

TECHNICAL MEMORANDUM

DATE: March 13, 2023
TO: City of Vancouver
FROM: Emily Mannisto, Ryan Farncomb, Parametrix
SUBJECT: Fourth Plain Blvd and Fort Vancouver Way Phase 1 Alternatives Development Process

INTRODUCTION

The City of Vancouver initiated the Fourth Plain and Fort Vancouver Safety and Mobility Project to develop lane reconfiguration and safety improvement recommendations for Fourth Plain Blvd and Fort Vancouver Way. These corridors have been identified as having significant safety concerns for all users through prior work conducted by the City¹ and through novel analysis conducted by the project team. This project places emphasis on examining how Fourth Plain Blvd and Fort Vancouver Way can better serve people walking, using a mobility device, biking, or using the bus, which in these corridors may mean addressing user comfort in addition to existing safety concerns.

Following review of two reports, the *Fourth Plain Blvd² and Fort Vancouver Way Existing and Future Baseline Traffic and Safety Analysis Memoranda*,³ the project team developed lane reconfiguration alternatives for different segments of the Fourth Plain and Fort Vancouver corridors and considered how to repurpose existing road space to address these safety concerns and integrate multimodal improvements. This memorandum documents the alternatives development and evaluation process, feedback received from community members and stakeholders, and the resulting recommended alternatives.

The study area for the project is Fourth Plain Blvd from F Street to Andresen Road and Fort Vancouver Way from Mill Plain Blvd to Fourth Plain Blvd. Figure 1 shows the study area boundaries and existing roadway conditions of the project.

¹ The 2018 Transportation System Safety Analysis (TSSA) for the City of Vancouver is a comprehensive analysis of crash trends and contributing factors on City-owned collectors and arterial roads.

https://www.cityofvancouver.us/sites/default/files/fileattachments/community_and_economic_development/page/28931/tssa_technical_report_final_draft.pdf

²https://www.cityofvancouver.us/sites/default/files/fileattachments/community_development/page/74791/fourthplainblvd_existingfuturesafetytrafficreport_final.pdf

³https://www.cityofvancouver.us/sites/default/files/fileattachments/community_development/page/74791/ft_vancouver_baseline_traffic_and_safety_analysis_v2_updatedtraffic_final.pdf

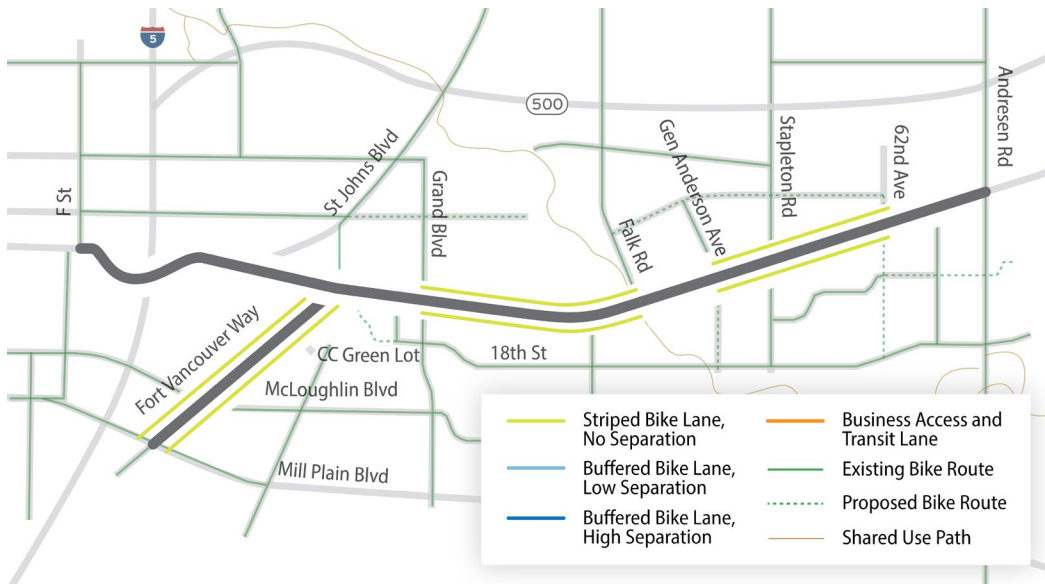


Figure 1. Project Study Area and Existing Roadway Conditions

Background

In 2016, the Vancouver City Council adopted the City’s 2016-2021 Strategic Plan,⁴ which includes actions to adopt and implement a ‘Complete Streets’ program designed to enable safe mobility for all users. In 2017, the City Council adopted a Complete Streets ordinance⁵ that included the following vision and intent: a safe, accessible street system that benefits all users, ages, and abilities, regardless of how they choose to travel; a convenient and interconnected transportation network that improves accessibility to adjacent land uses and fits the dynamics and character of each neighborhood throughout the City; and leveraging local funding for complete streets projects with regional, state, and federal grant funding programs.

The City is implementing this policy through their pavement management program;⁶ streets that have planned repaving projects will be assessed for simultaneous opportunities to implement complete streets improvements. This Safety and Mobility Project makes recommendations for multimodal improvements along the Fourth Plain Blvd and Fort Vancouver Way corridors that will be advanced by the City through a repaving project in 2023-2024 and a separate safety project that will be implemented at and near the Fourth Plain Blvd interchange with Interstate 5 (I-5). Re-paving of both roads will take place in two phases, starting in 2023 with Phase 1 (West Corridor) of Fourth Plain Blvd from F Street to Fort Vancouver Way, and Fort Vancouver Way from Mill Plain Blvd to Fourth Plain Blvd. Phase 2 (East Corridor) of Fourth Plain Blvd from Fort Vancouver Way to Andresen Road (Figure 2) begins in 2024.

