

TRAFFIC IMPACT ASSESSMENT REPORT

Alterations to 192 Main St.

Wellington,
Prince Edward County, ON

Amended May 30, 2023

Prepared for:

The Principals of the
Wellington I. G.

192 Main St., Wellington



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Executive Summary

Introduction - This report evaluates the weekday morning, weekday afternoon and Saturday mid-day peak vehicular traffic flows to address the expected traffic flow generated by the proposed commercial development on the north side of Main Street, Wellington, civic address #192.

The proposed commercial development is a three-story hotel which will offer the usual amenities, dining, lounge, parlour, spa. Seven rooms/suites will be provided in the main building. Additional accommodations will be provided by seven (7) separate cabins on-site (A frame with two (2) bedrooms), and a separate annex that will have five (5) units, for a total of twenty (20) rooms.

The basement area of the main building will provide a spa area for guests as well as a work/office area for staff. The daily operation of the hotel dining room is expected to be from 7:00 AM to 11:00 PM most days, if not daily throughout the year. The hotel guests are expected to be the primary diners.

A proposed separate outdoor non-enclosed area will total 3000 square feet (278.7 square metres). This facility will be located west of the main building and will provide dining/private gatherings for up to about one hundred (100) on an occasional basis, an alternative to the indoor dining area, weather permitting. In this report, any reference to the dining room will apply to the enclosed room in the main building.

Vehicular access to this property will be along the present driveway location directly to/from Main Street. Pedestrians will have access to the hotel/restaurant from the municipal sidewalks along Main Street.

A conceptual drawing of the proposed development is attached in the Appendix.

Recommendation – Conclusion

Traffic Volume –

The estimated trip generation for the proposed hotel/restaurant development at #192 Main Street, Wellington will have a negligible effect on traffic flows and should not cause a hazard to or adversely interfere with other traffic on Main Street.

Turning Lane –

Turning-lanes are not required on Main Street at the Wellington Hotel access point or at the Main-Belleville Streets intersection as a result of the Wellington Hotel development.

Traffic Control -

A traffic control device is not required at the driveway access to Main Street; the ‘rules of the road’ apply to vehicular & pedestrian right-of-way.

Pedestrians & Cyclists -

The estimated trip generation for the proposed hotel development at #192 Main Street will have a negligible effect on pedestrian traffic or cyclists.

Level of Service -

Main Street at Belleville Street intersection operates at LOS ‘A, B & C’ respectively during the weekday AM & PM peaks and Saturday mid-day peak in the year 2027 with the proposed hotel/restaurant generated trips and the usual expected annual traffic volume growth added to the year 2017 traffic volumes, based on Synchro software version 10 level of service assessments.

As noted in section 5.6 *Operational Assessment*, Levels of Service A, B or C are acceptable levels of service for Main Street.

Emergency Vehicle Access –

Considering the access for the largest of the emergency vehicles, the current firefighting trucks, there is only one access to the property – from Main St. The entrance is marked with a conspicuous identifying sign. The centreline radius from both the east and west directions off Main St. is 12.0 metres. The width of the driveway at the property line in is 7.44 metres. See Architectural drawing A-101A, “Fire Route Plan”. This geometry complies with the minimum requirements under OBC 20 and the Town of Prince Edward County.

The 6.0 metre wide fire route is constructed of a heavy-duty base and asphalt from the entry to the proposed rear yard fire hydrant and passes by a clearly marked fire hose connection on the east face of the building, near the east public entry; and includes the ‘backup’ length of fire route for turnaround.

The entire fire route is following the minimum requirements of OBC 20.

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1.0 Introduction

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The basement area of the main building will provide a spa area for guests as well as a work/office area for staff. The daily operation of the hotel dining room is expected to be from 7:00 AM to 11:00 PM most days, if not daily throughout the year. The hotel guests are expected to be the primary diners.

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Vehicular access to this property will be along the present driveway location directly to/from Main Street. Pedestrians will have access to the hotel/restaurant from the municipal sidewalks along Main Street.

A conceptual drawing of the proposed development is attached in the Appendix.

2.0 Existing Roadway Characteristics

2.1 Roadways

Main Street, Wellington is a two-lane east-west roadway under Prince Edward County jurisdiction. The roadway asphalt is delineated with concrete curb & gutter, with grassed boulevards separating the roadway from the concrete sidewalk along the north & south sides of the street. Street lights are located along the north boulevard of Main Street on either side of this property, making this area attractive to pedestrians/cyclists.

The closest significant roadway intersection is about 300 metres to the east, Main Street at Belleville Street (County Road 2).

2.2 Vehicular Speed

The posted maximum speed limit in this area of Main Street is 50 km/h.

2.3 Traffic Volume

Manual traffic counts utilized in this report were collected in late September & early October 2017. Directional flow peak period traffic data was collected at the intersection of Main Street at Belleville Street. Figures 1 & 2 illustrate the intersection flow diagrams for the typical weekday AM peak hour and PM peak hour respectively. Figure 3 illustrates the intersection flow diagrams for a typical Saturday mid-day peak hour. Note that traffic volumes in & out of the adjacent commercial lot immediately west of the intersection are included in the figures due to its proximity to the intersection.

Note that the weekday PM peak hour traffic flows exceed the weekday AM peak hour traffic flows, and the Saturday mid-day hour traffic flows exceed the weekday peak flows. Therefore, this report will assess the weekday PM peak hour period & the Saturday mid-day period as the bases for analysis of the impact of the traffic flows generated by the proposed hotel, though the restaurant is expected to influence the majority of the trips during the Saturday mid-day peak period.

