

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 2 Alternatives Development Process

INTRODUCTION

This memorandum builds upon recommendations made in the prior Phase 1 Alternatives Memo and proposes alternatives for the Phase 2 project area.

As described in the Phase 1 Alternatives Memo, The City of Vancouver initiated this *Fourth Plain and Fort Vancouver Safety and Mobility Project* to develop lane reconfiguration and multimodal 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 City and through novel analysis conducted by the project team. This *Safety and Mobility 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. Planned improvements will be advanced by the City through a repaving project in 2023-2024.

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. Phase 1 repaving will begin in 2023 on Fourth Plain Blvd from F Street to Fort Vancouver Way and Fort Vancouver Way from Mill Plain Blvd to Fourth Plain Blvd (West Corridor); Phase 2 repaving will take place in 2024 on Fourth Plain Blvd from Fort Vancouver Way to Andresen Road (East Corridor). See Figure 2 for a map of construction phasing.

Following a review of the *Fourth Plain Blvd Existing and Future Baseline Traffic and Safety Analysis Memorandum*,¹ the project team developed lane reconfiguration alternatives for different segments of Fourth Plain Blvd and considered how to repurpose existing road space to address safety concerns and integrate multimodal

¹https://www.cityofvancouver.us/sites/default/files/fileattachments/community_development/page/74791/fourthplainblvd_existingfuturesafetytrafficreport_final.pdf

improvements. This memorandum documents the development of Phase 2 alternatives, the evaluation process, feedback received from community members and stakeholders, and the resulting recommendations.

