

TECHNICAL MEMORANDUM

TO: Rajat Sachedva, M.Eng-Civil, Prism Construction Ltd.
FROM: Aaron Chan, P.Eng., Creative Transportation Solutions Ltd. (CTS)
DATE: 20 July 2021
RE: 12258 Harris Road Parking Assessment, Pitt Meadows, BC
FILE NO: 7095-01

CTS was retained by Prism Construction Ltd. on 29 June 2021 to update the parking assessment regarding the development of a mix use residential building with commercial and live-work space on the first floor, located at 12258 Harris Road, in Pitt Meadows, BC.

The primary objectives of this study were as follows:

- To conduct a parking assessment for the proposed mix-use development at 12258 Harris Road;
- To document the analysis in a report that meets the requirements of the City of Pitt Meadows.

This report documents our analyses and findings.

1.0 BACKGROUND

Prism Construction Ltd is proposing to develop a 5-storey mix use residential development at 12258 Harris Road, in the City of Pitt Meadows, BC. The development will contain 15 residential apartment units and approximately 231 m² of commercial use (designated to be a pharmacy) on the first floor. In addition, there will be 100 m² of live-work designated on the first floor, which is reserved for use by one of the residential units. Referenced architectural drawings are included in **APPENDIX A**.

The proposed development is illustrated in **FIGURE 1**, in the context of the Pitt Meadows town center area.

**FIGURE 1
SITE CONTEXT**



The property is currently zoned as Community Commercial (C3), and is being proposed to be rezoned as Mixed-Use Town Centre Commercial (TC). This property is currently noted in the existing Official Community Plan, with the land use of Town Centre Commercial. This change allows for the principal usage of apartment, as currently proposed.

2.0 EXISTING CONDITION

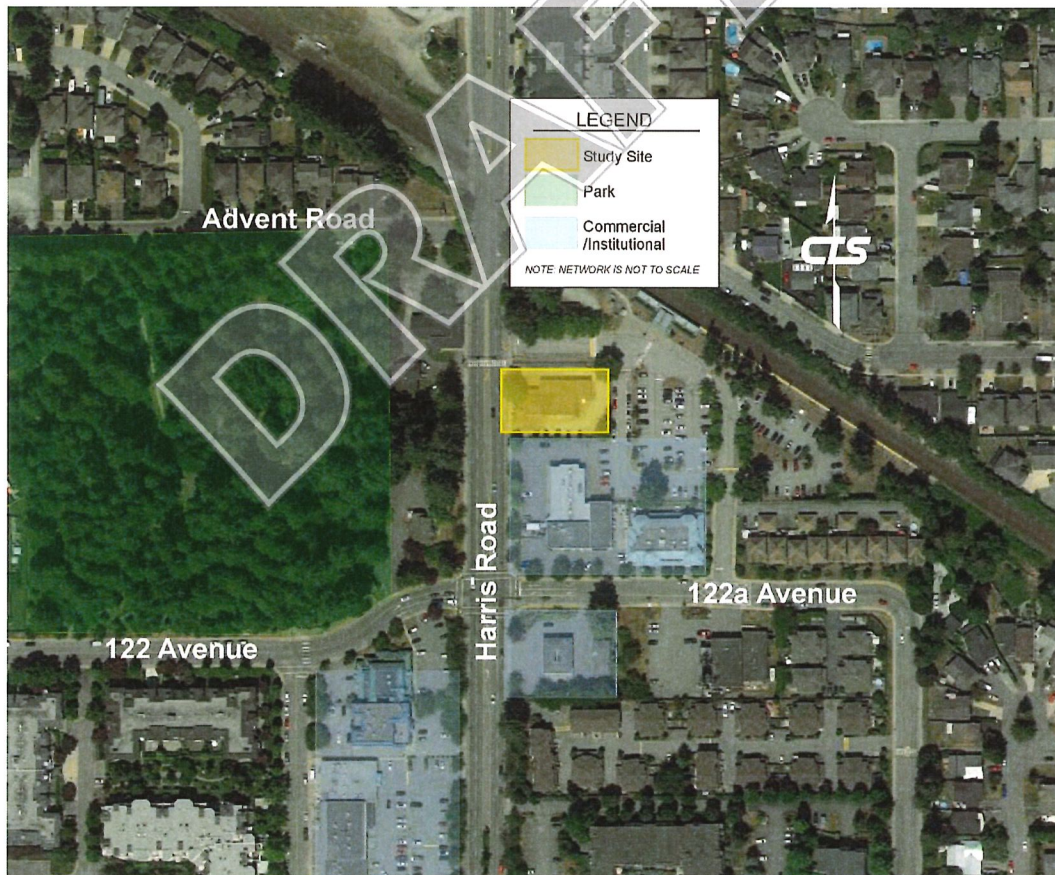
As previously illustrated in **FIGURE 1**, the development property is located central within the Town Centre areas. Currently existing at the proposed development site, is a vacant commercial unit.

