



paradigm
TRANSPORTATION SOLUTIONS LIMITED

2220 Stanley Avenue City of Niagara Falls Parking Study

Paradigm Transportation Solutions Limited

September 2024
240360



ptsl.com



Project Summary



Project Number:
240360

2220 Stanley Avenue, City of Niagara Falls, Parking Study

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Executive Summary

Content

Paradigm Transportation Solutions Limited (Paradigm) was retained to conduct this Parking Study for a proposed residential development located at 2220 Stanley Avenue in the City of Niagara Falls.

The purpose of this study is to assess the adequacy of the proposed parking supply and the site circulation for the proposed design. A plan to ensure that the parking is accommodated and managed consistently with the development's needs will be provided.

Development Concept

The subject site is municipally known as 2220 Stanley Avenue in the City of Niagara Falls, located on the north-east corner of the Stanley Avenue at Morning Glory Court intersection. The development concept includes the 28 stacked townhouse dwellings with the existing single dwelling to be severed. The site will have a single private driveway connection to Stanley Avenue. The proposed site proposes a parking supply of 37 spaces, equating to a parking rate of 1.32 per unit.

Conclusions

The conclusions of the study are as follows:

- ▶ The proposed site provides for a total of 37 parking spaces that equates to a parking ratio of 1.32 parking space per unit. The parking requirement for the development under the City of Niagara Falls Zoning By-Law 79-200 is 39 parking spaces for 28 units (1.40 spaces per unit).
- ▶ All-day parking utilization surveys were conducted for comparable low to mid-rise residential developments (2349 Portage Road and 101-125 Shoreview Place). Based on the data set compiled utilizing the highest parking demand observed at each site, the maximum parking demand ranges from 0.95 to 1.28 parking spaces per unit.
- ▶ Based on the survey data, 2220 Stanley Avenue is estimated to have weekday parking demands of 36 parking spaces. Therefore, the proposed parking supply of 37 parking spaces is sufficient for the 28 units.
- ▶ The ITE Parking Generation manual recommends 1.27 parking spaces per unit for Land Use Code 220 (Multifamily Housing –



Low-Rise) which result in a parking demand of 36 spaces (surplus of one space).

- ▶ As 2220 Stanley Avenue has a proposed parking supply of 1.32 parking space per unit, the development exceeds the observed maximum parking demand observed.

Recommendations

Based on the findings of this study, it is recommended that:

- ▶ The City of Niagara Falls recognizes the conclusions drawn above; and
- ▶ The City of Niagara Falls supports the proposed Zoning By-Law variance to allow the site to operate with 28 units and 37 parking spaces for the development (1.32 parking spaces per unit).
- ▶ The site's TDM program be implemented and monitored over time to help manage the site's transportation and parking impacts.



Contents

1	Introduction	1
1.1	Overview	1
1.2	Purpose and Scope	1
2	Area Description	3
2.1	Road Network	3
2.2	Transit Service.....	3
2.3	Active Transportation	6
2.4	Neighbourhood Multi-Modal Assessment.....	6
2.4.1	Walkability	6
2.4.2	Transit	6
2.4.3	Cycling.....	7
3	Development Concept.....	8
3.1	Description.....	8
4	Parking Methodology	10
4.1	Zoning Requirements.....	10
4.1.1	City of Niagara Falls Zoning By-Law 79-200	10
4.2	Parking Utilization Survey	10
4.2.1	ITE Parking Generation Data	12
4.3	Other Jurisdictions (Updated Standard)	13
4.4	Summary of Parking Demand Estimates.....	15
5	Transportation Demand Management	17
5.1	Potential TDM Measures	17
5.1.1	Transportation Information	17
5.1.2	Cycling.....	17
5.1.3	Walking.....	18
5.1.4	Parking.....	18
5.1.5	Unbundled Parking.....	18
6	Conclusions and Recommendations	20
6.1	Conclusions.....	20
6.2	Recommendations	20



Appendices

Appendix A	Terms of Reference
Appendix B	Parking Utilization Data
Appendix C	ITE Parking Generation Worksheet

Figures

Figure 1.1:	Development Location	2
Figure 2.1:	Local Transit Routes	5
Figure 3.1:	Site Concept Plan	9
Figure 4.1:	Summary of Parking Demand.....	16

Tables

Table 4.1	Niagara Falls Parking Requirements	10
Table 4.2:	Parking Utilization Surveys	11
Table 4.3:	Other Jurisdictions.....	14



1 Introduction

1.1 Overview

Paradigm Transportation Solutions Limited (Paradigm) was retained to conduct this Parking Study for a proposed residential development located at the municipal address of 2220 Stanley Avenue in the City of Niagara Falls. The subject site is located on the north-east corner of the Stanley Avenue and Morning Glory Court intersection. **Figure 1.1** details the location of the subject development.

Appendix A contains the pre-study consultation material with the City of Niagara Falls.

1.2 Purpose and Scope

This study aims to assess the adequacy of the proposed parking supply and the site circulation for the proposed design. A plan to ensure that the parking is accommodated and managed consistently with the development's needs will be provided.





NTS
Image Source: Niagara Falls Interactive Map



Development Location

2220 Stanley Avenue , Niagara Falls
240360

Figure 1.1

2 Area Description

This section of the report provides an overview of the conditions and components of the study area.

2.1 Road Network

The main road near the subject site is Stanley Avenue. The characteristics of this roadway are as follows:

- ▶ **Stanley Avenue** is a north-south regional arterial roadway¹. The road has a two-lane urban cross-section and a posted speed limit of 50 km/h. There are no dedicated cycling facilities along this roadway within the study area. An asphalt walkway is provided along the east side of the roadway north of Morning Glory Court. Sidewalks are provided on both sides of the roadway south of Morning Glory Court.
- ▶ **Morning Glory Court** is an east-west local roadway. The road has a two-lane urban cross-section and an assumed statutory speed limit of 50 km/h. There are no dedicated pedestrian and cycling facilities along this roadway within the study area.
- ▶ **Portage Road** is an east-west regional roadway with a posted speed limit of 50 km/h and a two-lane cross-section. Portage Road is classified as a regional roadway west of Stanley Avenue and as a local roadway east of Stanley Avenue. Sidewalks are provided on both sides of the road west of the intersection. On-street cycling facilities are present on both sides of the road west of the intersection.

2.2 Transit Service

The study area is served by the regional transit service (Niagara Region Transit). Niagara Region Transit provides transit service across Niagara Region and local route service in St. Catharines, Niagara Falls, Welland, Port Colborne, and Fort Erie. Note that as of January 1, 2023, Niagara Falls Transit, which had provided local transit service within Niagara Falls, has become part of Niagara Region Transit. The closest bus stop that provides service to the site can be found at the intersection of Stanley Avenue and Church's Lane, approximately 1.1 km (15-minute walk) away from the site. The following routes serve the study corridor:

- ▶ **Route 107** provides service between the Main Street and Ferry Bus Hub to the Town and Country Plaza. Service runs every 30

¹ Niagara Region - Regional Road Map. 2024.