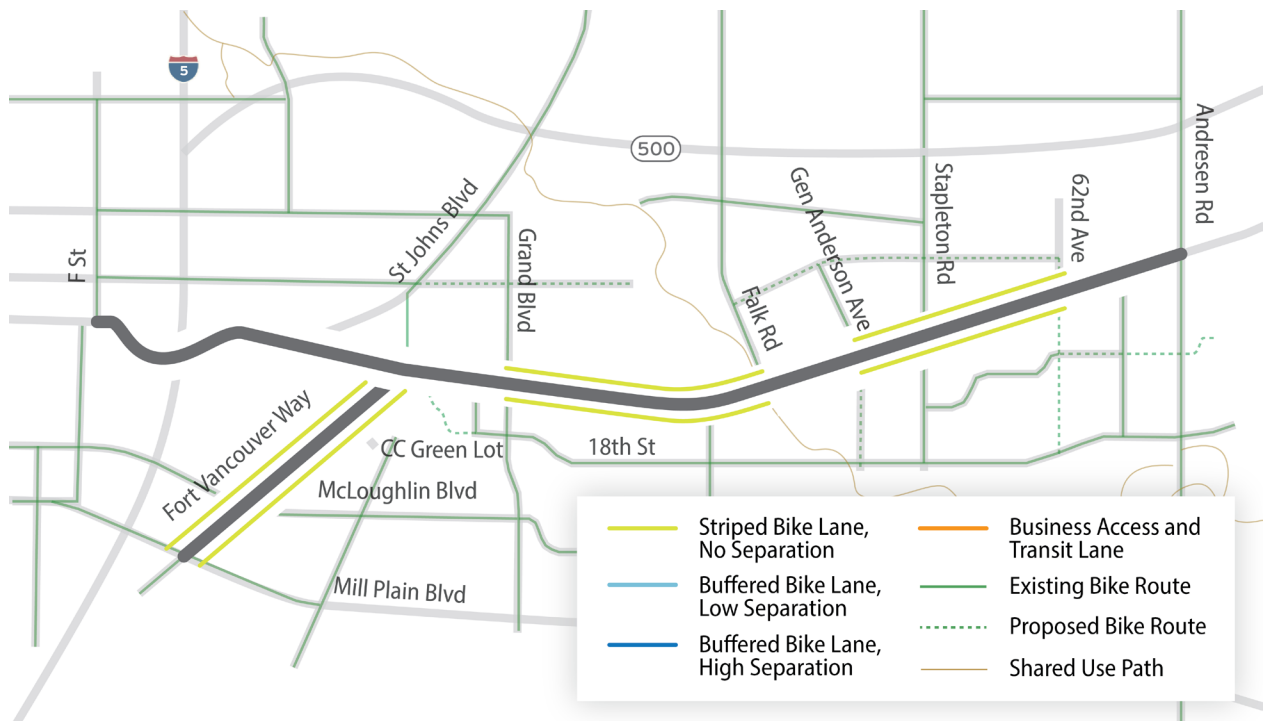


Figure 1. Project Study Area and Existing Roadway Conditions

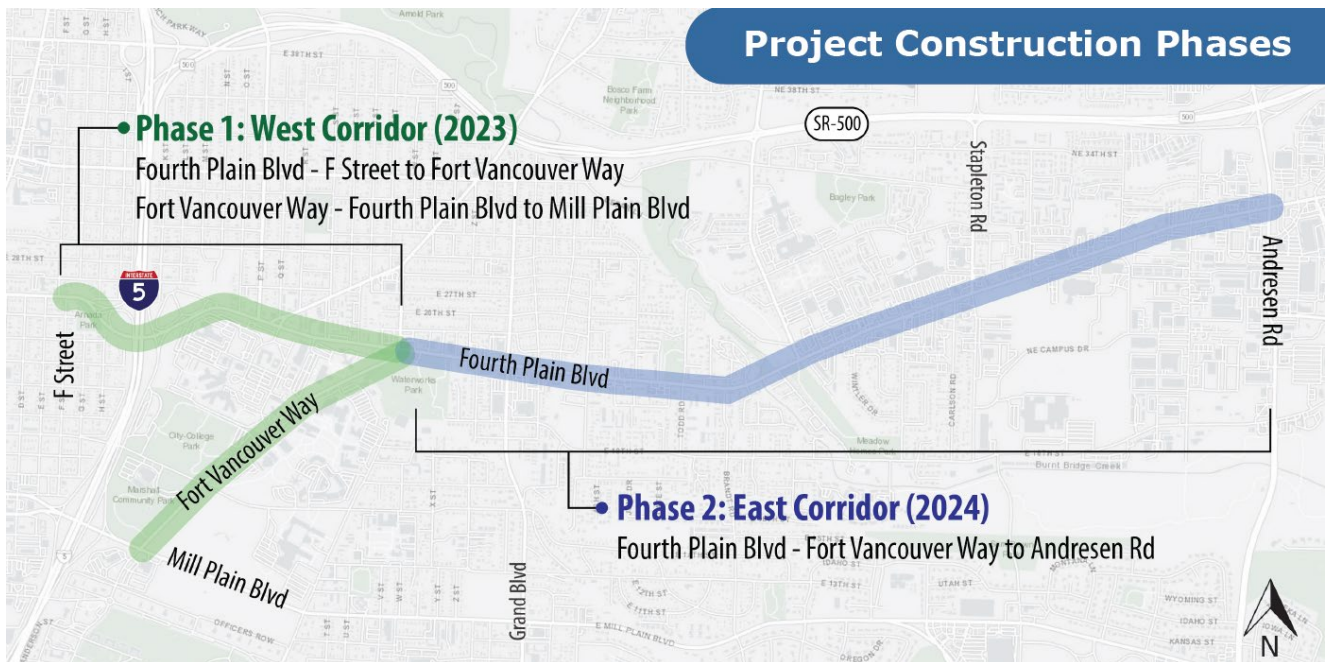


Figure 2. Project Construction Phases

Corridor Needs

The project team determined the following corridor priority issues and needs through an analysis of existing conditions on the Fourth Plain corridor 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 in 2020 involving a pedestrian at the Fourth Plain Blvd / Fort Vancouver Way intersection.
- Speeding is an issue along the corridor, creating an unsafe environment for all users, especially children, older adults, and people with mobility limitations.
- Inadequate and disconnected bike lanes do not provide a continuous, safe route.
- Sidewalks in the corridor are often uncomfortably narrow.

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

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 corridor. This framework was informed by the public during the first phase of outreach and refined based on feedback. The community on the corridors informed the development of this framework and 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)², Fourth Plain Forward Pedestrian Safety and Access Implementation Strategy,³ the Fourth Plain Forward Action Plan,⁴ City’s Complete Streets Policy, and ongoing Vancouver Moves⁵ projects. 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.

²https://www.cityofvancouver.us/sites/default/files/fileattachments/community_and_economic_development/page/28931/tssa_technical_report_final_draft.pdf

³https://www.cityofvancouver.us/sites/default/files/fileattachments/community_and_economic_development/page/21226/fourth_plan_ped_safety_action_plan_10.5.17_final.pdf

⁴http://www.cityofvancouver.us/sites/default/files/fileattachments/community_and_economic_development/page/21232/fourth_plain_forward_action_plan_compressed.pdf

⁵ <https://www.cityofvancouver.us/cdd/page/vancouver-moves>

Criteria	Questions the team will ask	How will we measure it?
	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?	

Based on the discussion in the *Fourth Plain Public Engagement Plan*⁶ 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

⁶ https://www.cityofvancouver.us/sites/default/files/fileattachments/community_development/page/74791/fourthplain_engagementplan_final_2021-10-11.pdf

ALTERNATIVES DEVELOPMENT

Traffic Analysis

The iterative traffic analysis process used different assumptions to hone in on 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.

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.

Initially, 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.

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

Outreach Feedback

Community Outreach

The following sections summarizes themes and findings of both in-person and online outreach conducted as part of Community Engagement Milestones in Summer 2022 and Fall 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. Common safety concerns included dangerous driving, pedestrian safety, and bicycle safety.
- **Support for Repurposing a Travel Lane** - Comments generally reflected support for changes to Fourth Plain Blvd, particularly for 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. Preferences for repurposing a travel lane strongly supported bus reliability (33% of respondents) and either bike or bus improvements (33% of respondents). 17 percent of respondents supported bike safety and access, while 17 percent wanted the roadway to remain as-is.
- **Priorities** - Of people who walk, bike, or use a mobility device, the top 3 priorities stated were increasing physical space between cars and people walking, biking, or using a mobility device; improving pavement/repairing potholes; and 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

during Milestone 2 outreach.⁷ About 88% of people asked responded favorably to repurposing a travel lane, with 44% favoring bus improvements and 9% favoring bicycling improvements.

- **Other Concerns** – Other concerns included a perceived lack of investment in the corridor, an unwelcoming atmosphere in the area, and a desire for more enforcement to address dangerous driving.

Community feedback was heavily considered when developing and refining alternatives for the Fourth Plain Blvd corridor. For a more detailed summary of public outreach results, see the *Fourth Plain Blvd and Fort Vancouver Way Phase 1 Alternatives Development Process Memo*.

TMC and Council

The project team met with members of the Transportation and Mobility Commission (TMC) and City Council from Summer 2021 through Winter 2023 to discuss project scope and goals, existing conditions, plans for public outreach, issues and needs along the corridors, and traffic analyses. These discussions informed the development of preliminary design recommendations, which were then refined based on further feedback. Key themes from these conversations include the following:

- **Mobility** - Strong desire for mobility lanes throughout the whole corridor, with an emphasis on bike mobility. Desire to address mobility within the Andresen Road intersection and beyond, which lies outside of this project’s area of impact.
- **Consistency** - Desire for consistent treatments along the corridor, as much as possible given variations in corridor width and other constraints.
- **Placemaking** - Desire for placemaking and community celebration; incorporating a vision of Fourth Plain as a prosperous, vibrant place that people want to visit.
- **Connectivity** - Need for better connectivity – an expanded network of mobility lanes.
- **Alignment with City Council Strategic Priorities** - Council values include an emphasis on *safety, equity*, and focus on *climate*.

Table 3. TMC and City Council Involvement Summary

Meeting Date	Topics	Actions
TMC		
April 5, 2022	Issues and needs on Fourth Plain; traffic analysis results;	TMC feedback to inform design options
June 7, 2022	Issues and needs on Fort Vancouver Way; traffic analysis results	TMC feedback to inform design options
September 6, 2022	Reviewed Phase 1 design options	TMC feedback to inform design refinement
October 4, 2022	Evaluation of Phase 1 designs; initial updates from second phase of public outreach	TMC recommendation for Phase 1
November 1, 2022	Reviewed Phase 2 design options; reviewed full public feedback received in second phase of outreach	

⁷ 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.

