

April 6<sup>th</sup>, 2016

**United Gulf Developments Limited**  
60 Walter Havill Dr, Suite 111  
Halifax, Nova Scotia  
B3N 0A9



Attention: Navid Saberi

## **RE: Traffic Impact Statement: Paper Mill Lake Subdivision**

DesignPoint Engineering and Surveying Ltd. is pleased to submit this Traffic Impact Statement (TIS) in support of the proposed amendment to the Development Agreement (DA) dated May 17th, 1995 between Annapolis Basin Group Inc. and The Town of Bedford. The properties of 00360677, 00428375, 40810228, and 40810210 included in the DA are owned by United Gulf Development Limited. Section 14.2 of the DA states that:

*“The Developer shall be allowed to create no more than 100 residential units prior to the completion of a collector road which is to run from Moirs Mill Road to Hammonds Plains Road.”*

This DA was signed prior to the consideration and/or construction of Oceanview Drive, Nine Mile Drive, Southgate Drive, Larry Uteck Boulevard, and the Larry Uteck Interchange and its connection to Highway 102 – Bi Centennial Highway (BiHi), when the only access/egress from the proposed subdivision was via Moirs Mill Road and Nelson’s Landing Boulevard to the Bedford Highway.

This TIS supports the amendment to section 14.2 of the DA to allow for additional phases of this development without the need to build a collector road to Hammonds Plains Road. The DA allows for 881 residential units, to date 160 units have been built, leaving 720 units to be considered within this TIS.

### **Proposed Development Phasing**

This development is proposed to be completed in phases. The two phases that are considered are as follows:

#### **Phase 1**

This first phase of the remaining development will consist of connecting Richardson Drive between Moirs Mill Road and Oceanview Drive. Currently, Richardson Drive has been built to Baha Court (northend) and has been built to form a T-intersection at Oceanview Drive (southend). The remaining 290 m long section of Richardson Drive will be built as part of this phase. As part of this connection the remaining lots on Baha Court will be constructed as well as the lots along Richardson Drive for a total of 60 units out of the 720 units remaining.

#### **Phase 2 (Full Build Out)**

This future phase includes the remaining 660 units (720 units subtract the 60 units undertaken as part of Phase 1 outlined above) and the construction of the associated street network which includes the connection of Nine Mile Drive to Moirs Mill Road (See Figure 1: Map 4: Approved Site Plan for the Paper



Since this DA was signed 160 residential units have been constructed (100 on Ahmadi Crescent, Richardson Drive, Baha Court, and Moirs Mill Drive and a 60 unit seniors' complex on Hammonds Plains Road). Originally, when this DA was signed Moirs Mill Road, Nelson's Landing Boulevard, and the new connection to Hammonds Plains Road were to be the only routes into and out of this proposed subdivision. Since the approval of the DA, Oceanview Drive, Nine Mile Drive, Larry Uteck Boulevard, South Gate Drive, and the Larry Uteck Interchange to the BiHi have been constructed. This has significantly increased the roadway capacity into and out of the proposed subdivision.

As part of the proposed Phase 1 of the Paper Mill Lake subdivision, Richardson Drive will be completed and connected between Moirs Mill Road and Oceanview Drive. The approved concept plan for the Paper Mill Lake subdivision has always showed Richardson Drive connecting Moirs Mill Road and Oceanview Drive, which is consistent with the concept plan that was approved as part of the original DA.

### Existing Traffic Data

The HRM Regional Plan outlines street classification for the HRM roadway network. The HRM redbook provides guidelines on the average daily traffic volumes for each street classification. Table 1 lists the existing street network that surround the proposed subdivision as well as recent traffic count data received from HRM or undertaken by DesignPoint.

When the Larry Uteck Interchange was constructed in 2010 it was designed to handle between 45 000 and 50 000 vehicles per day (vpd). In a discussion with representatives of the Nova Scotia Department of Transportation and Infrastructure Renewal (NSTIR) they indicated that the interchange is currently operating at approximately 50% of its intended capacity.

