



# Bike Bellevue **DRAFT** Design Concepts Guide



September 2023



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Bicyclists riding in buffered bike lane Downtown



# Key Takeaways

## Safety

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Appendix A

» People bicycling are more than nine times as likely to be killed or seriously injured in a collision compared to people in vehicles.

» Bike Bellevue will implement proven safety countermeasures on 15.11 miles of roadway within the project area.

## Bicycle Level of Traffic Stress

Page 9-10

» Today, two-thirds of the Bike Bellevue corridors are rated LTS 4, where the speed limit and traffic volume on the street combined with minimal to no bicycle facilities accommodate only the strong and fearless bicycle rider.

» Bike Bellevue projects will eliminate LTS 4 conditions on all project corridors and will meet Bellevue's MIP performance target on 90% of the Bike Bellevue corridors.

## Equity and Accessibility

Page 11-12  
Appendix B

» Bellevue residents living below the poverty line are 30% more likely to walk or bike than Bellevue residents living above the poverty line.

» Bike Bellevue expands low-income resident access to jobs by 24% and access to schools by 33%.

## Access to Transit

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Appendix B

» Only 9% of current bus stops are accessible by a low-stress bike route today.

» Bike Bellevue will provide low-stress bicycle access to all future Link light rail stations.  
» The number of bus stops accessible by a low stress bike route increases by 45%.

## Sustainability

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Appendix C

» Today, less than 1% of all trips are made by bicycle.  
» In a city survey, 62% of respondents indicated they would ride a bicycle more often if streets had safe and comfortable bike lanes.

» With denser land use and Bike Bellevue investments, the 2035 bicycle mode share is forecasted to be 2.6%-4.3% in the project area.  
» The corresponding reduction in driving is equivalent to eliminating the annual greenhouse gas emissions generated by 240-890 cars.

## Vehicle Performance

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Appendix D

» Bike Bellevue project concepts were developed in conjunction with a rigorous vehicle performance analysis.

» The average Bike Bellevue corridor speed is forecast to decrease by 0.2 miles per hour with implementation of Bike Bellevue projects.

## Roadway Capacity Utilization

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Appendix E

» In 2035, only 48% of the Bike Bellevue corridor roadway capacity will be used to move cars during the busiest 12 hours of the day.  
» Bike Bellevue shifts some of the underutilized road capacity to improve bike LTS.

» With Bike Bellevue implemented in 2035, two corridors will approach full capacity utilization during the peak hour with 9 corridors having additional vehicle capacity to accommodate future peak hour growth.



# Transportation Vision



Bike Bellevue is aimed at implementing bicycle network improvements in the urban core areas of Bellevue including Downtown, Wilburton and BelRed. The goal of Bike Bellevue is to enhance the multimodal transportation system in the city; align with the dense, vibrant land use vision in these urban core neighborhoods; and make getting around Bellevue safer, more equitable, sustainable, and accessible.

## Background

Bellevue is known for many things. The city in a park, great schools, a growing and vibrant urban core, and quiet neighborhoods, just to name a few. While Bellevue has many strong assets, it is not known for its extensive bicycle network. There is an urgency to build out the infrastructure for Bellevue’s least-developed mode—the bike network—particularly in the urban core.

Major capital projects, levy-supported projects, and private-sector developments are implementing various types of bicycle facilities in Bellevue’s urban core neighborhoods. However, significant gaps in the planned bicycle network remain, limiting access to and the utility of these investments. In 2022, the [Council approved funding](#) to plan and implement rapid-build bicycle infrastructure in the urban core neighborhoods and subsequently [directed staff to work with the Transportation Commission](#) to prepare a Bike Bellevue recommendation plan for implementation.

## Who Benefits?

Urban core neighborhoods in Bellevue are, by far, the fastest growing areas of the city and are preparing for 67,000 new jobs and 33,000 new residents by 2035 (Source: BKRCast). Anchoring this growth are five new East Link light rail stations, three planned frequent transit network routes, and the Eastrail regional trail. Completion of these transportation projects and realization of the land use vision will facilitate greater use of non-auto travel options in the Bike Bellevue project area.

The benefits of Bike Bellevue extend to the rest of the city as well. Residents of neighborhoods that surround the urban core will be able to easily access, jobs, shopping and recreation by bike. People anywhere in Bellevue and the region will be able to use transit to access the urban core and reach their destinations without the stress and financial barriers of parking and driving simply by bringing their bike on transit.

## Document Outline

This document describes the major elements, benefits, and traffic implications of the Bike Bellevue project including the following:

- » Relationship to Mobility Implementation Plan
- » Project Principles
- » Overview of Bike Bellevue Corridors
- » Prioritizing Safety Improvements
- » Reducing Level of Traffic Stress
- » Enhancing Equitable Access
- » Advancing Environmental Stewardship
- » Implications for Traffic Congestion
- » Roadway Capacity Utilization
- » Detailed Corridor Profiles

# Mobility Implementation Plan

## A New Approach to Mobility

The [Bellevue Mobility Implementation Plan \(MIP\)](#) is a performance measurement and prioritization system that aligns transportation investments with the city’s land use vision; providing the platform for Bellevue to meet the multimodal future envisioned in the [Comprehensive Plan](#).

### Layered Network

The MIP is based on a concept called the “layered network,” shown in Figure 1. A layered network considers the land use context and each mode in the multimodal transportation system to be the “layers” that describe Bellevue’s interconnected multimodal transportation system. The layered network acknowledges that existing and planned land use influences expectations for transportation network performance. For example, people expect to be able to ride their bicycle on arterials and residential streets in Bellevue, and they understand that the type of bicycle facility (e.g., bike lane, shared lane, off-street path) will vary based on adjacent land uses, the type of street, and the proximity and connections to other modes. The layered network acknowledges that there may be competing priorities between modes and constraints to provide an “ideal” facility for all modes on all streets.

### Performance Metrics

To guide the implementation of the layered network, the MIP identifies performance metrics for each mode. The MIP also identifies performance targets for each mode that vary by land use context. Specific to Bike Bellevue

corridors, the bicycle and vehicle performance metrics and targets are relevant.

» **Bicycle system performance** is measured using a concept known as level-of-traffic-stress (LTS), which describes the bicycle rider experience related to the speed limit and volume of traffic on the street, and the type of bicycle facility. LTS performance targets are defined by both the role of the bicycle facility as part of the city’s overall network (e.g., priority bicycle corridor versus a general segment of the bicycle network) and the location of the segment with respect to the Performance Management Area (PMA) (described below).

» **Vehicle system performance** is measured using the PM peak period volume/capacity ratio at system intersections and vehicle travel speed along primary vehicle corridors. System intersections and primary vehicle corridors are defined in the MIP.

The bicycle network vision identified in the MIP is a robust network of bicycle facilities within PMA Type 1 as shown in Figure 2. This network will connect the diverse mix of uses within PMA 1, and it will also allow people from across Bellevue to better access the employment, transit, cultural, and recreational amenities within Downtown, BelRed, and Wilburton.

Consistent with the layered network approach, Bike Bellevue significantly expands low-stress bicycle access by strategically expanding bike infrastructure on a complete and connected network within PMA 1, with connections throughout the city and region.

Figure 1. Layered Network

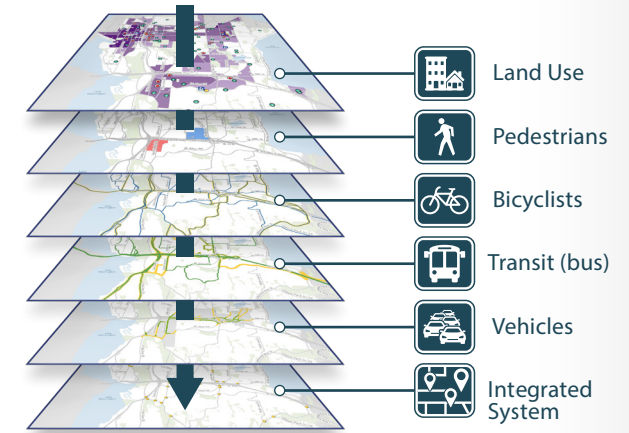
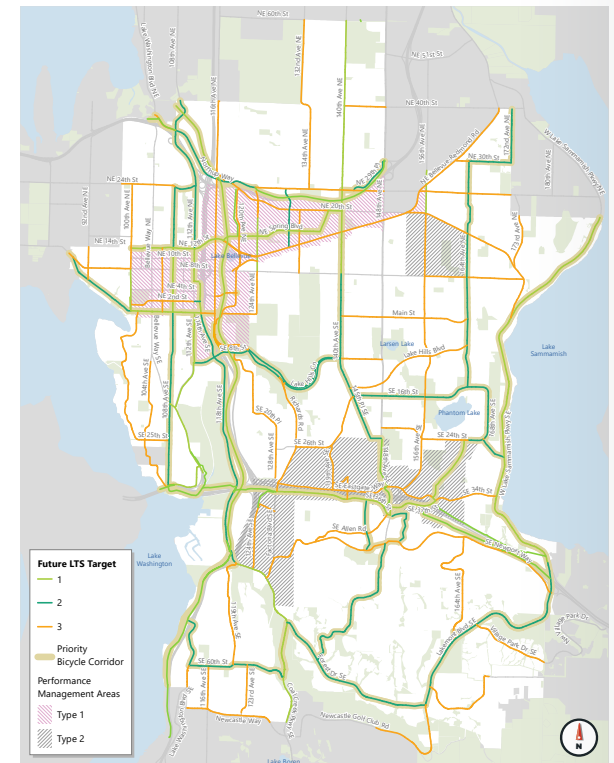


Figure 2. Bicycle Network LTS Vision











# Bike Bellevue Principles

On March 27, 2023, the Bellevue City Council [approved eight Bike Bellevue project principles](#) and directed staff to work with the Transportation Commission to prepare and submit a recommendation for implementation to the Transportation Director. The icons below are used throughout the document to establish a connection to the eight Council principles. These principles are:

- **Safety**  
Reduce the frequency and severity of crashes and minimize conflicts between roadway users through bikeway design.
- **Connectivity**  
Implement a connected network of bicycle lanes that facilitate access to major destinations.
- **Comfort**  
Design bicycle lanes that maximize separation between motor vehicles and people bicycling on streets with higher speed limits and more vehicle traffic.
- **Evaluation**  
Use a data informed approach to evaluate impacts to all modes of travel and design the program to maximize the mobility of all modes.

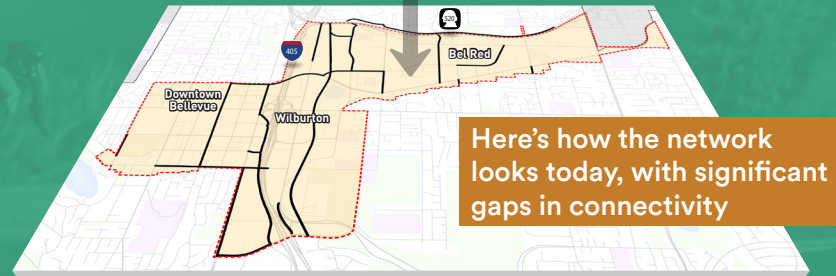
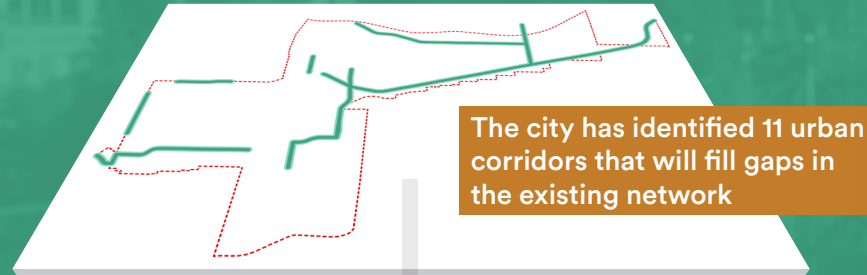
- **Coordination**  
Coordinate transportation and land use efforts underway in Bellevue to ensure equity and sustainability outcomes are aligned.
- **Partnerships**  
Identify partnership opportunities to advance the implementation of bicycle projects.
- **Engagement**  
Engage community stakeholders in setting the priorities for Bike Bellevue investments.
- **Equity**  
Promote equity and inclusion in the development and delivery of bicycle projects. Consistent with the city's Diversity Advantage Plan, Bike Bellevue will center equity, access, inclusion, and opportunity in project delivery.

# What is Bike Bellevue?

Bike Bellevue will implement 15.11 miles of bicycle network improvements in Downtown, BelRed, and Wilburton that will fill major gaps in the city's low stress bike network. Bike Bellevue will provide key linkages to East Link light rail stations, Eastrail, and many parks, schools, and other points of interest.



11 Bike Bellevue Corridors



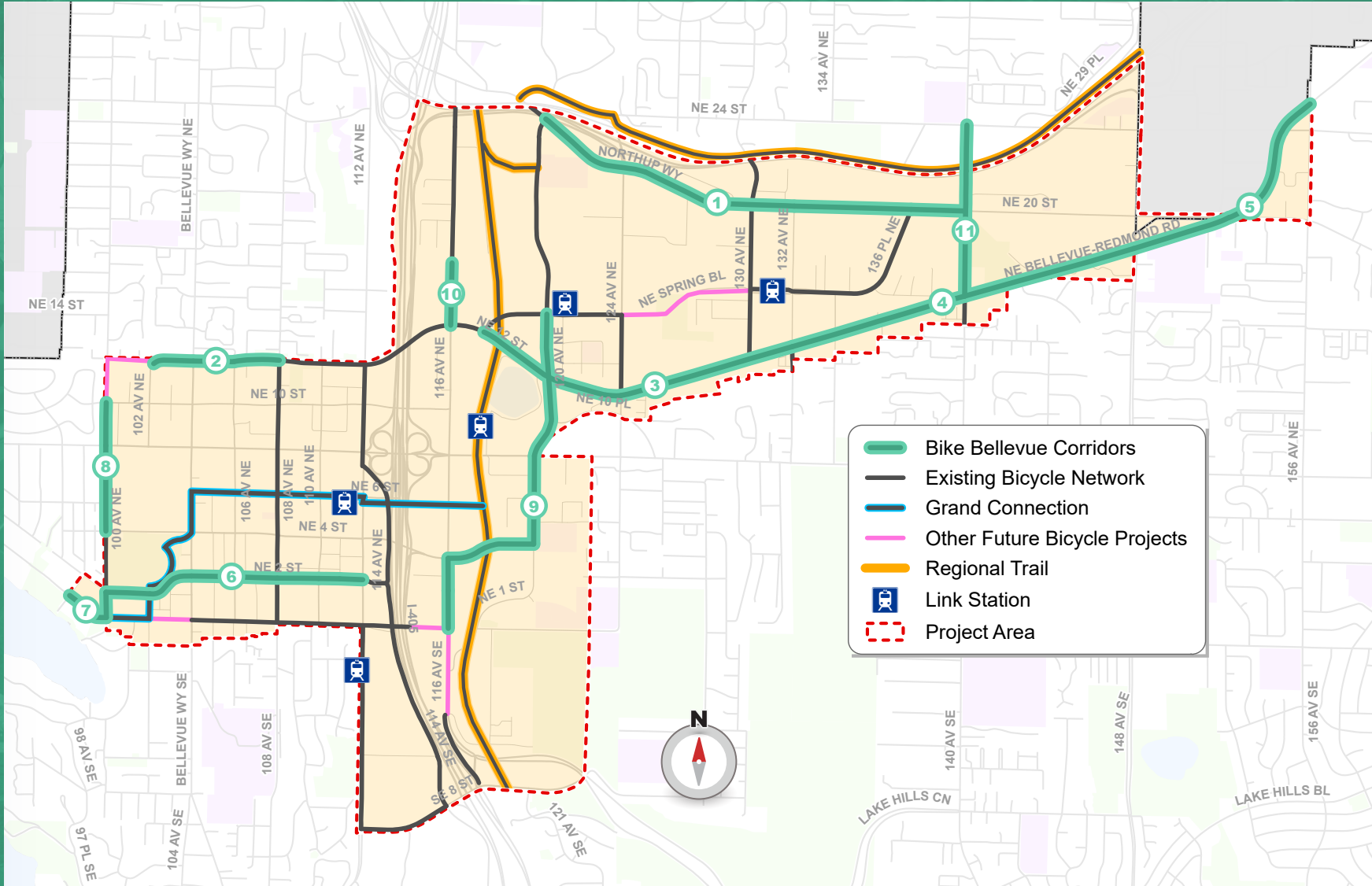
Existing Network



Future Network



The future network will allow people to travel on a dedicated network of bicycle facilities throughout the urban core, greatly expanding access between homes, transit, jobs, and recreation.



Future Network



# Prioritizing Safety



**People bicycling are more than nine times as likely to be killed or seriously injured in a collision compared to people in vehicles.**

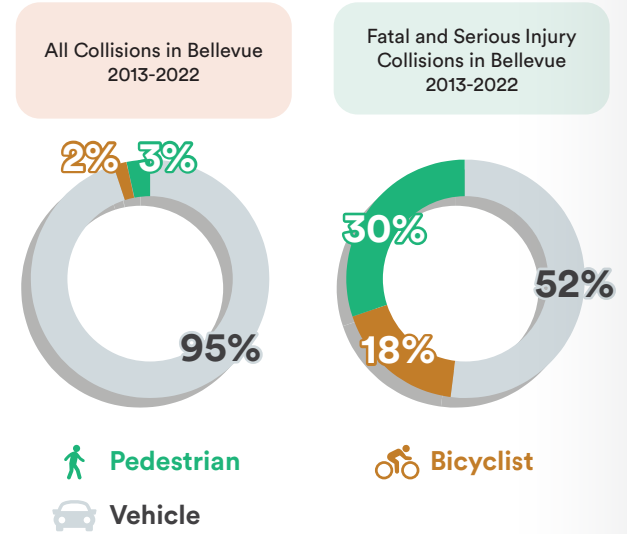
To achieve its [goal of eliminating traffic deaths and serious injury collisions](#) on city streets by 2030, the Bellevue City Council adopted the [Safe System Approach](#). This outcome-based approach to road safety bundles strategies focused on safe people, safe streets, safe speeds, and safe vehicles—as well as the supporting elements of leadership, culture, partnerships, and data.

Bike Bellevue aligns with the City Council’s commitment to a Safe System Approach to Vision Zero. In the Bike Bellevue project area, bicyclists are involved in 10% of all fatal and serious injury crashes even though they represent just 1% of all crashes on city streets in this geography. People bicycling are more than nine times as likely to be killed or seriously injured in a collision compared to people in vehicles (WSDOT Collision Data, 2013-2022).

Consistent with the collision data, Bike Bellevue streets account for only 9% of total street mileage, but 67% of Bike Bellevue corridors

are on the [High Injury Network](#). The High Injury Network represents the subset of city streets with the highest share of crashes with fatalities and/or serious injuries. It is a city priority to implement safety projects on the High Injury Network.

One of the strategies in Bellevue’s Safe System Approach to Vision Zero is [implementing Complete Streets](#) improvements that make it safe, comfortable, and convenient to bike to work, school, shops, services, parks, transit, and anywhere else people want to go. To achieve this outcome, Bellevue is implementing [proven countermeasure](#) improvements that encourage safe behaviors by design (e.g., increasing the separation of bicycles and vehicles to allow for more time for travelers to react to unexpected situations) on sections of the city’s High Injury Network (see [Appendix A](#)).



