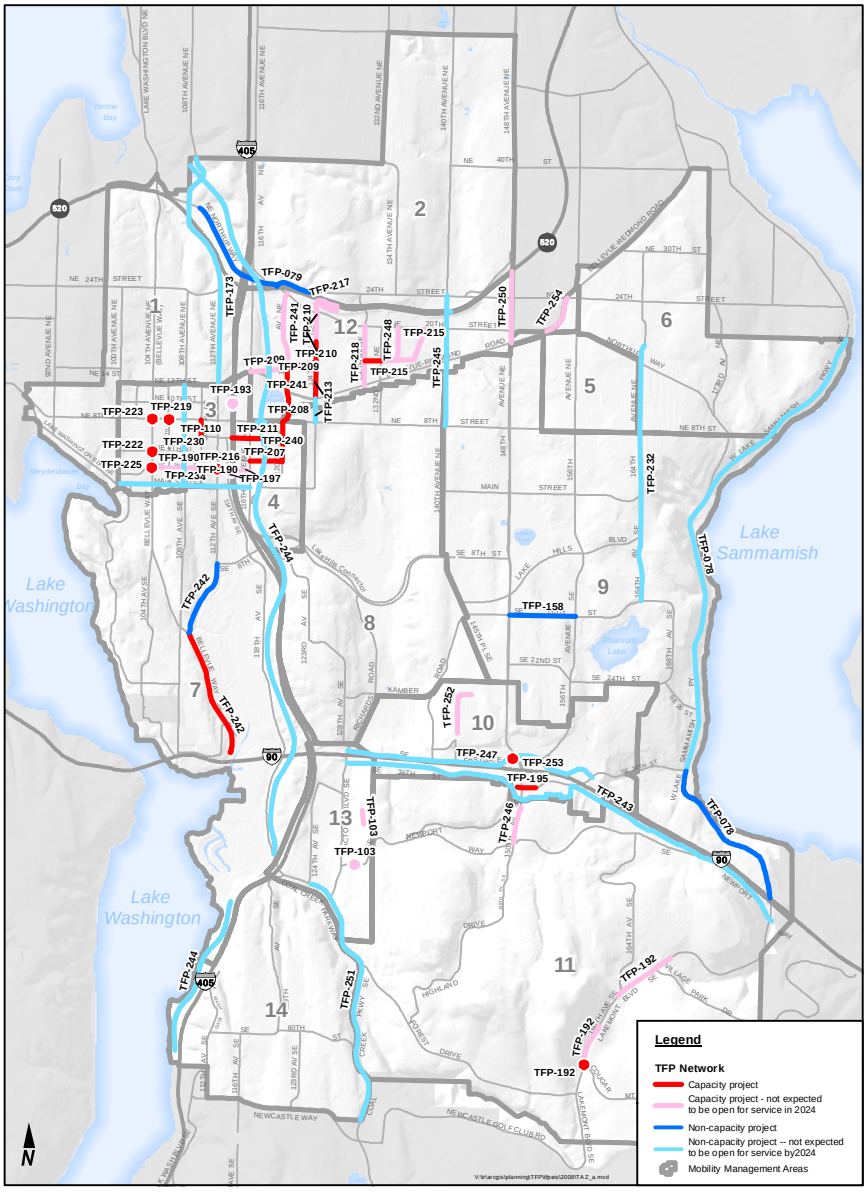
Final Environmental Impact Statement

2013–2024 Transportation Facilities Plan

City of Bellevue July 2013



City of Bellevue

Post Office Box 90012 ▪ Bellevue, Washington ▪ 98009 9012

July 25, 2013

TO: Recipients of the Final Environmental Impact Statement for the City of Bellevue 2013-2024 Transportation Facility Plan

This Final Environmental Impact Statement (FEIS) analyzes the potential citywide impacts of two alternatives for implementation of transportation facilities by the year 2024 to meet the City's Comprehensive Plan, Transportation Element, Mobility Management goals. This programmatic, or "non-project" FEIS is part of a phased environmental review as defined under the State Environmental Policy Act (WAC 197-11). Specific projects listed in the plan will undergo separate project level environmental review as they are funded for design and/or implementation.

The alternatives considered are:

Alternative 1, the "CIP Network" or no-action alternative assumes no future investment in transportation facilities beyond those included in Bellevue's current 2013-2019 Capital Investment Program (CIP) Plan or other funded regional or local agency plans.

Alternative 2, the Proposed 2013-2024 Transportation Facilities Plan (TFP) Alternative assumes additional funding for transportation facilities through 2024. The projects selected for this alternative were prioritized based on the following criteria (taken from the goals of the Comprehensive Plan):

- Level-of-Service (i.e. congestion management)
- Safety (vehicular, pedestrian and bicycle)
- Transit (improving service, facilities and/or access)
- Non-motorized (serving key locations and populations, providing connected facilities)
- Plan Consistency & Outside Funding (integration with local and regional plans, likelihood of attracting non-local funds)

Improvements identified in the proposed 2013-2024 TFP include roadway projects to support the long-range land use vision for the city and accommodate development activity anticipated in the 12-year plan period and projects to continue building out elements of the pedestrian and bicycle system networks. Capacity projects identified in the TFP provide the basis for the City's Transportation Impact Fee Program.

Next Steps

Following the Environmental Impact Statement phase of the process, the Bellevue City Council is expected to adopt the 2013-2024 TFP in August 2013. Implementation of TFP projects will occur over the next 12 years. For further information about the transportation facilities planning and implementation processes in Bellevue, please contact Michael Ingram, Senior Transportation Planner, 425-452-4166 or via e-mail at mingram@bellevuewa.gov.

Sincerely,

Carol V Helland

Carol V. Helland, Environmental Coordinator
Department of Development Services

Final Environmental Impact Statement

2013–2024 Transportation Facilities Plan

Prepared for:

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July 2013

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Prepared by Parametrix Inc. July 2013

Title VI Assurances

It is the City of Bellevue's policy to assure that no person shall, on the grounds of race, color, national origin or sex, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. Any person who believes his /her Title VI protection has been violated may file a complaint with the City of Bellevue. For Title VI complaint forms and procedures, please contact the Title VI Coordinator for the City of Bellevue Transportation Department at (425) 452-4496.

Fact Sheet

Proposal Title

2013–2024 Transportation Facilities Plan (TFP)

Description of Proposal

Adoption of a program of transportation improvements to be implemented over the next 12 years and to provide the basis for the City of Bellevue's Transportation Impact Fees.

Proponent

City of Bellevue, Transportation Department

Location

Citywide

Lead Agency

City of Bellevue

Responsible Official

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Staff Contacts

Proponent

Transportation Department
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EIS

Development Services Department
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Required Licenses and Permits

City of Bellevue, City Council Adoption

Final Environmental Impact Statement Authors and Principal Contributors

The Final EIS for the City of Bellevue 2013–2024 Transportation Facilities Plan has been prepared under the direction of the City of Bellevue Transportation and Development Services Departments. Research, analysis, and document preparation were performed by the following departments and firms:

City of Bellevue Transportation Department
Implementation Planning Group
Transportation Forecasting and Modeling Group

City of Bellevue Information Technology Department
Geographic Information Services Group

City of Bellevue Development Services Department

Parametrix Inc.
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Bellevue, WA 98004

Documents Incorporated by Reference

Addendum to Environmental Impact Statement Bel-Red Corridor Project, City of Bellevue, 12 February 2009 (Bellevue 2009c).

Final Environmental Impact Statement for the City of Bellevue Bel-Red Corridor Project, City of Bellevue, 19 July 2007 (Bellevue 2007)

2013 SEPA Addendum East Link Extension (Sound Transit 2013)

Final Environmental Impact Statement East Link Project (Sound Transit 2011)

Transportation 2040 Final Environmental Impact Statement (PSRC 2010)

Transportation 2040 Final Environmental Impact Statement Addendum (PSRC 2012)

Date of Final Environmental Impact Statement Issuance

July 25, 2013

Nature and Date of Final Action by City

Adoption of the 2013–2024 Transportation Facilities Plan anticipated August/September 2013.

Timing of Future Environmental Review

This EIS is part of a phased environmental review in accordance with WAC 197-11-060(5).

This document focuses on the impacts resulting from the adoption of the proposed plan including:

- Broad policy implications of adoption of alternatives
- The analysis of impacts on the general transportation system in the area
- The analysis of impacts related to traffic such as air quality and noise
- General analysis of impacts on natural and human environments.

Specific projects listed in the plan will undergo separate project-level State Environmental Policy Act (SEPA) review as they are funded for design and/or implementation. Project-level review may result in different procedural compliance for individual projects including Determinations of Significance, Mitigated Determinations of Non-significance, Determinations of Non-significance, adoption of this EIS, preparation of Supplemental EISs, preparation of new EISs, or review in compliance with the National Environmental Policy Act (NEPA).

Projects under the jurisdiction of the Washington State Department of Transportation (WSDOT) referenced in this EIS will undergo separate review by WSDOT as the lead agency under the authority of SEPA or NEPA.

It is anticipated that this EIS will be adopted for specific private development projects that generate trip demand consistent with the projections included in this analysis.

Location of Background and Supporting Documents

Data used during the preparation of this document may be viewed at the following location:

City of Bellevue
Service First Desk
1st Floor Bellevue City Hall
450 110th Avenue NE
Bellevue, WA 98009

Cost to the Public

Printed Copy $5.00

Copies may be purchased at the Service First Desk on the first floor of City Hall, 450 110th Avenue NE, Bellevue, WA 98004. Electronic copies may also be downloaded at: http://www.bellevuewa.gov/transportation-facilities-plan.htm.