⁴ <https://www.cityofvancouver.us/sites/default/files/2018StrategicPlan/index.html>

⁵ https://www.cityofvancouver.us/sites/default/files/fileattachments/community_development/page/74381/complete_streets_policy_-_ord_exhibit_a.pdf

⁶ <https://www.cityofvancouver.us/publicworks/page/pavement-management>

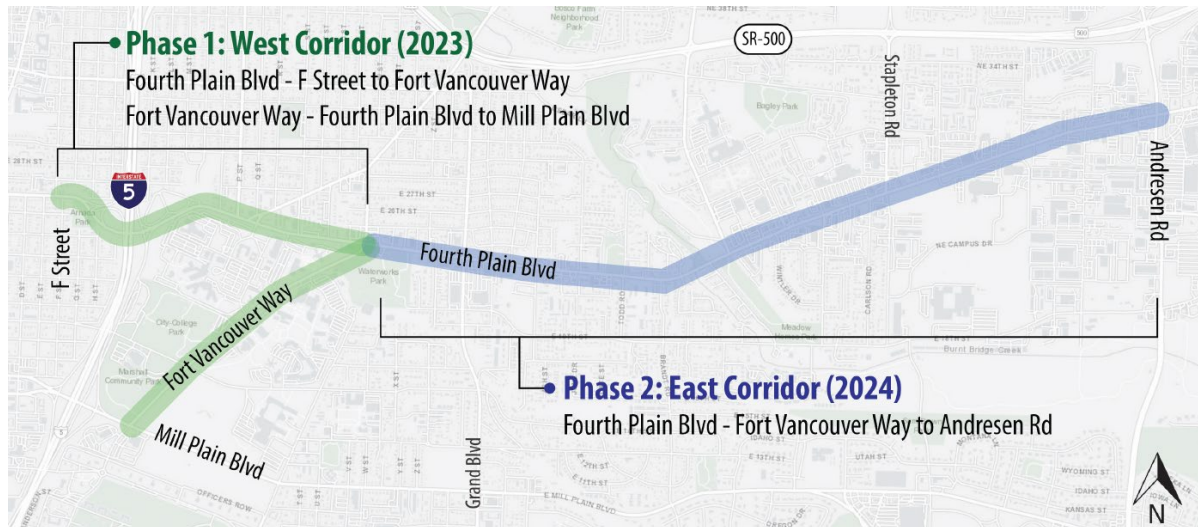


Figure 2. Project Construction Phases

The project team determined the following corridor priority issues and needs through an analysis of existing conditions on the corridors and through feedback from the community:

- Five lanes of traffic - Fourth Plain Blvd is wide, and many people report drivers fail to yield to pedestrians, even in marked and signalized crosswalks.
- The Vine Bus Rapid Transit (BRT) route operates on the corridors; this route is one of C-TRAN's busiest routes, averaging nearly 2 million annual trips.
- Several intersections operate at a traffic level of service (LOS) D or worse.
- Safety concerns are prevalent, including a fatal collision involving a pedestrian.
- Inadequate and unconnected bike lanes do not provide a continuous, safe route.
- Sidewalks in the corridor are often uncomfortably narrow and bike lanes are intermittent.

For a more detailed background on safety issues and existing conditions within these corridors, refer to the *Fourth Plain Blvd and Fort Vancouver Way Existing and Future Baseline Traffic and Safety Analysis Memoranda*.

Evaluation Criteria

The following Evaluation Framework was used to assess lane configuration/reconfiguration alternatives and other safety or mobility improvements to the Fourth Plain Blvd and Fort Vancouver Way corridors. This framework was informed by the public during the first phase of outreach and refined based on feedback. Members of the TMC helped define what "mobility" should mean for these corridors, ensured that specific elements of equity and inclusion were addressed, and modified measures to include transit reliability improvements. The community on the corridors both (1) informed the development of this framework and (2) provided input on the alternatives that directly informed the selection of the preferred alternatives. This framework was informed by the findings and goals from prior studies and plans, including the Transportation System Safety Analysis (TSSA)⁷, Fourth Plain

⁷https://www.cityofvancouver.us/sites/default/files/fileattachments/community_and_economic_development/page/28931/tssa_technical_report_final_draft.pdf

Forward Pedestrian Safety and Access Implementation Strategy,⁸ the Fourth Plain Forward Action Plan,⁹ City’s Complete Streets Policy, and ongoing Vancouver Moves¹⁰ projects. Finally, this framework was used to evaluate alternatives for both the Fourth Plain Blvd and Fort Vancouver Way projects.

Table 1. Evaluation Framework

Criteria	Questions the team will ask	How will we measure it?
Mobility improvement for people walking, using a mobility device, bicycling, or using the bus	Does the alternative make it more comfortable and easier for people to walk, roll, bike, use a mobility device or use the bus?	Alternative applies known best practices for increasing comfort and mobility for people walking, using a mobility device, bicycling, or using the bus.
	Does the alternative avoid serious negative impacts to freight and personal vehicle travel in the corridor?	Alternative maintains or improves transit travel time reliability. Alternative would meet traffic mobility standards on Fourth Plain Blvd. Alternative minimizes diversion to local streets or diversion is mitigatable.
Safety improvement for all users of the corridor, including people walking, using a mobility device, bicycling, driving, or using the bus	Does the alternative make it safer for people to walk, roll, bike, or use the bus?	Alternative provides greatest safety benefits (based on literature review and safety countermeasure performance) relative to implementation cost.
	Does the alternative make it safer for people driving?	Alternative would improve safety for people driving by applying known safety countermeasures.
Greenhouse gas (GHG) reduction benefits	Does the alternative support the City’s goals to reduce GHG emissions?	Degree to which alternative supports mode shift, based on results from regional travel model.
Equitable outcomes	Does the alternative provide benefits or mitigate burdens to equity populations (see below) specifically?	Direct benefit (reduced transportation costs) or reduced burden to identified equity populations living or working within the corridor (within ¼ mile of both streets).
Access to businesses, jobs, services, parks and recreation, and educational opportunities	Does the alternative increase access to essential places as identified in the City’s equity atlas?	Degree to which alternative support increased access to businesses and services, based on improvements in transportation safety and comfort for all users in the corridor.
	Does the alternative increase access to businesses for people walking, using a mobility device, riding a bike, or using the bus?	