Meeting Date	Topics	Actions
February 2, 2023	Fourth Plain Phase 2 design refinements and draft project recommendations	TMC feedback to inform final recommendations
March 7, 2023	Fourth Plain Phase 2 Project Recommendations Hearing	TMC to provide recommendation for City Council
City Council		
July 19, 2021	Reviewed project scope and goals	Funded project planning in 2021-22 budget
December 20, 2021	Updates on project timeline	None
July 11, 2022	Updates on Phase 1 public outreach	Feedback on public outreach approach and issues in both corridors
October 3, 2022	Reviewed preliminary recommendations for Fourth Plain cycle track and Fort Vancouver Way lane reconfiguration (Phase 1); Outreach updates from Phase 1 and Phase 2	Feedback on Phase 1 recommendations
October 24, 2022	Reviewed design recommendations for Phase 1; Outreach updates	Approved Phase 1 design recommendations
Nov 14, 2022	Reviewed preliminary recommendations for Fourth Plain (Phase 2)	Feedback on Phase 2 alternatives
February 27, 2023	Workshop to review project design refinements and recommendations	Feedback on refinements and raising remaining issues
March 20, 2023	Council resolution approving Phase 2 designs and project recommendations	Passed ResM-4215

PROPOSED ALTERNATIVES AND RECOMMENDATIONS

Based on community priorities, findings and goals from prior studies and plans, and extensive technical analysis, the project team developed the Phase 2 alternatives described in this section. The project team developed alternatives based on the criteria developed initially with TMC/Council feedback and that responded to the needs identified in outreach Milestone #1. During outreach Milestone #2, the project team presented these alternatives. Generally, feedback for the proposed alternatives was positive, although the TMC and Council had concerns about the east end of the corridor, where no new bike lanes were proposed. After receiving this feedback, the project team developed a series of investments to complete the bike network gap in the east end of the corridor that would be funded and implemented through capital programming separate from the restriping that would occur within the scope of the pavement project.

Corridor Constraints and Alternatives Summary

Due to existing constraints within the corridor, this *Fourth Plain and Fort Vancouver Safety and Mobility Project* can address many - but not all - needs and issues. There are important constraints and tradeoffs, including:

- **Right-of-Way Limitations:** Working within the existing “curb-to-curb” pavement. Some segments of the corridor are narrower than others, and a single treatment cannot be applied to all parts of the corridor. Outreach feedback indicated a desire for consistency throughout the corridor; as a result, the project team attempted to provide consistent treatments while working within the confines of the right-of-way.
- **Transit Efficiency Requirements:** Prior obligations made by CTRAN as part of the funding agreement for The Vine with the federal government, including “in lane” bus stops for speed and reliability.
- **Funding:** Available funding and deadlines for use.

- **Traffic Standards:** Concurrency ordinances require maintaining a minimum level of traffic flow. According to the City’s *2017 Concurrency Corridors Classification*, the average PM peak hour travel speeds along Fourth Plain Blvd are 12 mph from Mill Plain Blvd to I-5 and 10 mph from I-5 to NE Andresen Road.

The project team considered these constraints while evaluating the proposed alternatives and developed additional recommendations to alleviate some of the issues posed by these constraints. From a combination of these recommendations and alternative options, the project team produced a package hybrid solution that intends to address many of the needs within the corridor. The two main alternatives and resulting hybrid package are outlined in Table 4 and detailed in the following sections.

Table 4. Phase 2 Alternatives Comparison Summary

Segment	Alternative 1: Mobility Lane Emphasis	Alternative 2: Transit Mobility Emphasis	Package: Hybrid Mobility and Transit Solutions
Ft. Vancouver Way to Falk Road	Enhanced buffered mobility lanes	BAT lane westbound Buffered mobility lanes	BAT lane westbound Buffered mobility lanes Improve existing mobility lanes on E 18 th Street (provides an alternate route to bicycling on Fourth Plain Blvd)
Falk Road to Stapleton Road	BAT lane eastbound Buffered mobility lanes (enhanced buffer in places)	BAT lane eastbound Short BAT lane westbound Buffered mobility lanes	BAT lane eastbound Short BAT lane westbound Buffered mobility lanes Improve existing mobility lanes on E 18 th Street
Stapleton Road to 62 nd Avenue	BAT lane eastbound Mobility lanes	BAT lane eastbound Mobility lanes	BAT lane eastbound Mobility lanes Improve existing mobility lanes on E 18 th Street Buffered mobility lanes on Stapleton between Fourth Plain and 18 th Street
62 nd Avenue to Andresen Road	BAT lane eastbound No mobility lanes	BAT lane eastbound No mobility lanes	BAT lane eastbound Off-street multiuse facilities between 62 nd Ave and Andresen Road