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Acronyms and Abbreviations

ACS	American Community Survey
BCC	Bellevue City Code
BKR	Bellevue-Kirkland-Redmond
BMPs	best management practices
CAA	Clean Air Act
CAT	Climate Action Team
CFR	Code of Federal Regulations
CIP	Capital Investment Program
City	City of Bellevue
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CTR	Commute Trip Reduction
dB	decibel
dBA	A-weighted decibel
Ecology	Washington State Department of Ecology
EDNA	Environmental Designation for Noise Abatement
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESHB	Engrossed Substitute House Bill
FHWA	Federal Highway Administration
GHG	greenhouse gas
GIS	Geographic Information System
GMA	Growth Management Act

HOV	high-occupancy vehicle
Hz	hertz
I-90	Interstate 90
I-405	Interstate 405
ICLEI	International Council for Local Environmental Initiatives
IPCC	Intergovernmental Panel on Climate Change
Leq	equivalent sound level
Ldn	day-night sound level
LOS	level of service
MMA	Mobility Management Area
mpg	miles per gallon
MSATs	mobile source air toxics
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NGPA	Native Growth Protection Area
NGPE	Native Growth Protection Easement
NO_2	nitrogen dioxide
NOx	nitrogen oxides
NTSS	Neighborhood Traffic Safety Services
Pb	lead
PHS	Priority Habitats and Species
PM_{10}	particulate matter less than 10 micrometers in size
$PM_{2.5}$	particulate matter less than 2.5 micrometers in size
ppm	parts per million
PSCAA	Puget Sound Clean Air Agency
PSRC	Puget Sound Regional Council

RCW	Revised Code of Washington
RPZ	Residential Permit Parking Zone
SEPA	State Environmental Policy Act
SO_2	sulfur dioxide
Sound Transit	Central Puget Sound Regional Transit Authority
SOV	single-occupant vehicle
SOx	sulfur oxides
SR	State Route
TDM	Transportation Demand Management
TFP	Transportation Facilities Plan
TIP	Transportation Improvement Program
TNM	Traffic Noise Model
V/C	volume to capacity ratio
VMT	vehicle miles traveled
VOC	volatile organic compound
WAC	Washington Administrative Code
WASIST	Washington State Intersection Screening Tool
WDFW	Washington Department of Fish and Wildlife
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation

Corrections and Clarifications to Draft EIS

The table below summarizes the corrections and clarifications reflected in this Final Environmental Statement (EIS) that were made to the text presented in the Draft EIS for the 2013–2024 Transportation Facilities Plan (TFP), issued for public review on April 11, 2013.

Location in Final EIS	Correction / Clarification	Notes
Chapter 2, Section 2.2.1 discussion of revenue sources	Revised figures for proportion of TFP funding that will support roadway and intersection improvements vs pedestrian and bicycle facility elements.	Updated analysis using project cost allocations based on year of expenditure dollars for TFP projects in CIP, 2020 dollars for TFP projects not in CIP.
Chapter 2, Table 2-1	Augmented descriptions of TFP-211, TFP-215 to acknowledge stream crossings in project area.	Addresses comment from Muckleshoot Indian Tribe.
Chapter 3, Tables 3-1, 3-3. Appendix D, Tables D-7, D-8. Section 3.2.2 discussion of North Bellevue / Bridle Trails forecast conditions. Section 3.4 discussion of Significant Unavoidable Adverse Impacts.	Congestion Allowance for the Bridle Trails MMA permits 4 intersections to exceed the areawide LOS standard.	The Draft EIS incorrectly indicated a congestion allowance level of 3 intersections for the Bridle Trails MMA, a level that would put the 2024 forecast level of congestion over the standard in the CIP Alternative and TFP Alternative. Under the correct congestion allowance of 4 intersections, the 2024 forecast conditions meet the City standard under both alternatives (as well as the TFP Network Plus scenario).
Chapter 3, Table 3-1, Section 3.2.1 and 3.2.2 discussion of Overall System Performance and Intersection Operations. Table C-8 Intersection LOS.	Slight revisions to 2024 traffic volumes and intersection volume/capacity (V/C) values. Minor revisions to text for each Mobility Management Area.	Updated traffic analysis, based on TAZ-level land use values in Draft EIS Table D-1.
Chapter 4, Table 4-1	Corrected values for state $PM_{2.5}$ limits, nitrogen dioxide limits. Corrected footnotes and state code references.	Corrects errors in Draft EIS.
Chapter 5, Tables 5-8, 5-9, 5-10, 5-11 and Section 5.2 discussion of noise impacts.	Revisions to modeled values for 2024 noise levels at intersections 15 and 26.	Updated forecast for 2024 traffic volumes that are input to the TNM noise modeling.
Chapter 6, Table 6-2. Section 6.2.2 discussion of Land Use Impacts.	Potential impacts of TFP-193 to structures and parking are greater than previously identified.	Updated orthophotos reveal presence of new office building that may be impacted by addition of I-405 southbound off-ramp to NE 10th Street.
Chapter 6, Section 6.2.2 discussion of Land Use Impacts. Section 6.4 discussion of Significant Unavoidable Adverse Impacts.	TFP-242 no longer presumed to be constructed in conjunction with Sound Transit East Link project.	Decisions by the Bellevue City Council and Sound Transit Board have separated the prospective Bellevue Way SE HOV lane segment between the 112th Avenue "Y" and the South Bellevue Park-and-Ride from the East Link project. East Link project EIS Addendum includes analysis of potential project impacts that will be relevant even if project pursued separate from East Link.

Location in Final EIS	Correction / Clarification	Notes
Chapter 7, Section 7.1.4 discussion of Aquatic Resources.	Reference added to new Water Crossing Design Guidelines released by Washington Department of Fish and Wildlife.	New guidelines released on May 13, 2013. Addresses comment from Muckleshoot Indian Tribe.
Chapter 7, Table 7-9	Various corrections to projects associated with MMAs and streams. Removed projects 213, 217 because they are not in vicinity of any stream.	Corrects errors in Draft EIS.
Chapter 7, Table 7-9	Augmented table to indicate anticipated impact of projects in ameliorating conditions for fish passage.	Addresses comment from Muckleshoot Indian Tribe that more detail of stream crossing treatments and impacts be included.
Appendix B	Scoping comment added.	Scoping comment message from Muckleshoot Indian Tribe inadvertently omitted from Draft EIS.
Appendix D discussion of Land Use Projections; Appendix E.	Clarified how the City develops land use projections, why development may be less than maximum FAR allowed.	Addresses comment from Kemper Development Company.
Appendix D, Table D-1	Shifted Institutional land use from “Office” category to “Others” and Hotel land uses from “Retail” to “Others.” (Commercial land use total unchanged.)	Aligns data in summary table with TAZ-level data in Table E-1.
Appendix D, Tables D-2 and D-3	Corrected totals for 2024 forecast land use at MMA and citywide scales (Table D-2). Revised delta values between 2012 base year and 2024 horizon year (Table D-3).	Provides accurate roll-up of 2024 TAZ-level data.
Appendix D, Trip Generation/Mode Choice	Clarified that forecast mode choice is determined within the travel demand model, based on various factors. Commute mode information provided from Bellevue Mode Share Surveys and American Community Survey describes existing conditions; this is provided for reference only.	Addresses comment from Wright Runstad & Company.

Chapter 1. Background and Summary

The City of Bellevue (City) is proposing to adopt its 2013–2024 Transportation Facilities Plan (TFP), which serves as the City's 12-year transportation implementation planning document. It comprises priority projects detailed in the long-range facility plans and other projects that represent emerging transportation facility needs and opportunities.

The City's first TFP for the years 1991–2002 was adopted by the Bellevue City Council in 1990. Subsequent plan updates were adopted for the years 1994–2005, 1996–2007, 1998–2009 (an interim plan), 2001–2012, 2004–2015, 2006–2017, and 2009–2020. A copy of the current 2009-2020 TFP is posted at: http://www.bellevuewa.gov/transportation-facilities-plan.htm.

The Washington State Environmental Policy Act (SEPA) requires government officials to consider the environmental consequences of a Proposed Action. Under SEPA, the TFP is considered a Proposed Action. As such, this Final Environmental Impact Statement (EIS) has been prepared. This Final EIS will assist the public and agency decision-makers in considering the environmental effects of proposed changes to the City's current 2009–2020 TFP. The projects from the 2009–2020 TFP that have been completed, as well as projects that are not proposed to be carried into the 2013–2024 TFP, are summarized in Appendix C.

1.1. Purpose of the Transportation Facilities Plan

The TFP serves as the City's 12-year, or intermediate-range, transportation planning document. It serves as a bridge between long-range facility plans in the City's Comprehensive Plan and the fully financed Capital Investment Program (CIP). More information about these plans and their relationship to each other is presented in Chapter 2 of this document. The TFP includes high-priority projects from the City's long-range plans that address future transportation and land use needs and opportunities. Projects included in the plan may address roadway/intersection capacity, safety/operations, walkway/bikeway mobility, and/or maintenance. Updated every 2 to 3 years, the TFP is a "financially constrained" plan; the identified cost of the projects in the TFP is balanced with the City's transportation revenue projections for the 12-year planning period. Some projects included do not have full funding for implementation; they have placeholder funding for initial design or property acquisition and will need additional funding in subsequent TFP updates. The TFP serves several functions:

- It provides the first level of project prioritization necessary to identify projects for funding in the adopted CIP. The CIP presents a schedule of major public facility improvements that will be implemented over the next 7 years. Project design, land acquisition, construction costs, and the projected means of financing these costs are integral components of the plan.
- It serves as the basis for the City's Transportation Impact Fee Program. The roadway and intersection capacity projects adopted in the TFP are used to calculate the impact fees

charged to new land use developments. The fees cover a portion of the cost of capacity needed to serve the new development.

- It describes current and future environmental conditions through this EIS. Prepared in conjunction with each TFP update, this TFP EIS documents potential cumulative impacts to the environment and the citywide transportation system that may occur due to 12 years of projected land use growth and the implementation of the projects identified in the TFP.

1.2. Environmental Review

This Final EIS provides qualitative and quantitative analysis of environmental impacts as appropriate to the general nature of this planning effort. The adoption of comprehensive plans or other long-range planning activities is classified by SEPA as a non-project (i.e., programmatic) action. A non-project action is defined as an action that is broader than a single, site-specific project and involves decisions on policies, plans, or programs. An EIS for a non-project proposal does not require site-specific analyses; instead, the EIS discusses impacts and alternatives appropriate to the scope of the non-project proposal and to the level of planning for the proposal (Washington Administrative Code [WAC] 197-11-442).

The adoption of the TFP is classified under SEPA as a non-project action. Consistent with SEPA, the City issued a Notice of Determination of Significance, Notice of Environmental Impact Statement Scoping Period, and Notice of Public Meeting on October 25, 2012. Appendix B contains a copy of this notice, as well as the comments that were submitted during the scoping period and responses to those comments.

