-88 designating the real property known as The Cedars, 589 King Street West, Cobourg is hereby revoked and replaced with a new Schedule "A", attached hereto and forming part of this by-law.
- 2. THAT a copy of this by-law with a new Schedule "A" be registered against the property described in Schedule "A" hereto in the land registry office.
- 3. THAT a copy of this by-law be served on the owner of the aforesaid property and on the Ontario Heritage Foundation and that notice of the passing of this by-law be published in the same newspaper having general circulation in the municipality once for each of three consecutive weeks.

READ a first, second and third time and finally passed in Open Council this 15th day of February , 1993.

Mayor

Municipal Clerk

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# THE CORPORATION OF THE TOWN OF COBOURG

#### BY-LAW NUMBER 16-93

#### SCHEDULE "A"

Town of Cobourg, County of Northumberland, being Part of Lot 21, Concession "A" (formerly Township of Hamilton) being designated as Part 3 on Plan 39R-1757 and land lying under water in front of Lot 21, Concession "A", being Part 4 on Plan 39R-1757 (hereinafter sometimes called "the Subject Lands").

Mayor

Municipal Clerk

#### STATEMENT OF REASONS FOR THE PROPOSED DESIGNATION:

This fine Regency style home was built in the early 1880s by Dr. T. E. White. In 1891 it was sold to Dr. J. R. Clark, and in 1894 to Charles Guillet. In 1898 it was purchased by E. H. Osler, manager of the local Dominion Bank, and ownership has remained in the Osler family.

The two storey house is of red brick with hip roof and wide boxed cornice with decorated dentil frieze. Three exterior chimneys extend through the roof. In the centre of the north facade there is a small gable with a circle head clerestory window in Queen Anne style with patterned glass. Below the small gable, a small 2 storey wing projects northward, and has a low pitched gable roof.

The windows of the main building are four light double hung with segment arch heads. A verandah runs around three sides of the house and is supported by decorated wood pillars and brackets. Two french doors lead on to the verandah. The central main door has an open transom, segmented flush lights, and semi-circular windows.

The main door leads into a centre hall with pine and walnut staircase. The walls and ceiling of the centre hall have been decorated in a combination of bas-relief designs and all-over texture in papier-mache. The dining room off the centre hall is also unique in its decoration. The ceiling displays a large round mural of painted figures, surrounded by a trellis of papier-mache extending out to the walls. The upper portion of the walls is decorated with papier-mache done in intricate bas-relief design. The dado of the room is of moulded plaster work. The upper north west corner displays the title "The Flower Festival 1892" and is attributed to Charles Guillet. The papier-mache decoration is quite rare, and is remarkably well preserved.

On the property is situated a barn and carriage house of red brick construction with gable roof. A chimney extends up the east end of the structure. The double carriage doors have a segment arch head as does the hay loft door in the west gable. Another pair of vertical plank doors leads into the stable area. The north facade contains a door which gave access to the paddock. The west end has four small window openings, and the south side has two somewhat larger.

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co St. + St.

