



Transportation Impact Assessment

# Base31 Revitalization District: Rental Building A – Prince Edward County

October 2024 | TYLin Project # 10762

Prince Edward County Community Partners Inc.

TYLin

# TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION.....</b>	<b>1</b>
1.1	Scope and Objective .....	1
<b>2</b>	<b>EXISTING CONDITIONS .....</b>	<b>2</b>
2.1	Road Network.....	2
2.2	Transit Network.....	2
2.3	Active Transportation .....	3
2.4	Existing Traffic.....	4
<b>3</b>	<b>SITE CHARACTERISTICS.....</b>	<b>7</b>
3.1	Study Environment .....	7
3.2	Development Context.....	7
<b>4</b>	<b>FUTURE HORIZON YEAR.....</b>	<b>9</b>
4.1	Study Horizon Year .....	9
4.2	Background Corridor Growth .....	9
4.3	Planned Transportation Improvements.....	9
4.3.1	Transit Improvements.....	9
4.3.2	Active Transportation Improvements .....	9
4.3.3	Road Network Improvements.....	10
4.3.4	Relocation of Existing Parking Lot Driveway.....	10
4.4	Background Developments.....	12
4.4.1	Background Development #5 Trip Generation Comparison.....	13
4.5	Future Background Traffic Volumes .....	13
<b>5</b>	<b>SITE TRAFFIC.....</b>	<b>16</b>
5.1	Trip Generation Methodology .....	16
5.2	Site Trip Generation .....	16
5.3	Site Trip Distribution, Assignment, and Internal Capture .....	17
5.4	Future Total Traffic Volumes .....	21
<b>6</b>	<b>TRAFFIC CAPACITY ANALYSIS .....</b>	<b>23</b>
6.1	Future Total Conditions.....	23
<b>7</b>	<b>SITE CIRCULATION REVIEW .....</b>	<b>24</b>
7.1	Heavy Vehicles.....	24
7.2	Waste Collection Vehicles .....	24

7.3	Passenger Vehicles .....	24
7.4	Emergency Vehicle Circulation .....	24
8	TRANSPORTATION DEMAND MANAGEMENT PLAN.....	26
8.1	TDM Measure Categories .....	26
8.2	Introduction to Alternate Modes of Travel .....	26
8.3	Core Commuter Knowledge and Distribution.....	27
8.4	Financial Incentives.....	27
8.5	Supporting Transit and Active-Transportation Infrastructure.....	27
9	CONCLUSION.....	29

## APPENDICES

**Appendix A:** Turning Movement Count Data

**Appendix B:** Site Plan

**Appendix C:** Proposed Cross-Section

**Appendix D:** Background Developments

**Appendix E:** Trip Distribution

**Appendix F:** Synchro Analysis

**Appendix G:** Site Circulation Review

## LIST OF FIGURES

Figure 2-1	Transit Routes.....	3
Figure 2-2	Cycling Routes.....	4
Figure 2-3	Existing Traffic Volumes.....	6
Figure 3-1	Development Area.....	7
Figure 3-2	Proposed Base31 Revitalization Map .....	8
Figure 4-1	Future Lane Configuration.....	11
Figure 4-2	Future Background 2034 Traffic Volumes .....	14
Figure 4-3	Rental Building A Trip Removal.....	15
Figure 5-1	Site Traffic Volumes.....	20
Figure 5-2	Future Total 2034 Traffic Volumes.....	22

## LIST OF TABLES

Table 4-1	Background Developments.....	12
Table 4-2	Base31 Revitalization Trip Generation Comparison.....	13
Table 5-1	Site Trip Generation .....	17
Table 5-2	Urban SDK Travel Data.....	18
Table 5-3	Site Trip Distribution.....	19
Table 6-1	2034 Future Total Traffic Operations.....	23

# 1 INTRODUCTION

## 1.1 Scope and Objective

T.Y. Lin International Canada Inc. (TYLin) was retained by the Prince Edward County Community Partners Inc. (PECCPI) to prepare a Transportation Impact Assessment for a rental building located within the Base31 Revitalization District in Prince Edward County in the community of Picton. The proposed development is located east of County Road 22 (Church Street), south of Kingsley Road (within the future Revitalization District), north of existing Base31, and west of vacant lands, within Prince Edward County (“the County”), southeast Picton. This report will build off of the previous Base31 Area Concept Plan Transportation Impact Assessment (“TIA”) that was submitted to the County in November 2023 also prepared by TYLin.

This updated transportation assessment consists of the following:

- ▶ The future traffic operations for the weekday AM/PM and Saturday peak hours, and on-peak season scenario, while considering the background traffic growth and relevant background developments, and assessing the impact of the proposed development.
- ▶ An updated summary of the expected traffic and transportation impacts on the operation for both the future background and future total traffic conditions in the 2034 horizon year for Rental Building A.
- ▶ A review of the proposed masterplan collector road network.

The purpose of this assessment is to determine the traffic volumes anticipated to be generated by the proposed development during the weekday AM/PM and Saturday peak hours, assess the impact of this traffic on the existing and future roadway network, recommend improvements to accommodate the projected traffic if any are needed, and confirm that the proposed road network is consistent with County standards. Note that Saturday peak hour counts are not typically required for residential developments, since the primary peak travel times for residential developments fall within the weekday morning / evening peaks, however it has been included within this study for consistency with the previous November 2023 TIA and September 2024 Village A TIS, which is in close proximity to the future Base31 Revitalization District.

## 2 EXISTING CONDITIONS

### 2.1 Road Network

Kingsley Road is an existing road that is included in the transportation study network. Kingsley Road is an east-west local road under the jurisdiction of Prince Edward County. Kingsley Road starts from Country Road 22/Church Street on the west and ends at Old Milford Road on the east side. Within the study area it operates as a two-way undivided cross section (one lane in each direction). Within the study area it has a posted speed limit of 70 km/h with unpaved shoulder and no sidewalks.

### 2.2 Transit Network

Picton is served by Quinte transit which provides the following services within the area:

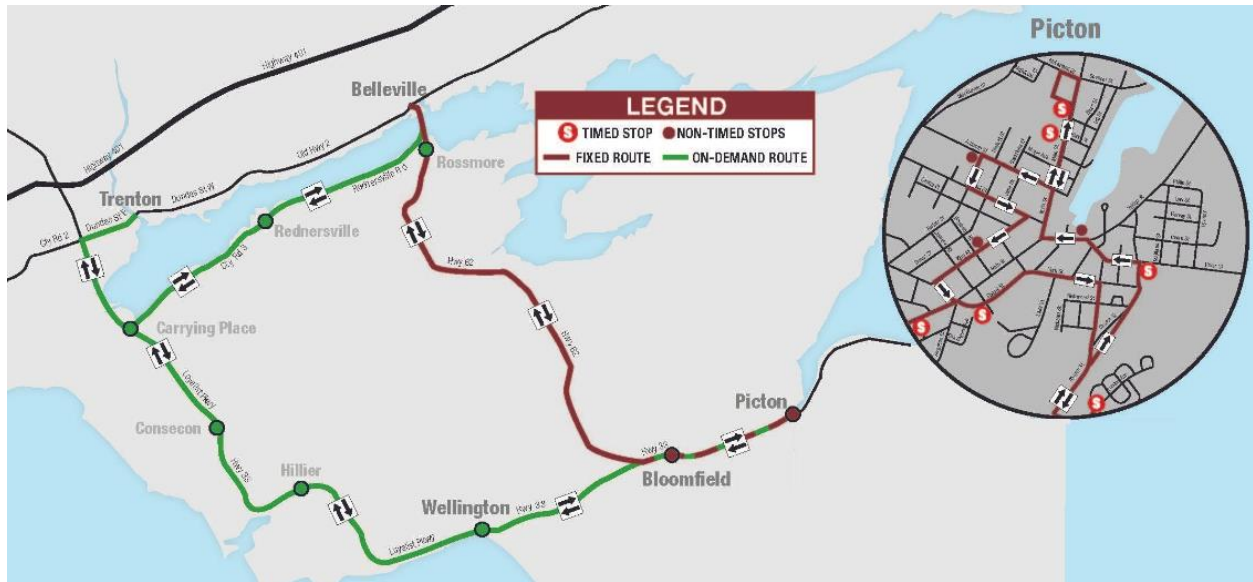
A **Fixed Route Service** operates between Picton, Bloomfield, and Belleville. The route runs on weekdays between 6:30 AM and 6:30 PM with two busses in the morning and two busses in the afternoon. The bus stops in several locations within Picton including medical facilities, the supermarket, and Macaulay Mountain, before stopping at the Bloomfield post office, finally going to the Belleville Transit Terminal.

An **On-Demand Door to Bus Stop Service** operates in the communities of Wellington, Consecon, Carrying Place, Rednersville, and Rossmore. The service is booked in advance and takes users from their front door to the nearest bus stop to take the fixed route service.

A **Specialized Service** operates within Prince Edward County for users over 55 years old and disabled users. The service is booked in advance and takes the users from their front door directly to their destination.

**Figure 2-1** shows the current transit routes in the region.

**Figure 2-1 Transit Routes**

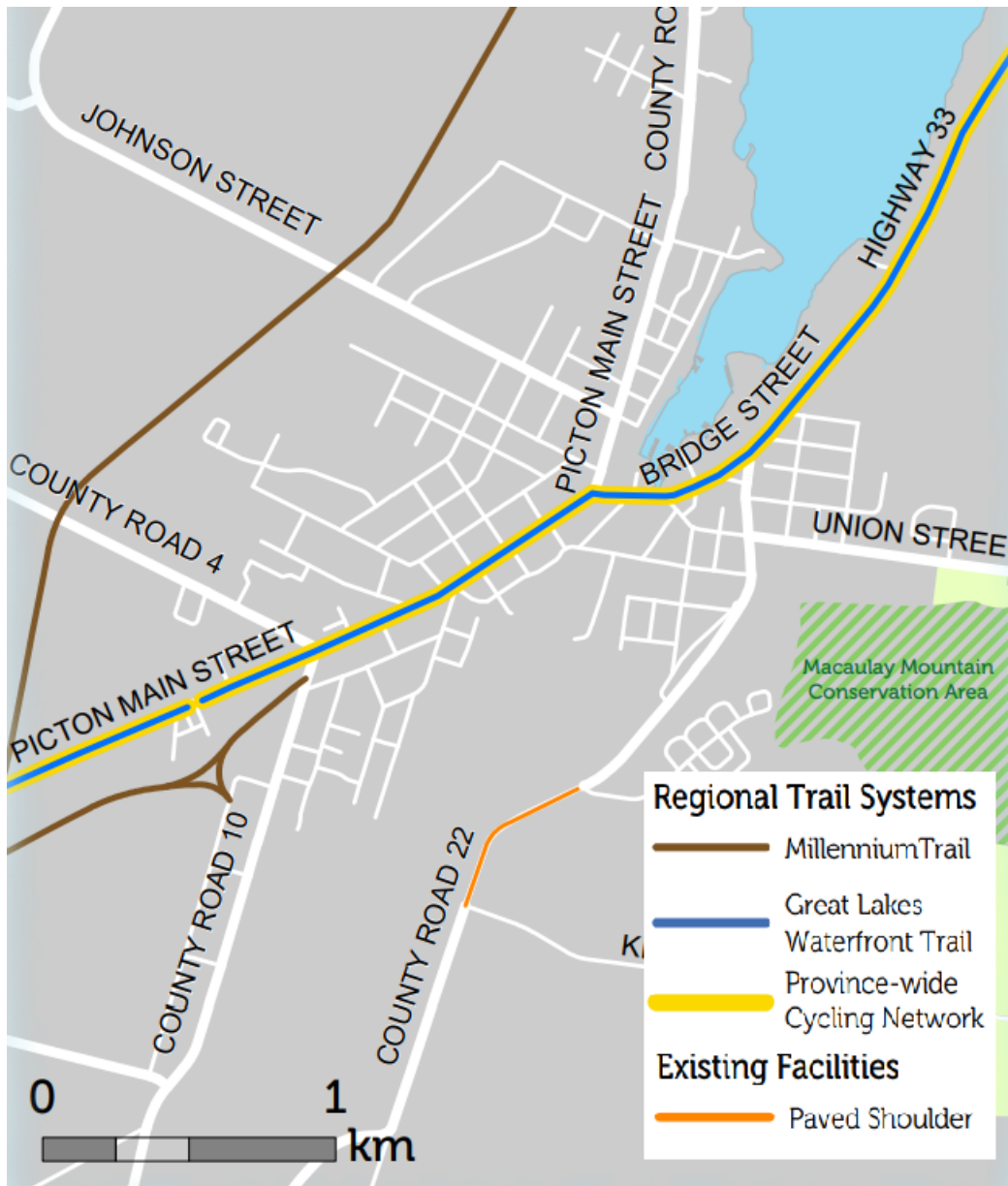


## 2.3 Active Transportation

Within the study network there are two major cycling routes identified in the April 2023 Cycling Master Plan. Loyalist Parkway, Picton Main Street, and Bridge Street are part of the Great Lakes Waterfront Trail and the Millenium Trail runs parallel to Picton Main Street.

**Figure 2-2** shows the existing cycling facilities identified in the cycling masterplan.

**Figure 2-2 Cycling Routes**



## 2.4 Existing Traffic

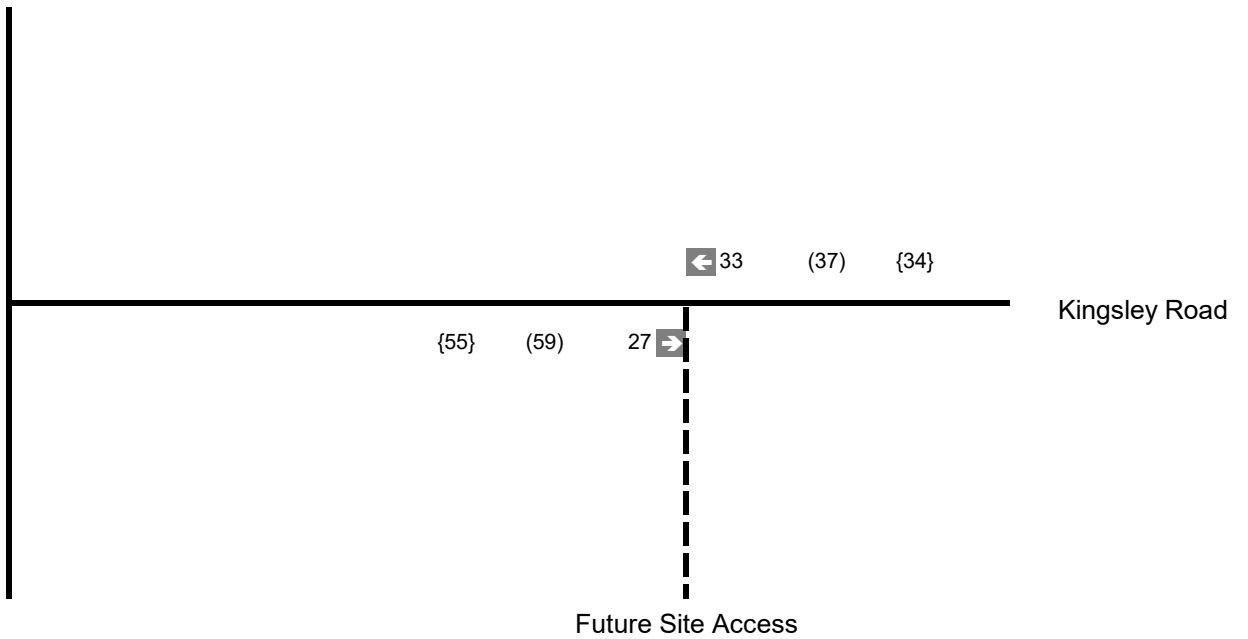
Since the study intersection of Private Street A & Kingsley Road does not currently exist under the existing conditions, turning movement count data for peak tourism season was collected on July 5<sup>th</sup> and 8<sup>th</sup>, 2023 at a nearby intersection at Church Street & Kingsley Road. Although the intersection of Church Street & Kingsley Road is not considered for this analysis, the existing turning movement counts were balanced through to the study intersection. This count is consistent with the previous November 2023 TIA and September 2024 Village A TIS conducted by TYLin and is considered as existing for the purposes of analysis. As a conservative approach,



the traffic count undertaken during the peak tourism season has been included in the analysis. Turning movement count data for the peak season can be found in **Appendix A**. The existing traffic volumes for the study intersection is shown in **Figure 2-3**.



