

RECHANNELIZATION - FAQs

Frequently Asked Questions (FAQs)

June 2017 (Revision 1 - 6/21/17)

This project will rechannelize Richmond Beach Road/ NW 195th Street/ NW 196th Street from 24th Avenue NW to Dayton Avenue N from four lanes to one vehicle lane in each direction and a center turn lane. The purpose of this project is to improve driver, pedestrian, and bicyclist safety and mobility. Rechannelization also provides the ability to implement on-street bicycle lanes as well as pedestrian refuge space for pedestrians crossing the street between controlled intersections. We have taken the frequently asked questions about this project and grouped them into categories to assist the reader in quickly finding specific information. Taken together, these answers provide the broader context for the project as a whole.

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Background

1 What is a rechannelization?

A “rechannelization” is when the lane striping along a street is changed. In this case Richmond Beach Road would change from a street with two travel lanes in each direction (diagram - left) to a street with one travel lane in each direction, a two-way center-turn lane, and bike lanes in each direction (diagram - right). Rechannelizations address safety and mobility concerns for a relatively low construction cost because they do not involve paving, purchasing right-of-way, or other high-cost treatments. The Federal Highway Administration has deemed this rechannelization method a proven safety countermeasure for roads like Richmond Beach Road, **reducing collisions by 19-47%**.



2 Why is the City proposing a rechannelization on Richmond Beach Road?

The City is proposing to rechannelize Richmond Beach Road to improve driver, pedestrian, and bicyclist safety and mobility. The corridor has a history of vehicle, pedestrian, and bicycle collisions, and includes two of the City’s high collision locations from the [2016 Annual Traffic Report](#). Based on existing roadway characteristics, collision history, traffic data, and numerous case studies performed across the county, the City has determined that a rechannelization would work well on Richmond Beach Road.

SAFETY

Updated 6/21/17 to remove data from Fremont to Dayton

- From 2010-2016, there were **154 total collisions** in this corridor, west of Fremont Ave N to 24th Ave NW.
- Of these collisions, **20 were injury collisions, including 1 fatality**.
- 10 of these collisions involved pedestrians, and 3 involved bicyclists.
- There is significant speeding in the corridor which increases the risk of collision frequency and severity.
- Traffic data west of 8th Ave NW shows that **68% of drivers are exceeding 35 mph**. That means most drivers are speeding more than 5 mph over the posted speed. Nearly 10% of drivers are traveling more than 45 mph.

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TRAFFIC & MOBILITY

- **Traffic volumes** on this corridor are supported by a 3 lane design, ranging from 2,800 vehicles per day west of 20th Ave NW to approximately 16,000 vehicles per day east of 3rd Ave NW.
- Studies have shown the proposed channelization to work well – reducing collisions while maintaining traffic delay level of service standards - on roadways with average daily traffic volumes up to 20,000 vehicles per day.
- Existing **sidewalks are narrow** with no buffer between cars and pedestrians.
- Protected **crossing opportunities** (where most pedestrians are hit) are limited, making access to bus stops and interaction between north and south neighborhoods very challenging.
- The City’s 2011 Bicycle Master Plan includes on-street **bike lanes** for this street.
- Bicyclists currently use this roadway and collisions have occurred. Many bicyclists have expressed they would use the corridor if vehicle speeds were lower and dedicated bike lanes in place.

Unique corridor characteristics and challenges which will be carefully considered:

- Uphill segment between 15th Ave NW and 8th Ave NW; slow moving vehicles & blockages.
- Bus Routes (4 maximum, per direction during the peak hours).
- Proposed Point Wells development in Snohomish County.
- Intersection and roadway geometry.

3 How did we get to this point?

- [2011 Transportation Master Plan \(TMP\)](#) – Slated bike lanes for the corridor.
- [Annual Traffic Report](#) – Has consistently identified the need for safety improvements based on collision patterns.
- [Capital Improvement Plan \(CIP\)](#) – Project concept was added to the 2016-2021 CIP, and adopted by Council.