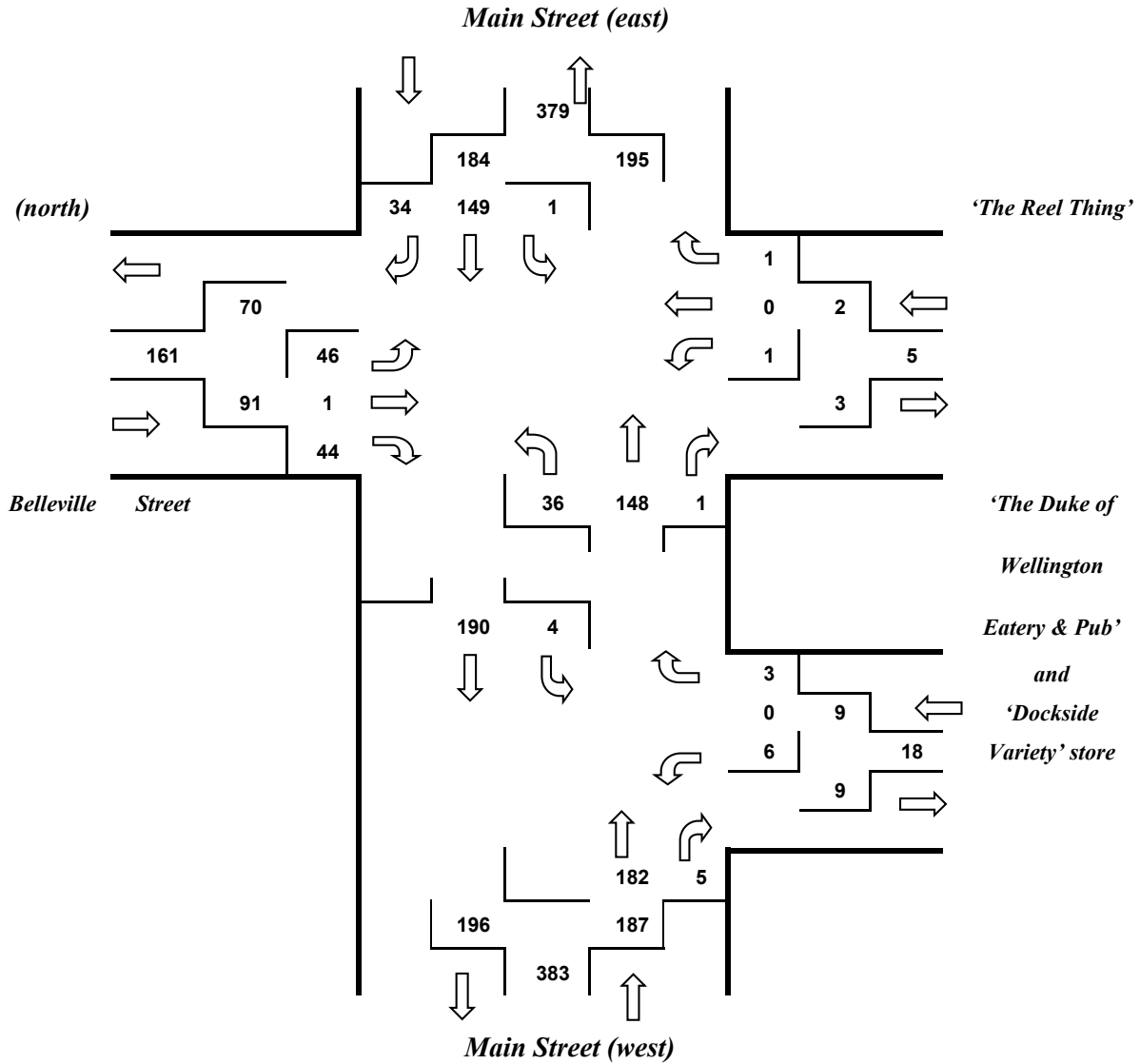
Any reference within this report to weekday AM or PM peak hour/period refers to the peak hour times at the adjacent Main Street-Belleville Street intersection. Presently the peak periods can be expected on a weekday between 7:30 & 9:00 AM, and between 3:15 & 5:15 PM. On a typical Saturday, the peak hour occurs between 11:45 AM & 1:30 PM. A typical Sunday is expected to be reflective of a typical Saturday, but with its peak occurring a little later in the afternoon.

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The existing traffic volumes on this section of Main Street range from about 375 to 400 vehicles per hour (vph) during the morning rush hour with a directional distribution of about 50/50 westbound – eastbound as commuters go to work. During the evening rush hour, the traffic volume is about 450 to 475 vph and is also split about 50/50 as typically, commuters head home. During the Saturday mid-day peak, the 650 to 675 vph traffic flow distribution on Main Street is split about 50/50.

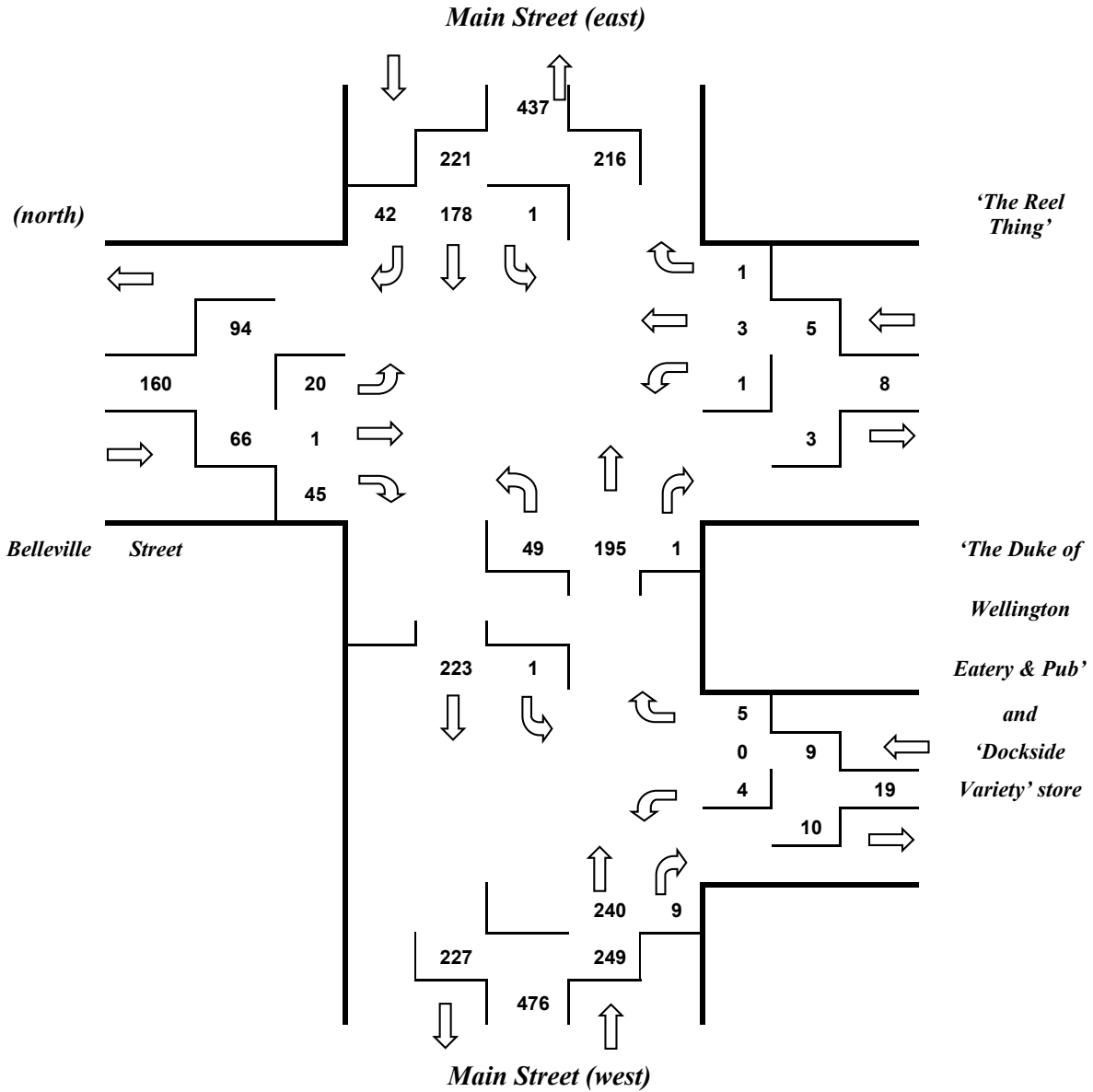
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**Figure 1 – Main Street at Belleville Street, Wellington,
 Weekday AM Peak Traffic Volume,
 October 3, 2017.**