Immediately to the south is a church and some commercial retail and restaurants. To the immediate east is the Pitt Meadows station for the West Coast Express. To the immediate north and west, are heritage preservation areas that include historical museums and buildings.

In the nearby proximity is Hoffman Park, Pitt Meadows Centre which contains several commercial and office establishments, and the Pitt Meadows Fire Department

The commercial areas are highlighted in **FIGURE 2**.

**FIGURE 2
STUDY SITE**



2.1 Alternative Transportation Infrastructure

Located in the Pitt Meadows Town Centre, the proposed development is well situated with an excellent transit network with good pedestrian connections, and many amenities in close proximity.

The following describes the existing alternative transportation infrastructure available, and is also illustrated in **FIGURE 3**:

Train

The Westcoast Express (WCE) is a train service operated by Translink that provides commuter travel options to the Vancouver downtown area at Waterfront. The Pitt Meadows station is conveniently located within less than a 1-minute walk from the proposed development.

The WCE starts in Mission and connects to Waterfront Station. It is noted that it takes approximately 47 minutes to travel from Pitt Meadows station to Waterfront.

The trains operate on weekdays only, during the peak morning and afternoon periods. In the morning, it travels only westbound with 5 trains that depart between 5:25 AM and 7:25 AM. In the afternoon, it travels only eastbound with 5 trains that depart between 3:50 PM and 6:20 PM.

Transit

The proposed development is located right along the Frequent Transit Network (FTN), which runs along Harris Road. Being identified as part of FTN, service is provided at least every 15 minutes for both directions throughout the day, every day of the week. The FTN corridors are expected to be convenient, reliable, and easy-to-use services, that provide enough frequency that scheduling its usage is not always necessary.

The closest northbound and southbound bus stops are located less than a 1-minute walking distance from the proposed development. The southbound bus stop, located directly across Harris Road, is easily accessible as there is a pedestrian crossing immediately north of the development.

The following transit routes are serviced:

- 701 Coquitlam Central Station/Haney Place-Maple Ridge East-Mission City Station (generally operates in 15-minute intervals, all days of the week)
- 722 Bonson/Meadowtown (generally operates in one-hour intervals, two hours on Saturday)
- 791 Braid Station/Haney Place (generally operates in 20-minute intervals, Monday to Friday)

The bus route that has higher frequency, the 701, provides a reliable connection between Mission and Coquitlam. The bus travels along Lougheed Highway to the west, and travels along Dewdney Trunk Road and Lougheed Highway to the east. Both bus stops have excellent infrastructure, with shelters and benches provided for transit users.

Walking

Walking is an ideal alternative transportation mode for reducing vehicle dependency in the community. It is noted in the 2008 Regional Trip Diary, that 11% of all daily trips in Pitt Meadows are made via walking. Development within the Pitt Meadows Town Centre is intended to be pedestrian friendly, as noted in the Official Community Plan.

As previously mentioned, there is a pedestrian crossing located immediately adjacent to the proposed development. The sidewalks along Harris Road are well developed. They provide good connections to the nearby amenities, and available transit services.

Cycling

The City of Pitt Meadows has a joint bicycle network plan with the City of Maple Ridge. The City of Pitt Meadows has an extensive trail/cycle network along the dikes of the Fraser River, Pitt River, and Alouette Rivers.

Specifically, within the study area, there is a Major Street Bicycle Lane on Harris Road. This bike route can be used to connect to the off-street trails, such as the Blue Heron Loop, Hawk Rotary Loop, and Osprey Loops.

The Pitt Meadows Official Community Plan notes that requiring new developments to provide bicycle parking, is part of their strategy to promote cycling with the city. The proposed development will be satisfying the required bicycle parking noted by the City of Pitt Meadows zoning bylaw.