4 What is the public’s role?

The project is transitioning from the planning phase to the design phase. To kick off the design phase, the City is hosting a public meeting on June 22nd and will have a public comment period which will help shape the design going forward. An additional public meeting will be held in the fall which will be an opportunity for the public to see how their comments and questions were incorporated into the project, and to have a chance to comment on the 60% design before the project is finalized.



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5 Will this project move forward?

This project has been authorized and funded by the City Council. It is needed to address collision history on the corridor. Best practices and case studies throughout the country show this kind of 3 lane configuration is the best way to meet the safety improvement objectives for this corridor. However there are many design details which can vary for which we are currently soliciting comments. Based on input from the public, the City will develop a final design.

Mobility

6 How will all of the vehicles on Richmond Beach Road fit into fewer lanes?

When turning cars, bicyclists, buses or deliveries are common, a lane is often blocked making a 4 lane roadway often function like 3 lane roadway. Case studies show that 3 lane roadways can function quite well – reducing collisions while maintaining traffic delay level of service standards – at average daily traffic volumes of up to 20,000 vehicles. This corridor’s volumes are well below that. Thorough traffic analysis has been conducted and will continue to be refined as described in the following sections.

7 How will this affect my commute along Richmond Beach Road as a driver?

The City has conducted preliminary PM peak (4-6 PM) traffic analysis. The existing and proposed travel times and speeds are shown below. Existing travel times were verified by actual travel time runs conducted in the field, calibrating the model to within 7 seconds of the real life average.

Westbound from West of Fremont Ave N to 23rd Ave NW

	Existing	Proposed	Difference
PM Peak Travel Time	4 min 23 sec	5 min 14 sec	51 seconds
Cumulative Intersection Delay	63 seconds	103 seconds	40 seconds
Average Travel Speed (includes stoppages)	23 mph	20 mph	3 mph

If you are turning onto Richmond Beach Road from a signalized side street, additional delays will also be a consideration. In some cases however, turning from the side street will become easier and less delayed which is a great benefit for locations with limited sight distance or challenging geometry. Staff has developed various intersection improvement concepts that would help to maximize efficiency and signals will be optimized to minimize stopping. Additional detailed traffic analysis and travel time information, as well as preliminary intersection design options, will be available at the open house and online after June 22nd for review. Traffic analysis has not yet been completed for the AM Peak. This information will be available online and before the second public meeting, however the difference in average travel time is not expected to vary much from the PM peak since overall traffic volumes are lower in the morning.

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8 How can we trust the traffic analysis?

Technical staff has thoroughly analyzed the corridor with traffic modeling software but understands these models aren't perfect. In order to provide modeling that is as close to reality as possible, staff conducted weekday PM peak travel time runs in the field to check and calibrate the existing model and better understand driver behavior on the corridor. In doing so, the "Existing Configuration" model was calibrated within 7 seconds of the real life average travel time. The same considerations will be applied to the "Proposed Configuration" model in order to achieve the most accurate results possible, erring on the higher/conservative side in estimating delay. We will also conduct after studies to verify these estimates.

