



Ref. No. 171-00927 Task 11

July 31, 2018

Mr. Cesar Saleh, P. Eng.  
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Sent via Email to [cesar.saleh@wmfares.com](mailto:cesar.saleh@wmfares.com)

**RE: Traffic Impact Statement for Proposed Expansion of Three Day Care Centers,  
Grosvenor Road and Wedgewood Avenue, Halifax**

Dear Mr. Saleh:

Further to recent Emails and telephone conversations, this is the Traffic Impact Statement (TIS) for the proposed additional child care spaces at three day care centers on Grosvenor Road and Wedgewood Avenue, Halifax. The TIS has been prepared to consider potential traffic and parking impacts of increasing the total approved capacity of the three buildings from 60 to 150 child care spaces.

**Description of Day Care Centers** - The three buildings have multiple programs catering to toddlers, preschoolers and school age children from the Grosvenor Wentworth Park School. The three buildings (Figure 1), which operate independently with dedicated staff, have the existing approved capacities:

- 55 Kearney Lake Road - 38 children; 7 staff; full time toddlers and preschoolers
- 56 Kearney Lake Road - 14 children; 1 staff; full time school age program
- 4 Grosvenor Road - 8 children; 1 staff; full time school age program and part day morning program.



Figure 1 - Locations for three day care buildings.

**Transit Services** - Halifax Transit provides service for Routes 2, 16, 33, and 86 on Kearney Lake Road past the Grosvenor Road and Wedgewood Avenue intersection.

**Pedestrian Facilities** - There are sidewalks on both sides of Kearney Lake Road and on the east side of Grosvenor Road (Photos 1 and 2), however, Wedgewood Avenue does not have sidewalks (Photos 3 and 4). There is a marked pedestrian crosswalk with actuated amber beacons across Kearney Lake Road between Grosvenor Road and Wedgewood Avenue, as well as walk lights at a signalized intersection on Kearney Lake Road just east of the day care centers.

**Day Care Center at 55 Kearney Lake Road** - The site at 55 Kearney Lake Road has a large driveway with parking for about six vehicles on the east side of Grosvenor Road immediately north of Kearney Lake Road (Figure 1 and Photo 1). Stopping is prohibited between Kearney Lake Road and just north of the driveway; parking is not permitted from there to the south edge of the driveway for 4 Grosvenor Road. Also, parking is prohibited on the west side of Grosvenor Road opposite the frontage for 55 Kearney Lake Road.

**Day Care Center at 4 Grosvenor Road** - The site at 4 Grosvenor Road has a large driveway with parking for four vehicles on the east side of Grosvenor Road immediately north of 55 Kearney Lake Road (Figure 1 and Photo 2).

Curb side parking for approximately six vehicles is available on both sides of Grosvenor Road between the north edge of the driveway for 4 Grosvenor Road and the Castle Hill Drive intersection.



Photo 1 - Looking south along Grosvenor Road at the lot frontage for 55 Kearney Lake Road. Stopping is not permitted along the lot frontage.



Photo 2 - Looking east across the street towards the lot frontage for 4 Grosvenor Road. The driveway has space for about four vehicles.

**Day Care Center at 56 Kearney Lake Road** - The site at 56 Kearney Lake Road has a reasonably large driveway with parking for two or three vehicles on east side of Wedgewood Avenue south of Kearney Lake Road (Figure 1 and Photo 3). Curb side parking for approximately six vehicles is available on both sides of Wedgewood Avenue between the north edge of the site driveway and the Kearney Lake Road intersection (Photo 4).



Photo 3 - Looking across Wedgewood Avenue towards the driveway for 56 Kearney Lake Road.



Photo 4 - Looking north on Wedgewood Avenue towards Kearney Lake Road from the driveway for 56 Kearney Lake Road.

**Traffic Volumes** - A manual count obtained by HRM at the Kearney Lake Road / Grosvenor Road and Wedgewood Avenue intersection during mid-June 2012 indicated the following two-way peak hour volumes:

- Grosvenor Road - AM 125 vph; PM 85 vph
- Wedgewood Avenue - AM 90 vph; PM 115 vph.

A machine count on Kearney Lake Road during mid-June 2015 indicated the following two-way peak hour volumes on Kearney Lake Road between Castle Hill Drive and Grosvenor Road:

- AM 1220 vph
- PM 1400 vph

While the counts for Grosvenor Road and Wedgewood Avenue are from 2012, volumes are considered representative of existing conditions since there has not been any development that would change volumes on the side streets at this intersection. Volume data indicate the peak hourly volumes are high on Kearney Lake Road and low on the side streets at the intersection.

**Trip Generation Rates** - Travel information was obtained for 55 children and 9 staff members arriving at the three day care centers on Thursday morning, July 26. While some staff and a few children arrived between 7:00 AM and 7:30 AM, the majority of children arrived during two hours between 7:30 AM and 9:30 AM.