Source: WSDOT Collision Data (2013-2022)

Corridor safety improvements provide more space between vehicles, bicycles, and pedestrians, helping to reduce collisions.

Bike Bellevue could prevent 4-8 fatal and severe injury crashes over a 20 year period.





# Prioritizing Safety



**There was a 10% increase in vehicle speed on Bike Bellevue corridors from 2019 to 2023.**

Speed is understood as one of the biggest threats to the safety of those outside of a vehicle, as [higher speeds lead to worse outcomes](#) when crashes occur. As shown in Figure 3 and 4, an analysis of 2023 citywide motor vehicle operating speed shows a 10% increase in speed on Bike Bellevue corridors from 2019 pre-Covid-19 levels. A 5 mph increase in speed (observed on multiple streets in the Bike Bellevue project area) [correlates to a 10-15% increase](#) in the risk of fatal and serious injury crashes.

Bike Bellevue's separated [bikeways](#), narrower travel lanes, and [road diets](#) are [proven safety countermeasures](#) to reduce vehicle speeding and improve safety for all roadway users. These corridor safety improvements provide more space between vehicles, bicycles, and pedestrians, allowing more time for people to react to unexpected conditions. Cities that have emphasized and implemented multimodal mobility strategies for people who are walking, bicycling, and using public transportation have seen [consistent reductions in collisions by as much as 50%](#).

Assuming a 20-50% reduction in fatal and severe injury bicycle and pedestrian crashes per year identified by the research, Bike Bellevue could prevent 4-8 fatal and severe injury crashes over a 20 year period (see [Appendix A](#)). Based on the FHWA's economic impact valuations related to fatal crashes, this reduction amounts to \$16 to \$32 million ([Appendix A](#)).

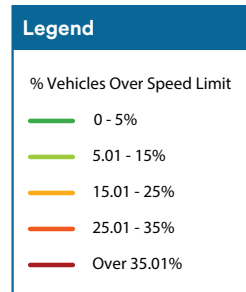


Figure 3. Bellevue Speed Map, 2020

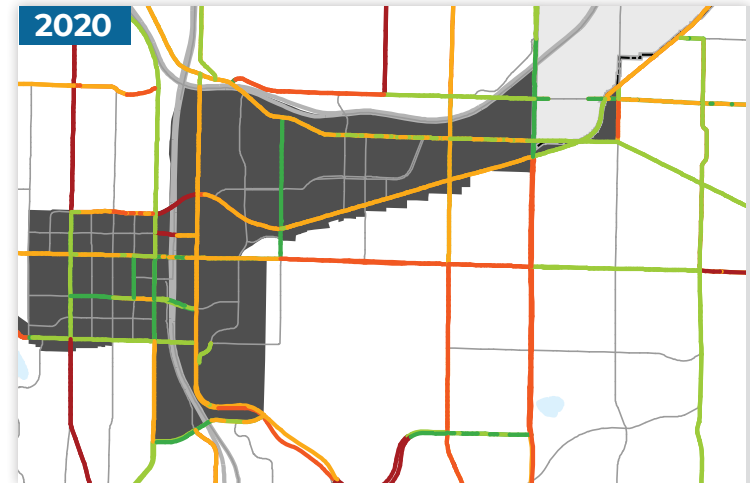
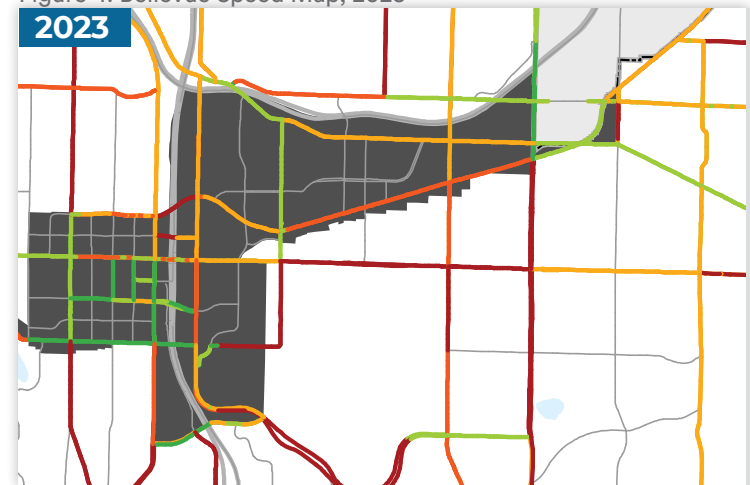


Figure 4. Bellevue Speed Map, 2023



# Improving Bicycle LTS



## Existing

**Today, two-thirds of the Bike Bellevue corridors are rated LTS 4, where the speed limit and traffic volume on the street combined with minimal to no bicycle facilities accommodate only the strong and fearless bicycle rider.**

Bellevue’s bicycle network is comprised of connected corridors and intersections with facilities that range from multi-purpose paths separated from arterials, to protected bike lanes along arterials, to standard bike lanes or shared lanes on lower volume arterials. The bicycle network identified in the MIP was originally drawn from the city’s [2009 Pedestrian and Bicycle Transportation Plan](#), with a 2021 update to address known constraints/conflicts, as well as to include new bicycle facility types.

The Performance Metric defined in the MIP for the bicycle network is Level of Traffic Stress (LTS). LTS considers that different types of bicycle riders are comfortable using different types of facilities depending on the characteristics of the roadway. The LTS and rider type range from LTS 1, which is a facility that can accommodate riders of all ages and abilities, to LTS 4, which will be comfortable for only the most experienced riders who are comfortable mixing with cars on congested corridors at high speeds. Upon completion, Bike Bellevue will eliminate the LTS 4 conditions on the 11 Bike Bellevue corridors.

Today, nearly two-thirds of Bike Bellevue corridors are rated as LTS 4, and none of the corridors are rated as LTS 1 or 2. See Figure 5 for a map of the existing LTS within the project area and Figure 6 for a breakdown of Bike Bellevue corridors by LTS. The lack of a complete and connected low-stress bike network is a substantial barrier to bicycling for people who are uncomfortable riding in mixed traffic.

Figure 5. Existing LTS Map, where two-thirds of the Bike Bellevue corridors are LTS 4

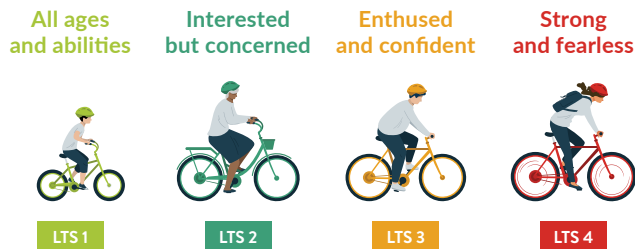
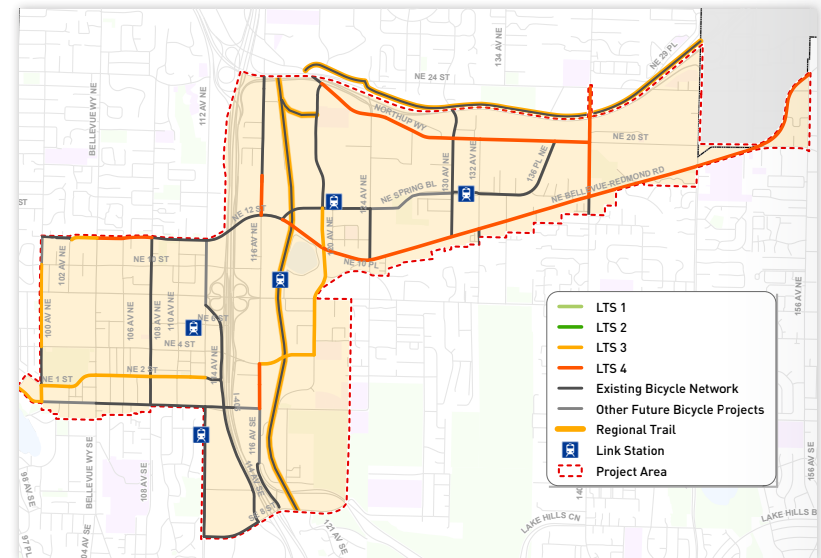
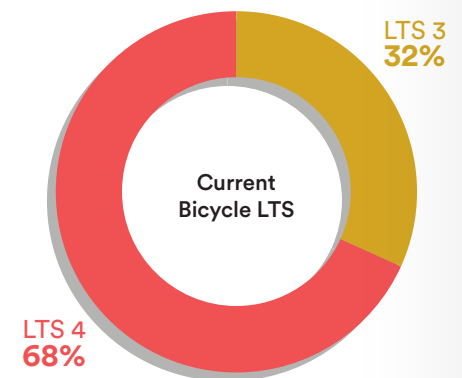


Figure 6. Current Bicycle LTS along Bike Bellevue corridors

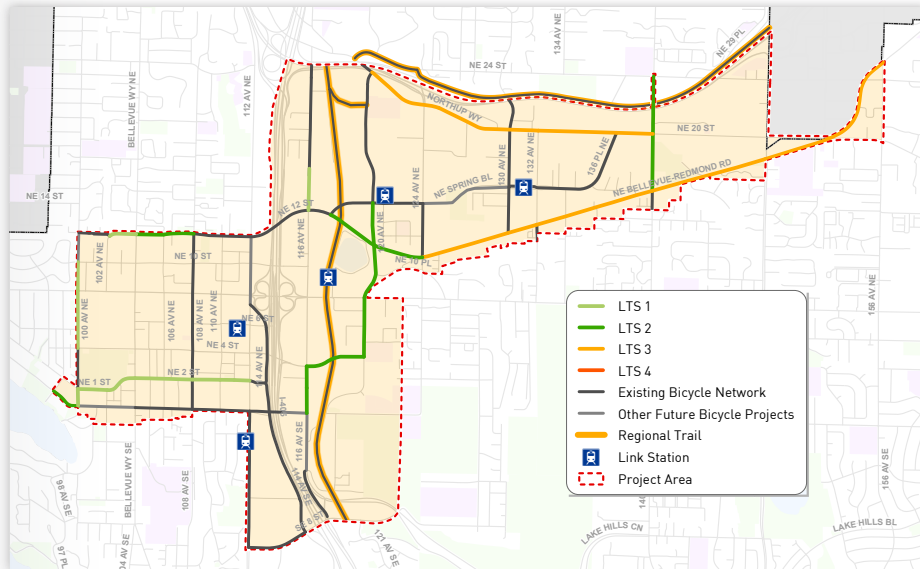


# Improving Bicycle LTS



## Future

Figure 7. Bike Bellevue LTS Map, where 53% of Bike Bellevue segments will be LTS 1 and 2



**Bike Bellevue projects will eliminate LTS 4 conditions on all project corridors and will meet Bellevue’s MIP performance target on 90% of the Bike Bellevue corridors.**

The Bike Bellevue project area is a subset of the citywide bicycle network and is intended to provide lower-stress routes to accommodate riders of various ability levels looking to access or travel through Downtown, Wilburton, and BelRed. The LTS ratings after Bike Bellevue is implemented are shown in Figure 7 and a breakdown of Bike Bellevue corridors by LTS is presented in Figure 8.

The implementation of separated bicycle facilities will eliminate the LTS 4 conditions on the Bike Bellevue corridors and will meet Bellevue’s LTS target on 90% of the corridors. With these improvements, cyclists of all ages and abilities will have access to a network of separated bicycle facilities totaling 15.11 miles of roadway, up from 7.5 miles today—an increase of 100%.

Eight miles of Bike Bellevue corridors, approximately 55%, will be low-stress bicycle facilities comprised of LTS 1 and 2 segments; these corridors will accommodate riders of all ages and abilities. Low-stress bicycle facilities are shown to [improve safety for all road users](#), not just those who are bicycling.

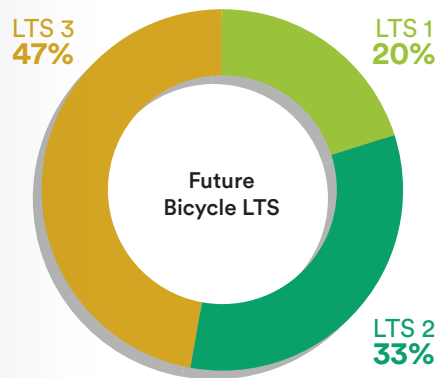


Figure 8. Future Bicycle LTS along Bike Bellevue corridors

# Enhancing Equitable Access



**Bellevue residents living below the poverty line are 30% more likely to walk or bike and 80% more likely to ride transit than Bellevue residents living above the poverty line. Bike Bellevue expands resident access to jobs by 34%.**

Transportation systems provide a vital link between people and opportunities. Travel to work, school, shopping, medical care, and social visits are necessary to live a healthy and fulfilling life. The connection between people and opportunities is captured by the term accessibility, defined as the ability to reach destinations distributed across an area. Put simply, accessibility—connections between people and opportunities—is the most important economic and social benefit created by a transportation system and it facilitates participation in activities that individuals need to lead a meaningful life.

One of the city's [Diversity Advantage Initiative's](#) guiding principles is equity, and "transportation equity seeks fairness in mobility and accessibility to meet the needs of all community members." Bike Bellevue aims to consider the circumstances that impact resident's mobility and accessibility needs. The goal is to expand active transportation access for all residents while focusing on underserved and disadvantaged communities.

There are many ways to evaluate equity and subject matter experts have correlated many social, economic, and demographic characteristics with underserved and disadvantaged communities. See [Appendix B](#) for how equity populations are distributed across Bellevue. When considering how equity intersects with transportation needs, the Transportation Commission has previously identified that Bellevue residents with low-incomes and people who work low-wage jobs are key groups to prioritize. For these low-income individuals, the cost-burden of owning, operating and maintaining a vehicle is proportionally higher compared to those with higher-incomes, and convenient accessibility by other modes is important to ensure people with lower-incomes can travel where they need and want to go.

To illustrate this point, City of Bellevue travel model data ([Appendix C](#)) demonstrates that residents who live below the poverty line are 30% more likely to walk or bike and 80% more likely to ride transit than Bellevue residents living above the poverty line. Low-income residents are mapped in Figure 9 and the city's retail and office areas have the highest concentrations of low-wage jobs.

The Bike Bellevue corridors would provide low-stress bicycle connections communities that could directly benefit from more active transportation options while also providing greater connectivity citywide. The expanded low-stress connections would provide the following benefits in the project area:

- » **24% increase** in the number of jobs accessible to low-income residents by a low-stress bike route.
- » **71% increase** in the number of low-income residents that have access to a bus stop via a low-stress bike route.
- » **33% increase** in the number of low-income residents that would have a low-stress bicycle route to schools.

See [Appendix B](#) for more detailed access evaluations.

**Bike Bellevue improvements greatly expand the number of employment opportunities, schools, transit stations and stops that people can comfortably get to by bike within the project area.**



# Enhancing Equitable Access



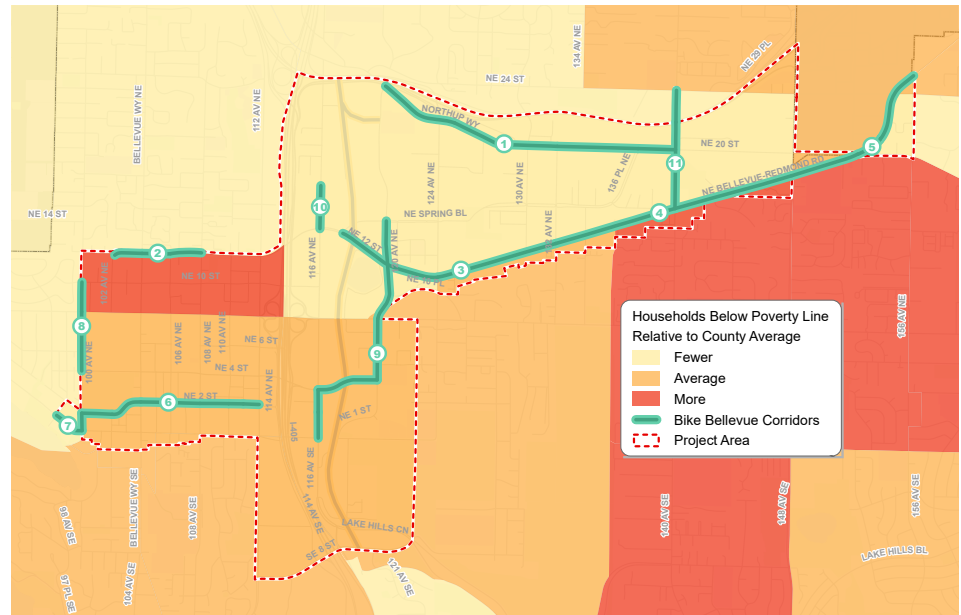
## Access to Transit

Bellevue recognizes the importance of transit access as it relates to mobility, economic development, and overall livability. The [Bellevue Transit Master Plan](#) identifies a set of policies and city investments to support "abundant access" through an enhanced transit system. Key elements of the Transit Master Plan that relate to Bike Bellevue include leveraging existing investments, making connections to transit easy and attractive, and encouraging walking and biking. Today, just 9% of bus stops in the project area have access via a low-stress bicycle route. Bike Bellevue helps advance the city's accessible transit vision by:

- » **Building low-stress bicycle connections** that improve network connectivity near the East Link light rail stations
- » **Reducing the level of traffic stress** adjacent to 19 bus stops on routes planned to be reconfigured as part of the [East Link Connections](#) project
- » **Increasing the total number of residents that have low-stress access to a transit stop by 45%**
- » **Improving the pedestrian environment to access transit** along Bike Bellevue corridors by creating additional separation between moving vehicles and the sidewalk

As noted in [Appendix B](#), the City of Bellevue and King County Metro are working together to implement best practices on the design of bus stops along Bike Bellevue corridors. This collaborative effort will continue as the project concepts continue to be refined.

