

**763 – 773 DUNDAS STREET
LONDON, ON**

MIXED-USE DEVELOPMENT

TRAFFIC IMPACT STUDY



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TRAFFIC IMPACT STUDY (JUNE 2024)

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INTRODUCTION AND BACKGROUND

A high-rise residential and mixed-use (commercial / mid-rise residential) redevelopment is proposed for lands situated at 763 – 773 Dundas Street in London, ON. As noted on **Figure 1**, the site is in central London, east of Adelaide Street North. Dundas Street is part of the arterial grid system in London and the principal means of external access to and from the area. Dundas Street begins in downtown London and runs east (to Thamesford, Woodstock, and beyond). King Street, south of the site, is a 3 km one-way eastbound collector roadway. Rectory Street, east of the site, is a collector roadway that runs south from Dundas Street to south of Hamilton Road. Hewitt Street, to the west of the site, is a one block local road. English Street is a local road to the northwest of the site. The Western Fair complex and Gateway Casinos London are located just southeast of the site; commercial establishments are located along the Dundas Street corridor, and the land use to the north is primarily residential.

King Street is part of the future Bus Rapid Transit (BRT) route and has been reconstructed to accommodate bus-only lanes. Bus-only lanes separate buses from mixed traffic to help improve transit reliability and frequency, reduce congestion, and support mobility. Designated bus lanes provide transit priority for rapid transit and local buses, and unrestricted access to emergency vehicles. As part of the road design for future rapid transit operations, buses will be travelling east and west on King Street. Before rapid transit operations begin in London, LTC local buses will be utilizing the newly installed bus-only lanes downtown for existing routes that serve passengers through these areas. General traffic will continue to travel eastbound ONLY on King Street as the road configuration has NOT changed for people driving (the contraflow bus-only lane is on the north side of the road). Right and left turns at some intersections have changed to ensure safety for all and to support efficient transit operations. Pavement markings, signs and other elements will help drivers recognize the direction of traffic, where right / left turns are restricted and whether there is a dedicated or shared turning lane.

Figure 2 defines the study area. Rectory Street is signal controlled at its intersections with Dundas Street and King Street. The tee intersections of Hewitt Street at Dundas Street and King Street are stop-controlled on Hewitt Street; English Street also meets Dundas Street at a stop-controlled tee intersection. One primary (reconfigured) all-directional stop-controlled site access at Dundas Street will facilitate access to and from the proposed development. The existing easement (single-lane alley between Hewitt Street and Rectory Street) is not evaluated for this report.

As illustrated on **Figure 3**, the proposed mixed-use development is comprised of a maximum of 213 residential units within the 24-storey high rise building and 34 residential units (with approximately 3,055 sq. ft. of first floor commercial space) in the 6-storey building fronting Dundas Street.

A total of 88 residential parking spaces will be provided in two lower floors of the tower, and the peak commercial parking demand will be accommodated via the existing ground-level parking supply of 16 spaces. It is anticipated that the northerly Dundas Street access will be the primary means of access to and from the proposed development, although some motorists may use the one-way lane to and from Hewitt Street and Rectory Street.

All applicable correspondence with the City of London (referenced to determine the scope of work for this report) is provided in **Appendix A**.

TRAFFIC DATA COLLECTION

As provided in **Appendix B**, weekday and weekend turning movement counts were collected by RC Spencer Associates Inc. on 2 and 3 February 2024 for the intersections of:

- Hewitt Street at Dundas Street;
- English Street at Dundas Street;
- Rectory Street at Dundas Street;
- Hewitt Street at King Street; and
- Rectory Street at King Street.

METHODOLOGY

The collected turning movement counts provided the basis for area traffic operations analysis. The software package utilized for the analysis (Synchro 11) calculates various parameters of intersection performance, such as level of service (LOS), intersection capacity utilization (ICU), control delay, and queue lengths on individual approaches. Synchro 11 outputs reference the Highway Capacity Manual (HCM) 6th Edition methodology.

Signalized level of service results are reported based on the following industry standard:

Level of Service	Average Control Delay (sec/veh)	General Description (Signalized Intersections)
A	≤10	Free Flow
B	>10 - 20	Stable Flow (slight delays)
C	>20 - 35	Stable flow (acceptable delays)
D	>35 - 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 - 80	Unstable flow (intolerable delay)
F	>80	Forced flow (jammed)

Unsignalized level of service results are reported based on the following industry standard:

Level of Service	Average Control Delay (sec/veh)
A	0 - 10
B	>10 - 15
C	>15 - 25
D	>25 - 35
E	>35 - 50
F	>50

TRIP GENERATION AND DISTRIBUTION

Trip generation for the proposed development was estimated from the 11th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. The dataset's average rate was used instead of the fitted curve equation because the value of the independent variables is in the lower range of the dataset, and the fitted curve equation does not pass through the origin. ITE Land Use Code 222 (High-Rise Multifamily Housing), ITE Land Use Code 221 (Mid-Rise Multifamily Housing), and ITE Land Use Code 822 (Strip Retail Plaza) are the most appropriate and conservative land use codes for the subject development proposal:

- Land Use Code 222 (residential) provides the following average trip generation rates:
 - Weekday Peak Hours:
 - AM Peak Hour: 0.27 trips per unit, with 34% in and 66% out;
 - PM Peak Hour: 0.32 trips per unit, with 56% in and 44% out;
 - Saturday Peak Hour: 0.36 trips per unit, with 57% in and 43% out.
- Land Use Code 221 (residential) provides the following average trip generation rates:
 - Weekday Peak Hours:
 - AM Peak Hour: 0.37 trips per unit, with 23% in and 77% out;
 - PM Peak Hour: 0.39 trips per unit, with 61% in and 39% out;
 - Saturday Peak Hour: 0.39 trips per unit, with 51% in and 49% out.
- Land Use Code 822 (commercial) provides the following average trip generation rates:
 - Weekday Peak Hours:
 - AM Peak Hour: 2.36 trips per 1000 sq. ft. GLA, with 60% in and 40% out;
 - PM Peak Hour: 6.59 trips per 1000 sq. ft. GLA, with 50% in and 50% out;
 - Saturday Peak Hour: 6.57 trips per 1000 sq. ft. GLA, with 51% in and 49% out.

The details of the trip generation analysis are contained in **Appendix C**; separate estimates were developed for AM, PM, and Saturday peak hours. When combined, the total trips generated by the proposed development are estimated to be:

- Weekday AM Peak Hour: 26 entering and 51 exiting;
- Weekday PM Peak Hour: 56 entering and 45 exiting;
- Saturday Peak Hour: 60 entering and 49 exiting.

To be abundantly conservative, no reductions were made in consideration of modal split, pass-by trips, or internal capture. However, it is the engineers' opinion that, given the location of the proposed development and its accessibility to active transportation facilities and transit stops, at least 20% of these trips will select a non-auto mode or will be the result of internal capture (or pass-by trips) from other area developments. Transit Routes 2 and 20 provide stops on Dundas Street at Hewitt Street and Rectory Street; each are approximately 100m from the site access. Regardless, for the sake of this analysis, all site generated trips were assumed to be auto trips.

Site generated traffic was distributed to / from Dundas Street at the primary (reconfigured) site access. The distribution of turning movements was based on the origin-destination observed in the turning movement counts (and in consideration of the one-way street constraints within the study area). The resulting site generated turning movements are provided on **Figures 4A and 4B**.

CAPACITY AND LEVEL OF SERVICE ANALYSIS

Detailed Synchro 11 analysis was carried out with respect to the following traffic scenarios:

- Existing Traffic;
- Background Traffic 2029;
- Total Traffic 2029 (Background Traffic 2029 + Site Generated Traffic);
- Background Traffic 2034; and
- Total Traffic 2034 (Background Traffic 2034 + Site Generated Traffic).