9 What about future growth?

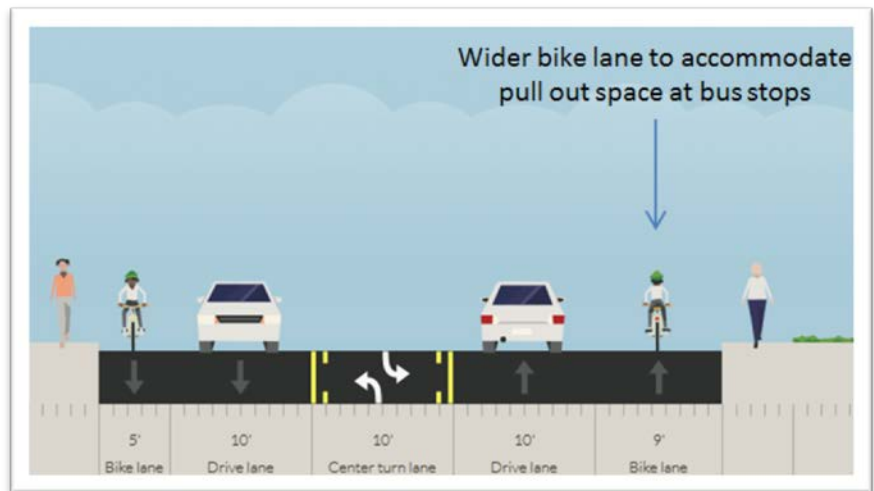
Under state law, the City and any proposed development are subject to maximum travel delay standards, also known as Level of Service (LOS) standards or concurrency. The City's current Level of Service standards require the following:

1. A LOS D (Average of 35-55 seconds of delay per vehicle) at signalized intersections on arterial streets and at unsignalized intersecting arterials; and
 2. A volume to capacity (V/C) ratio of 0.90 or lower for principal and minor arterials.
- The V/C ratio on one leg of an intersection may exceed 0.90 when the intersection operates at LOS D or better.*

Based on traffic counts and modeling for the proposed configuration, the corridor and all intersections are anticipated to operate well within the bounds of these standards. Under state law, future development must demonstrate through a traffic analysis that added project related trips will fall within the Level of Service standards. If the project will push the roadway beyond the set standards, the development must determine a way to stay within the standard or provide mitigation to allow the road to continue to meet the LOS standards. Otherwise, permits cannot be issued.

10 Are cars going to get stuck behind buses when they stop?

No. One alternative provides a wider bike lane at bus stops to accommodate a wider bus stop area that will allow buses to pull out of through traffic (see diagram). Staff will also work with King County Metro to identify potential bus stop removals and/or relocations. With a maximum of 4 buses per hour in either direction in the peak commuting hours, the frequency of buses is fairly low which makes their impact minimal. In addition, it is not illegal to go around a stopped bus.



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11 What happens when a large truck is going slow uphill?

Law prohibits slow moving vehicles from holding up 5 or more following cars if they can pull off to let cars pass. The design alternative that provides wider space at bus stops so vehicles can pass also provides space for trucks to safely pull into if they are delaying following drivers. In addition, the City will work with the asphalt plant to determine a reasonable operating strategy when this project is implemented if slow moving vehicles prove to be problematic.

Current traffic data as well as information from previous traffic studies show there are about 5-7 tanker trucks using the corridor staggered throughout the day. Buses and other large vehicles operate at or above the 30 mph speed limit uphill as verified by field studies. Due to the infrequent occurrence of tanker trucks on the corridor, staff was not able to measure their speed uphill but will capture this for design documentation in the future.

Considering that most drivers are traveling in excess of 35 mph, and nearly 10% of drivers are exceeding 45 mph on this hill segment, addressing a majority speeding problem remains the priority over potential infrequent truck delays. As a contingency plan, staff has developed a climbing lane alternative for the hill that could be implemented if slow moving vehicle delays prove to be a much greater impact than anticipated by traffic modeling.

12 What happens when a delivery truck or garbage truck is stopped?

It is **legal** to go around stopped vehicles or obstructions ([RCW 46.61.100\(1\)\(b\)](#)). This is how every other two lane roadway with no-pass striping operates, many with traffic volumes higher than segments of this corridor. It is illegal to pass another **moving** vehicle by utilizing the center turn lane space.

13 How will the City address cut through traffic as a result of diversion?

City staff does not expect to see significant diversion based on the traffic analysis results however, we would still like to hear your thoughts on routes you'd expect to see cut through traffic. Once we have this information, we can collect "Before" traffic data in advance of implementation for some of the primary identified routes, and monitor with follow up collection after project implementation. Based on this information, we can work with neighborhoods to implement traffic calming as part of our [Neighborhood Traffic Safety Program](#), where warranted.