⁸https://www.cityofvancouver.us/sites/default/files/fileattachments/community_and_economic_development/page/21226/fourth_plan_ped_safety_action_plan_10.5.17_final.pdf

⁹http://www.cityofvancouver.us/sites/default/files/fileattachments/community_and_economic_development/page/21232/fourth_plain_forward_action_plan_compressed.pdf

¹⁰ <https://www.cityofvancouver.us/cdd/page/vancouver-moves>

Based on the discussion in the *Fourth Plain Public Engagement Plan*¹¹ and the City's *Equity Index*, this evaluation framework defines equity populations as:

- People who have low incomes
- People who belong to a racial or ethnic minority group
- Households that speak English less than “very well”, including Spanish, Chuukese, Vietnamese, and Russian speaking communities along the corridors
- People living with a disability, including those who use mobility devices and people with low vision and/or hearing
- Households without access to a personal vehicle, who depend on public transportation, walking, using a mobility device, or bicycling to meet their daily needs
- Households with children
- Other equity populations that have been historically underserved by transportation investments, including people of color, homeless and/or houseless individuals, youth (<18), older adults (65+), LGBTQ communities, refugees, persons who are unemployed or experiencing financial hardship, and people with limited access to economic opportunities (for reasons such as immigration status, educational attainment, disability, health limitations, or otherwise)
- People who rent their home

ALTERNATIVES DEVELOPMENT

Traffic Analysis

The iterative traffic analysis process used different assumptions to identify potential lane reconfiguration options that would meet concurrency standards and allow for additional space for other roadway users. The City's Concurrency Corridors Classification defines the level of service for designated concurrency corridors within the City. It defines minimum speeds on Fourth Plain Blvd from Mill Plain Blvd to I-5 as 12 mph, and I-5 to NE Andresen Road as 10 mph. Minimum speeds on Ft. Vancouver Way from Mill Plain Blvd to 63rd Street are 12 mph.

Corridor traffic volumes were primarily collected in July 2021, with supplemental data collected in September 2021. The peak hour for this study is 7:30 to 8:30 a.m. and 4:00 to 5:00 p.m. The project team conducted analysis to understand existing conditions and future conditions for year 2040. The project team used SimTraffic/Synchro software to assess peak-hour traffic operations with existing and future “no build” conditions, as well as with a lane reconfiguration implemented. For full SimTraffic/Synchro results, see Appendix A: Traffic Analysis and Appendix B: Synchro Report.

Fourth Plain Blvd

Initially on Fourth Plain Blvd, the project team assessed Alternative 1, which removed a travel lane in each direction throughout the full corridor, from F Street to Andresen Road. Then, based on traffic operation issues identified in the east end of corridor (Stapleton Road east to Andresen Road), the team developed several additional model runs. Alternative 4, which used a similar lane configuration to Alternative 1 but retained two travel lanes westbound approaching the northbound I-5 on-ramp and two lanes westbound between Stapleton Road and Andresen Road, performed very similar to “no build” conditions.

¹¹ https://www.cityofvancouver.us/sites/default/files/fileattachments/community_development/page/74791/fourthplain_engagementplan_final_2021-10-11.pdf

Assumptions:

Alternative 1: Alternative 1 was run using two different traffic growth scenarios:

- i. *Historic Growth Rates:* Historic traffic growth rates assume traffic would continue to grow into the future. This growth rate assumes no change in driver behavior as a result of implementing the lane reconfiguration.
- ii. *RTC Growth Rates:* Growth rates derived from RTC incorporate the lane reconfiguration and its effects on driver behavior. This latter growth rate is lower.

Alternative 4: Alternative 4 used RTC growth rates.

Alternative 4 represents the “most likely” scenario in terms of future traffic patterns, whereas Alternative 1 represents a “worst case” traffic scenario. These two scenarios provide a realistic range of traffic outcomes that informed development of alternatives.

Analysis Results:

- From a technical standpoint, **removing travel lanes from Fourth Plain Blvd will likely result in acceptable changes in traffic speeds and delay.** To meet City concurrency standards, the project team recommended moving forward with the lane configuration assumptions in Alternative 4 to hone lane reconfiguration alternatives.
- Existing and future “no build” analysis of traffic volumes and operations reveals that traffic delay (as LOS) is generally not a major issue along the Fourth Plain Blvd corridor, except at specific intersections during peak hours; at these intersections, delay would be similar to “no build” conditions. LOS would be acceptable at study intersections now and in the future.
- The removal of travel lanes presents an opportunity to repurpose this space to enhance transit mobility and reliability, with particular focus on Fourth Plain Blvd eastbound from Stapleton Road to Andresen Road, and westbound from Falk Road to Ft. Vancouver Way.

A summary of traffic analysis results is displayed in Table 2. For a full description of traffic and safety analysis results, refer to the *Fourth Plain Blvd Existing and Future Baseline Traffic and Safety Analysis Memorandum*.

Table 2. Fourth Plain Blvd Traffic Analysis

	No Build 2040	Alternative 2040
Description	Future traffic performance assuming the corridor stays the same as today	Remove one travel lane EASTBOUND and WESTBOUND between F Street and Stapleton Road, maintain two westbound travel lanes between Stapleton Road and Andresen Road
Intersection Delay and LOS	Overall delay generally decreases in the future no-build condition	Delay is similar to No Build conditions, and average traffic speeds and driving time are also very similar to No Build
Corridor average speed during MORNING peak hour (7:30 – 8:30 AM)	EB: 23 MPH WB: 23 MPH	EB: 24 MPH WB: 23 MPH
Corridor average speed during EVENING peak hour (4:00 – 5:00 PM)	EB: 22 MPH WB: 21 MPH	EB: 22 MPH WB: 21 MPH

MPH = miles per hour; NB – northbound, SB = southbound

Note: Speed limit on Fourth Plain Blvd is 30 mph from F Street to Falk Road and 35 mph from Falk Road to Andresen Road

Fort Vancouver Way

Based on traffic operations and a detailed safety analysis, a lane reconfiguration was also shown to be a feasible and appropriate alternative on Fort Vancouver Way. An iterative traffic analysis process similar to Fourth Plain Blvd was applied.