### THE CORPORATION OF THE TOWN OF COBOURG

# BY-LAW NUMBER 127-88

#### SCHEDULE "A"

ALL AND SINGULAR those certain parcels or tracts of land and premises situate, lying and being in the Township of Hamilton, and now being in the Town of Cobourg, in the County of Northumberland and Province of Ontario and being composed FIRSTLY of all that part of the West Half of Lot Number Twenty-one in the broken Front Concession "A" of the said Township of Hamilton lying South of the public travelled road which is the prolongation of King Street in the Town of Cobourg, and being composed SECONDLY of all that part of the East Half of Lot Number Twenty-two in said broken Front Concession "A" of the said Township of Hamilton lying South of the said public travelled road and next east to that part of said Lot Number Twenty-two heretofore conveyed to, held and occupied by one Daniel McAllister, and which said two parcels of land may be further described as follows, being bounded on the North by said public travelled road, on the South by Lake Ontario, on the East by the boundary line between said Township of Hamilton and the Corporation of said Town of Cobourg and on the West by said land formerly held and occupied by said McAllister and which said two parcels of land contain by admeasurement fifteen acres more of less; and THIRDLY: All that parcel or tract of land, and land covered with water situate, lying and being in the said Township of Hamilton, containing by admeasurement Two and Two-tenths acresbe the same more or less, which said parcel or tract of land and land covered with water may be otherwise known as follows, that is to say, being composed of Water Lot in Lake Ontario in front of parts of said Lots Numbers Twenty-one and Twenty-two, Concession "A" of the said Township of Hamilton described as follows: COMMENCING at the point of intersection of the waters edge of said Lake with the division line between the East and West halves of said Lot Number Twenty-one in Concession "A" of the said Township, thence Westerly along the waters edge Ten Hundred and Eight feet more or less to the Easterly limit of the lands of the said Daniel McAllister or its production Southerly to the waters edge, thence Southerly parallel with the division line between the East and West halves of said Lot Number Twenty-one One Hundred feet in the Lake, thence South Eighty-six degrees Thirty-five munutes East astronomic Ten Hundred and Seventy-three feet more or less to the said division line between the East and West halves of said Lot Number Twenty-one produced in the Lake One Hundred feet from the point of commencement, thence Northerly along the said division line produced in the Lake One Hundred feet to the place of beginning as shown on plan of survey by Ontario Land Surveyor Alfred J. Cameron dated April Second, Nineteen Hundred and Ten, of record in the Department of Lands, Forests and Mines a copy of which plan is attached to and forms part of the Letters Patent.

# Schedule A

Town of Cobourg, County of Northumberland, Lot 9, Plan 39M-936, being Part of Lot 21 Concession A and Part of Water lot in front of Lot 21 Concession A.

KING STREET WEST ( TRAVELED ROAD KNOWN AS ) PIN 51085-1392 - N.W. ANGLE BLOCK A, R.P. 416 (A)SIB(765) BENT RESET ട് N63 N26° SIB (1293) 1B (765) BLOCK A . (NOT TO SCALE) N71°39'20"E 132.04 N71'39'20"E 30.00 N71'39'20"E (NOT TO SCALE) SIB(765) (STREET WIDENING) 51.21 BLOCK 16 (STREET WIDENING) N71\*39'20"E (NOT TO SCALE) 51.18 - \_\_\_\_ - \_\_\_ -51.51 N71\*39'20"E 29.05 N71\*39'20"E NG3 0.3 51.48 N71'39'20"E SIB(765 25,004 BLOCK F SIB BLOCK 17 BLOCK 18 PIN 51085-0466 (RESERVE) (NOT TO SCALE) (0.30 m RESERVE) (NOT TO SCALE) (0.30 m RESERVE) (NOT TO SCALE) LOT 14 LOT 1 ×+-PIN 51085-0413 LOT 15 12128 32 60 55.97 N70°34'50"E 55.99 BOULEVARD 1 N70'34'50"E 39R LOT 13 PIN 51085-0412 PLAN LOT 14 LOT 2 1085 5 S Ń LOT 12 55.95 N70'34'50"E 55.97 Ш Х N70'34'50"E SIB PIN 51085-0411 SUZANNE ର୍ । LOT 13 РАRТ ЫN LOT 3 LOT 11 PIN 51085-0410 55.93 N70'34'50"E 55.94 N70'34'50"E 24.02 31.92  $\odot$ LOT 10 L O T 21 <u>N70'34'40"E</u> 20.00 2 PIN 51085-0409 SIB LOT 12 =8.1 =8.1 000 \_\_\_\_ R=50.00 A=20.67 C=20.52 7:34'50"W 0 8 2 8 2 8 ξΰΞ CONCESSION 2 N8871'20"W LOT 9 LOT 5 PIN 51085-0408 LOT 4 33.3047 20.00 W LOT 8 PART PLAN 39R 13179 1, --PIN 51085-0407 51085 PIN 1837

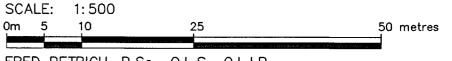
# PLAN 39M- 936

I CERTIFY THAT THIS PLAN IS REGISTERED IN THE LAND REGISTRY OFFICE FOR THE LAND TITLES DIVISION OF NORTHUMBERLAND (No 39)  $AT_{3:56}$  o'clock on the <u>30</u> day of <u>September</u> 2020 AND ENTERED IN THE PARCEL REGISTER FOR PROPERTY IDENTIFIER 51085-1837(LT) AND REQUIRED CONSENTS ARE REGISTERED AS PLAN DOCUMENT No. ND 203715

REPRESENTATIVE FOR LAND REGISTRAR

THIS PLAN COMPRISES ALL OF PIN 51085-1837.