The analysis in this Final EIS is not intended to satisfy individual project action SEPA requirements such as the review required for future land use or building permit applications. Additional detailed environmental review of transportation projects will occur as specific projects are moved into the implementation phase.

1.2.1. Transportation Facilities Plan Non-Project Environmental Analysis

Based on comments received from the general public and decision-makers, the City determined that the scope of this environmental analysis should focus on potential impacts on the following resource areas:

- Transportation
- Air quality
- Noise
- Land use and aesthetics
- The natural environment.

Chapters 3 through 7 of this document discuss potential impacts on these resources which may result from the Transportation Faciliteis Plan (TFP) Network. System-wide qualitative and quantitative analyses are presented in this document. Project-specific impacts are not addressed.

1.2.2. Previous Environmental Review

The current TFP includes a variety of plans and programs that have undergone environmental review. The Fact Sheet at the beginning of this Final EIS indicates environmental documents incorporated by reference.

1.2.3. Relationship to Growth Projections

This Final EIS presents the potential citywide impacts that could occur if or when two outcomes happen:

1. The City's 12-year land use growth projections are realized (see Appendix E).
2. The City's transportation facilities are upgraded based on the projects identified in the City's adopted CIP and/or the proposed TFP.

City staff and developers rely on the TFP EIS for disclosure of the cumulative impacts of growth on the built and natural environments. This analysis is used for the review and approval of development applications. Because this is a non-project EIS, however, it is not possible to predict the exact location or amount of new development between the present and 2024. In addition, new development may be permitted on parcels for which the land use estimates did not project sufficient growth; therefore, the analysis presented in this EIS must be regarded as a comparison of potential impacts rather than a strict projection. Actual land use growth and its impacts on the transportation system and other elements of the built and natural environments are not likely to exceed the cumulative land use projections and impacts disclosed in this TFP EIS.

If future growth exceeds estimates used in this EIS analysis, the City can address these changes by one, or a combination of, the following options:

- Address the additional growth and impacts as part of a future TFP EIS. The TFP and its related EIS are updated approximately every 2 to 3 years. Updates are a crucial part of the process so that the reality of actual development patterns, updated land use growth projections, adjustments to the existing transportation network, and the evolution of future transportation plans are reflected in the citywide impact analysis.
- Issue a supplement to this TFP EIS to incorporate the additional land use growth and its associated impacts.
- Require the development to implement additional transportation system improvements, reduce the scope of the proposed development, or defer the development until the CIP and/or TFP are updated to include such improvements. Improvements required of developers as part of the development review process are included in subsequent TFP networks, once those improvements are guaranteed for implementation.

1.2.4. Steps in the Environmental Process

The Draft EIS was circulated for a 30-day public review period to invite written comments from the general public, tribes, permitting agencies, and agencies with jurisdiction over the areas where the TFP projects may have potential environmental impacts. This Final EIS provides responses to comments received during the Draft EIS comment period in Appendix A. Following completion of the Final EIS, the Bellevue City Council will make its decision on the TFP.

1.3. Summary of Alternatives

Two alternatives are considered for the 2013–2024 TFP and are analyzed in this environmental document. These alternatives are described in detail in Chapter 2 of this Final EIS.

1.3.1. CIP Network Alternative

The CIP Network alternative includes all the projects that the City, along with its local jurisdiction and regional agency partners, has committed to fund and implement within the city limits; these projects are shown in Figure 1-1 and are listed in Table 2-1.

There are 11 projects included in the CIP Network alternative; 9 projects are from the adopted 2013–2019 CIP, and 2 projects are assumed to be built or funded by others within the City. Nine projects are roadway capacity projects and two are non-capacity improvement projects.

Because this alternative is based on existing project plans with secured funding, it is considered a "no action" alternative. The City Council is not required to take any additional action to implement the CIP Network alternative if it chooses not to adopt the proposed 2013–2024 TFP.

1.3.2. TFP Network Alternative

The proposed Transportation Facilities Plan, referred to as the TFP Network alternative, includes all of the 11 projects included in the CIP Network alternative plus an additional 32 roadway and non-motorized projects, which total 43 projects; Figure 1-1 shows these projects.

The TFP Network includes 28 capacity projects, with the remaining 15 addressing non-capacity needs (generally pedestrian and bicycle facilities and/or transit access). Eighteen of the capacity projects are designated as impact fee projects because the improvement is expected to be implemented and open for use by 2024.

This analysis also includes a variation on the TFP Network alternative, the "Plus" scenario (referred to as the TFP Network Plus scenario). This scenario differs from the TFP Network alternative in one respect only: it fully implements TFP-209, opening for use by 2024 the NE 15th Street segment between 116th Avenue NE and 120th Avenue NE (as well as the connecting segment of NE 15th Street between 120th Avenue NE and 124th Avenue NE, which is implemented in the TFP Network alternative).

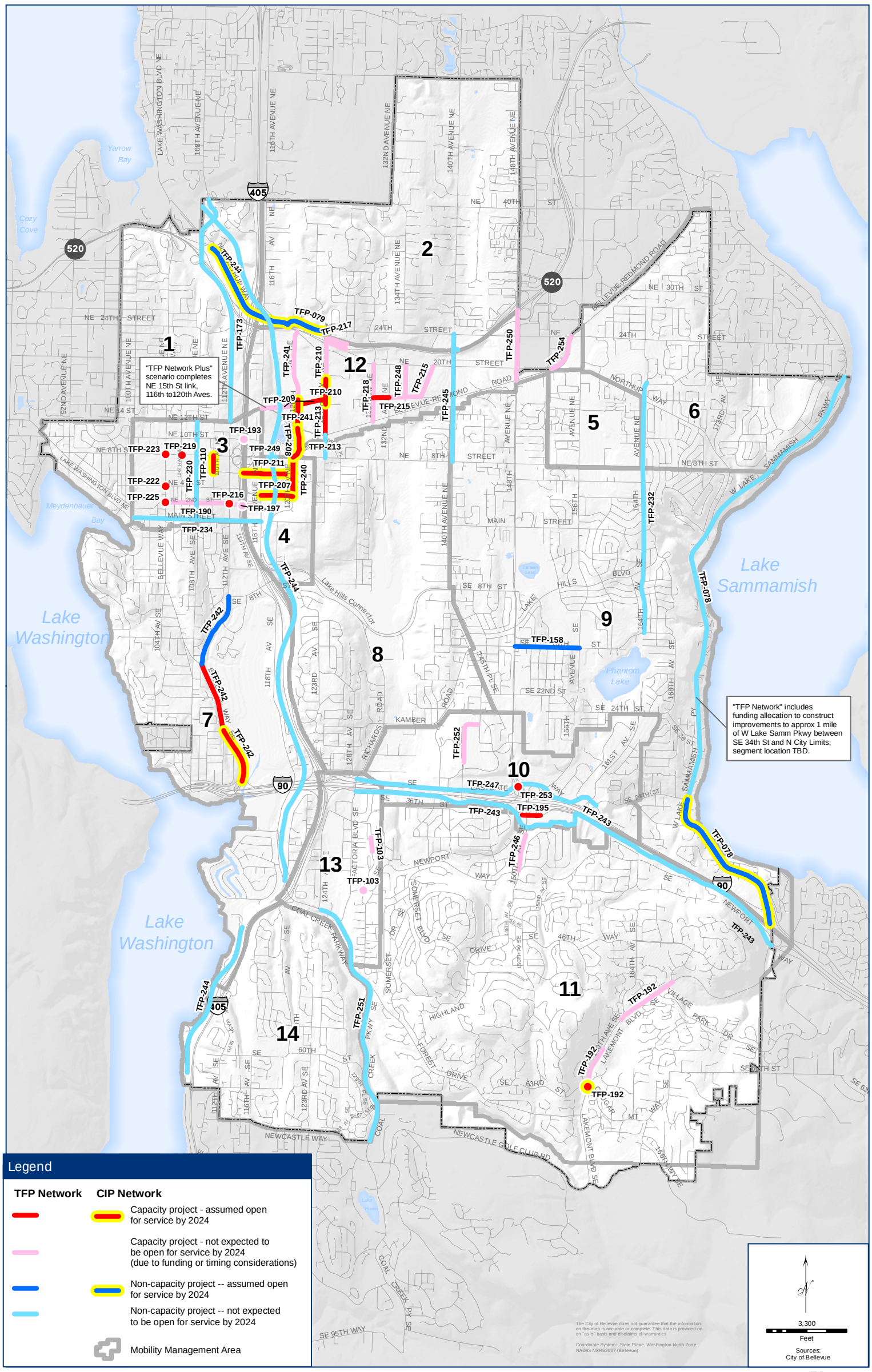


Figure 1-1. Proposed 2013–2024 Transportation Facilities Plan Alternative and CIP Network Projects

1.4. Summary of Potential Impacts and Mitigation Measures

Chapters 3 through 7 describe the affected environment, impacts, and mitigation measure analyses of this Final EIS. Summary statements presented in Table 1-1 are considerably abbreviated from the full discussions and do not include explanations of terminology. Summary statements of the potential impacts also appear here in the absence of the context of existing environmental conditions (the affected environment). For these reasons, readers are encouraged to review the more comprehensive discussion of issues of interest in Chapters 3 through 7 to formulate the most accurate impression of impacts associated with the TFP Network and CIP Network alternatives.

Table 1-1. Summary of Potential Impacts of the CIP Network Alternative and TFP Network Alternative

Subject	CIP Network Alternative	TFP Network Alternative
Transportation		
Impacts	**System Performance** In general, volumes on arterials would increase at a rate consistent with the average over the next 12 years. As development, population, and traffic volumes increase, intersections in all MMAs are predicted to operate at worsened LOS conditions between now and 2024. Areas with the greatest increase (i.e., worsening) in traffic volumes are the Wilburton and Bel-Red MMAs. In both of these areas, increases at some locations are projected to exceed 100% between now and 2024. In general, the change of 2024 roadway volumes over existing are projected to be within 5% of each other, under the two alternatives and the TFP Network Plus scenario. The CIP Network volumes are expected to be a little higher at some locations, and the TFP Network or TFP Network Plus volumes a little higher at others. Two MMAs (4 and 11) are projected to exceed areawide LOS standards in 2024. In both MMA 4 and 11, the TFP Network Plus scenario is expected to improve areawide LOS compared to the TFP Network alternative.	**System Performance** Impacts are generally as described under the CIP Network alternative. **Neighborhood Impacts** Because there are more capacity projects under the TFP Network alternative, it may reduce neighborhood cut-through traffic to a greater extent than the CIP Network alternative. Two TFP Network projects include implementation or evaluation of neighborhood protection measures as a scope element. **Safety** Because there are more sidewalk and bicycle projects under the TFP Network alternative, it may improve safety conditions for pedestrians and bicycles to a greater extent than the CIP Network alternative. **Pedestrian/Bicycle Impacts** The greater number of projects included under the TFP Network alternative may result in greater improvement to non-motorized mobility than under the CIP Network. The TFP Network will bring the Pedestrian Network to 73% completion and the Bicycle Network to 50% completion.

