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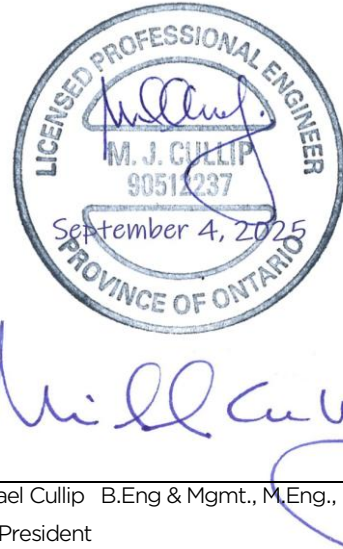
466 West Street North

PARKING JUSTIFICATION STUDY

1931806 Ontario Inc.

Document Control

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1 Introduction

Tatham Engineering Limited was retained by 1931806 Ontario Inc. to complete a parking study in support of the proposed residential condominium development to be located at 466 West Street North in the City of Orillia. The location of the site and immediate area road network are illustrated in Figure 1.

The purpose of this study is to establish the parking needs of the subject property. In this regard, the study has considered the following:

- the City of Orillia's current parking requirements;
- parking survey results from proxy sites within Orillia;
- parking standards adopted by other municipalities;
- findings from similar parking studies; and
- methodologies employed in establishing parking demand.



2 Proposed Development

2.1 SITE LOCATION

The subject site is located at 466 West Street North in the City of Orillia (illustrated in Figure 1). The site is approximately 0.25 ha in size and is bounded by existing development to the north, Commerce Road to the south and east, and West Street North to the west.

2.2 DEVELOPMENT DETAILS

The proposed development will consist of a 4-storey residential condominium building containing a total of 25 dwelling units of the following types:

- 2-bedroom – 6 units;
- 1-bedroom with den – 3 units; and
- 1-bedroom – 16 units.

For the purposes of this study, the 1-bedroom units and 1-bedroom units with den are considered equivalent. A site plan is provided in Figure 2.

2.3 PARKING SUPPLY

The proposed parking supply for the development is 35 parking spaces, providing 1.4 parking spaces per dwelling unit.

The proposed supply does not satisfy the City's parking requirement of 1.5 spaces per unit, or 38 spaces, as per the *City of Orillia Comprehensive Zoning By-law 2014-44*. It is the intent of this parking study to review the proposed parking supply in context of available parking data for similar uses, establish parking needs and recommend an appropriate parking requirement



3 Parking Review

To establish an appropriate parking supply for the site, a review was conducted to consider the following:

- *City of Orillia Comprehensive Zoning By-law 2014-44* parking requirements;
- residential parking standards adopted by other municipalities for similar uses;
- parking demands per the *ITE Parking Generation Manual, 6th Edition*¹;
- key findings from other parking studies; and
- results of parking surveys conducted at proxy sites.

3.1 MUNICIPAL PARKING STANDARDS

3.1.1 City of Orillia

The *City of Orillia Comprehensive Zoning By-law 2014-44* requires that a residential building containing more than 3 dwelling units provide 1.5 parking spaces per unit, of which 25% must be designated for visitor parking. This equates to 1.125 spaces for residents and 0.375 spaces for visitors per dwelling unit.

3.1.2 Other Municipalities

Parking standards adopted by other municipalities for an apartment building (or equivalent) land-use are summarized in Table 1.

As indicated, the parking rates for apartment building land-uses range between 0.75 and 1.75 spaces per dwelling unit. It is noted that the City of Orillia's rates are somewhat conservative, being on the higher side of the municipalities reviewed.

¹ *Parking Generation Manual, 5th Edition*. Institute of Transportation Engineers. January 2019.



Table 1: Parking Rates by Municipality

MUNICIPALITY	PARKING RATES		
	Base	Visitor	Total
City of Barrie	1.5 spaces per unit	not specified	1.5 spaces per unit
City of Cambridge	1.0	0.25	1.25
Town of Collingwood	0.5	0.25	0.75
Town of Gravenhurst	1.0	0.25	1.25
City of Guelph	1.0	0.25	1.25
Town of Innisfil	1.25 - 1.5	0.25	1.5 - 1.75
City of Owen Sound	1.25	not specified	1.25
City of North Bay	1.2	0.3	1.5
Town of Newmarket	1.5	0.25	1.75

3.2 ITE PARKING GENERATION MANUAL, 6TH EDITION

The Institute of Transportation Engineers (ITE) *Parking Generation Manual, 6th Edition* provides parking supply and demand data for several residential land-uses. In considering the proposed use of the subject development, data provided for the *multifamily housing - mid-rise* (ITE land-use code 221) was reviewed (the ITE land-use description for the noted land-use is provided in Appendix A). The ITE data is summarized in Table 2. It is noted the ITE data reflects a general urban/suburban location.