County Road 22 / Church Street



Legend

- xx A.M. Peak Hour Traffic
- (xx) P.M. Peak Hour Traffic
- {xx} Weekend Peak Hour Traffic

Fig 2-3  
Existing Traffic Volumes

## 3 SITE CHARACTERISTICS

### 3.1 Study Environment

The subject site is located east of County Road 22 (Church Street), south of Kingsley Road, west and north of existing Base31. The site is partially vacant with parts of the site being occupied by an existing gravel parking lot. An overview of the development area is shown in **Figure 3-1**.

**Figure 3-1** Development Area

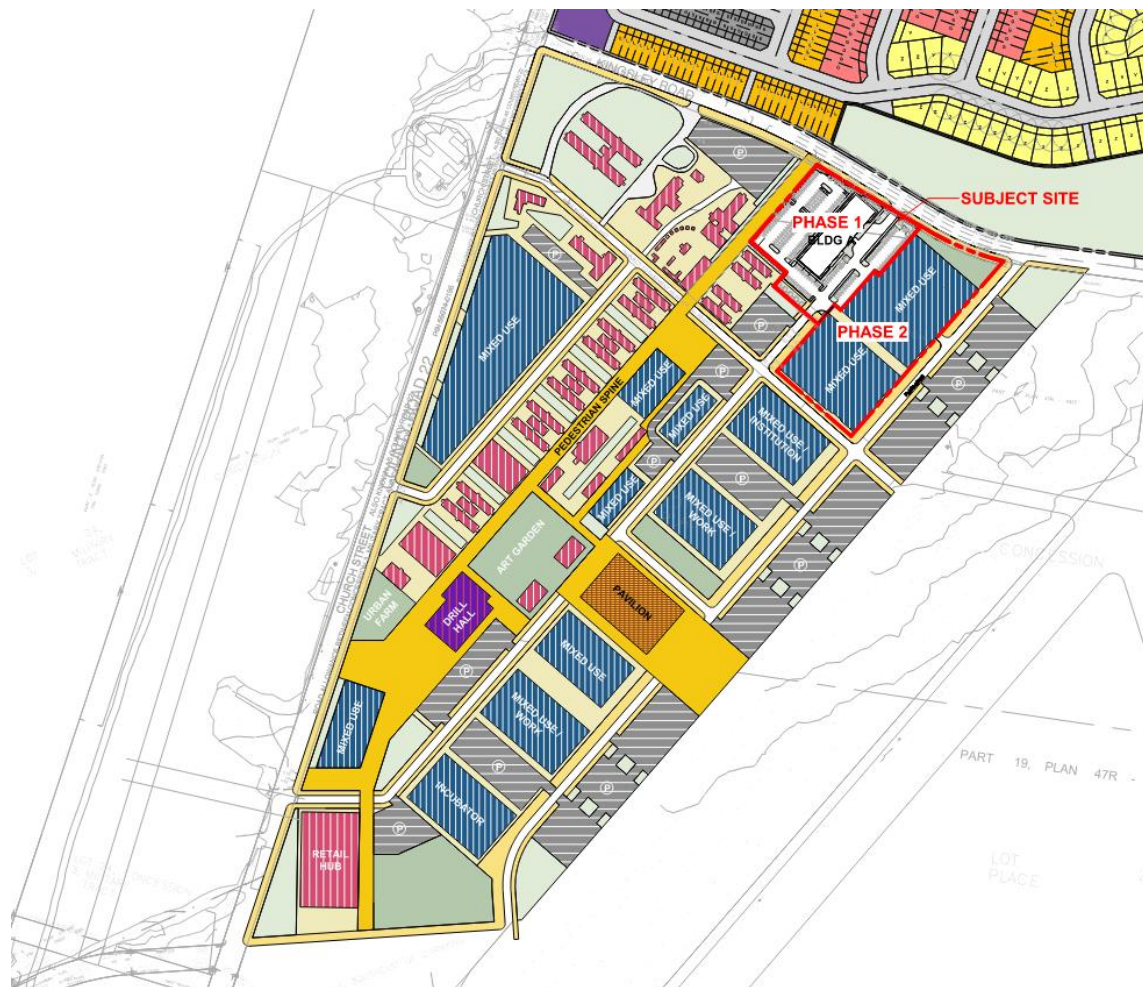


### 3.2 Development Context

Rental Building A will be one of several planned developments within the Base31 Revitalization that will make up the future Base31 Area Concept Plan, which encompasses residential developments as well as a mixture of commercial and recreational land uses. Rental Building A is proposed to be developed into a residential mid-rise consisting of 120 dwelling units and is located immediately

south of Kingsley Road within the future planned Base31 Revitalization District, which acts as the area's primary commercial / recreational hub. Note that the number of high-density units are based on an assumed total unit count of 800 which is in line with the previous Base31 TIA for the purpose of traffic analysis. However, the actual number of future residential units are to be confirmed based on future submissions. **Figure 3-2** illustrates the proposed block map of Base31, with Rental Building A being located in the southeast corner of County Road 22 and Kingsley Road intersection. The site plan of Rental Building A can be found in **Appendix B**.

**Figure 3-2 Proposed Base31 Revitalization Map**



## 4 FUTURE HORIZON YEAR

### 4.1 Study Horizon Year

Based on the previous November 2023 TIA which held pre-consultation with the County, and based on the overall lands development phasing, a horizon year of 2034 has been adopted for the studying the future conditions of Rental Building A.

### 4.2 Background Corridor Growth

Based on the Terms of Reference discussions with the County, a growth factor of 2.0% was recommended by the County. However, due to the nature of the surrounding land uses of the development being incorporated within background developments, no additional growth is anticipated along Kingsley Road that has not already been accounted for. Therefore, to avoid double counting, no growth factor has been applied to Kingsley Road for the purpose of this analysis.

### 4.3 Planned Transportation Improvements

#### 4.3.1 Transit Improvements

There are no transit improvements currently planned by the County within the study area. It is noted that the County is currently preparing a Transportation Master Plan addendum which is expected to propose transit improvements. As part of the previous November 2023 TIA prepared by TYLin for the overall Base31 lands, further transit improvements have been recommended for the County and Base31's consideration. It is recommended that the County and Quinte Transit consider providing transit routes to service these lands if deemed appropriate based on demand.

Additionally, it is TYLin's understanding that the County is seeking to engage a specialized transit consultant to review post pandemic transit services and growth patterns to develop updated transit routes. It is our understanding that the Base31 team will provide input to assist with the development of new routes to complement its development.

#### 4.3.2 Active Transportation Improvements

According to the April 2023 Cycling Master Plan, bicycle lanes will be added to Picton Main Street, Bridge Street, and Union Street along sections within the study area.

It is noted that the County is working on a project called the Delhi Park Community Connections which is in the process of designing a series of 3-metre wide, paved pathways in Delhi Park. Upon

completion of the project, the pathway alignments will be reviewed by the Base31 team to identify opportunities for active transportation connections.

Additionally, active transportation facilities are planned along the future and redeveloped roadways as part of the proposed development lands which will support non-auto modes of travel throughout the development lands. The proposed cross sections of Kingsley Road with active transportation facilities are included in **Appendix C**. The development will also prioritize active transportation by developing an off-street trail system through the “green fingers” as shown in area concept plan.

The above planned active transportation facilities would also enhance connectivity with the adjacent blocks within the Base31 Area Concept Plan.

### **4.3.3 Road Network Improvements**

The County capital works project list indicates that the intersection of Bridge Street and Picton Main Street is undergoing an intersection improvement study. As the improvement study is ongoing, this traffic impact analysis has been conducted independently.

It is noted that the County is currently preparing a Transportation Master Plan addendum which is expected to propose roadway improvements. It is also noted that the subject site is part of the Base31 lands, so the existing Base31 road network will also service Rental Building A.

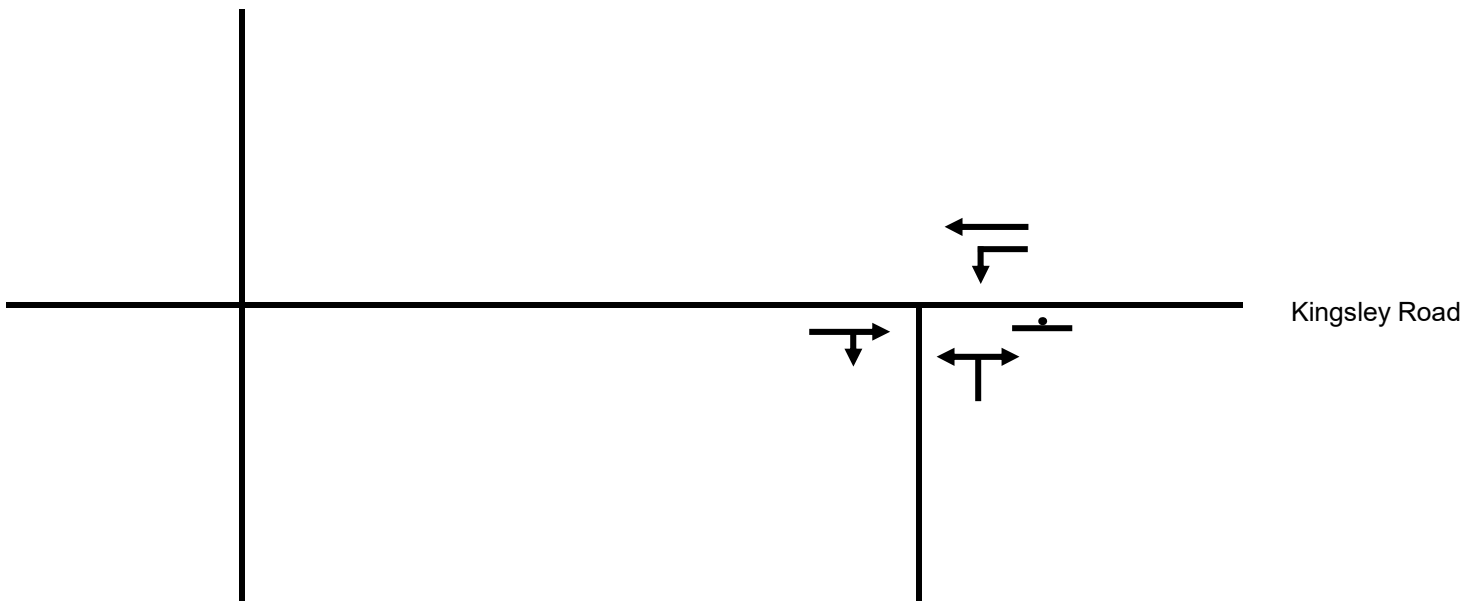
As previously identified in the November 2023 TIA, a proposed cross-section for Kingsley Road is being proposed. In the interim condition, Kingsley Road will operate similarly to its existing conditions, where it will operate as a two-way undivided cross-section (one lane in each direction) rural road. In the ultimate condition, Kingsley Road would be designed as an Urban Collector Road with a 26.0 metre ROW, and would provide sidewalks on either side, a 3.0 metre two-way bicycle lane, and a 4.2 metre centre turn lane. The following proposed cross-section and functional design for Kingsley Road is shown in **Appendix C**. The future lane configuration is shown in **Figure 4-1**.

### **4.3.4 Relocation of Existing Parking Lot Driveway**

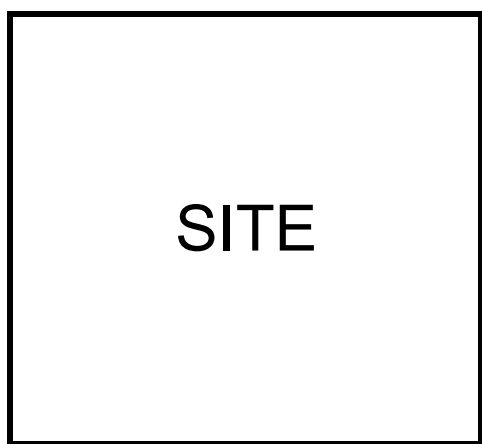
The current driveway access to the existing gravel parking lot onto Kingsley Road will be relocated approximately 75m to the east to service Rental Building A as its site access in the future. Although it is understood that the County suggested on including two site accesses, the analysis in this report concludes that one site access is sufficient to service the development, as detailed in the traffic capacity operations in Section 6.1. Additionally, including a secondary site access on the west side of the development would interfere with the future pedestrian crossing operations as the secondary site access would be located too close. As detailed in Section 7, emergency vehicles are able to maneuver in and out through the single site access and if required by the County, emergency access to the mews can be provided.



County Road 22 / Church Street



Kingsley Road



SITE

Legend



Signalized Intersection  
Stop-Control

## 4.4 Background Developments

The background developments included in the Base31 Area Concept Plan TIA and Village A TIS prepared by TYLin in November 2023 and September 2024, respectively, have also been included as part of the analysis for Rental Building A. The following background developments listed in **Table 4-1** were included in the future background traffic scenarios. Note that for the subject site (Rental Building A), both the Base31 Revitalization District (exclusion of Rental Building A) as well as the Hotel (to be located within Village F lands) have been considered as “Background Developments” and is consistent with the November 2023 TIA’s Phase 1 scenario.

**Table 4-1 Background Developments**

#	Development	Description
1	VineRidge Boutique Towns	560 Townhouse units located directly north of the subject development
2	Tulip Estates	387 Low-rise residential units at 12697 Loyalist Parkway
3	Port Picton Condos	233 residential units, 18 vacation rental units, and 1 restaurant at 97 Bridge Street
4	Village A – Residential Subdivision	800 residential units
5	Base31 Revitalization District	707 Low-rise residential units at Base31 Commercial / Recreational Land Uses
6	Village F - Hotel	60 hotel rooms within Village F lands

The traffic volumes for each background development were obtained from their relevant transportation impact studies and added to the study network. The relevant excerpts of each study can be found in **Appendix D**.

For background development #5, the traffic volumes were updated to not include Rental Building A, which was originally included in the analysis of the November 2023 ACP TIA and September 2024 Village A TIS. Previously, 800 low-rise residential units was assumed for the Base31 Revitalization District in the September 2024 Village A TIS included both Rental Buildings A and B. The Base31 residential breakdown concept plan prepared by Sasaki in December 2022 forecasted the maximum number of units for each building in the Base31 Revitalization District. Given the maximum number of units for Rental Building A at the time, the proportion of the building’s residential units to the overall Base31 Revitalization District’s residential count equated to approximately 11.66%. This proportion of Rental Building A’s residential units was applied to the originally assumed 800 residential units in the Base31 Revitalization District, which results in the removal of 93 units representing the Rental Building A development.



Note that the Base31 Revitalization District’s non-residential commercial lands have been estimated by reviewing the forecasted daily volume of visitors to the district and have been confirmed by the Base31 team and are consistent with the previously conducted November 2023 TIA.

All background developments are planned to be completed before the 2034 horizon year and are therefore present in the horizon year analysis.

#### 4.4.1 Background Development #5 Trip Generation Comparison

**Table 4-2** summarizes the trip generation comparison of Base31 Revitalization District with the originally assumed 800 residential units and post-removal of Rental Building A.