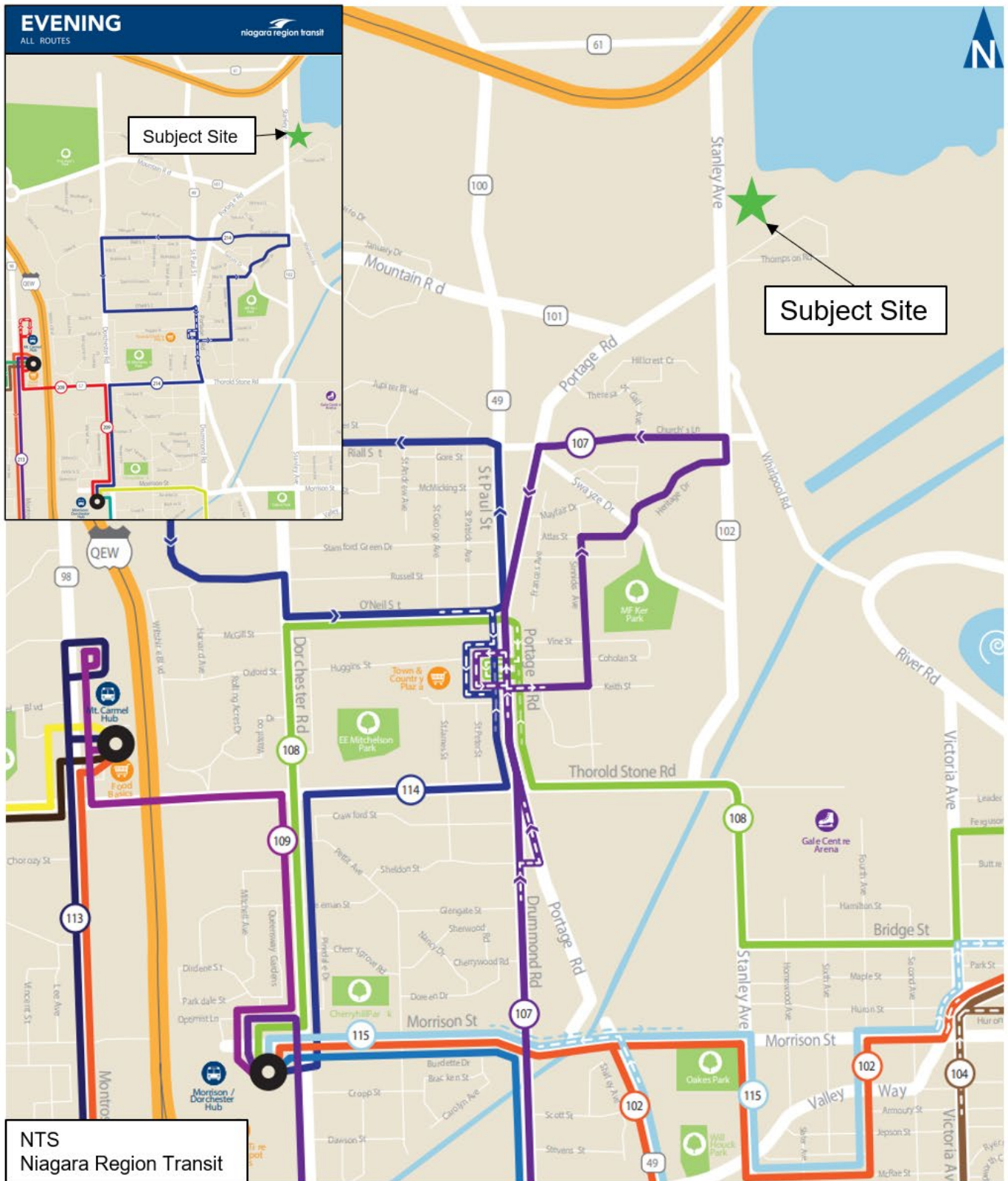


to 60 minutes between 6:15 AM to 7:15 PM on Monday to Saturday.

- ▶ **Route 214** provides service between the Morrison and Dorchester Hub to Portage Road and Colborne Street. Service runs every 60 minutes from approximately 6:30 AM to 11:00 PM, Monday to Saturday. Service runs every 60 minutes on Sundays between 7:30 AM to 8:00 PM.

Figure 2.1 illustrates the Niagara Region Transit routes serving the study corridor.





NTS
Niagara Region Transit



Existing Transit Network

Figure 2.1

2.3 Active Transportation

Pedestrian infrastructure typically consists of sidewalks or multi-use paths parallel to the roadway.

Cycling infrastructure typically consists of on-street and off-street facilities. On-street facilities comprise cycling lanes, signed cycling routes, and paved shoulders. Off-street facilities are in the form of multi-use or informal trails.

Concerning the study area's active transportation facilities, sidewalks are provided on both sides of Stanley Avenue south of Morning Glory Court, and along Portage Road west of Stanley Avenue. On-street cycling lanes are also present along Portage Road, west of Stanley Avenue on both sides of the road. No other cycling facilities are available near the subject area.

2.4 Neighbourhood Multi-Modal Assessment

Sustainability is a principle that cuts across all developments as it is ingrained in developing a balanced multi-modal transportation system and is supported by the City of Niagara Falls.

Analytical tools allow communities, transit agencies, developers, and employers to measure the environmental impact of neighbourhoods' transportation and land-use choices.

2.4.1 Walkability

Walk Score is a well-known (but proprietary) measure of Walkability – it aggregates several data sources to provide a proxy measure of the quality of the pedestrian environment. It is used to gauge the walkability and destination density of each neighbourhood.

2220 Stanley Avenue has a Walk Score of 3 and is considered a "Car-Dependent" location, meaning almost all errands will require a car².

2.4.2 Transit

Transit Score is a measure of transit accessibility. It aggregates information regarding transit frequency, the density of stops and routes, and mode of service. It is used to gauge the transit accessibility of each neighbourhood.

² <https://www.walkscore.com/score/2220-stanley-ave-niagara-falls-on-canada>



2220 Stanley Avenue has a Transit Score of 0 and is considered to have "Minimal Transit," which means there are a minimal public transportation options near the subject area.

2.4.3 Cycling

Bike Score is a measure of the area's ability to accommodate cyclists. A Bike Score is calculated for a given location by measuring bike infrastructure (lanes, trails, etc.), hills, destinations and road connectivity, and the number of bike commuters.

2220 Stanley Avenue has a Bike Score of 22 and is considered "Somewhat Bikeable," which means minimal bike infrastructure is available.