Table 1-1. Summary of Potential Impacts of the CIP Network Alternative and TFP Network Alternative (Continued)

Subject	CIP Network Alternative	TFP Network Alternative
Transportation (Continued)		
Impacts (Continued)	**Neighborhood Impacts** In general, the proposed capacity projects under the CIP Network alternative and TFP Network alternative do not directly respond to residents' concerns about traffic volumes or speeds on their neighborhood streets. (Only one project specifically includes this scope element.) Capacity projects can reduce spillover traffic onto local streets, however, by improving the traffic flow on the City's main arterials. Most of the capacity projects in the CIP Network and TFP Network alternatives either directly or indirectly address this concern. Because there are fewer capacity projects than under the TFP Network alternative, the CIP Network alternative may reduce neighborhood cut-through traffic to a lesser extent than the TFP Network alternative. **Safety** The TFP identifies projects at specific locations to address inherent design or engineering deficiencies that may result in accidents. In some cases, capacity projects help resolve hazards resulting from traffic congestion; other projects such as the addition of turning lanes may improve safety by lowering the number of potential vehicle conflict points. Sidewalk and bicycle projects improve safety conditions for pedestrians and bicyclists by separating them from vehicular traffic. Because there are fewer sidewalk and bicycle projects than under the TFP Network alternative, the CIP Network alternative may improve safety conditions for pedestrians and bicycles to a lesser extent than the TFP Network alternative. **Pedestrian/Bicycle Impacts** Fewer projects are included under the CIP Network alternative, leading to less improvement to non-motorized mobility than under the TFP Network. The CIP Network will bring the Pedestrian Network to 72% completion and the Bicycle Network to 49% completion.	

Table 1-1. Summary of Potential Impacts of the CIP Network Alternative and TFP Network Alternative (Continued)

Subject	CIP Network Alternative	TFP Network Alternative
Transportation (Continued)		
Mitigation Measures	The capacity, safety, operations, and non-motorized projects included in both alternatives would reduce congestion, improve mobility, and improve safety for vehicular traffic, bicyclists, and pedestrians. The TFP Network alternative and TFP Network Plus scenario include more projects than the CIP Network alternative, and thus are expected to improve overall safety and mobility conditions to a greater extent. The projects included in the CIP and TFP Network alternatives and the TFP Network Plus scenario would be expected to improve transportation conditions; therefore, no mitigation is recommended.	
Unavoidable Adverse Impacts	The analysis of 2024 conditions indicates that V/C is projected to exceed areawide LOS standards in two MMAs under the CIP and TFP Network alternatives and the TFP Network Plus scenario. Wilburton (MMA 4) is projected to exceed its standard of 0.90, and Newcastle (MMA 11) is projected to exceed its standard of 0.80. As compared to the CIP Network alternative, the TFP Network alternative is projected to slightly improve the areawide V/C in Wilburton and slightly degrade the areawide V/C in Newcastle. The TFP Network Plus scenario is expected to improve the areawide V/C in Wilburton compared to the CIP Network and TFP Network alternatives. In Newcastle, the TFP Network Plus scenario would slightly degrade the areawide V/C. Although the TFP Network alternative and TFP Network Plus scenario have little or no adverse effect on the areawide LOS of these MMAs, and generally improve conditions, the exceedance of the areawide standard in itself can be considered a significant unavoidable adverse effect. No other significant unavoidable adverse impacts on the transportation system were identified as a result of the CIP Network and TFP Network alternatives and the TFP Network Plus scenario.	
Air Quality		
Impacts	Future Mobile Source Air Toxic (MSAT) emissions likely to be lower than current conditions in nearly all cases. **Greenhouse Gases** Analysis performed for the PSRC regional Transportation 2040 plan indicates reduction in greenhouse gas (GHG) emissions from the transportation sector under either of two scenarios: a Likely scenario and an Aggressive scenario. The differences largely relate to fuel and fleet mix; the Aggressive scenario would be required to meet Bellevue community goals. **Construction Impacts** Potential construction impacts would be temporary and localized and could include dust; diesel, heavy truck, and equipment emissions; and odors. Construction equipment and materials hauling could also affect traffic flow on city streets, which could temporarily affect air quality. **Transportation Conformity Analysis** Ambient carbon monoxide (CO) concentrations at all four intersections analyzed show slight increases in 2024 from existing conditions (owing to increased traffic volumes). All are within National Ambient Air Quality Standards.	Future MSAT emissions are likely to be lower than current conditions in nearly all cases. The proposed roadway and intersection widening improvements and new roadway links contemplated as part of both the CIP Network alternative and the TFP Network alternative would have the effect of moving some traffic closer to nearby homes and businesses. The TFP Network alternative includes more projects of this type than the CIP Network alternative; therefore, there may be localized areas where ambient concentrations of MSAT emissions could be higher with the TFP Network alternative than under the CIP Network alternative. **Greenhouse Gases** Impacts are generally as described under the CIP Network alternative. However, overall VMT is essentially the same under both alternatives. **Construction Impacts** Impacts are generally as described under the CIP Network alternative. **Transportation Conformity Analysis** Impacts are generally as described under the CIP Network alternative. Analyzed levels of forecast CO are essentially the same under both

alternatives.

Table 1-1. Summary of Potential Impacts of the CIP Network Alternative and TFP Network Alternative (Continued)

Subject	CIP Network Alternative	TFP Network Alternative
Air Quality (Continued)		
Mitigation Measures	**Incorporated Plan Features** The City should require all construction contractors to implement air quality control plans for construction activities. The air quality control plans should include best management practices (BMPs) to control fugitive dust and odors emitted by diesel construction equipment. During construction, dust from excavation and grading could cause temporary, localized increases in the ambient concentrations of fugitive dust and suspended particulate matter. The City should adopt fugitive dust control measures specified in the brochure Guide to Handling Fugitive Dust from Construction Project published by the Associated General Contractors of Washington. The following BMPs would be used to control fugitive dust: ▪ Use water sprays or other non-toxic dust control methods on unpaved roadways. ▪ Minimize vehicle speed while traveling on unpaved surfaces. ▪ Prevent track-out of mud onto public streets. ▪ Cover soil piles when practical. ▪ Minimize work during periods of high winds when practical. Typical mitigation measures to minimize air quality and odor issues caused by tailpipe emissions include the following: ▪ Maintain the engines of construction equipment according to manufacturers' specifications. ▪ Minimize idling of equipment while the equipment is not in use. ▪ Locate stationary equipment as far as practical from sensitive receptors. **Applicable Regulations and Commitments** As part of future project-specific SEPA and NEPA documentation for individual new roadway improvement projects, the City may be required to conduct CO hot-spot modeling (as required under WAC 173-420) to demonstrate that the projects would not cause localized impacts related to increased CO emissions from vehicle tailpipes at congested intersections. **Other Potential Reduction Measures** The City could identify GHG reduction measures in its projects and explain why other measures are not included or are not applicable.	
Unavoidable Adverse Impacts	No significant unavoidable adverse impacts on regional or local air quality are anticipated. Temporary, localized dust and odor impacts could occur during the construction activities.	

Table 1-1. Summary of Potential Impacts of the CIP Network Alternative and TFP Network Alternative (Continued)

Subject	CIP Network Alternative	TFP Network Alternative
Noise		
Impacts	Construction of roadways would temporarily increase short-term noise levels when projects are implemented. The impacts would be most severe at residential locations in the vicinity of construction. Noise increases would result from on-site construction activities, especially during site preparation, grading, and other earthmoving activities, as well as from construction-related vehicle traffic delivering materials to and from the construction site. The increase in noise levels will be nearly the same (1 dB or less) for most roadways under both alternatives. Background growth between the years 2006 and 2024 is a generally more substantial component of traffic noise levels in the future than changes in traffic patterns or increases related to projects in the alternatives. Traffic noise levels are not predicted to increase by 5 dB or more, which would have resulted in a "definitely noticeable" increase at any modeled locations due to implementation of the TFP Network alternative. Traffic noise levels at a range of residential locations are predicted to exceed the City's threshold of 67 dBA Leq, at which a project-level noise analysis is required under existing conditions, as well as under the CIP Network and TFP Network alternatives in the future. Because noise levels along certain roadways are predicted to exceed the City's threshold of 67 dBA Leq, which requires a project-level noise analysis, more detailed acoustical analysis of proposed projects will be addressed at the project implementation phase where warranted.	
Mitigation Measures	**Construction Noise** Roadway construction occurring outside of exempt hours should follow noise-reducing construction practices to ensure that the City's noise ordinance standards are not exceeded. Measures to limit noise include, but are not limited to: ▪ Locating equipment as far as practical from noise sensitive uses ▪ Using equipment that is quieter than standard equipment ▪ Selecting haul routes that affect the fewest number of people ▪ Using noise-reducing enclosures around noise-generating equipment ▪ Constructing barriers between noise sources and noise-sensitive land uses ▪ Establishing a 24-hour complaint hotline ▪ Offering temporary hotel room in exceptionally loud cases where nighttime noise limits cannot be achieved. **Traffic Noise** Noise abatement is considered where noise impacts are predicted in areas of frequent human use that would benefit from a lowered noise level. Potential noise abatement measures include the following: ▪ Avoiding the impact by using design alternatives, such as altering the horizontal and vertical alignment of the project ▪ Constructing noise barriers where substantial reduction in noise would be provided and where reasonable ▪ Acquiring property to serve as a buffer zone ▪ Using traffic management measures to regulate types of vehicles and speeds ▪ Acoustically insulating public-use or non-profit institutional structures. Noise walls are generally the most common and effective measure to reduce noise levels. In the project area, however, noise walls may not be desirable because of their effects on community cohesion and aesthetics. "Quiet pavements," such as rubberized asphalt, are sometimes considered as an effective measure to reduce traffic noise levels due to noise from the tire-pavement interface. Rubberized asphalt would be minimally effective for urban projects because travel speeds on surface streets are lower than on highways; the primary source of vehicle noise is expected to be from car and truck engines and exhaust, not tire noise. A detailed noise analysis would determine which, if any, mitigation measures would be acoustically effective.	