Table 2: ITE Parking Generation

TYPE OF PARKING RATE	PARKING RATES
Average Parking Supply	1.70 spaces per unit
Average Parking Demand	1.23
Peak Parking Demand Range	0.39 to 1.75
Peak Parking Demand - Fitted Curve Equation ¹	$P = 1.32(X) - 19.46$ ($R^2 = 0.96$)

¹ fitted curve equation where P = number of parked cars and X = number dwelling units



As noted, the ITE data indicates an average parking supply of 1.70 spaces per unit, an average demand of 1.23 (leaving approximately 0.5 spaces per unit vacant, on average), and a peak parking demand between 0.39 and 1.75 spaces per unit.

In addition to the parking supply and demand statistics provided in Table 2, the *Parking Generation Manual* also includes fitted curve equations that have been derived from the empirical parking demand dataset. These equations can be used to estimate parking demand and can be applied when the Coefficient of Determination (R^2) is greater than 0.50. The R^2 value is a statistical measure that illustrates the relationship between an independent variable (in this case dwelling units) and a dependent variable (parked cars). For example, an R^2 value of 0.75 indicates that 75% of the variance in the number of parked cars is accounted for by the variance in the number of dwelling units. With respect to the *multifamily housing - mid-rise* land-use, the R^2 value is 0.96, indicating that the number of dwelling units is an excellent indicator of parking demand.

3.3 PARKING SURVEYS AT PROXY SITES

3.3.1 Proxy Sites

Parking surveys were conducted at 3 proxy sites within the City of Orillia, the locations of which are illustrated in Figure 3. Each proxy site surveyed is an apartment development, of comparable size to the proposed development. The proxy sites surveyed are:

- Atherley Place Apartments;
- Bond Street Condos; and
- 1047 Mississauga Street Condos.

A brief description of each proxy site is provided below.

Atherley Place Apartments, 135 Atherley Road

Atherley Place Apartments is a 4-storey, 48-unit apartment development consisting of 1 and 2 bedroom units. The site provides 60 parking spaces (1.25 spaces per unit) of which 48 are available to residents (1 space per unit) with the remaining 12 available to visitors (0.25 spaces per unit).

Bond Street Condos, 107-125 Bond Street

Bond Street Condos is a development consisting of three 3-storey, 24-unit condominium buildings each containing a mix of 1 and 2 bedroom units. The site provides a total of 86 spaces (1.19 spaces per unit) of which 72 spaces are available to residents (1 space per unit), 12 spaces are available to visitors (0.17 spaces per unit) and 2 spaces are barrier-free, available to both



residents and visitors. For the purposes of this study, the barrier-free spaces are assumed to be part of the resident-assigned parking supply (+0.03 resident spaces/unit).

1047 Mississauga Street Condos, 1047 Mississauga Street

1047 Mississauga Condos is a 3-storey, 19-unit condominium development containing a mix of 1 and 2 bedroom units. The site provides a total of 26 parking spaces (1.37 space per unit) of which 20 (13 surface spaces + 7 garage spaces) are available to residents (1.05 spaces per unit), 5 spaces are available to visitors (0.26 visitor spaces per unit) and one space is barrier-free and available to both residents and visitors. For the purposes of this study, the barrier-free spaces are assumed to be part of the resident-assigned parking supply (+0.05 resident spaces/unit).

3.3.2 Parking Surveys

The parking surveys were conducted by Tatham Engineering staff on Wednesday, May 25, 2022, and Saturday, May 28, 2022, from 8:00PM to 11:00PM on each day. The weekday evening surveys ensure peak resident parking demand was captured (i.e. when most residents would be home), whereas weekend evening surveys ensure peak visitor parking rates were captured (i.e. when residents are most likely to have guests).