Figure 9. Low Income Population in the Bike Bellevue Project Area Based on US Census Bureau Data (2019-2023)



# Sustainability



Improving bike facilities encourages more people to ride. City modeling indicates that Bike Bellevue improvements and increased land use density will result in bicycle mode share increasing from 0.8% today to 2.6-4.3% by 2035 ([Appendix D](#)). These modeling results support a city survey, that found that 62% of respondents indicated they would ride a bicycle more often if streets had safe and comfortable bike lanes. **When built out in 2035, Bike Bellevue will:**



Facilitate 825,000<sup>a</sup> to 4 million<sup>b</sup> bike trips a year



Reduce VMT between 1.2 million<sup>a</sup> and 10.8 million<sup>b</sup> miles per year



Reduce GHG emissions by between 1,100<sup>a</sup> - 4,000<sup>b</sup> metric tons per year; equivalent of eliminating the annual GHG emissions of 240<sup>a</sup> - 890<sup>b</sup> cars



Support Bellevue's Environmental Stewardship goals of reducing total GHG emissions and per capita VMT by 50% over the next 10 years

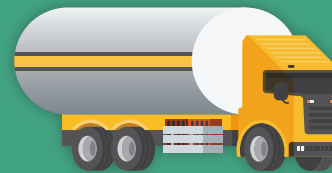
Over the 20-year project lifetime, between 31,000<sup>a</sup> and 115,000<sup>b</sup> metric tons of GHG emissions are eliminated, equivalent to eliminating the annual emissions of:



6,900<sup>a</sup> and 25,700<sup>b</sup> cars, or



3,900<sup>a</sup> or 14,600<sup>b</sup> homes, or



Burning 3.5<sup>a</sup> million to 12.9<sup>b</sup> million gallons of gasoline, or



Planting between 37,000<sup>a</sup> and 137,500<sup>b</sup> acres of new forest

a. BKRCast Bike Bellevue 2035 Build Model ([Appendix D](#))

b. ICLEI International Local Government GHG Emissions Analysis Protocol (IEAP) Level B ([Appendix A](#))



# Sustainability

## Improved Health Outcomes

In addition to expanding the set of viable choices for how people travel and reducing pollution, bicycling produces tangible health benefits by increasing physical activity. Using a model from the [World Health Organization](#) that quantifies the benefits of active transportation on long-term health outcomes, Bike Bellevue is expected to reduce the number of premature deaths within the project area by 0.8 annually, by 2035.

**Over 20 years, improved health outcomes attributable to more people bicycling will have a cumulative positive economic benefit of \$208 million.**

When combining the safety and health benefits of Bike Bellevue, the community should expect to see a benefit/cost ratio of 5.8-10.8 over a period of 20 years ([Appendix A](#)).



Cyclists on shared-use path



# Documenting Vehicle Performance (Existing)



The MIP defines a key performance metric for the vehicle network:

**Volume-to-capacity ratio (V/C) at System Intersections Typical Urban Travel Speed on Vehicle Corridors during the two-hour PM peak period (4-6 PM)**

We used BKRCast to analyze the combined impact of the Bike Bellevue corridors on vehicle performance and travel behavior. The vehicle network Performance Metrics from the MIP were used to evaluate System Intersections in and near the project area and along the 11 Bike Bellevue corridors. The vehicle Performance Metrics are evaluated during the PM peak period (4-6 PM) to capture the most congested part of the day. The Bike Bellevue project area is consistent with the Performance Management Area (PMA) Type 1 designation in the MIP which includes Downtown, Wilburton, and BelRed. The vehicle Performance Targets are based on the PMA in which the intersection or corridor are located.

The results for existing conditions, based on the 2019 Base Year model, are shown in Figure 11 for system intersections and Figure 12 for travel speed on the Bike Bellevue corridors. Within the analysis area, two system intersections do not meet the Performance Target (V/C < 1.00). However, these intersections have programmed improvements that will be implemented prior to 2035. The eleven Bike Bellevue corridors meet the Performance Target for Typical Urban Travel Speed (>= 0.5).

**Type 1 PMA: High Density Mixed-Use | 1.0 V/C ratio at System Intersections**

Figure 11. Existing Conditions, 2019 Base Year Model, Intersection V/C for Analysis Area

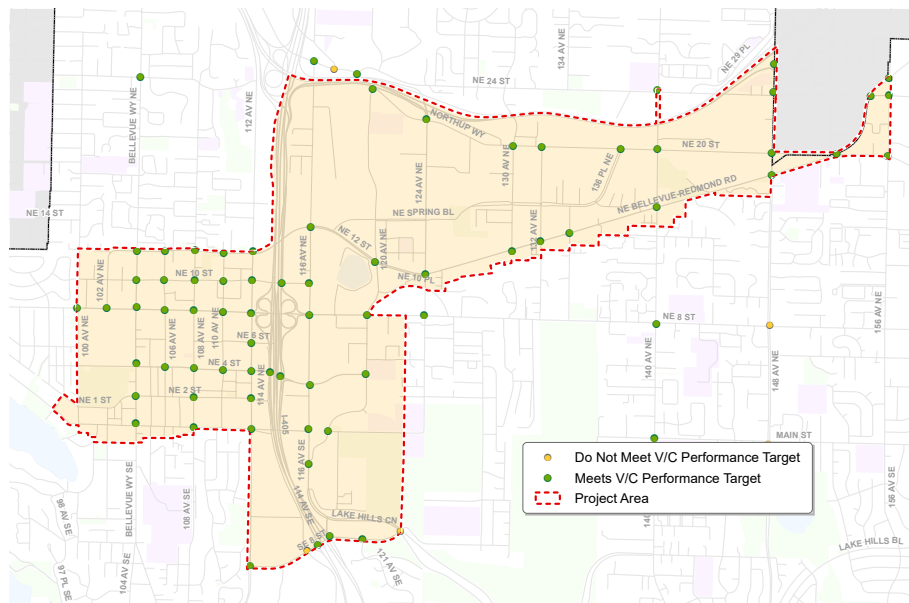
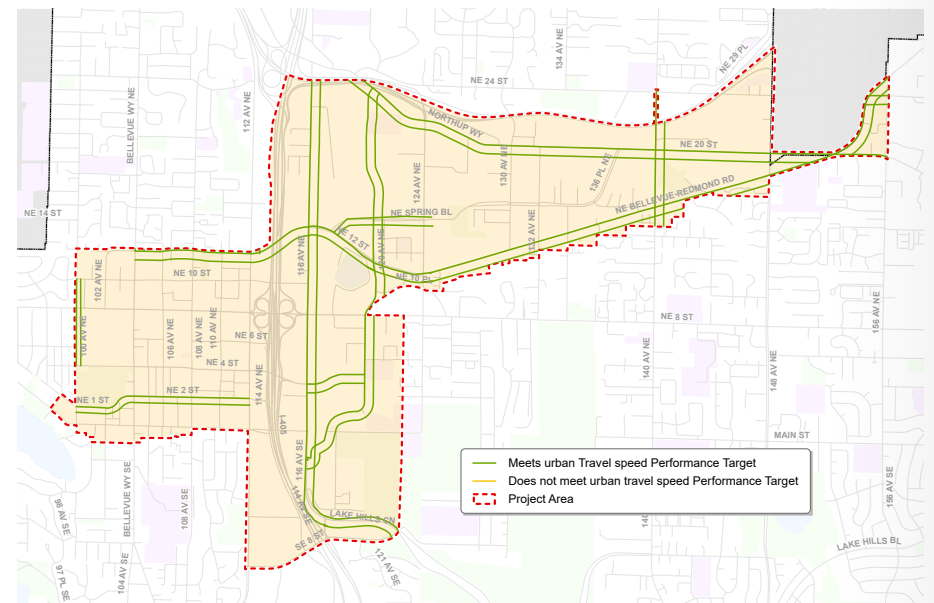


Figure 12. Existing Conditions, 2019 Base Year model, Urban Travel Speed on Bike Bellevue Corridors





# Documenting Vehicle Performance (Future)



The average vehicle speed on the 11 Bike Bellevue corridors decreased, on average, by 0.2 miles per hour with implementation of the projects.

In addition to modeling existing conditions using the 2019 Base Year model, two additional future year models were developed to evaluate the Build and No Build scenarios in 2035. The 2035 future year models are based on the BKRCast TFP Land Use Scenario (see [Appendix D](#) for a detailed description of the modeling assumptions and results). The projected land use in the project area includes the following:

- » **Nearly 152,000 jobs**, an increase of almost 67,000 jobs from 2019.
- » **Approximately 27,000 households**, an increase of nearly 16,000 households from 2019.
- » **About 51,100 residents**, an increase of nearly 33,000 residents from 2019.

The only difference between the Build and No Build models are the 11 Bike Bellevue projects. Both future year models assume the completion of seven major transportation projects by 2035 (see [Appendix D](#)).

The results for future conditions, based on the 2035 Bike Bellevue Build model, are shown in Figure 13 for system intersections and Figure 14 for travel speed on the Bike Bellevue corridors. Within the analysis area, two system intersections within PMA 1 do not meet the Performance Target (Main St/112th Ave and Bel-Red Rd/124th Ave). Additionally, within the analysis area, one system intersection within PMA 3 does not meet the Performance Target (NE 24th St/140th Ave NE). See both results in [Appendix D](#).

Of the three intersections in the analysis area that do not meet the Performance Target under future Build Conditions, two of the intersections also do not meet the Performance Target under future No Build Conditions. See the modeling approach [Appendix D](#) for additional information on the analysis. The eleven Bike Bellevue corridors meet the Performance Target for Typical Urban Travel Speed ( $\geq 0.5$ ).

Figure 13. Future Conditions, 2035 Bike Bellevue Build Model, Intersection V/C for Analysis Area

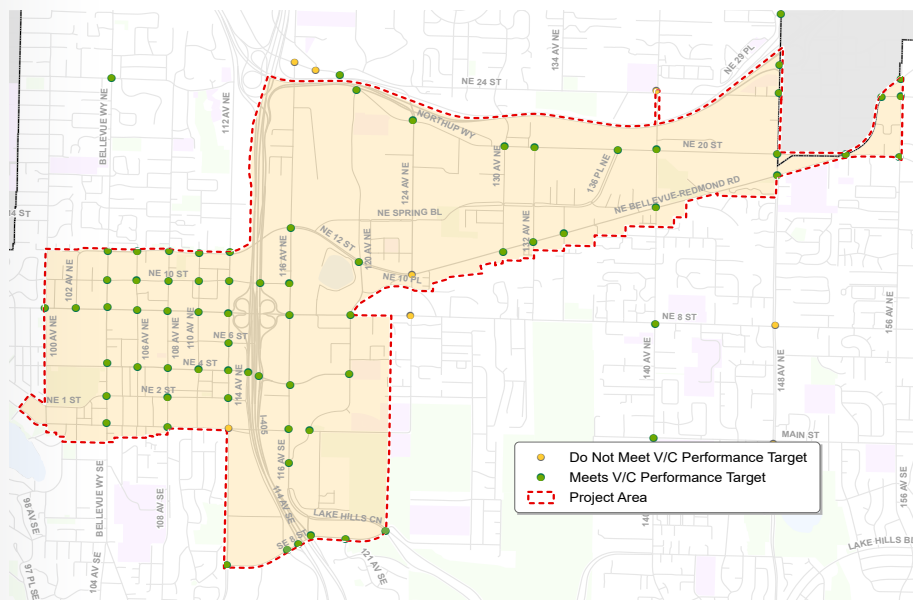
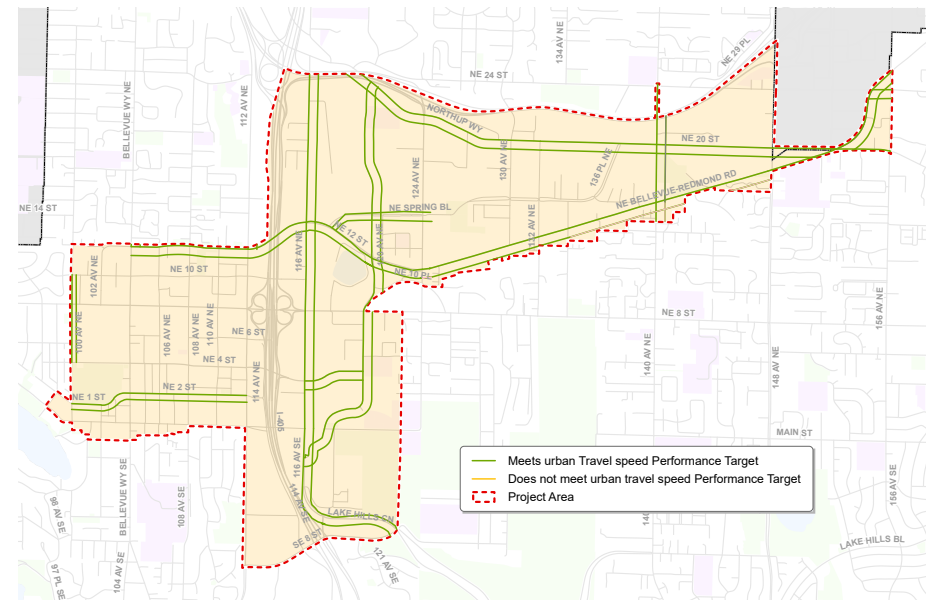


Figure 14. Future Conditions, 2035 Bike Bellevue Build Model, Urban Travel Speed on Bike Bellevue Corridors



# Roadway Capacity Utilization



The Documenting Vehicle Performance sections reviewed the results of the MIP's Vehicle Performance Metrics, which utilize data collected during the PM peak period. While these metrics offer a valuable snapshot of traffic during the busiest time of the day, it is also important to recognize that during the rest of the day there is far less traffic on the road. From an economic perspective, most roads are overbuilt, since a majority of the capacity is unused during much of the day. Aside from the cost to build roads that are often under-utilized, there are environmental, safety, and livability consequences for roads that are wider than necessary.

National transportation planning experts have acknowledged [the issues](#) associated with focusing too much attention on accommodating traffic during the busiest hours of the day. As part of a National Academies of Sciences [report](#), practitioners developed the "Hourly Demand / Theoretical Capacity (D/C) Ratio" to assess whether demand exceeds capacity ( $D/C > 1$ ) at any time during the day and, if so, for how long.

Bellevue staff used this methodology and BKRCast results to evaluate the 11 Bike Bellevue corridors over a 24-hour period. An example chart for one of the corridors is shown in Figure 15. Charts for the remaining ten corridors are provided in [Appendix E](#), and the methodology is also summarized in [Appendix E](#).

## Key findings from the analysis include:

- » Upward of 90% of all vehicle travel on the Bike Bellevue corridors occurs between 7 AM and 7 PM.
- » Under future conditions, 2035 Build model, the average 7 AM -7 PM D/C ratio is 0.48; in other words, during the period when most travel takes place, vehicles are using less than half of the available roadway capacity.
- » The maximum forecast D/C ratio exceeds 0.90 on two corridors: Corridor 2 – NE 12th Street and Corridor 11 – 140th Avenue NE. This high D/C ratio occurs for only one hour out of the day.

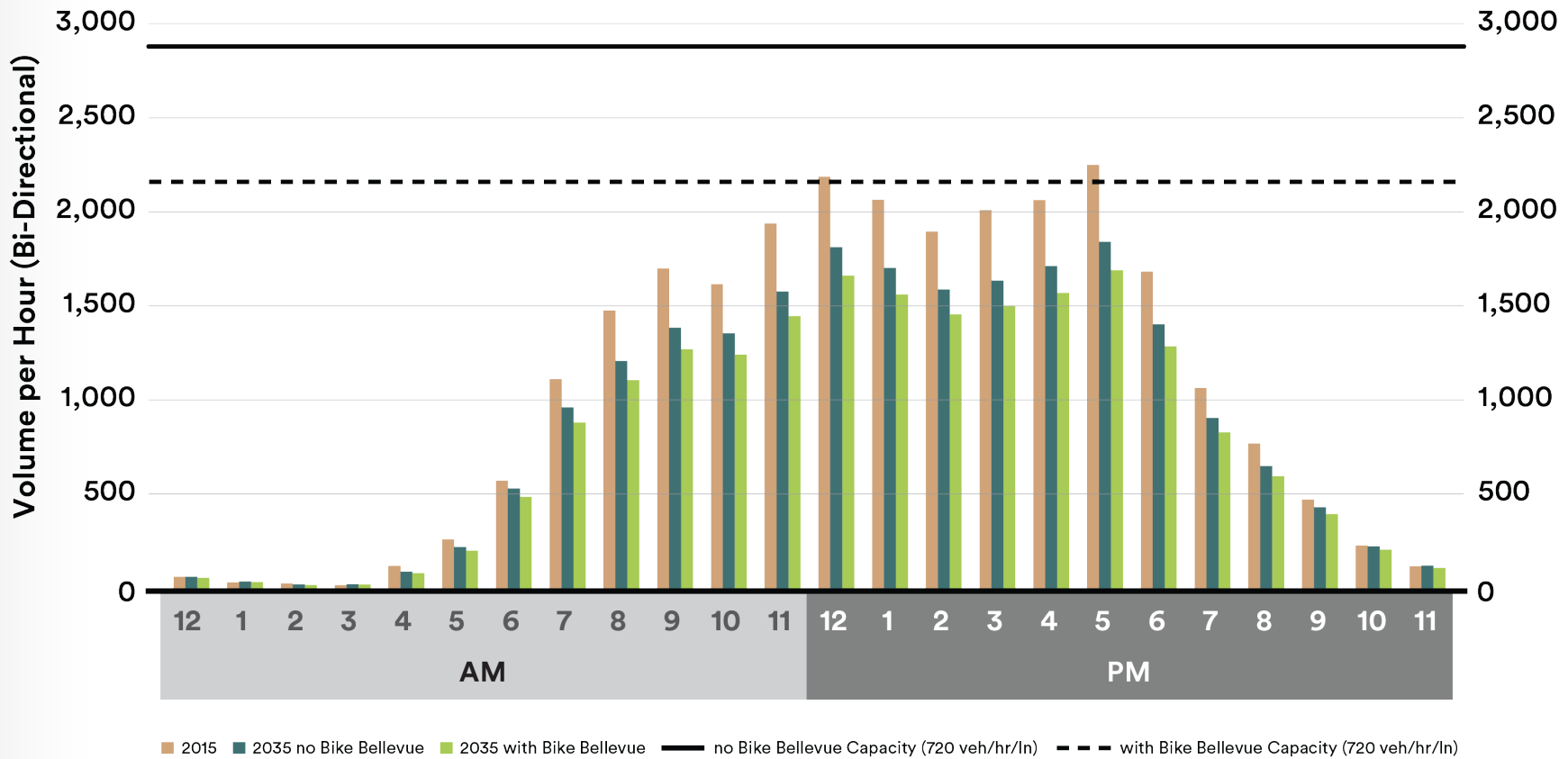
## How can 2035 traffic volume be less than 2015 traffic volume?

Figure 15 and the charts in the appendix may look counterintuitive to people who expect that additional population and employment growth invariably leads to more vehicle traffic. However, the city has been tracking traffic volume at numerous locations for more than 20 years and six of the 11 Bike Bellevue corridors have seen no growth in traffic volume or even a decrease in traffic volume over the past 20 years, a period of rapid growth in Bellevue. Nearly all corridors saw a drop in traffic volume between 2019 and 2022 as travel patterns changed after the pandemic. It is expected that over time a lower percentage of people will regularly commute to work, but that there will be slightly more non-work travel throughout the day.

**Fundamentally, the demand/capacity analysis shows that even with substantial growth in Bellevue in the future, approximately half of the roadway capacity on the Bike Bellevue corridors will not be utilized by cars in 2035, even with these projects in place. In exchange for a reduction in vehicular capacity, the city will be able to eliminate the highest-stress LTS 4 conditions on Bike Bellevue corridors.**

Figure 15. Daily Flow of Traffic

### Corridor 1: Northrup Way E/O 130th Ave NE - 24-Hour Volume Profile



This chart shows the demand for travel along Northrup Way throughout the day. The capacity of the road is also shown: the solid black line represents the hourly roadway capacity without the Bike Bellevue project. The dashed black line shows the capacity of the roadway with the Bike Bellevue project. As shown, the future 2035 forecast for travel demand is less than the roadway capacity at all hours of the day with Bike Bellevue in place.