PLAN OF SUBDIVISION OF PART OF LOT 21 CONCESSION A and PART OF WATER LOT IN FRONT OF LOT 21 CONCESSION A ( GEOGRAPHIC TOWNSHIP OF HAMILTON ) TOWN OF COBOURG COUNTY OF NORTHUMBERLAND



FRED PETRICH, B.Sc., O.L.S., O.L.I.P

# METRIC

DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

#### NOTE

BLOCKS 16, 17, 18 AND 19 ARE NOT TO SCALE TO PROVIDE CLARITY.

ALL\_PLANTED\_MONUMENTS\_ARE\_IRON\_BARS\_UNLESS\_OTHERWISE\_STATED.

BEARINGS ARE GRID REFERRED TO UTM ZONE 17 (81° WEST LONGITUDE) NAD83 (CSRS)(1997) CONSISTENT WITH COORDINATE SYSTEM INTEGRATION OF PLAN 39R-13179.

DISTANCES SHOWN ON THIS PLAN ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 1.0002185.

# LEGEND

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SIB

SSIB

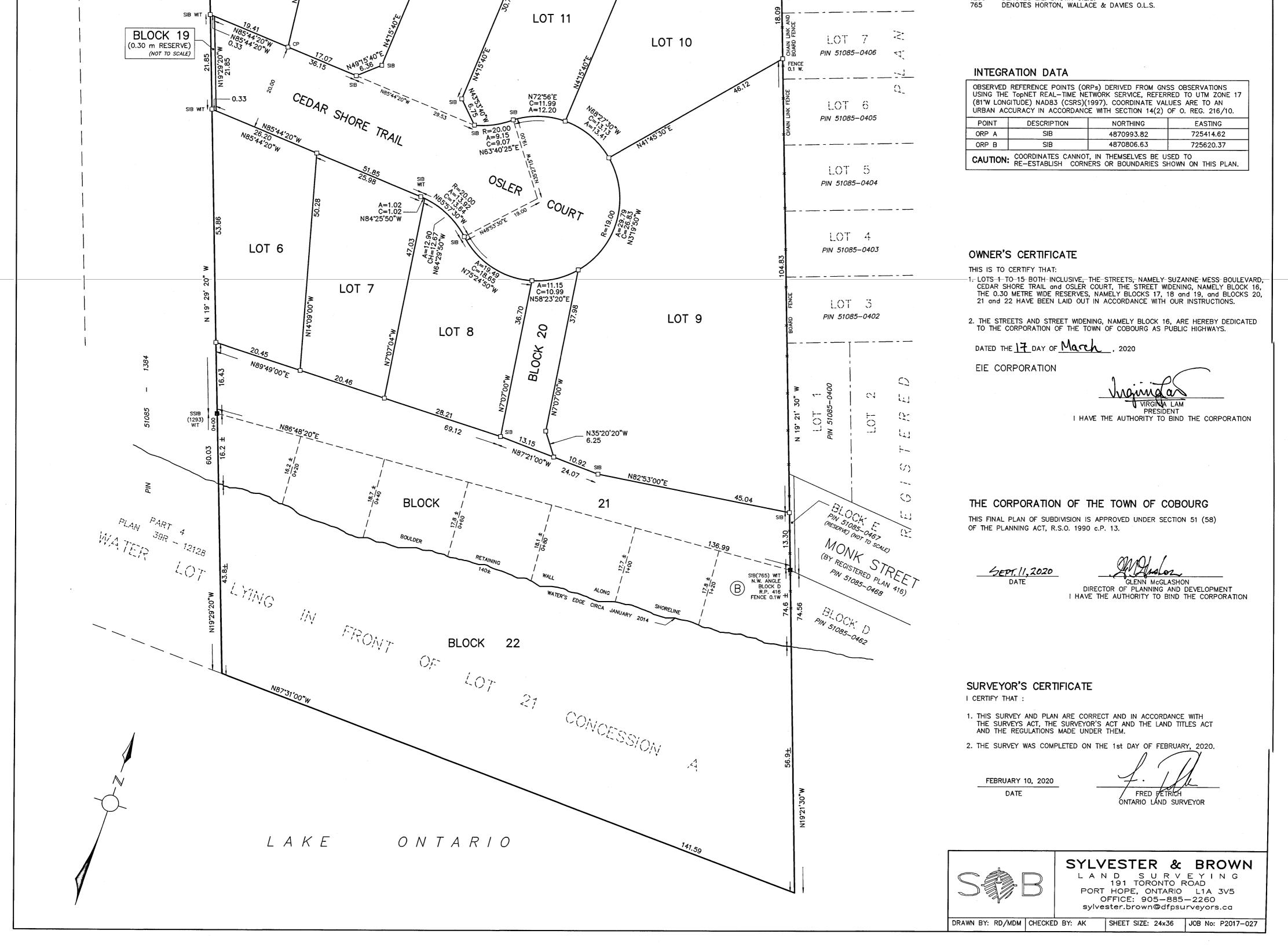
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DENOTES MONUMENT FOUND DENOTES MONUMENT PLANTED DENOTES STANDARD IRON BAR DENOTES SHORT STANDARD IRON BAR DENOTES IRON BAR DENOTES IRON BAR DENOTES CONCRETE PIN DENOTES C. FLEISCHMANN O.L.S. DENOTES G.T. HORTON O.L.S. DENOTES E.L. BROWN O.L.S. 1293