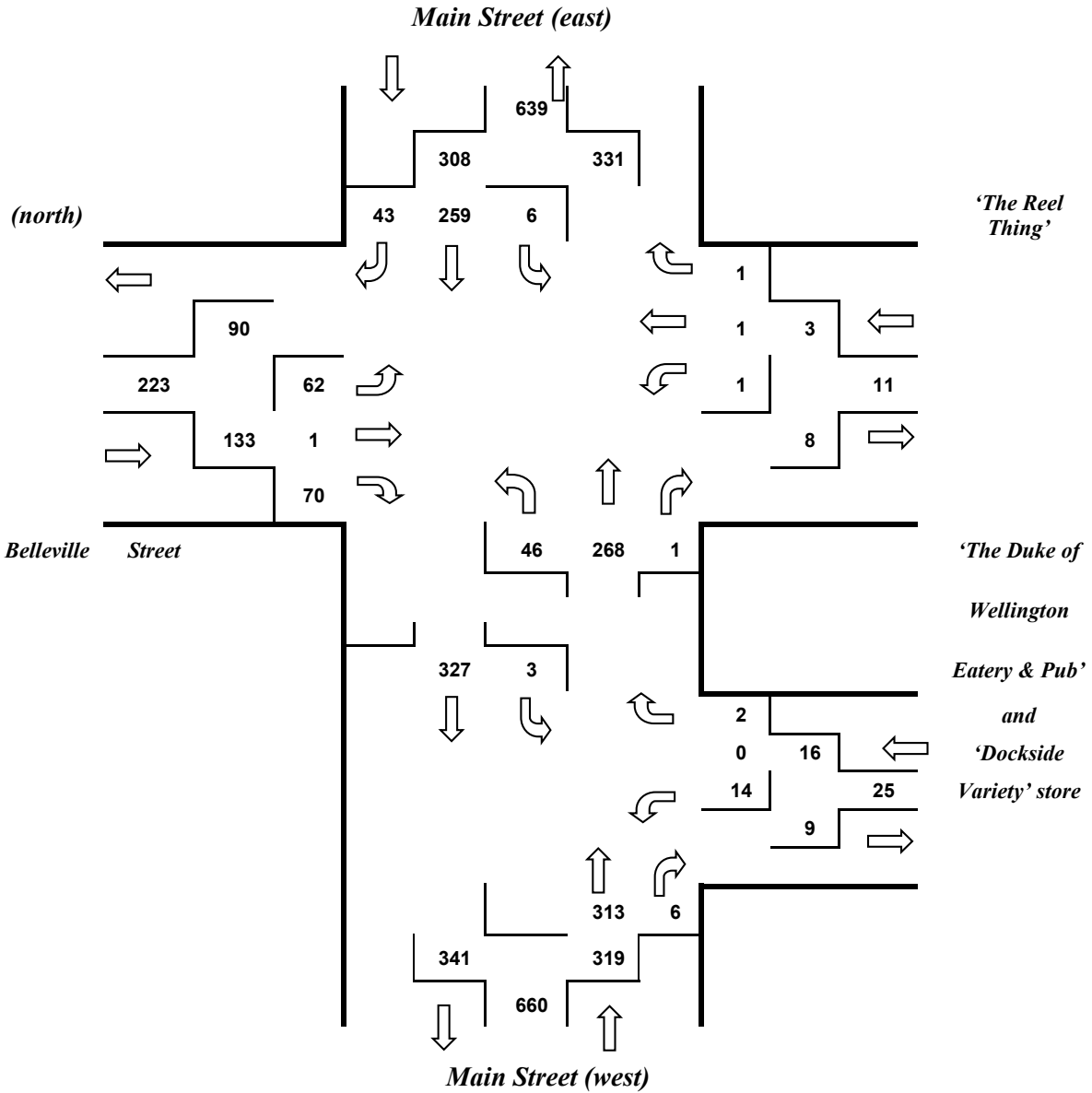
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**Figure 2 - Main Street at Belleville Street, Wellington,
 Weekday PM Peak Traffic Volume,
 October 3, 2017.**



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**Figure 3 – Main Street at Belleville Street, Wellington,
 Saturday Mid-day Peak Traffic Volume,
 September 30, 2017.**



3.0 Pedestrians, Cyclists

Neither the number of pedestrians nor cyclists are noteworthy on the roadways in this area of the Main Street, Wellington. Occasionally pedestrians walk along the sidewalks on Main Street, and an occasional pedestrian crosses Main Street and/or Belleville Street at or near the intersection. An occasional cyclist travels along Main Street and/or Belleville Street.

4.0 Future Traffic Volume

4.1 Traffic Volume Growth

Prince Edward County staff has advised that a growth rate of 3.2 percent per year, non-compounded is appropriate to predict background traffic volume growth in this area of Main Street from the present to the year 2027.