# Explore the 11 Bike Bellevue Corridors

Explore each of the corridor improvements on the following pages:

Page 24

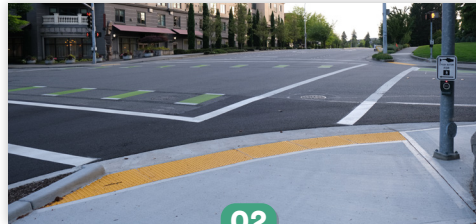


01

120<sup>TH</sup> AVE NE TO 140<sup>TH</sup> AVE NE

**Northup Way**

Page 26



02

NE 8<sup>TH</sup> ST TO 108<sup>TH</sup> AVE NE

**NE 12<sup>th</sup> Street**

Page 28

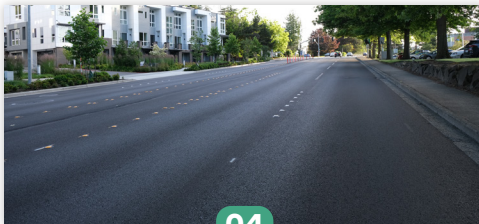


03

116<sup>TH</sup> AVE NE TO 132<sup>ND</sup> AVE NE

**NE 12<sup>th</sup> Street & Bel-Red Road**

Page 30

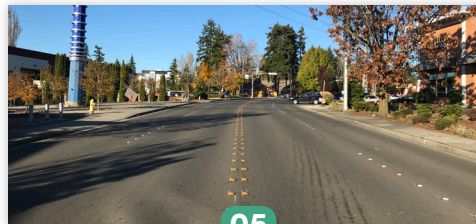


04

132<sup>ND</sup> AVE NE TO 148<sup>TH</sup> AVE NE

**Bel-Red Road**

Page 32

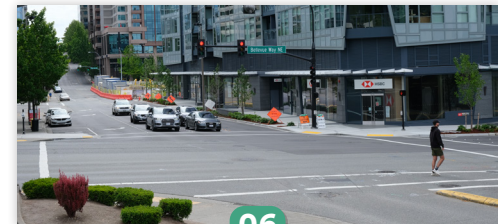


05

148<sup>TH</sup> AVE NE TO 156<sup>TH</sup> AVE NE

**Bel-Red Road**

Page 34



06

100<sup>TH</sup> AVE NE TO 112<sup>TH</sup> AVE NE

**NE 1<sup>st</sup> & NE 2<sup>nd</sup> Street**



# Explore the 11 Bike Bellevue Corridors

Explore each of the corridor improvements on the following pages:

Page 36



100<sup>TH</sup> AVE NE TO 99<sup>TH</sup> AVE NE

Lake Washington Boulevard

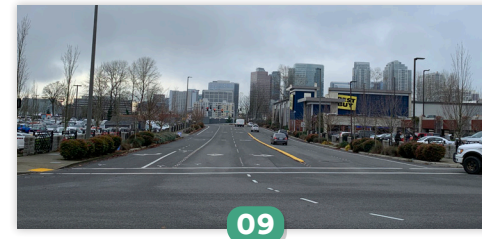
Page 38



MAIN ST TO NE 10<sup>TH</sup> ST

100<sup>th</sup> Ave NE

Page 40



116<sup>TH</sup> AVE NE & NE 4<sup>TH</sup> STREET

Wilburton Route

Page 42



NE 12<sup>TH</sup> STREET TO NE 14<sup>TH</sup> STREET

116<sup>th</sup> Ave NE

Page 44



BEL-RED ROAD TO NE 24<sup>TH</sup> ST

140<sup>th</sup> Ave NE



# 01 Northup Way

## Project Description

Northup Way/NE 20th Street is an important east-west corridor serving the Bel-Red mixed-use area, which is rapidly densifying and changing from a light industrial to a mixed-use area.

The proposed concept reallocates one existing westbound lane to provide one-way separated buffered bike lanes on both sides of the corridor. The two-way left turn lane will be retained to provide vehicle access to the many businesses on both sides of the street.

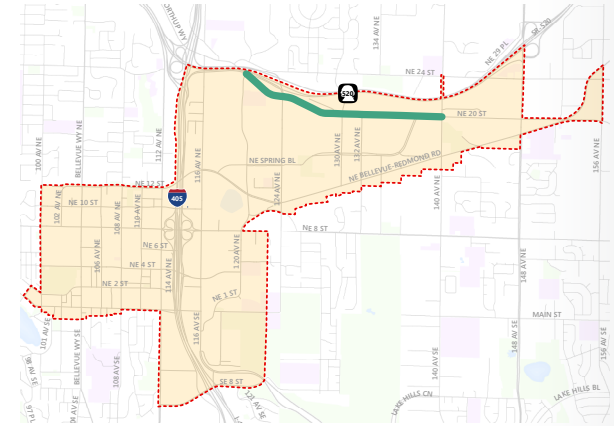
Existing



Proposed



View west along NE 20<sup>th</sup> Street, east of 132<sup>nd</sup> Avenue NE

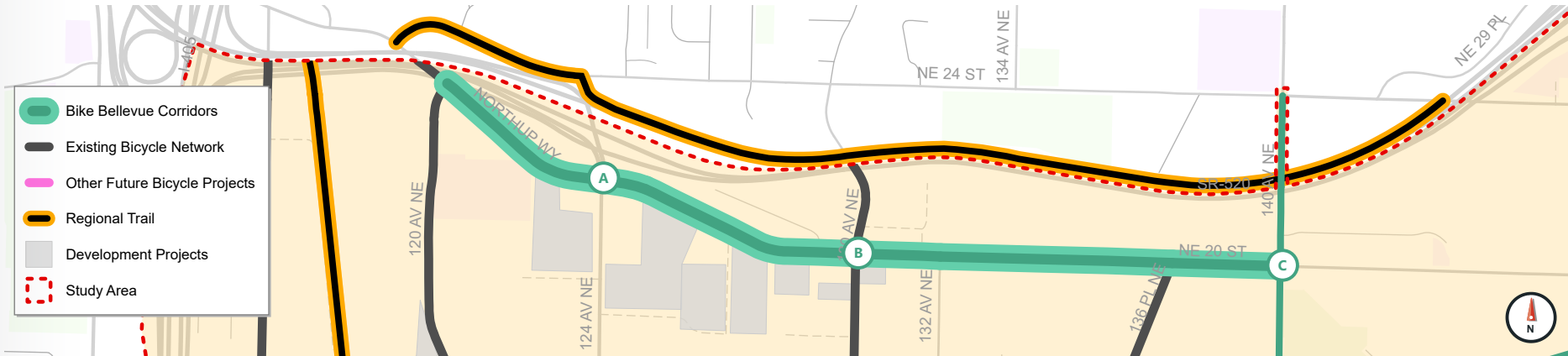


<b>Street Classification</b>	Minor arterial
<b>Traffic Volume (ADT)</b>	20,000 - 30,000
<b>Posted Speed Limit</b>	35 mph
<b>Existing Bicycle Facility</b>	No facility
<b>Existing Bike LTS</b>	1 2 3 4
<b>Target Bike LTS</b>	1 2 3 4
<b>Safety Data</b>	<ul style="list-style-type: none"> <li>On the Vision Zero High Injury Network.</li> <li>4 severe or fatality crashes (2011 - 2022)</li> </ul>
<b>Major Nearby Destinations</b>	Highland Park; access to SR 520 Trail and Eastrail
<b>Population (600 Foot Buffer)</b>	3,600 (2019) 16,850 (2050)
<b>Employment (600 Foot Buffer)</b>	18,300 (2019) 40,000 (2050)
<b>Transit Route</b>	King County Metro 249

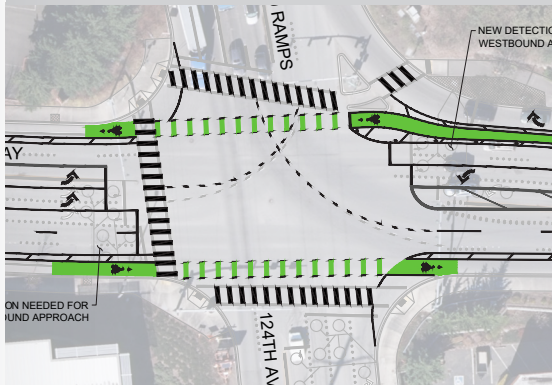


120<sup>TH</sup> AVE NE TO 140<sup>TH</sup> AVE NE

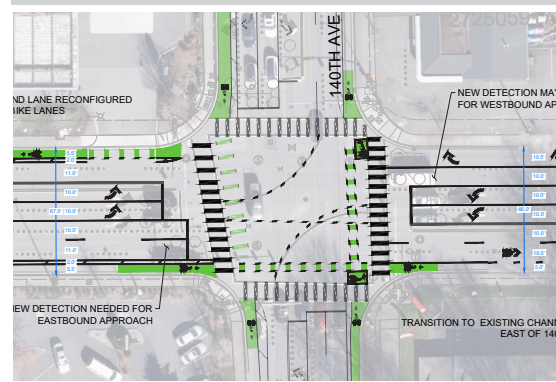
# 01 Northup Way



Northup Way at 124<sup>th</sup> Avenue NE



Northup Way and 140<sup>th</sup> Avenue NE



### Changes

- A** Coordinate with WSDOT on 124th Avenue NE Interchange Project
  - B** Convert 1 of 2 westbound lanes to separated buffered bike lanes
  - C** Integrate with bike lanes on 140<sup>th</sup> Avenue NE
- Level of traffic stress meets MIP target (LTS 3) between 120<sup>th</sup> Ave NE and 136<sup>th</sup> Place NE. Improves condition, but does not meet LTS 1 target east of 136<sup>th</sup> Place NE.

With changes, all intersections meet vehicle performance target of 1.0 V/C or lower.

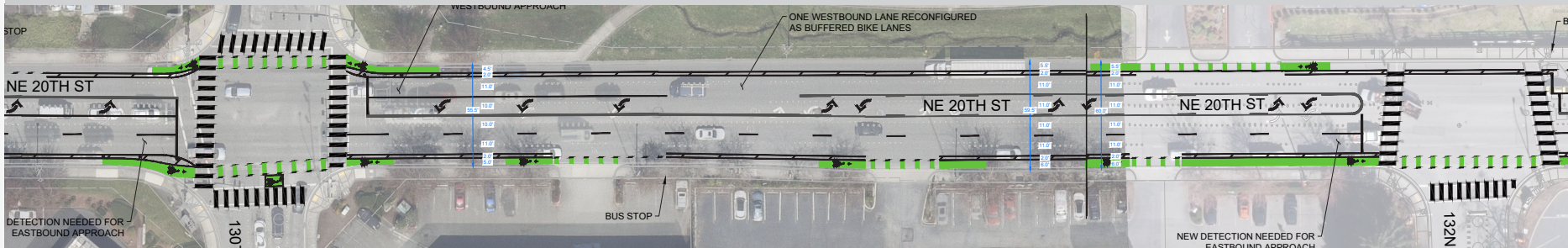
### Benefits

One of two continuous east-west arterials in the BelRed neighborhood, connects to major commercial uses along corridor. Improves access to the East Link stations at 120<sup>th</sup> and 130<sup>th</sup> Avenues. Provides a less hilly alternative to the SR 520 trail.

### Cost Estimate

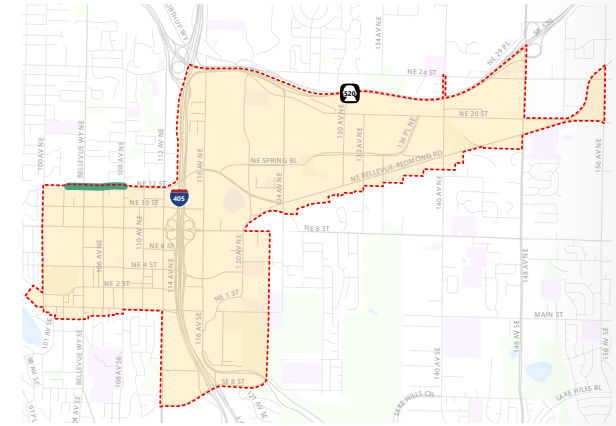
**\$3.90M**

Northup Way and 130<sup>th</sup>/132<sup>nd</sup> Avenue NE





# 02 NE 12<sup>th</sup> Street



## Project Description

The NE 12<sup>th</sup> Street project would extend the from the existing shared-use path that ends at 108th Avenue NE to a planned bicycle facility that extends west of 102nd Avenue NE. This would create a continuous low-stress bicycle route

across all of north downtown. The proposed design reallocates one westbound lane to provide a two-way separated buffered bike lane on the north side of NE 12<sup>th</sup> Street.

Existing

Proposed



View from NE corner of NE 12<sup>th</sup> Street and 108<sup>th</sup> Avenue NE



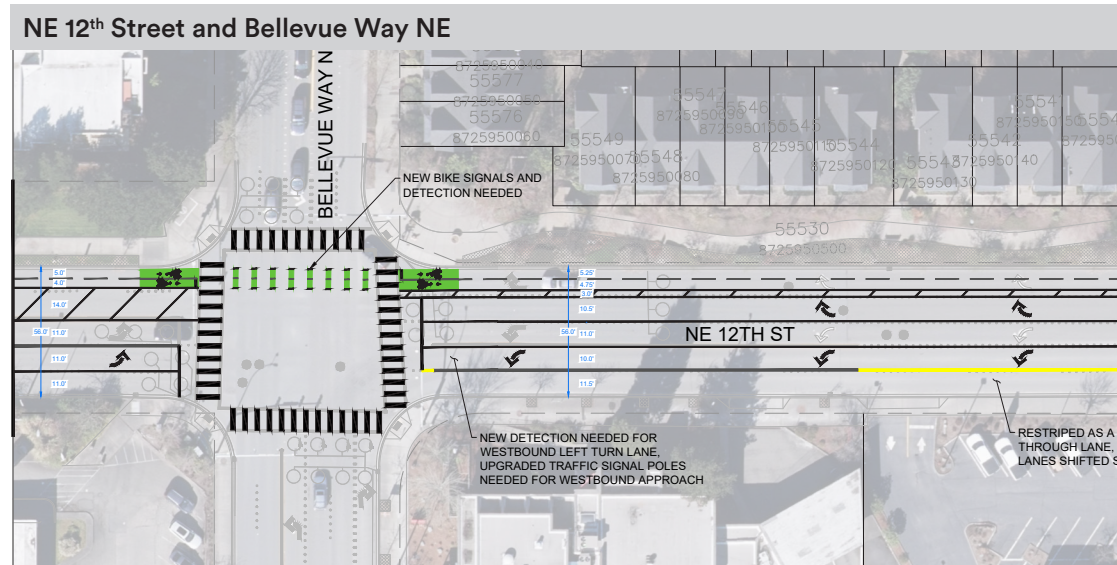
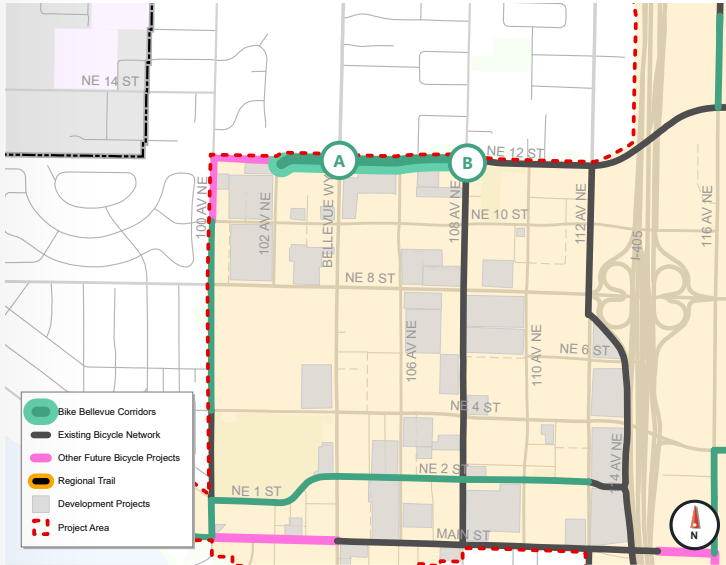
View east along NE 12<sup>th</sup> Street, east of 102<sup>nd</sup> Avenue NE

<b>Street Classification</b>	Major/Minor arterial
<b>Traffic Volume (ADT)</b>	14,000 - 22,000
<b>Posted Speed Limit</b>	30 mph
<b>Existing Bicycle Facility</b>	No facility
<b>Existing Bike LTS</b>	1 2 3 4
<b>Target Bike LTS</b>	1 2 3 4
<b>Safety Data</b>	<ul style="list-style-type: none"> <li>2 severe or fatality crashes (2011 - 2022)</li> </ul>
<b>Major Nearby Destinations</b>	Bellevue Square, Bellevue Village Center
<b>Population (600 Foot Buffer)</b>	6,300 (2019) 27,200 (2050)
<b>Employment (600 Foot Buffer)</b>	17,100 (2019) 30,800 (2050)
<b>Transit Route</b>	N/A



102ND AVE TO 108TH AVE NE

# 02 NE 12<sup>th</sup> Street



### Changes

- A** 1 of 2 eastbound lanes removed at Bellevue Way NE, 106<sup>th</sup> Avenue NE and 108<sup>th</sup> Avenue NE to improve westbound traffic operations.
- B** New westbound right turn bay at 108<sup>th</sup> Avenue NE.
- C** New level of traffic stress is between 2 and 3 (depending on vehicle volumes). Conditions are improved, but does not meet LTS 1 target along NE 12<sup>th</sup> Street.

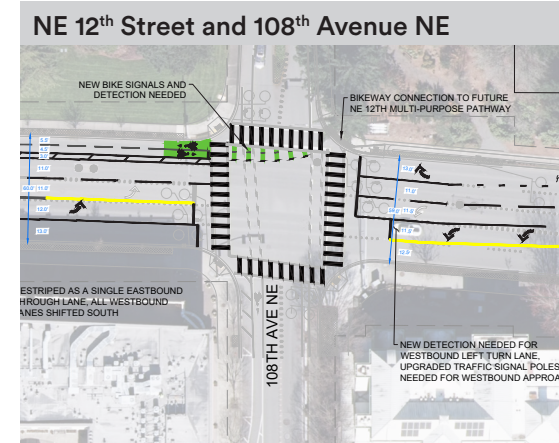
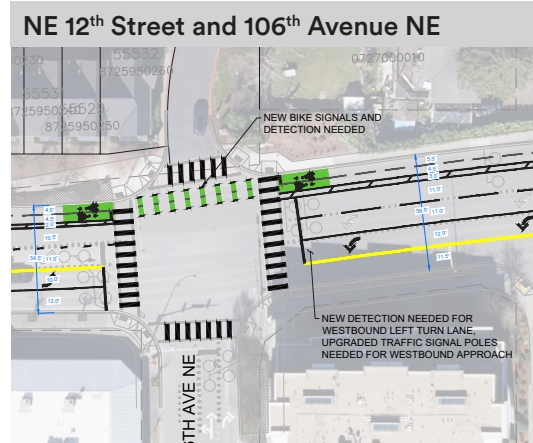
**With changes, all intersections meet vehicle performance target of 1.0 V/C or lower.**

### Benefits

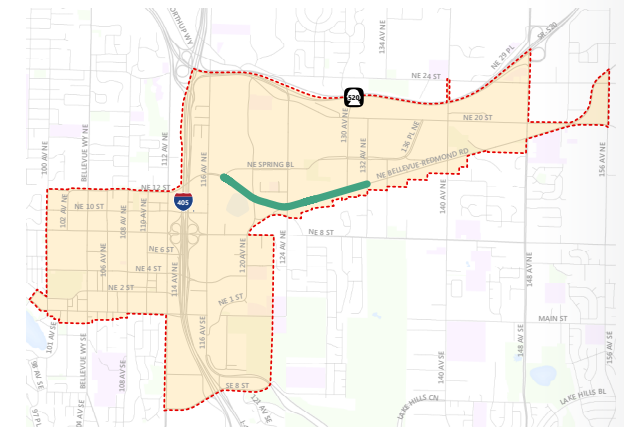
Extends bicycle connection along NE 12<sup>th</sup> Street from the 108<sup>th</sup> Avenue corridor.

