



Technical Memorandum

Date: August 23, 2023 **Project No.:** 300056761.0000

Project Name: 560, 580, 590 Sixth Street, Collingwood – Second Submission

Client Name: Town of Collingwood

Submitted To: Stuart West, P. Eng., Manager, Engineering Services

Submitted By: Henry Centen, P. Eng.

This memorandum provides Burnside's peer review comments on the following documentation:

- Traffic Impact Study, 560, 580 & 590 6th Street, Town of Collingwood; dated May 13, 2022, revised July 31, 2023; prepared by JD Northcote Engineering Inc.
- Comment letter, 560, 580, 590 Sixth Street, Collingwood, Traffic Impact Study, First Submission Comments; dated July 31, 2023; prepared by JD Northcote Engineering Inc.

The subject development proposes 70 residential townhouse units plus 231 high-density residential units by 2026 and an additional 11 townhouse units to be completed by 2031. The site access is to be provided via a new public road connection to Sixth Street, opposite Stewart Road, and by an extension of Holden Street, which subsequently connects to High Street via Chamberlain Crescent.

Burnside's peer review comments on the original submission of this Traffic Impact Study are repeated, in italics, with a subsequent response on the status of those comments.

Burnside Comments on the revised Traffic Impact Study (TIS):

1. **Background Developments and Traffic Growth** – *The estimates for future traffic growth are generally consistent with forecasts made in the Collingwood Transportation Study Update (Burnside, August 2019). However, the trip reductions made in Table 2, to avoid double-counting of the trips from the subject development, appear to be higher than the trip generation assumed in the Town's study and should be checked.*

A future road connection to the east of the subject lands is included in the subdivision plan. The lands to the east are currently used for commercial purposes (i.e., Storage

Collingwood), whereas the Official Plan designates these lands for residential purposes. The TIS should consider traffic from these lands if they are anticipated to be developed within the 2036 time horizon considered in this study.

Addressed. Table 2 has been revised and it has been confirmed that the lands to the east are not likely to be developed within the timeframe (2036) considered in this study.

2. **Study Area and Road Network Considerations** – *The TIS forecasts that 28% of the traffic to/from the south will use the intersection of High Street / Chamberlain Crescent (north leg) to access the subject development. The TIS forecasts that operations at this intersection will have long delays in the short term, resulting in some traffic diverting to alternate routes. One of those routes would be for traffic travelling to/from the south to use the Chamberlain Crescent (south leg) to access High Street. The TIS does not assign any traffic to use this access. The TIS should provide additional analysis / commentary on the potential for traffic to infiltrate through the Creekside Subdivision and any impacts that this may create, particularly on Holden Street.*

Traffic accessing the proposed development may also choose to travel through the Creekside Subdivision to avoid the traffic signals at the intersection of High Street / Sixth Street. Similarly, traffic to/from the Creekside Subdivision may also choose to travel through the proposed development. The TIS has not provided sufficient analysis of the network circulation impacts of traffic diversion on the local roads in either development.

It is acknowledged that the TIS has provided a sensitivity analysis that considers some diversion of traffic from Creekside, in peak periods, through the proposed development, in response to the high delays of egress movements from the Chamberlain Crescent (north leg) onto High Street. Consideration of the traffic operations at the intersection of Chamberlain Crescent (south leg) at High Street should be included in the analysis, to confirm the impacts on the Creekside subdivision. The development of the lands to the south of the Creekside subdivision (i.e., Fumo property on the west side of High Street) should also be considered in the analysis of the Chamberlain Crescent (south leg), due to the planned connection between the developments in this area. Current traffic counts should be obtained at the Chamberlain Crescent (south leg) as part of this analysis.

Partially addressed. The revised TIS now provides a review of Chamberlain Crescent (South) / High Street intersection under existing conditions. However, it is assumed that traffic generated by the Fumo property at this intersection will be beyond the 2036 horizon period and subject to a future TIS for that development, once details are known. The TIS also does not assign any diverted traffic from Chamberlain Crescent (North) or from the proposed development to the Chamberlain Crescent (South) intersection. The TIS recommends that speed cushions be placed on Holden Street, south of Street A, to discourage cut-through traffic.

3. **Traffic Counts** – *It is noted that the traffic counts were collected in November 2017 and December 2018, while it is typically preferred that counts be taken within the past two years. We recommend that updated counts be taken at the Sixth Street / High Street intersection, to compare to the counts assumed in the TIS. Preferably the counts should be taken in the summer months to capture seasonal peak conditions.*

Addressed. Updated traffic counts were conducted at all intersections in June of 2023.