4.2 Traffic Volume – Year 2027

It is normal practice to predict the expected annual growth of the existing traffic volumes on the adjacent roadways regardless of any development generated trips. This expected growth is usually referred to as background traffic. It is also normal practice to predict how much traffic will be added to the current peak period traffic by a proposed development. The usual accepted method to accomplish this is to record pre-development traffic volumes, add the generated trips with the assumption that the development is complete, and repeat this process for five years later with the expected annual growth factored in.

Assuming that the construction of the proposed commercial development is completed in about one year, traffic volumes are predicted for the year 2027, the build-out year (2022) plus 5 years beyond. Figures 4, 5 & 6 below illustrate the expected traffic flows for the weekday AM & PM peak periods, plus the Saturday peak, in the year 2027.

4.3 Trip Generation

The Institute of Transportation Engineers (ITE) has compiled sets of data in their Trip Generation manual which identifies many types of developments and the number of vehicle trips each tends to generate. The ITE refers to this data as ‘trips generated per unit’. The data that they reference in their manual is contributed by engineering professionals and interested parties, based on actual events. The data contained in this report is from the current tenth (10th) edition of this ‘Trip Generation’ manual.

The lodging category from the ITE Trip Generation manual was used to estimate the number of vehicle trips expected to be generated by the ‘hotel’ portion of this

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proposed development. The ITE manual defines ‘hotel type lodging’ (ITE Code 310). “A hotel is a place of lodging that provides sleeping accommodations and supporting facilities such as a restaurant, cocktail lounge, meeting & banquet rooms or convention facilities, limited recreational facilities (pool, fitness room), and other retail and service shops”; not unlike the facilities planned for this proposed development.

The restaurant category from the ITE Trip Generation manual was used to estimate the number of vehicle trips expected to be generated by the ‘100 seat restaurant’ portion of this proposed development. The ITE manual defines High-Turnover (Sit-down) Restaurant (ITE Code 932) as a full-service establishment typically offering lunch & dinner and may also be open for breakfast. They typically do not take reservations. Typically, a portion of these diners will be hotel guests, who are already accounted for as generated trips, needing parking, and potential diners. This adjustment effectively reduces the additional dining area to about 1860 sq ft (172.8 sq m).

Note that on a typical weekday, the timing of greatest number of hotel-generated vehicular trips does not necessarily coincide with the timing of a peak traffic flow on the adjacent roadway, Main Street. This pattern also applies to the typical weekday peak period trips and Saturday mid-day peak. Additionally, some restaurant guests may be pedestrians, thereby reducing the number of motor vehicle trips and reducing the use of on-site parking; some patrons may arrive by bicycle & some may be dropped off/picked up.

By determining what affects the additional traffic will have on the adjacent roadway, the road authority can then determine if the roadway can support the additional traffic or if roadway improvements may be required.

Table 1 below details the vehicular trips expected to be generated by the nineteen (19) rooms, and the restaurant. Pass-by trips represent trips to the Wellington Hotel by vehicles already accounted for in the background traffic volumes, motorists who would typically be travelling along Main Street even if the Wellington Hotel were not operating.

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**Table 1 – Main Street at Hotel Access,
Estimated Generated Trips, Weekday AM Peak.**

Weekday AM Peak	# of Units	Avg Rate Per Unit	Total Number of Trips	Estimated Vehicular Trips Entering	Estimated Vehicular Trips Exiting
Hotel Generated - Rooms	19	0.47	9	59% 5	41% 4
Restaurant Generated – 1000 sq ft	1.86	9.94	18	55% 10	45% 8
Pass-by Trips Adjustment			0	0	0
Total Vehicular Trips			27	15	12
Left-turns from Main Street				60% 9	
Right-turns from Main Street				40% 6	
Left-turns from Hotel Access					40% 5
Right-turns from Hotel Access					60% 7

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**Table 2 – Main Street at Hotel Access,
Estimated Generated Trips, Weekday PM Peak.**

Weekday AM Peak	# of Units	Avg Rate Per Unit	Total Number of Trips	Estimated Vehicular Trips Entering	Estimated Vehicular Trips Exiting
Hotel Generated - Rooms	19	0.60	11	51% 6	49% 5
Restaurant Generated – 1000 sq ft	1.86	9.77	18	62% 11	38% 7
Pass-by Trips Adjustment			8	4	4
Total Vehicular Trips			21	13	8
Left-turns from Main Street				45% 6	
Right-turns from Main Street				55% 7	
Left-turns from Hotel Access					35% 3
Right-turns from Hotel Access					65% 5

The ITE Trip Generation tables usually look at the peak period of the generator, rather than the roadway peak, when evaluating weekend traffic. And yes, this usually coincides with the roadway peak, or close to it.

For the purpose of this report, the ‘Saturday Peak Hour of Generator’ in Table 3 can be assumed to be during or near the Saturday mid-day peak of Main Street.