Table 1 also identifies the approximate remaining capacity within the surrounding street network. As can be seen in Table 1, all streets are currently operating below their intended capacity based on the recent traffic data or can be assumed based on traffic data of the surrounding streets. It should be noted that the traffic count undertaken for Oceanview Drive was completed in December, 2014. Oceanview Drive is a direct link between a residential area and a commercial area. Based on this connection it can be assumed that this volume is most likely higher than the usual volume on Oceanview Drive due to the holiday season. In addition, Larry Uteck Boulevard is an arterial roadway that allows for greater than 20,000 vpd. The remaining capacity is shown conservatively at 1500 vpd which is 20,000 minus the existing daily traffic volume of 18,500.

**Table 1: Street Classification**

Street Name	Street Classification <sup>1</sup>	Range of Design Traffic Average Daily Volume (vehicles/day) <sup>2</sup>	Existing Traffic Volumes <sup>3</sup>		
			Date Counted	Daily Traffic Volume	Approximate Remaining Capacity (daily vehicle trips)
Larry Uteck Interchange	Expressway	In the range of 45,000 – 50,000	No available count data <sup>4</sup>		22,500
Larry Uteck Boulevard	Arterial	Greater than 20,000	Sept 18, 2014	18,500	Greater than 1,500
Nine Mile Drive	Major Collector	Greater than 12,000	March 30, 2016	7,500	Greater than 4,500
Moirs Mill Drive	Collector	Equal to or less than 12,000	June 13, 2013	4,700	7,500
Southgate Drive	Collector	Equal to or less than 12,000	October 28, 2014	5,300	6,700
Nelson's Landing Boulevard	Local	Less than 3,000	May 20, 2010	2,100 <sup>5</sup>	900
Oceanview Drive	Local	Less than 3,000	December 12, 2014	2,640 <sup>6</sup>	360 <sup>6</sup>
Royal Masts Way	Local	Less than 3,000	March 22, 2016	1,900	1,100
Richardson Drive (proposed)	Local	Less than 3,000	No available count data (not constructed)		

<sup>1</sup>Street Classification taken from HRMs Map 8 RP+8 Road Hierarchy Classification

<sup>2</sup>Range of design traffic average daily volumes taken from Table 4.1 Characteristics of Street Classes, HRM Municipal Design Guidelines

<sup>3</sup>Traffic Volumes received from HRM Traffic Management or undertaken by DesignPoint

<sup>4</sup>NSTIR indicates the interchange is at 50% capacity in 2016

<sup>5</sup>The original 2010 traffic volume of 2010 has been factored by a 1.0% growth rate to the year 2014 in order to comparison roadway volumes.

<sup>6</sup> – Assumption that this volume is conservative based on the time of year the count was undertaken

## Site Trip Generation and Distribution

ITE trip generation rates contained in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, document were used to determine trip generation for the proposed development. Site-generated trips were calculated based on ITE's Land Use Code 210 – Single Family Detached Housing. The unit of measurement for average vehicle trip ends is "per dwelling unit". The land use remains unchanged, as it had previously been determined by the DA.

### Phase 1: Trip Generation

Trip generation for the proposed 60 units in Phase 1 was calculated for a weekday. This resulted in an estimated 571 vehicles per day for a weekday (approximately 24 vehicles per hour throughout the day). A summary of the site trip generation results are contained in Table 2.

The AM and PM peak hour site-generated trip were calculated to be 45 new vehicles/hour (vph) during the AM weekday peak hour and 60 vph during the PM weekday peak hour. These calculations can be found in Table 3, but were not used as AM and PM peak hour counts were not available for all intersections/roadways surrounding this proposed development and weekday trips were used in this analysis.

**Table 2: Phase 1 Trip Generation, Weekday**

Total Units	Dwelling	Weekday			
		Trip Rate	In	Out	Total
Single Family Detached Housing (ITE Code 210)					
Phase 1 (60 Units)					
60		9.52 <sup>1</sup>	286	285	571

<sup>1</sup> – ITE trip rate calculated on a weekday

**Table 3: Phase 1 Trip Generation, Peak Hours**

Total Units	Dwelling	AM Peak				PM Peak			
		Trip Rate	In	Out	Total	Trip Rate	In	Out	Total
Single Family Detached Housing (ITE Code 210)									
Phase 1 (60 Units)									
60		0.75 <sup>1</sup>	11 (25%)	34 (75%)	45	1.00 <sup>1</sup>	38 (63%)	22 (37%)	60

<sup>1</sup> - ITE trip rate calculated using the AM and PM hour of adjacent traffic between 7-9 AM and 4-6 PM.

