



May 7, 2020

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Project Manager
Mattamy Homes

**Re: Traffic Impact Study Addendum
Phase 3 of Joshua Creek Draft Plan
Town of Oakville, Ontario**

1. Introduction

1.1 Background

An initial comprehensive Traffic Impact Study (TIS) was completed by READ, VOORHEES & ASSOCIATES, dated August 2012, which was submitted for the proposed Joshua Creek Lands located on the north side of Dundas Street between Eighth Line and Ninth Line in the vicinity of Joshua's Creek, in the Town of Oakville. The subdivision was proposed to include a mix of single family units, street townhouses, back-to-back townhouses, stacked townhouses, live-work units, and potentially some commercial floor area.

Subsequently, an updated TIS dated March 2016 was completed by READ, VOORHEES & ASSOCIATES for the proposed subdivision to reflect numerous changes to the proposed development unit counts.

In Table 1 of the 2016 traffic study, the total study area unit count was incorrectly calculated as 4,472 units instead of 2,486. This error was carried through into the trip generation found in Table 2 in section 4.2 which resulted in a total of 2,127 site trips estimated to be generated during the a.m. peak hour (521 inbound and 1,606 outbound) and 2,704 during the p.m. peak hour (1,684 inbound and 1,020 outbound). The findings of the updated TIS based on the significantly over estimated unit count continued to conclude that "*adequate capacity will be available*" to accommodate additional increase in site trips; the conclusions and recommendations noted in the original 2012 TIS thus remained unchanged.

In October 2018, GHD had submitted addendum letters based on updated draft plans for the Phases 1 of the Bressa Subdivision and for Phases 2 of the Dunoak Subdivision within the Joshua Creek Draft Plan area. As Mattamy is proposing to begin construction of Phase 3, which is comprised of development within the Bressa, Dunoak, and Dryland development areas, GHD has prepared the following traffic brief.

Figure 1 shows the location of the proposed Phase 3 development lands within the Joshua Creek Composite Plan.