To be conservative, the analysis was carried out assuming full build-out conditions for the 2029 and 2034 horizon years. As directed by the City's transportation staff, existing traffic volumes were increased by 1.0% per year, compounded annually, for the 2029 and 2034 horizon forecasts. **Figures 5 to 9** summarize total traffic estimates that result from the addition of site generated traffic and the 2029 and 2034 horizon year forecasts for background traffic within the study area. The effect of adding the site generated traffic from the proposed development to horizon traffic volumes at each specific intersection can be found in **Appendix D**. The resulting Synchro 11 simulation reports are provided in **Appendix E**.

Existing signal timings (provided by the City of London) were used for all signalized control scenarios. To quantify the effect of traffic growth on area intersections and to assess the need for geometric and / or traffic control improvements, the Synchro results were summarized within the following commentaries:

Hewitt Street at Dundas Street

Hewitt Street at Dundas Street is a northbound stop-controlled tee intersection. The northbound approach accommodates a single shared approach lane, and Dundas Street is a two-lane undivided roadway (with a bicycle lane on the south side); this lane is physically separated from the vehicle lanes by a median / curb. A pedestrian crossover (PXO) is located on the east leg of the intersection, between Hewitt Street and English Street; sidewalks are on both sides of all legs. As observed from the below Tables 1 to 4, the intersection is anticipated to perform well on the eastbound and westbound approaches, exhibiting an overall LOS A during all AM, PM, and Saturday peak hour scenarios; the critical northbound approach exhibits a LOS C in the future background and total traffic PM peak hours, which is satisfactory. There is a nominal drop in the levels of service over the 10-year horizon; however, the critical northbound queues should not exceed one vehicle length, and the control delay should not exceed 16.5 seconds in the critical PM peak hour scenarios.

Table 1a: Level of Service by Approach – Hewitt Street at Dundas Street (AM Peak Hour)

Scenario	Hewitt Street at Dundas Street											
	AM Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	-	A	A	A	A	-	B	-	B	-	-	-
Background Traffic 2029	-	A	A	A	A	-	B	-	B	-	-	-
Total Traffic 2029	-	A	A	A	A	-	B	-	B	-	-	-
Background Traffic 2034	-	A	A	A	A	-	B	-	B	-	-	-
Total Traffic 2034	-	A	A	A	A	-	B	-	B	-	-	-

Table 1b: Level of Service by Approach – Hewitt Street at Dundas Street (PM Peak Hour)

Scenario	Hewitt Street at Dundas Street											
	PM Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	-	A	A	A	A	-	B	-	B	-	-	-
Background Traffic 2029	-	A	A	A	A	-	C	-	C	-	-	-
Total Traffic 2029	-	A	A	A	A	-	C	-	C	-	-	-
Background Traffic 2034	-	A	A	A	A	-	C	-	C	-	-	-
Total Traffic 2034	-	A	A	A	A	-	C	-	C	-	-	-

Table 1c: Level of Service by Approach – Hewitt Street at Dundas Street (Saturday Peak Hour)

Scenario	Hewitt Street at Dundas Street											
	Saturday Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	-	A	A	A	A	-	B	-	B	-	-	-
Background Traffic 2029	-	A	A	A	A	-	B	-	B	-	-	-
Total Traffic 2029	-	A	A	A	A	-	B	-	B	-	-	-
Background Traffic 2034	-	A	A	A	A	-	B	-	B	-	-	-
Total Traffic 2034	-	A	A	A	A	-	B	-	B	-	-	-

Table 2a: Control Delay by Approach – Hewitt Street at Dundas Street (AM Peak Hour)

Scenario	Hewitt Street at Dundas Street											
	AM Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	-	0.0	0.0	7.6	0.0	-	10.0	-	10.0	-	-	-
Background Traffic 2029	-	0.0	0.0	7.7	0.0	-	10.2	-	10.2	-	-	-
Total Traffic 2029	-	0.0	0.0	7.7	0.0	-	10.3	-	10.3	-	-	-
Background Traffic 2034	-	0.0	0.0	7.7	0.0	-	10.3	-	10.3	-	-	-
Total Traffic 2034	-	0.0	0.0	7.7	0.0	-	10.4	-	10.4	-	-	-

Table 2b: Control Delay by Approach – Hewitt Street at Dundas Street (PM Peak Hour)

Scenario	Hewitt Street at Dundas Street											
	PM Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	-	0.0	0.0	8.6	0.0	-	14.3	-	14.3	-	-	-
Background Traffic 2029	-	0.0	0.0	8.7	0.0	-	15.0	-	15.0	-	-	-
Total Traffic 2029	-	0.0	0.0	8.9	0.0	-	15.7	-	15.7	-	-	-
Background Traffic 2034	-	0.0	0.0	8.8	0.0	-	15.7	-	15.7	-	-	-
Total Traffic 2034	-	0.0	0.0	9.0	0.0	-	16.5	-	16.5	-	-	-

Table 2c: Control Delay by Approach – Hewitt Street at Dundas Street (Saturday Peak Hour)

Scenario	Hewitt Street at Dundas Street											
	Saturday Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	-	0.0	0.0	7.9	0.0	-	11.6	-	11.6	-	-	-
Background Traffic 2029	-	0.0	0.0	7.9	0.0	-	11.8	-	11.8	-	-	-
Total Traffic 2029	-	0.0	0.0	8.0	0.0	-	12.3	-	12.3	-	-	-
Background Traffic 2034	-	0.0	0.0	8.0	0.0	-	12.1	-	12.1	-	-	-
Total Traffic 2034	-	0.0	0.0	8.0	0.0	-	12.6	-	12.6	-	-	-

Table 3a: Queue Length by Approach – Hewitt Street at Dundas Street (AM Peak Hour)

Scenario	Hewitt Street at Dundas Street											
	AM Peak Hour – 95 th Percentile Queueing (veh)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	-	0.0	0.0	0.1	0.0	-	0.3	-	0.3	-	-	-
Background Traffic 2029	-	0.0	0.0	0.1	0.0	-	0.3	-	0.3	-	-	-
Total Traffic 2029	-	0.0	0.0	0.1	0.0	-	0.3	-	0.3	-	-	-
Background Traffic 2034	-	0.0	0.0	0.1	0.0	-	0.3	-	0.3	-	-	-
Total Traffic 2034	-	0.0	0.0	0.1	0.0	-	0.3	-	0.3	-	-	-

Table 3b: Queue Length by Approach – Hewitt Street at Dundas Street (PM Peak Hour)

Scenario	Hewitt Street at Dundas Street											
	PM Peak Hour – 95 th Percentile Queueing (veh)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	-	0.0	0.0	0.2	0.0	-	0.6	-	0.6	-	-	-
Background Traffic 2029	-	0.0	0.0	0.2	0.0	-	0.7	-	0.7	-	-	-
Total Traffic 2029	-	0.0	0.0	0.2	0.0	-	0.8	-	0.8	-	-	-
Background Traffic 2034	-	0.0	0.0	0.2	0.0	-	0.8	-	0.8	-	-	-
Total Traffic 2034	-	0.0	0.0	0.2	0.0	-	0.9	-	0.9	-	-	-

Table 3c: Queue Length by Approach – Hewitt Street at Dundas Street (Saturday Peak Hour)

Scenario	Hewitt Street at Dundas Street											
	Peak Hour – 95 th Percentile Queueing (veh)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	-	0.0	0.0	0.0	0.0	-	0.2	-	0.2	-	-	-
Background Traffic 2029	-	0.0	0.0	0.0	0.0	-	0.3	-	0.3	-	-	-
Total Traffic 2029	-	0.0	0.0	0.0	0.0	-	0.3	-	0.3	-	-	-
Background Traffic 2034	-	0.0	0.0	0.0	0.0	-	0.3	-	0.3	-	-	-
Total Traffic 2034	-	0.0	0.0	0.1	0.0	-	0.3	-	0.3	-	-	-

Table 4a: V/C Ratio by Approach – Hewitt Street at Dundas Street (AM Peak Hour)