**Table 4-2 Base31 Revitalization Trip Generation Comparison**

Development	Peak Hour Trip Generation								
	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
<b>Base31 Revitalization District (800 Units)</b>	51	171	222	142	91	233	119	115	234
<b>Base31 Revitalization District without Rental Building A (707 Units)</b>	45	151	196	126	81	207	106	101	207
<b>Net Trip Removals</b>	<b>6</b>	<b>20</b>	<b>26</b>	<b>16</b>	<b>10</b>	<b>26</b>	<b>13</b>	<b>14</b>	<b>27</b>

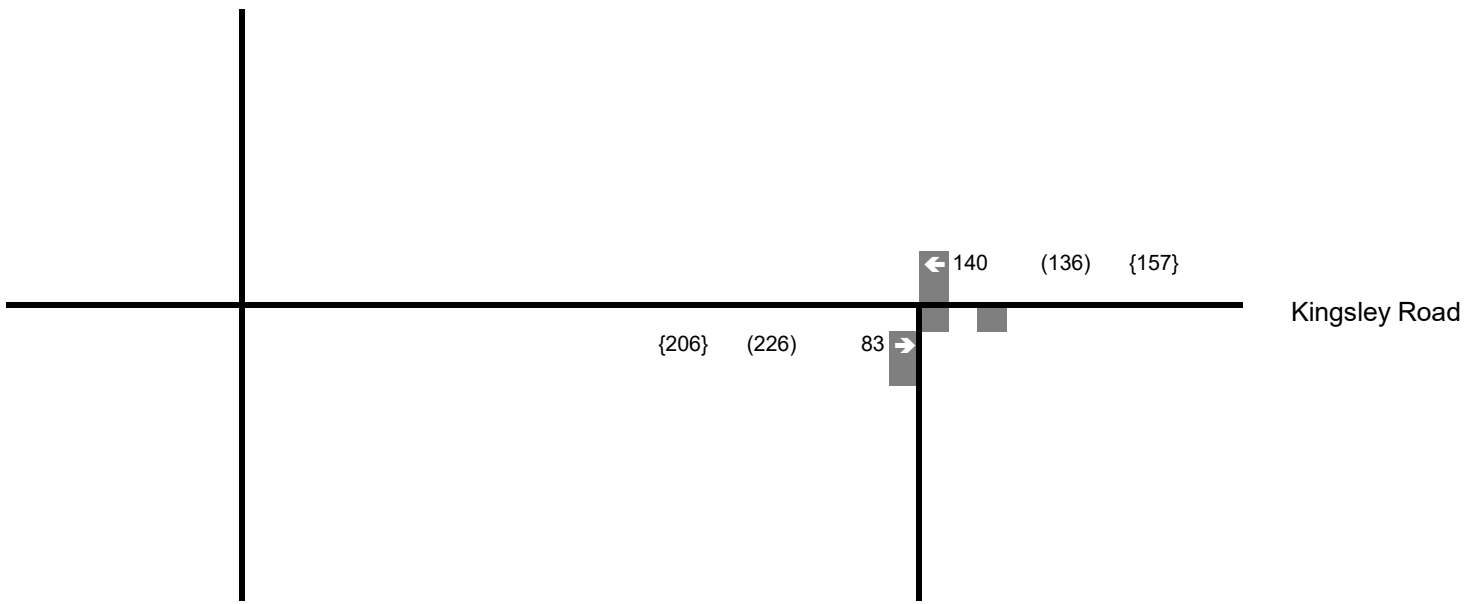
As shown in **Table 4-2**, the removal of Rental Building A from the originally assumed Base31 Revitalization District background development results in approximately 26 two-way trips (6 inbound and 20 outbound) during the AM peak hour, 26 two-way trips (16 inbound and 10 outbound) during the PM peak hour, and 27 two-way trips (13 inbound and 14 outbound) during the Saturday midday peak hour.

## 4.5 Future Background Traffic Volumes

The 2034 future background weekday AM/PM and Saturday peak hour traffic volumes include the existing volumes plus ten years of growth and background development traffic is presented in **Figure 4-2** for the on-peak season future 2034 background traffic and the Rental Building A trip removal from the Base31 background development is presented in **Figure 4-3**.



County Road 22 / Church Street



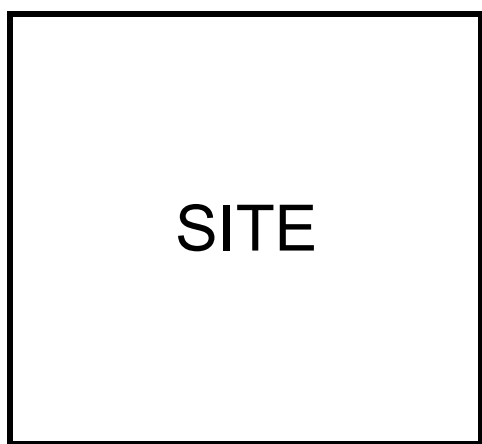
{206} (226)

83 →

← 140

(136) {157}

Kingsley Road



SITE

Legend

- xx A.M. Peak Hour Traffic
- (xx) P.M. Peak Hour Traffic
- {xx} Weekend Peak Hour Traffic

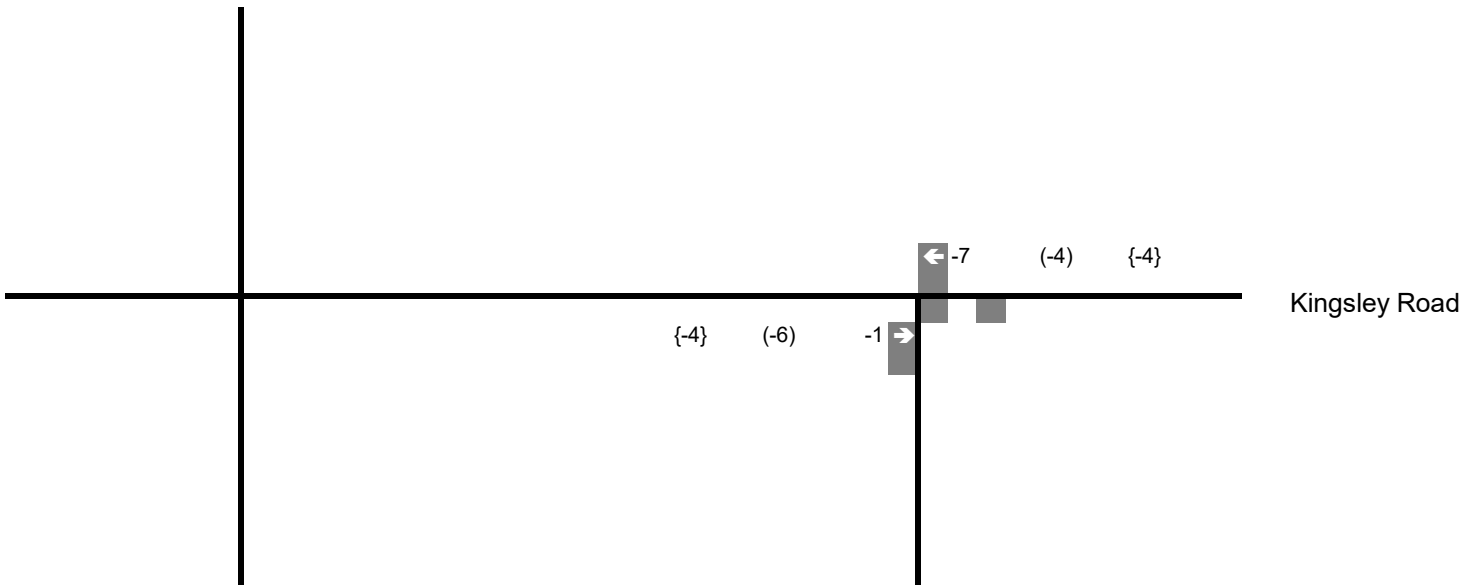
Fig 4-2

Future Background 2034  
Traffic Volumes





County Road 22 / Church Street



Kingsley Road

{-4}

(-6)

-1

← -7

(-4)

{-4}

SITE

Legend

- xx A.M. Peak Hour Traffic
- (xx) P.M. Peak Hour Traffic
- {xx} Weekend Peak Hour Traffic

Fig 4-3

Rental Building A Trip  
Removal

## 5 SITE TRAFFIC

### 5.1 Trip Generation Methodology

The trip generation methodology from the November 2023 Base31 Area Concept Plan TIA was applied to this study and remain unchanged. The trip generation methodology has been summarized below.

A non-auto trip reduction factor of 25% was applied to all trips, which is consistent with the Base31 Area Concept Plan Transportation Study from November 2023. This rate is based on similar municipalities in Ontario such as the City of Guelph or City of Barrie which have a dense multiuse core area surrounded by lower density residential development similar to the Base31 Revitalization District and its surrounding villages. It is also noted that Picton has a higher-than-average retirement community with 34.6% of the population aged 65 years or over (compared to the provincial average of 15.5%). This would lead towards lower vehicle ownership rates and a heavier reliance on transit, rideshare / taxis, and active transportation.

Note that the 25% non-auto modal split was assumed for the entire Base31 lands and specific areas within the Revitalization District such as the proposed site are expected to have potentially higher non-auto mode splits.

As the overall Base31 Area Concept Plan progresses, it is expected that additional transit services will be established to serve the population growth. The implementation of additional transit services is to be planned as a coordinated effort between the Base31 team, the County, and the County's specialized transit consultant. The collector roads within the surrounding area are designed to facilitate transit vehicles by providing sufficient lane widths. As the County engages with a specialized transit consultant, routes should be developed and phased to correspond with the build out of the proposed Villages. Additionally, the development is designed to prioritize active transportation modes with the network of on and off-street facilities. The transportation demand management strategies outlined in **Section 8** will further support the non-auto trip reduction factor.

### 5.2 Site Trip Generation

The site trip generation for Rental Building A was estimated according to the Institute of Transportation Engineers (ITE) 11<sup>th</sup> Edition Trip Generation Manual. Residential use was represented by ITE Land Use Code (LUC) **221** for "multifamily mid-rise". The trip generation for the proposed development has been detailed in **Table 5-1**.

**Table 5-1 Site Trip Generation**

Land Use	Parameters	Peak Hour Trip Generation								
		AM Peak Hour			PM Peak Hour			SAT Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
<b>LUC 221 Multifamily Mid-Rise (120 units)</b>	Fitted Curve Equation	T = 0.44 (X) – 11.61			T = 0.39 (X) + 0.34			Ln (X) = 1*Ln (X) – 0.91		
	Trip Distribution	23%	77%	100%	61%	39%	100%	51%	49%	100%
	Gross Trips	9	32	41	29	18	47	25	23	48
	Non-Auto Modal Split Trip Reduction	25%	25%	-	25%	25%	-	25%	25%	-
		-2	-8	-10	-7	-5	-12	-6	-6	-12
<b>Net New Trips</b>	<b>7</b>	<b>24</b>	<b>31</b>	<b>22</b>	<b>13</b>	<b>35</b>	<b>19</b>	<b>17</b>	<b>36</b>	

A total of 31 two-way trips, consisting of 7 inbound and 24 outbound trips are predicted to be generated by the subject site during the weekday AM peak hour. During the weekday PM peak hour, 22 inbound and 13 outbound trips are predicted, totaling 35 two-way trips and during the weekend midday peak hour, 19 inbound and 17 outbound trips are predicted, totaling 36 two-way trips.

### 5.3 Site Trip Distribution, Assignment, and Internal Capture

The trip distribution, assignment, and internal capture is based on the overall Base31 Area Concept Plan from the November 2023 TIA, then applied to Rental Building A, which is further detailed below.

To determine the distribution of traffic utilizing the road network near Village A, the site traffic for the overall Base31 Area Concept Plan has been distributed throughout the internal road network as well as the broader external roads. The distribution of trips is based on 2019 Urban SDK data of travel patterns for Picton and engineering judgement. **Table 5-2** outlines the Urban SDK data used. The raw Urban SDK data can be found in **Appendix E**.

**Table 5-2 Urban SDK Travel Data**

Destination	Travel Demand
External (outside the Bay of Quinte)	39.0%
Picton (Internal)	29.0%
Other areas within the Bay of Quinte	16.0%
Belleville	8.0%
Bloomfield	2.0%
Sandbanks & South Shore	2.0%
Wellington	1.0%
Trenton & CFB Trenton	1.0%
Tyendinaga & Deseronto	0.5%
Napanee	0.5%
Kingston	0.5%
Bath, OPG Lennox, Millhaven, Bombardier	0.5%
<b>Total</b>	<b>100%</b>

The travel demand was applied to all the potential gateways in the study network. The destinations of 'Other areas within the Bay of Quinte' and 'External (Outside of the Bay of Quinte)' were assigned based on the existing traffic volumes observed from the traffic movement counts. The Urban SDK data identified that 29% of trips in Picton are destined for a location within Picton. It was assumed for the analysis that the 29% internal capture would be comprised of both Picton Main Street and the Base31 Revitalization District as they will be able to satisfy these day-to-day discretionary trips such as groceries, retail, recreational, or institutional trips.

Due to the proximity and multimodal nature of the development it was assumed that 80% of the trips destined for the Base31 Revitalization District; originating from the Revitalization District itself and Village A would be attributed to internal capture and rely on walking or other modes of active transportation. Hence, 20% of the trips generated by the Base31 Revitalization District was assumed to be external vehicle trips. **Table 5-3** outlines the trip distribution results after destinations were assigned to gateways.

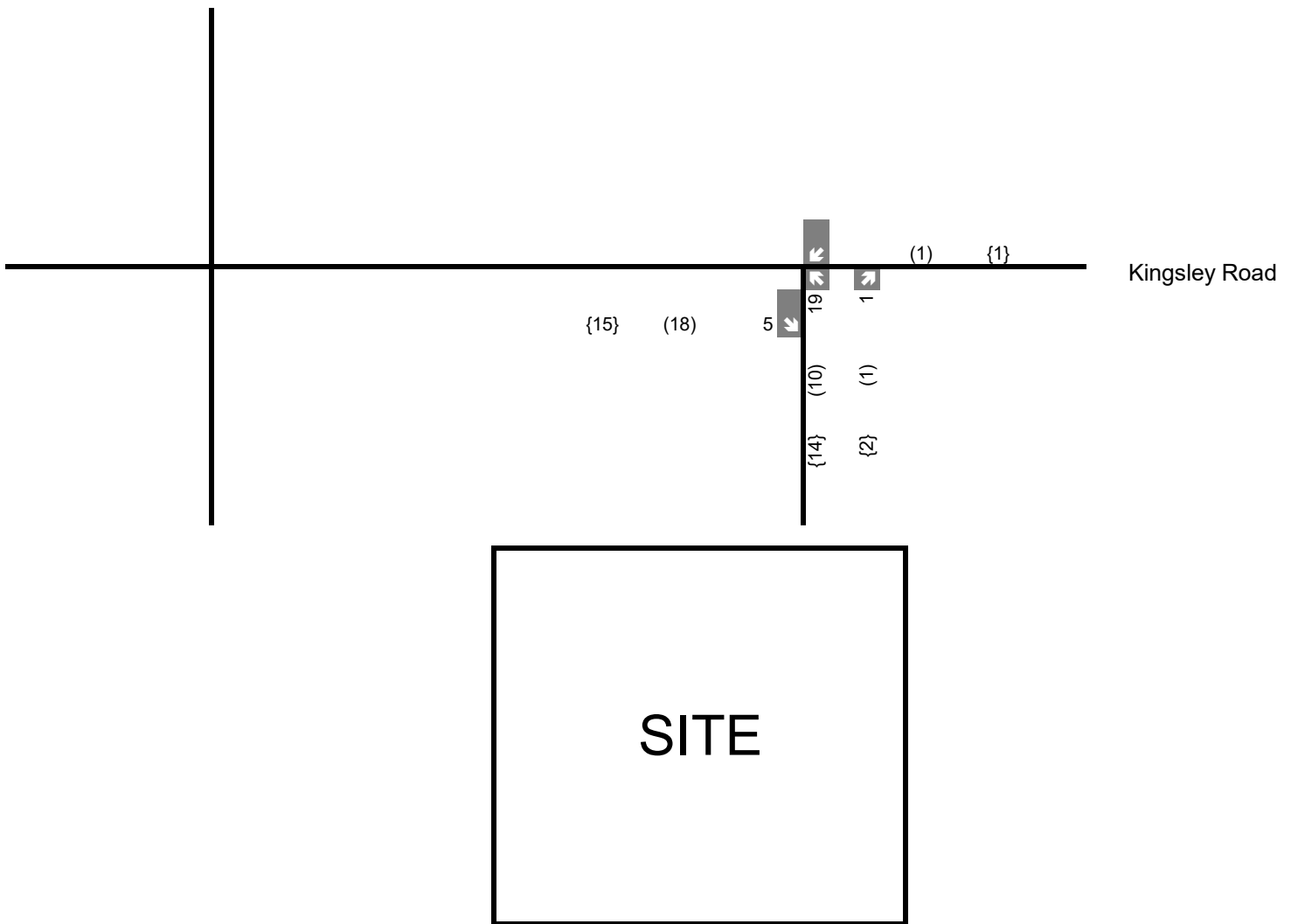
**Table 5-3 Site Trip Distribution**

Direction	Distribution
External	
East	2.1%
South	6.8%
West	35.6%
North	26.5%
Internal	
Picton	29.0%
Total	<b>100.0%</b>

The detailed site traffic distribution calculations can be found **Appendix E. Figure 5-1** illustrates the 2034 site traffic volumes.