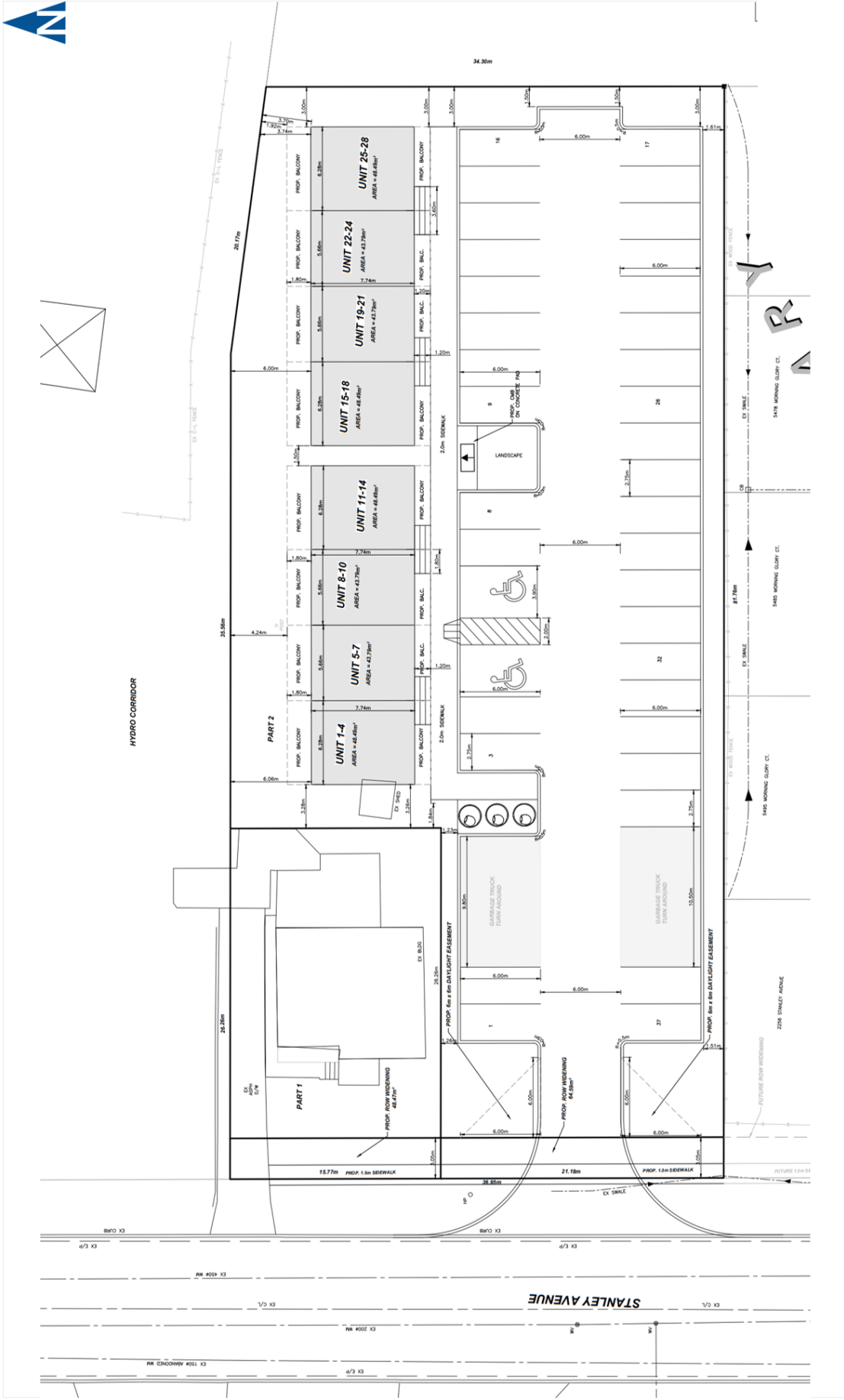
3 Development Concept

3.1 Description

The subject site is municipally known as 2220 Stanley Avenue in the City of Niagara Falls, located on the north-east corner of the Stanley Avenue at Morning Glory Court intersection. The development concept includes the 28 stacked townhouse dwellings with the existing single dwelling to be severed. The site will have a single private driveway connection to Stanley Avenue.

Figure 3.1 illustrates the site concept plan.





Site Concept Plan

Figure 3.1

4 Parking Methodology

As with any equilibrium system, a minimum of two components are required to be in balance and reach the equilibrium point. With parking systems, this involves the balance of parking supply and demand. Achieving an appropriate supply level is equally important as demand. The ubiquitous oversupply of cheap and accessible parking has long contributed significantly to single-occupant vehicle (SOV) travel growth.

4.1 Zoning Requirements

4.1.1 City of Niagara Falls Zoning By-Law 79-200

Zoning By-Law 79-200³, is currently in effect for multiple-unit residential uses located within Niagara Falls. This Zoning By-Law stipulates a parking rate of 1.40 parking spaces per unit for multiple dwelling units for 39 parking spaces for the subject site.

Table 4.1 summarizes the minimum parking calculations for the development under the current City of Niagara Falls Zoning By-Law. The proposed site proposes a parking supply of 37 spaces, equating to a parking rate of 1.32 per unit.

TABLE 4.1 NIAGARA FALLS PARKING REQUIREMENTS

Land Use	Rate	Zoning By-law Calculation
Dwelling containing 4 or more dwelling units (28 units)	1.40 spaces per unit	39
Mandated Parking Supply		39 spaces
Proposed Parking Supply		37 spaces
Surplus/Deficit		-2 spaces (5%)

4.2 Parking Utilization Survey

A review of actual parking demands likely generated by the development has been considered to assess, independent and separate from a review of the Zoning By-Law requirements.

³ Zoning By-Law 79-200 < <https://niagarafalls.ca/pdf/planning/zoning-by-law-79-200.pdf> >



The "real" demands established for the subject site are based upon a review of parking demand data collected by Paradigm. The specified demand considers several influencing factors, including market demands and study area attributes.

All-day parking utilization surveys were conducted from Thursday, July 18, to Saturday, July 20, 2024, at 101-125 Shoreview Place and 2349 Portage Road. Given the low turnover at residential land uses, the parking utilization surveys were carried out in 15-minute increments. **Table 4.2** summarizes this assessment. **Appendix B** contains the parking survey data.

- ▶ **101-125 Shoreview Place** currently operates with two mid-rise 6-storey apartment buildings with 456 residential units. The subject site contains approximately 589 parking spaces for residents and visitors.

The parking surveys show that out of the 589 parking spaces provided, at most 432 spaces were observed to be used. The survey's maximum parking demand was calculated to be 0.95 parking space per unit.

- ▶ **2349 Portage Road** currently operates as a low-rise 3-storey apartment building with 40 residential units. The subject site contains approximately 67 parking spaces for residents and visitors.

The parking surveys confirm that out of the 67 parking spaces provided, at most 51 spaces were observed to be used. The survey's maximum parking demand was calculated to be 1.28 parking space per unit.

TABLE 4.2: PARKING UTILIZATION SURVEYS

Day of the Week	2349 Portage Road			101-125 Shoreview Place		
	Max Parking	Usage	Parking Rate	Max Parking	Usage	Parking Rate
Thursday (July 18, 2024)	50	75%	1.25	432	73%	0.95
Friday (July 19, 2024)	51	76%	1.28	425	72%	0.93
Saturday (July 20, 2024)	49	73%	1.23	396	67%	0.87
Maximum	51	76%	1.28	432	73%	0.95

The parking survey results indicate that the maximum parking demand ranges from 0.95 to 1.28 parking spaces per unit. As 2220 Stanley Avenue has a proposed parking supply of 1.32 parking spaces per unit, the development exceeds the observed maximum parking demand.



Applying the maximum observed parking rate of 1.28 spaces per unit to 2220 Stanley Avenue, the proposed development with 28 units is estimated to have a peak parking demand of 36 vehicles.

4.2.1 ITE Parking Generation Data

A review of the Institute of Transportation Engineers (ITE) Parking Generation manual has been reviewed to provide further confidence in the proxy data observed.

Numerous industry associations and institutions are dedicated to surveying and reviewing parking requirements related to various land uses. These associations, such as ITE, collect, review, and disseminate parking demand, supply, and appropriate design standards. This data helps establish a typical range of requirements. The latest ITE parking generation manual is the 6th edition⁴ and is comparative to determine baseline assumptions.

ITE Land Use Code (LUC) 220 (Multifamily Housing –Low-Rise) is used. LUC 220 includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walk-up apartment, mansion apartment, and stacked townhouse.

The subject site's setting can be classified as a General Urban/Suburban area. The requirements specified by ITE's Parking Generation for Multi-Family Low-Rise dwellings located in a General Urban/Suburban setting is an average parking supply of 1.27 spaces per dwelling unit. The data is based on 143 sites surveyed within North America, with an average of 154 dwelling units. **Appendix C** includes the ITE worksheet.

Applying the ITE parking rate of 1.27 parking spaces per dwelling unit to the subject site, the development is estimated to generate a peak parking demand of 36 spaces. The proposed parking supply provides one additional space than the estimated parking demand.

Based on the data, the subject site with a proposed parking supply of 1.32 spaces per unit provides sufficient parking for the anticipated demand.

⁴ ITE Parking Generation 6th Edition, Washington DC, 2023.



4.3 Other Jurisdictions (Updated Standard)

Parking standards are increasingly seen as an instrument of planning policy, and parking ratios are now looked at as having the primary role in determining car use. Parking ratios have existed in most cities since the 1950s and have often been amended incrementally by various means. Consequently, it is not surprising that municipalities often cannot trace the justification or reasoning behind some of the older parking ratios found in their current Zoning By-laws.

Since parking standards reflect an “average” condition, they will rarely prescribe the number of parking spaces to match the parking demands of any individual development project exactly. Other municipalities are recognizing the advantages of parking ratios in support of broader Official Plan objectives. The empirical challenge is to understand the range over which parking demand for a given use may vary, and the policy question is where in that range should the parking standard or ratio be set.

