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**JCRA Notes on the Winston Churchill Warehouses**

Comments from the Joshua Creek Residents Association on the Applicants’ resubmissions in response to Town of Oakville requirements for an analysis of the Ultimate Operating Conditions of both 560 & 772 Winston Churchill Blvd combined. This submission is in addition to submissions previously presented to the Town.

**Summary**

Based on JCRA’s analysis of the most recent WCB warehouse submissions, we found that the proponents have not yet addressed key conditions that were set by the Town at the June 27, 2022 Development Council meeting. These include evaluating the ultimate operating condition of the sites at full build-out and mitigating the noise, vibration and air quality impacts upon the local residents.

Our strong recommendation is that a logistics professional with extensive warehouse experience be brought onto the Task Force to determine the criteria and definition of the ultimate operating condition at full build out, including an analysis of seasonal peaks in warehouse operations and traffic volumes.

For proper context, we have included details of our analysis that was previously shared with the Town on pages 6-7. The critical issues are identified under specific headings below, and we hope that the Task Force will find our analysis useful.

**JCRA analysis and review of most recent submissions**

Our analysis and comments are based primarily on the Crozier 560 & 772 Winston Churchill Blvd. Trip Generation Review dated August 3, 2023, and the Paradigm Peer Review dated September 14, 2023.

The Crozier report is a comparative analysis using a proxy warehouse at 8550 Boston Church Rd. in Milton. It was intended to confirm the following condition that was added, by the Town, to the conditions for site plan approval for both 560 and 772 Winston Churchill Blvd. at a Development Council meeting on June 27, 2022, was met.

1. *“The Owner shall evaluate the ultimate operating condition of the site, based on full build-out, and identify any required traffic, noise and vibration measures, prior to final approval of the site plan. This evaluation shall be reviewed by the Town’s peer review consultants at the expense of the Owner. Installation of any mitigation measures identified by the evaluation shall be incorporated into the final plans and studies and implemented prior to occupancy of any of the proposed buildings.”*

In addition, the Owners’ presented a draft letter on WeirFoulds **LLP**letterhead (Denise Baker, Partner) dated June 9, 2022, at the Development Council meeting June 27, 2022 that outlined a number of items including the following provision which we see as an important step in addressing the impact on the community:

1. *“The Owner will undertake not to occupy the buildings on the easternly portions of the Properties, which abut Winston Churchill Blvd. in advance of the commencement of the exterior construction of the buildings located on the westerly portion of the Properties closest to the residentially zoned lands.”*

Council must hold the Owners to these conditions, as they are fundamental to understanding and mitigating the potential traffic, vibration, noise and air quality impacts of these warehouses on the adjacent Aspen Forest neighbourhood and will ensure that appropriate mitigation measures are implemented.

Based on our review of the recent submissions we found that these two conditions have not been met, which causes the JCRA to question if Town was able to examine the consulting engineers’ and peer reviewer’s reports closely enough.

560 and 772 WCB are two enormous developments comprised of 5 warehouses, with 1.3 million square feet of warehouse space, 226 loading docks, 94 trailer parking spaces and 725 employee parking spaces on 70.5 acres of land. **The magnitude of this development cannot be under-stated, and residents need strong support from the Town to mitigate the adverse impacts on the liveability of their neighbourhood.**

**Recent Applicant Submissions**

Both applicants submitted updated reports in late 2023, early 2024 that still did not provide an evaluation of the “ultimate operating conditions of the warehouses based on full build-out.”

Instead, both their consultants and the Town’s peer reviewer compared their previous traffic studies for 560 and 772 WCB to trip generation rates for a Lowe’s warehouse at 8850 Boston Church Rd. in Milton (8550) that was identified by the municipality as a proxy for the Winston Churchill warehouses.

The peer reviewer identified that the trip generation rates at 8550 in Milton were significantly lower than the combined trip generation rates used in the studies submitted for 560 and 772 WCB. The report states that the 560 and 772 “ ITE trip generation rates are 53% and 47% higher than the proxy trip generation rates for the AM and PM peak hours respectively.”