### Cost Estimate

**\$0.99M**



# 03 NE 12<sup>th</sup> Street/Bel-Red Road



## Project Description

The connection along NE 12<sup>th</sup> Street and Bel-Red Road is a key link between downtown Bellevue and the city's emerging BelRed neighborhood. This will be the only low-stress bike route between these areas until redevelopment occurs and NE Spring Boulevard is completed.

The proposed design reallocates 1 of 2 westbound lanes between NE Spring Blvd and 124<sup>th</sup>

Avenue NE, and transitions to reallocating 1 of 2 eastbound lanes east of 124<sup>th</sup> Avenue NE to provide one-way separated buffered bike lanes in each direction. A new protected intersection will be installed at NE 12<sup>th</sup> Street and 120<sup>th</sup> Avenue NE to facilitate safe connections between the two bicycle routes.

Existing

Proposed



View east along NE 12<sup>th</sup> Street, west of 120<sup>th</sup> Avenue NE



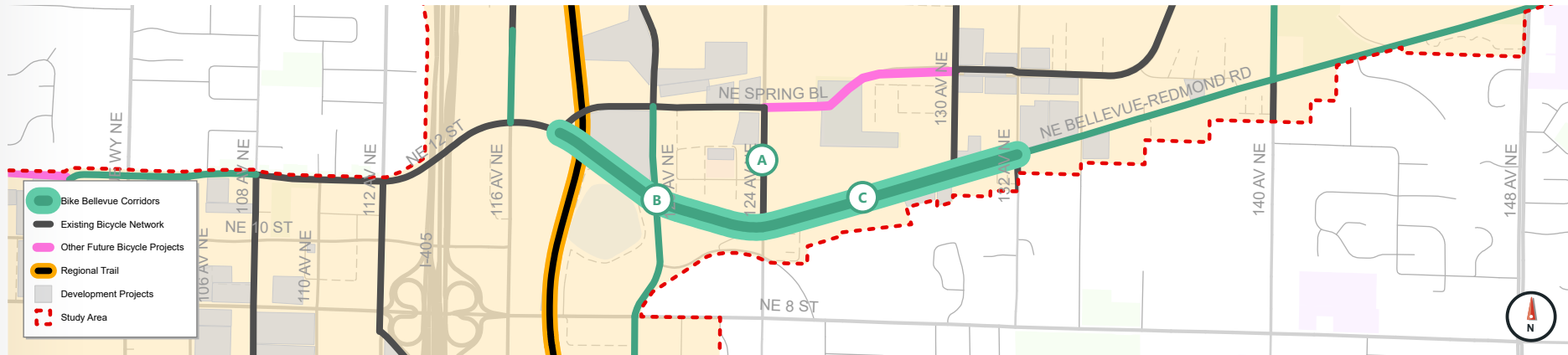
View west along Bel-Red Road, east of 124<sup>th</sup> Avenue NE

<b>Street Classification</b>	Major arterial
<b>Traffic Volume (ADT)</b>	18,000 - 29,000
<b>Posted Speed Limit</b>	30/35 mph
<b>Existing Bicycle Facility</b>	No facility
<b>Existing Bike LTS</b>	1 2 3 4
<b>Target Bike LTS</b>	1 2 3 4
<b>Safety Data</b>	<ul style="list-style-type: none"> <li>On the Vision Zero High Injury Network.</li> <li>4 severe or fatality crashes (2011 - 2022)</li> </ul>
<b>Major Nearby Destinations</b>	Overlake Medical Center, Spring District
<b>Population (600 Foot Buffer)</b>	4,700 (2019) 15,300 (2050)
<b>Employment (600 Foot Buffer)</b>	21,950 (2019) 40,550 (2050)
<b>Transit Route</b>	King County Metro <b>226</b>



116<sup>TH</sup> AVE NE TO 132<sup>ND</sup> AVE NE


# 03 NE 12<sup>th</sup> Street/Bel-Red Road




## Changes

- A** Convert 1 of 2 westbound lanes to one-way buffered bike lanes between NE Spring Boulevard and 124<sup>th</sup> Avenue NE.
- B** New protected intersection corners at NE 12<sup>th</sup> Street and 120<sup>th</sup> Avenue NE to facilitate safe bicycle movements between the two bike routes.

- C** Maintain 2 westbound lanes and convert 1 of 2 eastbound lanes east of 124<sup>th</sup> Avenue NE to accommodate one-way separated buffered bike lanes on each side of the street.

 Level of traffic stress meets MIP target (LTS 3).

 With changes, one intersection does not meet the vehicle performance target of 1.0 V/C or lower, 124<sup>th</sup> Avenue NE & Bel-Red Road (V/C = 1.01).

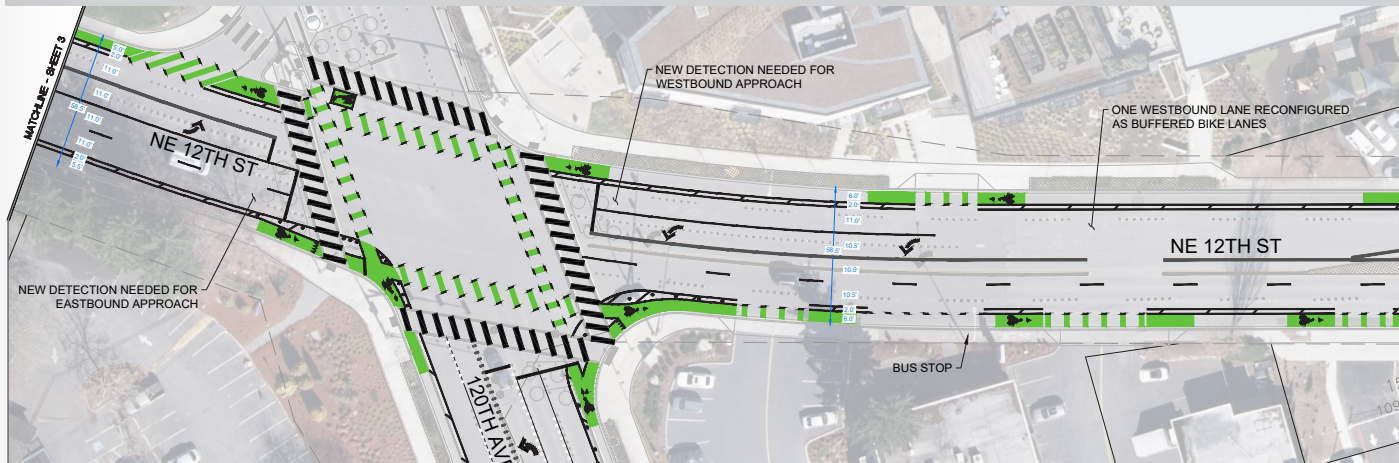
## Benefits

One of two continuous east-west arterials in the BelRed neighborhood, connects to major commercial uses along corridor downtown, Wilburton, and other surrounding neighborhoods to the businesses and commercial uses in the BelRed neighborhood.

## Cost Estimate

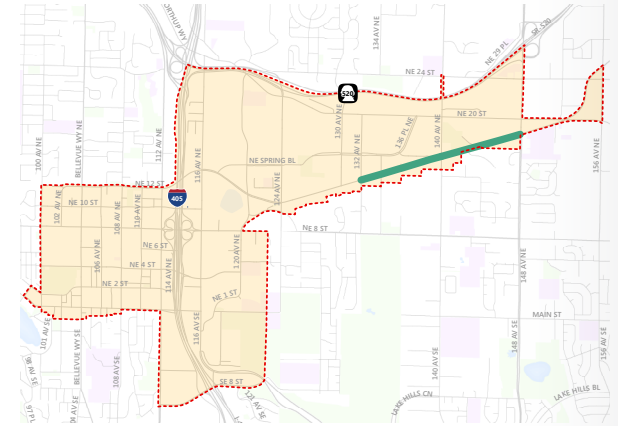
**\$3.38M**

## NE 12<sup>th</sup> Street and 120<sup>th</sup> Avenue NE





# 04 Bel-Red Road



## Project Description

Bel-Red Road is a major continuous east-west corridor that serves the BelRed neighborhood and is one of the few continuous east-west streets through Bellevue. The area along Bel-Red Road is rapidly changing from light industrial to higher-density mixed-use consistent with the City's BelRed Plan.

The proposed design reallocates 1 of 2 eastbound lanes between 132<sup>nd</sup> Avenue NE and opens back up to 2 lanes on approach to the busy 148<sup>th</sup> Avenue NE intersection. This design provides one-way separated buffered bike lanes on both sides of the street. Between 143<sup>rd</sup> Avenue NE and 148<sup>th</sup> Avenue NE, 1 of 2 westbound lanes is modified to provide a two-way left turn lane, improving access to destinations on both sides of the corridor.

Existing



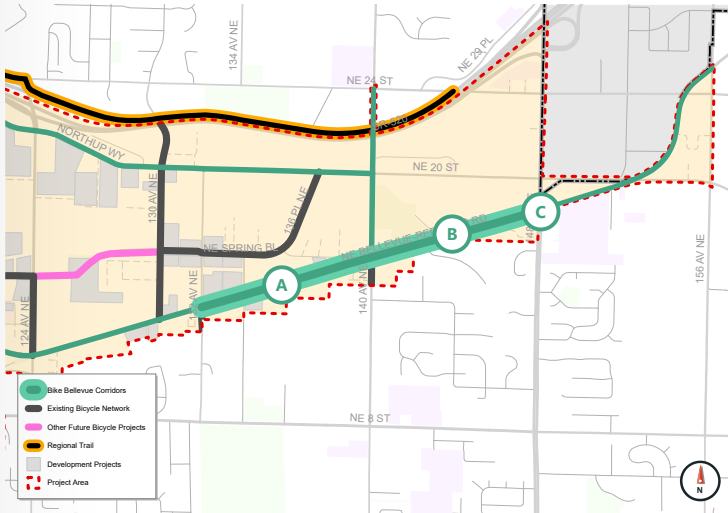
Proposed



View west along Bel-Red Road, west of 130<sup>th</sup> Avenue NE


<b>Street Classification</b>	Major arterial
<b>Traffic Volume (ADT)</b>	19,000 - 25,000
<b>Posted Speed Limit</b>	35 mph
<b>Existing Bicycle Facility</b>	No facility
<b>Existing Bike LTS</b>	1 2 3 4
<b>Target Bike LTS</b>	1 2 3 4
<b>Safety Data</b>	<ul style="list-style-type: none"> <li>On the Vision Zero High Injury Network.</li> <li>5 severe or fatality crashes (2011 - 2022)</li> </ul>
<b>Major Nearby Destinations</b>	Bel-Red mixed use neighborhood, Highland Park
<b>Population (600 Foot Buffer)</b>	6,150 (2019) 7,350 (2050)
<b>Employment (600 Foot Buffer)</b>	14,150 (2019) 30,250 (2050)
<b>Transit Route</b>	King County Metro <b>226</b>


# 04 Bel-Red Road



## Changes

- A** Convert 1 of 2 eastbound lanes to one-way separated buffered bike lanes, retain 2 lanes westbound between 134<sup>th</sup> Avenue NE and 140<sup>th</sup> Avenue NE.
- B** Between 140<sup>th</sup> Avenue NE and 148<sup>th</sup> Avenue NE, convert 1 of 2 westbound lanes to a two-way left turn lane.
- C** Convert 1 of 2 westbound lanes and retain 2 lanes eastbound at 148<sup>th</sup> Avenue NE.

 Level of traffic stress meets MIP target (LTS 3).

 With changes, all intersections meet vehicle performance target of 1.0 V/C or lower.

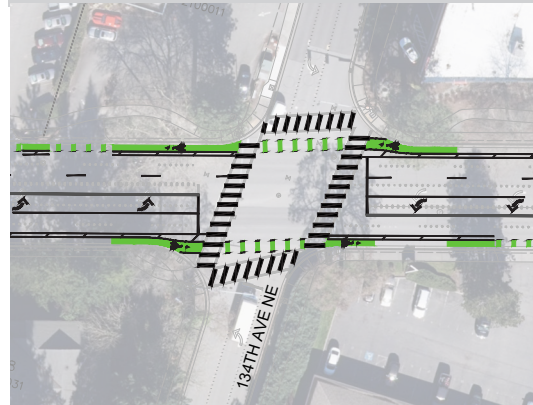
## Benefits

One of the only continuous east-west bicycle routes in Bellevue between I-405 and the neighborhoods east of 156<sup>th</sup> Avenue NE.

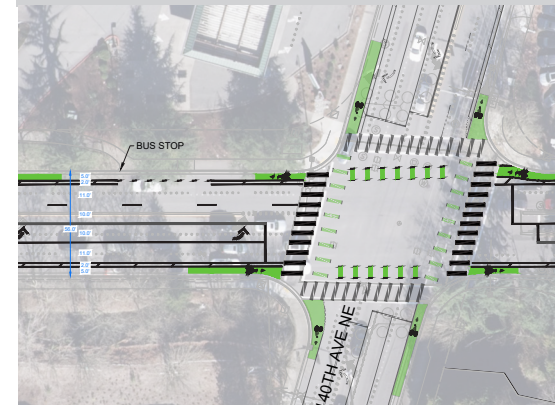
## Cost Estimate

**\$2.81M**

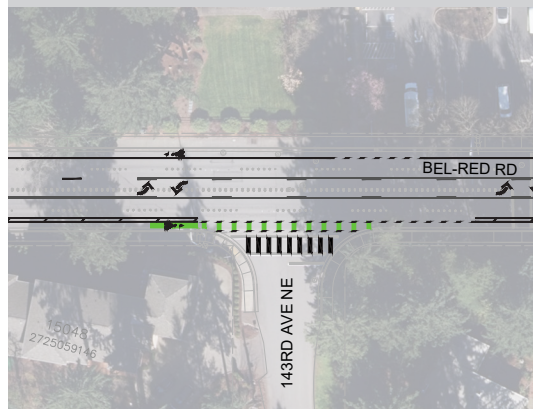
Bel-Red Road and 134<sup>th</sup> Avenue NE



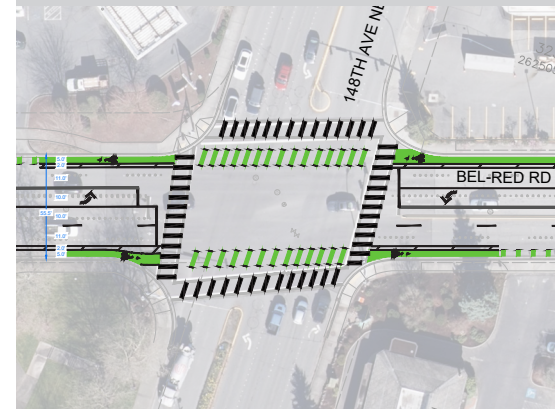
Bel-Red Road and 140<sup>th</sup> Avenue NE



Bel-Red Road and 143<sup>rd</sup> Avenue NE



Bel-Red Road and 148<sup>th</sup> Avenue NE

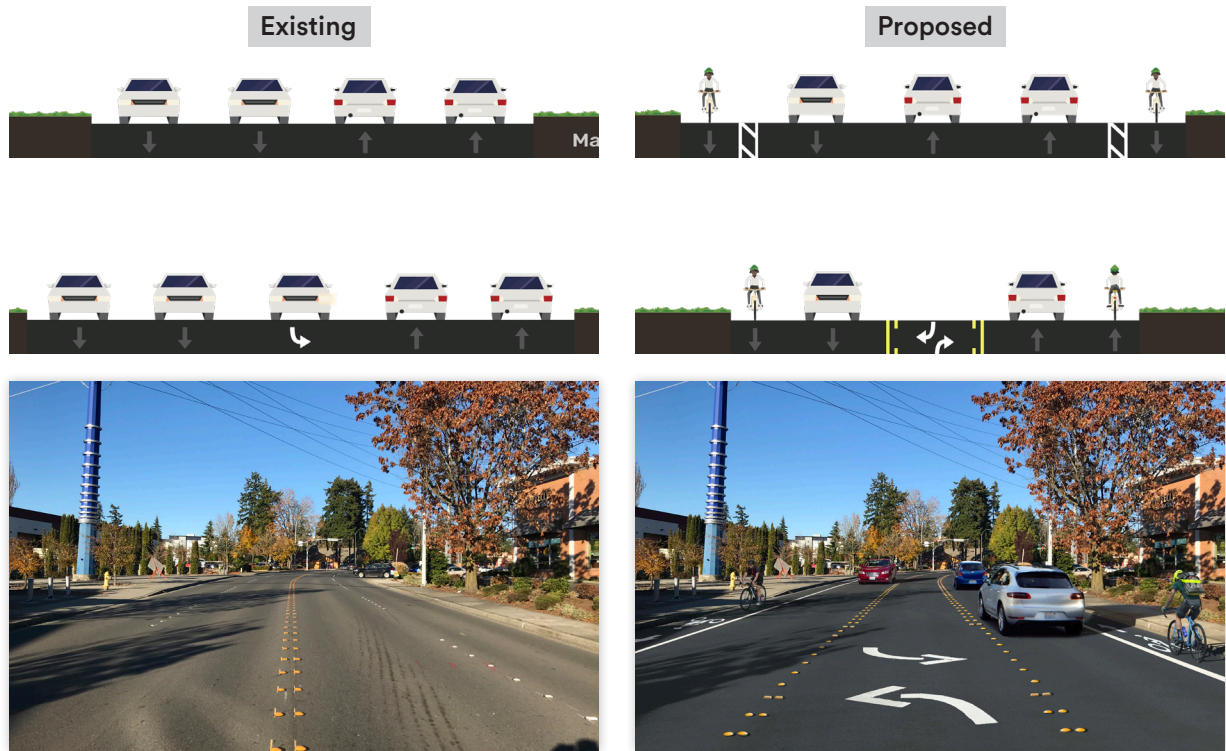
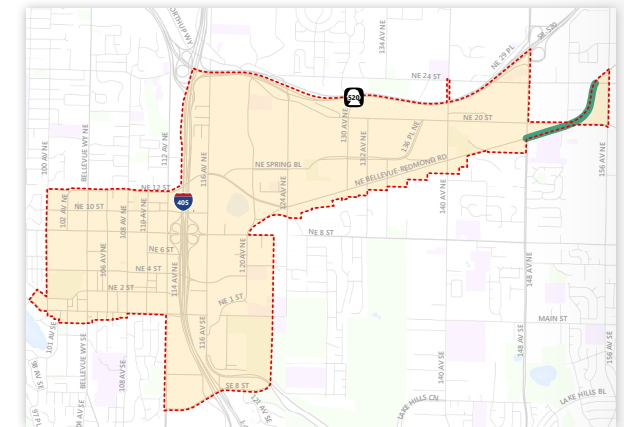


# 05 Bel-Red Road

## Project Description

This segment of Bel-Red Road runs adjacent to the South Overlake neighborhood in Redmond, which is rapidly densifying with mixed-use development replacing low-density retail. This segment also is a key link between Bellevue's and Redmond's bicycle networks.