Alternative 1: Enhanced Mobility Lane Focus

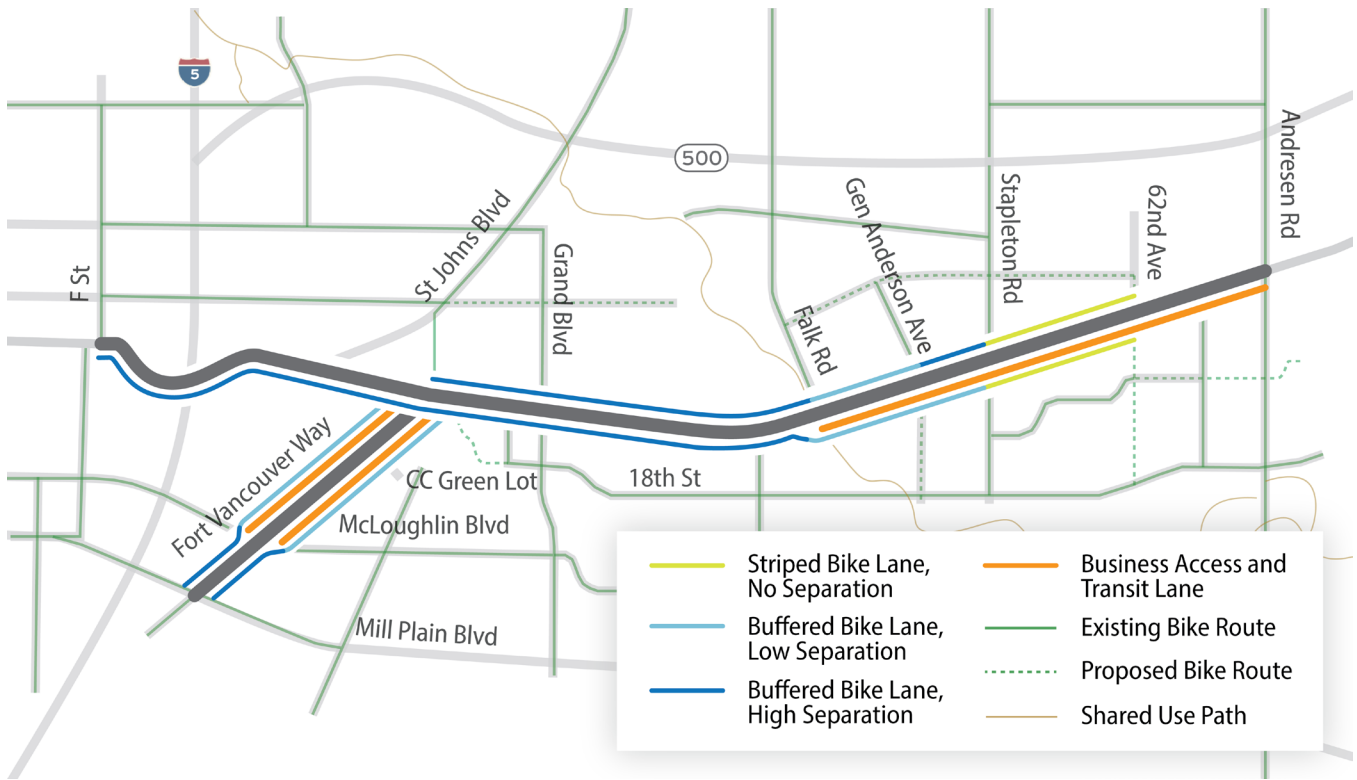


Figure 3. Alternative 1: Enhanced Mobility Lane Focus

Alt 1: Ft. Vancouver Way to Falk Road

Fourth Plain Blvd between Fort Vancouver Way and Falk Road would feature one travel lane in each direction, a center turn lane, and wide bike lanes with painted buffers.

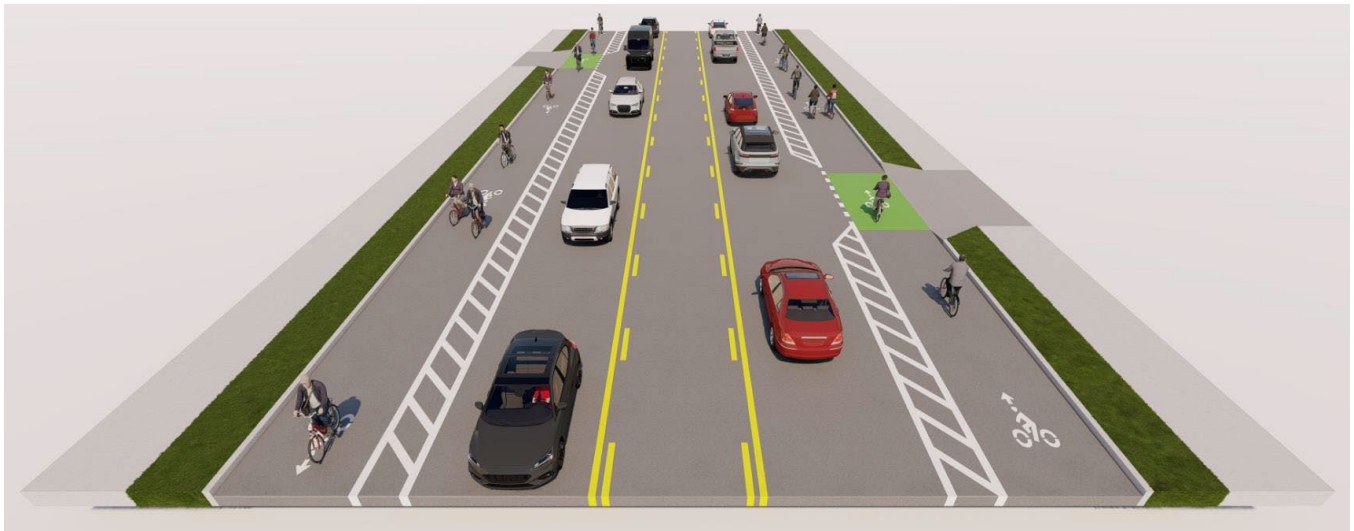


Figure 4. Alternative 1 - Ft. Vancouver Way to Falk Road

Alt 1: Falk Road to Stapleton Road

Fourth Plain Blvd between Falk Road and General Anderson Avenue would include one travel lane in each direction, a center turn lane, bike lanes with painted buffers, and an eastbound transit and right turn only lane (BAT lane).

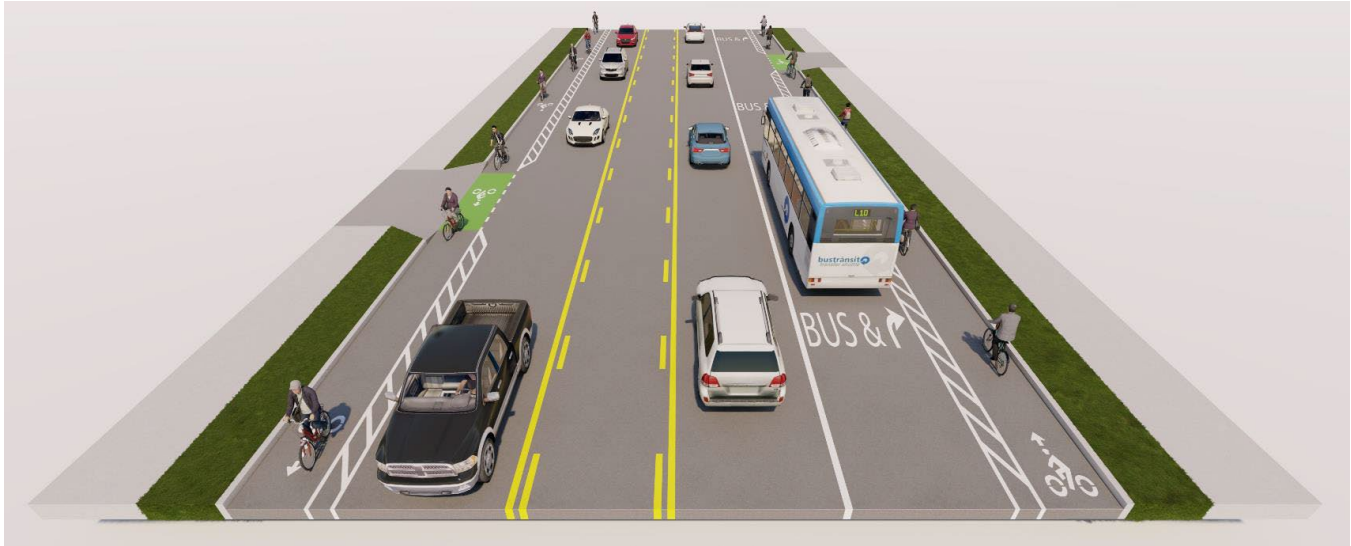


Figure 5. Alternative 1 – Falk Road to Stapleton Road

Alt 1: Stapleton Road to 62nd Avenue

Fourth Plain Blvd between Stapleton Road and 62nd Avenue would include one eastbound travel lane and two westbound travel lanes, a center turn lane, bike lanes with no painted buffers, and an eastbound transit and right turn only lane (BAT lane).