Scenario	Hewitt Street at Dundas Street											
	AM Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	-	0.0	0.0	0.016	0.0	-	0.081	-	0.081	-	-	-
Bkgd. Traffic 2029	-	0.0	0.0	0.017	0.0	-	0.087	-	0.087	-	-	-
Total Traffic 2029	-	0.0	0.0	0.018	0.0	-	0.089	-	0.089	-	-	-
Bkgd. Traffic 2034	-	0.0	0.0	0.018	0.0	-	0.092	-	0.092	-	-	-
Total Traffic 2034	-	0.0	0.0	0.019	0.0	-	0.095	-	0.095	-	-	-

Table 4b: V/C Ratio by Approach – Hewitt Street at Dundas Street (PM Peak Hour)

Scenario	Hewitt Street at Dundas Street											
	PM Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	-	0.0	0.0	0.061	0.0	-	0.179	-	0.179	-	-	-
Bkgd. Traffic 2029	-	0.0	0.0	0.065	0.0	-	0.199	-	0.199	-	-	-
Total Traffic 2029	-	0.0	0.0	0.067	0.0	-	0.21	-	0.21	-	-	-
Bkgd. Traffic 2034	-	0.0	0.0	0.07	0.0	-	0.217	-	0.217	-	-	-
Total Traffic 2034	-	0.0	0.0	0.072	0.0	-	0.23	-	0.23	-	-	-

Table 4c: V/C Ratio by Approach – Hewitt Street at Dundas Street (Saturday Peak Hour)

Scenario	Hewitt Street at Dundas Street											
	Saturday Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	-	0.0	0.0	0.014	0.0	-	0.073	-	0.073	-	-	-
Bkgd. Traffic 2029	-	0.0	0.0	0.015	0.0	-	0.08	-	0.08	-	-	-
Total Traffic 2029	-	0.0	0.0	0.015	0.0	-	0.084	-	0.084	-	-	-
Bkgd. Traffic 2034	-	0.0	0.0	0.016	0.0	-	0.088	-	0.088	-	-	-
Total Traffic 2034	-	0.0	0.0	0.016	0.0	-	0.094	-	0.094	-	-	-

English Street at Dundas Street

English Street at Dundas Street is a southbound stop-controlled tee intersection; it offers a single shared lane for all approaches. Dundas Street has a bicycle lane on the south side of the street; this lane is physically separated from the vehicle lanes by a median / curb. A PXO is located on the west leg of the intersection; sidewalks are provided on both sides of all legs. As observed from the below Tables 5 to 8, the critical southbound approach exhibits satisfactory LOS C in the critical PM peak hours. There is a nominal drop in the levels of service over the 10-year horizon; however, the critical southbound queues should not exceed 1.2 vehicle lengths, and the control delay is not expected to exceed 22.6 seconds in any PM peak hour scenario.

Table 5a: Level of Service by Approach – English Street at Dundas Street (AM Peak Hour)

Scenario	English Street at Dundas Street											
	AM Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	A	A	-	-	A	A	-	-	-	B	-	B
Background Traffic 2029	A	A	-	-	A	A	-	-	-	B	-	B
Total Traffic 2029	A	A	-	-	A	A	-	-	-	B	-	B
Background Traffic 2034	A	A	-	-	A	A	-	-	-	B	-	B
Total Traffic 2034	A	A	-	-	A	A	-	-	-	B	-	B

Table 5b: Level of Service by Approach – English Street at Dundas Street (PM Peak Hour)

Scenario	English Street at Dundas Street											
	PM Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	A	A	-	-	A	A	-	-	-	C	-	C
Background Traffic 2029	A	A	-	-	A	A	-	-	-	C	-	C
Total Traffic 2029	A	A	-	-	A	A	-	-	-	C	-	C
Background Traffic 2034	A	A	-	-	A	A	-	-	-	C	-	C
Total Traffic 2034	A	A	-	-	A	A	-	-	-	C	-	C

Table 5c: Level of Service by Approach – English Street at Dundas Street (Saturday Peak Hour)

Scenario	English Street at Dundas Street											
	Saturday Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	A	A	-	-	A	A	-	-	-	B	-	B
Background Traffic 2029	A	A	-	-	A	A	-	-	-	B	-	B
Total Traffic 2029	A	A	-	-	A	A	-	-	-	B	-	B
Background Traffic 2034	A	A	-	-	A	A	-	-	-	B	-	B
Total Traffic 2034	A	A	-	-	A	A	-	-	-	B	-	B

Table 6a: Control Delay by Approach – English Street at Dundas Street (AM Peak Hour)

Scenario	English Street at Dundas Street											
	AM Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	7.7	0.0	-	-	0.0	0.0	-	-	-	10.7	-	10.7
Background Traffic 2029	7.7	0.0	-	-	0.0	0.0	-	-	-	10.9	-	10.9
Total Traffic 2029	7.8	0.0	-	-	0.0	0.0	-	-	-	11.2	-	11.2
Background Traffic 2034	7.7	0.0	-	-	0.0	0.0	-	-	-	11.1	-	11.1
Total Traffic 2034	7.8	0.0	-	-	0.0	0.0	-	-	-	11.4	-	11.4

Table 6b: Control Delay by Approach – English Street at Dundas Street (PM Peak Hour)

Scenario	English Street at Dundas Street											
	PM Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	8.4	0.0	-	-	0.0	0.0	-	-	-	17.6	-	17.6
Background Traffic 2029	8.5	0.0	-	-	0.0	0.0	-	-	-	18.9	-	18.9
Total Traffic 2029	8.6	0.0	-	-	0.0	0.0	-	-	-	20.8	-	20.8
Background Traffic 2034	8.6	0.0	-	-	0.0	0.0	-	-	-	20.3	-	20.3
Total Traffic 2034	8.7	0.0	-	-	0.0	0.0	-	-	-	22.6	-	22.6

Table 6c: Control Delay by Approach – English Street at Dundas Street (Saturday Peak Hour)

Scenario	English Street at Dundas Street											
	Saturday Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	8.0	0.0	-	-	0.0	0.0	-	-	-	13.0	-	13.0
Background Traffic 2029	8.1	0.0	-	-	0.0	0.0	-	-	-	13.4	-	13.4
Total Traffic 2029	8.1	0.0	-	-	0.0	0.0	-	-	-	14.1	-	14.1
Background Traffic 2034	8.1	0.0	-	-	0.0	0.0	-	-	-	13.8	-	13.8
Total Traffic 2034	8.2	0.0	-	-	0.0	0.0	-	-	-	14.6	-	14.6

Table 7a: Queue Length by Approach – English Street at Dundas Street (AM Peak Hour)

Scenario	English Street at Dundas Street											
	AM Peak Hour – 95 th Percentile Queueing (veh)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.1	0.0	-	-	0.0	0.0	-	-	-	0.1	-	0.1
Background Traffic 2029	0.1	0.0	-	-	0.0	0.0	-	-	-	0.1	-	0.1
Total Traffic 2029	0.1	0.0	-	-	0.0	0.0	-	-	-	0.2	-	0.2
Background Traffic 2034	0.1	0.0	-	-	0.0	0.0	-	-	-	0.1	-	0.1
Total Traffic 2034	0.1	0.0	-	-	0.0	0.0	-	-	-	0.2	-	0.2

Table 7b: Queue Length by Approach – English Street at Dundas Street (PM Peak Hour)

Scenario	English Street at Dundas Street											
	PM Peak Hour – 95 th Percentile Queueing (veh)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.2	0.0	-	-	0.0	0.0	-	-	-	0.8	-	0.8
Background Traffic 2029	0.2	0.0	-	-	0.0	0.0	-	-	-	0.9	-	0.9
Total Traffic 2029	0.2	0.0	-	-	0.0	0.0	-	-	-	1.1	-	1.1
Background Traffic 2034	0.2	0.0	-	-	0.0	0.0	-	-	-	1.0	-	1.0
Total Traffic 2034	0.2	0.0	-	-	0.0	0.0	-	-	-	1.2	-	1.2

Table 7c: Queue Length by Approach – English Street at Dundas Street (Saturday Peak Hour)

