



PLANNING, DEVELOPMENT  
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File No.: C14-60/30  
Capital Paving Inc.

Dear Mr. Philips:

Re: **Transportation Impact Study, Shantz Station Road Gravel Pit, Lots 81 & 82  
German Tract, Township of Woolwich**

Regional staff has reviewed the Transportation Impact Study, dated April 2019, for the proposed Zone Change and OPA Application at Shantz Station Road Gravel Pit, Lots 81 & 82 German Tract, Township of Woolwich.

Please review staff comments below, and provide a response for items as applicable.

**Transportation Planning**

#	Details	Action
	<b>Section</b>	
1.	Section 2.3 – Level of Service analysis should be performed based on most recent Synchro versions based on HCM 2010. However, the analysis in the TIS is reported to be based on HCM 2000 procedures	Check and ensure the appropriate HCM procedure was used in accordance to the Region's requirements for Capacity Analysis, Roundabouts and Turn Lanes
2.	Section 3.1 – Peak Hour Factor (PHF) can never be greater than 1.0. However, the TIS report states that a PHF of 2 was used to convert average hourly volume to peak hour volume. How did this come about? Although multiplying the estimated trips generated by a factor of 2.0 seems rational (in order to account for return trips), the context under which "PHF" was used isn't appropriate.	Replace "PHF" measure in Table 3.1 with another measure that represents a factor meant to account for "return trips"
3.	Section 3.1 – The TIS report mentions that the PCE's were obtained from the Canadian Capacity Guidelines (CCG). However, the Region's requirements for Capacity Analysis,	Provide explanation with justification for the PCE's from CCG as

#	Details	Action
	Roundabouts and Turn Lanes should be based on the 2010 HCM. Was there a need for using the CCG in this context?	opposed to using that from the HCM 2010. Otherwise, use HCM 2010 as basis for analysis.
4.	Section 5.1.1 – The report mentioned a vertical curve along Shantz Station Rd, south of the subject site. However, it doesn't mention if it is a 'sag' or 'crest' vertical curve	Specify if it is a 'Sag' or 'Crest' vertical curve. Also, state slope of the curve.
5.	Section 5.1.1 – The report stated that the sight distance was measured to be 350 meters. No further details was provided on how and when it was measured (e.g. date)	Provide more information on the technique used to measure sight distance and the date it was measured
6.	Section 5.1.2 – The report mentions the Intersection Sight Distances (ISD) were estimated based on TAC Guidelines. However, wrong citations were provided as to where parameters were obtained to perform calculations (re: 7.5 s for cars and 11.5 s for trucks). Also, nothing was mentioned about the gradients of the approaching slopes which often influence the estimated ISD.	Provide proper citation for parameters State if approach slopes along roadway have an influence on ISD
7.	Section 5.1.3 – The report states that a northbound acceleration lane is not required. However, given the likelihood of truck routes changing over time and the plausibility of present and future aggregate demand to the north of the site, a northbound acceleration shoulder will be required to accommodate westbound right-turn truck movements from the site.	Implement deceleration and acceleration shoulder lanes on Shantz Station Rd as outlined in the Region's Standard Dwg # 260

### Traffic Systems

#	Details	Action
	<b>Section</b>	
8.	The signalized intersection in the TIS (Victoria @ Shantz Station) is under MTO's jurisdiction.	Follow up with MTO for comments at this intersection

## Transportation Engineering

#	Details	Action
	<b>Section</b>	
9.	N/A	N/A

### Recommendation of Submitted TIS

1. That a northbound right-turn deceleration lane be added at the proposed site entrance on Shantz Station Road.

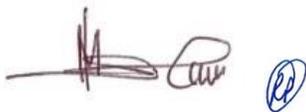
### Transportation Division Staff Recommendation

1. That northbound deceleration and acceleration shoulders be implemented on Shantz Station Road as outlined in the Region's Standard Drawing # 260.
2. That MTO be contacted to comment on recommended improvements at the Highway 7 & Shantz Station Road intersection.
3. A functional design, cost estimate and letter of credit, will all be required, secured through a registered agreement, to be included in a 2020 Regional contract, should be submitted to the satisfaction of the Region for:
  - a Gravel pit access as per Regional Drawing #260 including a northbound right-turn deceleration and acceleration lane.

Please provide the above requested information for Regional review and approval. We would note the actions identified in the tables above are for the benefit of the author, and a resubmission of the TIS is not required.

Should you have any questions, please don't hesitate to contact me.

Yours truly,



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