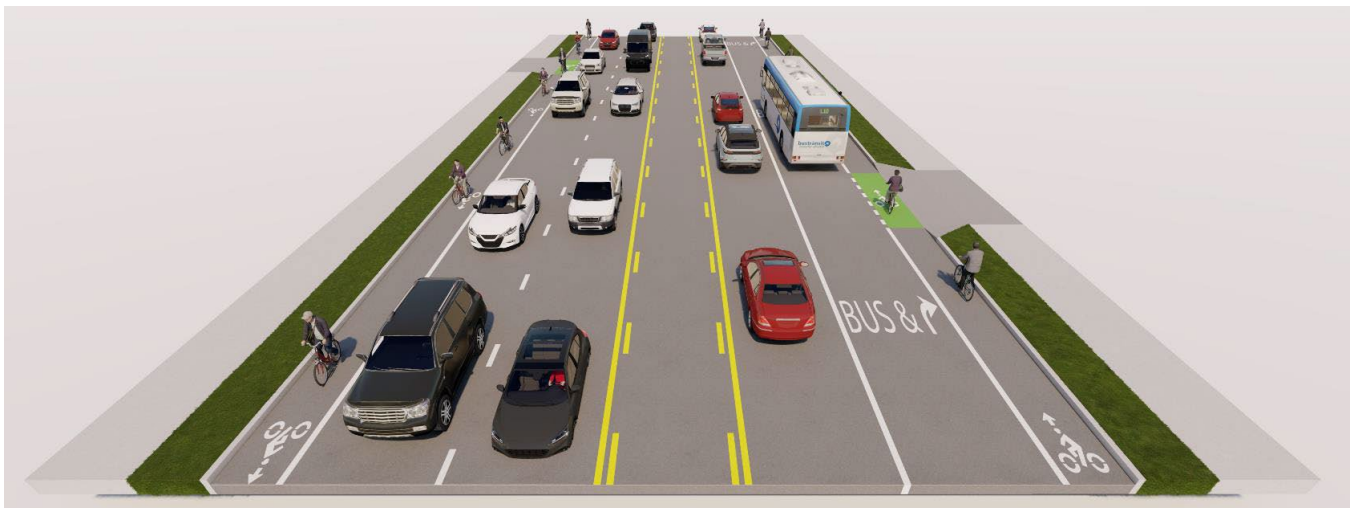


Figure 6. Alternative 1 – Stapleton Road to 62nd Avenue

Alt 1: 62nd Avenue to Andresen Road

Fourth Plain Blvd between 62nd Avenue and Andresen Road showing one eastbound travel lane and two westbound travel lanes, a center turn lane, and an eastbound transit and right turn only lane (BAT lane). Two westbound travel lanes would be retained between Stapleton and Andresen to maintain traffic mobility. This section would not include bike lanes, as the curb-to-curb width is more constrained in this segment. Transit reliability is prioritized because of higher levels of traffic and a greater need to maintain bus travel speed and reliability.