County Road 22 / Church Street



Legend

- xx A.M. Peak Hour Traffic
- (xx) P.M. Peak Hour Traffic
- {xx} Weekend Peak Hour Traffic

Fig 5-1

Site Traffic Volumes



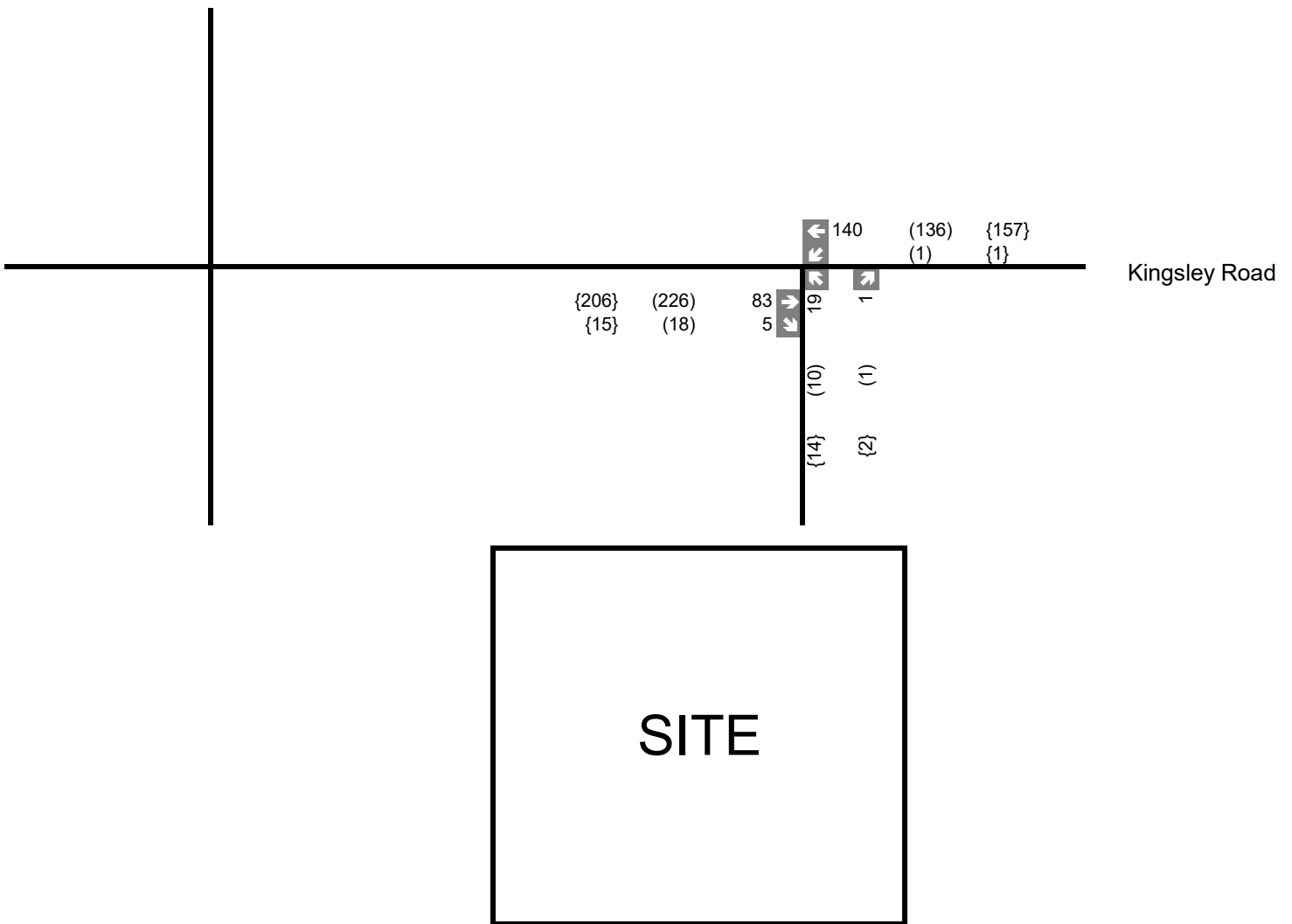


## 5.4 Future Total Traffic Volumes

The future total traffic volumes during the AM/PM and Saturday peak hours for the future horizon year was derived by combining the projected future background traffic with the corresponding estimate of site generated traffic. The future 2034 traffic volumes are illustrated in **Figure 5-2** for the on-peak season.



County Road 22 / Church Street



Legend

- xx A.M. Peak Hour Traffic
- (xx) P.M. Peak Hour Traffic
- {xx} Weekend Peak Hour Traffic

Fig 5-2  
Future Total 2034 Traffic  
Volumes

## 6 TRAFFIC CAPACITY ANALYSIS

The capacity analysis identifies how well the intersections are operating and how they are expected to operate in the future. The analysis contained in this report utilized the Highway Capacity Manual (HCM) 2000 techniques within the Synchro Software package. The reported intersection volume-to-capacity ratios (v/c) are a measure of the saturation volume for each turning movement, while the levels-of-service (LOS) are a measure of the average delay for each turning movement.

Since the future site access to Rental Building A has not yet been constructed during existing conditions, the existing conditions and future background conditions of this intersection will not be considered in this analysis. The following section of the report will detail the future total conditions of the site access operations for the applicable horizon year during the weekday AM/PM, Saturday peak hours under the on-peak scenario. Detailed Synchro reports are attached in **Appendix F**.

### 6.1 Future Total Conditions

The future total 2034 traffic capacity analysis results for the study intersection are summarized in **Table 6-1** for both weekday AM/PM peak hours and weekend midday peak hours under the on-peak season.

**Table 6-1 2034 Future Total Traffic Operations**

Intersection	Movement	Weekday AM			Weekday PM			Weekend Midday		
		v/c	Delay	LOS	v/c	Delay	LOS	v/c	Delay	LOS
Private Street A & Kingsley Road [unsignalized]	EBTR	0.06	0	A	0.16	0	A	0.14	0	A
	WBL	<0.01	0	A	<0.01	8	A	<0.01	8	A
	WBT	0.09	0	A	0.09	0	A	0.10	0	A
	NBLR	0.03	9	A	0.02	10	A	0.02	10	A

Under future total conditions, the study intersection is expected to operate well within capacity and acceptable delays during both weekday AM/PM and weekend midday peak hours for the on-peak season. The individual movements at the site access are operating with LOS A or better under both weekday and weekend peak hours.

Overall, the site traffic can be accommodated within the single future site access without the need for an additional site access.

## 7 SITE CIRCULATION REVIEW

One new site access intersection will be added to the road network, which will be a full-moves access onto Kingsley Road. Vehicle maneuvering diagrams have been prepared for the subject site. The vehicle simulations include a review of parking and vehicle circulation, waste collection, loading maneuvers, and fire route accessibility. The vehicle maneuvering diagrams are provided in **Appendix G**. Based on TYLin's review of the site plan, all required parking space and parking aisle dimensions were either met or exceeded. Additionally, passenger, loading, waste collection, and emergency vehicles are capable of maneuvering throughout the site.

### 7.1 Heavy Vehicles

Heavy vehicle turning movements were simulated using Transportation Association of Canada (TAC) medium single-unit (MSU) vehicle templates. Truck turning movements indicate that medium vehicles can enter and exit the site via the proposed site access and circulate the building loading areas without conflict, as shown in **Appendix G**.

### 7.2 Waste Collection Vehicles

Waste collection vehicle turning movements were simulated using a typical side-packer garbage truck. Waste collection vehicles will be utilizing the same loading areas as the medium vehicles, which is at the pick-up/drop-off located in front of the building's main entrance. It is noted that the loading area for the site would be cleared and the waste containers would be wheeled out during any scheduled waste collection operations. Truck turning movements indicate that waste collection vehicles can enter and exit the site, circulate through the site, and access the loading area of the site without conflict, as shown in **Appendix G**.

### 7.3 Passenger Vehicles

Passenger vehicle turning movements were simulated using a Transportation Association of Canada (TAC) passenger vehicle. Turning movements indicate that passenger vehicles can access the site and circulate the parking area of the site without conflict as shown in **Appendix G**. Based on TYLin's review of the site plan, all aisle and parking space dimensions were either met or exceeded.

### 7.4 Emergency Vehicle Circulation

Emergency vehicle turning movements were simulated using a typical Aerial Fire Truck vehicle.

Turning movements indicate that the selected fire truck vehicle can access the site and service the development without conflict, as shown in **Appendix G**. Additionally, all drive aisles meet the required fire route dimensions.

# 8 TRANSPORTATION DEMAND MANAGEMENT PLAN

## 8.1 TDM Measure Categories

Transportation Demand Management (TDM) refers to various measures that are undertaken to encourage non-auto modes of travel and reduce single occupant vehicle (SOV) traffic. This also has a direct impact on the parking demand and trip generation for both residential and non-residential components of the site. TDM measures can be categorized into five categories:

1. Introduction of Alternative Modes of Travel
2. Core Commuter Knowledge and Distribution
3. Financial Incentives
4. Supporting Transit and Active-Transportation Infrastructure
5. Transportation Management Program Support

## 8.2 Introduction to Alternate Modes of Travel

The introduction of new modes of travel to current single-occupant vehicle drivers can be conducted through a variety of marketing and communication strategies. For the residential land uses, this can be accomplished through raising awareness of the availability for alternate travel modes for residents. It is recommended that TDM marketing material be provided to all residents, and that any updates to the transit / active transportation infrastructure be posted at community centres, delivered by mail, or presented at residential lobbies / elevators for condominiums.

For non-residential modes, introduction of alternate travel modes can be facilitated through TDM measures such as commuting-themed events and promotion of other TDM programs. Marketing material should be created by County staff to ensure that the information provided is up to date and should be visually attractive. This will help to target and encourage non-driver modes of transportation from the earliest point in the process.

Outreach events are another method to promoting TDM measures. It is recommended that an outreach event be hosted for residents of the site following a minimum of 50% occupancy or at an appropriate time determined by the developer based on phasing. Prince Edward County staff should be invited to attend the event to answer any questions from residents and provide information on the existing infrastructure and planned infrastructure improvements. Future outreach events can also be planned to promote any new TDM measures and facilities

### **8.3 Core Commuter Knowledge and Distribution**

In addition to marketing and communicating the availability of alternative travel modes, it is important to ensure that those seeking to change their travel behaviours have the tools to facilitate this change. Information on the available transit and active transportation network should be readily available for anyone looking to travel to or from the site. Improving the ease of access to information of alternative modes would also increase the willingness for behavioural change amongst commuters. It is recommended that carpool ride-matching tool such as [www.ridesharing.com](http://www.ridesharing.com) and carpool networking events be promoted to provide a safe and convenient platform for commuters to meet and find other commuters looking to carpool together.

Providing real-time transit / weather information in lobbies or elevators would also help transit / active transportation users to better plan their trips accordingly whenever possible. These can be provided in the form of a television screen that could also provide promote upcoming or existing TDM programs.

Car share programs may also be contemplated by condominium buildings subject to demand and property management's discretion, and would provide commuters who do not own a personal vehicle with the freedom of using a vehicle for a discretionary trip such as a shopping trip, personal emergency trip or a long-distance trip. This would encourage a lower vehicle ownership and reduce the dependency on personal vehicles.

### **8.4 Financial Incentives**

It is understood that one of the primary factors in behavioural change is monetary compensation. The purpose of providing financial incentives is to promote this change in behaviour and incentivize commuters with trying out new alternate travel modes. This financial support may come in the form of subsidized transit passes, car share subsidies (subject to demand and property management's discretion), or carpooling incentives. It is recommended that as transit services expand in the region, the County should consider, as an example, providing subsidized transit passes equivalent to one monthly transit pass be provided for each residential unit purchase within the first year of occupancy subject to the Owner's discretion.

### **8.5 Supporting Transit and Active-Transportation Infrastructure**

Physical infrastructure is necessary to support transit and active transportation modes. It is noted that the proposed cross sections for the development road network are designed to support transit

vehicles with sufficient lane width, as well as provides dedicated active transportation facilities as needed.

The area concept plan also identifies core cycling routes and trails that will promote active-transportation and provide an attractive alternative to motor vehicle travel. The “green fingers” within the development lands have been designed to provide efficient and amiable routes for the residential lands within each village to easily access the major commercial hub of the Revitalization District.

The provision of TDM infrastructure will continue to advance as technology and standards improve, and is expected to continue to be monitored by the County. Some examples of infrastructure that should be implemented include:

- ▶ **Improved Transit Service** should be considered especially with the increase in demand as part of the Base31 Revitalization District as well as increase in population from the proposed development and nearby developments. Further, the proposed development would also provide an increased population to support increased transit ridership. The current transit service should be considered for expansion both in the routes and destinations as well as in terms of frequency and capacity for service. It is understood that the County plans to engage with a specialized transit consultant in 2024, Base31 will provide input to assist with development of new routes to correspond with the development buildout.
- ▶ **Sheltered Transit Stops** should be constructed where appropriate. Improvements to transit shelters could include transit route maps, heated facilities, transit pass vending machines, and benches;
- ▶ **Secure Bicycle Racks / Parking** should be provided at any major non-residential area, as well as scattered throughout the Base31 lands. Public bicycle racks should be maintained and also located along the future active transportation facilities;
- ▶ **Wayfinding Signage** should be provided that directs both residents and visitors to the available TDM infrastructure. Signage should be visually appealing, easy to see and recognizable. Wayfinding will ensure that both new residents and visitors to the park will be aware of and have access to the available infrastructure;
- ▶ **Bicycle Supportive Infrastructure** should be made available to the public such as bicycle repair stations, bicycle valet services, tire inflation locations, e-bike charging stations, bicycle lock rentals, water fountains / rest areas along the Green Finger cycling routes, trail maps and wayfinding signage, and ongoing maintenance of cycling routes.



## 9 CONCLUSION

TYLin has been retained by Prince Edward County Community Partners Inc. to prepare a Transportation Impact Assessment for the proposed rental building located within the Base31 Revitalization District. The residential development is located east of County Road 22 (Church Street), south of Kinglsey Road, north of existing Base31, and west of vacant lands, within Prince Edward County, southeast Picton. Existing traffic data was collected at the intersection of County Road 22 & Kingsley Road and analyzed for the AM, PM, and Saturday peak hours during the peak tourist season. The existing counts at County Road 22 & Kingsley Road were used and balanced through to the study intersection of Private Street A & Kingsley Road for analysis purposes.