The report goes on to state that the 560 and 772 “ITE trip generation rates are found to be “conservative” when compared to the proxy site (8550 Boston Church Road).”

This finding says nothing about whether the trip generation rates at 560 and 772 WCB represent the ultimate operating conditions of the warehouses based on full build-out, a condition for site plan approval. It only confirms that the proxy was an under-utilized warehouse.

**Inappropriate Proxy Choice**

The proxy selected was found to be an under-utilized warehouse that had very low trip generation rates during the study period in mid 2023.

There was no examination of the operating level of this Milton warehouse which was sold by Lowe’s to a private equity firm in late 2022 when Lowe’s exited Canada and the warehouse was likely undergoing restructuring during the study period. *It should have been determined that it was not an acceptable proxy for determining the “the ultimate operating condition of the two development sites, based on full build-out.”*

Our analysis found that the trip generation rates for the proxy (8550) were in the bottom quartile of ITE rates for LUC (Land Use Code) 150 warehouses based on the 10th edition of the Trip Generation Manual. The proxy all vehicle trip generation rate of .08 was only 47% of the ITE average rate of .17 and the proxy heavy truck trip rate of 13% was only 37% of the ITE average rate of 35%.

As a result of the conclusions stated in the Crozier memo of August 3, 2023, the D6-Land Compatibility report and related traffic, air quality and noise studies were not updated for the WCB warehouses.

772 WCB updated their traffic report but they still used the previous trip generation rates that are not representative of “the ultimate operating condition of the site.”

It is evident that neither submission incorporated an analysis of the “ultimate operating conditions at full build-out”, the fundamental requirement for site plan approval. Nor did they provide a combined traffic study that was requested by the Town and Peer reviewer. We need confidence that the numbers represent the combined ultimate buildout of the warehouses so appropriate mitigation measures can be designed and implemented.

We need to understand what the applicants can actually do based on the combined size of these warehouses, number of loading docks and trailer parking spaces, not what they say they would do. **Our strong recommendation is that a logistics professional with extensive warehouse experience be brought onto the Task Force to bring clarity to this question and determine the criteria and definition of the “ultimate operating condition at full build out. “**

**Standard Traffic Analysis Approach**

Our traffic analysis used calculations of estimated heavy truck trips into and out of the warehouses based on the Institute of Traffic Engineers (ITE) average rates for LUC 150 warehouses. The ITE represents the industry standard in traffic with over 17,000 members in 92 countries including more than 2,000 in Canada.

The trip generation rates used are consistent with the trip generation rates used for the neighbouring warehouses currently under construction in Mississauga at 551 Avonhead and 759 WCB (e.g. an average all vehicle ITE trip generate rate of .17 per 1,000 sq. metres of warehouse floor space) to determine the total number of vehicles during the peak AM and PM hours, and heavy truck rate of 35% based on an ITE daily heavy truck rate of 1.74/ daily all vehicle trip rate of 4.96 = 35% and confirmed by the 551 Avonhead and 759 WCB studies.

The consultants deviated from using ITE industry average rates and instead used observed rates from the proxy at 8550 Boston Church Rd. in Milton which our analysis demonstrates is an under-utilized facility and does not represent the ultimate operating condition of the warehouses at full build-out **(see Table 1).**

If we compare the proxy’s “all vehicles” and “heavy truck” numbers using the average ITE rate of .17 and the heavy truck rate 35% the total number of vehicles were:

Proxy Boston Church: Total vehicles, 104 (.08 observed rate) and 14 heavy vehicles observed (13% observed rate) versus 221 total vehicles (.17 ITE rate/1,000 sf warehouse space) with 77 heavy vehicles (ITE average rate 35%) or 5.5 times the number of heavy vehicles if the ITE average rates were used **(see Table 2).**

The neighbouring warehouses heavy truck rate of 35% for 551 Avonhead is based on the average of the AM In/Out rates of 40%/ 20% and PM In/Out rates of 50%/30%. The resulting 35% average heavy truck rate for Avonhead is very similar to average of 33.4% used for 759 WCB.