Scenario	English Street at Dundas Street											
	Peak Hour – 95 th Percentile Queueing (veh)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.1	0.0	-	-	0.0	0.0	-	-	-	0.3	-	0.3
Background Traffic 2029	0.1	0.0	-	-	0.0	0.0	-	-	-	0.3	-	0.3
Total Traffic 2029	0.1	0.0	-	-	0.0	0.0	-	-	-	0.3	-	0.3
Background Traffic 2034	0.1	0.0	-	-	0.0	0.0	-	-	-	0.3	-	0.3
Total Traffic 2034	0.1	0.0	-	-	0.0	0.0	-	-	-	0.3	-	0.3

Table 8a: V/C Ratio by Approach – English Street at Dundas Street (AM Peak Hour)

Scenario	English Street at Dundas Street											
	AM Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.017	0.0	-	-	0.0	0.0	-	-	-	0.041	-	0.041
Bkgd. Traffic 2029	0.018	0.0	-	-	0.0	0.0	-	-	-	0.046	-	0.046
Total Traffic 2029	0.018	0.0	-	-	0.0	0.0	-	-	-	0.05	-	0.05
Bkgd. Traffic 2034	0.019	0.0	-	-	0.0	0.0	-	-	-	0.047	-	0.047
Total Traffic 2034	0.019	0.0	-	-	0.0	0.0	-	-	-	0.051	-	0.051

Table 8b: V/C Ratio by Approach – English Street at Dundas Street (PM Peak Hour)

Scenario	English Street at Dundas Street											
	PM Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.064	0.0	-	-	0.0	0.0	-	-	-	0.208	-	0.208
Bkgd. Traffic 2029	0.069	0.0	-	-	0.0	0.0	-	-	-	0.235	-	0.235
Total Traffic 2029	0.07	0.0	-	-	0.0	0.0	-	-	-	0.266	-	0.266
Bkgd. Traffic 2034	0.074	0.0	-	-	0.0	0.0	-	-	-	0.261	-	0.261
Total Traffic 2034	0.075	0.0	-	-	0.0	0.0	-	-	-	0.296	-	0.296

Table 8c: V/C Ratio by Approach – English Street at Dundas Street (Saturday Peak Hour)

Scenario	English Street at Dundas Street											
	Saturday Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.019	0.0	-	-	0.0	0.0	-	-	-	0.078	-	0.078
Bkgd. Traffic 2029	0.02	0.0	-	-	0.0	0.0	-	-	-	0.085	-	0.085
Total Traffic 2029	0.02	0.0	-	-	0.0	0.0	-	-	-	0.097	-	0.097
Bkgd. Traffic 2034	0.021	0.0	-	-	0.0	0.0	-	-	-	0.092	-	0.092
Total Traffic 2034	0.022	0.0	-	-	0.0	0.0	-	-	-	0.104	-	0.104

Site Access at Dundas Street

The site access at Dundas Street is a northbound stop-controlled tee intersection with a single shared approach lane. Dundas Street is a two-lane undivided roadway with a separated bicycle lane on the south side; this lane is physically separated from the vehicle lanes by a median / curb. Sidewalks are provided on both sides of Dundas Street (and along the west side of the site access). As observed from Tables 9 to 12, the critical northbound approach exhibits a satisfactory LOS C in the horizon PM peak hours. There is a nominal drop in the levels of service over the 10-year horizon; however, the critical northbound queues from the site should not exceed one-half vehicle length, and the control delay is not expected to exceed 12.9 seconds in any PM peak hour scenario. Adequate gaps are provided for egressing vehicles.

Table 9a: Level of Service by Approach – Site Access at Dundas Street (AM Peak Hour)

Scenario	Site Access at Dundas Street											
	AM Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Traffic 2029	-	A	A	A	A	-	B	-	B	-	-	-
Total Traffic 2034	-	A	A	A	A	-	B	-	B	-	-	-

Table 9b: Level of Service by Approach – Site Access at Dundas Street (PM Peak Hour)

Scenario	Site Access at Dundas Street											
	PM Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Traffic 2029	-	A	A	A	A	-	C	-	C	-	-	-
Total Traffic 2034	-	A	A	A	A	-	C	-	C	-	-	-

Table 9c: Level of Service by Approach – Site Access at Dundas Street (Saturday Peak Hour)

Scenario	Site Access at Dundas Street											
	Saturday Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Traffic 2029	-	A	A	A	A	-	B	-	B	-	-	-
Total Traffic 2034	-	A	A	A	A	-	B	-	B	-	-	-

Table 10a: Control Delay by Approach – Site Access at Dundas Street (AM Peak Hour)

Scenario	Site Access at Dundas Street											
	AM Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Traffic 2029	-	0.0	0.0	7.8	0.0	-	10.8	-	10.8	-	-	-
Total Traffic 2034	-	0.0	0.0	7.8	0.0	-	10.9	-	10.9	-	-	-

Table 10b: Control Delay by Approach – Site Access at Dundas Street (PM Peak Hour)

Scenario	Site Access at Dundas Street											
	PM Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Traffic 2029	-	0.0	0.0	8.7	0.0	-	17.2	-	17.2	-	-	-
Total Traffic 2034	-	0.0	0.0	8.8	0.0	-	18.0	-	18.0	-	-	-

Table 10c: Control Delay by Approach – Site Access at Dundas Street (Saturday Peak Hour)

Scenario	Site Access at Dundas Street											
	Saturday Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Traffic 2029	-	0.0	0.0	8.1	0.0	-	12.6	-	12.6	-	-	-
Total Traffic 2034	-	0.0	0.0	8.1	0.0	-	12.9	-	12.9	-	-	-

Table 11a: Queue Length by Approach – Site Access at Dundas Street (AM Peak Hour)

Scenario	Site Access at Dundas Street											
	AM Peak Hour – 95 th Percentile Queueing (veh)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Traffic 2029	-	0.0	0.0	0.0	0.0	-	0.3	-	0.3	-	-	-
Total Traffic 2034	-	0.0	0.0	0.0	0.0	-	0.3	-	0.3	-	-	-

Table 11b: Queue Length by Approach – Site Access at Dundas Street (PM Peak Hour)

Scenario	Site Access at Dundas Street											
	PM Peak Hour – 95 th Percentile Queueing (veh)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Traffic 2029	-	0.0	0.0	0.1	0.0	-	0.5	-	0.5	-	-	-
Total Traffic 2034	-	0.0	0.0	0.1	0.0	-	0.5	-	0.5	-	-	-

Table 11c: Queue Length by Approach – Site Access at Dundas Street (Saturday Peak Hour)

Scenario	Site Access at Dundas Street											
	Peak Hour – 95 th Percentile Queueing (veh)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Traffic 2029	-	0.0	0.0	0.1	0.0	-	0.3	-	0.3	-	-	-
Total Traffic 2034	-	0.0	0.0	0.1	0.0	-	0.3	-	0.3	-	-	-

Table 12a: V/C Ratio by Approach – Site Access at Dundas Street (AM Peak Hour)

Scenario	Site Access at Dundas Street											
	AM Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Traffic 2029	-	0.0	0.0	0.01	0.0	-	0.082	-	0.082	-	-	-
Total Traffic 2034	-	0.0	0.0	0.01	0.0	-	0.084	-	0.084	-	-	-

Table 12b: V/C Ratio by Approach – Site Access at Dundas Street (PM Peak Hour)

Scenario	Site Access at Dundas Street											
	PM Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Traffic 2029	-	0.0	0.0	0.021	0.0	-	0.142	-	0.142	-	-	-
Total Traffic 2034	-	0.0	0.0	0.022	0.0	-	0.151	-	0.151	-	-	-

Table 12c: V/C Ratio by Approach – Site Access at Dundas Street (Saturday Peak Hour)

Scenario	Site Access at Dundas Street											
	Saturday Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Traffic 2029	-	0.0	0.0	0.025	0.0	-	0.101	-	0.101	-	-	-
Total Traffic 2034	-	0.0	0.0	0.025	0.0	-	0.104	-	0.104	-	-	-

Rectory Street at Dundas Street

The four-legged intersection of Rectory Street at Dundas Street is signalized. A dedicated bicycle lane is provided on the south side of Dundas Street; this lane is separated from the vehicle lanes by a median / curb. Sidewalks are provided on both sides of the eastbound, westbound, and northbound legs. The eastbound and westbound approaches consist of a shared lane. The northbound approach provides a dedicated left turn lane and right turn lane, while the southbound approach provides access to and from a private business parking lot. The results of the analysis indicate that the signalized intersection of Rectory Street at Dundas Street is operating at a LOS A in all existing and future scenarios. The critical northbound left turn exhibits a consistent LOS D; however, according to **Tables 13 to 17**, traffic generated by the proposed redevelopment does not change the operating characteristics of the intersection.