Assumptions:

Alternative 1: Removes a single travel lane in each direction through the corridor and uses traffic growth rates derived from the RTC travel model. This alternative used RTC growth rates and was based on traffic counts conducted in July and September of 2021.

Alternative 2: Based on feedback from the project team, a second alternative was evaluated that used an RTC growth rate based on pre-COVID pandemic (2017) traffic counts, which better account for the mid-day peak in the corridor that is largely due to traffic patterns at Clark College. The project team also included new trips in the corridor due to a planned elementary school in the corridor that will be constructed in the coming years. Alternative 2 assumes that Clark College traffic and travel patterns will return to pre-pandemic conditions; discussions with Clark College indicated that the school has moved to a hybrid model where many students will not return to campus in the foreseeable future, meaning traffic is unlikely to return to pre-pandemic levels.

Actual traffic volumes and operations are likely to fall somewhere in between Alternative 1 and Alternative 2.

Analysis Results:

- Under Alternative 1, modeled build conditions show a similar pattern to future no-build conditions. Under Alternative 2, modeled build conditions are less favorable than no-build conditions. However, the assumptions for Alternative 2 again represent a “worst case” scenario that is unlikely to occur.
- From a technical standpoint, **removing travel lanes from Fort Vancouver Way will likely result in acceptable changes in traffic speeds and delay.**
- Traffic operations issues are likely to be limited to the intersection at Fourth Plain Blvd and Mill Plain Blvd, which will be addressed through intersection design.
- The removal of travel lanes presents an opportunity to repurpose this space to enhance transit and provide additional space for buffered mobility lanes.

A summary of traffic analysis results is displayed in Table 3. For a full description of traffic and safety analysis results, refer to the *Existing and Future Baseline Traffic and Safety Analysis Memoranda* for Fourth Plain Blvd and Fort Vancouver Way.

Table 3. Fort Vancouver Way Traffic Analysis

	No Build 2040	Alternative 2040
Description	Future traffic performance assuming the corridor stays the same as today	Remove one travel lane NORTHBOUND and SOUTHBOUND between Fourth Plain Blvd and Mill Plain Blvd
Intersection Delay and LOS	Performs acceptably and fairly similar to Existing Conditions	Very similar to “No Build”
Corridor average speed during MORNING peak hour (7:00 – 8:00 AM)	NB: 16 MPH SB: 15 MPH	NB: 15 MPH SB: 16 MPH
Corridor average speed during EVENING peak hour (4:15 – 5:15 PM)	NB: 15 MPH SB: 14 MPH	NB: 13 MPH SB: 14 MPH

MPH = miles per hour; NB – northbound, SB = southbound

Note: Speed limit on Fort Vancouver Way is 30 mph from F Street to Falk Road and 35 mph from Falk Road to Andresen Road

Parking Study

To assess the current use of parking within the study area, the project team conducted a parking utilization study and analysis on Fort Vancouver Way, McLoughlin Blvd, and the Marshall/Luepke Community Center parking lot. Project staff used the 85% rule to assess utilization of the parking supply. The 85% rule is a parking industry standard that suggests parking on each block should aim to be 85% full. At this level of utilization, drivers are able to find a space when they need one, but parking is not oversupplied and empty. As such, less than 55% is considered “low use,” 55-69% is considered “moderate use,” 70-84% is considered an “efficient supply,” and above 85% is considered a “constrained supply.”

Weekday Parking Utilization

For the weekday study, parking utilization information was collected along Fort Vancouver Way and McLoughlin Blvd hourly from 8am - 6pm on Wednesday, September 14 and Thursday, September 15, 2022. Parking utilization takeaways for the weekday study are outlined below and shown in Table 4.

- Parking use was generally "low" or "moderate"
- The segment with highest utilization was between McLoughlin Blvd and Plain Blvd (also known as Air Force Ave)
- Most parking spots were occupied by RV/trailers that remained in the same location throughout the 2-day observation period.
- Parking usage was very low between the Yellow Lot entrance at Clark College and Fourth Plain Blvd (almost always one car or less present on both sides of the street)
- Ample off-street parking options are available adjacent to Fort Vancouver Way, including Clark College parking lots, VA Medical Center parking lots, the Marshall/Luepke Community Center parking lot, and Hudson’s Bay High School parking lots

Table 4. Weekday Parking Utilization Study Results

Segment	Utilization
<i>Fort Vancouver Way</i>	
McLoughlin Blvd to Plain Blvd	41-78%
Plain Blvd to Yellow Lot Entrance	0-70%
Yellow Lot Entrance to Green Lot Entrance	0-14%
Green Lot Entrance to Fourth Plain Blvd	0-31%
<i>McLoughlin Blvd</i>	
I-5 to Fort Vancouver Way	0-54%
Fort Vancouver Way to Blue Lot Entrance	1-44%
Blue Lot Entrance to Reserve Street	0-24%