FIGURE 3
ALTERNATIVE TRANSPORTATION INFRASTRUCTURE



3.0 DATA COLLECTION

To better understand the parking situation within the Pitt Meadows town centre area, CTS conducted a parking accumulation on all the available on-street parking within a 200-meter radius. The adjacent WCE Park and Ride lot was also surveyed. The surveyed areas on noted in **FIGURE 4**.

FIGURE 4
DATA COLLECTION STUDY AREA



Parking accumulation counts were conducted on the following day, for a period of 12 hours:

- Thursday 18 July 2019 (1300 – 0100)

Data was collected in half hour intervals. The detail survey data is available in **APPENDIX B**.

3.1 Survey Results

The parking accumulation for the study area is summarized in **FIGURE 5** and **FIGURE 6**.

FIGURE 5
PARKING ACCUMULATION SURVEY RESULTS (THURSDAY 19 JULY 2019)

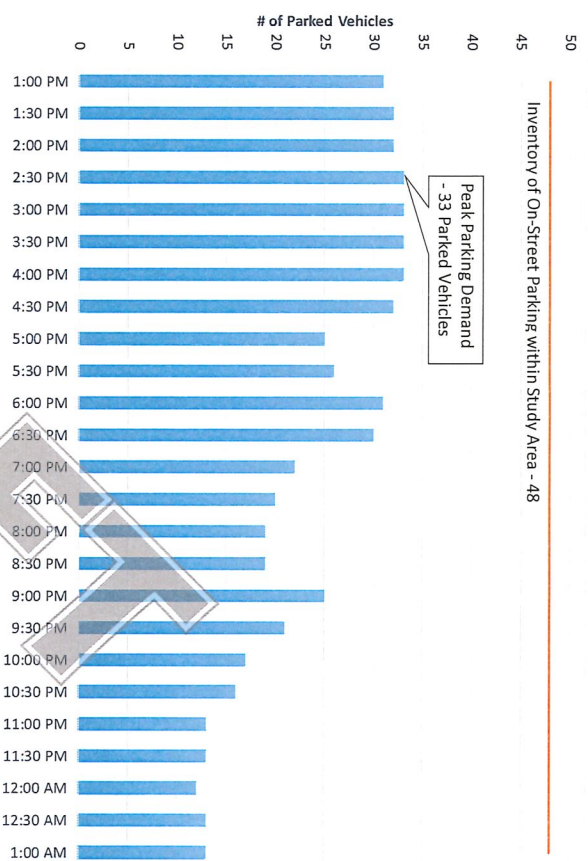


FIGURE 6
WEST COAST EXPRESS PARKING ACCUMULATION SURVEY RESULTS
(THURSDAY 19 JULY 2019)

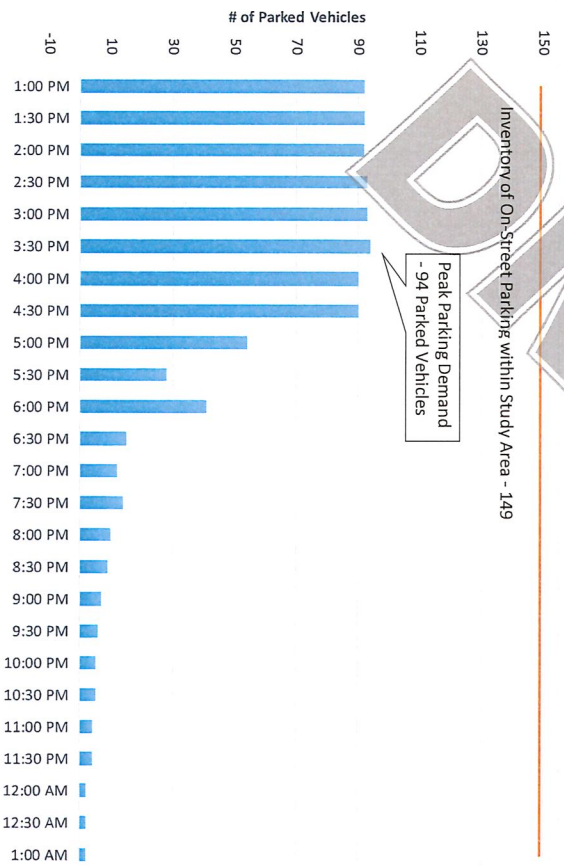


FIGURE 4 illustrates the observed parking demand by time of day for the on-street parking within the study area for Thursday 19 July 2019. The maximum observed number of parked vehicles in the study area was 33 vehicles which occurred at 14:30 and represents 69% of the available lot parking inventory.