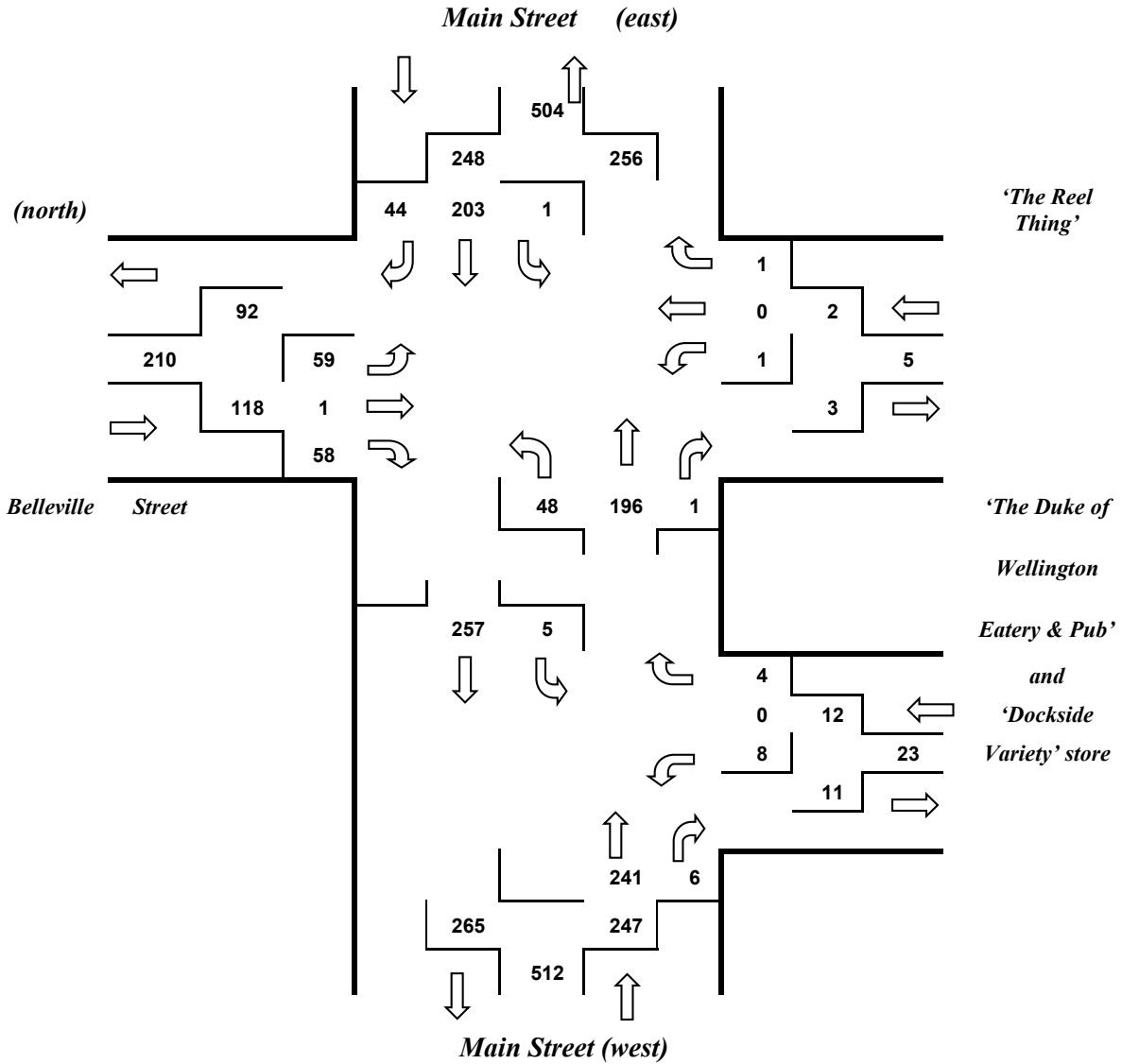
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**Table 3 – Main Street at Hotel Access,
Estimated Generated Trips, Saturday Mid-day Peak.**

Weekday AM Peak	# of Units	Avg Rate Per Unit	Total Number of Trips	Estimated Vehicular Trips Entering	Estimated Vehicular Trips Exiting
Hotel Generated - Rooms	19	0.72	14	56% 8	44% 6
Restaurant Generated – 1000 sq ft	1.86	11.19	21	51% 11	49% 10
Pass-by Trips Adjustment			0	0	0
Total Vehicular Trips			35	19	16
Left-turns from Main Street				25% 5	
Right-turns from Main Street				75% 14	
Left-turns from Hotel Access					35% 6
Right-turns from Hotel Access					65% 10

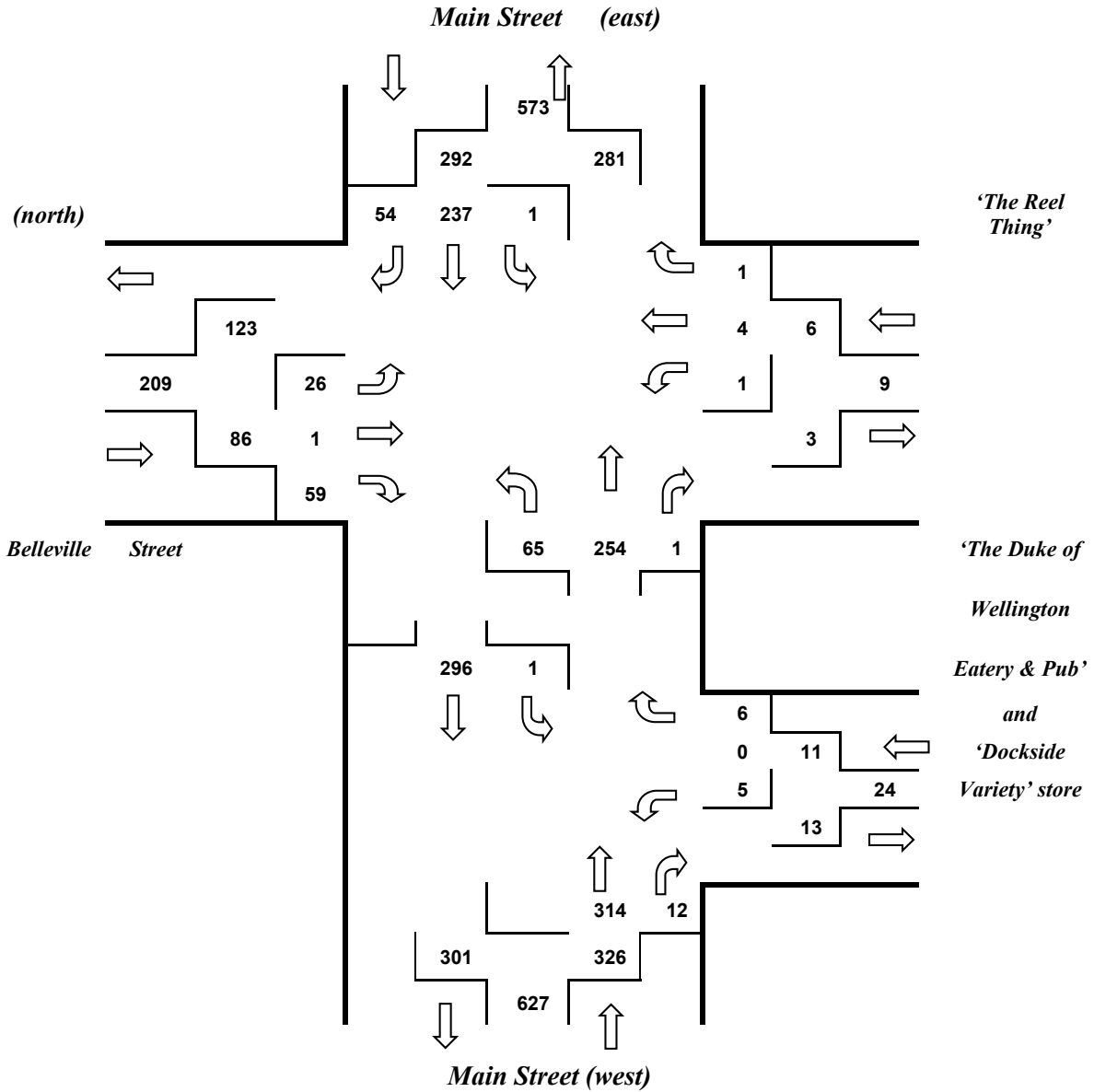
Figures 4, 5 & 6 below illustrate respectively the intersection traffic flow diagrams for the weekday AM peak hour, the weekday PM peak hour, and the Saturday mid-day peak for Main Street at Belleville Street in the year 2027 with the generated vehicular traffic trips from the hotel/restaurant added.