0%O	THE CORPORATION OF THE	E TOWN OF COBOURG
COBOURG	STAFF REPORT	
TO:	Mayor and Council	
FROM:	Terry Hoekstra	
TITLE:	Manager of Engineering and Cap	ital Projects
DATE OF MEETING:	December 7, 2020	
TITLE / SUBJECT:	Assumption of Municipal Services and Infrastructure at West Park Village, Phases 4A, 4B and 4C	
REPORT DATE:	November 25, 2020	File #:

- 1.0 <u>STRATEGIC PLAN</u> NA
- 2.0 <u>PUBLIC ENGAGEMENT</u> NA

# 3.0 <u>RECOMMENDATION</u>

THAT Council authorize the Municipal Clerk to prepare a By-law to assume Municipal services and Infrastructure at West Park Village Phases 4A, 4B and 4C, namely the streets known as:

- Charles Wilson Parkway (Wilkins Gate to Fisher Street);
- Leslie Street (Wilkins Gate to Fisher Street);
- Fisher Street (Leslie Street to Kerr Street);
- Robinson Drive (Leslie Street to Kerr Street);
- McMurdo Drive (Fisher Street to first rear lot line East of Robinson Drive);
- Kerr Street (Fisher Street to first rear lot line east of Robinson Drive);
- Henderson Drive (Leslie Street to McMurdo Drive); and
- McMurdo Drive (Wilkins Gate to Fisher Street)

all part of Registered Plan 39M-876 and with the limits as indicated on attached Schedule A and described in the Subdivision Agreement Between the Corporation of the Town of Cobourg and VanDyk West Park Village Limited dated July 30, 2012.

# 4.0 ORIGIN

A subdivision agreement Receipted as ND79389 with VanDyk West Park Village Limited dated July 30, 2012 for the subdivision known as West Park Village Limited.

# 5.0 BACKGROUND

Phases 4A, 4B and 4C have been completed and are in conformity with the approved Engineering Design Drawings and with the Town of Cobourg Design Standards.

As part of the subdivision agreement, when a municipality assumes a subdivision, Council must be made aware when all works have been completed and the road can be assumed by the Town.