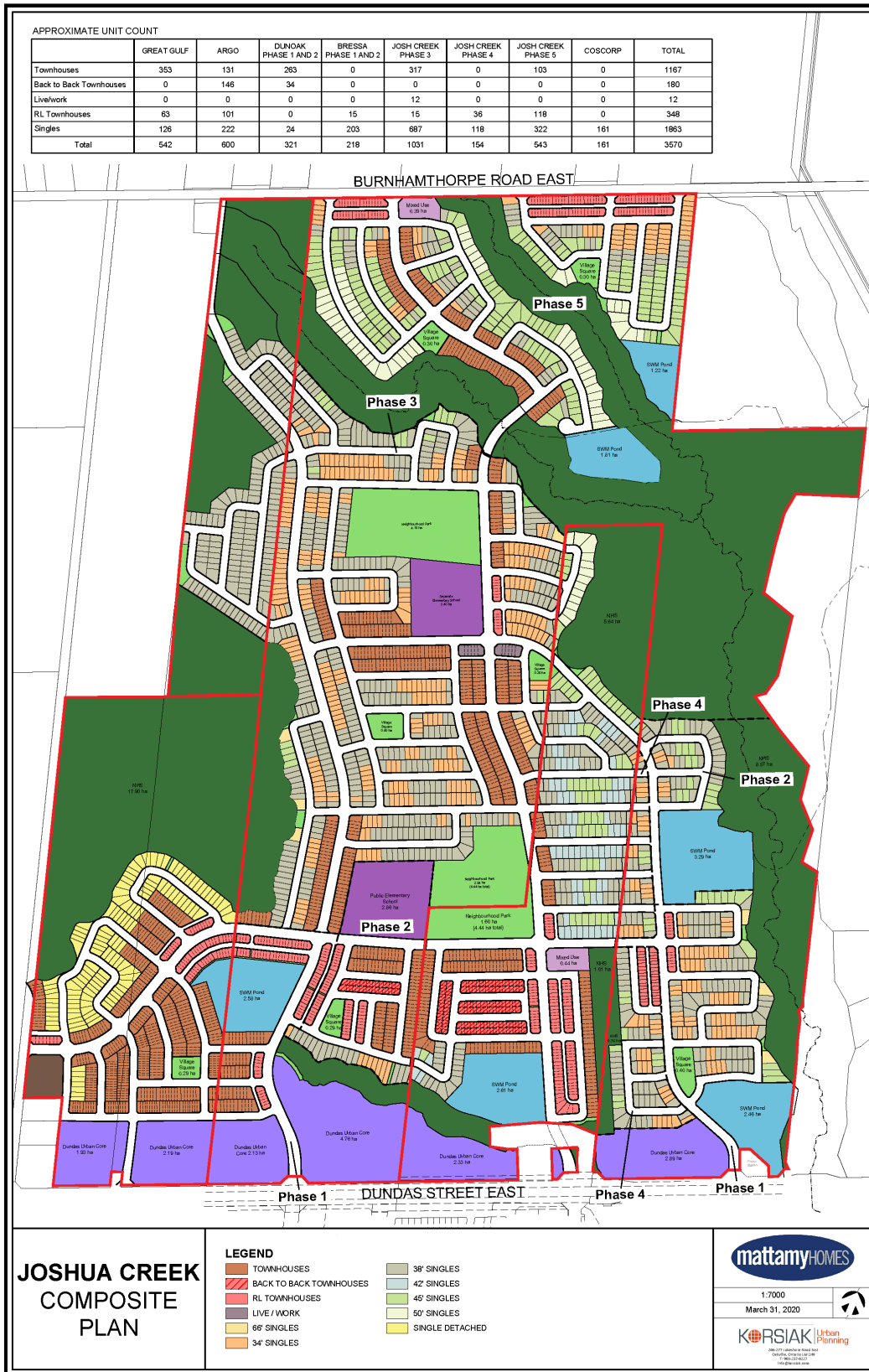


Figure 1 – Proposed Joshua Creek Composite Plan

1.2 Objective

The objective of this traffic brief is to determine the expected trip generation from the proposed Phase 3 of the Joshua Creek Draft Plan and provide a comparison of the proposed update trip generation to that of the previously approved traffic study for the Joshua Creek composite plan.

2. Trip Generation (Phase 3)

GHD completed Trip Generation analysis utilizing the latest 10th Edition of the Institute of Traffic Engineer's (ITE) *Trip Generation* manual for the Phase 3 of the development. The proposed development consists of a total of 687 single family units and 344 town house units of which 12 are considered live-work units with commercial.

GHD adopted the estimated site based on either the average rate or the fitted curve equation, depending on which approach resulted in a higher number of trips.

The following Land Use Codes (LUC) were utilized:

- LUC #210 Single Family Detached Housing for single family units;
- LUC #220 Multifamily Housing (Low-rise) for townhouses; and
- LUC #231 Mid-Rise Residential with 1st-Floor Commercial for the live-work units.

The results of the trip generation calculations are presented in Table 1 below

Table 1: Trip Generation Table

Proposal	Parameters	Weekday AM			Weekday PM		
		In	Out	Total	In	Out	Total
LUC 210 (687 units)	Equation		0.74			0.99	
	Trips Ratio	25%	75%	-	63%	37%	-
	Gross Trips	127	381	508	428	252	680
LUC 220 (332 Units)	Equation		0.46			0.56	
	Trips Ratio	23%	77%	-	63%	77%	-
	Gross Trips	35	118	153	117	69	186
LUC 231 (12 Units)	Average Rate		0.3			0.36	
	Trips Ratio	28%	72%	-	70%	30%	-
	Gross Trips	1	3	4	3	1	4
Total Site Trips		163	502	665	548	322	870

The proposed Phase 3 draft plan is expected to generate a total of 665 two-way trips during the a.m. peak hour (163 inbound and 502 outbound) and 870 two-way trips during the a.m. peak hour (548 inbound and 322 outbound).

3. Total Trip Generation

GHD calculated the updated total traffic generated by the Joshua Creek Composite Plan by adding previously updated trip generation for Bressa Phases 1 and 2 and Dunoak Phases 3 and 5 to the Phase 3 site trips summarized in Table 1 above. The total trip generation was then compared it to original Joshua's Creek TIS.

Table 2, below presents the total trips generation of Phases 1 through 3 of the Joshua Creek Draft Plan.

Table 2: Total Trip Generation

Composite Phase	Weekday AM			Weekday PM		
	In	Out	Total	In	Out	Total
Phase 1 (Part of Bressa and Dunoak Subdivision)	41	120	161	135	79	214
Phase 2 (Part of Bressa and Dunoak Subdivision)	39	127	166	126	75	201
Phase 3 (parts of Bressa, Dunoak, and Dryland Subdivision)	163	502	605	548	322	870
Total Site Trips	243	749	992	809	476	1,285

The total trip generation from Phases 1 through 3 of the Joshua Creek Draft Plan is expected to generate 992 two-way trips during a.m. peak hour (243 inbound & 749 outbound) and 1,285 two-way trips during p.m. peak hour (809 inbound and 476 outbound).

Table 3: Total Trip Generation Comparison

	Weekday AM			Weekday PM		
	In	Out	Total	In	Out	Total
2016 Traffic Study	521	1,606	2,127	1,684	1,020	2,704
2020 with Updated Phase 6 Draft Plan	243	749	992	809	476	1,285
Net Difference	-278	-857	-1,135	-875	-544	-1,419

Due to the error in unit count in the 2016 report, the total site trips generated by the updated site plans is significantly lower then the previously calculated total site trips.

4. Expected Operational Impacts

The capacity analysis included in the 2016 TIS submission included the following study area intersections:

- Dundas Street and Eighth Line;
- Dundas Street and Prince Michael Drive;
- Dundas Street and Meadowridge Drive;
- Dundas Street and Ninth Line; and
- Burnhamthorpe Road and Street "A".

The results of the analysis indicated that "*adequate capacity will be available*" for the site trips generated for the entire subdivision. Given the expected reduction in overall trip generation, adequate capacity will also be available for the site trips generated for the proposed Phase 3 development.

5. Summary of Findings & Recommendations

The initial 2016 TIS submission concluded that with the planned roadway and intersection improvements within the study area, the proposed Joshua Creek Draft Plan could be accommodated. With the results of the trip generation analysis indicating that total site trips will in fact be less for the entire Joshua Creek subdivision, of which proposed Phase 3 of Composite Development is a part of, the conclusions of the original study remain valid and may overestimate the required intersection geometry to accommodate the proposed development.

We trust the enclosed is sufficient for your needs, but please do not hesitate to contact the undersigned should you require additional assistance.

Sincerely,

GHD



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Transportation Planner



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