**Figure 4 – Main Street at Belleville Street, Wellington,
 Weekday AM Peak Traffic Volume,
 Year 2027.**



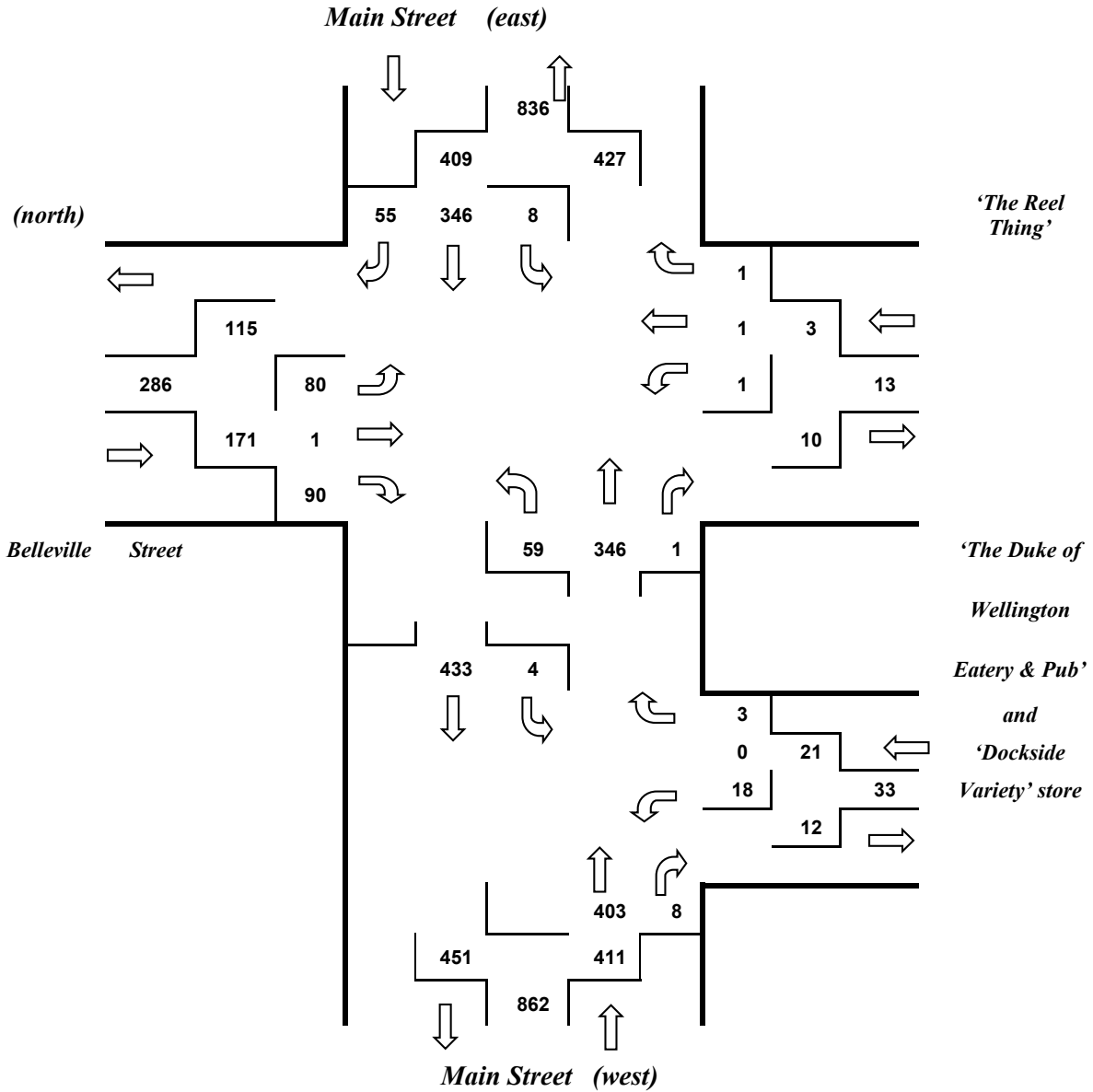
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Figure 5 - Main Street at Belleville Street, Wellington, Weekday PM Peak Traffic Volume, Year 2027.



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Figure 6 – Main Street at Belleville Street, Wellington,
 Saturday Mid-day Peak Traffic Volume,
 Year 2027.



5.0 Design Feature

5.1 Design Speed

Whenever a roadway or intersection is being designed or assessed, it is important to determine what is the appropriate maximum speed limit or design speed to be assigned to the roadway. This ensures that the road authority is providing a safe and efficient roadway.

5.2 Design Hour Volume

Whenever a roadway or intersection is being designed or assessed, decisions must be made as to what will be provided in the roadway cross-section, number of lanes, lane width, shoulders, turning lanes, and traffic control devices. Therefore, traffic analyses and the capacity of the roadway focus on the traffic volume during peak periods (hours). The weekday AM & PM peak is usually the most reoccurring traffic flow, and is typically a commuter type of traffic flow, home to work in the morning, work to home in the evening, usually five days a week, fifty-two weeks a year. The weekday P.M. peak hour volume is typically higher than the weekday A.M. peak hour volume. This is the reason the roadway is usually designed to accommodate the weekday P.M. peak hour traffic flows, but obviously the AM peak traffic flows also must also be considered.

In an environment such as Wellington, the traffic pattern has its weekday morning peak & weekday evening peak ‘commuter’ characteristics, but also ‘tourist’ & ‘recreation’ characteristics, weekend mid-day peak. This can result in weekend traffic being busier than some weekday peaks. Therefore, it is prudent to also include a Saturday mid-day peak period in the traffic volume assessment.

It is important to remember that the design hour is typically the thirtieth (30th) highest hour in the year. This area of Prince Edward County typically has seasonal variations in traffic flows, lower during the Winter months, higher during the late Spring to early Autumn months. The thirtieth highest hour most likely occurs on a July or August weekday PM peak.