The Town of Oakville recently developed a new zoning by-law for lands north of Dundas Street. The parking rates contained within this by-law for multiple dwelling units stipulate that a maximum parking rate of 1.25 parking spaces per unit would be accepted with no prescribed minimum parking requirement. In contrast to generic minimum parking requirements, North Oakville provides maximum limits to restrict the total number of spaces that can be constructed rather than establish a minimum number.

The City of Welland has recently undertaken a comprehensive review of the zoning by-law to ensure land and growth are appropriately managed and the zoning regulations are up to date. As part of this work, updated parking requirements were developed, which requires multiple dwellings to provide a parking rate of 1.00 parking space per unit.

City of Hamilton has a staggered approach for parking requirements for multiple dwellings. The minimum parking required depends on the size of the dwellings and the number of units, with a maximum parking rate of 1.25 spaces per unit.

The Town of Pelham stipulated that the original by-law was drafted in 1987 and is outdated and not representative of current development trends. As a result, the Town undertook a comprehensive zoning by-law which revised the requirement for multiple dwellings to be lowered from 1.50 to 1.25 spaces per unit.



Attitudes towards automobile ownership and its role in an urban lifestyle are changing in the eyes of both consumers and policymakers, and lower parking regulations reflect this. As parking regulations are an attempt to supply to meet demand, regulations which require a lower supply for future buildings are an indication that future demand is likely to be lower with the rise of sustainable travel modes (transit, cycling, and walking).

Parking regulations as stipulated in the City of Niagara Falls By-law for residential zones are, on average, 35% higher than neighbouring municipalities that have adopted new standards based on broader Official Plan objectives that recognize the correlation between supportive land uses and lower automobile use ownership, and promotion of sustainable travel modes.

As the subject site is situated in a location supported by active transportation facilities and at a walkable distance to transit, it is positioned to support lower parking rates. The proposed residential supply of 37 spaces is adequate for the Town of Oakville, City of Welland, Town of Pelham and City of Hamilton with new parking rates adopted. **Table 4.3** summarizes the parking standard calculations for other jurisdictions.

Overall, this comparison outlines the new parking rate standards being accepted by municipalities through a comprehensive review of research and best practices. The rates stipulated in the antiquated Zoning By-law provide for an oversupply of parking.

TABLE 4.3: OTHER JURISDICTIONS

Municipality	Land Use	Number of Units	Parking Rate	Minimum Parking Required
Town of Oakville (North Oakville)	Multiple Residential	28	0.00 spaces per unit or maximum of 1.25 space per unit	22*
	Visitor	28	0.20 spaces per unit	6
	Total			28
City of Welland	Multiple Residential	28	1.00 space per unit	28
City of Hamilton	Multiple Residential	28	Minimum 0.85 space per unit for units greater than 50.0 sq.m or maximum 1.25 units per unit	35
Town of Pelham	Multiple Residential	28	1.25	35

*0.80 parking space per unit assumed



4.4 Summary of Parking Demand Estimates

The proposed site provides for a total of 37 parking spaces that equates to a parking ratio of 1.32 spaces per unit.

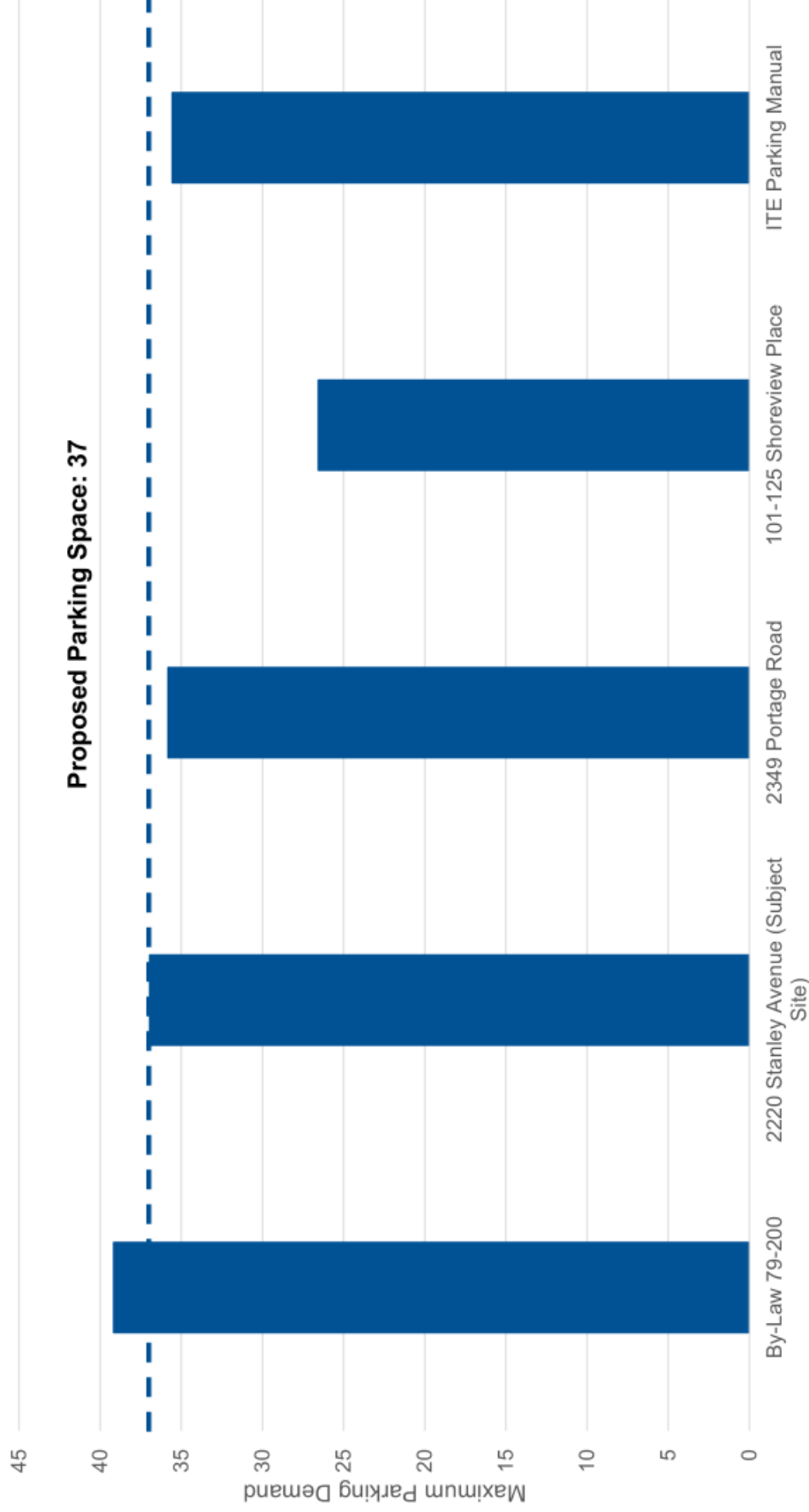
The parking requirement for the development under the City of Niagara Falls Zoning By-Law 79-200 is 39 parking spaces (1.40 spaces/unit). To fully satisfy the City's Zoning By-Law requirements, the proposed parking supply would need to increase by two spaces (5%).

To estimate the potential parking demand, Paradigm conducted parking utilization surveys to compare "real life" parking demand for similar low to mid-rise residential developments (2349 Portage Road and 101-125 Shoreview Place). Based on the utilization data, the maximum parking demand ranges from 0.95 to 1.28 parking spaces per unit. Applying the maximum observed parking rate of 1.28 spaces per unit to the proposed development is forecast to have a peak demand of 36 vehicles. As the proposed parking supply provides 37 spaces, the site can adequately satisfy these demands.

The ITE Parking Generation manual for Land Use Code 220 (Multifamily Housing – Low-Rise) suggests an average parking supply of 1.27 spaces per unit for occupants. Applying this rate to the subject site indicates a potential surplus of one space. Therefore, the site's parking provision is adequate when considering peak demand in relation to the number of dwelling units.

