



INFORMATION ONLY COUNCIL REPORT

To: Mayor and Council

Date: September 26, 2023

From: Paul Gipps, CAO

File No: 5330-20-56

Subject: **Shannon Lake Road Active Transportation Corridor**

Report Prepared by: Evan Sun, Engineering Technologist II

STRATEGIC AREA(S) OF FOCUS

Invest in Infrastructure – We will invest in building, improving and maintaining infrastructure to meet the needs of, and to provide a high quality of life for, current and future generations.

BACKGROUND

Conceptual Design Background

Shannon Lake Road is classified as an Urban Arterial road that provides essential connectivity and accessibility to Old Okanagan Highway and Stevens Road. Shannon Lake Road from the Westbank First Nation Boundary to Swite Road lacks cycling and pedestrian facilities to provide a safe means of transportation for all users. Shannon Lake Elementary School is in the vicinity of the project area and the Shannon Lake Active Transportation Corridor project will provide connectivity to the existing sidewalk on both ends of the project. Accesses along the project corridor include the Kinsmen Park baseball and soccer fields, the commercial complex south of the Shannon Lake Road/Shannon Way intersection, the Westside Transfer Station at Saddleback Way/Asquith Road intersection and the parking lot at Swite Road to access the Shannon Lake Regional Park.

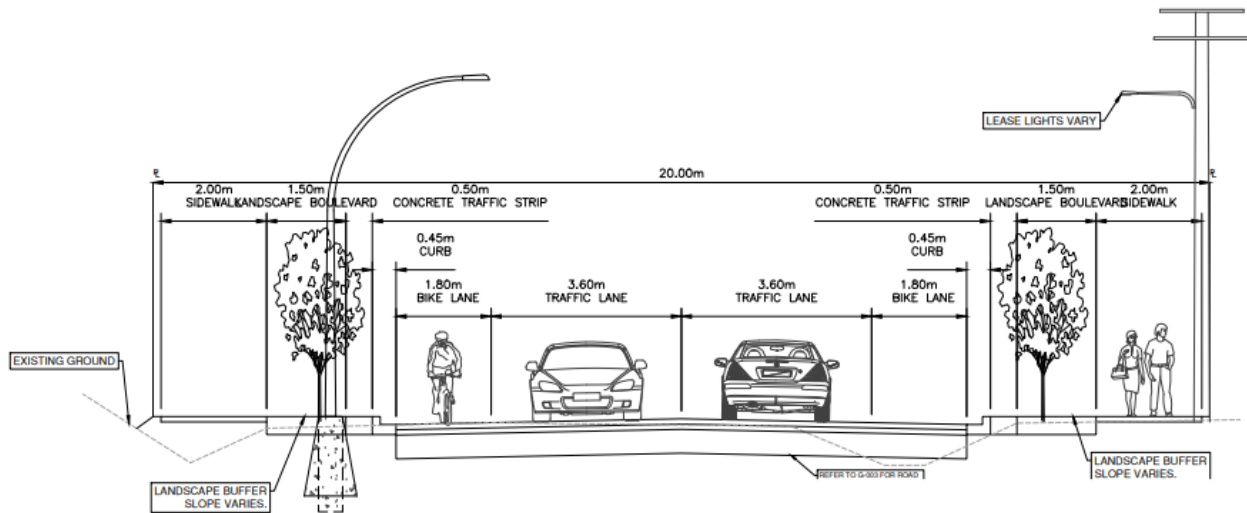
In April 2022, the City of West Kelowna awarded the Shannon Lake Road Active Transportation Corridor project between the Westbank First Nation boundary and Swite Road to Stantec Consulting. The design for the Shannon Lake Active Transportation Corridor project will include 1.1-kilometre sidewalk, road upgrades, bike lanes, drainage improvements, landscape improvements, and streetlights.