5.3 Left-turn Lane Assessment

A left-turn lane is usually provided when the number of left-turning vehicles creates a hazard to other motorists or reduces the capacity of the intersection.

5.4 Right-turn Lane Assessment

The Ministry of Transportation, Ontario uses a guideline that indicates that a right-turn lane and taper is beneficial when right-turning vehicles create a hazard

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(to other traffic flows) or when the volume of right-turns approaches the channelization criteria of about 60 vehicles per hour.

5.5 Traffic Control Device Assessment

The Ontario Highway Traffic Act requires that ‘Every driver or street-car operator entering a highway from a private road or driveway shall yield the right of way to all traffic approaching on the highway so closely that to enter would constitute an immediate hazard.’

Since the Hotel driveway is a ‘private road or driveway’, and not a municipal roadway, a stop/yield sign is not required.

5.6 Operational Assessment

The additional traffic volume generated by the Wellington Hotel will have an effect on Main Street traffic flows, and on the Main Street intersection at Belleville Street. A method to quantify this effect is to assess the traffic flows on Main Street at Belleville Street as it presently exists, year 2017, and compare its operation to the year 2027, assuming the Wellington Hotel is complete and operating.

The Highway Capacity Manual, 2010 edition, is the usual standard used by road authorities to determine at which level a roadway or roadway intersection is operating. A new tool that replicates the Highway Capacity Manual is the software program “Synchro 10”, which is the method preferred by most Municipal staff to calculate volume to capacity ratio and level of service at intersections controlled by traffic control signal or stop sign.

The Level of Service for (non-signalized) intersections controlled by stop sign, usually on the minor roadway, is determined by calculating the vehicle delay for the intersection rather than per approach or flow and is assigned a letter (A to F) to a range of values as noted below. Delay is usually only experienced by vehicles on the approach controlled by the stop sign.

Non-signalized Intersection LOS	
Average Delay per Vehicle	LOS
≤ 10	A
>10 to ≤ 15	B
>15 to ≤ 25	C
>25 to ≤ 35	D
>35 to ≤ 50	E
>50	F

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The Intersection Capacity Utilization (ICU) Level of Service gives insight into how an intersection is operating and how much extra capacity is available to handle traffic volume fluctuations. The ICU LOS is not a measurement in time as much as it is a barometer of the conditions that can be expected. In the ICU calculation the sum of critical traffic flows in seconds, and assumed to be 100% saturated, is expressed as a percentage when divided by a 120 second cycle length.

Intersection Capacity Utilization	
Average Delay per Vehicle	LOS
0% to 55%	A
>55% to 64%	B
>64% to 73%	C
>73% to 82%	D
>82% to 91%	E
>91% to 100%	F
>100% to 109%	G
>109%	H

A percentage value less than 100 means there is extra capacity at the intersection. A value greater than 100 indicates the intersection is operating at above its capacity. The ICU Level of Service ‘E’ or ‘F’ indicates less congestion than the Non-signalized Intersection Level of Service ‘E’ or ‘F’ above.

Table 4 below lists the intersection level of service for the AM & PM peak hour, and Saturday mid-day peak in the years 2017 and 2027 for the Main Street-Belleville Street intersection.

**Table 4 – Level of Service for Main-Belleville Streets Intersection,
Weekday AM Peak, PM Peak & Saturday Mid-day Peak,
Years 2017 & 2027.**

Intersection	Peak Hour	Intersection Capacity Utilization LOS Year 2017	Intersection Capacity Utilization LOS Year 2027
Main Street at Belleville Street	Weekday AM	A	A
	Weekday PM	A	B
	Saturday Mid-day	B	C

Note: Synchro software version 10 used to calculate Level of Service.

6.0 Recommendation – Conclusion

6.1 Traffic Volume

The estimated trip generation for the proposed hotel/restaurant development at #192 Main Street, Wellington will have a negligible effect on traffic flows and should not cause a hazard to or adversely interfere with other traffic on Main Street.

6.2 Turning Lane

Turning-lanes are not required on Main Street at the Wellington Hotel access point or at the Main-Belleville Streets intersection as a result of the Wellington Hotel development.

6.3 Traffic Control

A traffic control device is not required at the driveway access to Main Street; the ‘rules of the road’ apply to vehicular & pedestrian right-of-way.

6.4 Pedestrians & Cyclists

The estimated trip generation for the proposed hotel development at #192 Main Street will have a negligible effect on pedestrian traffic or cyclists.

6.5 Level of Service

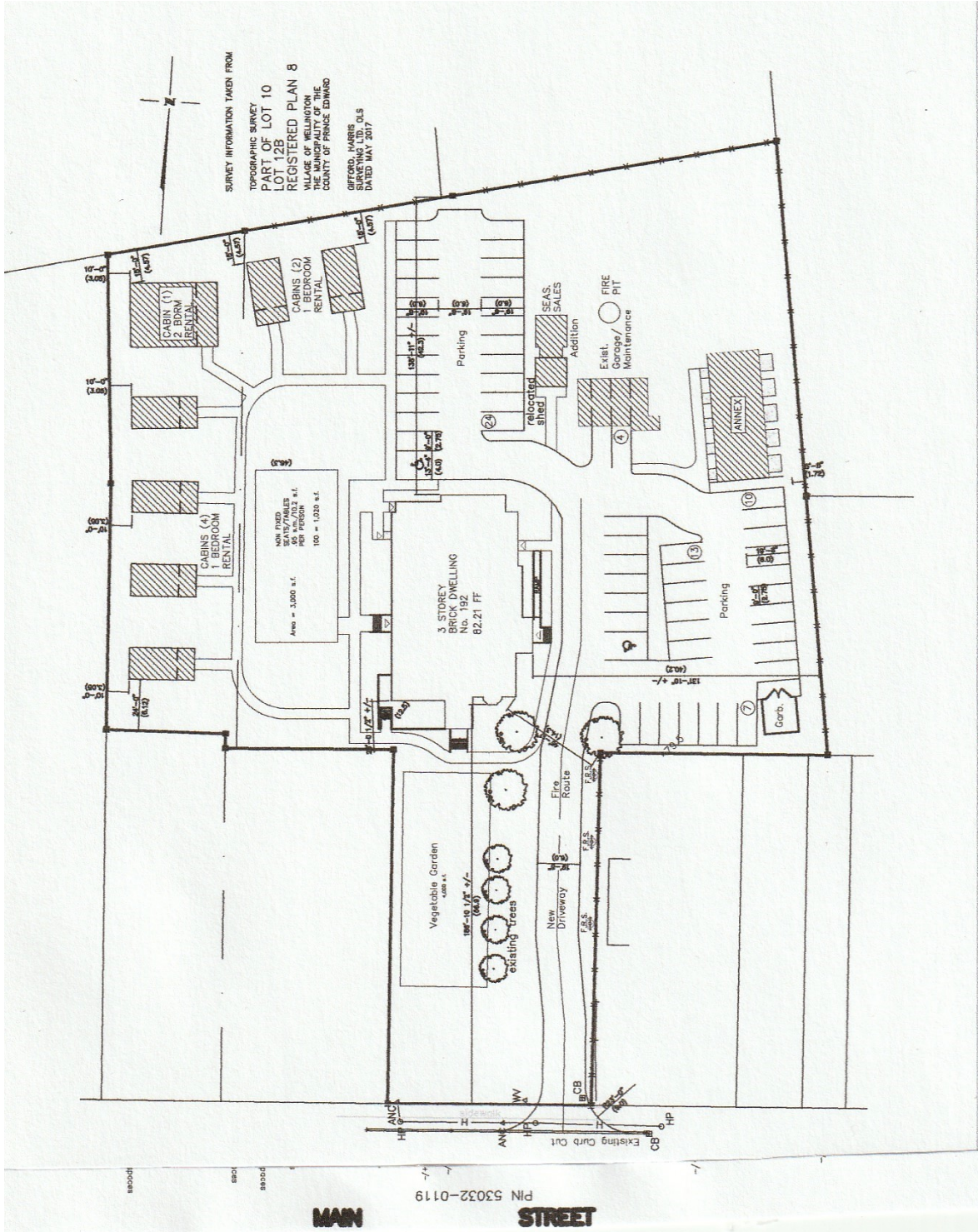
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As noted in section 5.6 *Operational Assessment*, Levels of Service A, B or C are acceptable levels of service for Main Street.