As a result, the peer reviewer and consultants' findings both fail to satisfy the Council’s condition requiring an evaluation of the sites’ ultimate operational potential upon full build-out.

Furthermore, because the applicants did not provide a combined traffic analysis for both developments, the assessment of road and intersection capacity is understated and should be re-evaluated on a combined basis.

Hence, they did not identify any necessary traffic, noise, vibration and air quality measures to mitigate the impact on the quality of life for Aspen Forest residents, prior to final approval of the site plan.

The analysis submitted to date fails to account for a significant increase in truck volumes in the area and the related increase in noise from back-up beepers, truck coupling and uncoupling at loading docks and increased emissions from idling truck traffic. It does not appear that logistic experts were retained to undertake this critical analysis despite repeated requests from residents.

**Analysis of Ultimate Operating Capacity**

The peer reviewer and consultants' findings both failed to satisfy the Council’s conditions of measuring the site's ultimate operational potential upon full build-out.

An analysis of the **peak hours of on-site truck movements and related combined truck trips at the developments** as a measure of the “the ultimate operating condition of the site at full build-out” is required. (this is different from the peak AM and PM traffic on adjacent roads).

Consider factors such as the peak combined truck trips generated by the site based on:

* combined floor area of 1.283 million sq. ft for both warehouse developments
* peak on-site turnover rates of the combined 226 loading docks for both developments including 94 trailer parking spaces at 772 WCB
* an analysis of the loading dock turnover and truck trip rates for high frequency goods
* Determination of the combined peak hour(s) truck trips and daily truck trips generated.

An experienced logistics expert specialist should be able to assist with this analysis.

The usual traffic analysis done to assess traffic, noise and air quality is based on the estimated truck trips generated from the facilities during the two AM and PM peak traffic hours on adjacent roads. This approach is the best approach for measuring the impact of area roads and intersections.

Another set of calculations is required to assess peak truck trips on-site, independent of the peak AM and PM traffic on adjacent roadways, to better understand the impact on nearby residences.

In addition, a seasonality/peak traffic analysis using higher peak trip generation rates (+ 30%) to reflect seasonal bulges during the year is required. An analysis that omits seasonal peaks, by definition, is not full capacity utilization and will significantly understate noise, vibration and air quality impacts which are required to be measured under worst-case scenarios according to the Provinces D-6 Guidelines for facilities adjacent to sensitive uses which includes residential areas.

This analysis should predict the combined peak truck traffic for both sites. This information could then be used by the noise, vibration and air quality experts to assess the impact on nearby residents in the Aspen Forest neighbourhood and identify mitigation measures that should be implemented into the final plans and studies prior to issuing of building permits and the start of construction.

The analysis outlined above utilizes industry standard methodologies and is a better approach for determining the ultimate operation condition of the site at full build-out so appropriate measures can be implemented to mitigate the impact on residents in the nearby Aspen Forest neighbourhood.

**Mitigation Measures During Construction**

There are no mitigation measures in the consultants’ reports that provide protection to residents from noise, vibration, and dust during construction.

The applicants must provide clarity on the sequence of construction of the facilities to ensure the buildings which are situated closest to residents (e.g. Deer Run, Acacia Court and Claremont) and will provide noise mitigation for residents are constructed first. The wording used in the applicants’ letter appears to mean the opposite:

**Existing wording: “**the Owner will undertake not to occupy the buildings on the easternly portions of the Properties which abut Winston Churchill Blvd. in advance of the commencement of the exterior construction of the buildings located on the westerly portion of the Properties closest to the residentially zoned lands.”

**Suggested wording to ensure full noise mitigation the facilities must be constructed as follows:** “The entire shell of the westerly buildings (772 Bldg. B & 560 Bldg. B) and the southernly building (560 Bldg. A) that are adjacent to residents must be completed first before construction of the buildings adjacent to Winston Churchill Bld. (772 Bldg. A & 560 Bldg. C) commence.”

