

## MEMORANDUM

**To:** Chandra Moncrieff, District of Summerland  
**Copy:** Nadine King, Watt Consulting Group  
**From:** Tom Baumgartner, M.Sc., P.Eng.  
**Our File #:** 2061.B01  
**Project:** 13610 Bank Crescent Traffic Study Review  
**Date:** November 8, 2016  
**RE:** Traffic Study Review

Watt Consulting Group was retained by the District of Summerland to review the “Okanagan Vistas Independent & Assisted Living, Summerland BC Traffic Review” dated September 28, 2016 and “Concept Servicing Memo” dated September 26, 2016 by CTQ Consultants. The location of the proposed development is shown in **Figure 1**. The site is located in a depression east of Bristow Road and southeast of Solly Road.



**Figure 1: Subject Property Location (Red) and Proposed Site Accesses (Blue)**

### Proposed Development

- The proposed residential development totals of 346 units comprised of 99 units of senior adult housing, 36 units of assisted living, and 211 residential condominium units. These will generate 118 vehicle trips in the AM peak hour, 142 vehicle trips in the PM peak hour and 1,662 vehicles per day.
- Higher density residential developments are typically placed in areas where amenities are within walking distance. When they are placed away from those amenities and within a local road network, the increase vehicle trips must circulate through residential roads to get to major routes and destinations.

### Site Access

- Buildings A through E are accessed from Latimer Avenue and are comprised of 311 units.
- Building F is located on Banks Crescent and is comprised of 35 units.
- Turning sight distances at site accesses must be checked.

### Adjacent Road Network

- The main route to the site access is expected to be from Highway 97 to Solly Road and Latimer Avenue. Solly Road and Latimer Avenue are classified as local roads, which typically support up to 1,000 vehicles per day and collectors up to 8,000 vehicles per day. The proposed development is estimated to generate an additional 1,660 vehicle trips per day. Considering Solly Road is a key link between Highway 97 and Lakeshore Drive and the traffic needs of this development, Solly Road should be classified as a collector road.
- The Traffic Study recommends Solly Road to Latimer Avenue for truck access. This roadway regulated for no truck access from Highway 97. However, trucks must be able to reach their destination. The quickest/shortest route (via Solly Road) is the best option for truck access to the site. It is not clear how much of the generated trips would be truck trips. Truck turning templates should also be verified for the intersection of Solly Road / Latimer Avenue and site access for movements between the highway and proposed development site.
- Adjacent to the site, the horizontal curves on Latimer Avenue are signed with a curve warning and advisory speed of 20 km/h (see **Figure 2**). Sight lines are further constrained by adjacent landscaping (see **Figure 3**) making it challenging to see driveways through the substandard horizontal curve.



**Figure 2: Curve Warning with 20 km/h Advisory Speed Entering Horizontal Curve on Latimer Ave**



**Figure 3: Horizontal Curve and Landscaping on Latimer Ave Constrain Sight Lines**

- The adjacent roadway network is constructed over hillside topography and has insufficient sight lines with substandard horizontal and vertical curves. **Figure 4** shows curve radii for Latimer Avenue and Gillespie Road ranging from 25m down to 10m radii. These radii are less than the District's minimum radii of 85m for limited adverse topographic conditions. It should be noted that the District does not have hillside road standards that could accommodate lower design speed limits and low impact roads in challenging topographic conditions.





**Figure 4: Latimer Avenue / Gillespie Road Horizontal Curve Radii**

- A substantial increase in traffic volumes generated by the development should consider improvements to the deficient roadway curves and sight lines, or propose alternatives (i.e. new road alignment) due to the impacts of adjacent properties by straightening road curvature. Considerations could include:
  - Cul-de-sac at end of Latimer Avenue with emergency access only (gates) to Gillespie Road. Maintaining pedestrian and cycling through emergency access closure. With or without the connection of MacDonald Place across Latimer Avenue to MacDonald Street.
  - Realign Latimer Avenue to west of 13620 Latimer Avenue and tie-in to Gillespie at on a larger radius. Place cul-de-sac at the end of Latimer Avenue. This will effectively turn the south portion of Latimer Avenue into a driveway.

### **Pedestrian Facilities**

- The Traffic Study notes that pedestrian facilities should be provided to connect to Solly Road from the site with a stairway. It should be noted that the stairway would not be accessible to those with mobility impairments and that the surrounding topography is generally challenging.
- Due to the challenges with the topography, the Traffic Study recommends placement of sidewalks away from the property frontage and located:
  - From site to the west on Solly Road for 230m;
  - From Latimer Avenue to the west at MacDonald Place for 270m; and

- From Latimer Avenue to the east at MacDonald St for 230m.
- Pedestrian travel through the constrained horizontal alignment is not encouraged and there is insufficient street lighting.

### Summary and Recommendations

Watt Consulting Group makes the following suggestions:

- The Developer:
  - Verify turning sight distances for the proposed site accesses.
  - Verify:
    - (1) Stopping sight distances for the existing horizontal curves on Latimer Avenue and (2) truck turning templates through horizontal curves and in/out of accesses are verified; OR
    - Provide alternative alignment to constrained horizontal curves.
  - Quantify anticipated truck trips.
  - Show truck turning templates at Solly Road / Latimer Avenue and with proposed site access for movements between the site and the highway.
- The District:
  - Develop hillside road standards that would allow for low speed and low impact road design.
  - Classify Solly Road as a collector road.

Please contact me if you have any questions or comments at (778) 313-1014 ext 431. Thank you.

Sincerely,

**Watt Consulting Group**



Tom Baumgartner, M.Sc., P.Eng.

Transportation Engineer