# 6.0 <u>ANALYSIS</u>

All work has been completed and inspected to be in general conformance with the design drawings, all maintenance periods have expired, and any noted deficiencies have been rectified.

# 7.0 FINANCIAL IMPLICATIONS/BUDGET IMPACT

Following formal assumption, Public Works will begin maintaining Charles Wilson Parkway, Leslie Street, McMurdo Drive, Fisher Street, Henderson Drive, Robinson Drive and Kerr Street to the limits shown on the attached Schedule A.

# 8.0 CONCLUSION

THAT Council authorize the Municipal Clerk to prepare a By-law to assume Municipal services and Infrastructure at West Park Village Phases 4A, 4B and 4C, namely the streets known as:

- Charles Wilson Parkway (Wilkins Gate to Fisher Street);
- Leslie Street (Wilkins Gate to Fisher Street);
- Fisher Street (Leslie Street to Kerr Street);
- Robinson Drive (Leslie Street to Kerr Street);
- McMurdo Drive (Fisher Street to first rear lot line East of Robinson Drive);
- Kerr Street (Fisher Street to first rear lot line east of Robinson Drive);
- Henderson Drive (Leslie Street to McMurdo Drive); and
- McMurdo Drive (Wilkins Gate to Fisher Street)

all part of Registered Plan 39M-876 and with the limits as indicated on attached Schedule A and described in the Subdivision Agreement between

the Corporation of the Town of Cobourg and VanDyk West Park Village Limited dated July 30, 2012.

# 12.0 AUTHORIZATION ACKNOWLEDGMENT

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Laurie Wills, P,Eng. Director, Public Works

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Tracey Vaughan Chief Administrative Officer

<mark>0☆0</mark>	THE CORPORATION OF THE TOWN OF COBOURG	
COBOURG	STAFF REPORT	
TO:	Mayor and Council	
FROM: TITLE:	Laurie Wills Director of Public Works	
DATE OF MEETING:	December 7, 2020	
TITLE / SUBJECT:	Execute Transfer Payment Agree Canada Infrastructure Program (IC	
REPORT DATE:	November 25, 2020	File #:

# 1.0 STRATEGIC PLAN

Invest in programs, services and infrastructure to make Cobourg more accessible.

# 2.0 PUBLIC ENGAGEMENT

The Accessibility Advisory Committee and the Town's Accessibility Coordinator will be involved throughout the procurement process of all transit vehicles.

# 3.0 <u>RECOMMENDATION</u>

That the Town of Cobourg Council authorize execution of an agreement with Her Majesty the Queen in right of Ontario represented by the Minister of Agriculture, Food and Rural Affairs and the Corporation of the Town of Cobourg for the Investing in Canada Infrastructure Program Public Transit Stream.

# 4.0 <u>ORIGIN</u>

Investing in Canada Infrastructure Program (ICIP) funding – Transit Stream.

# 5.0 BACKGROUND

The useful life of the 30' conventional buses is 12 years. Both of the Town's conventional buses were purchased in 2009 and are due for replacement in 2021. The useful life of the 8m Wheels bus is 8 years and the Town's back up Wheels bus was due for replacement in 2014. This bus has been out of service for over a year and the Town has been utilizing the operating contractor's bus

as a back up vehicle.

In 2019, the Town of Cobourg entered into an agreement with the Metrolinx Transit Procurement Initiative (TPI) to take advantage of cost savings as well as to have the advantage of Metrolinx facilitating the acquisition process for transit bus procurement.

The Metrolinx TPI has become one of North America's most innovative transit procurement programs. Over 46 transit agencies across Ontario have participated in the program since 2006. Purchasing new buses through the Metrolinx procurement process typically results in better pricing for the Town of Cobourg because of the number of buses being ordered. In addition, the Town benefits from all the other procurement services that Metrolinx TPI provides, such as:

- Industry experienced TPI staff to develop detailed technical specifications, develop the RFP and manage the contract
- Enhanced contract terms and product warranties
- Increased quality control through in-plant inspection of buses
- Evaluation Committee made up of transit participants
- Fairness Commissioner services to oversee the procurement process, where applicable.
- Preparation of the Purchase Agreement for the Municipality

The outcome of the program is an approved list of a variety of vehicles that best suit the needs of the participating municipalities. The Town can then choose from the list, the most appropriate vehicle for its purpose.