Each site was visited 3 times over the 3-hour period. The parking survey data and resulting peak parking demands for each site are summarized in Table 3 through Table 5. With respect to the 1047 Mississauga Condos, it could not be determined as to whether the private garages were occupied by a vehicle. As such, the survey data has assumed that each of the private garages are occupied by a vehicle (thus ensuring a conservative approach).

As indicated:

- peak resident parking demand was observed during the weekday surveys at each site, with maximum resident parking demand ranging between 0.68 to 0.95 spaces per unit;
- peak visitor parking demand was observed during the weekend surveys at each site, with maximum visitor parking demand ranging between 0.06 to 0.10 spaces per unit; and
- the overall parking demand at each site ranges between 0.56 to 0.95 spaces per unit, which is consistent with the ITE demand data.

It is noted that the parking provision at each site is lower than that required by the City's Zoning By-law (1.125 spaces per unit for residents and 0.375 spaces per unit for visitors), with resident parking supply ranging from 1.00 to 1.11 spaces per unit, and visitor parking provisions ranging from 0.7 to 0.26 spaces per unit.



Table 3: Parking Survey – Atherley Place Apartments

PARKING STATISTICS		WEEKDAY PARKING DEMAND			WEEKEND PARKING DEMAND		
		Count 1	Count 2	Count 3	Count 1	Count 2	Count 3
Number of Units		48 apartment units					
Resident Parking	Supply	48 spaces (1.00 spaces/unit)					
	Demand	34	32	33	24	26	32
	Demand per Unit	0.71	0.67	0.69	0.50	0.54	0.67
Visitor Parking	Supply	12 spaces (0.25 spaces/unit)					
	Demand	2	3	3	4	5	4
	Demand per Unit	0.04	0.06	0.06	0.08	0.10	0.08
Total Parking	Supply	60 spaces (1.25 spaces/unit)					
	Demand	36	35	36	28	31	36
	Demand per Unit	0.75	0.73	0.75	0.58	0.65	0.75



Table 4: Parking Survey – Bond Street Condos

PARKING STATISTICS		WEEKDAY PARKING DEMAND			WEEKEND PARKING DEMAND		
		Count 1	Count 2	Count 3	Count 1	Count 2	Count 3
Number of Units		72 condominium apartment units					
Resident Parking	Supply	74 spaces (1.03 spaces/unit)					
	Demand	46	46	49	36	40	40
	Demand per Unit	0.64	0.64	0.68	0.50	0.56	0.56
Visitor Parking	Supply	12 spaces (0.17 spaces/unit)					
	Demand	2	4	4	4	4	4
	Demand per Unit	0.03	0.06	0.06	0.06	0.06	0.06
Total Parking	Supply	86 spaces (1.19 spaces/unit)					
	Demand	48	50	53	40	44	44
	Demand per Unit	0.67	0.69	0.74	0.56	0.61	0.61



Table 5: Parking Survey – 1047 Mississauga Street Condos

PARKING STATISTICS		WEEKDAY PARKING DEMAND			WEEKEND PARKING DEMAND		
		Count 1	Count 2	Count 3	Count 1	Count 2	Count 3
Number of Units		19 condominium apartment units					
Resident Parking	Supply	21 spaces (1.11 spaces/unit)					
	Demand	17	18	18	15	15	14
	Demand per Unit	0.89	0.95	0.95	0.79	0.79	0.74
Visitor Parking	Supply	5 spaces (0.26 spaces/unit)					
	Demand	0	0	0	0	0	0
	Demand per Unit	0.00	0.00	0.00	0.00	0.00	0.00
Total Parking	Supply	26 spaces (1.37 spaces/unit)					
	Demand	17	18	18	15	15	14
	Demand per Unit	0.89	0.95	0.95	0.79	0.79	0.74

3.4 CITY OF VAUGHAN PARKING STUDY

In 2010, the City of Vaughan commissioned a review of the City's parking standards. The review was documented in the *Review of Parking Standards contained within the City of Vaughan's Comprehensive Zoning By-Law: Draft Parking Standards Report*². While the report remained in draft, the recommendations were endorsed in the *City of Vaughan Transportation Master Plan*. It is recognized that the review was specific to the Vaughan's parking standards, however, the draft report is comprehensive in its review of parking standards for multiple land-uses and contains valuable insights with respect to establishing parking rates.