Table 13: Overall Signalized Intersection Level of Service – Rectory Street at Dundas Street

Scenario	Rectory Street at Dundas Street		
	AM Peak Hour	PM Peak Hour	Saturday Peak Hour
Existing Traffic	A	A	A
Background Traffic 2029	A	A	A
Total Traffic 2029	A	A	A
Background Traffic 2034	A	A	A
Total Traffic 2034	A	A	A

Table 14a: Level of Service by Approach – Rectory Street at Dundas Street (AM Peak Hour)

Scenario	Rectory Street at Dundas Street											
	AM Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	A	A	A	A	A	A	D	B	B	A	A	A
Background Traffic 2029	A	A	A	A	A	A	D	B	B	A	A	A
Total Traffic 2029	A	A	A	A	A	A	D	B	B	A	A	A
Background Traffic 2034	A	A	A	A	A	A	D	B	B	A	A	A
Total Traffic 2034	A	A	A	A	A	A	D	B	B	A	A	A

Table 14b: Level of Service by Approach – Rectory Street at Dundas Street (PM Peak Hour)

Scenario	Rectory Street at Dundas Street											
	PM Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	A	A	A	A	A	A	D	B	B	C	C	C
Background Traffic 2029	A	A	A	A	A	A	D	B	B	C	C	C
Total Traffic 2029	A	A	A	A	A	A	D	B	B	C	C	C
Background Traffic 2034	A	A	A	A	A	A	D	B	B	C	C	C
Total Traffic 2034	A	A	A	A	A	A	D	B	B	C	C	C

Table 14c: Level of Service by Approach – Rectory Street at Dundas Street. (Saturday Peak Hour)

Scenario	Rectory Street at Dundas Street											
	Saturday Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	A	A	A	A	A	A	D	A	A	C	C	C
Background Traffic 2029	A	A	A	A	A	A	D	A	A	C	C	C
Total Traffic 2029	A	A	A	A	A	A	D	A	A	C	C	C
Background Traffic 2034	A	A	A	A	A	A	D	A	A	C	C	C
Total Traffic 2034	A	A	A	A	A	A	D	A	A	C	C	C

Table 15a: Control Delay by Approach – Rectory Street at Dundas Street (AM Peak Hour)

Scenario	Rectory Street at Dundas Street											
	AM Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	2.6	2.6	2.6	2.7	2.7	2.7	42.3	15.7	15.7	0.0	0.0	0.0
Background Traffic 2029	2.6	2.6	2.6	2.7	2.7	2.7	42.4	15.6	15.6	0.0	0.0	0.0
Total Traffic 2029	2.7	2.7	2.7	2.8	2.8	2.8	42.9	15.5	15.5	0.0	0.0	0.0
Background Traffic 2034	2.6	2.6	2.6	2.8	2.8	2.8	42.4	15.6	15.6	0.0	0.0	0.0
Total Traffic 2034	2.7	2.7	2.7	2.8	2.8	2.8	42.9	15.6	15.6	0.0	0.0	0.0

Table 15b: Control Delay by Approach – Rectory Street at Dundas Street (PM Peak Hour)

Scenario	Rectory Street at Dundas Street											
	PM Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	2.9	2.9	2.9	2.8	2.8	2.8	51.6	15.8	15.8	28.9	28.9	28.9
Background Traffic 2029	3.0	3.0	3.0	2.9	2.9	2.9	52.1	15.6	15.6	28.8	28.8	28.8
Total Traffic 2029	3.1	3.1	3.1	3.0	3.0	3.0	52.8	15.4	15.4	28.7	28.7	28.7
Background Traffic 2034	3.1	3.1	3.1	3.0	3.0	3.0	52.3	15.5	15.5	28.1	28.1	28.1
Total Traffic 2034	3.2	3.2	3.2	3.1	3.1	3.1	53.0	15.4	15.4	28.0	28.0	28.0

Table 15c: Control Delay by Approach – Rectory Street at Dundas Street (Saturday Peak Hour)

Scenario	Rectory Street at Dundas Street											
	Saturday Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	3.4	3.4	3.4	3.4	3.4	3.4	40.3	0.2	0.2	28.4	28.4	28.4
Background Traffic 2029	3.4	3.4	3.4	3.5	3.5	3.5	40.5	0.3	0.3	28.4	28.4	28.4
Total Traffic 2029	3.6	3.6	3.6	3.7	3.7	3.7	41.6	0.3	0.3	28.2	28.2	28.2
Background Traffic 2034	3.6	3.6	3.6	3.6	3.6	3.6	40.9	0.3	0.3	28.4	28.4	28.4
Total Traffic 2034	3.7	3.7	3.7	3.8	3.8	3.8	41.8	0.3	0.3	28.2	28.2	28.2

Table 16a: Queue Length by Approach – Rectory Street at Dundas Street (AM Peak Hour)

Scenario	Rectory Street at Dundas Street											
	AM Peak Hour – 95 th Percentile Queueing (m)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	18.5	18.5	18.5	18.6	18.6	18.6	8.6	11.0	11.0	0.0	0.0	0.0
Background Traffic 2029	19.5	19.5	19.5	19.6	19.6	19.6	9.0	11.6	11.6	0.0	0.0	0.0
Total Traffic 2029	22.3	22.3	22.3	20.7	20.7	20.47	9.8	11.6	11.6	0.0	0.0	0.0
Background Traffic 2034	20.3	20.3	20.3	20.7	20.7	20.7	9.0	11.6	11.6	0.0	0.0	0.0
Total Traffic 2034	23.3	23.3	23.3	21.6	21.6	21.6	9.8	11.6	11.6	0.0	0.0	0.0

Table 16b: Queue Length by Approach – Rectory Street at Dundas Street (PM Peak Hour)

Scenario	Rectory Street at Dundas Street											
	PM Peak Hour – 95 th Percentile Queueing (m)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	33.7	33.7	33.7	27.5	27.5	27.5	17.0	13.5	13.5	5.8	5.8	5.8
Background Traffic 2029	35.7	35.7	35.7	29.0	29.0	29.0	17.7	13.7	13.7	5.8	5.8	5.8
Total Traffic 2029	38.6	38.6	38.6	30.7	30.7	30.7	19.1	13.7	13.7	5.8	5.8	5.8
Background Traffic 2034	38.1	38.1	38.1	30.8	30.8	30.8	17.9	14.1	14.1	6.0	6.0	6.0
Total Traffic 2034	41.1	41.1	41.1	32.6	32.6	32.6	19.5	14.1	14.1	6.0	6.0	6.0

Table 16c: Queue Length by Approach – Rectory Street at Dundas Street (Saturday Peak Hour)

Scenario	Rectory Street at Dundas Street											
	Saturday Peak Hour – 95 th Percentile Queueing (m)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	30.9	30.9	30.9	30.8	30.8	30.8	15.4	0.0	0.0	3.5	3.5	3.5
Background Traffic 2029	32.6	32.6	32.6	32.4	32.4	32.4	15.9	0.0	0.0	3.5	3.5	3.5
Total Traffic 2029	36.1	36.1	36.1	34.8	34.8	34.8	18.4	0.0	0.0	3.5	3.5	3.5
Background Traffic 2034	35.1	35.1	35.1	34.6	34.6	34.6	17.0	0.0	0.0	3.5	3.5	3.5
Total Traffic 2034	38.7	38.7	38.7	36.9	36.9	36.9	18.8	0.0	0.0	3.5	3.5	3.5