Table 1-1. Summary of Potential Impacts of the CIP Network Alternative and TFP Network Alternative (Continued)

Subject	CIP Network Alternative	TFP Network Alternative
Noise (Continued)		
Unavoidable Adverse Impacts	The number of residential areas within the city predicted to be exposed to traffic noise levels exceeding 67 dBA Leq would increase from 2012 to 2024. Future traffic noise levels are basically equivalent between the two alternatives. Most residential areas within the city require direct driveway access to the roadways where traffic noise impacts are predicted to occur under either alternative. This access requirement would often conflict with placement of a noise barrier because of gaps in the barrier. Therefore, detailed analyses could conclude that future traffic noise impacts might be unavoidable.	
Land Use and Aesthetics		
Impacts	**Land Use Patterns** During construction, short-term impacts could include vehicular and pedestrian detours, loud noise, and construction dust. These impacts could affect localized uses and activities over the short term. Long-term land use impacts could result from the following: ▪ If traffic noise and pollution levels become intrusive for nearby structures, they could make affected buildings less desirable for tenants and/or could lead to the need for investment in abatement measures. ▪ Displacement of driveways, and removal of parking areas, landscaping, and public facilities may require reorienting entrances or similar features. ▪ Direct displacement or removal of parking spaces, especially parking areas located between streets and buildings. ▪ Acquisition of entire parcels or large parts of existing parcels for rights-of-way, especially for construction of new roadways, could slightly reduce the land supply for various uses. **Plans and Policies** The CIP Network alternative projects are consistent with the City's vision statement and goals, as well as policies of the land use and transportation elements of the Comprehensive Plan. **Aesthetics** The major impact would be the change in character of the roadway as perceived by an observer not on the roadway, or a change in character of the environment perceived by the observer from the roadway. This can occur by adding elements of an urban environment to an area where natural environment elements, such as vegetation, establish the dominant existing character, reducing landscaping or native vegetation, or changing road configurations, or affecting view corridors. Projects with the greatest impacts are generally new roadways or substantial widening of existing roadways.	**Land Use Patterns** Impacts would be as described under the CIP Network. The TFP Network includes projects not included in the CIP Network; therefore, the TFP Network has greater potential for these impacts. Projects with the potential for right-of-way acquisition are likely to affect more buildings and land uses as compared to the CIP Network. **Plans and Policies** The additional transportation projects included in the TFP Network alternative are consistent with the City's vision statement, as well as the goals and policies of the City's land use and transportation elements of the Comprehensive Plan. **Aesthetics** The TFP Network is expected to improve consistency and visual character in many locations by filling in missing segments of the streetscape, including sidewalks and/or bicycle lanes and street trees. Some areas may be transformed, however, from a lower intensity suburban character to the urbanized character envisioned in the Comprehensive Plan. Because the TFP Network includes nearly four times as many projects as the CIP Network, its impact on aesthetics would be greater. TFP-242 involves impacts along Bellevue Way SE due to the widening to the west of the current Bellevue Way SE footprint. Impacts of the added HOV lane include loss of residences or property impact to residential parcels, removal of native growth vegetation, introduction of a retaining wall, and potential loss of view from residences by prospective introduction of a noise wall in addition to the retaining wall.

Table 1-1. Summary of Potential Impacts of the CIP Network Alternative and TFP Network Alternative (Continued)

Subject	CIP Network Alternative	TFP Network Alternative
Land Use and Aesthetics (Continued)		
Mitigation Measures	**Land Use Patterns** ▪ Prepare a relocation plan for displaced residential or commercial uses. ▪ Remove hazardous materials or other environmental hazards at the time of project implementation. (This is most likely if gas stations are displaced that would require removal or relocation of underground storage tanks and other hazardous materials.) ▪ Redesign and reconfigure parking areas to minimize the number of lost spaces. Potential parking lot redesign measures include providing a greater area for compact car spaces with smaller dimensions, reducing aisle width by designing one-way circulation systems within the lots, and reducing the width of perpendicular spaces by using angled stalls. ▪ Minimize the loss of existing buildings and land uses in development of new transportation corridors and/or realignment of existing transportation corridors. ▪ Mitigate land acquisition impacts by combining parcels that are not used for sale with adjacent parcels and incorporating undeveloped parcels into roadway designs. ▪ Minimize the loss of landscaping and vegetation by shifting street alignments to avoid significant stands of vegetation; preserving significant specimen trees within sidewalk and planting strips by meandering sidewalks; and reducing the extent of cleared areas by using retention structures, where practical, in place of long, fill slopes. **Plans and Policies** ▪ Any transportation facility projects not identified in the City's Comprehensive Plan or associated subarea plans should be included in a Comprehensive Plan amendment to maintain consistency between the 2013–2024 TFP and the City's Comprehensive Plan. **Aesthetics** ▪ Preserve natural vegetation and landscaping to the extent feasible. ▪ Replace or add landscaping, including street trees when roadway widening or realignment removes landscaping, or where such amenities are lacking. ▪ Design and align new transportation corridors and other improvements to minimize adverse aesthetic impacts, particularly in residential neighborhoods. ▪ Implement consistent streetscapes along roadway corridors by using common designs for streets and freeway structures and common landscaping and street trees to provide visual unity. ▪ Coordinate closely with adjacent land owners to identify significant features that should be considered for retention or replacement in design improvements. ▪ Relocate utility lines underground. ▪ Consider use of retaining walls rather than extensive fill, which can affect aesthetics by widening the area of impact. ▪ Incorporate interesting and attractive elements into retaining walls. ▪ Construct gateway elements at appropriate locations, in coordination with the City's enhanced Right of Way and Urban Boulevards program. ▪ Incorporate public art into streetscapes.	

Table 1-1. Summary of Potential Impacts of the CIP Network Alternative and TFP Network Alternative (Continued)

Subject	CIP Network Alternative	TFP Network Alternative
Land Use and Aesthetics (Continued)		
Unavoidable Adverse Impacts	The areas most likely to be affected by the 2013–2024 TFP are Downtown (MMA 3), Wilburton (MMA 4), Bel-Red (MMA 12), and South Bellevue (MMA 7). These areas correspond to the major activity centers in the city, except for South Bellevue, through which vehicular and transit routes pass to access Downtown Bellevue. Projects in both the CIP Network and the TFP Network have the potential for permanent displacement of buildings and existing land uses. In the TFP Network alternative, project TFP-242 involves impacts along Bellevue Way SE due to the widening to the west of the current Bellevue Way SE footprint. TFP-242 HOV lane project impacts include loss of residences or property impact to residential parcels, removal of native growth vegetation, introduction of a retaining wall, and potential loss of view from residences by prospective introduction of a noise wall. (Land use and aesthetic impacts of TFP-242 are documented in the East Link Extension 2013 SEPA Addendum.)	
Natural Environment		
Impacts	**Geology and Soils** Construction activity in potentially unstable ground could destabilize hillsides if mitigating measures, such as groundwater interception, engineered retaining systems, or bridges, are not employed. Projects located in the vicinity of slopes greater than 40% may require special engineering. Additional areas may be identified during project-level review. **Wetlands** Several road-widening projects are adjacent to wetlands and may affect buffers or wetland areas. They also may affect wetland function through changes in the hydrologic recharge of the affected wetlands. The proximity to wetlands, however, does not necessarily result in impacts through use of retaining walls or other features that may result in little or no increase in road prism, or employment of stormwater management facilities. City Critical Area criteria address the consideration of alternatives to avoid displacement of wetlands and buffers and the minimization of impacts. **Aquatic Resources** A variety of projects included in the CIP Network cross streams. Additional areas may be identified during project-level review. Stream crossings may involve additional coverage of open channel areas, but also may include replacement of inadequate culverts and fish passage impediments. Many projects will increase impervious surface, particularly those that would provide additional lanes for traffic on existing roads, new road segments, and the construction of bicycle lanes and sidewalks. The potential increase is small in relation to the existing impervious surface in drainage basins and is unlikely to have a discernible impact. Stormwater detention facilities may result in less impact, despite increases.	**Geology and Soils** Impacts are generally as described under the CIP Network alternative. The TFP Network includes additional projects in areas of steep slopes or soils susceptible to liquefaction. **Wetlands** Impacts are generally as described under the CIP Network alternative. Additional projects near wetlands are included in the TFP Network, but the extent of impacts cannot be accurately assessed until the detailed design is completed. **Aquatic Resources** Impacts are generally as described under the CIP Network alternative. The TFP Network includes more projects and introduces more impervious surface, thus impacts may be greater. These could be mitigated or improved through incorporation of stormwater management facilities, which may compensate for the increased area through better treatment. **Wildlife and Vegetation** Impacts are generally as described under the CIP Network alternative. The TFP Network includes more projects; therefore, loss of vegetation and impact to wildlife habitat would be greater. **Shorelines** Project-level analysis will be conducted on individual projects to determine impacts on shorelines and compliance with relevant criteria.