The report identified that parking rates must balance competing objectives – such as ensuing sufficient parking supply while encouraging non-auto modes of transportation. Recognizing that development characteristics and transit provision can vary based on location, the report established a set of location-based categories. The following categories were recommended:

² *Review of Parking Standards contained within the City of Vaughan's Comprehensive Zoning By-Law: Draft Parking Standards Report*. IBI Group. March 2010.



- high-order transit hubs;
- primary centres/primary intensification corridors;
- local centres; and
- rest of the City (suburban areas with limited transit).

In addition to establishing parking requirements by location, the report also recommended that rates vary by the size of dwelling unit as determined by the number of bedrooms. The parking rates recommended in the Vaughan parking study for multiple family dwellings are summarized in Table 6.

Table 6: Vaughan Parking Study - Recommended Parking Rates (Multi-Family Dwelling)

POLICY AREA	RESIDENT PARKING RATES (PER UNIT)			VISITOR PARKING RATES	RANGE
	1 Bedroom	2 Bedroom	3+ Bedroom		
High-Order Transit Hubs	0.70	0.90	1.00	0.15	0.85 - 1.15
Local Centres	0.80	0.95	1.10	0.20	1.00 - 1.30
Primary Centres/ Intensification Areas	0.85	1.00	1.15	0.20	1.05 - 1.35
Rest of City (base rate)	0.90	1.10	1.20	0.20	1.10 - 1.40

As indicated, the recommended parking rates range from 0.70 to 1.20 spaces per unit for resident parking and 0.15 to 0.2 spaces per unit for visitor parking, depending on location of the site and size of the dwelling unit.

With respect to the City of Orillia, the Vaughan “Rest of City” rates would be the most appropriate in that those rates consider suburban areas with limited access to transit, thus requiring 1.10 to 1.40 spaces per unit.

3.5 PARKING REDUCTIONS

The *Review of Parking Standards* contained within the *City of Vaughan’s Comprehensive Zoning By-Law: Draft Parking Standards Report* notes that reducing the minimum parking requirement for residential uses is typically low risk, recognizing that parking availability is usually a key decision for a prospective buyer. Developers are not inclined to reduce parking supply to the extent that it compromises marketability, however, providing surplus parking increases the cost of development. Thus, minimizing the parking requirement to the extent possible reduces development costs (in turn making the dwelling units more affordable) while still remaining



appealing to prospective residents. Additionally, by offering unbundled parking, residents will need to opt-in and pay an additional fee for parking. This ensures that all parking spaces are being used and reduces the amount of parking required overall.

3.6 SUMMARY

The key findings of the parking review are summarized below:

- Based on the City of Orillia's parking requirements, the proposed development is required to supply 38 spaces, or 1.5 spaces per unit.
- The proposed parking supply for the residential development is 35 spaces, or 1.4 spaces per unit.
- Parking rates adopted by other local municipalities range from 0.75 to 1.75 spaces per unit (including visitor parking) for a multi-unit dwelling.
- ITE Parking Generation data for the *multifamily housing - mid-rise* land-use indicates an average parking supply of 1.70 spaces per unit and peak parking demand rates ranging from 0.39 to 1.75, with an average peak parking demand of 1.23 spaces per unit.
- Parking surveys conducted at proxy sites in May 2022 indicate peak parking demands in the order of 0.68 to 0.95 spaces per unit for a standard condominium development.
- The City of Vaughan parking study, which was comprehensive in its review of parking standards for multiple land-uses, recommends parking rates ranging from 0.85 to 1.40 for a multiple family dwelling.
- Reduced parking minimums for residential uses are typically low-risk, recognizing that parking availability is a priority for buyers (i.e. prospective buyers will not purchase units in developments which cannot accommodate their parking needs) – thus developments with reduced parking will attract buyers with one or no vehicles, rather than multi-vehicle owners



4 Parking Needs Assessment

As previously noted, the site plan indicates a parking supply of 35 spaces for the development, representing a shortfall of 3 spaces when considering the City of Orillia's parking requirements for the proposed use (38 spaces). Based on the parking review conducted in Chapter 3, the following justification is provided in support of the proposed parking supply for the proposed development.

