



MEMORANDUM

Date: July 7, 2023 Our File: 1705.01
To: David Hawkins, Senior Manager, Community Planning & Sustainability
From: Jenn Moller, Director of Engineering & Transportation Services
Re: **Summary for Ambleside Transportation Plan Phase 1**

Introduction:

The first phase of the Ambleside Transportation Plan focusses on the existing conditions with a view to the future plans. This has been completed in parallel with the community discussion of Ambleside Local Area Plan (LAP) Options.

The study area is bounded by 23rd Street to the west, 13th Street to the east, Inglewood Avenue to the north and the Burrard Inlet waterbody to the south. Ambleside is connected to the regional road network via Marine Dr to access the Lions Gate Bridge and downtown Vancouver to the east, and 15th Street and 21st Street to access Highway 1 to the north. Regional and local transit services provide travel choice and connectivity to the North Shore and Metro Vancouver. Ambleside has many features that enable it to have a higher-than-average sustainable mode share which is a function of land use density and mix. The area has a high percentage of internal trips throughout the day, many of them by foot or bike, and transit ridership is at a higher rate than the rest of West Vancouver (25% vs 12%).

The key transportation challenge for the Ambleside LAP is accommodating growth in the right places while improving mobility and providing travel choices.

Phase 1 of the Plan included:

- review of background materials
- review of the existing transportation systems
- existing conditions assessment for auto, transit, pedestrians, and cyclists
- high level assessment of the planning options

Transportation Network:

The two main east-west roads serving the area are Marine Drive and Bellevue Avenue. Marine Drive is an arterial road with a 24 m cross section and with two to four travel lanes, parking lanes, and sidewalks. Marine Drive currently focuses on serving personal

vehicle and transit travel on the roadway, with pedestrian traffic accommodated on sidewalks. With no formal infrastructure in support of cycling, cyclists are required to operate within shared traffic, mostly between the parking lane and the outside general-purpose lane. Bellevue Avenue is a two-lane collector with parking provided on both sides within a 20 m right-of-way. Traffic volumes and speeds tend to be lower on this corridor which provides an east-west corridor with access to residential and commercial properties. With minimal sidewalks on both sides, the current road cross section only utilizes approximately 15 m of available right of way. The remainder of the width includes landscaping.

Transit users are well served on the Marine Drive corridor with high frequency service that connect east-west while other areas of Ambleside are served with medium and low frequency service. The Spirit Trail serves as an all ages and abilities bicycle facility connecting Park Royal and Ambleside Park, west along Argyle Avenue to 18th Street. There are no other protected bicycle lanes in Ambleside. Sidewalks are provided on both sides of Marine Drive and Bellevue Avenue and both sides of 15th Street and 21st Street south of Fulton Avenue. The majority of the sidewalks in the key corridors are undersized for the current and future demand in the study area.

Traffic Analysis:

The existing traffic was assessed on the current network. The hourly traffic profiles along Marine Drive show higher vehicle volumes in the PM peak than the AM peak and also show fairly balanced volumes throughout the day which is unique compared to many other facilities in the region that display a clear inbound versus outbound commuting profile. Eastbound volumes are higher than westbound indicating that westbound travel is utilizing an alternate corridor. The PM peak also tends to begin early (around 2:00 p.m.) which is in line with the early PM peak hours that were observed at most of the study intersections (i.e., 2:45 – 3:45 p.m.). 15th Street shows a more typical commuter peak profile with a clear southbound morning peak and northbound afternoon peak. Midday volumes are relatively high in the study area indicating a high demand for travel during this time period; again, unique compared to hourly profiles observed at other locations across the region. High vehicle volumes in the midday can be attributed to high recreational and commercial activity in this area.

Based on hourly profiles, the peak (highest traffic volume) hours for the entire study area are:

- AM peak hour 8:30–9:30 a.m.
- PM peak hour: 2:45–3:45 p.m.

For the analysis, the Level of Service (LOS) is used as a descriptive parameter expressed as a letter grade with A representing very good conditions (such as those that may occur during periods of low volume traffic flow, outside of peak periods) and F representing very poor conditions (such as those that may occur during periods of

higher volume traffic flow such as in the morning or afternoon peak periods. All intersections in the study area generally perform at LOS - C or better for both AM and PM peak hours. There are a few movements that perform at LOS - D or worse, mainly left turns that have high volumes and short signal time phases. Overall, traffic in Ambleside is generally considered to be manageable (i.e., volume is below capacity), and there are no major traffic jams or bottlenecks that regularly occur in the area. A typical signalized urban arterial roadway can process 800 to 1,000 vehicles per hour per lane. The highest through volumes observed on Marine Drive occur during the PM peak, with roughly 600 to 700 vehicles; with two through lanes on Marine Drive, there is adequate and available capacity. Excessive delays and queuing can spill back to Ambleside if an incident such as an accident or vehicle breakdown occurs on the Lions Gate Bridge that can compromise access points and intersections along Marine Drive and other corridors.

Transit Analysis:

Marine Drive is well served by frequent transit, and ridership data reflects this with most transit trips in Ambleside beginning and ending at locations on Marine Drive. Although the remainder of Ambleside to the north is well-covered by transit, with almost all residents within 400 m walking distance of bus stops, transit service operates at lower frequencies of 30 to 60 minutes within this area. Given that ridership on these routes is low compared to routes on Marine Drive, and there are competing demands throughout the region for limited transit resources, it is unlikely that TransLink could justify increasing frequencies on routes north of Marine Drive. Consequently, transit services on Marine Drive should be the priority for improvements intended to encourage more transit trips in Ambleside. Opportunities to improve on-time performance include more bus bulges, queue jumpers, bus lanes and other transit priority measures on Marine Drive. The review suggests that there are too many bus stops on Marine Drive, and that some could be removed or skipped by frequent services without compromising service coverage. This could increase on-street parking supply in some areas.