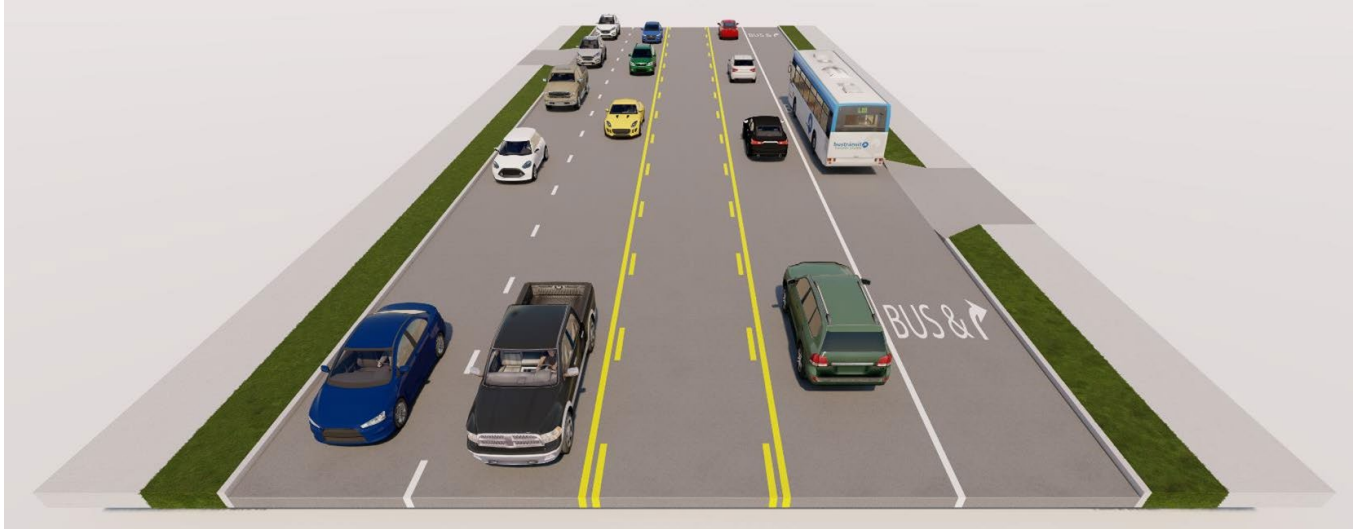


Figure 7. Alternative 1 – 62nd to Andresen

Alternative 2: Enhanced Transit Mobility Focus

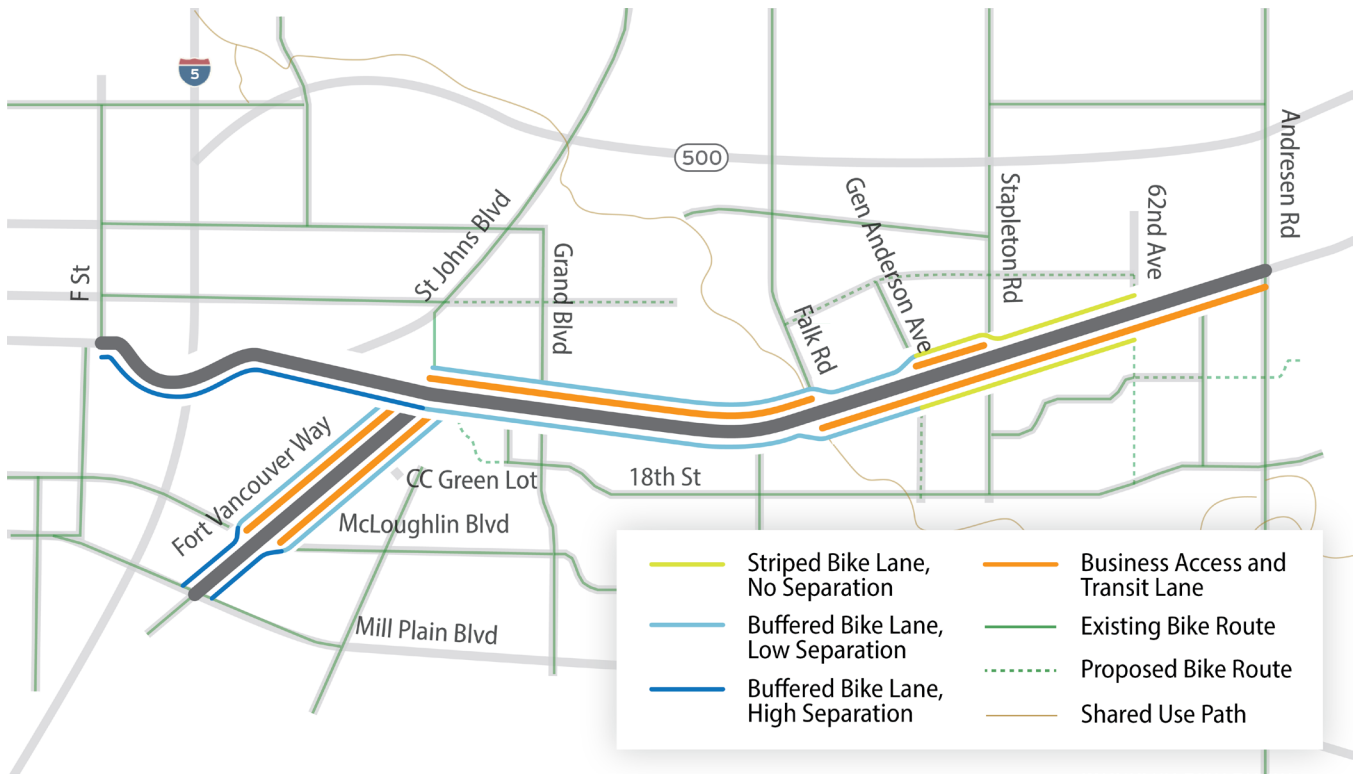


Figure 8. Alternative 2: Enhanced Transit Mobility Focus

Alt 2: Ft. Vancouver Way to Falk Road

Fourth Plain Blvd between Fort Vancouver Way and Falk Road would include one travel lane in each direction, a center turn lane, bike lanes with painted buffers, and a westbound transit and right turn only lane (BAT lane).

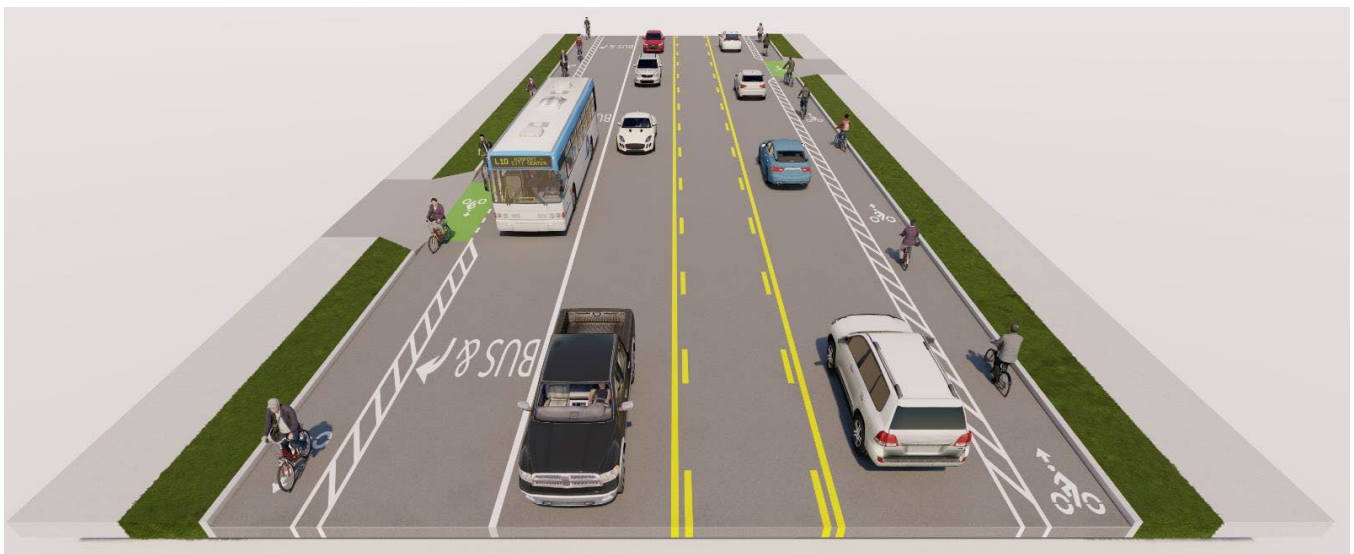


Figure 9. Alternative 2 - Ft. Vancouver Way to Falk Road

Alt 2: Falk Road to Stapleton Road

Fourth Plain Blvd between Falk Road and General Anderson Avenue would include one travel lane in each direction, a center turn lane, bike lanes with painted buffers, and an eastbound transit and right turn only lane (BAT lane).