Figure 4.1 provides a summary of the methodologies.





2220 Stanley Avenue, Niagara Falls
240360

Summary of Parking Demand

Figure 4.1

5 Transportation Demand Management

Based on best practices and policy objectives, there is merit for a further reduction through a Transportation Demand Management (TDM) program.

A TDM plan aims to reduce the development's overall traffic and parking impacts by implementing strategies to affect the demand side of the transportation equation. TDM strategies include incentives and disincentives that increase people's likelihood of changing travel behaviour. Strategies include financial incentives, time incentives, new or enhanced commuter services, information dissemination, and alternative marketing services. Such strategies include providing information on modes accessible to the site, providing bike parking, and providing the proper amount of parking.

The TDM plan has been formulated to extend reasonable and practical strategies that encourage residents and visitors to take alternative modes of transportation. The strategies identified are expected to improve transportation access and connectivity for the proposed development.

5.1 Potential TDM Measures

The parking justification outlined in **Section 4** has indicated that the development's parking supply can accommodate the estimated parking demand. The development will implement the proposed strategies identified herein to reduce the number of auto-trips made to/from the Development:

5.1.1 Transportation Information

A major part of mode choice is knowing which modes are available and accessible. Information on transportation options and links to the appropriate website should be conveyed to all prospective residents as a component of a resident welcome packet.

Available information should include schedules for local and regional transit services, bicycle and trail networks and the location of retail and recreational establishments.

5.1.2 Cycling

By providing additional opportunities and safeguards for residents that choose to travel to/from the development through cycling, sustainable transportation and a reduction in automobile trips and parking



requirements is expected to occur. The Applicant should provide ten bicycle parking spaces on-site (0.35 bicycle spaces per unit).

5.1.3 Walking

Similar to cycling, providing a safe and attractive environment for residents that choose to walk to/from the development will contribute to achieving sustainable transportation.

The site plan indicates that a concrete walkway at least 1.5 metres in width will be provided adjacent to the buildings frontage that will provide connections to the proposed sidewalk along the east side of Stanley Avenue.

The proposed development generally satisfies the City's TDM policy for walking.

5.1.4 Parking

A parking management plan recognizes the need to provide adequate parking, but values strategies which result in more efficient use of parking resources and reduce the amount of parking needed at a particular location.

Rather than establish generous parking requirements to satisfy the maximum potential demand that may occur, parking management allows contingency-based planning, which means that various solutions are identified which can be deployed if needed.

The single largest contributor to the ubiquitous use of the SOV is the oversupply of inexpensive parking. By limiting parking supply, the developer provides a key ingredient into managing demand for parking at the site. Reducing parking supply to match but not to exceed the expected demand can have a positive influence on the selection of alternative travel modes.

As the development promotes using other modes of transportation through limited on-site parking to meet the projected demand, the development plays a significant role in setting an example for residents and visitors to consider non-automotive travel.

5.1.5 Unbundled Parking

Implementing a paid-parking operation is one of the most effective TDM strategies for encouraging alternative travel habits. Occupants are not forced to pay for parking they do not need and allow consumers to adjust their parking supply to reflect their needs. To further encourage residents of the townhouses to utilize sustainable



travel modes, it is recommended that parking be unbundled from the cost of the units.

This is an essential factor as residents are notified at the project's onset that parking is proposed to be provided as an additional cost instead of the price to rent a unit. If residents are significantly considering changing their travel behaviour, the cost of renting a parking space could be a contributing factor to this change.



6 Conclusions and Recommendations

6.1 Conclusions

The conclusions of the study are as follows:

- ▶ The proposed site provides for a total of 37 parking spaces that equates to a parking ratio of 1.32 parking space per unit. The parking requirement for the development under the City of Niagara Falls Zoning By-Law 79-200 is 39 parking spaces for 28 units (1.40 spaces per unit).
- ▶ All-day parking utilization surveys were conducted for comparable low to mid-rise residential developments (2349 Portage Road and 101-125 Shoreview Place). Based on the data set compiled utilizing the highest parking demand observed at each site, the maximum parking demand ranges from 0.95 to 1.28 parking spaces per unit.
- ▶ Based on the survey data, 2220 Stanley Avenue is estimated to have weekday parking demands of 36 parking spaces. Therefore, the proposed parking supply of 37 parking spaces is sufficient for the 28 units.
- ▶ The ITE Parking Generation manual recommends 1.27 parking spaces per unit for Land Use Code 220 (Multifamily Housing – Low-Rise) which result in a parking demand of 36 spaces (surplus of one space).
- ▶ As 2220 Stanley Avenue has a proposed parking supply of 1.32 parking space per unit, the development exceeds the observed maximum parking demand observed.

6.2 Recommendations

Based on the findings of this study, it is recommended that:

- ▶ The City of Niagara Falls recognizes the conclusions drawn above; and
- ▶ The City of Niagara Falls supports the proposed Zoning By-Law variance to allow the site to operate with 28 units and 37 parking spaces for the development (1.32 parking spaces per unit).
- ▶ The site's TDM program be implemented and monitored over time to help manage the site's transportation and parking impacts.



Appendix A

Terms of Reference



Brian Kim

From: John Grubich <jgrubich@niagarafalls.ca>
Sent: June 27, 2024 3:12 PM
To: Adam Makarewicz; Brian Kim
Subject: RE: [EXTERNAL]-240360 - 2220 Stanley Ave, Niagara Falls, Parking Study - Terms of Reference

Adam;

The Stoney Creek site seems fine, but you will still need to identify in the report that it is a comparable site in built form, unit size, tenure, pricing, etc. I would like to see new field studies for this site. The same applies to the Stanley Avenue/Portage Road site to justify it as a comparable. Please identify in your report the occupancy of both sites, in case some units are not occupied.

John Grubich, C.E.T. | Traffic Planning Supervisor | Municipal Works - Transportation Services | City of Niagara Falls
8208 Heartland Forest Road | Niagara Falls, ON L2H 0L7 | (905) 356-7521 ext 5214 | Fax 905-356-5576 | jgrubich@niagarafalls.ca

From: Adam Makarewicz <amakarewicz@ptsl.com>
Sent: Wednesday, June 26, 2024 11:17 AM
To: John Grubich <jgrubich@niagarafalls.ca>; Brian Kim <bkim@ptsl.com>
Subject: RE: [EXTERNAL]-240360 - 2220 Stanley Ave, Niagara Falls, Parking Study - Terms of Reference

Hi John,

Thanks for your comments and advice on the proxy site nearby. We will get it surveyed.

Regarding an additional site, we have survey data for a relatively new condominium development in Stoney Creek ([101-125 Shoreview Place](#)). This could be suitable given this site does not have any fixed route transit service nearby (i.e. 400m+). Let me know if it would be OK to include this site as an option.

101-125 Shoreview Place – Stoney Creek Survey Details

Paradigm surveyed parking demands for a relatively new mid-rise building in the City of Hamilton (Stoney Creek – Lakeshore neighbourhood). The Site is located at 101-125 Shoreview Place and is known as Sapphire (Sapphire Site) at the end of a cul-de-sac. The Sapphire Site consists of two six storey buildings containing 456 units. Fixed transit routes do not service the Sapphire Site. Adjacent land uses are primarily residential with industrial uses located south of the QEW. The Sapphire Site parking demand was measured using Miovision Scout unit cameras from 5:00 PM to Midnight on Thursday, May 12, 2022, Friday, May 13, 2022, and Saturday, May 14, 2022. On-street parking along Shoreview Place was also recorded.