- The proposed design:**
- » 2 lanes EB, 1 lane WB (143<sup>rd</sup> to NE 20<sup>th</sup>)
  - » 3 lanes (NE 20<sup>th</sup> to NE 24<sup>th</sup>)
  - » 2 lanes WB, 1 lane EB (NE 24<sup>th</sup> to 156<sup>th</sup> Avenue NE)



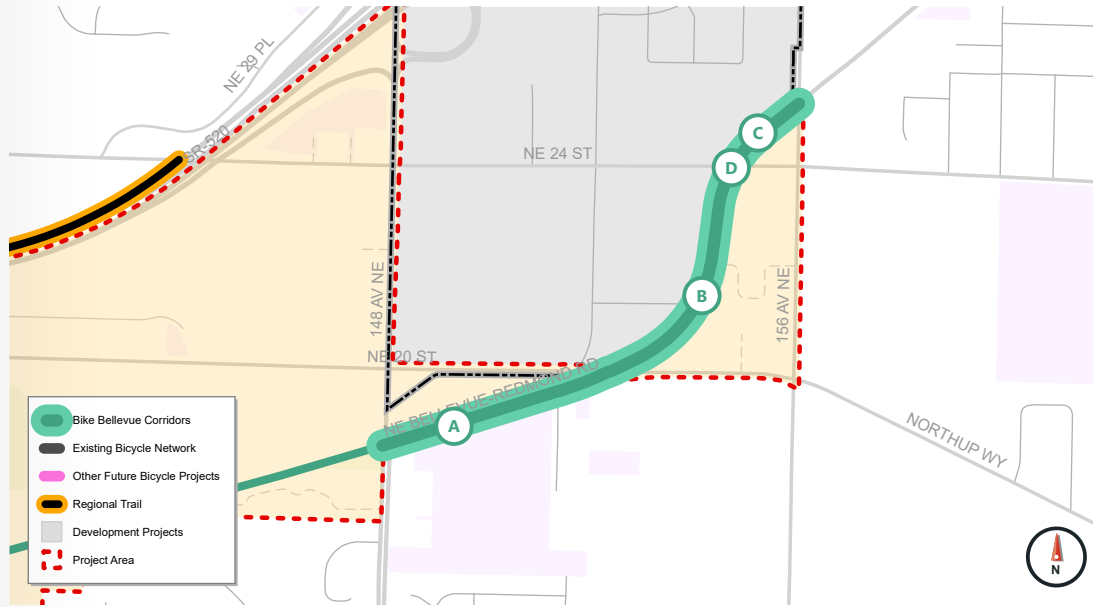
View north along Bel-Red Road, north of NE 22<sup>nd</sup> Place

<b>Street Classification</b>	Major arterial
<b>Traffic Volume (ADT)</b>	12,000 - 19,000
<b>Posted Speed Limit</b>	35 mph
<b>Existing Bicycle Facility</b>	No facility
<b>Existing Bike LTS</b>	1 2 3 4
<b>Target Bike LTS</b>	1 2 3 4
<b>Safety Data</b>	<ul style="list-style-type: none"> <li>• On the Vision Zero High Injury Network.</li> <li>• 2 severe or fatality crashes (2011 - 2022)</li> </ul>
<b>Major Nearby Destinations</b>	Highland Middle School
<b>Population (600 Foot Buffer)</b>	9,850 (2019) 11,100 (2050)
<b>Employment (600 Foot Buffer)</b>	11,700 (2019) 20,650 (2050)
<b>Transit Route</b>	King County Metro 226




148<sup>TH</sup> AVE NE TO 156<sup>TH</sup> AVE NE


# 05 Bel-Red Road



## Changes

- A** Convert 1 of 2 eastbound lanes to one-way separated buffered bike lanes between 148<sup>th</sup> Avenue NE and NE 20<sup>th</sup> Street
- B** Convert 1 eastbound lane and 1 westbound lane to a one-way separated buffered bike lanes and install a two-way left turn lane between NE 20<sup>th</sup> Street and NE 24<sup>th</sup> Street
- C** Convert 1 of 2 westbound lanes to one-way separated buffered bike lanes between NE 24<sup>th</sup> Street and 156<sup>th</sup> Avenue NE
- D** Remove northbound peak hour left turn restriction

 Level of traffic stress meets MIP target (LTS 3).

 With changes, all intersections meet vehicle performance target of 1.0 V/C or lower.

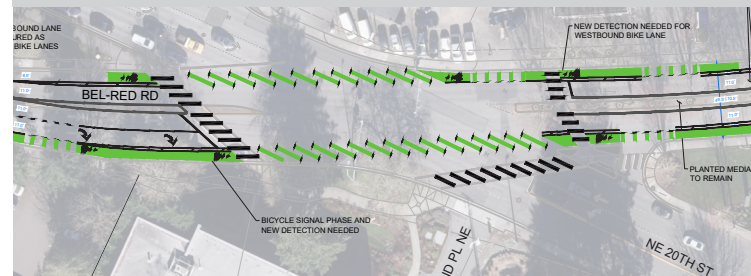
## Benefits

One of two continuous east-west arterials in the BelRed neighborhood, connects to major commercial uses along corridor.

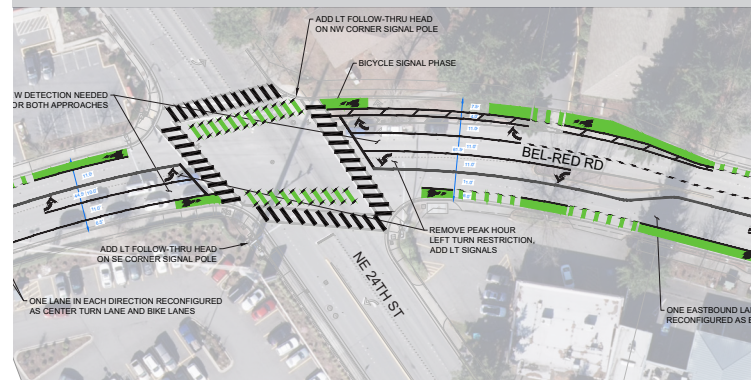
## Cost Estimate

**\$1.61M**

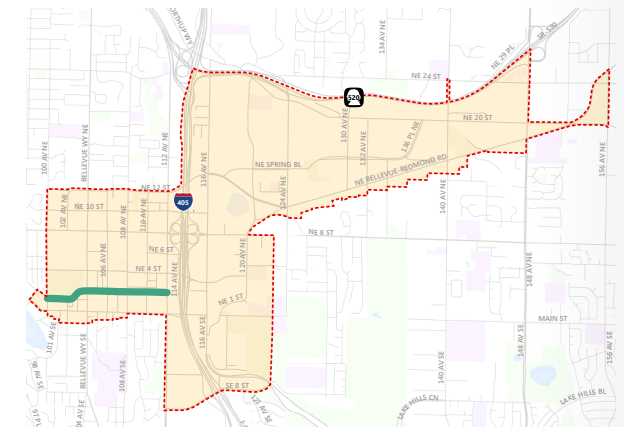
Bel-Red Road and NE 20<sup>th</sup> Street



Bel-Red Road and NE 24<sup>th</sup> Street



# 06 NE 1<sup>st</sup>/NE 2<sup>nd</sup> Street



## Project Description

NE 1<sup>st</sup> Street and NE 2<sup>nd</sup> Street are minor arterials in the heart of downtown Bellevue that provide a direct connection to Bellevue Downtown Park, the 108<sup>th</sup> Avenue bicycle corridor, and other high density land uses.

The proposed design converts the westbound travel lane on NE 1<sup>st</sup> Street and NE 2<sup>nd</sup> Street to a

two-way curb-separated bike lane on the north side of the street between 100<sup>th</sup> Avenue NE and Bellevue Way. The two-way curb-separated bike lane transitions to one-way bike lanes (mix of conventional, buffered, and separated buffered bike lanes) east of Bellevue Way NE, retaining 1 travel lane and the two-way left turn lane in each direction.

Existing



Proposed



View from NW corner of NE 2<sup>nd</sup> Street and Bellevue Way NE



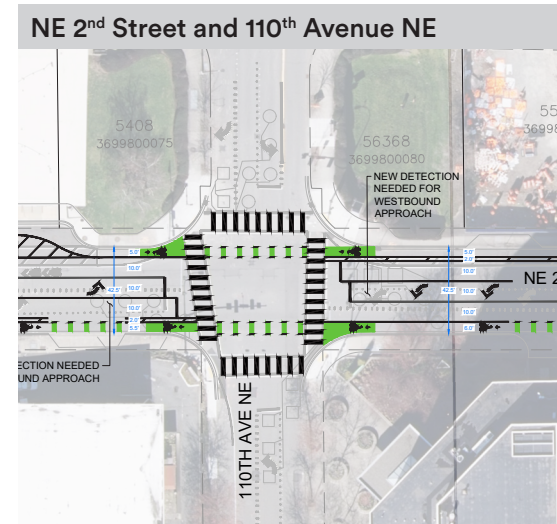
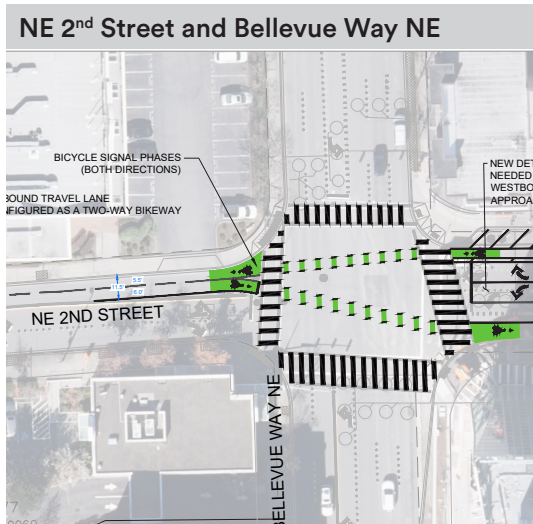
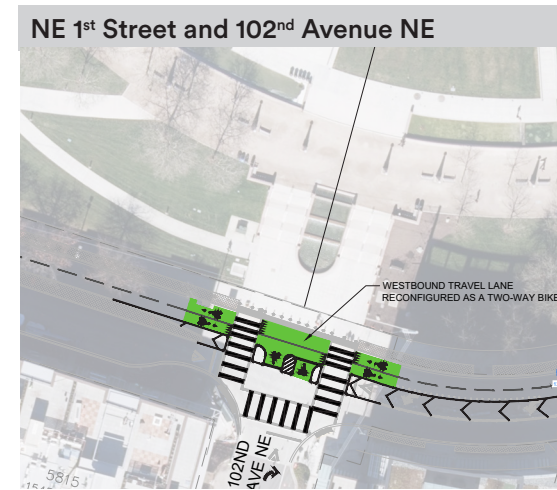
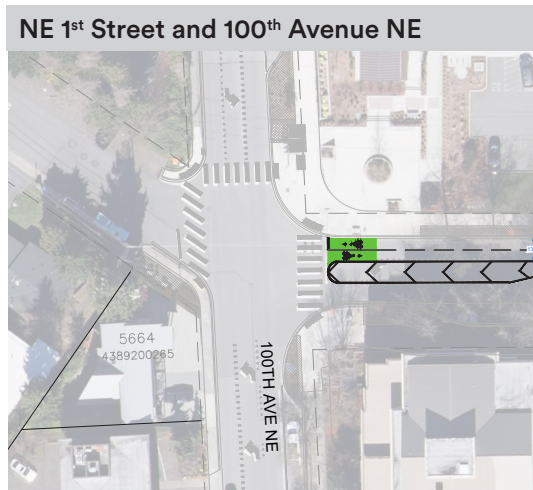
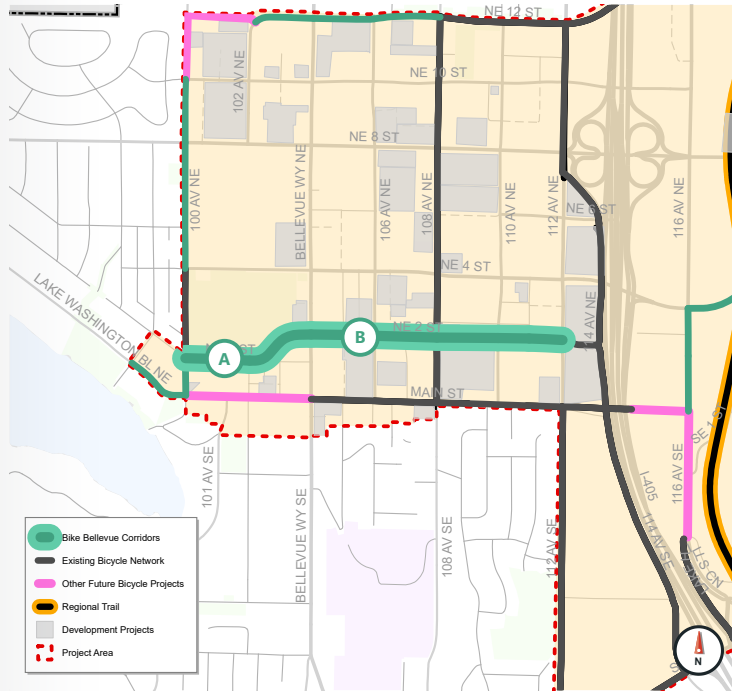
View west along NE 2<sup>nd</sup> Street, west of 105th Avenue NE

<b>Street Classification</b>	Collector Arterial (NE 1 <sup>st</sup> Street) Minor Arterial (NE 2 <sup>nd</sup> Street)
<b>Traffic Volume (ADT)</b>	7,500-9,000
<b>Posted Speed Limit</b>	25 mph (NE 1 <sup>st</sup> Street) 30 mph (NE 2 <sup>nd</sup> Street)
<b>Existing Bicycle Facility</b>	Buffered bike lane at some locations
<b>Existing Bike LTS</b>	1 2 3 4
<b>Target Bike LTS</b>	1 2 3 4
<b>Safety Data</b>	<ul style="list-style-type: none"> <li>On the Vision Zero High Injury Network.</li> <li>3 severe or fatality crashes (2011 - 2022)</li> </ul>
<b>Major Nearby Destinations</b>	Bellevue Downtown Park 108 <sup>th</sup> Avenue bicycle corridor
<b>Population (600 Foot Buffer)</b>	8,100 (2019) 23,800 (2050)
<b>Employment (600 Foot Buffer)</b>	14,900 (2019) 31,400 (2050)
<b>Transit Route</b>	N/A




100<sup>TH</sup> AVE NE TO 112<sup>TH</sup> AVE NE

# 06 NE 1<sup>st</sup>/NE 2<sup>nd</sup> Street



## Changes

- A** Convert NE 1<sup>st</sup> Street and NE 2<sup>nd</sup> Street between 100<sup>th</sup> Avenue NE and Bellevue Way NE to one-way eastbound only for motor vehicles and provide a two-way curb-separated bike lane on the north side.
- B** Between Bellevue Way NE and 112<sup>th</sup> Avenue NE, retain 1 lane in each direction to provide one-way bike lanes (a mix of conventional, buffered, and separated buffered).


 With changes, all intersections meet vehicle performance target of 1.0 V/C or lower.

## Benefits

Provide a direct connection to Bellevue Downtown Park and access to Meydenbauer Bay Park. Connects to 108<sup>th</sup> Avenue corridor.

## Cost Estimate

**\$1.25M**

 Level of traffic stress is better than MIP target (LTS 3).



# 07 Lake Washington Boulevard

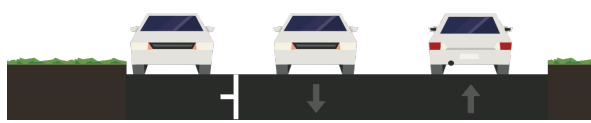


## Project Description

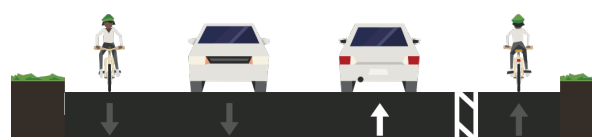
Lake Washington Boulevard is an important corridor along Meydenbauer Bay, providing access to destinations including Meydenbauer Bay Park before turning into Main Street east of 100<sup>th</sup> Avenue NE.

The proposed design reallocates existing on-street parking on the south side and implements a set of one-way bicycle lanes (which vary from conventional to buffered bike lanes).

Existing



Proposed

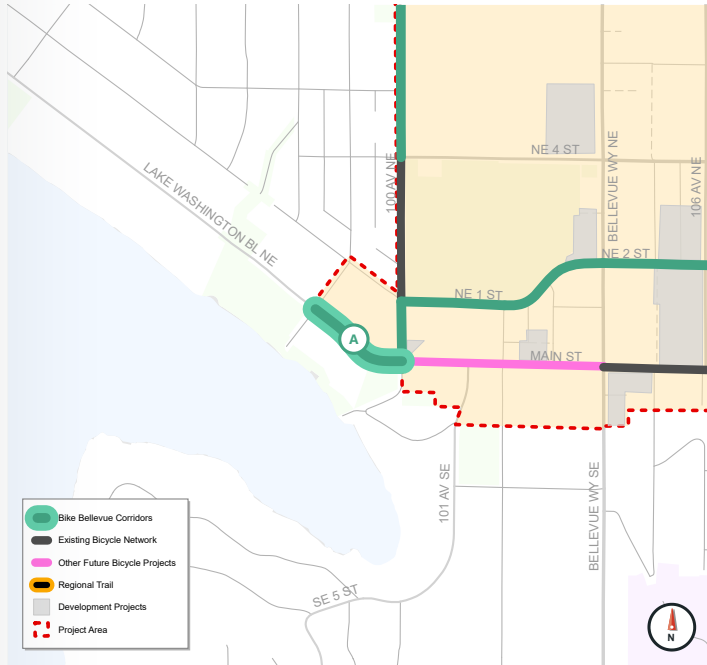


View southeast along Lake Washington Boulevard NE, east of 99<sup>th</sup> Avenue NE

<b>Street Classification</b>	Collector arterial
<b>Traffic Volume (ADT)</b>	6,500 - 7,500
<b>Posted Speed Limit</b>	30 mph
<b>Existing Bicycle Facility</b>	No facility
<b>Existing Bike LTS</b>	1 2 3 4
<b>Target Bike LTS</b>	1 2 3 4
<b>Safety Data</b>	1 severe or fatality crashes (2011 - 2022)
<b>Major Nearby Destinations</b>	Old Bellevue, Meydenbauer Bay Park
<b>Population (600 Foot Buffer)</b>	5,600 (2019) 14,400 (2050)
<b>Employment (600 Foot Buffer)</b>	2,000 (2019) 3,100 (2050)
<b>Transit Route</b>	N/A

100<sup>TH</sup> AVE NE TO 99<sup>TH</sup> AVE NE

# 07 Lake Washington Boulevard



### Changes

- A** Convert curbside parking on the south side into a pair of bicycle lanes.
- Level of traffic stress meets MIP target (LTS 2).
- No changes to vehicle operations.