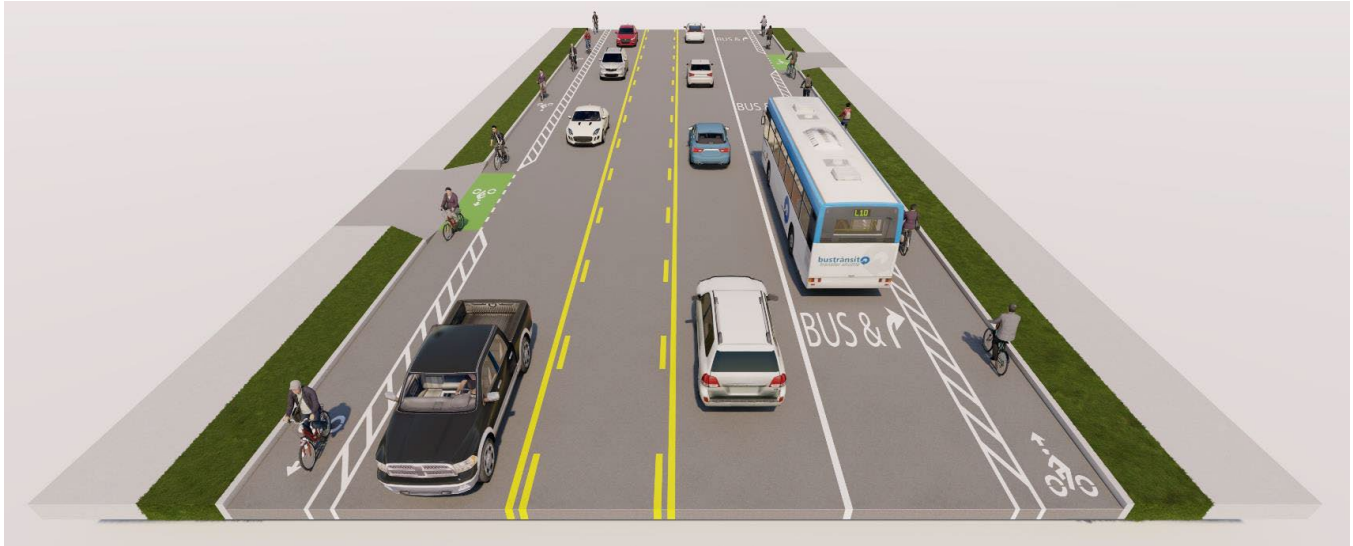


Figure 10. Alternative 2 – Falk Road to Stapleton Road

Alt 2: Stapleton Road to 62nd Avenue

Fourth Plain Blvd between Stapleton Road and 62nd Avenue would include one eastbound travel lane and two westbound travel lanes, a center turn lane, bike lanes with no painted buffers, and an eastbound transit and right turn only lane (BAT lane).

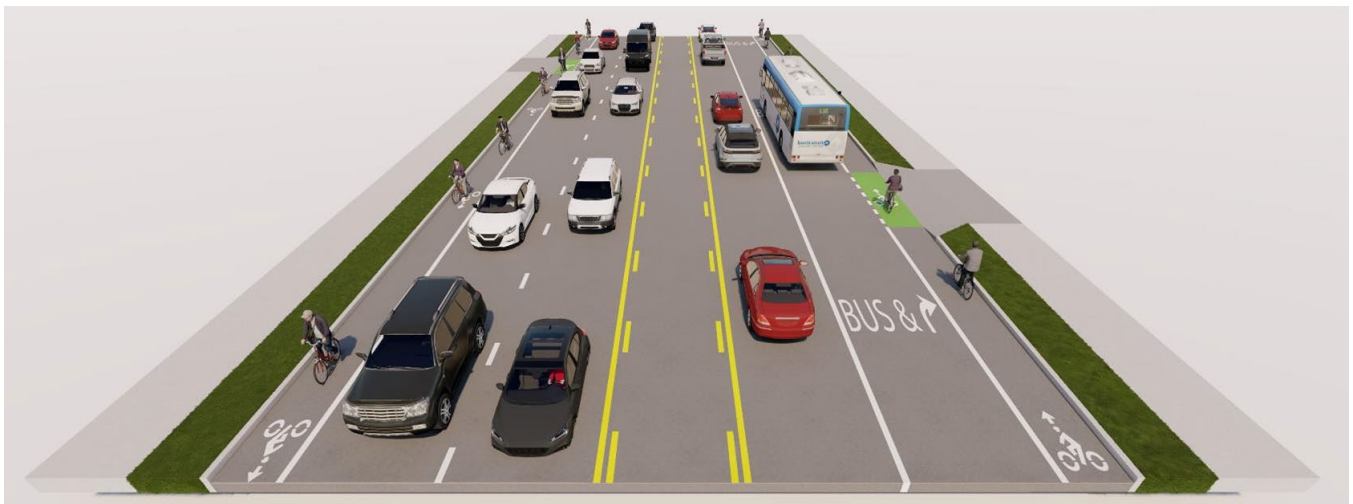


Figure 11. Alternative 2 – Stapleton Road to 62nd Avenue

Alt 2: 62nd Avenue to Andresen Road

Fourth Plain Blvd between 62nd Avenue and Andresen Road would feature the same design as proposed in Alternative 1, with one eastbound travel lane and two westbound travel lanes, a center turn lane, and an eastbound transit and right turn only lane (BAT lane). Two westbound travel lanes would be retained between Stapleton and Andresen to maintain traffic mobility. As mentioned previously, this section would not include on-street bike lanes and would instead prioritize transit mobility.