#### Phase 1: Trip Distribution

A review of the observed traffic volumes and travel patterns on Oceanview Drive and Nine Mile Drive was carried out to establish the future distribution patterns of the site-generated trips. The original concept plan shows Richardson Drive being extended to connect Moirs Mill Road and Oceanview Drive and with Phase 1 this is still the case. With this connection it was assumed that the proposed trips for the first phase would generally follow similar travel patterns that exist today at the intersection of Royal Masts Way and Oceanview Drive. This appears appropriate given the large employment areas, commercial development, and access to the BiHi as well as the connections to the Bedford Highway and the Bedford South School located at the end of Oceanview Drive just east of its intersection with Amin Street.

The site-generated trips associated with the proposed development were assigned to the intersection of Richardson Drive and Oceanview Drive as well as to Moirs Mill Road and Royal Masts Way for access to Larry Uteck Boulevard or the Bedford Highway. It is assumed that the many trips heading to and from this area are either travelling to and from the school (located at the end of Oceanview Drive east of Amin Street), to the commercial and office space at the Larry Uteck Interchange, or to the Bedford Highway via Larry Uteck Boulevard, Southgate Drive, or Moirs Mill Road, all which have significant remaining capacity.

In order to get out of or into this subdivision it is assumed that the proposed 571 daily trips generated by this subdivision will initially travel via the following roadways to get to ultimately the Bedford Highway or Larry Uteck Boulevard:

- Moirs Mill Road (remaining vehicle capacity: 7,525, assumed 40% of proposed trips take this road: 228)
- Royal Masts Way (remaining vehicle capacity: 1,100, assumed 30% of proposed trips take this road: 171)
- Richardson Drive (remaining vehicle capacity: 3,000, not constructed, proposed as part of Phase 1, assumed 30% of proposed trips take this road: 172)
- Oceanview Drive (remaining vehicle capacity: 360, assumed 60% of proposed trips take this road: 343)

The analysis indicates that the 571 vehicles per day estimated to be generated by the proposed development can be handled by the proposed and existing street network and in fact has excess capacity to handle these additional trips. It should be noted that Oceanview Drive is nearing capacity, but has not reached capacity based on the HRM redbook guidelines. Until Nine Mile Drive connects Moirs Mill Road to Larry Uteck Boulevard, Oceanview Drive will continue to be the primary route to get from the existing developed lands to Larry Uteck Boulevard. Although Oceanview Drive is nearing capacity based on the HRM redbook guidelines, based on field observations during the peak periods there is still remaining capacity on this street.

#### Phase 2 (Full Build Out): Trip Generation

An estimated total of site generated trips of 6283 vehicles per day for a weekday was calculated for full build out of the project and can be seen in Table 4. Table 5 shows the AM and PM peak hour trip generation estimates. A total of 495 vehicles/hour (vph) trips during the AM weekday peak hour and 660 vph during the PM weekday peak hour are estimated for full build out of the project. This calculation was included for information purposes only and was not used as peak hour traffic volumes were unavailable on the surrounding roadways therefore weekday trips were used in this analysis.

**Table 4: Phase 2 (Full Build Out) Trip Generation, Weekday**

Total Dwelling Units	Weekday			
	Trip Rate	In	Out	Total
Single Family Detached Housing (ITE Code 210)				
Phase 1 (60 Units)				
660	9.52 <sup>1</sup>	3142	3141	6283

<sup>1</sup> – ITE trip rate calculated on a weekday

**Table 5: Phase 2 (Full Build Out) Trip Generation, Peak Hours**

Total Dwelling Units	AM Peak				PM Peak			
	Trip Rate	In	Out	Total	Trip Rate	In	Out	Total
Single Family Detached Housing (ITE Code 210)								
Phase 1 (60 Units)								
660	0.75 <sup>1</sup>	124 (25%)	371 (75%)	495	1.00 <sup>1</sup>	416 (63%)	244 (37%)	660

<sup>1</sup> - ITE trip rate calculated using the AM and PM hour of adjacent traffic between 7-9 AM and 4-6 PM.