Thanks,

Adam J. Makarewicz
Senior Project Manager, Associate



5A-150 Pinebush Road, Cambridge ON, N1R 8J8
p: 905.381.2229 x303
e: amakarewicz@ptsl.com
w: www.ptsl.com

From: John Grubich <jgrubich@niagarafalls.ca>
Sent: Wednesday, June 26, 2024 8:36 AM
To: Brian Kim <bkim@ptsl.com>
Cc: Adam Makarewicz <amakarewicz@ptsl.com>
Subject: RE: [EXTERNAL]-240360 - 2220 Stanley Ave, Niagara Falls, Parking Study - Terms of Reference

Brian;

Thanks for forwarding your work plan and an updated site plan for this proposed stacked townhouse development on Stanley Avenue in the City's north end.

The subject lands are more than 1.0km from the closest transit stop at Stanley Avenue and Church's Lane. That is the reason why City Staff requested a parking study be done if the parking supply proposed is below 1.4 parking spaces per unit. I note the proposal is for 1.32 parking spaces per unit which equates to the development being 2 spaces short. Each of the proposed proxy sites are within 400m of a transit stop. I'm not aware of any stacked townhomes that are located more than 400m of transit in Niagara Falls; these types of developments are generally located in the built-up area. The 3-storey apartment at the northwest corner of Stanley Avenue and Portage Road may be a suitable comparable given its location and similar 3-storey height, subject to how this site compares to the subject proposal (average unit sizes, # bedrooms, pricing, etc.). I would like a 2nd site studied but I couldn't find another site in Niagara Falls outside of the 400m transit distance that I feel is a comparable site, but I am open to suggestions.

I trust this information is satisfactory.

John Grubich, C.E.T. | Traffic Planning Supervisor | Municipal Works - Transportation Services | City of Niagara Falls
8208 Heartland Forest Road | Niagara Falls, ON L2H 0L7 | (905) 356-7521 ext 5214 | Fax 905-356-5576 | jgrubich@niagarafalls.ca

From: Brian Kim <bkim@ptsl.com>
Sent: Thursday, June 20, 2024 4:28 PM
To: John Grubich <jgrubich@niagarafalls.ca>
Cc: Adam Makarewicz <amakarewicz@ptsl.com>
Subject: [EXTERNAL]-240360 - 2220 Stanley Ave, Niagara Falls, Parking Study - Terms of Reference

Hi John,

Paradigm Transportation Solutions Limited has been retained to conduct a parking study for the residential development at 2220 Stanley Avenue in Niagara Falls, Ontario. The subject site is on the east side of Stanley Avenue and generally south of Fruitbelt Parkway. The property owner proposes to develop the lands to construct 28 stacked townhouse dwellings and a single dwelling to be severed. The site proposes a parking supply of 37 spaces, equating to a parking rate of 1.32 per unit, whereas the City's Zoning By-law requires 39 parking spaces (1.40 per unit).

We'd like to prepare our report based on the following scope, subject to your comments:

Proposed Terms of Reference

Parking Study

- Parking generation for the site will be calculated using parking rates obtained from ITE Parking Generation Manual and Zoning By-Law comparisons.
- A parking rate will be recommended that is deemed applicable to the subject site taking into account the development's location. The recommended rate will then be used to estimate the number of parking spaces needed to meet the projected parking demand. The estimated parking supply needed will be compared to the By-law required supply to assess the feasibility of providing less than the By-law supply requirements. In the event that the parking review determines that a parking reduction cannot be justified, the report will speak to this point.
- Parking utilization surveys will be conducted over three days during peak parking demand periods for the following sites:
 - 7768 Ascot Circle - A 98-unit townhouse development with parking contained on-site.
 - 6118 Kelsey Crescent - A 63-unit townhouse development with parking contained on-site.
 - 6065 McLeod Road - A 54-unit townhouse development with parking contained on-site.
 - 6591 Montrose Road - A 26-unit townhouse development with parking contained on-site.

Report

- We will document the study methodologies, findings, and conclusions in a report with appendices containing the detailed analysis results and any data collected.

Please let me know if you have any comments or concerns about the proposed study.

Thank you,

Brian Kim
Transportation Consultant



5A-150 Pinebush Road, Cambridge ON, N1R 8J8
 p: 905.381.2229 x301
 e: bkim@ptsl.com
 w: www.ptsl.com