4. **Traffic Operations at the Intersection of Chamberlain Crescent (north) / High Street** – *The TIS forecasts various impacts at this intersection, due to overall development growth, including:*

- *Egress during the PM peak periods will have a LOS F (61.5 second delay) under 2026 Total Traffic conditions, growing to a delay of 500.8 seconds by 2036,*
- *Southbound right turn volumes are in the range where a right turn lane may be a consideration,*
- *Northbound left turn lane warrants are forecasted to be met by 2031,*
- *Traffic travelling north may opt to divert to 6th Street to access the signals at 6th Street / High Street,*
- *Warrants for traffic signals are not met at this intersection, however the spacing of signals on High Street does allow for signalization at this location in the future, should it be required for operational reasons.*

The TIS recommends that traffic continue to be monitored, as development occurs, to confirm if any improvements are required.

We note that the left turn analysis in the TIS (Appendix H) uses the nomograph for divided highways, while the nomograph for undivided highways should be used.

In our opinion, the implementation of a northbound left turn lane should be considered at this intersection, in the short term, and signalization should be considered in the longer term. We recommend that underground provisions for future signalization be included with any improvements that may be made in the short term. Over the longer term the traffic operations at this intersection should be monitored to confirm the timing for signal installation.

Partially Addressed. The Left Turn Analysis has been updated, however only for Total 2036 conditions. Our recommendations for improvements to the Chamberlain Crescent (North) intersection at High Street continue to apply. The updated TIS continues to recommend that the Town monitor the traffic at this intersection, possibly via an extension of the ongoing EA for potential improvements to High Street to the south of the study area.

5. ***Traffic Operations at the Intersection of 6th Street / Stewart Road / Site Access*** – *The TIS forecasts that the warrants for a westbound left turn lane are met at this proposed access by 2026, recommending that this lane be implemented along with the construction access and ultimately be incorporated into the planned widening on 6th Street to a 3-lane cross-section (i.e., centre turn lane, between Black Ash Creek and High Street). The TIS also recommends that an eastbound left turn lane be implemented at this intersection to improve traffic operations.*

We concur with the improvement recommendations, however believe that the completion of the recommended left turn lanes will essentially complete the Town's planned 3-lane cross-section in this area, without further work by the Town. The completion of these external improvements is required to accommodate the access and therefore should be the responsibility of the proposed development. Consideration should be given to providing an urban cross section along Sixth Street (i.e., curbs and storm sewers) between Black Ash Creek and High Street, as part of the proposed improvements.

We acknowledge that the TIS has confirmed that the proposed development will include the construction of a sidewalk along the south side of 6th Street, between Black Ash Creek and High Street.

Partially addressed. The Developer acknowledges that the implementation of a westbound left turn lane will be implemented at the site access to 6th Street with the subject development. The TIS appears to assume that the remaining planned work on Sixth Street (i.e., urbanization plus implementation of an eastbound right turn lane at High Street) will be completed by the Town in the future. Further clarification should be provided on the staging of the Sixth Street improvements. We defer to the Town to confirm any agreement on allocating Development Charge Credits towards the funding of these improvements.

6. ***Traffic Operations at the Intersection of High Street / 6th Street*** – *We concur with the TIS that the signal timing at this intersection should be optimized in the short term and that an eastbound right turn lane a westbound right turn lane should be implemented in the longer term.*

Carried for information.

7. ***Traffic Operations at the Intersection of 10th Line / 6th Street*** – *We concur with the TIS that a single lane roundabout should be implemented at this intersection by the 2031 horizon.*

Carried for information.

8. *Transportation Demand Management (TDM)* - A summary of Transportation Demand Management measures for the apartment development should be provided in the TIS, to minimize vehicular demands resulting from this component of the development.

Addressed. A TDM plan has been included in the revised TIS.

9. New Comment – Sensitivity Analysis for Increased Development Density

The revised TIS now provides a sensitivity analysis to confirm the traffic impacts of adding an additional 76 high density units to the proposed development, concluding that this increased density would have a negligible impact on the operations at the intersections in the study area. Considering the forecasted poor operations at the Chamberlain Crescent (South) intersection at High Street, in our opinion any increase in density will have a negative impact on operations at this intersection, triggering an earlier need for operational improvements.

In conclusion, the revised TIS has clarified some of the items noted in our peer review. Further comment should be provided in response to any outstanding items.

This peer review has considered traffic matters that inform decision-making related to the applications for an Official Plan Amendment and a Zoning Bylaw Amendment. Further review of traffic matters within the development (e.g., internal traffic access and circulation, parking etc.) are not included in the current submission but should be considered further at the Plan of Subdivision and Site Plan Approval phases of this development.

R.J. Burnside & Associates Limited



Henry Centen, P. Eng.

Senior Transportation Engineer

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