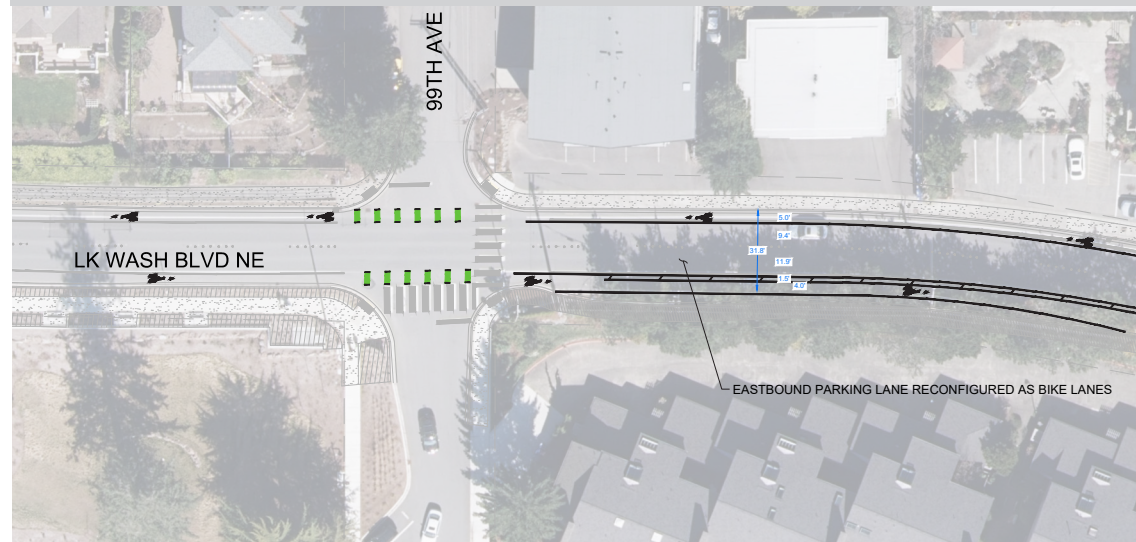
### Benefits

Improves bicycle and pedestrian access along Lake Washington Boulevard between Meydenbauer Bay Park and 100<sup>th</sup> Avenue NE.

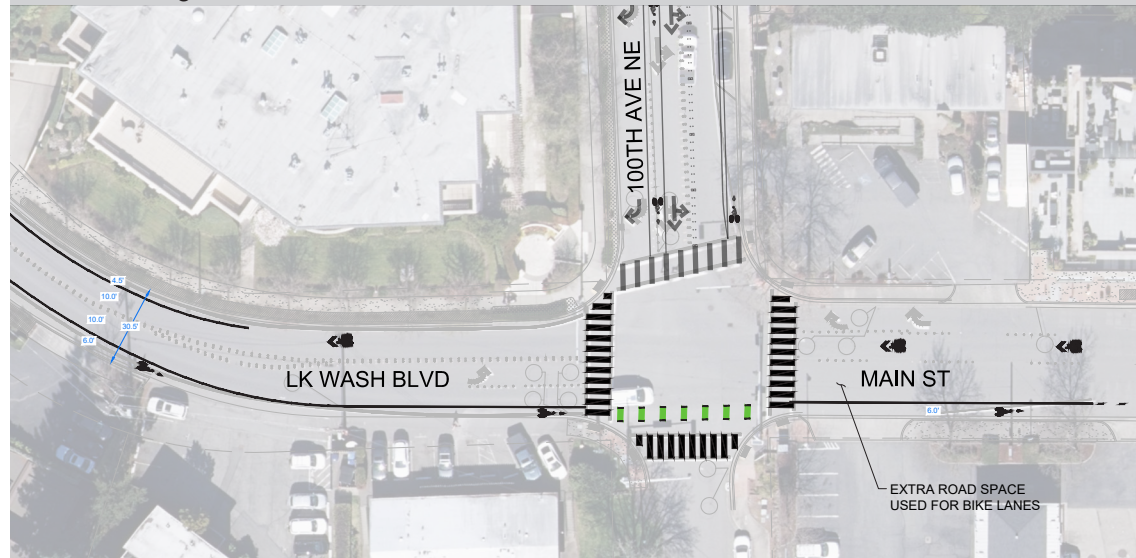
### Cost Estimate

**\$0.21M**

Lake Washington Boulevard and 99th Avenue SE



Lake Washington Boulevard and 100th Avenue NE





MAIN ST TO NE 10<sup>TH</sup> ST

# 08 100<sup>th</sup> Avenue NE

## Project Description

100<sup>th</sup> Avenue NE is a continuous north-south corridor on the western edge of downtown Bellevue and provides a direct connection to Bellevue Square and Bellevue Downtown Park.

The proposed design provides one-way bike lanes (mix of conventional and buffered) between

Main Street and NE 1<sup>st</sup> Street and transitions to the existing shared-use path on the east side between NE 1<sup>st</sup> Street and NE 4<sup>th</sup> Street. Between NE 4<sup>th</sup> and NE 8<sup>th</sup> Street, a two-way separated buffered bike lane is provided on the east side of the street and transitions to one-way bike lanes north of NE 8<sup>th</sup> Street.



Existing



View south along 100<sup>th</sup> Avenue NE, north of NE 8<sup>th</sup> Street

Proposed



View south along 100<sup>th</sup> Avenue NE, north of NE 5<sup>th</sup> Street



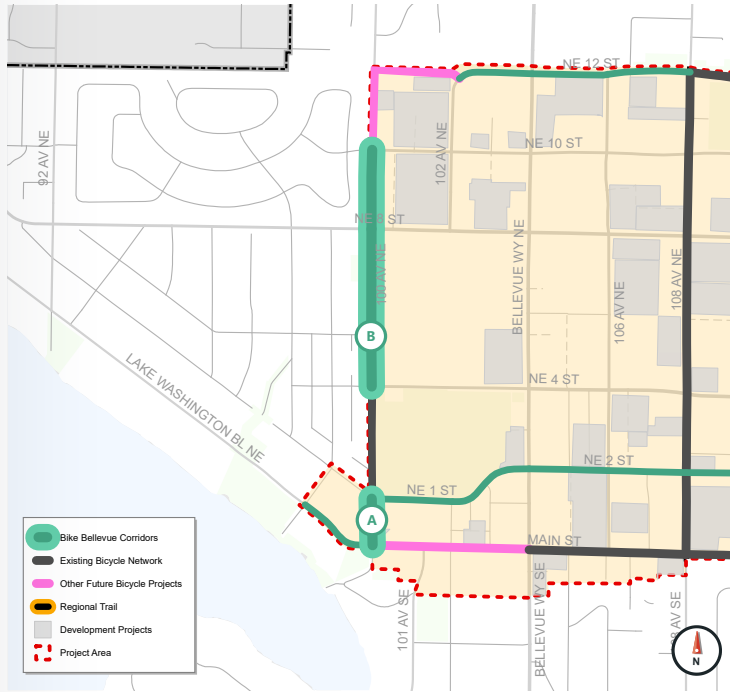
<b>Street Classification</b>	Minor arterial
<b>Traffic Volume (ADT)</b>	9,000 - 12,000
<b>Posted Speed Limit</b>	30 mph
<b>Existing Bicycle Facility</b>	No facility
<b>Existing Bike LTS</b>	1 2 3 4
<b>Target Bike LTS</b>	1 2 3 4 (Main Street to NE 8 <sup>th</sup> Street) 1 2 3 4 (NE 8 <sup>th</sup> Street to NE 24 <sup>th</sup> Street)
<b>Safety Data</b>	1 severe or fatality crash (2011 - 2022)
<b>Major Nearby Destinations</b>	Bellevue Square, Bellevue Downtown Park
<b>Population (600 Foot Buffer)</b>	7,600 (2019) 20,400 (2050)
<b>Employment (600 Foot Buffer)</b>	9,650 (2019) 17,600 (2050)
<b>Transit Route</b>	N/A





MAIN ST TO NE 10<sup>TH</sup> ST

# 08 100<sup>th</sup> Avenue NE



## Changes

- A** Convert curbside parking to one-way bike lanes between Main Street and NE 1<sup>st</sup> Street.
- B** Between NE 4<sup>th</sup> Street and NE 8<sup>th</sup> Street, reallocate 1 of 2 northbound lanes to provide a separated buffered two-way bicycle facility on the east side.
- Level of traffic stress meets MIP target (LTS 1) between NE 4<sup>th</sup> Street and NE 8<sup>th</sup> Street.

With changes, all intersections meet vehicle performance target of 1.0 V/C or lower.

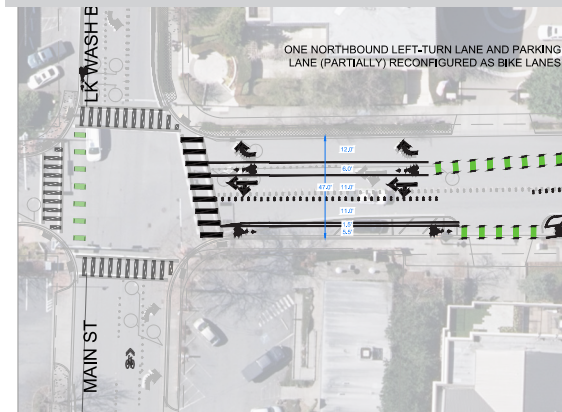
## Benefits

Direct bicycle access to Bellevue Square and Bellevue Downtown Park for people of all ages and abilities. Improves low-stress access in a dense residential area.

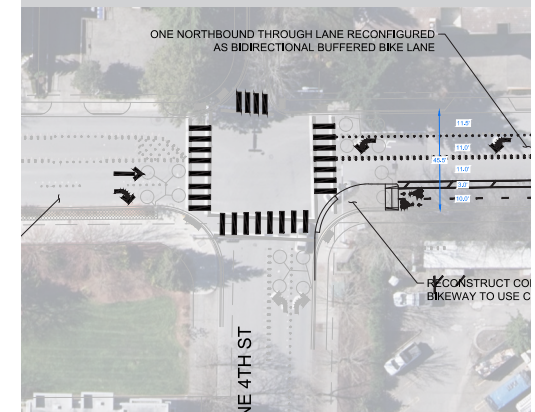
## Cost Estimate

**\$0.61M**

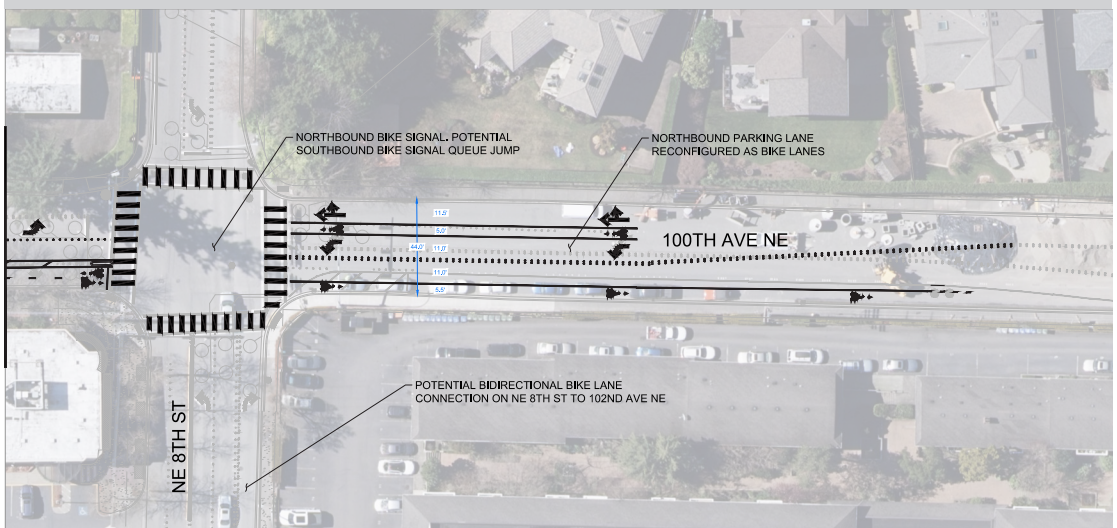
100<sup>th</sup> Avenue NE and Main Street



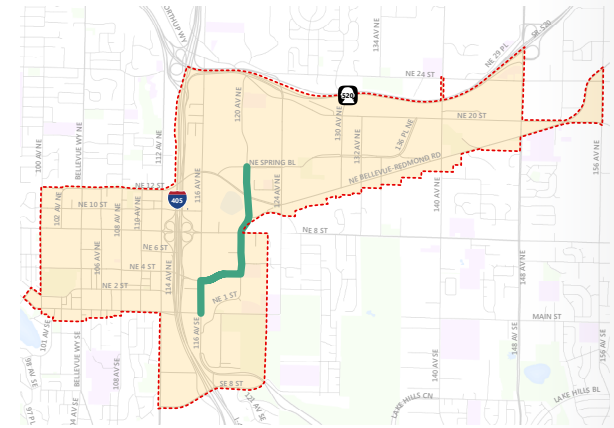
100<sup>th</sup> Avenue NE and NE 4<sup>th</sup> Street



100<sup>th</sup> Avenue NE and NE 8<sup>th</sup> Street



# 09 Wilburton Route



## Project Description

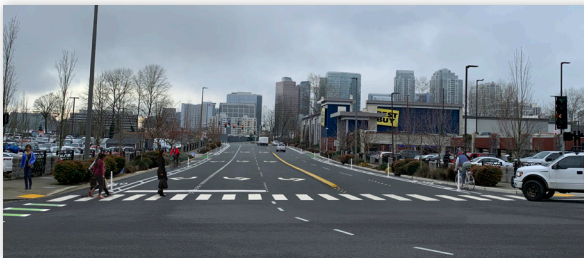
The Wilburton route along 116<sup>th</sup> Avenue NE, NE 4<sup>th</sup> Street, and 120<sup>th</sup> Avenue NE provides a main bicycle connection through the commercial portion of the Wilburton neighborhood and direct access to the Eastrail regional trail and Spring District/120<sup>th</sup> Link light rail station. This facility will close a key gap in the bicycle network between Main Street and Eastrail.

The proposed design retains two travel lanes in each direction and the two-way left turn lane on the entire route. The design installs one-way separated buffered bike lanes in each direction. A new protected bicycle corner will also be installed at the intersection of 116<sup>th</sup> Avenue NE and NE 4<sup>th</sup> Street to facilitate safe movements between the two bike routes.

Existing



Proposed



View west at NE 4<sup>th</sup> Street and 120<sup>th</sup> Avenue NE



View from SW corner of NE 2nd Place and 116th Avenue NE

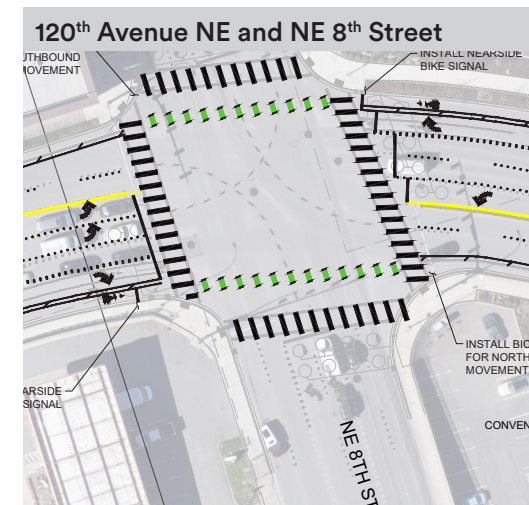
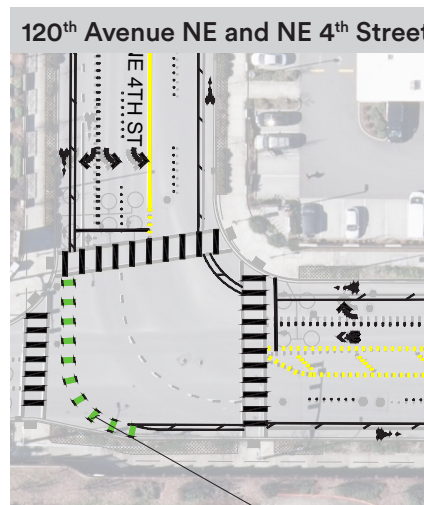
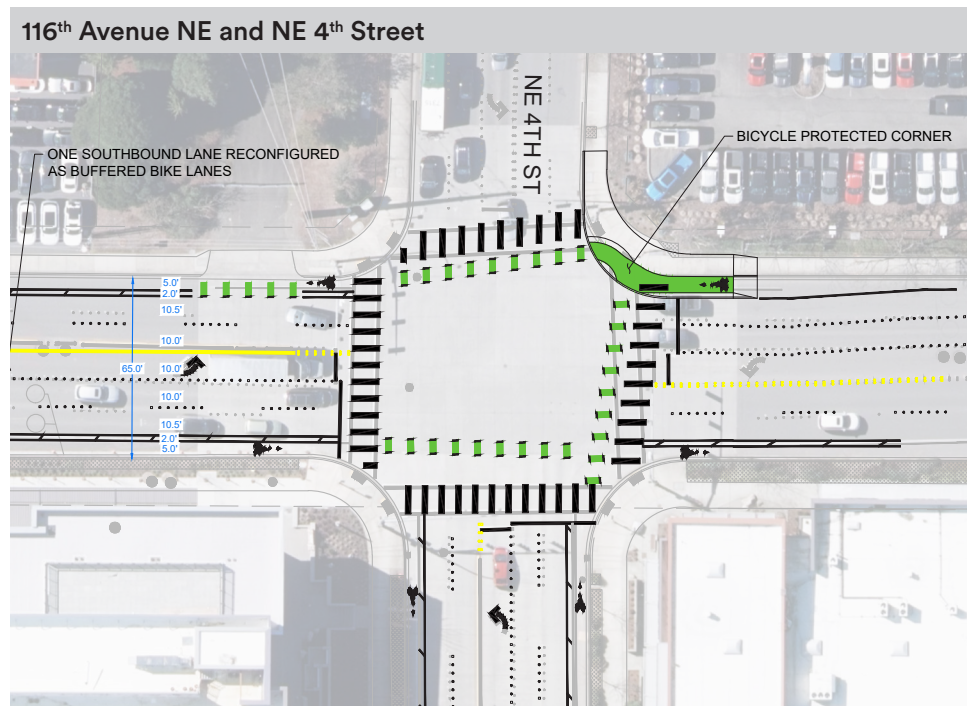
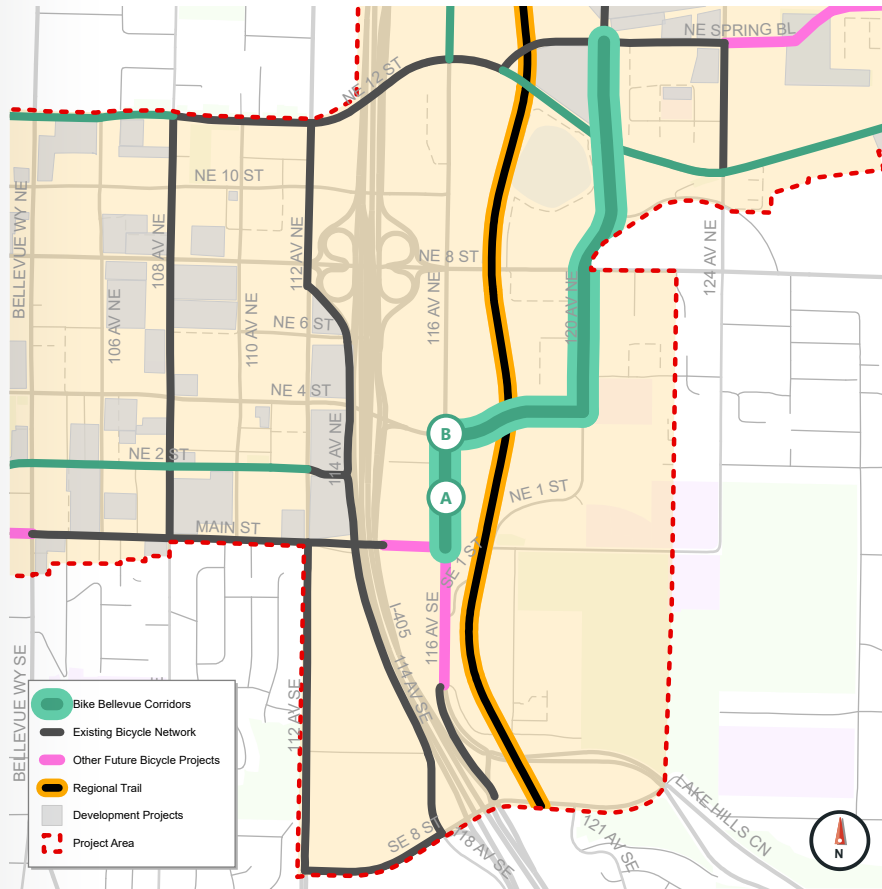
<b>Street Classification</b>	Major arterial
<b>Traffic Volume (ADT)</b>	12,000 - 20,000
<b>Posted Speed Limit</b>	30 mph
<b>Existing Bicycle Facility</b>	<ul style="list-style-type: none"> <li>No facility on 116<sup>th</sup> Avenue NE</li> <li>1-way painted bike lane on 4<sup>th</sup> Avenue NE</li> </ul>
<b>Existing Bike LTS</b>	1 2 3 4
<b>Target Bike LTS</b>	1 2 3 4
<b>Safety Data</b>	<ul style="list-style-type: none"> <li>On the Vision Zero High Injury Network.</li> <li>1 severe or fatality crashes (2011 - 2022)</li> </ul>
<b>Major Nearby Destinations</b>	Eastrail, major retailers
<b>Population (600 Foot Buffer)</b>	1,288 (2019) 1,976 (2050)
<b>Employment (600 Foot Buffer)</b>	5,973 (2019) 11,425 (2050)
<b>Transit Route</b>	King County Metro <b>271</b>