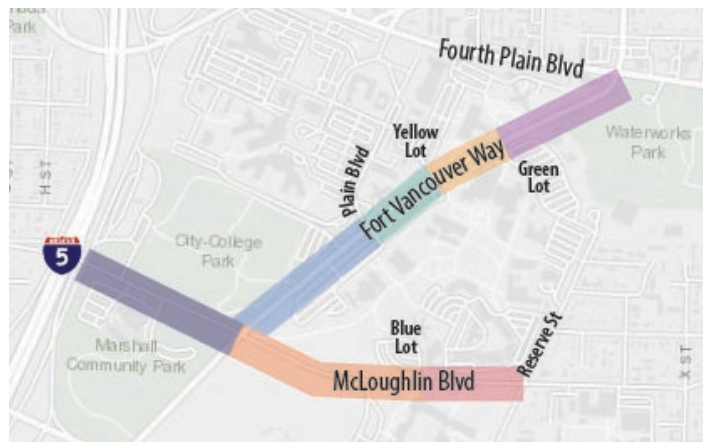


Figure 3. Weekday Parking Utilization Study Map

Weekend Parking Utilization

The weekend parking utilization study measured occupancy on McLoughlin Blvd from I-5 to Fort Vancouver Way and within the Marshall Center parking lot from 9am – 3pm on Saturday, September 24, 2022. Parking utilization takeaways for the weekend study are outlined below.

- The Marshall/Luepke Community Center lot averaged about 60% occupancy on Saturday
- Street parking on McLoughlin near Marshall/Luepke Community Center was not heavily used
- There was some use during events, but parking lots remained largely empty
- City Parks Staff noted that parking areas have adequate capacity and is anticipated to meet the needs of future parking demand at Harpers Playground
- On-street parking on Fort Vancouver Way did not have observed use on weekends

Parking Findings

This utilization study supports Clark College staff assertions that on-street parking is not needed along Fort Vancouver Way and may be removed without impacting parking capacity. The Marshall/Luepke Community Center and surrounding facilities have approximately 200 total spaces and parking on south-side of McLoughlin Blvd. Four back-in spots are used regularly, though others along McLoughlin Blvd are used less frequently. The director of the Marshall/Luepke Community Center noted that parking demand is currently somewhat low because of park closures and Clark College hybrid schedules. However, City of Vancouver Parks Staff noted that recent larger events have not strained existing parking and anticipate that existing lots will accommodate new visitors to Harpers Playground, which is under construction. Clark College staff also indicated support for removing on-street parking along Fort Vancouver Way to accommodate multimodal improvements.

Outreach Feedback

Milestone 1 Outreach

The following sections detail the themes and findings of both in-person and online outreach conducted as part of Community Engagement Milestone #1 in Summer 2022.

Safety Issues

Safety is a key concern in certain areas of the corridors. Respondents voiced a strong desire to address the dangerous travel experience in the corridor and emphasized ensuring safety for children. Most people stated that they feel unsafe or uncomfortable walking and biking along Fourth Plain Blvd and Fort Vancouver Way, with only 1 out of every 5 respondents saying they feel safe walking, biking, or accessing transit along these corridors.

- **Dangerous Driving:** Travelers in this area feel that speed, congestion, and aggressive traffic create a highly dangerous experience when travelling on these streets, regardless of mode choice. Many respondents expressed discomfort with a lack of protection from speeding vehicles.
- **Pedestrian Safety:** There are several intersections and locations in the corridors where crossing feels unsafe. Most community members expressed a strong desire for pedestrian safety improvements and reduced vehicle speeds. Several also expressed a desire to address traffic control at intersections, narrow sidewalks, and inadequate street lighting.
- **Bike Safety:** Residents and commuters alike believe the corridors are not bike-friendly. There is a strong desire to address the lack of bike infrastructure. Most people expressed that they would never consider riding a bike on the current configuration of these streets. Approximately 80% of respondents said they felt very uncomfortable bicycling along these streets.

Other Concerns

- **Enforcement:** People also expressed a desire for more enforcement to address speeding, dangerous crosswalk violations, and driving through red lights.
- **Unwelcoming Atmosphere:** Respondents expressed an overall unwelcoming perception of the area due to the poor condition of buildings, lack of greenery, inadequate lighting, presence of trash, and unpleasant pedestrian atmosphere. Perceived lack of investment in the area keeps people away and unengaged.
- **Mode Split:** Most people drive, but a significant amount of people walk along these streets. Although most respondents (36%) primarily drive along these streets, 29% said they walk, 21% said they ride a bike, and 14% of respondents said they rode transit.

Support for Alternatives

- **Concern with “lane reconfiguration” language:** Some people expressed concern about the term “lane reconfiguration” and a desire to learn more about what that may look like on these streets specifically. Of this group, some expressed opposition to the idea of reducing the number of vehicle travel lanes, opining: “There’s way too much traffic here to handle fewer lanes.”
- **Draft Evaluation Criteria:** Most survey respondents (74%) agree that the draft evaluation criteria are right for assessing safety and mobility improvements along these streets. Respondents indicated the top three most important evaluation criteria as:
 - Safety Improvements for all users (31%)
 - Mobility improvements for all users (24%)
 - Greenhouse gas reduction benefits (19%)

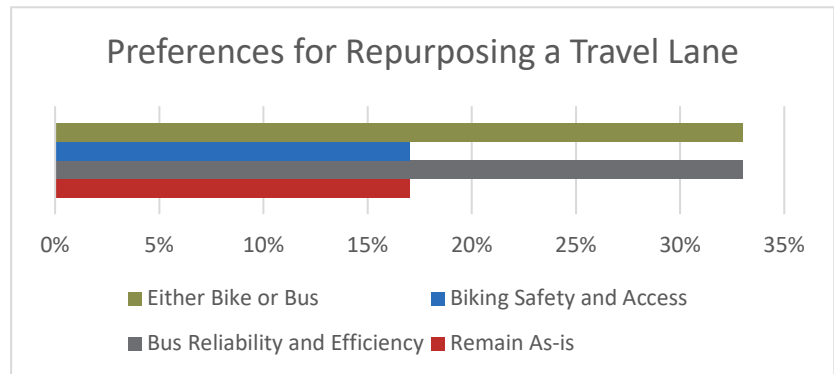
Milestone 2 Outreach

The following sections detail the themes and findings of both in-person and online outreach conducted as part of Community Engagement Milestone #2 in Fall 2022.