FIGURE 5 illustrates the observed parking demand by time of day for the adjacent WCE Park and Ride lot for Thursday 19 July 2019. The maximum observed number of parked vehicles in the study area was 94 vehicles which occurred at 15:30 and represents 63% of the available on-street parking inventory.

It is observed from this data collection, that both the WCE Park and Ride, and the nearby on-street parking within the study area are not at capacity.

4.0 PARKING ANALYSIS

4.1 Zoning Bylaw

As per the City of Pitt Meadows *Zoning Bylaw 2505*, the parking requirements for the proposed development are summarized in **TABLE 1**.

**TABLE 1
REQUIRED VEHICLE PARKING BASED ON ZONING BYLAW 2505**

Land Use Description	Land Use Bylaw Classification	Required Parking Rate	Scope	Parking Stalls Required
Apartment (Studio/1 Bdr)	Apartment	1.2 per Dwelling Unit	4	5
Apartment (2+ Bdr)		1.5 per Dwelling Unit	11	17
Visitor Parking		0.2 per Dwelling Unit	15	3
Commercial/Retail	Retail Use	1 per 30 sq m gfa	231	8
Live-Work	Professional Office	1 per 45 sq m gfa	100	2
Total				34
Small Car Stalls	Maximum of 25% of Total Required Parking			9
Disability Stalls	1 for every 100 Provided Parking Stalls			1
Class I Bicycle Parking	0.5 per Dwelling Unit			8
Class II Bicycle Parking	Minimum 6			6
Tandem Stalls	Maximum of 50% of Provided Parking			-

The Zoning Bylaw requires that there be an overall total of 34 vehicle parking stalls. The parking requirement for the apartment dwelling units, are based on the TC zoning, which is intended for properties within the Town Centre.

Of the 34 required vehicle parking stalls, a maximum of nine (9) may be small car stalls. Based on the British Columbia Building Code rates, one (1) disability stall will be required for the development. It is also noted that up to 50% of the provided parking for apartment use may be provided in tandem. The development is proposing the provide 19 vehicle parking stalls, with one stall noted as a disability stall.

In addition, 8 Class I bicycle parking stalls and 6 Class II bicycle parking stalls are required. It is our understanding that these will be provided.

The applicant is proposing to provide a total of 19 parking stalls, which consists of 15 standard stalls, 3 small stalls and 1 accessible stall. The applicant is requesting a 15 vehicle parking stall or 44% variance in the vehicle parking requirements.

4.2 Parking Demand

To consider the peak parking demand of the proposed development, the Institute of Transportation Engineers (ITE) Parking Generation Manual 5th Edition is referenced.

The parking generation manual contains observed data for common land uses, along with an average peak parking demand based on variables such as gross floor area, number of dwelling units, or number of bedrooms.

Land Use Code 221 – Multifamily Housing (Mid-Rise), provides data that represents multifamily developments, that include apartments, townhouses, and condominiums located within the same building, and are between three and ten levels (floor). The peak period of parking demand is noted as between 2200 and 0500.

Land Use Code 880 – Pharmacy/Drugstore without Drive-Through Window, provides data that represents a retail facility that primarily sells prescription and non-prescription drugs. The peak period of parking demand is noted as between 1400 and 1800.

Land Use Code 712 – Small Office Building, provides data that represents a single tenant and is less than or equal to 5, 000 gross square feet in size. The peak period of parking demand is noted as between 1000 and 1700

For our parking demand analysis, we consider data only in the general urban/sub-urban scenario. General urban/sub-urban areas are associated with almost homogenous vehicle centred access. Although the proposed development is located in an area with good alternative transportation infrastructure, this setting is applied as it describes the City of Pitt Meadows as a whole and will provide a more conservative (overestimate) analysis.