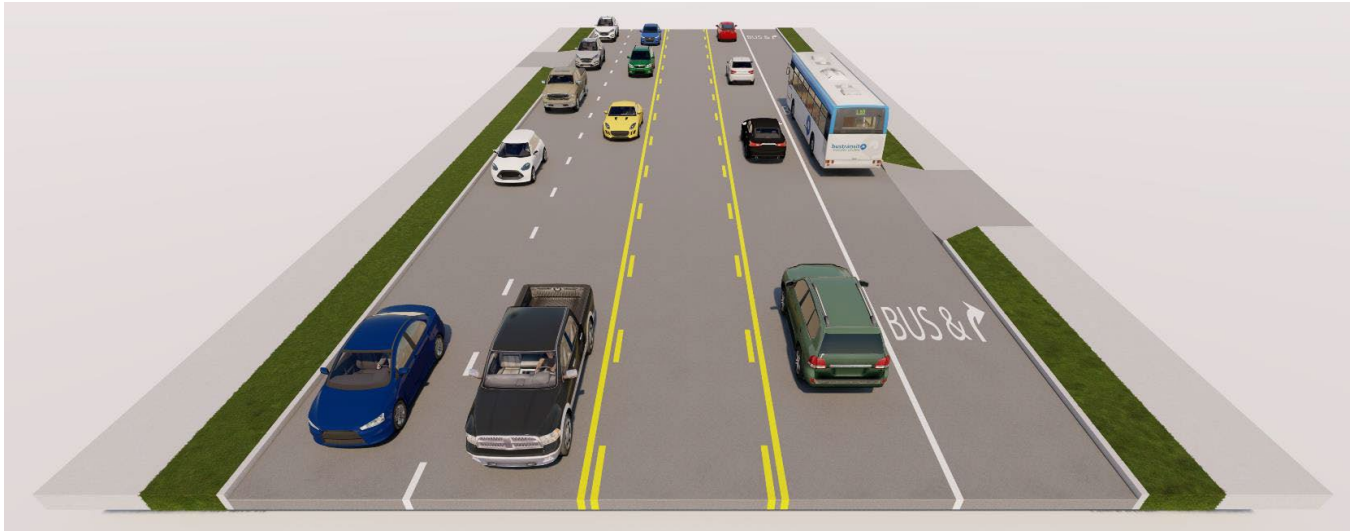


Figure 12. Alternative 2 – 62nd to Andresen Road

Package: Hybrid Mobility and Transit Solutions

The project team tailored lane reconfiguration recommendations to support TMC and Council priorities and developed several additional recommendations outside of this project's scope. This hybrid solution addresses Council and TMC concerns about not completing bike facilities between 62nd and Andresen due to the constraints articulated previously. To align with City Council strategic priorities, the project team refined proposed alternatives in the following ways:

- *Safety*: Recommended safety improvements along Fourth Plain Blvd repurpose road space to focus on transit and active transportation, including Business Access and Transit (BAT) lanes, expanded buffered mobility lanes, and narrowed vehicle lanes.
- *Equity*: Equity-focused outreach showed strong community and business support for lane reconfiguration and transit improvement, as transit serves a broad group of users. Recommended improvements place emphasis on enhancing transit reliability and access.
- *Climate*: Recommended improvements reallocate road space for transit and widened mobility lanes, providing supportive infrastructure for lower-carbon travel modes.

This hybrid package would incorporate lane configuration solutions from *Alternative 2: Enhanced Mobility Lane Focus* while also recommending capital improvement projects to address bicycle safety and mobility. Lane reconfiguration recommendations are specific to this *Safety and Mobility Project*, while additional recommended improvements that are out of the scope of this project can be advanced through forthcoming programs such as the Transportation Improvement Program (TIP) and the Ten-Year Investment Strategy for Fourth Plain - Fourth Plain for All: Investing in our Future. These improvements include three new mobility-focused TIP projects for placemaking and improving the bike network, and a new capital project to add a multiuse facility along Fourth Plain Blvd between 62nd Avenue and Andresen Road.

New Mobility-focused TIP Projects for Placemaking and Expanded Bike Network

Three capital projects would be added to the TIP to create quality mobility lane connections to parallel east-west corridors (Figure 13). This would provide an alternative route to bicycling on Fourth Plain Blvd with less high-speed motor vehicle traffic. The three proposed projects include:

- Restriping Stapleton to add buffered mobility lanes between Fourth Plain and 18th Street.
- Improving existing mobility lanes on 18th Street with buffers and vertical delineators, connecting to future projects on NE Burton Road.
- Intersection street mural at Fourth Plain and Falk where Burnt Bridge Creek Trail crosses the corridor; traffic calming and celebration of culture and community of the International District on Fourth Plain (Figure 14).

The project team also recommends evaluating appropriate traffic calming improvements for Brandt Road and Grand Blvd.



Figure 13. Mobility and Placemaking Recommendations



Figure 14. Intersection mural painting in Lloyd EcoDistrict, Portland, OR

Capital Project for a New Multiuse Facility along Fourth Plain from 62nd to Andresen

This proposed project would address the lack of bicycle facilities between 62nd Avenue and Andresen Road with off-street multiuse facilities that would serve mobility users including people walking, riding bicycles, and using mobility devices. The City will need to coordinate with property owners to purchase the right-of-way, relocate utilities, remove trees, and conduct any other necessary mitigation. This project is recommended to be prioritized in the forthcoming Ten-Year Investment Strategy for Fourth Plain- *Fourth Plain for All: Investing in our Future* given the cost, complexity, and time required to develop.



Figure 15. Ten Year Investment Strategy Project Recommendation

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 evaluation:

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

Table 5. Evaluation Matrix – Fourth Plain Blvd

Criterion	Alternative 1	Alternative 2	Hybrid Package	No Build	Comments
Mobility improvement for people walking, using a mobility device, bicycling, or using the bus	●	●	●	○	The hybrid package will address the community’s top priorities (improving bus reliability and efficiency) by providing BAT lanes, while improving bicycle network connectivity through off-street multiuse facilities.
Safety improvement for all users of the corridor, including people walking, using a mobility device, bicycling, driving, or using the bus	●	◐	●	○	Safety improvements along Fourth Plain Blvd will repurpose road space for transit and active transportation, including Business Access and Transit (BAT) lanes, expanded buffered mobility lanes, and narrowed vehicle lanes.
Greenhouse gas (GHG) reduction benefits	●	●	●	○	Increased access to transit and improved pedestrian and bicycle facilities may encourage non-motorized transportation, reducing GHG emissions.
Equitable outcomes	◐	●	●	○	Equity-focused outreach showed strong community and business support for lane reconfiguration and transit improvements; transit serves a broad group of users. Intersection mural at Fourth Plain and Falk can help slow traffic and celebrate culture and community.
Access to businesses, jobs, services, parks and recreation, and educational opportunities	●	●	●	○	Improvements increase transit access and address need for better connectivity with added mobility lanes on Stapleton, improvements to 18th Street mobility lanes, and new off-street multiuse facility at east end of Fourth Plain Blvd.

Preferred Alternatives

Based on the findings in the staff report and the alternatives evaluation, staff recommend that the Commission forward a recommendation to the City Council to advance the following design concepts for Phase 2.

Alternative 2: Enhanced Transit Mobility Focus for 2024 Repaving Effort

- Design for the 2024 paving project that preserves transit travel time reliability and includes improvements for mobility users, including people walking and bicycling.
- This design repurposes a travel lane in each direction to add a Bus Access Transit lane; Fourth Plain Blvd westbound east of Stapleton would maintain two vehicle lanes.
- This design includes buffered mobility lanes between St. Johns and Fort Vancouver Way and an expanded striped mobility lane from General Anderson to 62nd Avenue.
- Vehicle lanes will be narrowed to reduce speeds and reallocate space.

Additional Recommendations

- Three new mobility-focused TIP projects for placemaking and expanded bike network.
- Capital project for a new multiuse facility along Fourth Plain Blvd from 62nd Avenue to Andresen Road

NEXT STEPS

The preferred alternatives will be selected after discussing these alternatives with the public and stakeholders including TMC, City Council, CTRAN, and WSDOT. If design recommendations are approved, Phase 2 repaving and project construction will begin in 2024.