From the residents’ perspective the goal of the construction phasing is to ensure the buildings adjacent to Aspen Forest residents that are intended to provide noise protection for residents are completed first.

A review of the site plans that includes remediation recommendations for (1) potential gaps in noise walls; (2) inadequate chain link fencing (should be attractive solid fencing with noise reduction qualities); (3) gaps in berms etc. to protect residents from post-completion noise from heavy trucks, including back-up beepers and trucks coupling and uncoupling at loading docks and rooftop mechanical equipment and employee vehicles which use the roads that are adjacent to the exterior walls of each site is required.

**Mitigation During Operations**

Following the analysis and comments above, the JCRA requests that the applicants be required to meet the following condition that is required to obtain site plan approval.

***“The Owner shall evaluate the ultimate operating condition of the site, based on full build-out, and identify any required traffic, noise and vibration measures, prior to final approval of the site plan. This evaluation shall be reviewed by the Town’s peer review consultants at the expense of the Owner. Installation of any mitigation measures identified by the evaluation shall be incorporated into the final plans and studies and implemented prior to occupancy of any of the proposed buildings.”***

We are relying on the Town to ensure this condition is met.

In addition, the Town should:

* Determine the combined peak hour(s) truck trips and daily (12/24 hour) truck trips generated.
* Provide a combined analysis of the peak loading dock and trailer parking space turnover and related truck trips for both developments. The analysis needs to include peak turnover of truck trips for high frequency turnover of goods. This is the only way to model the ultimate operating conditions of these warehouses**.**
* Provide a seasonality/peak traffic analysis using higher peak trip generation rates (+ 30%) to reflect seasonal bulges during the year. An analysis that omits seasonal peaks, by definition, is not full capacity utilization and will significantly understate noise and air quality impacts which are required to be measured under worst-case scenarios account to the Provinces D-6 Guidelines.
* Provide combined (560 + 772) noise, vibration and air quality studies based on truck trips generated during peak hours of operation, including seasonal peaks, with analysis and recommendations to mitigate adverse noise, vibrations, and air quality impacts on Aspen Forest residents.
* Provide a new Land Compatibility report based on Ontario D-6 Guidelines peak on-site truck trips to ensure residents are protected from the worst-case scenarios these enormous warehouse operations represent under full capacity utilization, including seasonal peaks.

**Peak AM and PM Traffic and impact on nearby roads and intersections**

A combined (560 & 772) traffic analysis of heavy trucks entering and leaving both sites during peak hours on adjacent roads using ITE average rates in line with the rates used by 551 Avonhead and 759 Winston Churchill Blvd (or higher rates) must be undertaken. The analysis must include the impact of 94 tractor trailer parking spaces at 772 Winston Churchill Blvd. in addition to a total of 226 loading docks at the combined facilities.

The analysis should be revised to include a higher background growth factor above the 2% rate used in the analysis, to account for the increased truck volumes from five new warehouses in very close proximity to 560 & 772 WCB.

759 Winston Churchill Blvd. – under construction

551 Avonhead – under construction

880 Avonhead – Amazon delivery warehouse

2645 Winston Churchill Blvd.- under construction

2520 and 2510 Royal Windson Dr. – one building operational, one not.

Previous recommendations for work required to increase capacity on area roads and intersections to accommodate higher traffic volumes during the peak AM and PM rush hours.

We are pleased that a group of experts is being assembled to determine the ultimate operating condition of the site at full build-out and look for to the new analysis of the Task Force and the proposed mitigants that will be put forward to minimize the impact residents.