Table 17a: V/C Ratio by Approach – Rectory Street at Dundas Street (AM Peak Hour)

Scenario	Rectory Street at Dundas Street											
	AM Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.15	0.15	0.15	0.16	0.16	0.16	0.13	0.30	0.30	0.0	0.0	0.0
Bkgd. Traffic 2029	0.16	0.16	0.16	0.17	0.17	0.17	0.13	0.31	0.31	0.0	0.0	0.0
Total Traffic 2029	0.18	0.18	0.18	0.18	0.18	0.18	0.15	0.31	0.31	0.0	0.0	0.0
Bkgd. Traffic 2034	0.16	0.16	0.16	0.18	0.18	0.18	0.13	0.32	0.32	0.0	0.0	0.0
Total Traffic 2034	0.19	0.19	0.19	0.18	0.18	0.18	0.15	0.32	0.32	0.0	0.00	0.0

Table 17b: V/C Ratio by Approach – Rectory Street at Dundas Street (PM Peak Hour)

Scenario	Rectory Street at Dundas Street											
	PM Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.26	0.26	0.26	0.22	0.22	0.22	0.29	0.36	0.36	0.07	0.07	0.07
Bkgd. Traffic 2029	0.27	0.27	0.27	0.24	0.24	0.24	0.30	0.37	0.37	0.07	0.07	0.07
Total Traffic 2029	0.29	0.29	0.29	0.25	0.25	0.25	0.33	0.36	0.36	0.07	0.07	0.07
Bkgd. Traffic 2034	0.28	0.28	0.28	0.25	0.25	0.25	0.31	0.38	0.38	0.08	0.08	0.08
Total Traffic 2034	0.30	0.30	0.30	0.26	0.26	0.26	0.34	0.38	0.38	0.07	0.07	0.07

Table 17c: V/C Ratio by Approach – Rectory Street at Dundas Street (Saturday Peak Hour)

Scenario	Rectory Street at Dundas Street											
	Saturday Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.24	0.24	0.24	0.24	0.24	0.24	0.27	0.07	0.07	0.03	0.03	0.03
Bkgd. Traffic 2029	0.25	0.25	0.25	0.25	0.25	0.25	0.28	0.08	0.08	0.03	0.03	0.03
Total Traffic 2029	0.28	0.28	0.28	0.27	0.27	0.27	0.33	0.08	0.08	0.03	0.03	0.03
Bkgd. Traffic 2034	0.27	0.27	0.27	0.27	0.27	0.27	0.30	0.09	0.09	0.03	0.03	0.03
Total Traffic 2034	0.29	0.29	0.29	0.28	0.28	0.28	0.34	0.09	0.09	0.03	0.03	0.03

Shared Access Easement - Hewitt Street to Rectory Street

The shared access easement cuts through the centre of the site. According to the developer, it is a legal shared laneway that cuts across the whole block, from Hewitt Street to Rectory Street. However, the neighbour to the east of the proposed tower building has installed a fence with a gate that is blocking off the laneway at the east edge of the subject site. The developer is planning for garbage trucks to access the site from the laneway at Hewitt Street and to exit the site at Dundas Street. A site visit confirmed that the pavement is in very poor condition through the one-lane easement; due to the proximity of the buildings and fencing, it is not favourable for “regular traffic use”. Although this alley will likely see some “secondary” use, it was not modelled; all traffic to and from the site was distributed via the proposed northerly access at Dundas Street.

The below photographs depict the existing conditions of the easement:



Alley Looking East from Hewitt Street (Towards Site)



Alley Looking West from Site (Towards Hewitt Street)



Alley Looking West from Rectory Street (Towards Site)



Alley Looking East from Site (Towards Rectory Street)

Hewitt Street at King Street

Hewitt Street consists of a single approach lane at its southbound stop-controlled tee intersection with King Street; a left turn is the only option, as King Street is a one-way street. King Street is three lanes wide, with one eastbound one-way shared left turn / through personal vehicle lane, one eastbound one-way right turn personal vehicle lane for the one-way Glebe Street just past Hewitt Street (which is also a through lane for buses only), and a westbound “bus only” lane. Although King Street is intended for only one-way traffic, personal vehicles were observed travelling westbound during the turning movement count period. Sidewalks are provided on both sides of all legs; dedicated bicycle lanes are not provided.

The following photograph was taken from the intersection facing west; it identifies the westbound bus-only lane (separated by a solid yellow line), the eastbound centre left turn / through lane for personal vehicles, and the shared bus through lane / personal vehicle right turn lane for the Glebe Street at King Street intersection.



West Leg of Hewitt Street at King Street

As observed from the below **Tables 18 to 21**, the intersection is expected to perform well, exhibiting a LOS B (with an average control delay of just over 10 seconds) during the PM and Saturday peak hours.

Table 18a: Level of Service by Approach – Hewitt Street at King Street (AM Peak Hour)

Scenario	Hewitt Street at King Street											
	AM Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	A	A	-	-	-	-	-	-	-	A	-	-
Background Traffic 2029	A	A	-	-	-	-	-	-	-	A	-	-
Total Traffic 2029	A	A	-	-	-	-	-	-	-	A	-	-
Background Traffic 2034	A	A	-	-	-	-	-	-	-	A	-	-
Total Traffic 2034	A	A	-	-	-	-	-	-	-	A	-	-

Table 18b: Level of Service by Approach – Hewitt Street at King Street (PM Peak Hour)

Scenario	Hewitt Street at King Street											
	PM Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	A	A	-	-	-	-	-	-	-	B	-	-
Background Traffic 2029	A	A	-	-	-	-	-	-	-	B	-	-
Total Traffic 2029	A	A	-	-	-	-	-	-	-	B	-	-
Background Traffic 2034	A	A	-	-	-	-	-	-	-	B	-	-
Total Traffic 2034	A	A	-	-	-	-	-	-	-	B	-	-

Table 18c: Level of Service by Approach – Hewitt Street at King Street (Saturday Peak Hour)

Scenario	Hewitt Street at King Street											
	Saturday Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	A	A	-	-	-	-	-	-	-	B	-	-
Background Traffic 2029	A	A	-	-	-	-	-	-	-	B	-	-
Total Traffic 2029	A	A	-	-	-	-	-	-	-	B	-	-
Background Traffic 2034	A	A	-	-	-	-	-	-	-	B	-	-
Total Traffic 2034	A	A	-	-	-	-	-	-	-	B	-	-

Table 19a: Control Delay by Approach – Hewitt Street at King Street (AM Peak Hour)

Scenario	Hewitt Street at King Street											
	AM Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.0	0.0	-	-	-	-	-	-	-	9.3	-	-
Background Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	9.4	-	-
Total Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	9.4	-	-
Background Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	9.5	-	-
Total Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	9.5	-	-

Table 19b: Control Delay by Approach – Hewitt Street at King Street (PM Peak Hour)

Scenario	Hewitt Street at King Street											
	PM Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.0	0.0	-	-	-	-	-	-	-	10.2	-	-
Background Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	10.3	-	-
Total Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	10.3	-	-
Background Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	10.5	-	-
Total Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	10.5	-	-

Table 19c: Control Delay by Approach – Hewitt Street at King Street (Saturday Peak Hour)

Scenario	Hewitt Street at King Street											
	Saturday Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.0	0.0	-	-	-	-	-	-	-	10.1	-	-
Background Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	10.2	-	-
Total Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	10.2	-	-
Background Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	10.4	-	-
Total Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	10.4	-	-

Table 20a: Queue Length by Approach – Hewitt Street at King Street (AM Peak Hour)

Scenario	Hewitt Street at King Street											
	AM Peak Hour – 95 th Percentile Queueing (veh)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-
Background Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-
Total Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-
Background Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-
Total Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-