14 Does the City really expect people to use this as a bike route?

- Region wide, biking is up 7.8% since 2011 as indicated by the Washington State Bicycle and Pedestrian Documentation Project.
- Traffic data and collision history confirms that bicyclists are currently using the roadway.
- The "If you build it, they will come" principle - providing facilities produces the effect of inviting more people to use them.

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- Although topography is challenging, some riders will choose to use this corridor both to commute and for leisure when it is the most direct route. In addition, power assisted bikes are becoming popular, making the barrier of topography less of an issue.
- Alternate routes are still available for those who would prefer them, however, topography is a consideration on those routes as well.
- The route will be more attractive for bicyclists with less vehicle speeding.

15 Is the City trying to turn Shoreline into another Seattle?

No, the City's goal for this project is to responsibly and cost effectively improve safety, however this will not be done at the expense of the City's travel delay standards. The City of Seattle has implemented this 4 lane to 3 lane conversion on streets with traffic volumes exceeding 20,000 vehicles per day, which can be a tipping point for causing residual congestion. The heaviest trafficked corridor, between 3rd Ave NW and Dayton Ave NW, is below that rule of thumb tipping point as it only carries about 16,000 vehicles per day.

Another big difference between Shoreline and Seattle are our adopted travel delay standards, otherwise known as Level of Service (LOS) or concurrency, as discussed above. Shoreline's standard is significantly more conservative than Seattle's standards meaning that our standard accepts less travel delay than the standard Seattle is comfortable with. The City of Shoreline requires roadways to meet adopted standards. This means that any large development must provide analysis to show that they will not exceed these standards. If the standards are exceeded, the development is required to be modified to stay within the standards or provide mitigation for their added trips to meet those standards or the development cannot proceed.

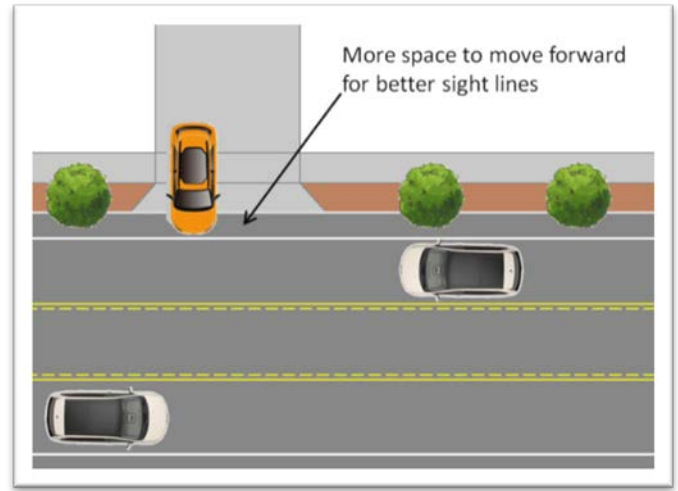
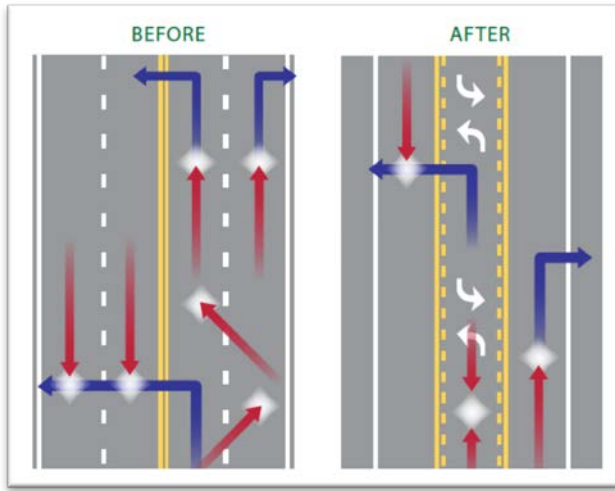
Safety

The Federal Highway Administration (FHWA) has deemed this 4 lane to 3 lane conversion as a proven safety countermeasure for roadways with characteristics similar to Richmond Beach Road, aggregating case studies from around the country which show a collision reduction of 19 to 47 percent. Detailed below are the factors that contribute to this proven collision reduction strategy.