### **Site Traffic Forecast**

Rental Building A was analyzed with a total of 120 residential units. The development is expected to generate a total of 31 two-way trips in the AM peak hour, 35 two-way trips in the PM peak hour, and 36 two-way trips in the Saturday Peak hour.

### **Traffic Capacity Analysis**

Since the study site access intersection is not constructed under existing conditions, only the future total conditions of the intersection were analyzed.

Under the future 2034 traffic conditions, the study intersection is expected to operate well within capacity and with acceptable levels of service of A or better for all peak hours. The site traffic can be accommodated within the future site access.

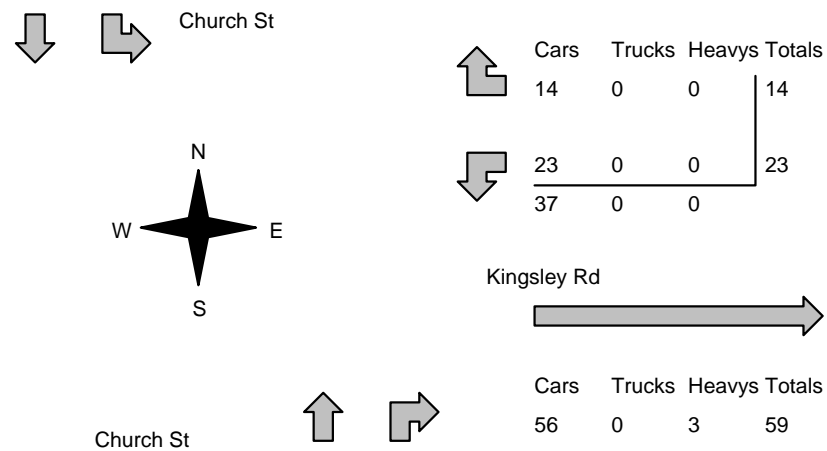
### **Functional Design of Kinglsey Road**

A functional design of the site access with a proposed 26.0m ROW of Kingsley Road was prepared. The cross-section includes sidewalks on either side, a 3.0m two-way bicycle lane, and a 4.2m centre turn lane.

# **Appendix A:**

## **Turning Movement Count Data**

<b>Morning Peak Diagram</b>		<b>Specified Period</b> <b>From:</b> 7:00:00 <b>To:</b> 9:00:00	<b>One Hour Peak</b> <b>From:</b> 8:00:00 <b>To:</b> 9:00:00																																																																																																																																																																									
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<b>Municipality:</b> Prince Edward <b>Site #:</b> 2316100006 <b>Intersection:</b> Church St & Kingsley Rd <b>TFR File #:</b> 1 <b>Count date:</b> 5-Jul-23		<b>Weather conditions:</b>  <b>Person counted:</b> <b>Person prepared:</b> <b>Person checked:</b>																																																																																						
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North Leg Total: 224 North Entering: 101 North Peds: 0 Peds Cross: ☒	<table style="margin: auto;"> <tr> <td style="text-align: right;">Heavys</td><td style="text-align: center;">2</td><td style="text-align: center;">0</td><td style="border-left: 1px solid black; text-align: center;">2</td></tr> <tr> <td style="text-align: right;">Trucks</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td><td style="border-left: 1px solid black; text-align: center;">0</td></tr> <tr> <td style="text-align: right;">Cars</td><td style="text-align: center;">93</td><td style="text-align: center;">6</td><td style="border-left: 1px solid black; text-align: center;">99</td></tr> <tr> <td style="text-align: right;">Totals</td><td style="text-align: center;">95</td><td style="text-align: center;">6</td><td style="border-left: 1px solid black; text-align: center;"></td></tr> </table>		Heavys	2	0	2	Trucks	0	0	0	Cars	93	6	99	Totals	95	6		<table style="margin: auto;"> <tr> <td style="text-align: right;">Heavys</td><td style="text-align: center;">1</td></tr> <tr> <td style="text-align: right;">Trucks</td><td style="text-align: center;">0</td></tr> <tr> <td style="text-align: right;">Cars</td><td style="text-align: center;">122</td></tr> <tr> <td style="text-align: right;">Totals</td><td style="text-align: center;">123</td></tr> </table>	Heavys	1	Trucks	0	Cars	122	Totals	123	<table style="margin: auto;"> <tr><td style="text-align: right;">East Leg Total:</td><td style="text-align: center;">96</td></tr> <tr><td style="text-align: right;">East Entering:</td><td style="text-align: center;">37</td></tr> <tr><td style="text-align: right;">East Peds:</td><td style="text-align: center;">0</td></tr> <tr><td style="text-align: right;">Peds Cross:</td><td style="text-align: center;">☒</td></tr> </table>	East Leg Total:	96	East Entering:	37	East Peds:	0	Peds Cross:	☒																																																				
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# Total Count Diagram

**Municipality:** Prince Edward  
**Site #:** 2316100006  
**Intersection:** Church St & Kingsley Rd  
**TFR File #:** 1  
**Count date:** 5-Jul-23

**Weather conditions:**

**Person counted:**  
**Person prepared:**  
**Person checked:**

**\*\* Non-Signalized Intersection \*\***

**Major Road:** Church St runs N/S

North Leg Total: 673  
 North Entering: 325  
 North Peds: 0  
 Peds Cross:  $\nabla$

Heavys	7	0	7
Trucks	1	0	1
Cars	284	33	317
Totals	292	33	

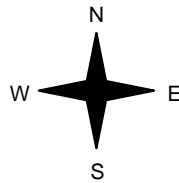


Heavys	10
Trucks	2
Cars	336
Totals	348

East Leg Total: 267  
 East Entering: 112  
 East Peds: 0  
 Peds Cross:  $\nabla$



Church St



	Cars	Trucks	Heavys	Totals
Northbound	44	0	0	44
Southbound	68	0	0	68
<b>Totals</b>	<b>112</b>	<b>0</b>	<b>0</b>	

Kingsley Rd



Cars	Trucks	Heavys	Totals
150	0	5	155

Cars	352
Trucks	1
Heavys	7
Totals	360



Cars	292	117	409
Trucks	2	0	2
Heavys	10	5	15
Totals	304	122	

Peds Cross:  $\nabla$   
 South Peds: 0  
 South Entering: 426  
 South Leg Total: 786

## Comments

# Traffic Count Summary

Intersection: Church St & Kingsley Rd					Count Date: 5-Jul-23		Municipality: Prince Edward					
North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	9	60	0	69	0	123	8:00:00	0	36	18	54	0
9:00:00	8	71	0	79	0	164	9:00:00	0	66	19	85	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	6	95	0	101	0	263	17:00:00	0	109	53	162	0
18:00:00	10	66	0	76	0	201	18:00:00	0	93	32	125	0
<b>Totals:</b>	<b>33</b>	<b>292</b>	<b>0</b>	<b>325</b>	<b>0</b>	<b>751</b>	<b>S Totals:</b>	<b>0</b>	<b>304</b>	<b>122</b>	<b>426</b>	<b>0</b>
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	13	0	3	16	0	16	8:00:00	0	0	0	0	0
9:00:00	19	0	14	33	0	33	9:00:00	0	0	0	0	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	23	0	14	37	0	37	17:00:00	0	0	0	0	0
18:00:00	13	0	13	26	0	26	18:00:00	0	0	0	0	0
<b>Totals:</b>	<b>68</b>	<b>0</b>	<b>44</b>	<b>112</b>	<b>0</b>	<b>112</b>	<b>W Totals:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00			17:00	18:00	0:00	0:00		
Crossing Values:	0	13	19	0			23	13	0	0		

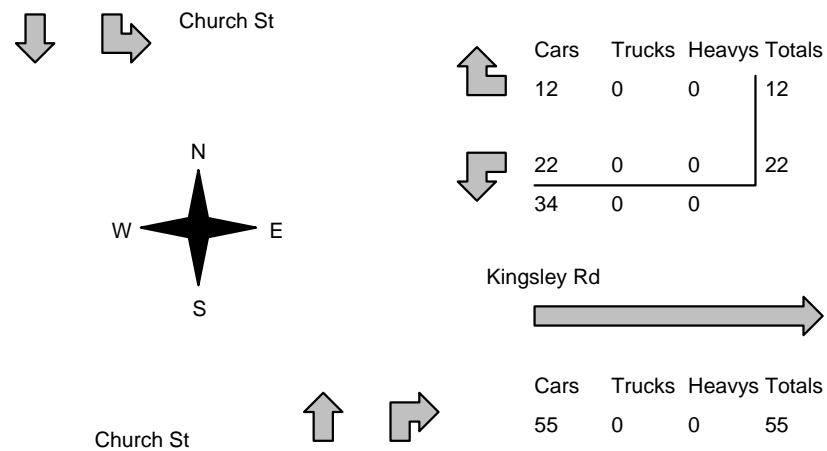










<b>Mid-day Peak Diagram</b>		<b>Specified Period</b> <b>From:</b> 11:00:00 <b>To:</b> 15:00:00	<b>One Hour Peak</b> <b>From:</b> 13:45:00 <b>To:</b> 14:45:00																																																
<b>Municipality:</b> Prince Edward <b>Site #:</b> 2316100006 <b>Intersection:</b> Church St & Kingsley Rd <b>TFR File #:</b> 1 <b>Count date:</b> 8-Jul-23		<b>Weather conditions:</b>  <b>Person counted:</b> <b>Person prepared:</b> <b>Person checked:</b>																																																	
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North Leg Total: 218 North Entering: 116 North Peds: 0 Peds Cross: ☒	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">Heavys</td> <td style="width:15%;">0</td> <td style="width:15%;">0</td> <td style="width:15%;">0</td> <td style="width:15%;"></td> <td style="width:15%;"></td> </tr> <tr> <td>Trucks</td> <td>1</td> <td>0</td> <td>1</td> <td></td> <td></td> </tr> <tr> <td>Cars</td> <td>104</td> <td>11</td> <td>115</td> <td></td> <td></td> </tr> <tr> <td>Totals</td> <td>105</td> <td>11</td> <td></td> <td></td> <td></td> </tr> </table>	Heavys	0	0	0			Trucks	1	0	1			Cars	104	11	115			Totals	105	11				<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">Heavys</td> <td style="width:15%;">0</td> <td style="width:15%;">0</td> <td style="width:15%;">0</td> <td style="width:15%;"></td> <td style="width:15%;"></td> </tr> <tr> <td>Trucks</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td></td> </tr> <tr> <td>Cars</td> <td>102</td> <td></td> <td>102</td> <td></td> <td></td> </tr> <tr> <td>Totals</td> <td>102</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Heavys	0	0	0			Trucks	0	0	0			Cars	102		102			Totals	102					East Leg Total: 89 East Entering: 34 East Peds: 0 Peds Cross: ☒
Heavys	0	0	0																																																
Trucks	1	0	1																																																
Cars	104	11	115																																																
Totals	105	11																																																	
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Cars	102		102																																																
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	55	0	0		55																																														
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Cars	126																																																		
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<b>Comments</b>																																																			

# Total Count Diagram

**Municipality:** Prince Edward  
**Site #:** 2316100006  
**Intersection:** Church St & Kingsley Rd  
**TFR File #:** 1  
**Count date:** 8-Jul-23

**Weather conditions:**

**Person counted:**  
**Person prepared:**  
**Person checked:**

**\*\* Non-Signalized Intersection \*\***

**Major Road:** Church St runs N/S

North Leg Total: 845  
 North Entering: 450  
 North Peds: 0  
 Peds Cross:  $\nabla$

Heavys	0	0	0
Trucks	3	0	3
Cars	401	46	447
Totals	404	46	

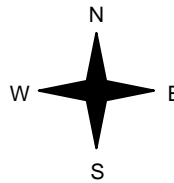


Heavys	0
Trucks	3
Cars	392
Totals	395

East Leg Total: 354  
 East Entering: 167  
 East Peds: 0  
 Peds Cross:  $\nabla$



Church St



Cars	Trucks	Heavys	Totals
51	0	0	51



116	0	0	116
167	0	0	

Kingsley Rd



Church St



Cars	517
Trucks	3
Heavys	0
Totals	520



Cars	341	138	479
Trucks	3	3	6
Heavys	0	0	0
Totals	344	141	

Cars	Trucks	Heavys	Totals
184	3	0	187

Peds Cross:  $\nabla$   
 South Peds: 0  
 South Entering: 485  
 South Leg Total: 1005

## Comments

# Traffic Count Summary

Intersection: Church St & Kingsley Rd					Count Date: 8-Jul-23		Municipality: Prince Edward					
North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	15	99	0	114	0	229	12:00:00	0	89	26	115	0
13:00:00	13	99	0	112	0	230	13:00:00	0	79	39	118	0
14:00:00	8	102	0	110	0	241	14:00:00	0	95	36	131	0
15:00:00	10	104	0	114	0	235	15:00:00	0	81	40	121	0
<b>Totals:</b>	<b>46</b>	<b>404</b>	<b>0</b>	<b>450</b>	<b>0</b>	<b>935</b>	<b>S Totals:</b>	<b>0</b>	<b>344</b>	<b>141</b>	<b>485</b>	<b>0</b>
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	33	0	15	48	0	48	12:00:00	0	0	0	0	0
13:00:00	24	0	15	39	0	39	13:00:00	0	0	0	0	0
14:00:00	25	0	7	32	0	32	14:00:00	0	0	0	0	0
15:00:00	34	0	14	48	0	48	15:00:00	0	0	0	0	0
<b>Totals:</b>	<b>116</b>	<b>0</b>	<b>51</b>	<b>167</b>	<b>0</b>	<b>167</b>	<b>W Totals:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Calculated Values for Traffic Crossing Major Street</b>												
Hours Ending:	11:00	12:00	13:00	14:00		15:00	0:00	0:00	0:00			
Crossing Values:	0	33	24	25		34	0	0	0			











# **Appendix B:**

## Site Plan

# BUILDING A

This drawing, as an instrument of service, is provided by and is the property of Turner Fleischer Architects Inc. The contractor must verify and accept responsibility for all dimensions and conditions on site and must notify Turner Fleischer Architects Inc. of any variations from the supplied information. This drawing is not to be scaled. The architect is not responsible for the accuracy of survey, structural, mechanical, electrical, etc. information shown on this drawing. Refer to the appropriate consultant drawings before proceeding with the work. Construction must conform to all applicable codes and requirements of authority having jurisdiction. The contractor working from drawings not specifically marked "for Contractor" must assume full responsibility and bear costs for any corrections or damages resulting from his work.