Detailed Design

The design utilizes the City's Urban Arterial Standard Detail Drawing in the Works and Services Bylaw No. 0249 where practical (see Figure 1). There are areas where the design deviates from the City's standard for an Urban Arterial due to existing site

constraints such as topography, available right of way, and existing utilities. Deviating the design standards followed a similar process as other major roadway improvements, such as the designs for Glenrosa Road, Boucherie Road, and Stevens Road/Shannon Lake Road. There are four different cross sections proposed, depending on the constraints encountered. Please refer to Appendix A for full set concept streetscape plans and cross-section view of Shannon Lake Road.

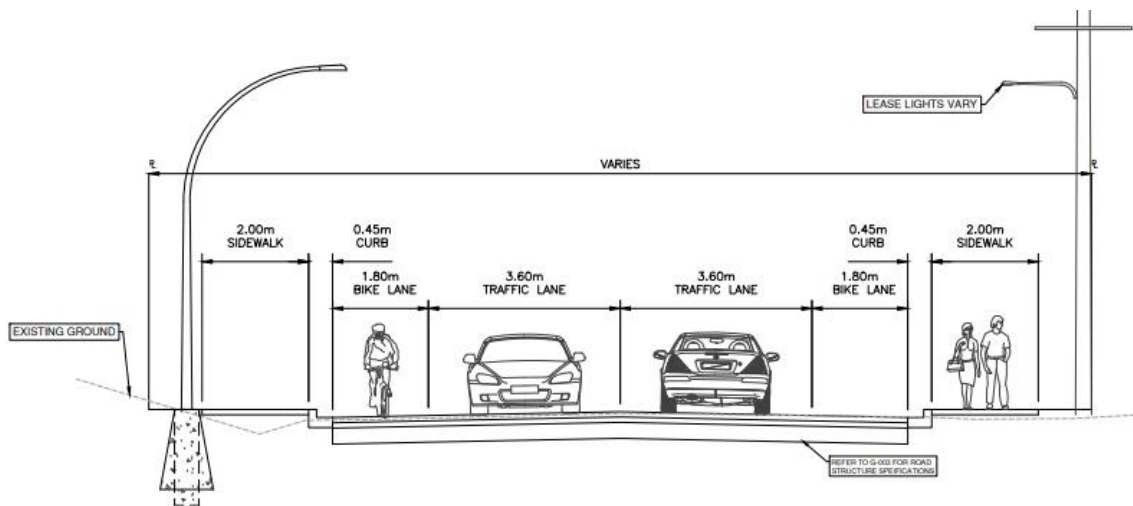
Figure 1 – Shannon Lake Road Section A-A



SECTION A - A'

Due to limited existing right-of-way width (approximately 18.0m) along the Shannon Lake Road corridor, the landscape boulevards are proposed to be eliminated and designed similar to the City’s Urban Collector cross-section (see Figure 2). Section B-B was used to tie into the existing sidewalk at the commercial complex and fronting the bulk water station.

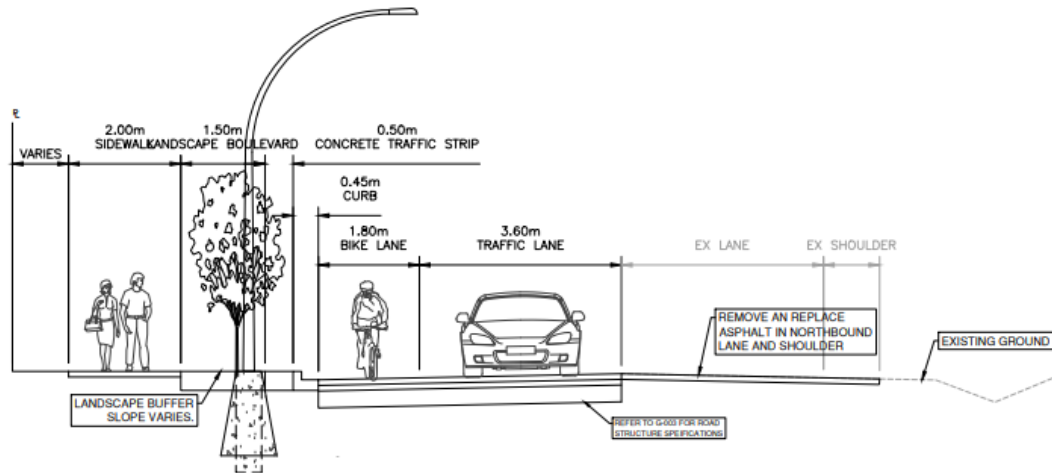
Figure 2 – Shannon Lake Road Section B-B