About 83% of people responded favorably to repurposing a lane. Comments generally reflected an appreciation for changes to Fourth Plain Blvd, with one respondent stating, "Something needs to change on these roads." Many respondents supported changes that would improve the corridor for those who don't drive, including improving mobility, making the street safer, and providing room for other mobility modes, such as biking and walking. Several respondents noted that proposed changes would be in line with other roads in the city.

Of people who walk, bike, or use a mobility device, the top 3 priorities are:

- Increasing physical space between cars and people walking, biking, or using a mobility device
- Improving pavement/repairing potholes
- Slowing vehicle traffic



Business Canvassing

The project team spoke to 34 people at 28 businesses and organizations and prioritized Black, Indigenous, (and) People of Color (BIPOC) community businesses and organizations.¹² About 88% of people asked responded favorably to repurposing a travel lane, with 44% favoring bus improvements and 9% favoring bicycling improvements. Some comments included:

- "Better sidewalks and safer crosswalks would go a long way."
- "We never see any bikes at our business."
- "Our people need to get to work and many of us take the bus. I'd love to see more buses, more often."

¹² BIPOC businesses were prioritized because of the diversity of the corridor, known as Vancouver's "International District". The project team received direction from City Council to ensure that business outreach was representative and captured diverse perspectives. The business community is one of the key aspects of the multicultural identity of the corridor.

PROPOSED ALTERNATIVES AND RECOMMENDATIONS

Phase 1 Alternatives

Fourth Plain Blvd - F Street to Fort Vancouver Way

A single “build” alternative was developed for this segment, in addition to a “no build” alternative that would keep the lane configuration the same as today. On Fourth Plain Blvd between F Street and Fort Vancouver Way, the project would include a two-way cycle track improvement that would address the lack of bicycle facilities in this segment and increase safety for people walking or using mobility devices along this segment of the corridor. The cycle track would be implemented on the south side (eastbound) side of the roadway, where the sidewalk-adjacent eastbound lane is proposed to be removed. The cycle track would utilize the width of the previous traffic lane for two marked bicycle lanes going in both directions as well as separation from traffic by a painted buffer with vertical separators. Figure 4 shows a rendering of the two-way cycle track.



Figure 4. Fourth Plain Blvd - F Street to Fort Vancouver Way

The City received a grant from the Washington State Department of Transportation (WSDOT) to implement a lane reconfiguration in this segment to improve safety and comfort for all users. This piece of the project will be funded through a separate source from the pavement management program for the rest of the corridors. The cycle track concept was approved during previous discussions with WSDOT; therefore, only one alternative was developed for this segment.

Fort Vancouver Way - Mill Plain Blvd to McLoughlin Blvd (West segment)

Alternative 1: Parking and Buffered Mobility Lanes

Alternative 1 would retain parking on both sides of the street and would use the existing travel lanes for on-street parking and a mobility lane with a protected buffer.

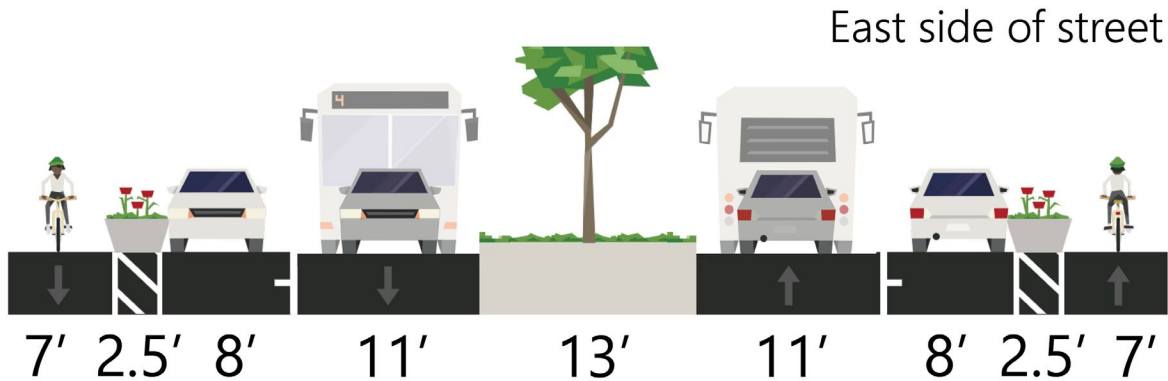


Figure 5. Alternative 1: Fort Vancouver Way - Mill Plain Blvd to McLoughlin Blvd

Alternative 2: Enhanced Buffered Mobility Lanes

Alternative 2 would repurpose the existing travel lanes to provide a wide enhanced mobility lane with a substantial protected buffer (Figure 6). The exact type and design of the buffer has not yet been determined, but could include landscaping or other placemaking elements.