Cycling:

From the perspective of cyclists (existing cyclists as well as people who might wish to cycle in Ambleside but currently do not), the significant observation is that there are no “all ages and abilities” (AAA) bicycle facilities other than the Spirit Trail. This means that anyone riding a bicycle in Ambleside is sharing the road with motor vehicles, with no protection from traffic, no designated space on the road, and no bicycle specific infrastructure such as bicycle signals or bike boxes. Based on land uses, terrain and observations of bicycle activity, the greatest potential to attract cyclists and increase bicycle trips is on Bellevue Avenue as it provides access to the Marine Drive commercial area, connects to the Spirit Trail and is in the area with the highest residential density. Bellevue Avenue also has lower traffic volumes and speeds compared to Marine Drive, making it a more appealing corridor for cycling.

Improvements to create AAA bicycle facilities along Bellevue Avenue should therefore be a high priority for future development of the active transportation network. Other higher-priority opportunities to increase bicycle trips would involve improvements on the two north-south bicycle routes along local streets. Another important consideration for cyclists is bicycle parking, particularly secure parking that protects bicycles from theft.

Pedestrians:

Pedestrians are generally well-served in Ambleside. The width and quality of the sidewalks could be improved with redevelopment to add to the pedestrian experience. There are signalized pedestrian crossings on Marine Drive at every numbered street, and many of the crossings on other streets are enhanced with curb extensions, flashing rectangular rapid flashing beacons (RRFB) and tactile surfaces to aid persons with visual impairments. Opportunities for improvements to pedestrian crossings have been explored. Bellevue Avenue is an area with a higher level of pedestrian activity, and consequently additional enhancements to crossings on Bellevue Avenue should be a priority to improve pedestrian safety and encourage more walking trips. Improvements to consider include curb extensions, raised crosswalks, flashing RRFBs, increased illumination and yellow tactile surfaces. There are sidewalks on both sides of 15th and 21st Streets (arterial roads) south of Fulton Avenue, in and near the Marine Drive commercial area and higher-density residential areas. Although there is only a sidewalk on one side of 15th and 21st Streets north of Fulton Avenue, and on Inglewood and Fulton Avenues, these may not be as high-priority improvements given the lower number of pedestrians in the area north of Fulton Avenue.

Parking:

Previous work undertaken on parking was reviewed. Results from the study showed that the parking utilization rate is relatively low in the morning and rises throughout the day until the peak around noon, and then starting to slightly decrease after midday. Parking is a concern for businesses in Ambleside and needs to be managed effectively. Some of the mitigation strategies coming out of this study include increased utilization of off-street parking through better mapping, signage and information, generate shared-parking opportunities amongst private property owners through business sharing, increase parking turnover in popular areas by reducing time limits, increase the supply of off-street parking through new development, enforce parking regulations by bylaw staff, encourage alternate modes of travel and consider pay parking to maintain an 85% utilization rate.

Planning Options High Level Review:

The Regional Transportation Model (RTM) is used to assess travel demand across the Metro Vancouver region. The RTM was updated for West Vancouver and the additional growth for Ambleside was included and assessed. In the case of Ambleside, the level of future development across all three scenarios is assumed to be constant, up to

approximately 1,100 new households. The key differentiator between the options will be the allocation of developments to different parcels based on the desired land use outcomes outlined for each option. These differences will have more of a local impact on access points to the arterial network, and travel patterns will be influenced by the average proximity to transit and the active transportation network. Volume plots illustrating the growth of total regional traffic on the network for the 2040 horizon shows significant growth on Highway 1 and marginal growth on Marine Drive and 15th Street. The level of network congestion for the 2040 horizon has only moderate congestion throughout Ambleside. There are small segments along Marine Drive that will see heavier congestion, but this can likely be mitigated with signal timing optimization and coordination. For example, while about 25% of vehicle traffic generated from Ambleside travels onto the Lions Gate Bridge, this represents a small proportion of the total traffic stream on the bridge, about 3%.

Conclusion:

While this transportation study has focused on existing travel conditions within Ambleside, several themes for future work have emerged. These are based on a review of past planning work, gathering and compiling information on traffic, transit and active modes travel, and an assessment of the existing transportation network geometry and where opportunities exist. Note that these emerging themes are not recommendations for the next phase of work, rather they are meant to be guidance for discussion with the District and the community. Ambleside is both a destination and has corridors that facilitate through movements. Some improvements to maintain traffic operations and efficient circulation are signal optimization and coordination. Parking management and potential pricing would help to increase turnover rates and maintain 85% utilization, and redevelopment can increase off-street parking supply. Some spot improvements to improve transit operations could include queue jumpers, signal priority and other transit amenities. Extension of RapidBus service to Ambleside could also be considered to provide transportation choices. Another key theme arising from this study is to provide a dedicated cycling facility along the Bellevue Avenue corridor which sees lower traffic volumes and speeds. With the right level of traffic calming, a neighbourhood bikeway along Bellevue Avenue could provide benefits to cyclists while maintaining traffic operations, property access and parking. The two other study area corridors, 15th Street and 21st Street, also have potential opportunities for improvement. Because of the limited right of way and the expected role and function of these corridors, no major remake of these corridors is suggested. Rather, consideration for minor improvements through development or as planned capital programming presents opportunities for incremental improvements such as updated cross sections that include curb and sidewalk treatment. Providing a consistent cross section treatment through these two corridors is suggested as a long-term strategy. These themes will be explored further in the next phase of the Transportation Plan.