

Staff Report to Council

Engineering Department

FILE: 16-8770-01/24

REPORT DATE: April 02, 2024

MEETING DATE:

April 09, 2024

TO: Mayor and Council

FROM: Samantha Maki, Director of Engineering & Operations

SUBJECT: Localized Truck Route Feasibility Study - Overview

CHIEF ADMINISTRATIVE OFFICER REVIEW/APPROVAL:



RECOMMENDATION(S):

THAT Council:

- A. Receive for information the summary report titled “Localized Truck Route Feasibility Study - Overview” as presented at the April 9, 2024 Council Meeting; AND
 - B. Support implementation of the recommended improvements as outlined in Option 1– Upgrade the Existing Truck Route; OR
 - C. Other.
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PURPOSE

To provide Council with an overview of the recently conducted Localized Truck Route Feasibility Study, which assesses the suitability of Kennedy Rd, Wooldridge Rd, Ford Rd and Ford Rd Detour as a truck route and possible recommendations and options for improvements.

☐ Information Report

☐ Decision Report

☒ Direction Report

DISCUSSION

Background:

The City’s existing truck route map (Figure 1 below) was created with the approval of TransLink and cooperation of the BC Trucking Association. The map was approved by Council in 2012 and remains in effect.

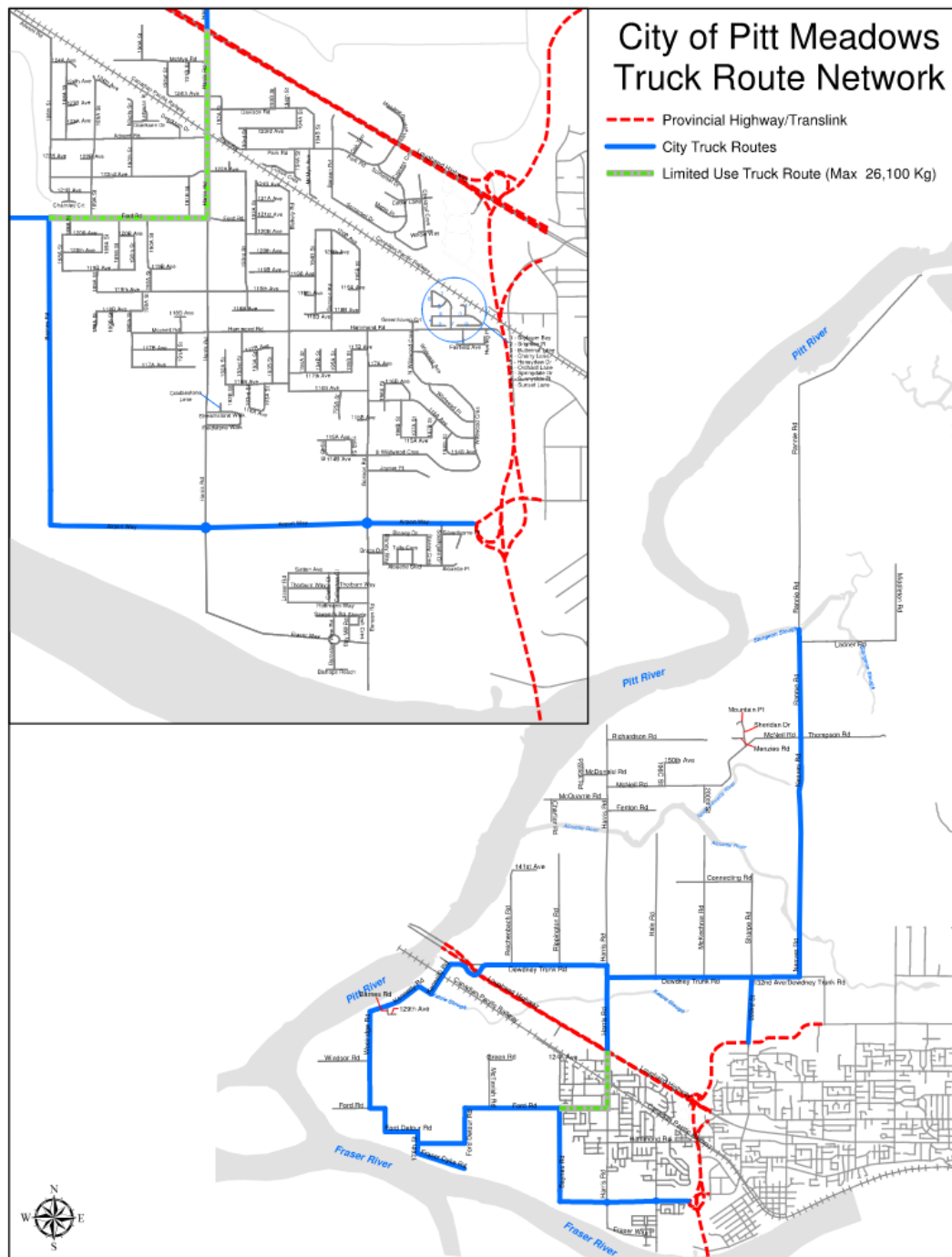


Figure 1 - City's Truck Route Map

Previously, a traffic safety review for Kennedy Road between Wooldridge Road and Highway 7 was completed following requests from area residents. The review was conducted to identify issues and provide recommendations for improvement. Improvements have since been implemented, such as signage improvements, delineators, and raised pavement markings.

More recently, residents located adjacent to the truck route between Kennedy Road and Baynes Road have voiced concerns regarding vehicles speeding, sightlines, truck traffic through residential areas, and past accidents etc. Considering residents' concerns and the existing conditions and layout of a localized section along the existing truck route (Kennedy Rd, Wooldridge Rd, Ford Detour Rd, and Ford Rd), the City retained Tetra Tech Canada Inc. (Tetra Tech) to undertake a localized truck route feasibility study to assess the suitability and impacts associated with the current designation of the aforementioned roads (i.e. area of the study - Figure 2 below) as a truck route. This report is an overview of Tetra Tech's findings.

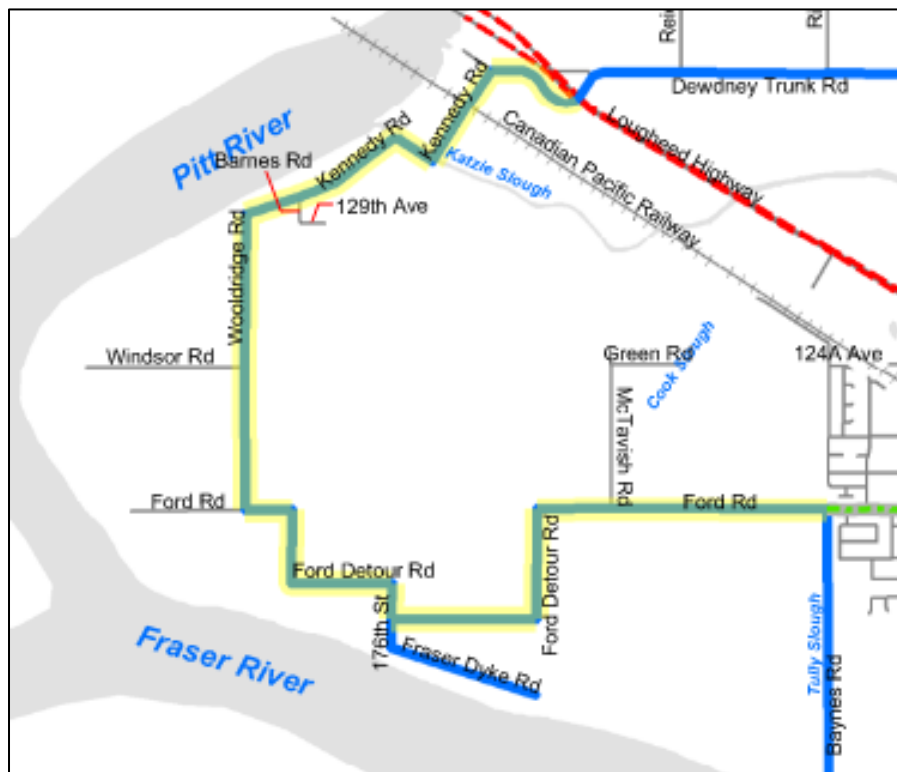


Figure 2 – Scope of localized truck route feasibility study indicated with yellow highlight.