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Appendix B

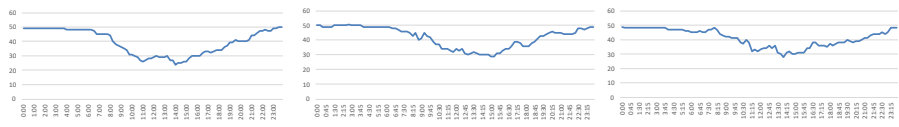
Parking Utilization Data





Niagara Falls - 2349 Portage Road

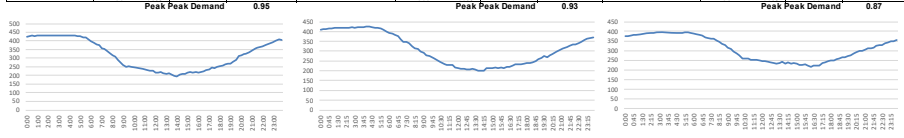
Private Road - Townhouse Development Project Number: 240360				Private Road - Townhouse Development Project Number: 240360				Private Road - Townhouse Development Project Number: 240360			
Dwelling Units				Dwelling Units				Dwelling Units			
Dwelling Units Unoccupied				Dwelling Units Unoccupied				Dwelling Units Unoccupied			
Dwelling Units Occupied				Dwelling Units Occupied				Dwelling Units Occupied			
Total Number of Spaces				Total Number of Spaces				Total Number of Spaces			
Walk Score				Walk Score				Walk Score			
Transit Score				Transit Score				Transit Score			
Bike Score				Bike Score				Bike Score			
2024-07-18				2024-07-19				2024-07-20			
Utilization		Rate Per Unit		Utilization		Rate Per Unit		Utilization		Rate Per Unit	
Occupied	Unoccupied			Occupied	Unoccupied			Occupied	Unoccupied		
0:00	49	73%	1.23	0:00	50	75%	1.25	0:00	49	73%	1.23
0:15	49	73%	1.23	0:15	50	75%	1.25	0:15	48	72%	1.19
0:30	49	73%	1.23	0:30	49	73%	1.18	0:30	48	72%	1.19
0:45	49	73%	1.23	0:45	49	73%	1.18	0:45	48	72%	1.19
1:00	49	73%	1.23	1:00	49	73%	1.18	1:00	48	72%	1.19
1:15	49	73%	1.23	1:15	49	73%	1.18	1:15	48	72%	1.19
1:30	49	73%	1.23	1:30	50	75%	1.25	1:30	48	72%	1.19
1:45	49	73%	1.23	1:45	50	75%	1.25	1:45	48	72%	1.19
2:00	49	73%	1.23	2:00	50	75%	1.25	2:00	48	72%	1.19
2:15	49	73%	1.23	2:15	50	75%	1.25	2:15	48	72%	1.19
2:30	49	73%	1.23	2:30	50	75%	1.25	2:30	48	72%	1.19
2:45	49	73%	1.23	2:45	51	76%	1.28	2:45	48	72%	1.19
3:00	49	73%	1.23	3:00	50	75%	1.25	3:00	48	72%	1.19
3:15	49	73%	1.23	3:15	50	75%	1.25	3:15	48	72%	1.19
3:30	49	73%	1.23	3:30	50	75%	1.25	3:30	48	72%	1.19
3:45	49	73%	1.23	3:45	50	75%	1.25	3:45	48	72%	1.19
4:00	48	72%	1.19	4:00	49	73%	1.18	4:00	47	70%	1.18
4:15	48	72%	1.19	4:15	49	73%	1.18	4:15	47	70%	1.18
4:30	48	72%	1.19	4:30	49	73%	1.18	4:30	47	70%	1.18
4:45	48	72%	1.19	4:45	49	73%	1.18	4:45	47	70%	1.18
5:00	48	72%	1.19	5:00	49	73%	1.18	5:00	47	70%	1.18
5:15	48	72%	1.19	5:15	49	73%	1.18	5:15	47	70%	1.18
5:30	48	72%	1.19	5:30	49	73%	1.18	5:30	46	69%	1.15
5:45	48	72%	1.19	5:45	49	73%	1.18	5:45	46	69%	1.15
6:00	48	72%	1.19	6:00	49	73%	1.18	6:00	45	67%	1.13
6:15	48	72%	1.19	6:15	49	73%	1.18	6:15	45	67%	1.13
6:30	47	70%	1.18	6:30	48	72%	1.19	6:30	45	67%	1.13
6:45	45	67%	1.13	6:45	48	72%	1.19	6:45	46	69%	1.15
7:00	45	67%	1.13	7:00	47	70%	1.18	7:00	45	67%	1.13
7:15	45	67%	1.13	7:15	46	69%	1.15	7:15	45	67%	1.13
7:30	45	67%	1.13	7:30	46	69%	1.15	7:30	47	70%	1.18
7:45	45	67%	1.13	7:45	46	69%	1.15	7:45	47	70%	1.18
8:00	44	66%	1.10	8:00	45	67%	1.13	8:00	48	72%	1.19
8:15	40	60%	1.00	8:15	43	64%	1.08	8:15	47	70%	1.18
8:30	38	57%	0.95	8:30	45	67%	1.13	8:30	44	66%	1.10
8:45	37	55%	0.93	8:45	40	60%	1.00	8:45	43	64%	1.08
9:00	36	54%	0.90	9:00	41	61%	1.03	9:00	42	63%	1.05
9:15	35	52%	0.88	9:15	45	67%	1.13	9:15	42	63%	1.05
9:30	34	51%	0.85	9:30	43	64%	1.08	9:30	41	61%	1.03
9:45	31	46%	0.78	9:45	42	63%	1.05	9:45	41	61%	1.03
10:00	31	46%	0.78	10:00	39	58%	0.98	10:00	41	61%	1.03
10:15	30	45%	0.75	10:15	37	55%	0.93	10:15	38	57%	0.95
10:30	29	43%	0.73	10:30	37	55%	0.93	10:30	37	55%	0.93
10:45	27	40%	0.68	10:45	34	51%	0.85	10:45	40	60%	1.00
11:00	26	39%	0.65	11:00	34	51%	0.85	11:00	38	57%	0.95
11:15	27	40%	0.68	11:15	34	51%	0.85	11:15	32	48%	0.85
11:30	28	42%	0.70	11:30	33	49%	0.83	11:30	33	49%	0.83
11:45	28	42%	0.70	11:45	32	49%	0.80	11:45	32	48%	0.80
12:00	29	43%	0.73	12:00	34	51%	0.85	12:00	33	49%	0.83
12:15	30	45%	0.75	12:15	33	49%	0.83	12:15	34	51%	0.85
12:30	29	43%	0.73	12:30	34	51%	0.85	12:30	34	51%	0.85
12:45	29	43%	0.73	12:45	31	46%	0.78	12:45	36	54%	1.01
13:00	29	43%	0.73	13:00	30	45%	0.75	13:00	34	51%	0.85
13:15	30	45%	0.75	13:15	31	46%	0.78	13:15	36	54%	1.01
13:30	27	40%	0.68	13:30	32	49%	0.80	13:30	31	46%	0.78
13:45	27	40%	0.68	13:45	31	46%	0.78	13:45	30	45%	0.75
14:00	24	36%	0.60	14:00	30	45%	0.75	14:00	28	42%	0.70
14:15	25	37%	0.63	14:15	30	45%	0.75	14:15	31	46%	0.78
14:30	25	37%	0.63	14:30	30	45%	0.75	14:30	32	48%	0.80
14:45	26	39%	0.65	14:45	30	45%	0.75	14:45	30	45%	0.75
15:00	26	39%	0.65	15:00	29	43%	0.73	15:00	30	45%	0.75
15:15	28	42%	0.69	15:15	29	43%	0.73	15:15	31	46%	0.78
15:30	30	45%	0.75	15:30	31	46%	0.78	15:30	31	46%	0.78
15:45	30	45%	0.75	15:45	31	46%	0.78	15:45	31	46%	0.78
16:00	30	45%	0.75	16:00	33	49%	0.83	16:00	34	51%	0.85
16:15	30	45%	0.75	16:15	34	51%	0.85	16:15	34	51%	0.85
16:30	32	48%	0.80	16:30	34	51%	0.85	16:30	38	57%	0.95
16:45	33	49%	0.83	16:45	36	54%	1.01	16:45	38	57%	0.95
17:00	33	49%	0.83	17:00	39	58%	0.98	17:00	36	54%	1.01
17:15	32	48%	0.80	17:15	39	58%	0.98	17:15	36	54%	1.01
17:30	33	49%	0.83	17:30	38	57%	0.95	17:30	36	54%	1.01
17:45	34	51%	0.85	17:45	36	54%	1.01	17:45	35	52%	0.88
18:00	34	51%	0.85	18:00	36	54%	1.01	18:00	37	55%	0.90
18:15	34	51%	0.85	18:15	36	54%	1.01	18:15	36	54%	1.01
18:30	36	54%	1.01	18:30	38	57%	0.95	18:30	37	55%	0.93
18:45	37	55%	1.03	18:45	39	58%	0.98	18:45	38	57%	0.95
19:00	39	58%	1.03	19:00	41	61%	1.03	19:00	38	57%	0.95
19:15	39	58%	1.03	19:15	43	64%	1.08	19:15	38	57%	0.95
19:30	41	61%	1.03	19:30	43	64%	1.08	19:30	40	60%	1.00
19:45	40	60%	1.00	19:45	44	66%	1.10	19:45	39	58%	0.98
20:00	40	60%	1.00	20:00	45	67%	1.13	20:00	38	57%	0.95
20:15	40	60%	1.00	20:15	46	69%	1.15	20:15	39	58%	0.98
20:30	40	60%	1.00	20:30	45	67%	1.13	20:30	39	58%	0.98
20:45	41	61%	1.03	20:45	45	67%	1.13	20:45	40	60%	1.00
21:00	44	66%	1.10	21:00	45	67%	1.13	21:00	41	61%	1.03
21:15	44	66%	1.10	21:15	44	66%	1.10	21:15	41	61%	1.03
21:30	46	69%	1.15	21:30	44	66%	1.10	21:30	43	64%	1.08
21:45	47	70%	1.18	21:45	44	66%	1.10	21:45	44	66%	1.10
22:00	47	70%	1.18	22:00	44	66%	1.10	22:00	44	66%	1.10
22:15	48	72%	1.19	22:15	45	67%	1.13	22:15	44	66%	1.10
22:30	47	70%	1.18	22:30	48	72%	1.19	22:30	45	67%	1.13
22:45	47	70%	1.18	22:45	48	72%	1.19	22:45	44	66%	1.10
23:00	49	73%	1.23	23:00	47	70%	1.18	23:00	45	67%	1.13
23:15	49	73%	1.23	23:15	48	72%	1.19	23:15	48	72%	1.19
23:30	50	75%	1.25	23:30	49	73%	1.18	23:30	48	72%	1.19
23:45	50	75%	1.25	23:45	49	73%	1.18	23:45	48	72%	1.19