### Phase 2: Trip Distribution

As previously indicated, when the DA was signed connections via Moirs Mill Road and Nelson's Landing Boulevard to the Bedford Highway were the only connections to get to and from this subdivision. The construction of Oceanview Drive, Nine Mile Drive, Southgate Drive, Larry Uteck Boulevard, and the Larry Uteck Interchange which now connects this proposed subdivision to the BiHi all allow for more connections into and out of this subdivision.

Consideration for the calculated traffic volumes and predicted travel patterns on Nine Mile Drive, Moirs Mill Road, Richardson Drive, and Royal Masts Way was carried out to establish the future distribution patterns of the site-generated trips. The original concept plan shows Nine Mile Drive being connected to Moirs Mill Road and it is expected this would still be the case during future Phase 2 construction.

The site-generated trips associated with the proposed development were assigned to the extended Nine Mile Drive, Moirs Mill Road, Richardson Drive, and Royal Masts Way for access to Larry Uteck Boulevard or the Bedford Highway. It is assumed that the trips heading to and from this area are either travelling to and from the school (located at the end of Oceanview Drive east of Amin Street), the commercial and office space at the Larry Uteck Interchange, or the Bedford Highway via Larry Uteck Boulevard, Southgate Drive, or Moirs Mill Road all which have significant remaining capacity.

In order to get out of or into this subdivision it is assumed that the proposed 6283 daily trips generated by this subdivision will initially travel via the following roadways to get to ultimately the Bedford Highway or Larry Uteck Boulevard:

- Nine Mile Drive (remaining vehicle capacity: greater than 4,500, assumed 50% of proposed trips take this road: 3,142)
- Moirs Mill Road (remaining vehicle capacity: 7,525, assumed 50% of proposed trips take this road: 3141)
- Royal Masts Way (remaining vehicle capacity: 1,900, assumed 5% of proposed trips take this road: 314)
- Richardson Drive (remaining vehicle capacity: 2,830, constructed as part of Phase 1, assumed 5% of proposed trips take this road: 314)

In considering the full buildout of this development, the proposed and existing street network based on the existing traffic data and trip generation can be accommodated and in all cases have some remaining capacity. Many of those vehicles accessing Oceanview Drive to connect to Nine Mile Drive will now travel the proposed connection between Nine Mile Drive and Moirs Mill Drive thereby relieving Oceanview Drive as the subdivision expands. Therefore, a connection to Hammonds Plains Road is not required now nor in the future.

### **Conclusions and Recommendations**

The following conclusions were assembled from the traffic impact assessment:

- Phase 1: The estimated weekday trips generated by the site in Phase 1 is 571 vehicles per day. The analyses indicates that the 571 vehicles per day estimated to be generated by the proposed

development can be handled by the proposed and existing street network and in fact the network has excess capacity to handle these additional trips.

- Phase 2: The estimated weekday trips generated by the site in Phase 2 is 6283 vehicles per day. The analyses indicates that the 6283 vehicles per day estimated to be generated by the proposed development can be handled by the proposed and existing street network and in fact the network has excess capacity to handle these additional trips.

The following recommendation was included based on the findings derived from this assessment:

- That the developer work with HRM to ensure positive communication with the existing residents of the neighbourhood regarding the expected change to travel patterns and network connections.

Based on the above assessment and a site visit the street network surrounding the proposed subdivision can accommodate this proposed development. In addition, this development can proceed without a connection to Hammonds Plains Road.

Sincerely,

DesignPoint Engineering & Surveying Ltd.



---

Tanya Davis, P.Eng.  
Senior Traffic Engineer





April 8, 2016

Thea Langille, Planning Manager  
Halifax Regional Municipality  
Alderney Gate Office  
Dartmouth, Nova Scotia

Dear Thea,

**RE: Amendment Application to the Paper Mill Lake RCDD Development Agreement dated May 17, 1995**


On behalf of my Client, United Gulf Developments Limited, please consider this letter our request to amend the Paper Mill Lake RCDD development agreement. The purpose for the amendment is to seek the ability to create additional residential units without the requirement to construct the connector road from Moirs Mill Road to Hammonds Plains Road.

United Gulf Limited is the owner of all remaining lands in the Paper Mill Lake RCDD (PIDs 00360667, 00428375, 40810228, 40810210). Therefore, they have the ability to seek this amendment as it affects all the undeveloped RCDD lands on both the north and south sides of Kearney Run.