16 How will the rechannelization improve vehicle safety?

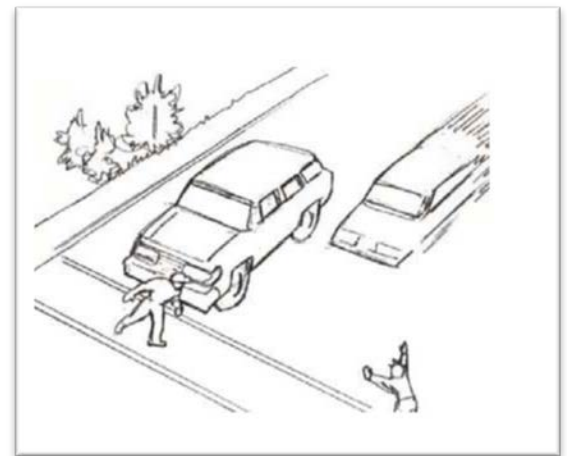
- ✓ Reduces speeding and high variability between vehicle speeds, a main cause of collisions.
- ✓ Reduces conflict points and provides dedicated left turn space as shown on the next page (diagram - left).
- ✓ Creates a space for better sight distance when turning from a side street or driveway. Currently, many driveways and side streets along the corridor have limited sight distance. The added bike lane space allows more room for vehicles to creep forward for better views without conflicting with vehicle traffic (diagram - right).

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17 How will the rechannelization improve pedestrian safety?

- ✓ Over 90% of pedestrian collisions occur when people cross the road, as opposed to while walking along the road. The rechannelization creates space for “Pedestrian Refuge” for safer crossings (see following diagram - left). In the absence of dedicated refuge space, there are still less lanes to cross which is safer.
- ✓ Eliminates the pedestrian “multi-lane threat” scenario - where one vehicle stops to allow a pedestrian to cross, but the adjacent lane fails to see the pedestrian and does not stop (see following diagram - right).
- ✓ Bike lane space adds 6 more feet between pedestrians and vehicle traffic.
- ✓ Discourages speeding, a main indicator in pedestrian crash survival, since the prudent driver sets the speed for the following platoon.



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18 How will the rechannelization improve bicycle safety?

The rechannelization provides a dedicated space for bicyclists instead of having to share the lane with vehicles. Collision history on this roadway indicates that the existing roadway is not as safe as it could be for bicyclists. Bike lane markings provide the expectation for drivers to encounter bicyclists, improving their awareness and attentiveness to nonmotorized users while driving. Reduction of speeding and improved sight lines as previously discussed, also provide a safety benefit to bicyclists.



VS



Miscellaneous

19 Why can't the City just widen the existing sidewalks?

This restriping effort is a low-cost project at approximately \$215,000, and is the most cost effective strategy for addressing the collision history on the corridor. By comparison, widening sidewalks would likely cost more than 4 million dollars and wouldn't address the corridor's history of collisions. Additionally, throughout much of the corridor the back of the existing sidewalks is concurrent with the Right of Way line for the road. This means in order to widen for bigger sidewalks or bike lanes, the City would need to acquire private property which significantly increases the cost of improvements. For more information on what Shoreline is doing to develop and maintain our network of sidewalks, please visit our webpage at:

<http://www.shorelinewa.gov/government/departments/public-works/capital-improvement-plan/sidewalks-priority-routes>

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20 How has this treatment worked on other streets?