Table 1-1. Summary of Potential Impacts of the CIP Network Alternative and TFP Network Alternative (Continued)

Subject	CIP Network Alternative	TFP Network Alternative
Natural Environment (Continued)		
Impacts (Continued)	The potential for increased pollution from stormwater runoff is greater for those projects that provide additional pollution-generating surfaces. Stormwater management facilities, however, may compensate for increased impervious surface area through better treatment. **Wildlife and Vegetation** Potential impacts resulting from implementation of proposed projects are likely to be minimal because existing roadways currently affect wildlife habitat and movement. The marginal decrease in vegetation likely would have minor impacts on habitat. Additional areas may be identified during project-level review. **Shorelines** Projects within Shoreline Management Act jurisdiction require permit review and must conform with applicable standards. Requirements are similar to Critical Area standards and criteria and citywide standards for fish passage, water quality, and storm drainage; conforming to these requirements may result in improved shoreline conditions.	
Mitigation Measures	**Geology and Soils** Site-specific earth resource impacts would be evaluated and mitigated through the environmental review process for individual projects. It is assumed that all road improvements proposed will conform to City policies and regulations, particularly in accordance with BCC 20.25H.125. Roadway development in areas of potentially unstable slopes would be mitigated to ensure stability and safety during and after construction. As part of project-specific design and review, alternative alignments within the same basic corridors that reduce disturbance to critical areas would be examined. **Wetlands** If a project results in impacts on wetlands, performance standards described in BCC 20.25H.100 would be implemented. **Aquatic Resources** If a project results in impacts on aquatic resources, performance standards described in BCC 20.25H.080 would be implemented on sites with a Type S or F stream or associated buffer. **Wildlife and Vegetation** If it is found that a species of local importance or that a potentially suitable habitat for a species of local importance is present in a project area, performance standards described in BCC 20.25H.160 would be implemented. If performance standards cannot be met due to infeasibility, mitigation measures would be implemented as described in BCC 20.25H.210 through 20.25H.225. This would require the development of a wildlife management plan in consultation with WDFW. A habitat assessment consisting of an investigation of the site to evaluate the potential presence or absence of designated species of local importance or habitat for species of local importance would also be required. **Shorelines** If, during project-specific review, impacts on shorelines are identified, mitigation measures would be put in place. Project TFP-078 is being designed to allow for improvements to fish passage, water quality, and storm drainage and so may improve shoreline conditions. If other projects result in similar impacts, similar design features could be considered.	

Table 1-1. Summary of Potential Impacts of the CIP Network Alternative and TFP Network Alternative (Continued)

Subject	CIP Network Alternative	TFP Network Alternative
Natural Environment (Continued)		
Unavoidable Adverse Impacts	Adverse impacts would largely be avoided or minimized through implementation of mitigation measures. Although proposed projects would be designed to minimize or avoid adverse impacts, it is possible that such impacts may occur. Proposed projects would result in an increase in pollution-generating impervious surfaces within the city and would reduce the amount of vegetative cover available. Although stormwater would be treated to the extent possible, and current BMPs would be employed to reduce volumes of stormwater runoff from reaching streams or rivers, the increase in impervious surface would likely result in an increase in stormwater volumes entering streams and rivers and a corresponding increase in associated pollutants and ongoing erosion and habitat impacts. If no feasible mitigation measures are identified during project-level environmental analysis to mitigate these effects, a significant unavoidable adverse impact would occur.	

Chapter 2. Description of Alternatives

This chapter describes the two alternatives considered in this EIS: 1) the CIP Network (No Action) alternative, and 2) the TFP Network (Proposed Action) alternative, as well as a variation on the TFP Network (the Plus scenario). This chapter also presents background information about the TFP, its relationship to the City's other plans, and potential funding sources.

2.1. Background

The TFP is a 12-year transportation program, which includes a listing of planned improvements balanced with projected revenues. This program is one phase in the City's multi-phased approach to planning for future transportation improvements, which is illustrated in Figure 2-1.

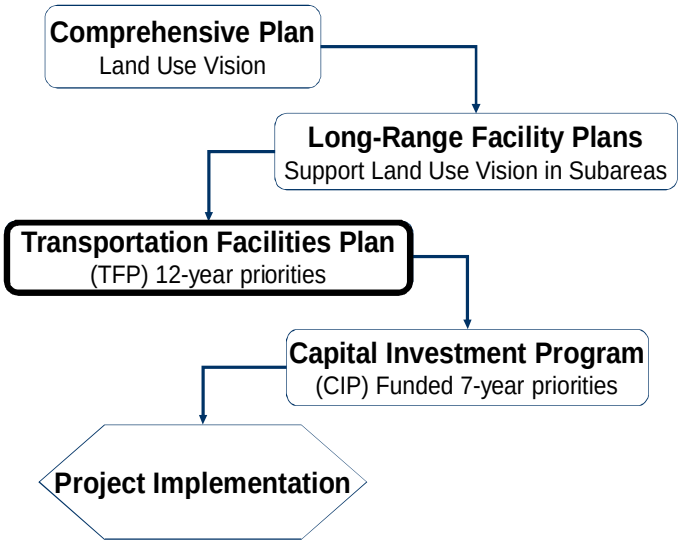


Figure 2-1. Transportation Planning Process

The components of the transportation planning process are described as follows:

- The Comprehensive Plan outlines the City's long-term (over 20 years) land use vision and identifies the infrastructure and services needed to support that vision. It provides a broad statement of community goals and policies that direct the orderly and coordinated development of the city into the future. It also serves as a guideline for designating land uses and infrastructure development as well as developing community services. The Comprehensive Plan is organized into two volumes: Volume 1 contains framework goals and general elements and Volume 2 contains subarea and long-range facility plans. The City updates its Comprehensive Plan in accordance with the Washington State Growth Management Act (GMA) (Bellevue 2010).

- Long-range facility plans, which are adopted into the Comprehensive Plan for various subareas of the city or for specific components of the transportation system, include a wide range of improvement projects designed to meet the mobility goals of the subarea (as established in the Comprehensive Plan). The Comprehensive Plan currently includes transportation facility plans for the Bel-Red/Overlake, Bridle Trails/Crossroads, Downtown, Bel-Red, East Bellevue (including Factoria), and Newcastle areas. It also includes the Pedestrian and Bicycle Transportation Plan.
- The Transportation Facilities Plan (TFP) serves as the City's transportation implementation plan, constrained by identified City funds and other revenues that are projected for the next 12 years. The goal of the TFP is to identify the transportation facilities needed to implement the City's transportation policies in the Comprehensive Plan. The TFP comprises priority projects detailed in the long-range facility plans and other projects that represent emerging transportation facility needs and opportunities. All projects, if not specifically identified in the Comprehensive Plan, should be consistent with the goals and policies of the Comprehensive Plan. Emerging needs and opportunities can be influenced by changing conditions in the built environment, acts of nature (e.g., landslides), or actions of other agencies (such as the planned implementation of the Sound Transit East Link light rail line approved by voters in November 2008). The rationale for inclusion of TFP projects not specifically listed in the Comprehensive Plan is available in the project file.
- The Capital Investment Program (CIP) provides a minimum 6-year period (the City adopts a 7-year CIP every 2 years) for implementation of TFP projects that are likely to be needed in the short term. It also includes programs that are not in the TFP; this additional funding supports operational, safety, and maintenance needs identified by City staff, the public, and other sources. The Bellevue City Council commits full or partial implementation funding to all CIP projects and programs through the City's biennial budget update process. The proposed 2013–2024 TFP is consistent with the adopted 2013–2019 CIP.

2.2. Funding Sources Supporting the Transportation Facilities Plan

2.2.1. City Revenue Sources

Over the next 12 years, the transportation projects in the TFP are projected to receive funding from a variety of sources, potentially including:

- Transportation-dedicated taxes and fees such as fuel and real estate excise taxes
- General CIP revenue consisting of the portion of the City's sales and business and occupation taxes dedicated to capital improvements

- Grants and contributions from other agencies such as the federal government, state agencies, and King County
- Impact fees and other developer contributions required from new development
- Local Improvement Districts that collect property assessments based upon an increase in property value attributable to specific transportation facility improvements.

An analysis of the projects in the proposed 2013–2024 TFP Network alternative indicates that an estimated 83 percent of the funding supports roadway and intersection improvements, with the remaining 17 percent supporting pedestrian and bicycle facility elements of roadway and intersection projects or dedicated pedestrian-bicycle projects. This division of funds is more weighted toward roadway and intersection improvements than the distribution in the adopted 2009–2020 TFP, in which an estimated 78 percent of funding supports roadway and intersection elements and 22 percent supports pedestrian and bicycle elements. The significant proportion of funding for roadway and intersection elements reflects the need to facilitate mobility in areas where growth is anticipated (especially Downtown, Wilburton, and Bel-Red).

2.2.2. Developer Impact Fees

The Traffic Standards Code requires a developer to upgrade an intersection or make other capacity improvements when projected vehicle trips from a proposed development exceed a certain threshold and contribute to a substandard level of service. While the TFP is a 12-year program, the code requires that the approval of development projects be based on roadway improvements fully funded in the City's CIP. The City will construct the projects in the CIP without additional participation by the developer, except for payment of impact fees. For development approval, the developer must fund any other needed facility improvements that are not included in the CIP. Facility improvements or the value of real property dedicated for improvements included in the TFP, which are implemented or provided by a developer (roadway or intersection capacity projects only), may be credited against the impact fee owed by that developer. If the implementation resources are not included in the TFP, however, the developer does not get a fee credit for its implementation.

All TFP capacity projects, including those funded in the CIP, provide the basis for the calculation and collection of impact fees. Therefore, alternative TFP strategies, in conjunction with the code, can affect the cost of development in two ways:

- If an alternative includes significant capacity improvements, there may be fewer requirements requesting developers to provide their own congestion mitigation. In this scenario, calculated impact fees will be higher to help fund the implementation of the TFP alternative.
- If an alternative provides fewer capacity improvements, it can result in lower impact fees and may also reduce planned and funded road improvements that developers can count on to mitigate transportation impacts, potentially increasing the mitigation requirements imposed directly on specific development projects.

The remaining discussion in this chapter focuses on the TFP project strategies analyzed in this EIS.

2.3. Traffic and Land Use Forecasts

For the purpose of this EIS, it is assumed that each alternative set of transportation projects will be built upon the transportation network that existed at the end of 2012. Future traffic counts were forecasted using the 2024 Bellevue-Kirkland-Redmond (BKR) model, which is based on the 2024 Land Use forecast provided by the Department of Planning and Community Development. Both alternatives have been evaluated using two land use scenarios; the 2012 existing land use distribution was used as a benchmark to test the 2024 land use projections. By using the same land use distributions, the effects of land use are assumed to be the same for both alternatives. Appendix E contains the land use projection tables. Capacity projects expected to be implemented by 2024 are identified as impact fee projects; these projects were included in the model scenarios developed for the TFP alternatives (see Appendix D for details on the traffic forecast model and methodology).

2.4. Alternative Descriptions

The City is considering two alternatives in this EIS:

- CIP Network – No Action alternative
- TFP Network – Proposed Action alternative (including the Plus scenario).