### PROJECT SITE AREA (PHASE 1)

BLDG	SITE AREA	m <sup>2</sup>	ft <sup>2</sup>
BLDG A	TOTAL NET SITE AREA	10,021.4	107,869.3
	TOTAL PROPOSED GFA	11,320.9	121,857.5
	F.S.I. OF PROPOSED DEVELOPMENT	1.12 x SITE AREA	

### GROSS FLOOR AREA SUMMARY

BLDG	USE	GFA		FSI
		m <sup>2</sup>	ft <sup>2</sup>	
BLDG A	RESIDENTIAL 120 UNITS	11,320.9	121,857	1.12
	<b>TOTAL</b>	<b>11,320.9</b>	<b>121,857</b>	<b>1.12</b>

### AMENITY AREAS REQUIRED & PROVIDED

BLDG	TYPE	REQUIRED			PROVIDED		
		RATIO	m <sup>2</sup>	ft <sup>2</sup>	RATIO	m <sup>2</sup>	ft <sup>2</sup>
BLDG A	INDOOR AMENITY	1.00 m <sup>2</sup> /UNIT	120.0	1,292	1.26 m <sup>2</sup> /UNIT	151.5	1,631
	OUTDOOR AMENITY	N/A	N/A	N/A	N/A	N/A	N/A
	<b>TOTAL AMENITY</b>	<b>1.00 m<sup>2</sup>/UNIT</b>	<b>120.0</b>	<b>1,292</b>	<b>1.26 m<sup>2</sup>/UNIT</b>	<b>151.5</b>	<b>1,631</b>

### SALEABLE UNIT MIX PROVIDED

BLDG	FLOOR	SALEABLE UNIT MIX			TOTAL	AVG. UNIT SIZE	
		STUDIO	1B	2B		m <sup>2</sup>	ft <sup>2</sup>
BLDG A	FLOOR 1	2	4	6	12	80.9	871
	FLOOR 2	2	6	10	18	82.5	888
	FLOOR 3	2	6	10	18	82.5	888
	FLOOR 4	2	6	10	18	82.5	888
	FLOOR 5	2	6	10	18	82.5	888
	FLOOR 6	2	6	10	18	82.5	888
	FLOOR 7	2	6	10	18	82.5	888
	SUBTOTAL	14	40	66	120	82.3	886
	<b>TOTAL UNITS</b>	<b>14</b>	<b>40</b>	<b>66</b>			
	UNIT MIX	11.7%	33.3%	55.0%	100.0%		
	UNIT MIX TOTAL	11.7%	33.3%	55.0%	100.0%		
	AVG UNIT SIZE	48.7	67.4	98.5	m <sup>2</sup>		
	AVG UNIT SIZE TOTAL	48.7	67.4	98.5	m <sup>2</sup>		

### VEHICULAR PARKING - MINIMUM REQUIRED

BLDG	USE	RATIO (MIN.)	UNITS / GFA (m <sup>2</sup> )	SPACES (MIN.)
	1B & 1B+D UNITS	1.0/Unit	40	40
	2B & 2B+D UNITS	1.0/Unit	66	66
	<b>TOTAL</b>			<b>120</b>

\* INCLUDING VISITOR PARKING

### VEHICULAR PARKING PROVIDED

BLDG	FLOOR	USE		TOTAL
		RESIDENTIAL	VISITOR	
BLDG A	FLOOR 1	144	24	168
	<b>TOTAL</b>	<b>144</b>	<b>24</b>	<b>168</b>

### BICYCLE PARKING - MINIMUM REQUIRED

BLDG	USE	RESIDENTIAL		TOTAL
		RATIO	SPACES	
BLDG A	SHORT TERM	0.05/Unit	6	6
	LONG TERM	0.25/Unit	30	30
	<b>TOTAL</b>		<b>36</b>	<b>36</b>

### BICYCLE PARKING - PROVIDED

BLDG	FLOOR	RESIDENTIAL			TOTAL
		SHORT TERM	LONG TERM	SUB TOTAL	
BLDG A	FLOOR 1	6	30	36	36
	<b>TOTAL</b>	<b>6</b>	<b>30</b>	<b>36</b>	<b>36</b>

### GROSS FLOOR AREA BREAKDOWN

BLDG	FLOOR	# OF UNITS	RESIDENTIAL								TOTAL GFA (TFA - EXCLUSIONS)			
			SALEABLE		COMMON		GARBAGE		BIKE LOCKERS		INDOOR AMENITY		m <sup>2</sup>	ft <sup>2</sup>
			m <sup>2</sup>	ft <sup>2</sup>	m <sup>2</sup>	ft <sup>2</sup>	m <sup>2</sup>	ft <sup>2</sup>	m <sup>2</sup>	ft <sup>2</sup>	m <sup>2</sup>	ft <sup>2</sup>		
BLDG A	FLOOR 1	12	971.0	10,451	329.0	3,541	72.6	782	41.7	449	151.5	1,631	1,565.8	16,854
	FLOOR 2	18	1,485.0	15,984	140.9	1,516							1,625.9	17,501
	FLOOR 3	18	1,485.0	15,984	140.9	1,516							1,625.9	17,501
	FLOOR 4	18	1,485.0	15,984	140.9	1,516							1,625.9	17,501
	FLOOR 5	18	1,485.0	15,984	140.9	1,516							1,625.9	17,501
	FLOOR 6	18	1,485.0	15,984	140.9	1,516							1,625.9	17,501
	FLOOR 7	18	1,485.0	15,984	140.9	1,516							1,625.9	17,501
	MPH												0.0	0
	<b>TOTAL</b>	<b>120</b>	<b>9,880.848</b>	<b>106,356.610</b>	<b>1,174.261</b>	<b>12,639.647</b>	<b>72.622</b>	<b>781.702</b>	<b>41.687</b>	<b>448.721</b>	<b>151.504</b>	<b>1,630.772</b>	<b>11,320.923</b>	<b>121,857.451</b>
	<b>TOTAL (ROUNDED)</b>	<b>120</b>	<b>9,880.8</b>	<b>106,357</b>	<b>1,174.3</b>	<b>12,640</b>	<b>72.6</b>	<b>782</b>	<b>41.7</b>	<b>449</b>	<b>151.5</b>	<b>1,631</b>	<b>11,320.9</b>	<b>121,857</b>

### AMENITY AREA BREAKDOWN

OUTDOOR AMENITY	
m <sup>2</sup>	ft <sup>2</sup>
0.000	0.000

### TOTAL FLOOR AREA

AREA EXCLUSIONS		TOTAL FLOOR AREA	
GFA+INDOOR AMENITY+EXCL			
m <sup>2</sup>	ft <sup>2</sup>	m <sup>2</sup>	ft <sup>2</sup>
60.1	646	1,625.9	17,501
		1,625.9	17,501
		1,625.9	17,501
		1,625.9	17,501
		1,625.9	17,501
		1,625.9	17,501
		1,625.9	17,501
		1,625.9	17,501
208.4	2,243	208.4	2,243
<b>268.476</b>	<b>2,889.849</b>	<b>11,589.398</b>	<b>124,747.301</b>
<b>268.5</b>	<b>2,890</b>	<b>11,589.4</b>	<b>124,747</b>

#	DATE	DESCRIPTION	BY
3	2024-10-04	ISSUED FOR SPA COORDINATION	
2	2024-09-27	ISSUED FOR SPA COORDINATION	
1	2024-07-03	ISSUED FOR PAC	

PROJECT  
**Base 31 \_ 26-343 County Road 22**

PICTON, ON

DRAWING

**STATISTICS**

PROJECT NO.

23.148P01

PROJECT DATE

2024-10-04

DRAWN BY

MZH

CHECKED BY

AYU

SCALE

1 : 1

DRAWING NO.

**SPA002**

REV.

**3**

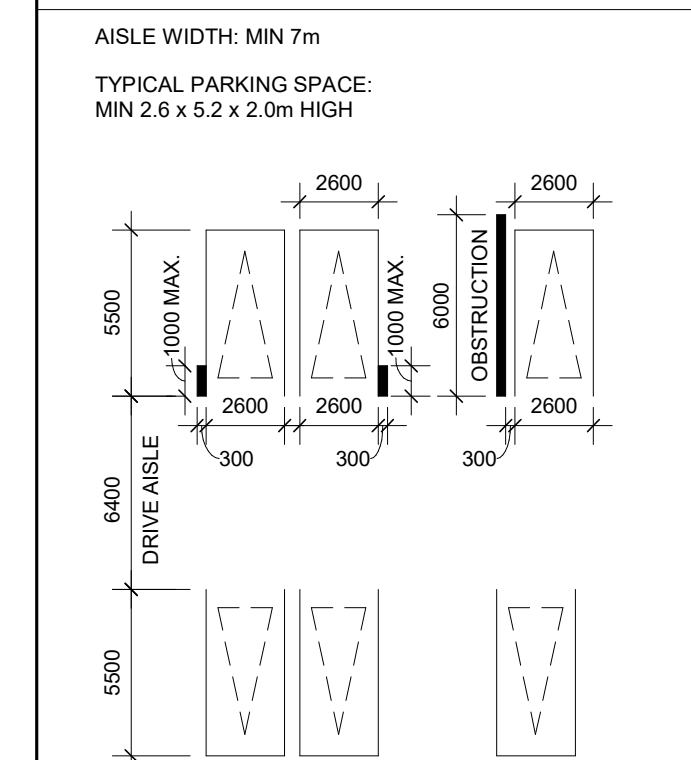
This drawing, as an instrument of service, is provided by and is the property of Turner Fleischer Architects Inc. The contractor must verify and accept responsibility for all dimensions and conditions on site and must notify Turner Fleischer Architects Inc. of any variations from the supplied information. This drawing is not to be scaled. The architect is not responsible for the accuracy of survey, structural, mechanical, electrical, etc. information shown on this drawing. Refer to the appropriate consultant's drawings before proceeding with the work. Construction must conform to all applicable codes and requirements of applicable building jurisdictions. The contractor must confirm that drawings not specifically marked "for Contractor" must assume full responsibility and bear costs for any corrections or damages resulting from his work.

### LEGEND

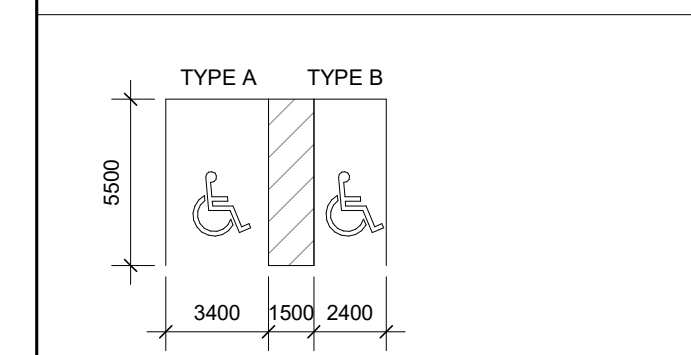
	PRIMARY RESIDENTIAL ENTRANCE
	SECONDARY RESIDENTIAL ENTRANCE
	EXIT
	FIRE HYDRANT
	SIAMESE CONNECTION
	WALL-MOUNTED LIGHT FIXTURE
	FIRE ROUTE SIGN
	SPOT ELEVATION
	GAS/HYDRO METER

### MINIMUM PERMITTED PARKING DIMENSIONS

#### TYPICAL PARKING DIMENSIONS



#### TYPICAL BARRIER FREE SPACE

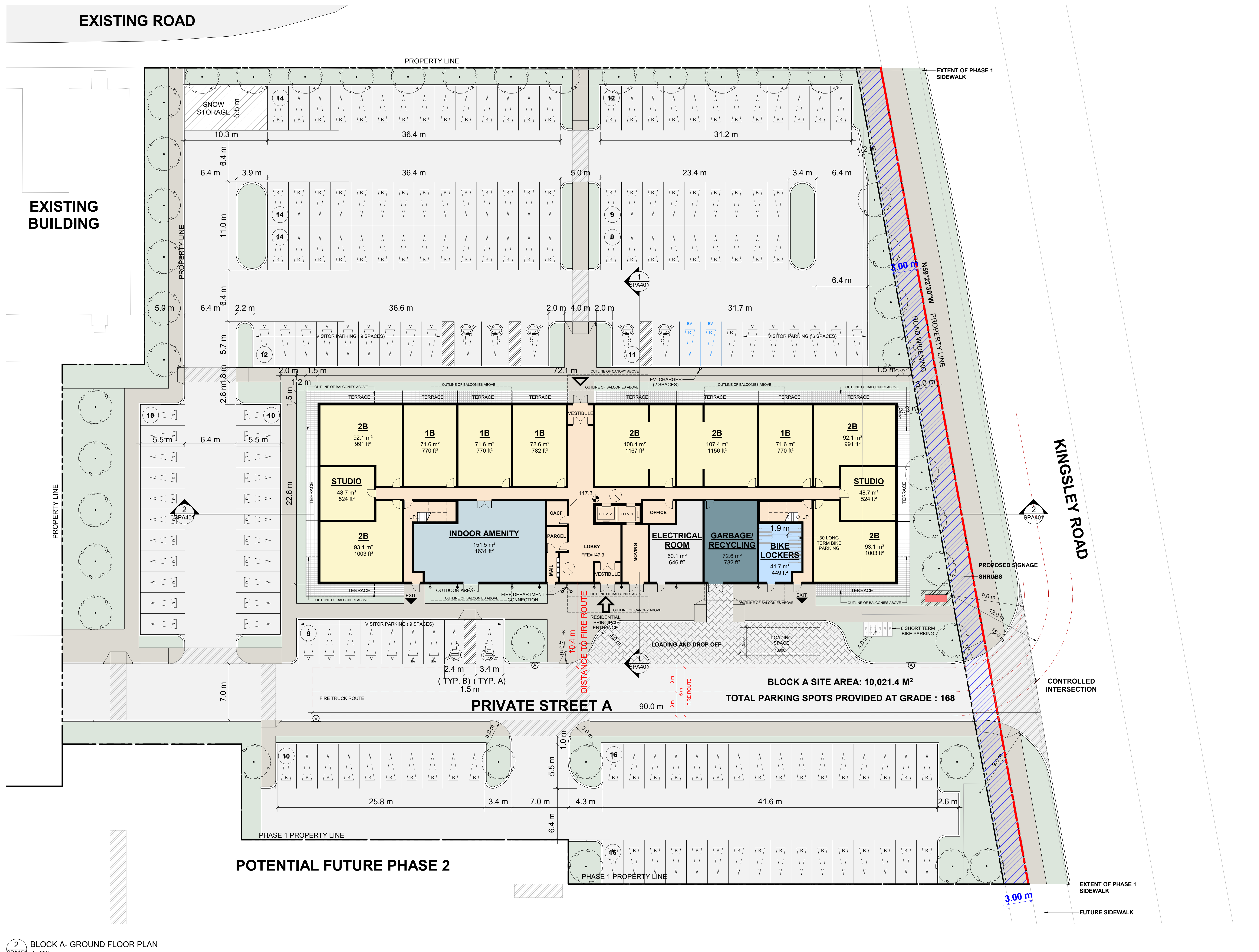


#	DATE	DESCRIPTION	BY
3	2024-10-04	ISSUED FOR SPA COORDINATION	
2	2024-09-27	ISSUED FOR SPA COORDINATION	
1	2024-07-03	ISSUED FOR PAC	