Analysis:

Existing Road Network

The existing road network within the area of the feasibility study consists of a two-lane undivided roadway that extends from Highway 7 to Baynes Road. The roadway has a posted speed limit of 50 km/h with reduced advisory speeds along the curves and bends. On-street parking is prevalent adjacent to commercial and retail properties (Meadows Landscape Supply, Esso Gas Station, etc). The roadway has a relatively flat profile except for the section crossing the Canadian Pacific Kansas City (CPKC) rail tracks, where approach grades reach approximately 6%. At some segments along the roadway, there are limited shoulders (recovery areas), a drainage ditch located on west side of Wooldridge Road, in addition to a steep side slope on the north side of Kennedy Road

between Katzie Slough and the Kennedy Pump Station. The roadway also consists of 11 sharp bends, mostly at the Ford Detour Road.

Existing Truck Traffic and Collision History

There are a number of accesses along the area of the study to commercial and retail properties, in addition to residential properties and the Pitt Meadows Regional Airport (YPK). An assessment of existing traffic volumes (including review of existing data and collection of new data) was completed at certain intersections along the area of study, and major truck volume generators were established based on traffic counts and site observations: CPKC Vancouver Intermodal Facility (VIF), Halo Sawmill, and Justice Institute of BC/YPK Integrated Training Centre. This is in addition to external truck generators located outside of the area of the study, including truck traffic along Airport Way.

In a 24-hour period, a two-way daily truck traffic of approximately 1,300 trucks per day was observed at the commercial areas near the CPKC VIF. Near the Halo Sawmill, the two-way truck traffic volume was approximately 70 trucks per day, and at the east end of the area of the study near Baynes Road, a 2-way truck traffic volume of approximately 150 trucks per day was noted. Overall, it was estimated that approximately 40 trucks per day in each direction (80 trucks total) are making the end-to-end trip along the entirety of the truck route.

Based on the collected truck traffic volumes, approximately 80-90% of trucks arriving from Highway 7/Kennedy Road are destined to CPKC VIF Facility, 10-15% to Baynes Road/Ford Road (external sites), and less than 5% to internal sites.

With further analyses, it was determined that a total traffic volume of 500 vehicles (including trucks) per hour or more would create unacceptable levels of service. Utilizing a typical 2% annual growth rate, this volume would not be met for another 50 years under the assumption that no significant traffic generators are introduced within the study area.

Collision data was also reviewed. Based on the data available, an average of 4.5 collisions occur per year (2012-2021), with 95% of the collisions being property damage only. Most of the reported collisions were isolated to Kennedy Road north of CPKC rail tracks.

Truck Route Options

Following completion of site investigations, assessment of existing traffic volumes and collision history, and identification of existing operational and safety considerations along the area of the study, the following truck route options (Figure 3 below) were developed for further evaluation.

Option 1 – Upgrade the Existing Truck Route

This option generally includes retention of the current truck route and completion of improvements along the route to better accommodate truck traffic by improving safety and traffic operations. This option does not include road widening.

Option 2 – Ford Road Connection

This option generally includes construction of a new connection between the east and west segments of Ford Road. This would eliminate the use of Ford Detour Road by truck traffic, which in turn eliminates six sharp bends and shortens the travel distance for some destinations (creates more from Halo Sawmill as a destination). The City currently owns the right of way (ROW) for this connection, but it is generally a gravel farm road.

Option 3 – McTavish Connection

This option generally includes construction of a new connection from Kennedy Road to the north end of McTavish Road, and upgrades to the existing McTavish Road from Katzie Slough to Ford Road. The City has the necessary ROW for the majority of the connection, with the exception of a small section west of McTavish Road. Note that this project is included in the City's DCC program for future implementation, but is a multi-million dollar undertaking.