SECTION B - B'
SHANNON LAKE ROAD SECTION
SCALE: 1:75

Section C-C was used north of the Shannon Lake Road and Asquith Road/Asquith Court intersection, refer to Figure 3. The topography of the east side of the road made it impractical to include a sidewalk.

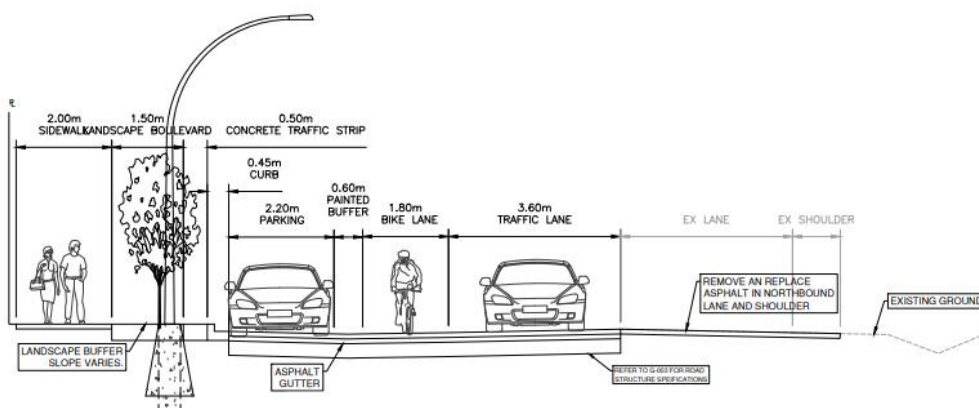
Figure 3 – Shannon Lake Road Section C-C



SECTION C - C'
SHANNON LAKE ROAD SECTION
SCALE: 1:75

Section D-D was included from north mid-block of Shannon Ridge Drive to Swite Road. The section includes approximately 100m additional street parking (see Figure 4) for Shannon Lake Regional Park. A pedestrian controlled flashing crossing will be installed to provide a crossing for those accessing the park.

Figure 4 – Shannon Lake Road Section D-D



SECTION D - D'
SHANNON LAKE ROAD SECTION
SCALE: 1:75

Utility conflicts were identified within the project limits. One Telus pole will need to be relocated and replaced with a new pole and anchor at 3170 Shannon Lake Road to accommodate the Shannon Lake Road widening. Design permitting for this proposed

pole and anchor is in progress. A northbound right-turn only lane at intersection of Saddleback Way and Asquith Road has been incorporated into the design drawings to provide access to the Westside Transfer Station. City staff receives traffic complaints on a yearly basis regarding traffic congestion to access the Westside Transfer station and the addition of a right-turn only lane to the Westside Transfer Station will create fewer delays for motorists travelling northbound on Asquith Road.

Concept design landscape drawings have been reviewed by City Parks staff and their recommendations have been incorporated. Future maintenance has been reduced where practical, while still providing a pleasantly landscaped road corridor. BC Transit design guidelines were followed for the design and Stantec Consulting has also reached out to BC Transit for any additional input. Also, an ICBC Road Safety Audit has been completed and the recommendations have been included in the design. The ICBC Road Safety Audit suggestions included items such as cycling pavement markings, signage, and turning movement improvements.