116<sup>TH</sup> AVE NE & NE 4<sup>TH</sup> STREET

# 09 Wilburton Route



### Changes

- A** Restripe channelization to provide separated buffered bike lanes while maintaining existing 5-lane cross section.
  - B** Protected bicycle corner at the intersection of 116<sup>th</sup> Avenue NE and NE 4<sup>th</sup> Street to improve westbound to southbound bicycle movement.
- Level of traffic stress meets MIP target (LTS 3) while providing enhanced separation.

No change. Proposed design does not impact existing vehicle operations.

### Benefits

Connects downtown Bellevue to Wilburton and Eastrail.

### Cost Estimate

**\$1.87M**



NE 12<sup>TH</sup> STREET TO NE 14<sup>TH</sup> STREET

# 10 116<sup>th</sup> Avenue NE

## Project Description

116<sup>th</sup> Avenue NE provides a connection between the Bridle Trails neighborhood, the SR 520 regional trail, downtown Bellevue, and the medical centers. This route would also provide direct access to the Spring District/120<sup>th</sup> Link station via the shared-use path along Spring Boulevard and NE 12<sup>th</sup> Street.

The proposed design closes the bicycle network gap along 116<sup>th</sup> Avenue NE between Northrup Way and NE 12<sup>th</sup> Street by converting one of two northbound lanes (south of the NE 12<sup>th</sup> intersection) to a right turn lane and removing the merge lane north of the intersection to provide conventional bike lanes on both sides of the street.



Existing



Proposed

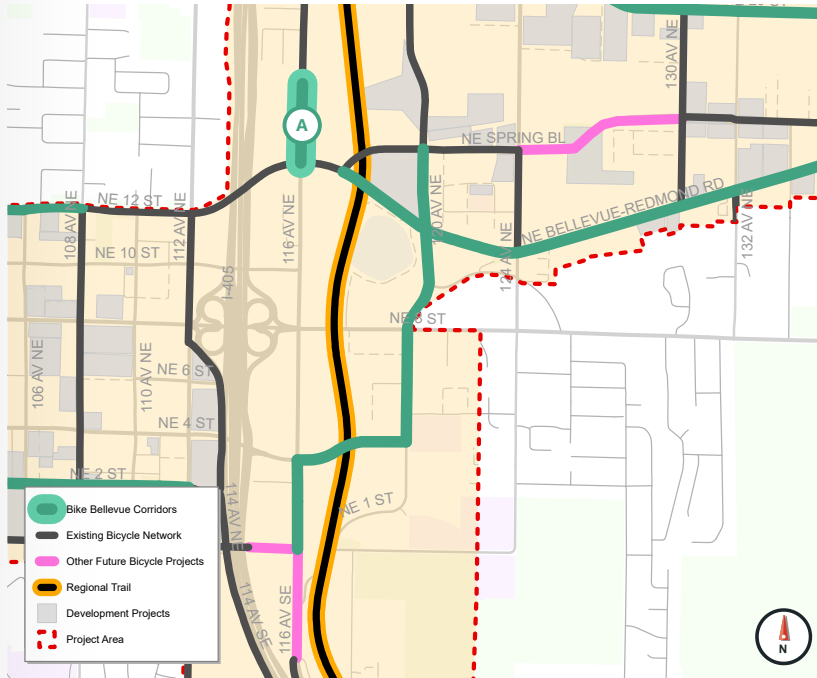


View south along 116th Avenue NE toward NE 12th Street



<b>Street Classification</b>	Minor arterial
<b>Traffic Volume (ADT)</b>	10,500 - 12,000
<b>Posted Speed Limit</b>	30 mph
<b>Existing Bicycle Facility</b>	No existing facility
<b>Existing Bike LTS</b>	1 2 3 4
<b>Target Bike LTS</b>	1 2 3 4
<b>Safety Data</b>	1 severe or fatality crash (2011 - 2022)
<b>Major Nearby Destinations</b>	Overlake Hospital, Seattle Children's Hospital
<b>Population (600 Foot Buffer)</b>	400 (2019) 550 (2050)
<b>Employment (600 Foot Buffer)</b>	9,600 (2019) 13,800 (2050)
<b>Transit Route</b>	King County Metro <b>250</b>

NE 12<sup>TH</sup> STREET TO NE 14<sup>TH</sup> STREET

# 10 116<sup>th</sup> Avenue NE



### Changes

- A** Install new conventional bike lanes on both sides of the street by removing the northbound merge lane (north of NE 12<sup>th</sup> Street) and converting the curb lane to a right turn lane (south of NE 12<sup>th</sup> Street).
-  Level of traffic stress improves from LTS 4 to LTS 3 and meets the MIP LTS target.
-  No changes to the existing V/C at 116<sup>th</sup> Avenue NE and NE 12<sup>th</sup> Street.

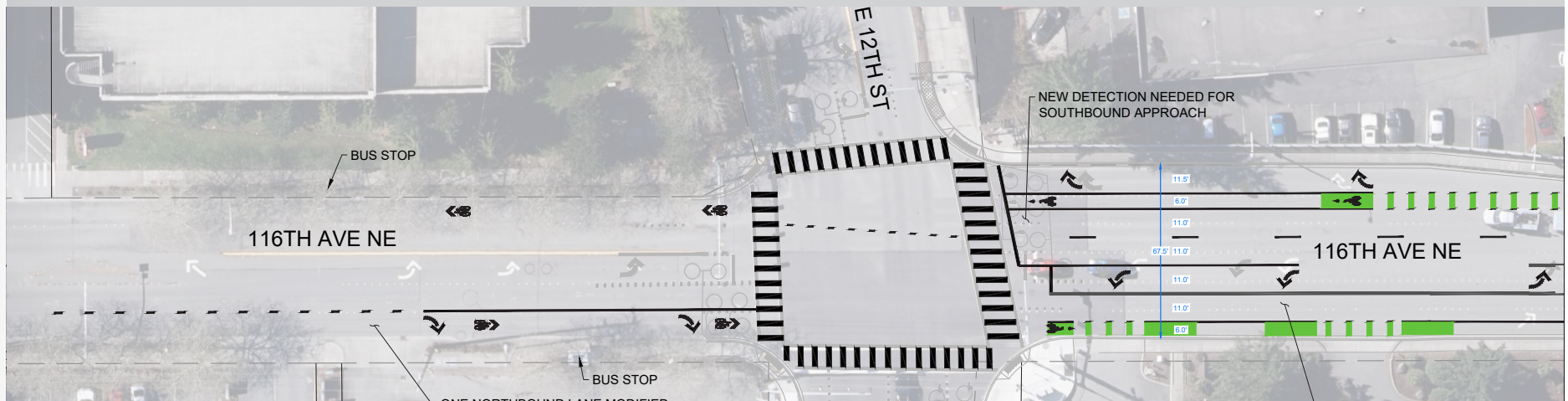
### Benefits

Closes a major gap in the bicycling network by connecting the 116<sup>th</sup> Avenue NE corridor from Northrup Way to NE 12<sup>th</sup> Street. NE 12<sup>th</sup> Street/Spring Boulevard has a low-stress connection to downtown Bellevue and the Spring District.

### Cost Estimate

**\$0.20M**

## 116<sup>th</sup> Avenue NE and NE 12<sup>th</sup> Street



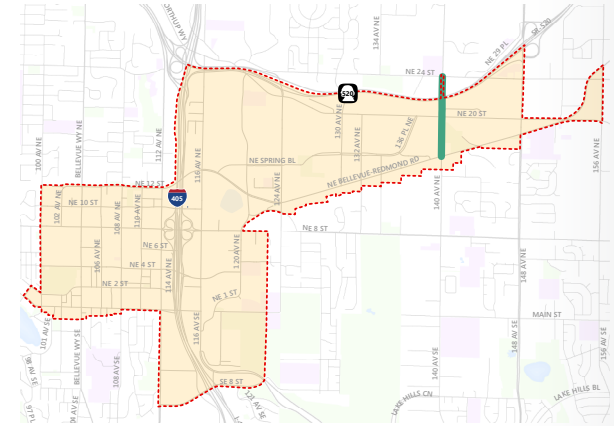
BEL-RED ROAD TO NE 24<sup>TH</sup> ST

# 11 140<sup>th</sup> Avenue NE

## Project Description

140<sup>th</sup> Avenue NE, a priority bicycle corridor, provides a continuous north-south connection between the neighborhoods of Bridle Trails to the north and Crossroads and Lake Hills to the south. The proposed design reallocates one southbound travel lane to provide separated buffered bike

lanes in both directions. Right turn conflicts between vehicles and bicycles will be managed by providing separate right turn phases at Bel-Red Road (WB), NE 20<sup>th</sup> Street (WB), and NE 24<sup>th</sup> Street (EB). Green pavement markings will be installed at major intersections.



Existing



Proposed



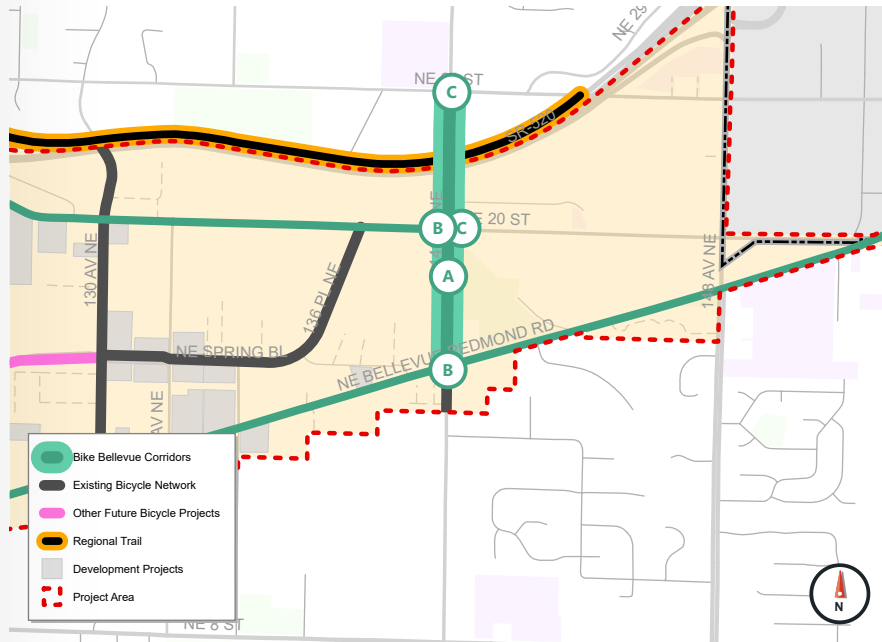
View from 140<sup>th</sup> Avenue NE and NE 18<sup>th</sup> Street looking south

<b>Street Classification</b>	Minor arterial
<b>Traffic Volume (ADT)</b>	21,000 - 25,000
<b>Posted Speed Limit</b>	30 mph
<b>Existing Bicycle Facility</b>	<ul style="list-style-type: none"> <li>Conventional bike lane (Northbound)</li> <li>Sharrow (Southbound)</li> </ul>
<b>Existing Bike LTS</b>	1 2 3 4 (Northbound) 1 2 3 4 (Southbound)
<b>Target Bike LTS</b>	1 2 3 4
<b>Safety Data</b>	On the Vision Zero High Injury Network
<b>Major Nearby Destinations</b>	Highland Park, grocery stores and other retail
<b>Population (600 Foot Buffer)</b>	9,300 (2019) 9,600 (2050)
<b>Employment (600 Foot Buffer)</b>	15,900 (2019) 31,400 (2050)
<b>Transit Route</b>	King County Metro <b>249</b>





BEL-RED ROAD TO NE 24<sup>TH</sup> ST

# 11 140<sup>th</sup> Avenue NE



### Changes

- A** Convert 1 of 2 southbound lanes to separated buffered bike lanes.
  - B** Separate bicycle and right turn signal phases at Bel-Red Road (WB), NE 20<sup>th</sup> Street (WB), and NE 24<sup>th</sup> Street (EB) to manage turning conflicts and improve safety.
  - C** Existing dual westbound left turn lanes at NE 24<sup>th</sup> Street and NE 20<sup>th</sup> Street will be converted to single left turn lanes.
-  Level of traffic stress improves from LTS 4 to LTS 3 southbound, and remains LTS 3 northbound. Does not meet the MIP target of LTS 1.

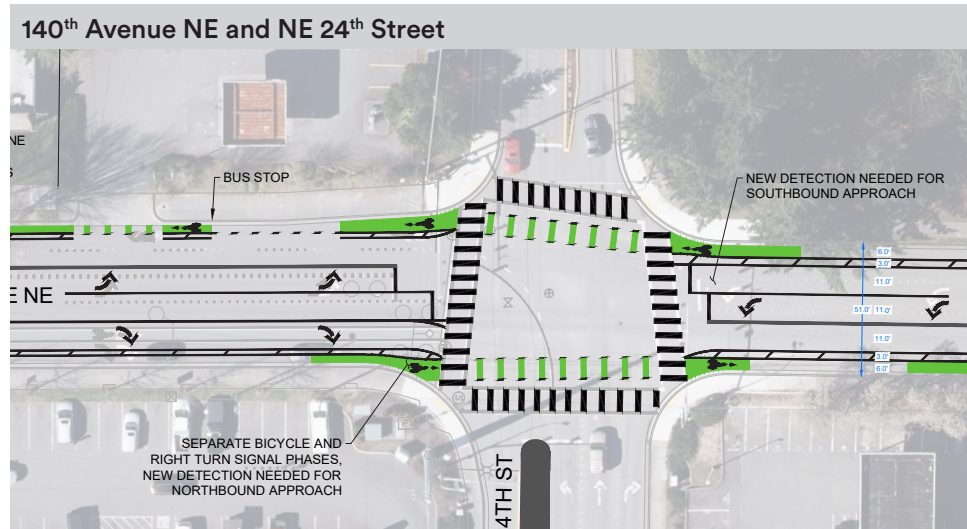
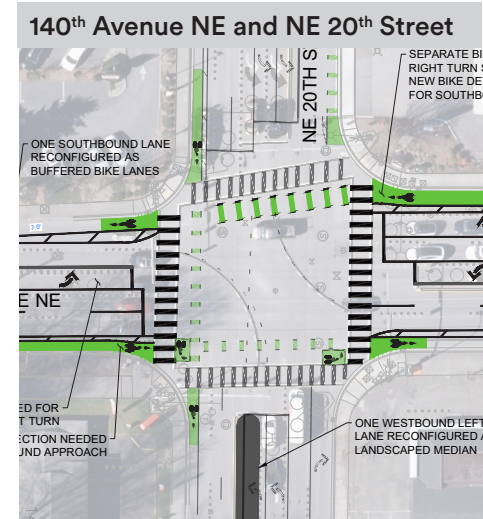
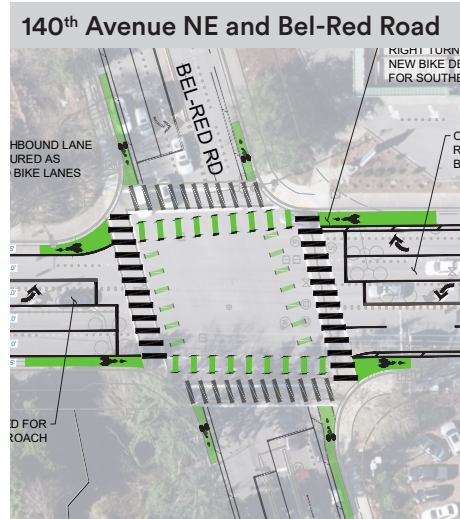
 With changes, the intersection of 140th Avenue NE and NE 24th Street (V/C = 0.97) does not meet the vehicle performance target for PMA 3 (V/C < 0.85).

### Benefits

Significantly improves safety on one of the few continuous north-south corridors through Bellevue. Provides enhanced access to many of the businesses along 140<sup>th</sup> Avenue NE.

### Cost Estimate

**\$1.76M**





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