Vehicle trips for both staff and children generated by the 55 children that morning included 71 two-way vehicle trips with 37 vehicles arriving (52%) and 34 vehicles leaving (48%) during the 2.5 hour period. Vehicle trips for children included 32 arriving and 32 departing (16 walked; 39 came in 32 cars with siblings in the groups). Vehicle trips for staff included 5 arriving and two departing (4 walked / bus; 3 drove and parked on-site; 2 were dropped-off).

Observed peak hourly trip generation rates for the three sites are compared to published trip generation rates for Land Use 565 - Day Care Center (*Trip Generation, 10<sup>th</sup> Edition*, Institute of Transportation Engineers, 2017) in Table 1. Since the observed trip generation rates and directional splits are reasonably close to the published data, published rates will be used in preparation of trip generation estimates for the three day care center buildings.

Scenario	Trip Generation Rates <sup>2</sup> (AM Peak Hour)			Trip Generation Rates <sup>2</sup> (PM Peak Hour)		
	Enter	Exit	Two-Way	Enter	Exit	Two-Way
Day Care Center <sup>1</sup> (Land Use 565)	0.41 (53%)	0.37 (27%)	0.78	0.37 (47%)	0.42 (53%)	0.79
Observed AM Peak <sup>3</sup> (July 26, 2018)	0.34 (52%)	0.31 (48%)	0.65	n/a	n/a	n/a

NOTES: 1. Published trip generation rates, *Trip Generation, 10<sup>th</sup> Edition*, Institute of Transportation Engineers, 2017,  
 2. Trip generation rates are 'vehicle trips per child'.  
 3. The 55 children plus staff arriving during 2.5 hours generated 71 two way trips (37 enter / 34 exit) for a trip generation rate of 1.29 two way trips per child for 2.5 hours. If it is assumed that most trips were during two hours between 7:30 and 9:30, then the estimated trip generation rate for one AM peak hour would be approximately 0.65 two way vehicle trips per child.

**Trip Generation Estimates for 55 Kearney Lake Road and 4 Grosvenor Road** - These two day care centers now have a total approved capacity for 46 children with a proposal to increase the total to 100 approved spaces, without any physical changes to the buildings. AM and PM peak

hour trip generation estimates for 100 children, as well as trip estimates for the existing 46 approved spaces, are included in Table 2. It is estimated that day care centers with a total of 100 children will generate approximately 78 two-way vehicle trips (41 arriving and 37 leaving) on Grosvenor Road during the AM peak hour and 79 two-way vehicle trips (37 arriving and 42 leaving) during the PM peak hour. However, when trip estimates for the existing capacity of 46 children are considered, the increased capacity is estimated to generate 42 additional two-way vehicle trips (22 arriving and 20 leaving) during the AM peak hour and 43 additional two-way vehicle trips (20 arriving and 23 leaving) during the PM peak hour

Table 2 - Trip Generation Estimates for 55 Kearney Lake Road and 4 Grosvenor Road									
Land Use <sup>1</sup>	Units <sup>2</sup>	Trip Generation Rates <sup>3</sup>				Trips Generated <sup>3</sup>			
		AM Peak		PM Peak		AM Peak		PM Peak	
		In	Out	In	Out	In	Out	In	Out
<b>Trip Generation Estimates for Proposed Capacity for 100 Children</b>									
Day Care Center <sup>1</sup> (Land Use 565)	100 children	0.41	0.37	0.37	0.42	41	37	37	42
<b>Trip Generation Estimates for Existing Capacity for 46 Children</b>									
Day Care Center <sup>1</sup> (Land Use 565)	46 children	0.41	0.37	0.37	0.42	19	17	17	19
<b>Estimated Added Peak Hour Trips for Increased Capacity from 46 to 100</b>						22	20	20	23
NOTES: 1. Rates are for the indicated Land Use Code, <i>Trip Generation, 10<sup>th</sup> Edition</i> , Institute of Transportation Engineers, 2017, except as noted. 2. Units are 'Number of Children'. 3. Rates are 'vehicles per hour per child'; trips generated are 'vehicles per hour for peak hours'.									

**Trip Generation Estimates for 56 Kearney Lake Road** - This day care center now has an approved capacity for 14 children with a proposal to increase the total to 50 approved spaces, without any physical changes to the building. AM and PM peak hour trip generation estimates for 50 children, as well as trips estimates for the existing 14 children, are included in Table 3.