Appendix

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Conceptual Development Plan of Proposed Hotel Complex,
 192 Main Street, Wellington, Prince Edward County



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Synchro 10 Report Main Street at Belleville Street Weekday AM Peak, Year 2027

Lanes, Volumes, Timings 3: Main St & Belleville St

03/17/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	48	196	1	1	203	44	1	0	1	59	1	58
Future Volume (vph)	48	196	1	1	203	44	1	0	1	59	1	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	4.8	3.7	3.7	4.2	3.7	3.7	4.8	3.7	3.7	4.5	3.7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.976			0.932			0.934	
Flt Protected		0.990						0.976			0.976	
Satd. Flow (prot)	0	2018	0	0	1874	0	0	1848	0	0	1798	0
Flt Permitted		0.990						0.976			0.976	
Satd. Flow (perm)	0	2018	0	0	1874	0	0	1848	0	0	1798	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		101.4			73.4			108.5			97.2	
Travel Time (s)		7.6			5.5			8.1			7.3	
Confl. Peds. (#/hr)	10		3	3		10	7		43	43		7
Confl. Bikes (#/hr)									1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	1	0	0	1	0
Adj. Flow (vph)	52	213	1	1	221	48	1	0	1	64	1	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	266	0	0	270	0	0	2	0	0	128	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			0.0	
Two way Left Turn Lane												
Headway Factor	1.06	0.91	1.06	1.06	0.99	1.06	1.06	0.92	1.06	1.06	0.95	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary













Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.0%
Analysis Period (min)	15
	ICU Level of Service A

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Synchro 10 Report
Main Street at Belleville Street
Weekday PM Peak, Year 2027

Lanes, Volumes, Timings
3: Main St & Belleville St

03/17/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	65	254	1	1	237	54	1	4	1	26	1	59
Future Volume (vph)	65	254	1	1	237	54	1	4	1	26	1	59
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	4.8	3.7	3.7	4.2	3.7	3.7	4.8	3.7	3.7	4.5	3.7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.975			0.977			0.907	
Flt Protected		0.990						0.992			0.985	
Satd. Flow (prot)	0	2020	0	0	1872	0	0	1956	0	0	1762	0
Flt Permitted		0.990						0.992			0.985	
Satd. Flow (perm)	0	2020	0	0	1872	0	0	1956	0	0	1762	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		101.4			73.4			108.5			97.2	
Travel Time (s)		7.6			5.5			8.1			7.3	
Confl. Peds. (#/hr)	10		3	3		10	7		43	43		7
Confl. Bikes (#/hr)									1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	1	0	0	1	0
Adj. Flow (vph)	71	276	1	1	258	59	1	4	1	28	1	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	348	0	0	318	0	0	6	0	0	93	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			0.0	
Two way Left Turn Lane												
Headway Factor	1.06	0.91	1.06	1.06	0.99	1.06	1.06	0.92	1.06	1.06	0.95	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.8%
Analysis Period (min)	15
	ICU Level of Service B

Traffic Impact Assessment Report – Wellington Hotel 192 Main Street, Wellington, Prince Edward County

Synchro 10 Report Main Street at Belleville Street Saturday Mid-day Peak, Year 2027

Lanes, Volumes, Timings 3: Main St & Belleville St

03/17/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	59	346	1	8	346	55	1	1	1	80	1	90
Future Volume (vph)	59	346	1	8	346	55	1	1	1	80	1	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	4.8	3.7	3.7	4.2	3.7	3.7	4.8	3.7	3.7	4.5	3.7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.982			0.955			0.929	
Flt Protected		0.993			0.999			0.984			0.977	
Satd. Flow (prot)	0	2026	0	0	1884	0	0	1903	0	0	1790	0
Flt Permitted		0.993			0.999			0.984			0.977	
Satd. Flow (perm)	0	2026	0	0	1884	0	0	1903	0	0	1790	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		101.4			73.4			108.5			97.2	
Travel Time (s)		7.6			5.5			8.1			7.3	
Confl. Peds. (#/hr)	10		3	3		10	7		43	43		7
Confl. Bikes (#/hr)									1			1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	1	0	0	1	0
Adj. Flow (vph)	64	376	1	9	376	60	1	1	1	87	1	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	441	0	0	445	0	0	3	0	0	186	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			0.0	
Two way Left Turn Lane												
Headway Factor	1.06	0.91	1.06	1.06	0.99	1.06	1.06	0.92	1.06	1.06	0.95	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 72.5% ICU Level of Service C
 Analysis Period (min) 15