Table 20b: Queue Length by Approach – Hewitt Street at King Street (PM Peak Hour)

Scenario	Hewitt Street at King Street											
	PM Peak Hour – 95 th Percentile Queueing (veh)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-
Background Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-
Total Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-
Background Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-
Total Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-

Table 20c: Queue Length by Approach – Hewitt Street at King Street (Saturday Peak Hour)

Scenario	Hewitt Street at King Street											
	Peak Hour – 95 th Percentile Queuing (veh)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-
Background Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-
Total Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-
Background Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-
Total Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	0.2	-	-

Table 21a: V/C Ratio by Approach – Hewitt Street at King Street (AM Peak Hour)

Scenario	Hewitt Street at King Street											
	AM Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.0	0.0	-	-	-	-	-	-	-	0.05	-	-
Bkgd. Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	0.053	-	-
Total Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	0.053	-	-
Bkgd. Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	0.056	-	-
Total Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	0.056	-	-

Table 21b: V/C Ratio by Approach – Hewitt Street at King Street (PM Peak Hour)

Scenario	Hewitt Street at King Street											
	PM Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.0	0.0	-	-	-	-	-	-	-	0.058	-	-
Bkgd. Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	0.062	-	-
Total Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	0.062	-	-
Bkgd. Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	0.066	-	-
Total Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	0.066	-	-

Table 21c: V/C Ratio by Approach – Hewitt Street at King Street (Saturday Peak Hour)

Scenario	Hewitt Street at King Street											
	Saturday Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.0	0.0	-	-	-	-	-	-	-	0.054	-	-
Bkgd. Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	0.058	-	-
Total Traffic 2029	0.0	0.0	-	-	-	-	-	-	-	0.058	-	-
Bkgd. Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	0.062	-	-
Total Traffic 2034	0.0	0.0	-	-	-	-	-	-	-	0.062	-	-

Rectory Street at King Street

The four-legged intersection of Rectory Street at King Street is signalized. King Street is three lanes wide, with one eastbound one-way shared left turn / through personal vehicle lane, one eastbound one-way right turn personal vehicle lane (which is also a through lane for buses only), and a westbound “bus only” lane. Although King Street is for one-way traffic only, personal vehicles were observed going westbound during the turning movement count period. Rectory Street northbound consists of a shared through / right turn approach lane; the southbound approach has a through lane and a dedicated left turn lane (no right turns are permitted). Sidewalks are provided on both sides of all legs; no bicycle lanes are provided.

The following photograph was taken from the intersection facing west; it identifies the westbound bus-only lane (separated by a solid yellow line), the eastbound centre left turn / through lane, and the shared bus through lane / personal vehicle right turn lane:



West Leg of Rectory Street at King Street

The results of the analysis indicate that the signalized intersection of Rectory Street at King Street is operating well, with an overall LOS B in all scenarios. As is evident in the following **Tables 22 to 26**, traffic generated by the proposed redevelopment has a nominal impact on the intersection’s operations, with future levels of service on the northbound and southbound approaches exhibiting between LOS B and LOS D.

Table 22: Overall Signalized Intersection Level of Service – Rectory Street at King Street

Scenario	Rectory Street at King Street		
	AM Peak Hour	PM Peak Hour	Saturday Peak Hour
Existing Traffic	B	B	B
Background Traffic 2029	B	B	B
Total Traffic 2029	B	B	B
Background Traffic 2034	B	B	B
Total Traffic 2034	B	B	B

Table 23a: Level of Service by Approach – Rectory Street at King Street (AM Peak Hour)

Scenario	Rectory Street at King Street											
	AM Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	A	A	A	-	-	-	-	C	C	C	C	-
Background Traffic 2029	A	A	A	-	-	-	-	C	C	C	C	-
Total Traffic 2029	A	A	A	-	-	-	-	C	C	C	C	-
Background Traffic 2034	A	A	A	-	-	-	-	C	C	C	C	-
Total Traffic 2034	A	A	A	-	-	-	-	C	C	C	C	-

Table 23b: Level of Service by Approach – Rectory Street at King Street (PM Peak Hour)

Scenario	Rectory Street at King Street											
	PM Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	A	A	A	-	-	-	-	C	C	C	D	-
Background Traffic 2029	A	A	A	-	-	-	-	C	C	C	D	-
Total Traffic 2029	A	A	A	-	-	-	-	C	C	C	D	-
Background Traffic 2034	A	A	A	-	-	-	-	C	C	C	D	-
Total Traffic 2034	A	A	A	-	-	-	-	D	D	C	D	-

Table 23c: Level of Service by Approach – Rectory Street at King Street. (Saturday Peak Hour)

Scenario	Rectory Street at King Street											
	Saturday Peak Hour – Level of Service											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	A	A	A	-	-	-	-	B	B	C	C	-
Background Traffic 2029	A	A	A	-	-	-	-	B	B	C	C	-
Total Traffic 2029	A	A	A	-	-	-	-	C	C	C	C	-
Background Traffic 2034	A	A	A	-	-	-	-	B	B	C	C	-
Total Traffic 2034	A	A	A	-	-	-	-	C	C	C	C	-

Table 24a: Control Delay by Approach – Rectory Street at King Street (AM Peak Hour)

Scenario	Rectory Street at King Street											
	AM Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	6.9	6.9	3.9	-	-	-	-	24.0	24.0	0.0	31.1	-
Background Traffic 2029	7.1	7.1	3.8	-	-	-	-	23.8	23.8	0.0	31.2	-
Total Traffic 2029	7.1	7.1	3.8	-	-	-	-	24.4	24.4	0.0	31.8	-
Background Traffic 2034	7.1	7.1	3.8	-	-	-	-	24.4	24.4	0.0	31.3	-
Total Traffic 2034	7.1	7.1	3.8	-	-	-	-	25.0	25.0	0.0	31.8	-

Table 24b: Control Delay by Approach – Rectory Street at King Street (PM Peak Hour)

Scenario	Rectory Street at King Street											
	PM Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	7.4	7.4	3.6	-	-	-	-	33.8	33.8	28.3	36.4	-
Background Traffic 2029	7.4	7.4	3.5	-	-	-	-	33.8	33.8	28.3	36.5	-
Total Traffic 2029	7.6	7.6	3.5	-	-	-	-	34.7	34.7	28.3	36.8	-
Background Traffic 2034	7.6	7.6	3.4	-	-	-	-	34.7	34.7	28.3	36.7	-
Total Traffic 2034	7.6	7.6	3.5	-	-	-	-	35.5	35.5	28.0	36.9	-

Table 24c: Control Delay by Approach – Rectory Street at King Street (Saturday Peak Hour)

Scenario	Rectory Street at King Street											
	Saturday Peak Hour – Control Delay (sec)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	6.8	6.8	3.5	-	-	-	-	19.1	19.1	23.8	29.4	-
Background Traffic 2029	7.0	7.0	3.5	-	-	-	-	19.0	19.0	23.8	29.5	-
Total Traffic 2029	7.0	7.0	3.5	-	-	-	-	20.3	20.3	23.6	29.6	-
Background Traffic 2034	7.0	7.0	3.4	-	-	-	-	19.2	19.2	24.5	29.7	-
Total Traffic 2034	7.1	7.1	3.5	-	-	-	-	20.7	20.7	24.3	29.6	-

Table 25a: Queue Length by Approach – Rectory Street at King Street (AM Peak Hour)

Scenario	Rectory Street at King Street											
	AM Peak Hour – 95 th Percentile Queueing (m)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	19.5	19.5	5.6	-	-	-	-	9.2	9.2	0.0	6.7	-
Background Traffic 2029	20.1	20.1	5.7	-	-	-	-	9.4	9.4	0.0	6.8	-
Total Traffic 2029	20.1	20.1	5.7	-	-	-	-	9.8	9.8	0.0	7.8	-
Background Traffic 2034	21.1	21.1	5.8	-	-	-	-	9.8	9.8	0.0	7.0	-
Total Traffic 2034	21.1	21.1	5.8	-	-	-	-	10.5	10.5	0.0	7.9	-