**TABLE 2
REQUIRED VEHICLE PARKING BASED ON ZONING BYLAW 2505**

Land Use Description	Land Use Code	Average Rate as Per ITE Parking Manual	Scope	Average Parking Demand
Multifamily Housing (Mid-Rise)	221	1.31 Per Dwelling Unit	15	19.7
Pharmacy	880	2.19 Per 1000 SQFT	2.5	5.5
Live-Work (Small Office Building)	712	2.56 Per 1000 SQFT	1	2.6
Combined Average Parking Demand				27.7

Note that the peak period of parking demand for the above land uses do not overlap. However, for a conservative analysis the average peak parking demands are directly added together.

If we apply this average peak parking demand rate to the proposed development, the average peak parking demand is forecasted to be approximately 28 parked vehicles. This

does not consider site specific conditions that may reduce parking demand such as available alternative modes of transportation and nearby amenities.

4.3 Parking Demand Considerations

Site-specific conditions may be considered, that will have an impact on the parking demand for the proposed development.

Development Location

The proposed development is located centrally, within the Pitt Meadows Town Centre. Part of the vision of the Pitt Meadows Official Community Plan, is to develop a pedestrian friendly town centre, and the residents of this development will be able to fully utilize it.

There are excellent nearby amenities, with Hoffman Park and a variety of local businesses within a 5-minute walking distance. In addition, there is direct access to TransLink's Frequent Transit Network and the West Coast Express. This allows a wide variety of options for both daily transportation and commuting, which is expected to lower vehicle parking demand.

In addition, based on the comprehensive parking accumulation, the nearby on-street parking demand was observed to be at 63% of its capacity. If the city permits, on-street parking can be used for unmet parking demand by the development especially that for the commercial units and visitors.

Mix Use Development with Shared Parking

The proposed development has a mix of land uses, containing residential, commercial, and office uses. There are opportunities for shared parking in consideration of some of the parking demand peak periods not overlapping.

Specifically, the required visitor parking for the residential units is expected to be at highest demand in the late evening. There is opportunity to share the parking stalls with those of the proposed live-work and pharmacy land uses, that are expected to be at their highest demand during the day and in the afternoon.

There is also consideration of shared parking between the live-work space, and one residential unit, as the user is intended to be the same.

Applying the concept of shared parking will allow better utilization of the available parking stalls for the proposed development.

Development Initiatives

The developer is proposing to provide electric vehicle charging stations for all parking stalls within the development. This is not expected to reduce vehicle parking demand for the proposed development; however, the City of Pitt Meadows is already a part of the electric vehicle charging station network and supports opportunities to reduce greenhouse gas emissions with vehicles.

This is not a requirement by the Pitt Meadows Zoning Bylaw but is being proposed by the development to support more sustainable modes of transportation.

5.0 CONCLUSIONS & RECOMMENDATIONS

5.1 Key Findings

In assessing the parking conditions for the proposed development, CTS determined the following:

- The proposed development is conveniently located in close proximity of amenities such as Hoffman Park, and a wide variety of local businesses;
- Within the study area, the existing alternative modes of transportation infrastructure are excellent, and provide a well-connected transit, pedestrian, and cycling network, including direct access to the West Coast Express;
- Based on a comprehensive parking accumulation survey conducted on Thursday 19 July 2019, the nearby on-street parking demand was observed to be at 63% of its capacity;
- The City of Pitt Meadows Zoning Bylaw requires that the proposed development provide 34 vehicle parking stalls;
- With reference to the Institute of Transportation Engineers Parking Generation Manual 5th ED, the forecasted overall average peak parking demand is 27.7 vehicles. This analysis is based on a general urban/sub-urban setting and does not account for alternative modes of travel available (overestimate);
- Considerations to development location and implementation of shared parking are expected to reduce and manage parking demand.

5.2 Recommendations

Based on the findings of this Parking Assessment, CTS recommends the following:

1. That the developer assigns the parking such that the residential visitor parking is shared with the commercial units on the first floor;
2. That the developer limits commercial use to uses with low parking demand;
3. That the City of Pitt Meadows permits the use of on-street parking for unmet parking demand from the development especially that of the commercial units and visitors;
4. That the City of Pitt Meadows accept the proposed development application request for parking variance of 44% or 15 vehicle parking stalls, in lieu of the parking demand strategies.

DRAFT

We would like to take this opportunity to thank you for this unique project and we look forward to working with you again in the future. Please call the undersigned should you have any questions or comments.

Yours truly,

CREATIVE TRANSPORTATION SOLUTIONS LTD.

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Appendix A
Architectural Drawing

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**Appendix B
Parking Data**