PROJECT  
**Base 31 \_ 26-343 County Road 22**  
 PICTON, ON

### BLOCK A - GROUND FLOOR PLAN

PROJECT NO. 23.148P01	PROJECT DATE 2024-10-04
DRAWN BY MZH	CHECKED BY AYU
SCALE 1 : 250	REV 3



EXISTING ROAD

EXISTING BUILDING

POTENTIAL FUTURE PHASE 2

PRIVATE STREET A

BLOCK A SITE AREA: 10,021.4 M<sup>2</sup>  
 TOTAL PARKING SPOTS PROVIDED AT GRADE : 168

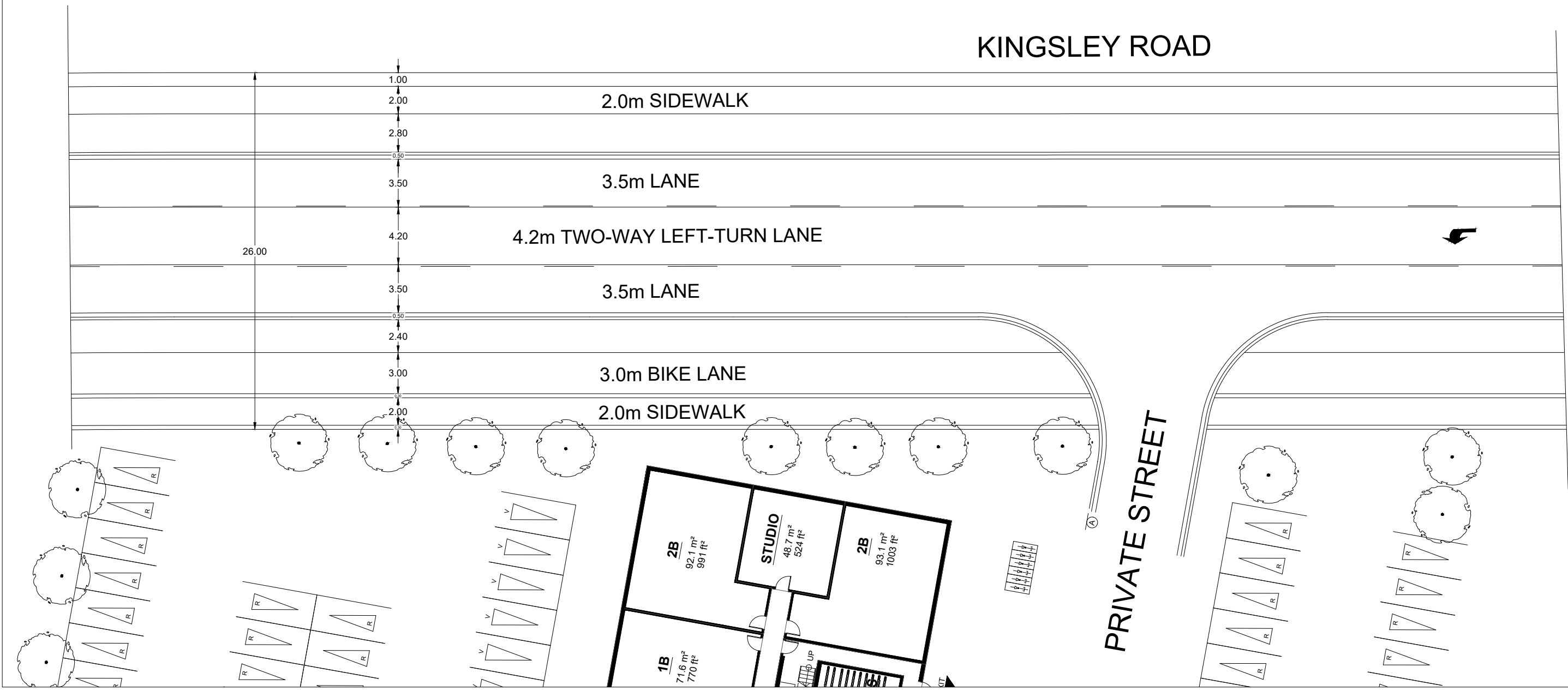
KINGSLEY ROAD

CONTROLLED INTERSECTION

# **Appendix C:**

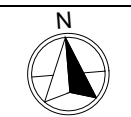
## **Proposed Cross-Section**

G:\Projects\2024\100xxx - TRAFFIC - Picton Rockport Rental A03 Analysis\03 Site Review & Circulation\2024\1007



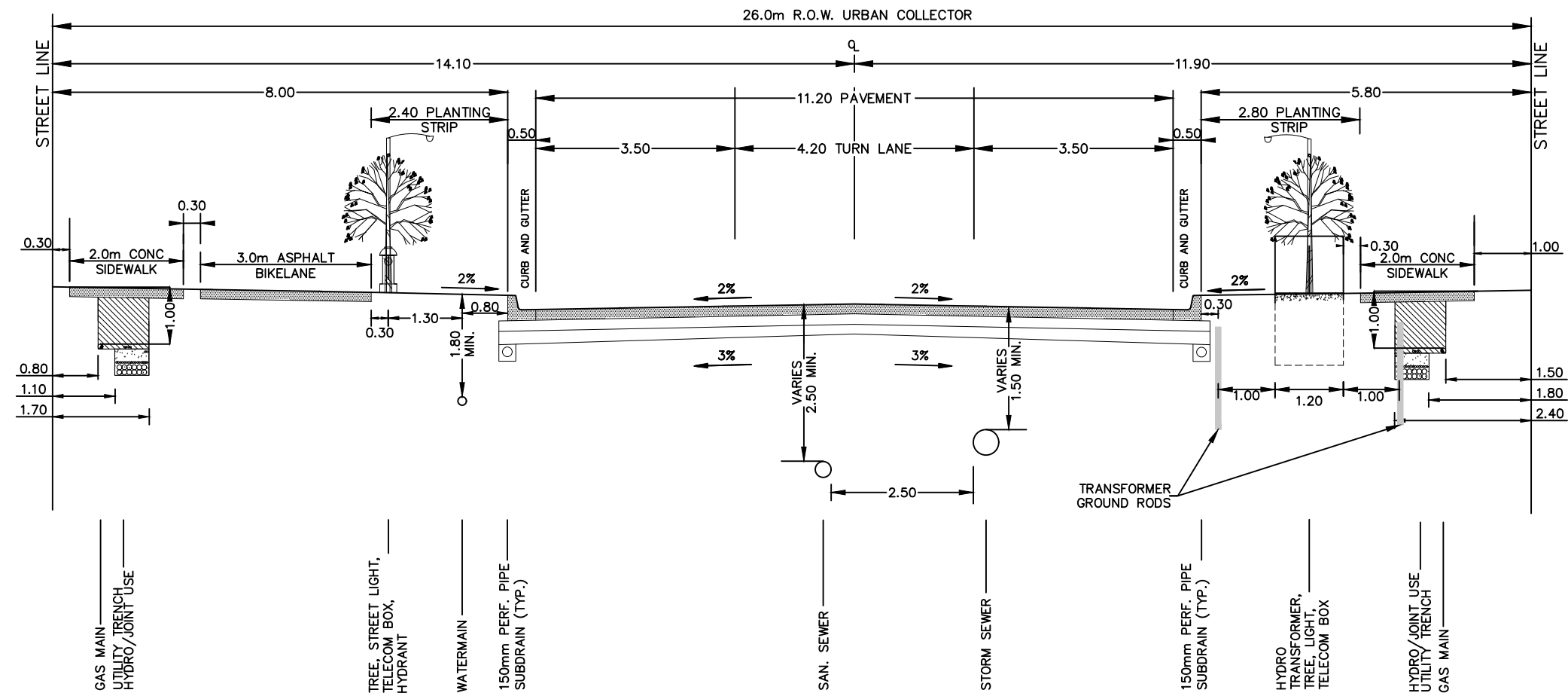
3381 Steeles Ave. East,  
Suite 315  
Toronto, ON  
M2H 3S6

BASE31 RENTAL BUILDING A  
KINGSLEY ROAD  
FUNCTIONAL DESIGN



N.T.S.

DRAWING No.  
01  
DATE  
OCT 2024



NOTE:  
 • MODIFIED PSD-023 26.0m COLLECTOR ROAD

**LEGEND:**

**PEC PARTNERS**

**26.0m R.O.W. URBAN COLLECTOR**

**SCS** consulting group ltd  
 30 CENTURIAN DRIVE, SUITE 100  
 MARKHAM, ONTARIO L3R 8B8  
 TEL: (905) 475-1900  
 FAX: (905) 475-8335

DESIGNED BY: S.G.

CHECKED BY: E.S. / S.M.S.

PROJECT No:

FIGURE No:

SCALE: 1:100

DATE: AUGUST 2023

**2365**

**F.5**

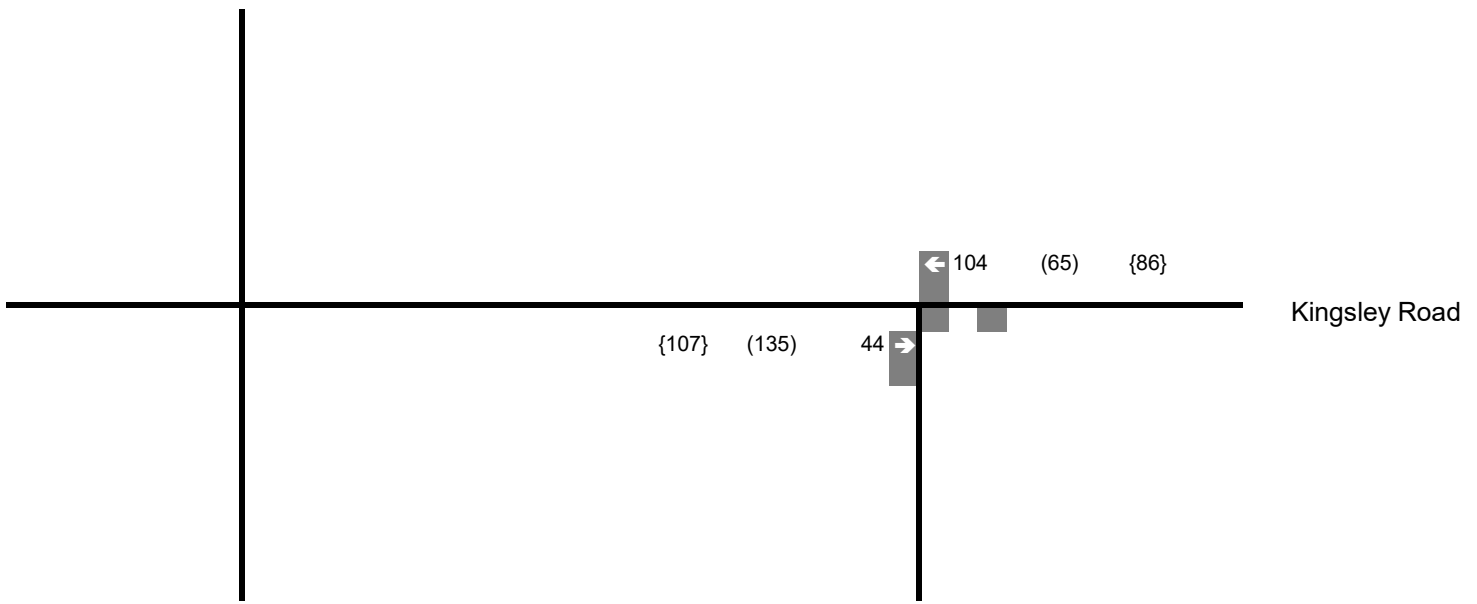
# **Appendix D:**

## Background Developments



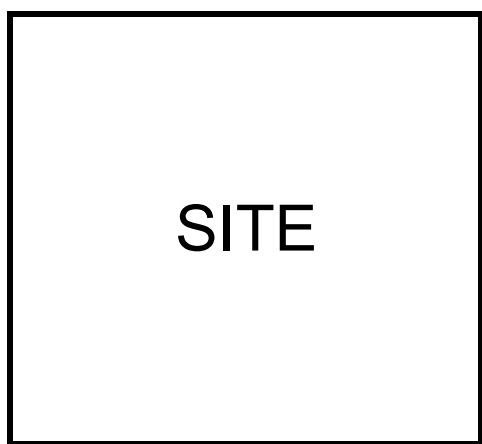


County Road 22 / Church Street



{107} (135) 44 → ← 104 (65) {86}

Kingsley Road



SITE

Legend

- xx A.M. Peak Hour Traffic
- (xx) P.M. Peak Hour Traffic
- {xx} Weekend Peak Hour Traffic

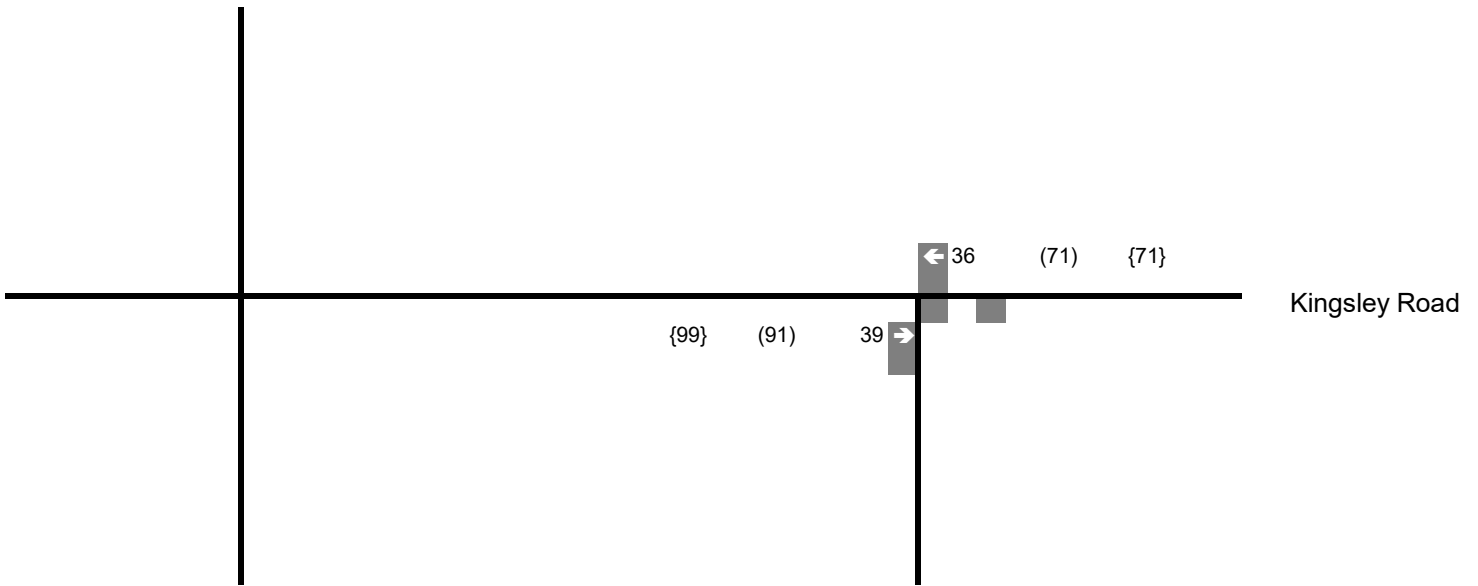
Village A

- Rockport Rental Building A
- Trip Removal





County Road 22 / Church Street



Kingsley Road

SITE

Legend

- xx A.M. Peak Hour Traffic
- (xx) P.M. Peak Hour Traffic
- {xx} Weekend Peak Hour Traffic

BGD 5 and 6

Background Developments 5 and 6 - Base31  
Revitalization District (without Rental Building A)  
and Village F - Hotel

# **Appendix E:**

## Trip Distribution



# **Appendix F:**

## **Synchro Analysis**

Lanes, Volumes, Timings  
303: Private Street A & Kingsley Road

10/09/2024  
2034 Future Total AM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↘		↙	↖	↗	
Traffic Volume (vph)	83	5	0	140	19	1
Future Volume (vph)	83	5	0	140	19	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	15.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			5.0		2.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993				0.994	
Fit Protected					0.954	
Satd. Flow (prot)	1906	0	1883	1921	1786	0
Fit Permitted					0.954	
Satd. Flow (perm)	1906	0	1883	1921	1786	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	202.7			266.0	82.5	
Travel Time (s)	15.2			20.0	6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	2%	2%	0%	2%	2%
Adj. Flow (vph)	90	5	0	152	21	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	95	0	0	152	22	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	17.4%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
303: Private Street A & Kingsley Road

10/09/2024  
2034 Future Total AM Peak Hour

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↘		↙	↖	↗	
Traffic Volume (veh/h)	83	5	0	140	19	1
Future Volume (Veh/h)	83	5	0	140	19	1
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)	90	5	0	152	21	1
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage (veh)	2			2		
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			95		244	92
vC1, stage 1 conf vol					92	
vC2, stage 2 conf vol					152	
vCu, unblocked vol			95		244	92
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		97	100
cM capacity (veh/h)			1499		826	965

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	95	0	152	22
Volume Left	0	0	0	21
Volume Right	5	0	0	1
cSH	1700	1700	1700	831
Volume to Capacity	0.06	0.00	0.09	0.03
Queue Length 95th (m)	0.0	0.0	0.0	0.6
Control Delay (s)	0.0	0.0	0.0	9.4
Lane LOS				A
Approach Delay (s)	0.0	0.0		9.4
Approach LOS				A

Intersection Summary	
Average Delay	0.8
Intersection Capacity Utilization	17.4%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings  
303: Private Street A & Kingsley Road

10/09/2024  
2034 Future Total PM Peak Hour

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖		↖	↖	↖	↖
Traffic Volume (vph)	226	18	1	136	10	1
Future Volume (vph)	226	18	1	136	10	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	15.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			5.0		2.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.990				0.989	
Fit Protected			0.950		0.956	
Satd. Flow (prot)	1799	0	1789	1921	1781	0
Fit Permitted			0.950		0.956	
Satd. Flow (perm)	1799	0	1789	1921	1781	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	202.7			266.0	82.5	
Travel Time (s)	15.2			20.0	6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	2%	2%	0%	2%	2%
Adj. Flow (vph)	246	20	1	148	11	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	266	0	1	148	12	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	23.0%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
303: Private Street A & Kingsley Road