Table 3 - Trip Generation Estimates for 56 Kearney Lake Road									
Land Use <sup>1</sup>	Units <sup>2</sup>	Trip Generation Rates <sup>3</sup>				Trips Generated <sup>3</sup>			
		AM Peak		PM Peak		AM Peak		PM Peak	
		In	Out	In	Out	In	Out	In	Out
<b>Trip Generation Estimates for Proposed Capacity for 100 Children</b>									
Day Care Center <sup>1</sup> (Land Use 565)	50 children	0.41	0.37	0.37	0.42	21	19	19	21
<b>Trip Generation Estimates for Existing Capacity for 14 Children</b>									
Day Care Center <sup>1</sup> (Land Use 565)	14 children	0.41	0.37	0.37	0.42	6	5	5	6
<b>Estimated Added Peak Hour Trips for Increased Capacity from 14 to 50</b>						15	14	14	15
NOTES: 1. Rates are for the indicated Land Use Code, <i>Trip Generation, 10<sup>th</sup> Edition</i> , Institute of Transportation Engineers, 2017, except as noted. 2. Units are 'Number of Children'. 3. Rates are 'vehicles per hour per child'; trips generated are 'vehicles per hour for peak hours'.									

It is estimated that a day care center with 50 children will generate approximately 40 two-way vehicle trips (21 arriving and 19 leaving) on Wedgewood Avenue during the AM peak hour and 40 two-way vehicle trips (19 arriving and 21 leaving) during the PM peak hour. However, when trip estimates for the existing capacity of 14 children are considered, the increased capacity is estimated to generate 29 additional two-way vehicle trips (15 arriving and 14 leaving) during the AM peak hour and 29 additional two-way vehicle trips (14 arriving and 15 leaving) during the PM peak hour.

**Summary -**

1. The Traffic Impact Statement has been prepared to consider potential traffic and parking impacts of increasing the total approved capacity of three day care buildings from 60 to 150 child care spaces.
2. The day care center at 55 Kearney Lake Road now has 38 approved spaces and the center at 4 Grosvenor Road has 8 approved spaces. Both buildings have driveways on Grosvenor Road north of Kearney Lake Road.

The day care center at 56 Kearney Lake Road, which now has 14 approved spaces, has a driveway on Wedgewood Avenue south of Kearney Lake Road.

3. Driveway parking spaces are available at each site; 55 Kearney Lake Road has a large driveway with room for about six cars; the driveway at 4 Grosvenor Road can accommodate four cars; and the driveway at 56 Kearney Lake Road has space for two or three cars.

While curb side parking is prohibited in front of 55 Kearney Lake Road, parking for about 12 cars is available in front of, and just north of, 4 Grosvenor Road. Curb side parking is available for about 12 cars on Wedgewood Avenue at the 56 Kearney Lake Road site.

4. Halifax Transit provides service for Routes 2, 16, 33, and 86 on Kearney Lake Road past the Grosvenor Road and Wedgewood Avenue intersection.
5. There are sidewalks on both sides of Kearney Lake Road and on the east side of Grosvenor Road, however, Wedgewood Avenue does not have sidewalks. There is a marked pedestrian crosswalk with actuated amber beacons across Kearney Lake Road between Grosvenor Road and Wedgewood Avenue, as well as pedestrian signals at a signalized intersection on Kearney Lake Road just east of the day care centers.
6. Travel information obtained for 55 children and 9 staff members arriving at the three day care centers over a 2 ½ hour period on Thursday morning, July 26, 2018, indicated that 16 (29%) children walked to the centers and four (44%) staff members walked or arrived by bus. Evaluation of trip generation estimates and directional splits for the observed data indicated that published trip generation rates for Day Care Center in *Trip Generation, 10<sup>th</sup> Edition* are appropriate for this site review.
7. It is estimated that increasing the day care center capacity from a total of 46 children to a total of 100 children at 55 Kearney Lake Road and 4 Grosvenor Road locations will generate 22 additional cars arriving during the AM peak hour and 20 additional cars arriving during the PM peak hour.
8. It is estimated that increasing the day care center capacity from 14 children to 50 children at 56 Kearney Lake Road will generate 15 additional cars arriving during the AM peak hour and 14 additional cars arriving during the PM peak hour.

**Conclusions -**

- 9. Since drop-off and pick-up times for children are staggered throughout peak hourly periods, and since drop-off or pick-up usually only requires about five minutes, existing driveway and curb side parking spaces are expected to be adequate to accommodate approximately 22 additional peak hourly vehicles on Grosvenor Road and 15 additional peak hourly vehicles on Wedgewood Avenue.
  
- 10. While peak hourly volumes are high on Kearney Lake Road, peak hourly volumes are low on both Grosvenor Road and Wedgewood Avenue. Peak hourly vehicle trips generated by the additional day care spaces are not expected to have a significant impact on adjacent streets or intersections.

If you have any questions, please contact me by Email to [ken.obrien@wsp.com](mailto:ken.obrien@wsp.com) or telephone 902-452-7747.

Sincerely:

*Ken Obrien*  
**Original Signed**

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