# 6.0 <u>ANALYSIS</u>

Public Works is currently investigating future service options for Cobourg Transit. Should it be determined by Council that Cobourg Transit should transition away from the conventional route system and no longer requires the 30' transit buses, Staff shall apply to the Ministry of Transportation to amend the agreement in favour of purchasing transit vehicles other than those specified in the application.

At this time, there is no schedule for purchasing new vehicles nor is there a plan for what type of replacement vehicle(s) will be purchased.

# 7.0 FINANCIAL IMPLICATIONS/BUDGET IMPACT

Based on the Town replacing its existing fleet, the total estimated cost for the project is \$1,240,454.40. The funding is split between the Provincial (33.33%) and Federal (40%) Governments, resulting in the Town's share being approximately \$330,829.19 (26.67%).

All funding is required to be spent by 2029.

# 8.0 <u>CONCLUSION</u>

That the Town of Cobourg Council authorize execution of an agreement with Her Majesty the Queen in right of Ontario represented by the Minister of Agriculture, Food and Rural Affairs and the Corporation of the Town of Cobourg for the Investing in Canada Infrastructure Program Public Transit Stream.

The Transfer Payment Agreement is now permitted to be submitted back to the Ministry electronically (Scanned PDF).

# 12.0 AUTHORIZATION ACKNOWLEDGMENT

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Laurie Wills, P,Eng. Director, Public Works

Tracey Vaughan Chief Administrative Officer Tracey Vaughan, CAO

	THE CORPORATION OF THE TOWN OF COBOURG
	COBOURG ACCESSIBILITY ADVISORY COMMITTEE
TO:	Brent Larmer, Municipal Clerk/Manager of Legislative Services
FROM:	Jamie Kramer, Accessibility Coordinator/Recording Secretary
MEETING DATE:	November 25, 2020
SUBJECT:	Accessibility Coordinator Position

# Moved by Member J. Ford

THAT Jamie Kramer, Accessibility Coordinator, be a permanent member of staff to continue the dedication to accessibility at the Town of Cobourg.

	THE CORPORATION OF THE TOWN OF COBOURG
	COBOURG ACCESSIBILITY ADVISORY COMMITTEE
TO:	Brent Larmer, Municipal Clerk/Manager of Legislative Services
FROM:	Jamie Kramer, Accessibility Coordinator/Recording Secretary
MEETING DATE:	November 25, 2020
SUBJECT:	Accessible Parking Spaces in the Town of Cobourg

# Moved by Member E. Sheffield

THAT in response to the Council Motion on October 7<sup>th</sup> that accessible parking spots in the Town of Cobourg remain as paid parking spots to ensure equity for Persons with Disabilities.

	THE CORPORATION OF THE TOWN OF COBOURG
	COBOURG ACCESSIBILITY ADVISORY COMMITTEE
TO:	Brent Larmer, Municipal Clerk/Manager of Legislative Services
FROM:	Jamie Kramer, Accessibility Coordinator/Recording Secretary
MEETING DATE:	November 25, 2020
SUBJECT:	APS Signal Priority Intersections for 2021

# Moved by Member K. Richards

THAT the intersections of Elgin/Frei and Elgin/Rogers be the priority intersections for new APS signals for the 2021 years.

	THE CORPORATION OF THE TOWN OF COBOURG
	COBOURG ACCESSIBILITY ADVISORY COMMITTEE
TO:	Brent Larmer, Municipal Clerk/Manager of Legislative Services
FROM:	Jamie Kramer, Accessibility Coordinator/Recording Secretary
MEETING DATE:	November 25, 2020
SUBJECT:	Accessibility Advisory Committee's 2021 Work Plan

# Moved by Chair S. Carron

THAT the 2021 Work Plan for the Accessibility Advisory Committee be approved and provide to Council.