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| **Table 1** | | | | | | | | | |
| **Trip Generation using Consultant’s Rates** | **ITE** | **8550 BC** | **759 WCB** | **551 Avonhead** |  | **560** | **772** | **Total** |  |
| **Description** | **rates** | **Proxy** | **Comp.** | **Comp.** |  | **WCB** | **WCB** | **560+750** | **Comments** |
| **Sq. Ft.** |  | **1,300,000** | **745,000** | **740,000** |  | **636,446** | **647,043** | **1,283,489** | **8550 & 560+772 have similar SF** |
| **# of Loading Docks** |  | **180** | **90** | **112** |  | **116** | **110** | **226** | **750+560 have + 25% docks than 8550** |
| **LUD Code** | **150** | **150** | **150** | **150** |  | **150** | **150** | **150** | **same LUC code** |
| **AM average trip generation rate all vehicles** | **0.17** | **0.08** | **0.17** | **0.17** |  | **0.17** | **0.17** | **0.17** | **8550 trip generation rate 50% lower than ITE rate used**  **for other warehouses** |
| **Daily Trip rate for all vehicles** | **4.96** |  |  |  |  |  |  |  |  |
| **Daily trip rate - heavy trucks** | **1.74** |  |  |  |  |  |  |  |  |
| **Daily average heavy truck rate** | **35.1%** | **13%** | **33.4%** | **35%** |  | **20%** | **20%** | **20%** | **8550 Rate (13%) is 37% of ITE avg. rate. 560 + 772 rate**  **(20%) is 57% of ITE avg. rage (35%)** |
| **Total avg. AM trip generation all vehicles** |  | **104** | **127** | **126** |  | **108** | **110** | **218** | **SF/1,000 x AM average trip generation rate**  **all vehicles = all vehicle #'s** |
| **Total peak am. Truck** |  | **14** | **42** | **44** |  | **22** | **22** | **44** | **Heavy truck #'s = all vehicle # x .35 daily truck rate** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 2** |  |  |  |  |  |  |  |  |  |
| **Trip Generation using ITE rates** | **ITE** | **8550 BC**  **Proxy** | **759 WCB**  **Comp.** | **551 Avonhead**  **Comp.** |  | **560 WCB**  **applicant** | **772 WCB** | **Total** |  |
| **Description** | **rates** |  | **applicant** | **560+750** | **Comments** |
| **Sq. Ft.** |  | **1,300,000** | **745,000** | **740,000** |  | **646,991** | **636,456** | **1,283,447** |  |
| **# of Loading Docks** |  | **180** | **90** | **112** |  | **116** | **110** | **226** |  |
| **LUD Code** | **150** | **150** | **150** | **150** |  | **150** | **150** | **150** | **same LUC code 150** |
| **AM peak hour generation rate all vehicles** | **0.17** | **0.17** | **0.17** | **0.17** |  | **0.17** | **0.17** | **0.17** | **Same ITE avg. trip generation rate** |
| **Avg. daily trip rate for all vehicles** | **4.96** |  |  |  |  |  |  |  |  |
| **Avg. daily trip rate heavy truck rate** | **1.74** |  |  |  |  |  |  |  |  |
| **Avg. daily trip rate heavy truck rate %** | **35.1%** | **35%** | **33.4%** | **35%** |  | **35%** | **35%** | **35%** | **1.74 truck rate/4.96 all vehicle rate = 35%** |
| **Peak am. hour all vehicles using ITE rates** |  | **221** | **127** | **126** |  | **110** | **108** | **218** | **SF/1,000 x AM average trip generation rate all vehicles = all vehicle #'s** |
| **Peak am. hour heavy trucks - ITE rates** |  | **77** | **42** | **44** |  | **38** | **38** | **76** | **All vehicles # x heavy truck rate** |
| **Peak am. hour heavy trucks - consultants #'s** |  | **14** | **42** | **44** |  | **22** | **22** | **44** |  |
| **Increase in heavy trucks using ITE rates** |  | **64** | **0** | **0** |  | **17** | **16** | **33** |  |
| **ITE Truck totals vs. Consultant truck totals** |  | **5.5** | **1.0** | **1.0** |  | **1.7** | **1.7** | **1.7** | **Heavy truck #'s 5.5 x higher for 8550 and 1.7 x higher for 560+772 using ITE avg. rates** |

**Also, refer to a short PowerPoint “ document “JCRA Site Plans and Comments March 2024 PPT" for annotated Site Plans and key Site Plan statistics submitted concurrently.**

**THE END**