We have undertaken a traffic analysis to demonstrate that the surrounding road network (Oceanview Drive, Nine Mile Drive, Southgate Drive, Larry Uteck Boulevard, and the Larry Uteck interchange) is capable of handling the remaining RCDD development without the need for the connector road to Hammonds Plains Road. (See attached study by Design Point). The proposed first phase of this application would be to complete the lots on Baha Court and to make the connection to Richardson Drive.

Please do not hesitate to contact me if you require anything further.

Sincerely:

  
Jenifer Tsang, MCIP

Enclosures:

- 4 copies of Traffic study by Design Point dated April 6, 2016
- Signed application form
- \$2600 application fee
- Electronic copies of all materials

TEL: 902.478.2541

FAX: 902.869.5252

EMAIL: SUNROSE@EASTLINK.CA

615 WESTPOINT DRIVE

LUCASVILLE, NOVA SCOTIA

B4B 1X8

## Planning Application Form

### APPLICATION TYPE

- ☐ Land Use By-law Amendment
 ☒ Development Agreement Amendment
 ☐ Other \_\_\_\_\_
- ☐ Development Agreement
 ☐ Subdivision By-law Amendment

Internal Use Only	<input type="checkbox"/> Major	<input type="checkbox"/> Intermediate	<input type="checkbox"/> Minor
Processing Fee		Advertising Deposit	Total
Description of proposed use in detail: (attach additional pages, if necessary)			
See attached letter			
Existing Land Use	Vacant		
Existing Structures		Previous Land Use	
Sanitary Service	Municipal	Water Service	Municipal

### PROPERTY INFORMATION

#### Primary Property

PID	Civic Address	Owner(s) Name
00360667		United Gulf Developments Ltd

#### Other Property(s) affected

PID	PID	PID
00360667	00428375, 408 10228	408 10210

### ENCUMBRANCES

Describe any easements, restrictive covenants or other encumbrances affecting the subject land(s):

### CULTURE/ HERITAGE

Is this a registered Heritage Property?			
<input type="checkbox"/> Municipal	<input type="checkbox"/> Provincial	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> No
Does this property abut a registered Heritage Property?			
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		

## Planning Application Form

**Are you aware if the site contains any of the following cultural/heritage resources?**

- ☐ archaeological sites  
☐ buildings, structures, and landscape features of historical significance or value  
☐ cemeteries or known burials

If yes to any of the above, please provide details of any cultural or heritage resources on or abutting the site:

### CONTACT INFORMATION

Registered Owner(s): <i>United Gulf Developments Ltd.</i>		
Mailing Address <i>60 Walter Havill Drive</i>		
E-mail Address <i>n.saberi@greathomes.ca</i>		
Phone <i>902-493-3066</i>	Cell <i>902-497-3200</i>	Fax
Applicant?* <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

Consultant: <i>Sunrose Land Use Consulting - Jenifer Tsang</i>		
Mailing Address <i>615 Westpoint Drive</i>		
E-mail Address <i>Sunrose@eastlink.ca</i>		
Phone <i>902-478-2541</i>	Cell <i>902-478-2541</i>	Fax
Applicant?* <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

I certify that I am submitting the above referenced application, including all of the required supporting information, for approval with the consent of the owner(s) of the subject property(s). The owner(s) has/have seen the proposal and have authorized me to act as the applicant for this planning application. \* My identification as the applicant means that I am the primary contact with HRM in all matters pertaining to this application.

I understand that all studies or reports submitted in support of this application are public. Once it has been determined that these documents are complete in both the comprehensiveness of the data used and that the analysis methodology is in keeping with HRM standards, they will be available for release to the public for inspection. Upon request by HRM, I agree to provide additional copies of such reports or studies as may be necessary.

  
Applicant Signature

*April 8, 2016*  
Application Date

All applications must include the written consent of all registered owners of the subject lands, contain complete and accurate information, and include the appropriate fees. **Incomplete applications will be returned.**

**All fees are to be made payable to Halifax Regional Municipality.**

**All plans are to be folded to approximately 8½" x 11" with the face of the folded print being the title block which is located in the lower right-hand corner of the plan.**