Table 2-1 presents a list of project descriptions for each project included in the alternatives. The table indicates the alternative, CIP number (if applicable), and whether the project is a capacity project, an impact fee project, or both. Table 2-1 also indicates the project's Mobility Management Area (MMA), which is a geographic area the City uses to analyze transportation systems. The city is divided into 14 MMAs, which are shown in Figure 2-2 and listed in Table 2-2.

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-078	West Lake Sammamish/ north city limit to I-90	6, 9	R-141	The project will ultimately provide a consistent 4-foot-wide shoulder on the east side, a 10.5-foot-wide northbound vehicle travel lane, a 10-foot-wide southbound vehicle travel lane, a 10-foot-wide multi-purpose trail (8 feet wide in approximately 2% of the corridor due to constricted space) on the west side separated by a 1.5-foot shy distance space and a 2-foot- or 5-foot-wide landscaped buffer where space is available; a signal at SE 34th St; and pedestrian crossings at SE 26th St, Northup Way, NE 24th St, and at five other locations along the parkway. The project will also make storm drainage, water quality, and fish passage improvements throughout the corridor. Funding allocation is to support design and construction of the first two segments (of five segments total).	Roadway and Pedestrian/ Bicycle Network	Two segments (of five segments total)	One segment (from SE 34th St to I-90)		
TFP-079	Northup Way/NE 33rd Pl to NE 24th St and NE 24th St to the SR 520 Regional Trail	1, 2	R-146	The project will complete sidewalks and include bicycle lanes on both sides of Northup Way (will not widen the existing culvert at Yarrow Creek). Improvements will be designed to facilitate potential future widening for center-turn lane. Additional elements include mid-block pedestrian crossings, a pedestrian bridge at the BNSF crossing, and a multi-use pathway along the south side of NE 24th St to connect to the existing terminus of the SR 520 Trail. Partial funding from WSDOT. The project will link to improvements to the west to be built by WSDOT from NE 33rd Pl to Bellevue Way. Component of Priority Bicycle Corridor EW-1 (SR 520 Trail).	Pedestrian/ Bicycle Network	Full implementation	Full implementation		

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-103	129th Pl SE/SE 38th St to Newport Way	13		The project will connect the stub ends of 129th Pl SE to provide a through-street connection between SE 38th St and Newport Way; investigate traffic operations at the intersection of 129th Pl SE and SE Newport Way; and consider signalization and channelization improvements, if warranted. Project implementation will be coordinated with future private development in the immediate vicinity. The funding allocation is a placeholder that may be used for project predesign, property acquisition, or early implementation and may be directed to design and development of a non-motorized facility on this link if a street connection is not feasible.	Roadway and Pedestrian/ Bicycle Network	None	None	X	
TFP-110	110th Ave NE/NE 6th St to NE 8th St	3		The project involves an incomplete segment remaining between NE 6th St and NE 8th St. Predesign was completed for a five-lane roadway section with sidewalks where missing. Project implementation will be coordinated with approved and potential future private development in the immediate vicinity.	Roadway	Full implementation	Full implementation	X	IF
TFP-158	SE 16th St/148th Ave SE to 156th Ave SE	9	W/B-82	The project will add 5-foot-wide bicycle lanes outside of 11-foot-wide vehicle lanes on both sides of SE 16th St. The project will construct new curb, gutter, and 6-foot-wide sidewalk and 4-foot-wide planter on the north side between 148th Ave NE and 154th Ave NE. This is a component of Priority Bicycle Corridor EW-3 (Lake to Lake Trail).	Pedestrian/ Bicycle Network	Full implementation	None		

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-173	108th/112th Ave NE/ north city limit to NE 12th St	1	W/B-81	The project will add 5-foot-wide bicycle lanes on both sides of 108th/112th Ave NE from north city limit to NE 12th St. A 6-foot-wide sidewalk will be constructed along the west side of 112th Ave NE from the end of the transportation trail south to NE 24th St. A sidewalk will be constructed on the east side from NE 24th St to connect to the existing sidewalk 450 feet south. Turn pockets will be widened at the NE 24th St intersection. This is a component of Priority Bicycle Corridor NS-2 (Lake Washington Loop). The funding allocation is a placeholder that may be used to support project predesign or early implementation.	Pedestrian/ Bicycle Network	None	None		
TFP-190	NE 2nd St/Bellevue Way to 112th Ave NE	3		The project will widen from three lanes to five lanes with parking and turn pockets, consistent with the NE 2nd St predesign plan. Project implementation will be coordinated with approved and potential future private development in the immediate vicinity. The funding allocation is a placeholder that may be used to advance project predesign or support early implementation.	Roadway	None	None	X	
TFP-192	Lakemont Blvd (Phase 1)/Cougar Mtn. Way to Lewis Creek Park and 164th Ave SE to 171st Ave SE	11	I-92	The project will install signal or roundabout and turn lanes at Cougar Mtn Way/Lakemont Blvd intersection; construct northbound left-turn lane on Lakemont Blvd at SE 62nd St; add sidewalk and bicycle lanes on east side between Cougar Mtn Way and park; and install planted medians where feasible.	Roadway (pedestrian-bicycle element not funded)	Partial implementation (roundabout or signal at intersection)	Partial implementation (same in CIP Network and TFP Network)	X	IF

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-193	NE 10th St at I-405	3	R-149	The project will add a southbound off-ramp. This project would likely be a regional or outside agency-led effort in which the City may choose to participate financially. The funding allocation is a placeholder that may be used to support project predesign or early implementation.	Roadway	None	None	X	
TFP-195	150th Ave SE/SE 37th St/I-90 off-ramp	10		Option A: The project will add a second eastbound right-turn lane, add a second westbound left-turn lane, add an eastbound through lane past the I-90 eastbound on-ramp, extend the southbound left-turn pocket, and extend the third southbound lane from the I-90 on-ramp to SE 38th St. Option B: The project will construct a multi-lane roundabout. Option C: The project will construct a roundabout per Option B plus construct a multi-lane roundabout at 150th Ave SE/SE 38th St and landscaped median between SE 38th St and SE 37th St. With any of the three options, the pedestrian and bicycle crossings would be upgraded and gateway treatment installed.	Roadway	Full implementation (Option A intersection improvements or Option B roundabout)	None	X	IF
TFP-197	NE 2nd St Extension and I-405 Interchange	3		The project will extend NE 2nd St across I-405 from 112th Ave NE to 116th Ave NE and add half interchange with I-405, to/from the south. This project would likely be a regional or outside agency-led effort in which the City may choose to participate financially. The funding allocation represents only a placeholder that may be used to initiate project predesign or early implementation.	Roadway	None	None	X	

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-207	NE 4th St Extension/116th Ave NE to 120th Ave NE	4	R-160	Construct a new four- or five-lane arterial with two vehicle lanes in each direction and center-turn lane, where necessary, with bicycle lanes and sidewalks on both sides. The project will be designed not to preclude potential future uses of the BNSF Railway corridor. Neighborhood traffic mitigation will be evaluated to discourage cut-through traffic on NE 5th St east of 120th Ave NE. This project will be coordinated with potential private development in the immediate vicinity.	Roadway and Pedestrian/ Bicycle Network	Full implementation	Full implementation	X	IF
TFP-208	120th Ave NE (Stage 2)/south of NE 8th St to NE 12th St	4, 12	R-164	Stage 2 will extend, realign, and widen 120th Ave NE from south of NE 8th St to NE 12th St. Includes all intersection improvements at NE 8th St, old Bel-Red Rd, and NE 12th St. The roadway cross section for Stage 2 will consist of five lanes, with two travel lanes in each direction and center-turn lane or turn pockets; bicycle lanes, curb, gutter, and sidewalk will be included on both sides. The project will transition between Wilburton and Bel-Red urban design standards.	Roadway and Pedestrian/ Bicycle Network	Full implementation	Full implementation	X	IF
TFP-209	NE 15th St/116th Ave NE to 124th Ave NE	12	R-172, 173	The project will construct a multi-modal corridor from 116th Ave NE to 124th Ave NE. The project will be phased, with segments from 116th Ave NE to 120th Ave NE and from 120th Ave NE to 124th Ave NE. New signalized intersections will be provided at NE 12th St/NE 15th St, 120th Ave NE, 121st Ave NE, 123rd Ave NE, and 124th Ave NE, with signal modifications at 116th Ave NE. The roadway cross section will include four lanes, sidewalks on both sides, and a multi-use pathway on the north side; the pathway between 120th Ave NE and 124th Ave NE will be coordinated with future private development.	Roadway and Pedestrian/ Bicycle Network	Partial implementation (segment 120th Ave to 124th Ave only). **TFP Network Plus** scenario includes full implementation 116th Ave to 124th Ave.	None	X	IF

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-210	124th Ave NE/Planned NE 14th St to Northup Way	12	R-166	The project will widen the roadway to five lanes and re-profile the segment from NE 14th St to NE 18th St in conjunction with the East Link project; curb, gutter, and sidewalks will be included consistent with the Bel-Red subarea plan and street corridor and urban design standards. The segment from NE 18th St to Northup Way includes a stream crossing of the West Tributary and planned trail. Key intersections are at NE 15th St multi-modal corridor/East Link project and Northup Way. (Intersection improvements at NE 15th St will be included in the NE 15th St project.) Open space trail connections for the segment from NE 15th St to NE 18th St will be evaluated.	Roadway and Pedestrian/ Bicycle Network	Partial implementation (segment NE 14th St to NE 18th St)	Partial implementation (same in CIP Network and TFP Network)	X	IF
TFP-211	NE 6th St Extension	4	R-162	The project will extend NE 6th St from the I-405 HOV interchange to 120th Ave NE. The facility will be designed to accommodate multiple uses, including HOV, transit, general purpose, and non-motorized. Conceptual design alternatives have been completed to coordinate with WSDOT's I-405 improvements and Sound Transit's East Link route. The route crosses Sturtevant Creek, which is in a pipe at this location; it is anticipated the project may involve shifting the pipe slightly to the east (to accommodate a bridge pier). The project would likely be a regional or outside agency-led effort in which the City may choose to participate financially. The funding allocation is a placeholder that may be used for additional predesign or other early implementation efforts.	Roadway and Pedestrian/ Bicycle Network	Full implementation	Full implementation	X	IF