This treatment has been successful both regionally and throughout the Country. Within just a few miles of this corridor are multiple examples of 3 lane roadways including N 155th Street and N 205th Street (pictured) which carry comparable volumes. One example of a nearby successful rechannelization in Seattle, NE 75th Street from 15th Ave NE to 35th Ave NE, provides a comprehensive before and after study, documenting the safety and mobility benefits. This study is available online at: <http://www.seattle.gov/transportation/docs/NE75thRechannelizationReportFINAL.pdf>



Additionally, the Federal Highway Administration (FHWA) has deemed this 4 lane to 3 lane conversion as a proven safety countermeasure, aggregating case studies from around the country which show a collision reduction of 19 to 47 percent. FHWA also summarizes that most streets can well accommodate average daily traffic volumes of 15,000 and higher in many cases. The Federal informational guide is available online at: https://safety.fhwa.dot.gov/road_diets/info_guide/

21 What about Point Wells?

The Point Wells property is located in unincorporated Snohomish County. Currently its only road access is through the Richmond Beach neighborhood of Shoreline. A development proposal for the property continues in the Snohomish County permitting process. The developer for the Point Wells site, Blue Square Real Estate (BSRE) submitted revisions to the project on April 17, 2017 to Snohomish County. The Snohomish County website states the revised plans “retain the basic overall concept in the original submittal, but add a second access road through the Town of Woodway and make some adjustments internal to the site in response to the County comments”. Work on the Draft Environmental Impact Statement is on hold while the revisions are being evaluated by Snohomish County Planning and Development Services staff.

In 2014, the City and BSRE undertook a joint effort to conduct a “[Transportation Corridor Study](#)”; a process for public input on the proposed project as required by a [Memorandum of Understanding](#) the City entered into with the developer in 2013. In addition, the City’s current [Point Wells Subarea Plan](#) relates changes to traffic volume restrictions on Richmond Beach Drive to a finalized Transportation Corridor Study. The Transportation Corridor Study was never finalized as the City reached an impasse with BSRE’s technical staff in determining an appropriate mitigation strategy to meet the City’s traffic standards (Level of Service) for their proposed number of vehicle trips added to Shoreline streets.

There have been questions from the community regarding how this rechannelization affects potential traffic from Point Wells. It would not be prudent for the City to postpone necessary safety and mobility improvements because of a yet to be approved development and its undetermined future traffic impacts that will not occur for a least a decade or

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more. It is also important to continue progress on the City's bicycle network to provide for expanded nonmotorized transportation choices. The City's Bicycle Master Plan slates on-street bike facilities for Richmond Beach Road and this is only accomplished through a 3-lane configuration without additional Right of Way.

As stated previously the primary purpose of this change is to address safety issues, but in response to questions from the community regarding how this affects potential traffic from Point Wells, based on traffic analysis fewer lanes through the corridor means less traffic can be added to the system within the City's current level of service requirements. In other words, fewer additional vehicular trips could be added by development without providing mitigation that would be necessary to meet the City's current level of service standard. City of Shoreline staff will continue to review any submittals to Snohomish County for consistency with the City's adopted plans and regulations applicable to this development and previously submitted staff comments on the project.

For more information on the proposed Point Wells Development visit the City and County's websites at the links below.

Snohomish County Point Wells web page:

<https://snohomishcountywa.gov/1511/Point-Wells>

City of Shoreline Point Wells web page:

<http://www.shorelinewa.gov/government/departments/planning-community-development/planning-projects/point-wells>

Next Steps

- **June 22nd – 1st Public Meeting**
- Summer 2017 – Refine design and analysis based on feedback from June 22nd meeting
- **Fall 2017 – 2nd Public Meeting** to show refined 60% design and get additional feedback on minor design revisions
- Winter 2017 – Final design
- Winter 2017/2018 – Award contract
- Summer 2018 – Implement improvements



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