Table 25b: Queue Length by Approach – Rectory Street at King Street (PM Peak Hour)

Scenario	Rectory Street at King Street											
	PM Peak Hour – 95 th Percentile Queueing (m)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	27.8	27.8	7.0	-	-	-	-	19.4	19.4	2.1	14.3	-
Background Traffic 2029	28.9	28.9	7.3	-	-	-	-	20.0	20.0	2.1	14.7	-
Total Traffic 2029	28.9	28.9	7.3	-	-	-	-	20.9	20.9	2.1	15.7	-
Background Traffic 2034	30.3	30.3	7.4	-	-	-	-	20.9	20.9	2.1	15.4	-
Total Traffic 2034	30.3	30.3	7.4	-	-	-	-	22.1	22.1	2.1	16.3	-

Table 25c: Queue Length by Approach – Rectory Street at King Street (Saturday Peak Hour)

Scenario	Rectory Street at King Street											
	Saturday Peak Hour – 95 th Percentile Queueing (m)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	29.0	29.0	5.9	-	-	-	-	16.7	16.7	2.6	12.0	-
Background Traffic 2029	30.2	30.2	6.2	-	-	-	-	17.3	17.3	2.6	12.4	-
Total Traffic 2029	30.2	30.2	6.2	-	-	-	-	18.8	18.8	2.6	13.4	-
Background Traffic 2034	31.8	31.8	6.3	-	-	-	-	17.7	17.7	3.3	13.1	-
Total Traffic 2034	31.8	31.8	6.3	-	-	-	-	19.6	19.6	3.3	14.0	-

Table 26a: V/C Ratio by Approach – Rectory Street at King Street (AM Peak Hour)

Scenario	Rectory Street at King Street											
	AM Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.06	0.06	0.03	-	-	-	-	0.15	0.15	0.0	0.08	-
Bkgd. Traffic 2029	0.07	0.07	0.03	-	-	-	-	0.15	0.15	0.0	0.08	-
Total Traffic 2029	0.07	0.07	0.03	-	-	-	-	0.16	0.16	0.0	0.10	-
Bkgd. Traffic 2034	0.07	0.07	0.03	-	-	-	-	0.16	0.16	0.0	0.09	-
Total Traffic 2034	0.07	0.07	0.03	-	-	-	-	0.17	0.17	0.0	0.10	-

Table 26b: V/C Ratio by Approach – Rectory Street at King Street (PM Peak Hour)

Scenario	Rectory Street at King Street											
	PM Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.09	0.09	0.04	-	-	-	-	0.30	0.30	0.01	0.18	-
Bkgd. Traffic 2029	0.09	0.09	0.05	-	-	-	-	0.31	0.31	0.01	0.19	-
Total Traffic 2029	0.10	0.10	0.05	-	-	-	-	0.32	0.32	0.01	0.20	-
Bkgd. Traffic 2034	0.10	0.10	0.05	-	-	-	-	0.32	0.32	0.01	0.20	-
Total Traffic 2034	0.10	0.10	0.05	-	-	-	-	0.33	0.33	0.01	0.21	-

Table 26c: V/C Ratio by Approach – Rectory Street at King Street (Saturday Peak Hour)

Scenario	Rectory Street at King Street											
	Saturday Peak Hour – Volume / Capacity Ratio (%)											
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Traffic	0.11	0.11	0.04	-	-	-	-	0.36	0.36	0.02	0.17	-
Bkgd. Traffic 2029	0.12	0.12	0.04	-	-	-	-	0.37	0.37	0.03	0.18	-
Total Traffic 2029	0.12	0.12	0.04	-	-	-	-	0.39	0.39	0.03	0.19	-
Bkgd. Traffic 2034	0.13	0.13	0.04	-	-	-	-	0.39	0.39	0.04	0.19	-
Total Traffic 2034	0.13	0.13	0.04	-	-	-	-	0.40	0.40	0.04	0.20	-

SIGHT LINE ANALYSIS

As calculated in **Appendix F**, a sight line analysis was completed for the site access at Dundas Street (in accordance with the TAC Geometric Design Guide for Canadian Roads – 2017). The speed limit on Dundas Street is 50 km/h, so a 60 km/h design speed was applied; a single unit truck (garbage truck) was selected as the design vehicle. Per the TAC, sight lines should be evaluated at 4.4m from the edge of the nearest travelled lane. For a single unit truck, the minimum intersection sight distance is 158m for the worst-case left turn egress maneuver and 142m for the less-critical right turn egress maneuver. An additional site visit was conducted on 7 June 2024, and the following photographs were taken to depict the sight lines:



Site Access at Dundas Street Looking West



Site Access at Dundas Street Looking East

Based on the sight lines illustrated on **Figure 10**, it is the engineers' opinion that there is sufficient sight distance for safe egress from the site access. No obstructions were observed within the defined sight triangle to the west; however, vehicles parked along the south side of Dundas Street (east of the site) may restrict the sight line to the east, so the road authority should ensure that the existing right-of-way elements do not adversely impact the motorists' decision-making.

SUMMARY AND CONCLUSIONS

A high-rise residential and mixed-use (commercial / mid-rise residential) redevelopment is proposed for lands situated at 763 – 773 Dundas Street, in London, Ontario. The site is in central London, east of Adelaide Street North. Dundas Street is part of the arterial grid system in London and the principal means of external access to and from the area. The Western Fair complex and the Gateway Casinos London are located just southeast of the site; commercial establishments are located along the Dundas Street corridor, and land use to the north is primarily residential.

The proposed mixed-use development is comprised of a maximum of 213 residential units in a 24-storey high rise building and 34 residential units (with approximately 3,055 sq. ft. of first floor commercial space) in a 6-storey building fronting Dundas Street. A total of 88 residential parking spaces will be provided in two lower floors of the tower, and the peak commercial parking demand will be accommodated via the existing ground-level parking supply of 16 spaces. It is anticipated that the northerly Dundas Street access will be the primary means of access to and from the proposed development, although some motorists may use the one-way lane to / from Hewitt Street and Rectory Street.

Upon completion of the analysis, it was concluded that:

- The northbound stop-controlled tee intersection of Hewitt Street at Dundas Street will operate at good levels of service in all studied horizon years;
- The southbound stop-controlled tee intersection of English Street at Dundas Street will operate at good levels of service in all studied horizon years;
- The northbound stop-controlled tee intersection of the site access at Dundas Street will operate at good levels of service in all studied horizon years; on-site queueing issues are not expected;
- The signalized intersection of Rectory Street at Dundas Street will operate at good levels of service in all studied horizon years (remaining at an overall intersection LOS A);
- The southbound stop-controlled tee intersection of Hewitt Street at King Street will operate at good levels of service in all studied horizon years;
- The signalized intersection of Rectory Street at King Street will operate at good levels of service in all horizon year (remaining at an overall intersection LOS B);
- Geometric and / or traffic control improvements are not warranted at any of the studied area intersections;
- There is sufficient sight distance for safe egress from the site access; no obstructions were observed within the defined sight triangle to the west; however, vehicles parked along the south side of Dundas Street (east of the site) may limit the sight lines;
- The proposed redevelopment is sustainable and encourages increased use of non-auto modes of travel.

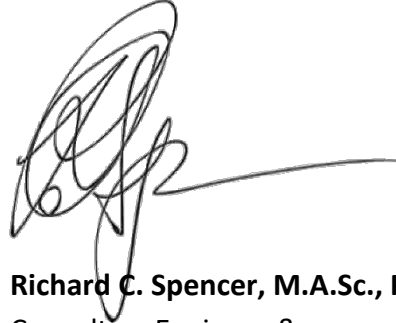
Therefore, based on the results of the technical work, it is the engineers' opinion that the proposed redevelopment will not adversely impact area traffic operations on Dundas Street or the surrounding road network. Area geometric and / or traffic control improvements are not required to accommodate the proposed development.

All of which is respectfully submitted,

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