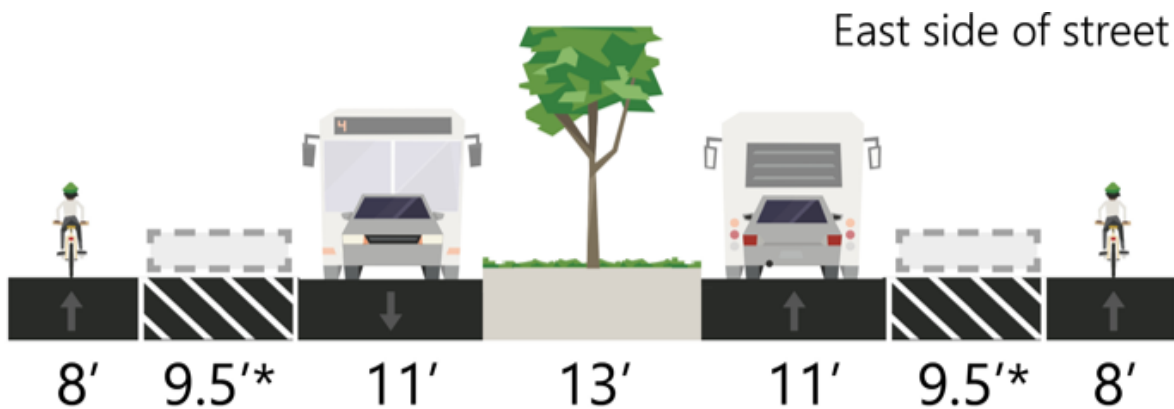


Figure 6. Alternative 2: Fort Vancouver Way - Mill Plain Blvd to McLoughlin Blvd

*Buffer type and design TBD

Alternative 3: Business Access & Transit (BAT) Lane and Buffered Mobility Lane

Alternative 3 would repurpose the existing travel lane on each side into a BAT lane, which functions as a “transit-only” and right-turn lane. This alternative was ultimately removed as an option because CTRAN’s Vine BRT does not provide service from Mill Plain Blvd to McLoughlin Blvd, and a transit-only lane was deemed unnecessary.

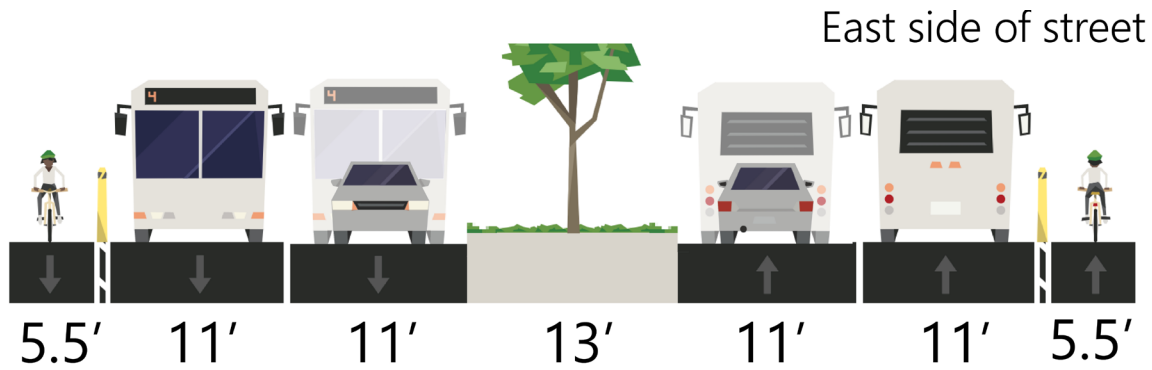


Figure 7. Alternative 3: Fort Vancouver Way - Mill Plain Blvd to McLoughlin Blvd

Fort Vancouver Way - McLoughlin Blvd to Fourth Plain Blvd

Alternative 1: Business Access & Transit (BAT) Lane and Buffered Mobility Lane

Alternative 1 would repurpose the existing travel lanes to include a BAT lane and an enhanced buffered mobility lane (Figure 8).

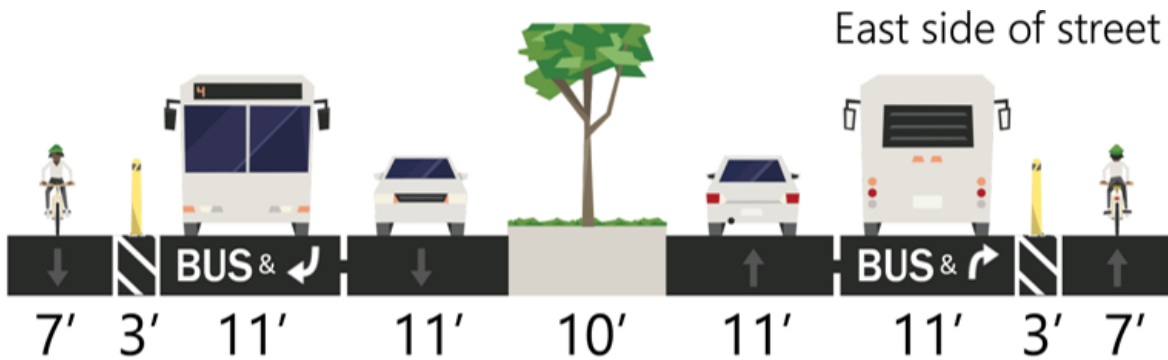


Figure 8. Alternative 1: Fort Vancouver Way - McLoughlin Blvd to Fourth Plain Blvd

Alternative 2: Parking and Buffered Mobility Lanes

Alternative 2 would repurpose the existing travel lanes to include on-street parking and a wider enhanced mobility lane with a protected buffer, which may include planters or other vertical separation (Figure 9).

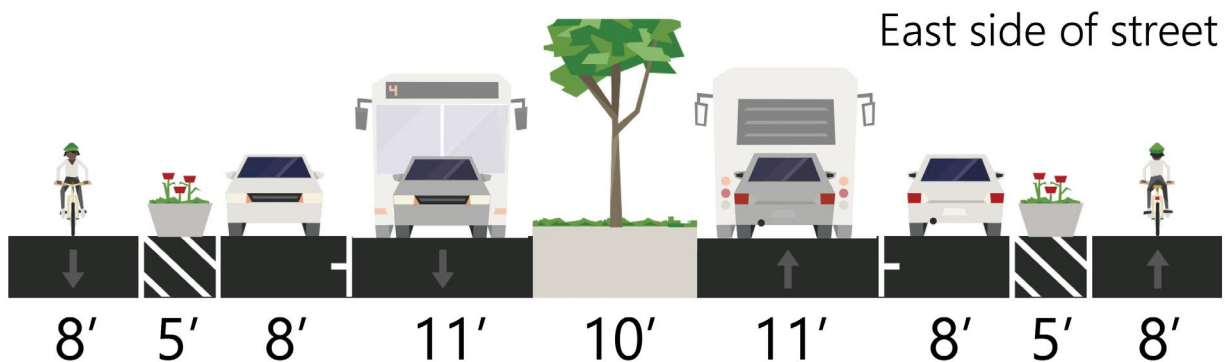


Figure 9. Alternative 2: Fort Vancouver Way - McLoughlin Blvd to Fourth Plain Blvd