4.1 PARKING JUSTIFICATION

Proxy Site Parking Surveys

The proposed parking supply is supported by the results of the parking surveys conducted at the various proxy sites, where the observed peak parking demand was in the order of 0.68 to 0.95 spaces per unit with parking supplies in the order of 1.19 to 1.37 spaces per unit.

With respect to the 1047 Mississauga Street Condos development, the observed peak parking demand was 0.95 spaces per unit; however, recognizing that the proxy site has private garage parking that was assumed occupied, this estimate is considered conservative (i.e. it is likely that some portion of the private garages are instead used for storage rather than parking, similar to a single-family home or townhouse).

Based on the results of the proxy site parking surveys, the proposed parking supply (1.4 spaces per unit) is considered reasonable and supportable.

City of Vaughan Parking Study

The *City of Vaughan Parking Review Study* recommended parking rates ranging from 0.85 to 1.40 spaces per unit, depending on the location of the development and size of the dwelling unit. The parking requirements for the proposed development based on the noted unit mix in terms of bedrooms (see Section 2.2) and the recommended parking rates contained in the Vaughan Parking Study have been summarized in Table 7. The base parking rates (i.e. those identified for suburban areas with limited transit access) have been considered in the summary. The rates include a visitor parking requirement of 0.20 spaces per unit.

In applying the recommended base parking rates, the resulting parking supply (per the Vaughan Parking Study) would be in the order of 1.16 spaces per unit (or 29 spaces). These rates are less than the proposed parking rate of 1.4 spaces per unit.



Table 7: Parking Supply - Vaughan Parking Study Rates

UNIT TYPE	UNITS	PARKING RATES & REQUIREMENTS	
		Base Rate	Requirement
1 Bedroom	19	1.10	21
2 Bedroom	6	1.30	8
Total	25	1.16	29

ITE Parking Rates

The ITE parking demand (average, peak and fitted curve) have been applied to the subject development, considering 25 dwelling units. The results are presented in Table 8

Table 8: Parking Requirements - ITE Parking Demand, Multi-family (mid-rise)

PARKING STATISTIC	PARKING RATES	PARKING REQUIRED ¹
Average Parking Demand	1.23	31 spaces
Demand Range	0.39 to 1.75	10 to 44 spaces
Fitted Curve Equation	$P = 1.32(X) - 19.46$ ($R^2 = 0.96$)	14 spaces

¹ based on 25 dwelling units

In considering the above, the proposed parking supply (35 spaces) for the development is supported by empirical ITE parking generation data.

4.2 RECOMMENDATION

In consideration of the above, the proposed parking supply of 35 spaces, or 1.4 spaces per unit, is considered reasonable and acceptable.



5 Summary

This parking justification study has reviewed the proposed parking supply for the proposed residential condominium development located at 466 West Street North in the City of Orillia. The proposed parking supply is 35 spaces, or 1.4 spaces per unit. The existing parking standards of the City of Orillia (1.5 spaces per unit) require a parking supply of 38 spaces to support the development. This study has reviewed the proposed parking supply in consideration of parking survey data collected at proxy sites within the City, parking standards adopted by nearby municipalities, published ITE parking generation data, and the findings of other parking study research.

While the proposed parking supply does not satisfy the minimum parking requirements per the City's zoning by-law, it is ultimately supported by the parking demand survey data collected from the proxy sites, along with ITE empirical data and the findings and recommendations of the *Vaughan Parking Study* (which was comprehensive in its review of parking standards for various land uses).

In consideration of this review, the proposed parking supply for the 466 West Street North development is considered appropriate.