Hamilton - 101-125 Shoreview Place

Private Road - Townhouse Development Project Number: 240360											
	Dwelling Units			Rate Per Unit	Dwelling Units			Rate Per Unit	Dwelling Units		
	Occupied	Unoccupied	Utilization		Occupied	Unoccupied	Utilization		Occupied	Unoccupied	Utilization
	456	0	0.00	456	0	0.00	456	0	0.00		
	456	0	0.00	456	0	0.00	456	0	0.00		
	456	0	0.00	456	0	0.00	456	0	0.00		
	22	17	0.77	22	17	0.77	22	17	0.77		
	31	17	0.55	31	17	0.55	31	17	0.55		
2024-07-18	Utilization			Utilization			Utilization				
0:00	422	72%	167	0.93	0.00	408	69%	181	0.89		
0:15	426	72%	163	0.93	0.15	413	70%	178	0.91		
0:30	429	73%	160	0.94	0:30	413	70%	176	0.91		
0:45	428	73%	161	0.94	0:45	416	71%	173	0.91		
1:00	429	73%	160	0.94	1:00	417	71%	172	0.91		
1:15	431	73%	158	0.95	1:15	418	71%	171	0.92		
1:30	431	73%	158	0.95	1:30	418	71%	171	0.92		
1:45	429	73%	160	0.94	1:45	418	71%	171	0.92		
2:00	430	73%	159	0.94	2:00	418	71%	171	0.92		
2:15	430	73%	159	0.94	2:15	419	71%	170	0.92		
2:30	431	73%	158	0.95	2:30	420	71%	169	0.92		
2:45	431	73%	158	0.95	2:45	421	71%	168	0.92		
3:00	430	73%	159	0.94	3:00	420	71%	169	0.92		
3:15	431	73%	158	0.95	3:15	421	71%	168	0.92		
3:30	431	73%	158	0.95	3:30	421	71%	168	0.92		
3:45	431	73%	158	0.95	3:45	423	72%	166	0.93		
4:00	432	73%	157	0.95	4:00	425	72%	164	0.93		
4:15	430	73%	159	0.94	4:15	424	72%	165	0.93		
4:30	429	73%	160	0.94	4:30	423	72%	166	0.93		
4:45	428	73%	161	0.94	4:45	420	71%	169	0.92		
5:00	426	72%	163	0.93	5:00	420	71%	169	0.92		
5:15	421	71%	168	0.92	5:15	414	70%	175	0.91		
5:30	419	71%	170	0.92	5:30	409	69%	180	0.90		
5:45	408	69%	181	0.89	5:45	398	69%	191	0.89		
6:00	398	67%	193	0.87	6:00	392	67%	197	0.86		
6:15	389	66%	200	0.85	6:15	390	66%	199	0.86		
6:30	380	65%	209	0.83	6:30	383	65%	206	0.84		
6:45	375	64%	214	0.82	6:45	375	64%	214	0.82		
7:00	358	61%	231	0.79	7:00	361	61%	228	0.79		
7:15	353	60%	236	0.77	7:15	348	59%	241	0.76		
7:30	343	59%	246	0.75	7:30	348	59%	241	0.76		
7:45	326	56%	263	0.71	7:45	342	58%	245	0.75		
8:00	317	54%	272	0.70	8:00	324	56%	265	0.71		
8:15	309	52%	280	0.68	8:15	315	53%	274	0.69		
8:30	291	49%	298	0.64	8:30	311	53%	278	0.68		
8:45	275	47%	314	0.60	8:45	297	50%	292	0.65		
9:00	260	44%	329	0.57	9:00	291	49%	298	0.64		
9:15	250	42%	339	0.55	9:15	280	48%	309	0.61		
9:30	252	42%	337	0.55	9:30	275	47%	314	0.60		
9:45	249	42%	340	0.55	9:45	279	46%	319	0.59		
10:00	246	42%	343	0.54	10:00	260	44%	329	0.57		
10:15	244	41%	345	0.54	10:15	261	43%	338	0.55		
10:30	241	41%	348	0.53	10:30	244	41%	345	0.54		
10:45	237	40%	352	0.52	10:45	236	40%	353	0.52		
11:00	235	40%	354	0.52	11:00	230	39%	359	0.50		
11:15	231	39%	358	0.51	11:15	229	39%	360	0.50		
11:30	228	39%	361	0.50	11:30	228	39%	361	0.50		
11:45	227	39%	362	0.50	11:45	217	37%	372	0.48		
12:00	216	37%	373	0.47	12:00	214	36%	375	0.47		
12:15	215	37%	374	0.47	12:15	209	35%	380	0.46		
12:30	218	37%	371	0.48	12:30	209	35%	380	0.46		
12:45	211	36%	378	0.46	12:45	208	35%	381	0.46		
13:00	210	36%	379	0.46	13:00	206	35%	383	0.45		
13:15	211	36%	378	0.46	13:15	210	36%	379	0.46		
13:30	206	35%	383	0.45	13:30	206	35%	383	0.45		
13:45	198	34%	391	0.43	13:45	202	34%	387	0.44		
14:00	196	33%	393	0.43	14:00	202	34%	387	0.44		
14:15	205	35%	384	0.45	14:15	202	34%	387	0.44		
14:30	209	35%	380	0.46	14:30	212	36%	377	0.46		
14:45	209	35%	380	0.46	14:45	213	36%	378	0.47		
15:00	217	37%	372	0.48	15:00	213	36%	378	0.47		
15:15	221	38%	368	0.48	15:15	217	37%	372	0.48		
15:30	216	37%	373	0.47	15:30	214	36%	375	0.47		
15:45	218	37%	371	0.48	15:45	216	37%	373	0.47		
16:00	216	37%	373	0.47	16:00	214	36%	375	0.47		
16:15	220	37%	369	0.48	16:15	219	37%	370	0.48		
16:30	225	38%	364	0.49	16:30	220	37%	369	0.48		
16:45	230	39%	359	0.50	16:45	227	39%	362	0.50		
17:00	233	40%	356	0.51	17:00	232	39%	367	0.51		
17:15	244	41%	345	0.54	17:15	234	40%	355	0.51		
17:30	242	41%	347	0.53	17:30	232	39%	367	0.51		
17:45	249	42%	340	0.55	17:45	236	40%	353	0.52		
18:00	254	43%	335	0.56	18:00	239	41%	350	0.52		
18:15	258	44%	331	0.57	18:15	240	41%	349	0.53		
18:30	264	45%	325	0.58	18:30	242	41%	347	0.53		
18:45	266	45%	323	0.58	18:45	248	42%	341	0.54		
19:00	269	46%	320	0.59	19:00	260	44%	329	0.57		
19:15	277	47%	312	0.61	19:15	265	45%	324	0.58		
19:30	288	49%	301	0.63	19:30	274	47%	315	0.60		
19:45	312	53%	277	0.68	19:45	288	46%	321	0.59		
20:00	317	54%	272	0.70	20:00	279	47%	310	0.61		
20:15	322	55%	267	0.71	20:15	286	49%	303	0.63		
20:30	328	56%	261	0.72	20:30	298	50%	293	0.65		
20:45	335	57%	254	0.73	20:45	303	51%	286	0.66		
21:00	345	59%	244	0.76	21:00	310	53%	279	0.68		
21:15	352	60%	237	0.77	21:15	316	54%	273	0.69		
21:30	359	61%	230	0.79	21:30	320	54%	269	0.70		
21:45	365	62%	224	0.80	21:45	328	56%	261	0.72		
22:00	369	63%	220	0.81	22:00	334	57%	255	0.73		
22:15	375	64%	214	0.82	22:15	334	57%	255	0.73		
22:30	381	65%	208	0.84	22:30	340	58%	249	0.75		
22:45	386	66%	203	0.85	22:45	346	59%	243	0.76		
23:00	392	67%	197	0.86	23:00	356	60%	233	0.78		
23:15	402	68%	187	0.88	23:15	363	62%	226	0.80		
23:30	407	69%	182	0.89	23:30	365	62%	224	0.80		
23:45	403	68%	186	0.88	23:45	369	63%	220	0.81		



Appendix C

ITE Parking Generation Worksheet



Multifamily Housing - 2+ BR (Low-Rise) Not Close to Rail Transit (220)

Peak Period Parking Demand vs: Dwelling Units

On a: Weekday (Monday - Friday)

Setting/Location: General Urban/Suburban

Number of Studies: 143

Avg. Num. of Dwelling Units: 154

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.27	0.58 - 3.16	1.07 / 1.59	1.22 - 1.32	0.29 (23%)

Data Plot and Equation