ALTERNATIVES EVALUATION

Feedback from stakeholders and public outreach informed this decision-making process and aided in the selection of the preferred alternatives. This evaluation process was also informed by findings and goals from prior studies and plans along the corridors, as well as novel analysis conducted by the project team. The criteria were evaluated using a “Consumer Reports” style evaluation¹³:

- Best performance
- ◐ Neutral or moderate performance
- Poor performance
- N/A Not applicable

Table 5. Evaluation Matrix – Fort Vancouver Way

Criterion	Alternative 1: Mobility Lanes and Transit Priority Emphasis	Alternative 2: On-street Parking Emphasis and Mobility Lanes	No Build	Comments
Mobility improvement for people walking, using a mobility device, bicycling, or using the bus	●	◐	○	Repurposing travel lanes into BAT lanes and protected buffered mobility lanes would provide significant mobility improvements for people walking, using a mobility device, bicycling, or using the bus. Including on-street parking does not improve mobility for these user groups and additional parking was determined to not be needed based on stakeholder conversations and the parking study conducted.
Safety improvement for all users of the corridor, including people walking, using a mobility device, bicycling, driving, or using the bus	●	●	○	Alternative 1 and 2 would result in similar safety improvements. The no-build condition does not address safety issues within the corridor.
Greenhouse gas (GHG) reduction benefits	●	◐	○	Mobility lanes and transit priority lanes can promote decreased reliance on single-occupancy vehicle trips. For Alternative 2, retaining on-street parking does not further GHG reduction goals.
Equitable outcomes	●	●	○	Alternatives 1 and 2 would result in similarly equitable outcomes by improving multimodal safety and comfort for underserved populations.
Access to businesses, jobs, services, parks and recreation, and educational opportunities	●	●	○	Alternatives 1 and 2 would result in similar increases in access by providing multimodal improvements for all users.

¹³ Harvey balls are graphic circles used to visually communicate qualitative information and to indicate to what degree particular options, like alternatives, meet the stated evaluation criterion.

PREFERRED ALTERNATIVES FOR PHASE 1

Public feedback strongly favored Alternative 1 or Alternative 2, as opposed to “no build”, as there was generally broad support for a lane reconfiguration. Based on the context in the various segments of the corridors, a combination of BAT lanes and buffered or protected mobility lanes were recommended. The preferred alternatives for Phase 1 are listed below and shown in Figure 10.

Phase 1: Fort Vancouver Way and Fourth Plain Blvd from F Street to Ft. Vancouver Way

- Fourth Plain Blvd, F Street to Fort Vancouver Way - *South side cycle track*
- Fort Vancouver Way, Mill Plain Blvd to McLoughlin Blvd - *Alternative 2: Enhanced Buffered Mobility Lanes*. Travel lanes would be repurposed for wide-buffered mobility lane on each side, with a taper from two receiving travel lanes on the northbound side of the south end of the segment. This alternative would retain two “receiving lanes” for left turns from Mill Plain Blvd onto Fort Vancouver Way, then transition to buffered mobility lanes.
- Fort Vancouver Way, McLoughlin Blvd to Fourth Plain Blvd - *Alternative 1: BAT Lane and Buffered Mobility Lanes*. On-street parking would be removed.

Based on the findings in the staff report, public feedback, and the alternatives evaluation, staff recommended that the Transportation and Mobility Commission (TMC) forward a recommendation to the City Council to advance these design concepts for Phase 1. In October 2022, City Council unanimously adopted the resolution supporting the design recommendations for Phase 1 of Fourth Plain Blvd and Fort Vancouver Way.

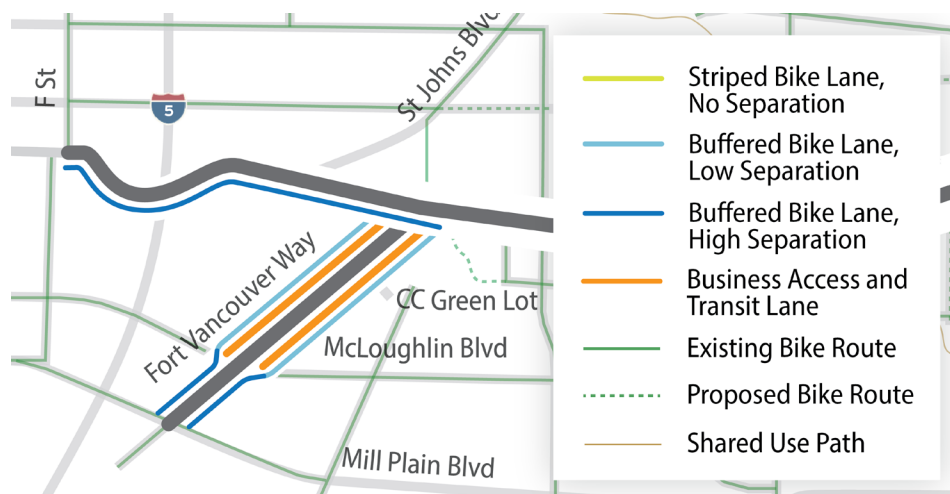


Figure 10. Phase 1 Preferred Alternatives

NEXT STEPS

Phase 1 repaving and project construction will begin in 2023. Phase 2 alternatives are still being evaluated; and if design recommendations are approved, construction will begin in 2024. City staff will continue Phase 2 alternatives (Fourth Plain Blvd from Fort Vancouver Way to Andresen Road) discussions with the TMC, City Council, CTRAN, and WSDOT. The preferred alternatives will be selected after discussing these alternatives with stakeholders and after conducting further public outreach.