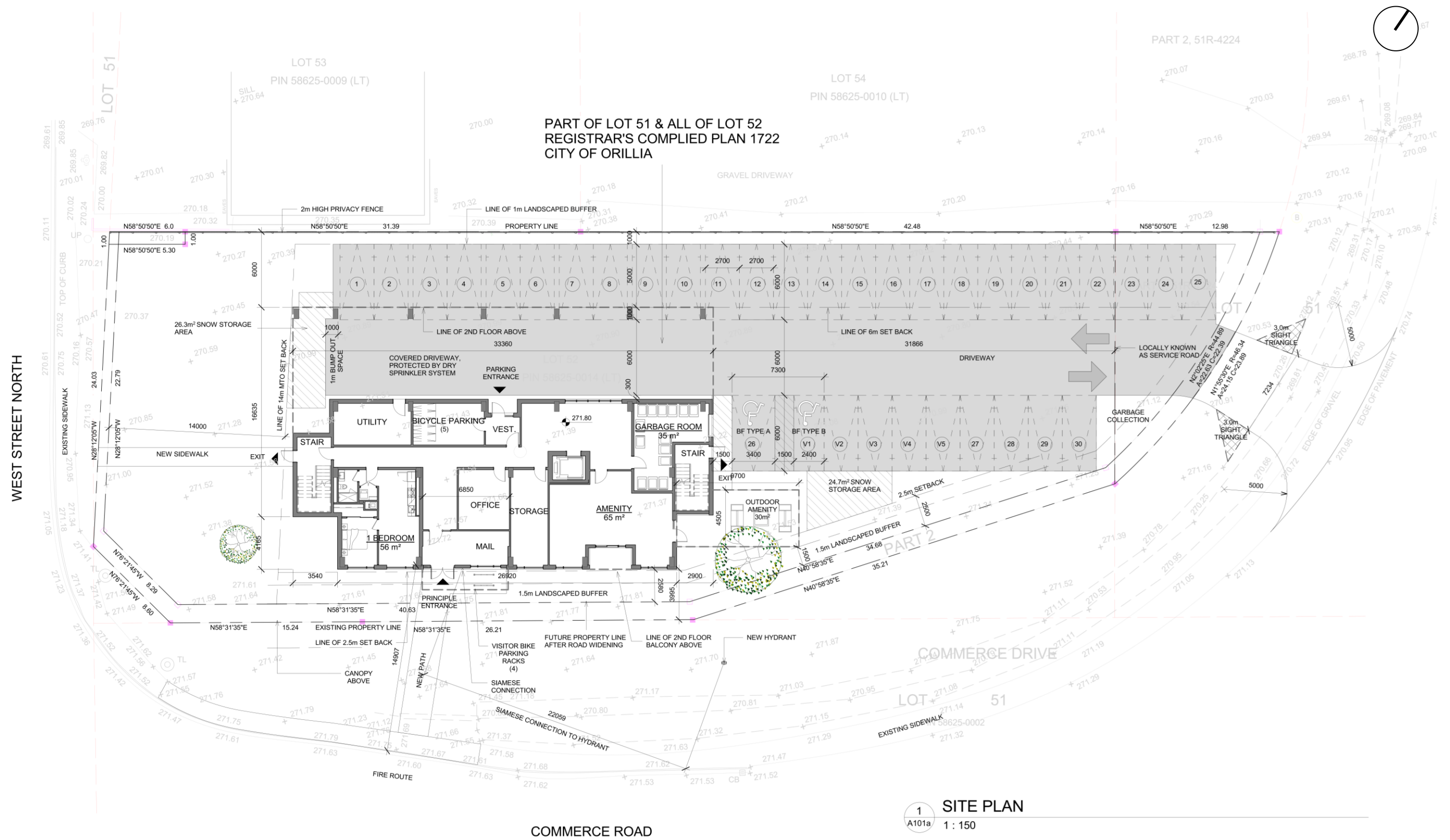




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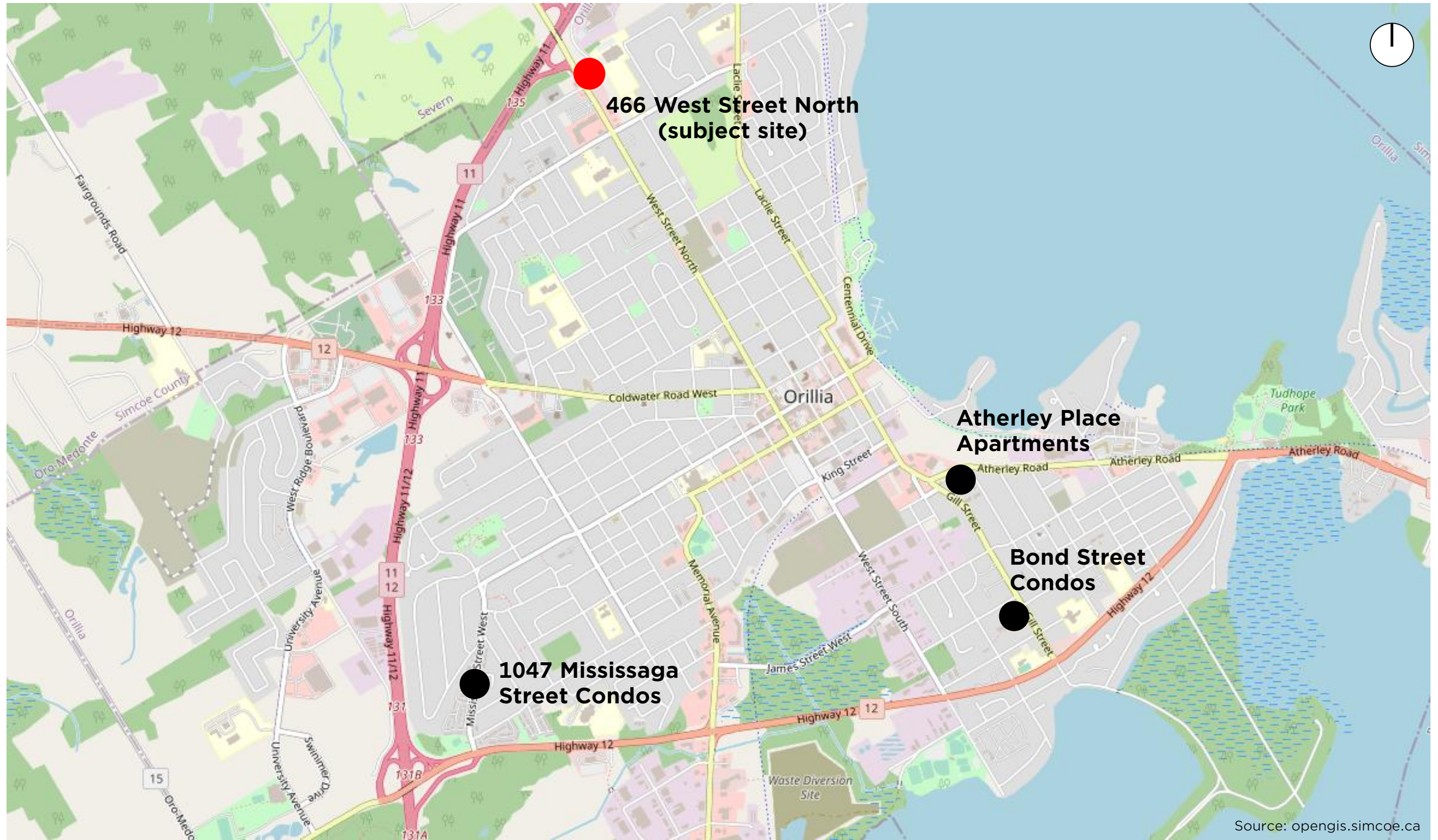
Figure 1: Site Location





466 WEST STREET NORTH - PARKING JUSTIFICATION STUDY
Figure 2: Site Plan





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466 WEST STREET NORTH - PARKING JUSTIFICATION STUDY

Figure 3: Proxy Site Locations



Appendix A: ITE Land Use Definition

Land Use: 221 Multifamily Housing— 2+ BR (Mid-Rise)

Description

Mid-rise multifamily housing with two or more bedrooms is a residential building with between four and 10 floors (levels) of residence that contain at least one dwelling unit with two or more bedrooms. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways.

Land Use Subcategory

Data are separated into two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Time-of-Day Distribution for Parking Demand

The following table presents a composite (weekday and Saturday) Time-of-Day distribution of parking demand for three general urban/suburban study sites.

Hour Beginning	Percent of Peak Parking Demand
	Weekday/Saturday Composite
12:00-4:00 a.m.	100
5:00 a.m.	96
6:00 a.m.	86
7:00 a.m.	77
8:00 a.m.	66
9:00 a.m.	60
10:00 a.m.	57
11:00 a.m.	55
12:00 p.m.	52
1:00 p.m.	50
2:00 p.m.	52
3:00 p.m.	51
4:00 p.m.	57
5:00 p.m.	62
6:00 p.m.	65
7:00 p.m.	68
8:00 p.m.	75
9:00 p.m.	82
10:00 p.m.	87
11:00 p.m.	91