Intersection Analysis

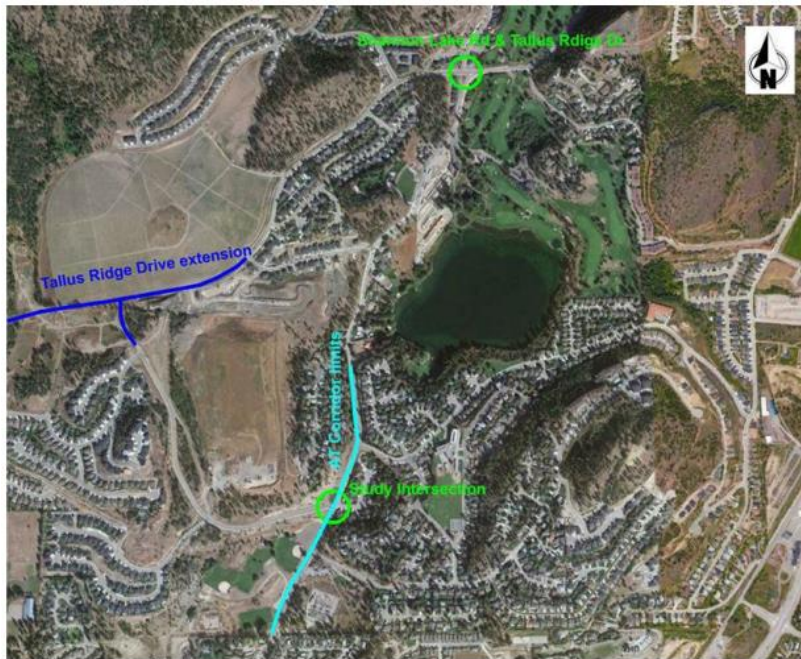
Stantec Consulting performed an intersection capacity analysis to examine the existing and future operation of the unsignalized intersection of Shannon Lake Road and Asquith Road/Asquith Court. In addition to growth, analysis included the change in travel patterns from a future connection between Tallus Ridge and Asquith Road. The traffic analysis used a combination of existing traffic volume and forecasted volumes at the Shannon Lake Road and Asquith intersection. As a result of the study, three geometric intersection options were examined.

- Existing Geometry
- Existing Geometry plus a northbound left turn lane
- Single lane roundabout

Based on a ten-year horizon, all three geometric improvement options for the intersection perform acceptably. As the ten-year horizon approaches, some turning movements will become challenging, such as the eastbound left turn movement onto Shannon Lake Road from Asquith Road. It is recommended that the existing geometry remain, and staff continue to perform ongoing monitoring of the intersection's traffic volumes. The design has considered adding a roundabout in the future when it is required.

Transportation modelling from the Transportation Master Plan was used to determine whether there was a benefit to focusing access to the Tallus neighbourhood via either the Shannon Lake Road and Tallus Ridge Drive intersection or the Shannon Lake Road and Asquith Road/Asquith Court intersection. Both intersections are expected to perform acceptably over the 10-year horizon and the ICBC Crash Data did not show a large amount of collisions at either intersection. The two intersections are recommended to be reviewed in a future update to the Transportation Master Plan.

Figure 6 – Intersection Locations



Stormwater Improvements

The design included a review of the contributing stormwater drainage area, the catchment area is shown in Figure 7. The need for a 1,100 m³ stormwater detention tank has been identified to be installed within Kinsmen Park under the existing gravel parking area. Stormwater improvements will be installed within the roadway with a storm main which connects to the detention tank. Drainage discharge onto Westbank First Nation jurisdiction and has been coordination with their Engineering team.

Figure 7 – Storm Drainage Catchment Area



FINANCIAL IMPLICATIONS

The Shannon Lake Road Active Transportation Corridor project is estimated to cost \$4,750,000, including construction, contingency, contract administration, inspections, utilities, and consulting. The project is eligible for Grant Funding from both BC Active Transportation Program (up to \$500,000) and ICBC Road Safety funding. The grant application for the BC Active Transportation Program is in progress. A funding request is planned in the 2024 Budget.

REVIEWED BY

Allen Fillion, Director of Engineering & Operations

Corinne Boback, Legislative Services Manager / Corporate Officer

APPROVED FOR THE AGENDA BY

Trevor Seibel, Deputy CAO

Powerpoint: Yes No

Attachments:

(Appendix A – Conceptual Streetscape Plan and Cross Section Design)