10/09/2024  
2034 Future Total PM Peak Hour

	→	↖	↗	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖		↖	↖	↖	↖
Traffic Volume (veh/h)	226	18	1	136	10	1
Future Volume (Veh/h)	226	18	1	136	10	1
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)	246	20	1	148	11	1
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage (veh)	2			2		
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			266		406	256
vC1, stage 1 conf vol					256	
vC2, stage 2 conf vol					150	
vCu, unblocked vol			266		406	256
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	100
cM capacity (veh/h)			1298		729	783

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	266	1	148	12
Volume Left	0	1	0	11
Volume Right	20	0	0	1
cSH	1700	1298	1700	733
Volume to Capacity	0.16	0.00	0.09	0.02
Queue Length 95th (m)	0.0	0.0	0.0	0.4
Control Delay (s)	0.0	7.8	0.0	10.0
Lane LOS		A		A
Approach Delay (s)	0.0	0.1		10.0
Approach LOS				A

Intersection Summary	
Average Delay	0.3
Intersection Capacity Utilization	23.0%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings  
303: Private Street A & Kingsley Road

10/09/2024  
2034 Future Total SAT Peak Hour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↔	↔	↔
Traffic Volume (vph)	206	15	1	157	14	2
Future Volume (vph)	206	15	1	157	14	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	15.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			5.0		2.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.991				0.984	
Fit Protected			0.950		0.958	
Satd. Flow (prot)	1901	0	1789	1921	1775	0
Fit Permitted			0.950		0.958	
Satd. Flow (perm)	1901	0	1789	1921	1775	0
Link Speed (k/h)	70			50	48	
Link Distance (m)	202.7			266.0	82.5	
Travel Time (s)	10.4			19.2	6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	2%	2%	0%	2%	2%
Adj. Flow (vph)	224	16	1	171	15	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	240	0	1	171	17	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.8%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
303: Private Street A & Kingsley Road

10/09/2024  
2034 Future Total SAT Peak Hour

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↔	↔	↔
Traffic Volume (veh/h)	206	15	1	157	14	2
Future Volume (Veh/h)	206	15	1	157	14	2
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)	224	16	1	171	15	2
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage (veh)	2			2		
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			240		405	232
vC1, stage 1 conf vol					232	
vC2, stage 2 conf vol					173	
vCu, unblocked vol			240		405	232
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	100
cM capacity (veh/h)			1327		735	807

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	240	1	171	17
Volume Left	0	1	0	15
Volume Right	16	0	0	2
cSH	1700	1327	1700	742
Volume to Capacity	0.14	0.00	0.10	0.02
Queue Length 95th (m)	0.0	0.0	0.0	0.5
Control Delay (s)	0.0	7.7	0.0	10.0
Lane LOS		A		A
Approach Delay (s)	0.0	0.0		10.0
Approach LOS				A

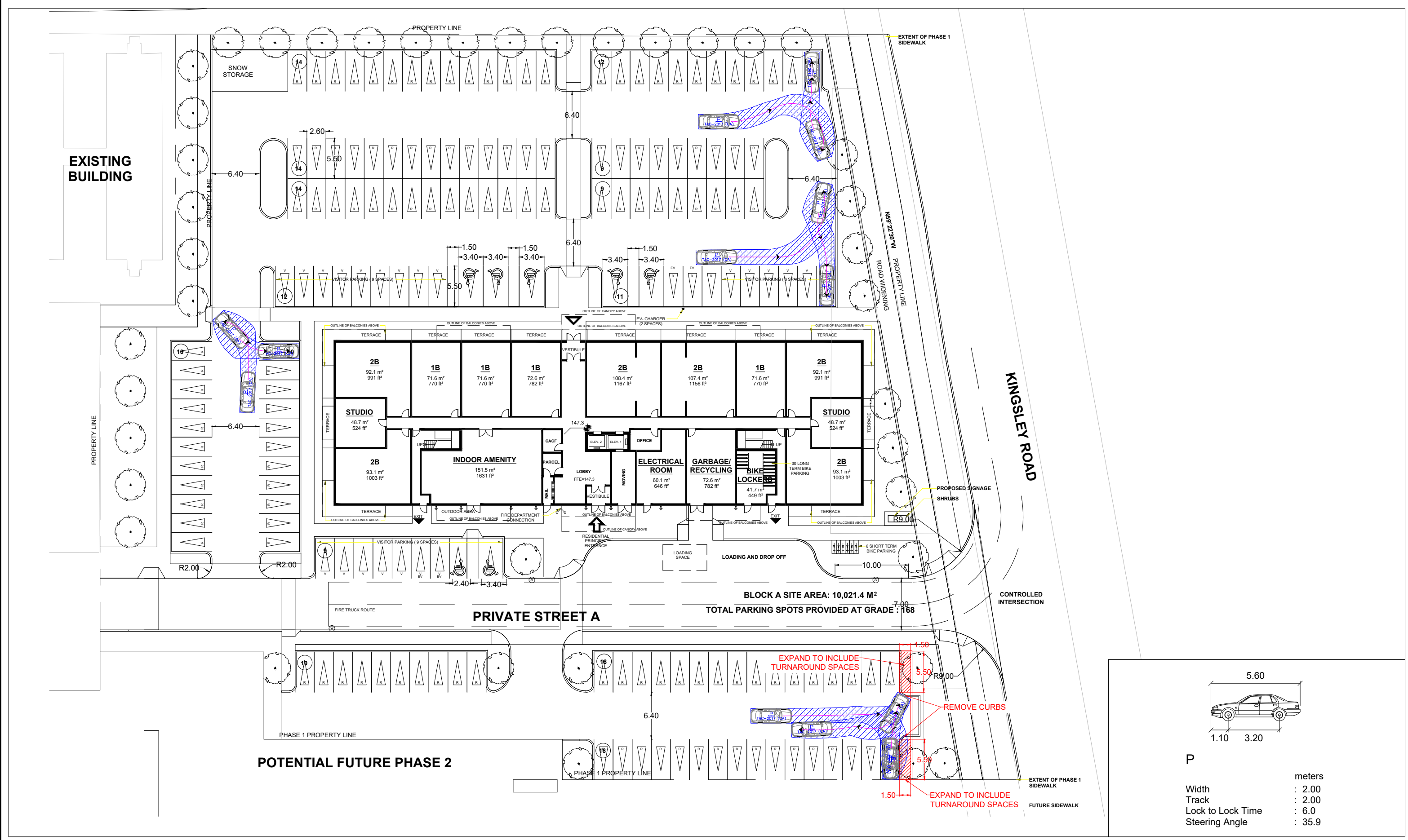
Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization	21.8%		ICU Level of Service A
Analysis Period (min)	15		



# **Appendix G:**

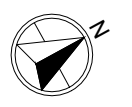
## Site Circulation Review

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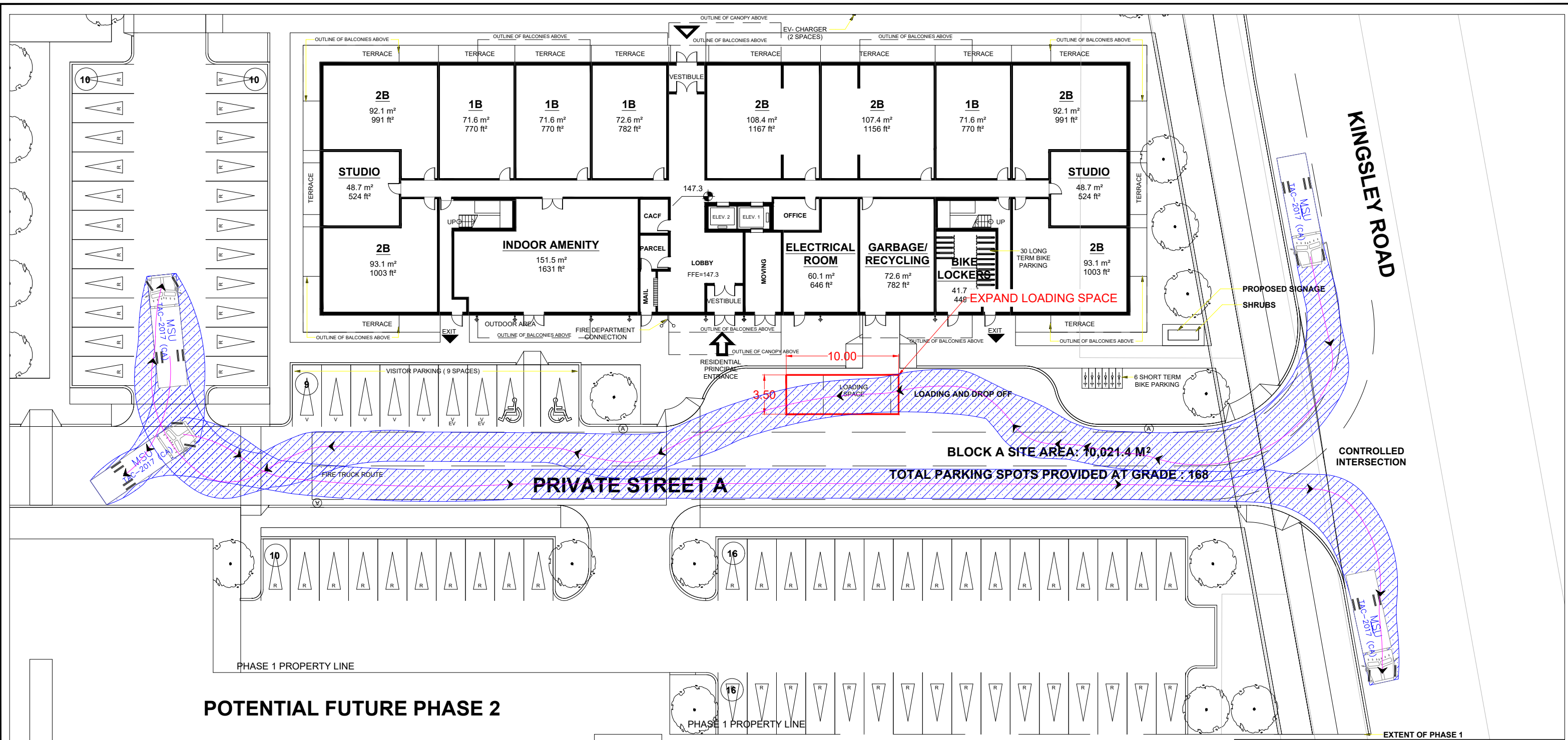


**P**

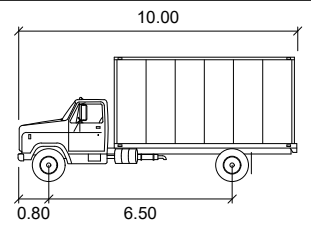
Width : 5.60 meters  
 Track : 1.10 meters  
 Lock to Lock Time : 3.20 seconds  
 Steering Angle : 35.9 degrees



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POTENTIAL FUTURE PHASE 2

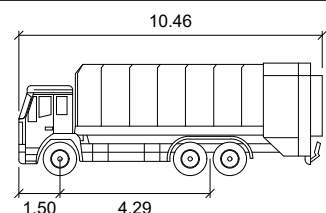
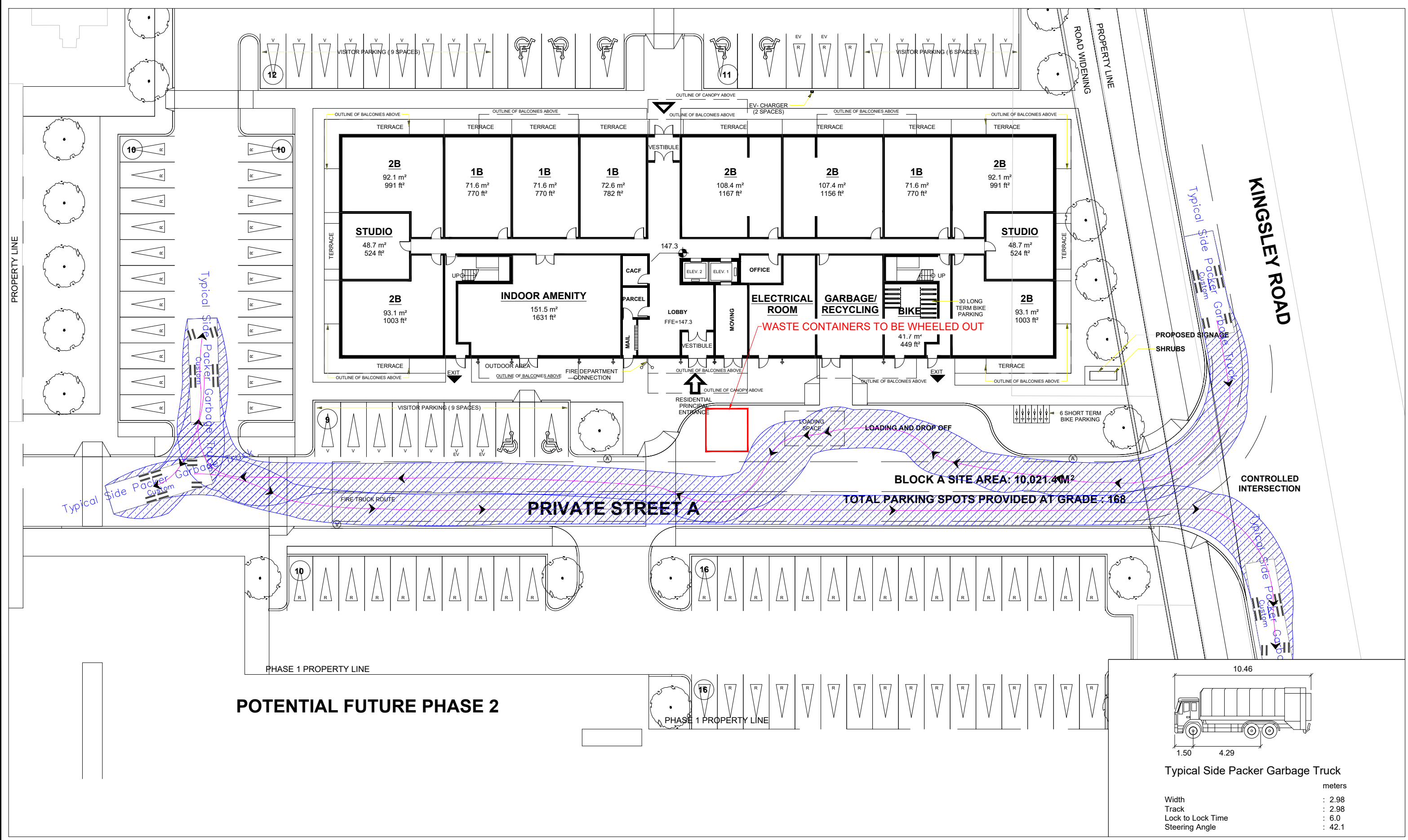


MSU		units
Width	: 2.60	meters
Track	: 2.60	meters
Lock to Lock Time	: 6.0	seconds
Steering Angle	: 40.2	degrees



N.T.S.

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Typical Side Packer Garbage Truck

	meters
Width	: 2.98
Track	: 2.98
Lock to Lock Time	: 6.0
Steering Angle	: 42.1

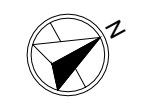
POTENTIAL FUTURE PHASE 2

PRIVATE STREET A

TOTAL PARKING SPOTS PROVIDED AT GRADE : 168

BLOCK A SITE AREA: 10,021.4M<sup>2</sup>

WASTE CONTAINERS TO BE WHEELED OUT



N.T.S.

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