Other Options

In addition to above options, de-designating the existing truck route along the area of the study was explored, but was not evaluated further due to its negative and unfavorable impacts. This option would promote re-routing truck traffic to Harris Road via Highway 7, which would add significant travel distance to trucks destined to properties/operations within the area of the study. Furthermore, increased truck traffic through residential communities, school zones, and commercial areas is not recommended. Most of the truck traffic would likely still use the existing route, and could do so, if it was their most direct route to their destination. This option would also require approval by Council, TransLink, and other parties, and consultation with the trucking association.

Similarly, the study also explored leaving the roadway as status quo (i.e. no changes to current conditions); however, this option would not enhance or improve the roadway and was not evaluated further.



Figure 3 - Graphic representation of the three truck route options.

Truck Route Options Evaluation and Preferred Option

Options 1, 2, and 3 were further evaluated using a variety of factors and criteria including, but not limited to:

1. User benefits
 - Improved road safety (such as number of sharp turns, collision history)
 - Improved travel time
2. Financial
 - Estimated construction cost
 - Annual maintenance costs
3. Constructability - ease of construction, impacts to residences
4. Environmental impacts (such as enclosing ditches, wildlife, pollution, etc)

Each criterion was assigned a weighting, which was applied to the three options based on their relative associated significance.

Based on the evaluation results, upgrading of the existing route (Option 1) was identified as the preferred and recommended approach, followed by Option 3 (McTavish Connection) and then Option 2 (Ford Road Connection).

Upgrades to Existing Truck Route

Considering the preferred option of retaining and upgrading the existing truck route, Tetra Tech recommends the following improvements to the existing truck route within the area of the study to improve safety and traffic operations:

- Prohibit parking within 5m of access point to southern parking area along Kennedy Rd to improve sightlines;
- Repaint faded stop bars at the CPKC rail crossing on Kennedy Rd to reduce potential risk of rear-end collisions and repaint crosswalk markings;
- Clear foliage around signage along the route and relocate a few signs along Kennedy Rd to improve visibility;
- Remove vegetation at the of intersection of Ford Detour Rd and 176 St to improve sightlines;
- Replace missing and damaged bollards at the sharp bends along the area of the study (approximately 6 locations) and add reflectors at Ford Rd/Ford Detour Rd;
- Monitor and replace missing reflectors along Kennedy Rd adjacent to the Katzie Slough; and
- Relocate mailboxes at Kennedy Rd to reduce the number of parked vehicles and potentially the frequency of collisions.

In addition to above, the City will continue to monitor the existing delineators along Katzie Slough, to ensure visibility and practicality of markers at the road edge, especially during winter/dark conditions.

Further, Tetra Tech recommends an optional adjustment to the sharp curve at the intersection of Wooldridge Road and Ford Road to implement a larger turning radii or a stop control. Implementation of this work will highly depend on City's ability to purchase a ROW and available funding.

COUNCIL STRATEGIC PLAN ALIGNMENT

- ☐ Principled Governance ☐ Balanced Economic Prosperity ☒ Infrastructure
☐ Community Spirit & Wellbeing ☐ Corporate Pride ☒ Public Safety
☐ Not Applicable
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WORKPLAN IMPLICATIONS

- ☒ Already accounted for in department workplan / no adjustments required
☐ Emergent issue / will require deferral of other priority(ies)
☐ Other
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FINANCIAL IMPLICATIONS

- ☐ None ☐ Budget Previously Approved ☒ Referral to Business Planning
☒ Other

Minor works that can be accommodated within the existing annual budget would be completed this year, such as line painting, vegetation clearing, signage and delineators. Remaining works, such as relocation of the mailbox, may require additional budget and be completed in a future year or further considered as part of future business planning. The optional intersection improvement at Wooldridge and Ford Rd would be further considered as part of future business planning.

PUBLIC PARTICIPATION

- ☒ Inform ☐ Consult ☐ Involve ☐ Collaborate ☐ Empower

Comment(s):

KATZIE FIRST NATION CONSIDERATIONS

Referral ☐ Yes ☒ No ☐ Other

SIGN-OFFS**Written by:**

Kasra Vahidi,
Project Engineer

Reviewed by:

Samantha Maki,
Director of Engineering & Operations

ATTACHMENT(S)

None