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-213	124th Ave NE/NE 8th St to NE 14th St	8, 12	R-169	Design roadway improvements for the project will include addition of bicycle lanes for the segment from NE 8th St to Bel-Red Rd and roadway widening to five lanes with sidewalks and bicycle lanes on both sides from Bel-Red Rd to NE 14th St. Signal modifications will be completed at 124th Ave NE and Bel-Red Road. The project design may be coordinated with adjacent development. Neighborhood protection measures will be evaluated to limit through traffic and impacts on the segment south of NE 8th St. Funding allocation will support predesign only between NE 8th St and Bel-Red Rd, but full implementation between Bel-Red Rd and NE 14th St.	Roadway and Pedestrian/ Bicycle Network	Partial implementation (segment Bel-Red Rd-NE 14th St)	None	X	IF
TFP-215	NE 16th St/130th Ave NE to 136th Pl NE and 136th Pl NE/NE 16th St to NE 20th St	12	R-174, 175	The project will construct a multi-modal corridor from 130th Ave NE to 132nd Ave NE. The project design will accommodate, as needed, the East Link project segment from 132nd Ave NE to 136th Pl and 136th Pl to NE 20th St. Accommodating East Link will bifurcate the eastbound and westbound travel lanes. The project area includes crossings of Goff Creek (east of 132nd Ave NE) and of an unnamed tributary to Kelsey Creek (along the 136th Ave NE segment). The project will provide one travel lane in each direction, buffered bicycle lanes, landscape strips, and sidewalk on both sides.	Roadway and Pedestrian/ Bicycle Network	Partial implementation (segment 130th Ave to 132nd Ave)	None	X	IF

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-216	112th Ave NE/NE 2nd St	3		The project will straighten and realign NE 2nd St between 112th Ave NE and 114th Ave NE, add dual southbound left-turn lanes, and a northbound right-turn lane. Project implementation will be coordinated with potential future private development in the immediate vicinity. Project scope and description may be revised, depending on the outcome of the Downtown Transportation Plan update. (Operation of the second southbound left-turn lane will not be active until the receiving lane is in place on NE 2nd St.)	Roadway	Full implementation	None	X	IF
TFP-217	124th Ave NE at SR 520	12		The project will construct ramps to and from the east. This project would likely be a regional or outside agency-led effort in which the City may choose to participate financially. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	Roadway	None	None	X	
TFP-218	130th Ave NE/NE 20th St to NE Bel-Red Rd	12	R-170	The project will initiate the design for roadway improvements. The segment from NE 20th St to NE 16th St will include two travel lanes, bicycle lanes, on-street parking, landscape strip, and sidewalk on both sides. The segment from NE 16th St to Bel-Red Rd will include one through lane in each direction, a center-turn lane, landscape strip, and sidewalk on both sides. The project will be coordinated with the East Link route.	Roadway and Pedestrian/ Bicycle Network	None	None	X	

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-219	NE 8th St/106th Ave NE	3		The project will involve realignment of the roadway to the south to better utilize the third westbound travel lane (between 108th Ave NE and 106th Ave NE, completed in 2009) and preserve the existing large sequoia tree. This realignment will allow NE 8th St three through lanes westbound from I-405 to Bellevue Way. Project implementation will be coordinated with potential future private development in the immediate vicinity. Project scope and description may be revised depending on the outcome of the Downtown Transportation Plan update.	Roadway	Full implementation	None	X	IF
TFP-222	Bellevue Way/NE 4th St	3		The project will add a southbound right-turn lane, a westbound right-turn lane, and dual westbound left-turn lanes. Project implementation will be coordinated with potential future private development in the immediate vicinity. Project scope and description may be revised depending on the outcome of the Downtown Transportation Plan update.	Roadway	Full implementation	None	X	IF
TFP-223	Bellevue Way/NE 8th St	3		The project will add a southbound right-turn lane. Project implementation will be coordinated with potential future private development in the immediate vicinity. Project scope and description may be revised depending on the outcome of the Downtown Transportation Plan update.	Roadway	Full implementation	None	X	IF
TFP-225	Bellevue Way/NE 2nd St	3		The project will add a northbound right-turn lane and a second southbound left-turn lane. Project implementation will be coordinated with potential future private development in the immediate vicinity. Project scope and description may be revised depending on the outcome of the Downtown Transportation Plan update. (Operation of the second southbound left-turn lane will not be active until the receiving lane is in place on NE 2nd St.)	Roadway	Full implementation	None	X	IF

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-230	108th Ave NE/NE 12th St to Main St	3		The project will enhance the108th Ave NE Downtown corridor consisting of "Great Streets," mid-block crossing, pedestrian-corridor interface, and bicycle lanes. The project scope and description may be revised depending on the outcome of the Downtown Transportation Plan update. This is a component of Priority Bicycle Corridor NS-1 (Enatai-Northtown Connection). The funding allocation is a placeholder that may be used to support project predesign or early implementation.	Pedestrian/ Bicycle Network	None	None		
TFP-232	164th Ave NE/SE-NE 18th St to SE 14th St	6, 9		The project will designate a bicycle shoulder on both sides between NE 18th St and Northup Way and between NE 8th St and SE 14th St. The 5-foot-wide bicycle lanes between Northup Way and NE 6th St will be striped and signed. On-street parking will be accommodated on the east side of the street from NE 6th St to SE 14th St. This is a component of Priority Bicycle Corridor NS-5 (Spirit Ridge-Sammamish River Connection). The funding allocation is a placeholder that may be used to support project predesign or early implementation.	Pedestrian/ Bicycle Network	None	None		
TFP-234	Main St/ 100th Ave to 116th Ave	3, 4		Funding will support pedestrian and bicycle facility components of the Main Street project as identified in the predesign plan. This will be built-out to plan conditions in conjunction with the East Link project. This is a component of Priority Bicycle Corridor EW-3 (Lake to Lake Trail). The funding allocation is a placeholder that may be used to support project predesign or early implementation.	Pedestrian/ Bicycle Network	None	None		

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-240	120th Ave NE improvements (Stage 1)/ south of NE 4th St to south of NE 8th St	4	R-161	The project will widen the roadway to five lanes, including two travel lanes in each direction, with center-turn lane, turn pockets, and medians. Bicycle lanes, and curb, gutter, and sidewalk will be included on both sides. A signal will be installed at NE 6th St.	Roadway and Pedestrian/ Bicycle Network	Full implementation	Full implementation	X	IF
TFP-241	120th Ave NE (Stages 3 and 4)/NE 12th St to 16th St and to Northup Way	12	R-168	Stage 3 will widen 120th Ave NE from NE 12th St to NE 16th St, which will be aligned and re-profiled in conjunction with Sound Transit's East Link project. The roadway cross section for Stage 3 will consist of five lanes, with two travel lanes in each direction and center-turn lane or turn pockets; bicycle lanes, and curb, gutter, and sidewalks will be included on both sides. Stage 4, from NE 16th St to Northup Way, will widen the roadway and transition from a five-lane section to a four-lane section in proximity to NE 18th St. Stage 4, north of NE 18th St, will consist of two northbound through lanes, a center-turn lane, and one southbound lane with sidewalks on both sides and a separated bicycle path on the west side. The project includes a stream crossing of the West Tributary. The project will follow Bel-Red urban design standards. Funding allocation will implement Stage 3 and fund the design phase of Stage 4.	Roadway and Pedestrian/ Bicycle Network	Partial implementation (segment NE 12th to NE 16th St)	Partial implementation (same in CIP Network and TFP Network)	X	IF

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-242	Bellevue Way HOV lane/112th Ave SE "Y" to I-90 and multi-use path/SE 8th St to I-90	7		The project will widen Bellevue Way SE to add a southbound, inside HOV lane and an outside shoulder. The potential for landscaping treatments will be evaluated during the project design phase. The project may be implemented in segments. The north segment is from the Bellevue Way SE/112th Ave SE "Y" to the main entrance to the South Bellevue Park-and-Ride at 112th Ave SE. The south segment is from the main park-and-ride entrance to the I-90 on-ramps. Improvements may extend to all legs of affected intersections to accommodate or optimize the function of the HOV lane. The south segment will be implemented by Sound Transit in conjunction with the East Link project, and as a partner, the City may choose to collaborate with Sound Transit to advance overall project implementation. The project will coordinate with the East Link design process to develop a 10- to 14-foot-wide multi-use pedestrian and bicycle path on the east side of 112th Ave SE and Bellevue Way SE from SE 8th St to 113th Ave SE (I-90 Trail).	Roadway and Pedestrian/ Bicycle Network	Full implementation	Partial implementation (HOV lane at south end from park-and-ride to I-90; separated path from SE 8th St to I-90)	X	IF

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-243	Mountains to Sound Greenway/ Factoria Blvd to Lakemont Blvd	10,11, 13	W/B-78	Part 1: The project will construct the Mountains to Sound Greenway Trail as a 10-foot-wide or greater width paved multi-use trail beginning at the current end of the I-90 Trail at Factoria Blvd. The route extends eastward along the north side of SE 36th St, follows a new independent alignment along the I-90 off-ramp to the 150th Ave SE at SE 37th St intersection, crosses 150th Ave SE, and continues along the south side of SE 37th St, just east of the entrance to the I-90 on-ramp (crosses SE 37th St opposite Eastgate Plaza). The trail route then turns north and continues eastward adjacent to I-90 in the WSDOT right-of-way to Lakemont Blvd. The design of the Mountains to Sound Greenway I-90 Trail links should, to the extent feasible, preserve existing and/or enhance adjacent on-street bicycle facilities, especially in locations where these are most useful to bicyclists. Revisions will be considered to the Factoria Blvd/SE 36th St intersection to enhance pedestrian and bicycle crossings, which is identified as Priority Bicycle Corridor EW-4. Part 2: The project will install boulevard treatment on roadway segments adjacent to the Mountains to Sound Greenway Trail, with elements likely to include street trees, median plantings, special lighting, crosswalks, seating, special signs, landscaping, and public art. The project will coordinate with the City's Urban Boulevards program. The funding allocation is a placeholder that may be used to support project predesign or early implementation.	Pedestrian/ Bicycle Network	None	None		

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-244	BNSF bicycle path/southern city limits to northern city limits	1, 2, 4, 7, 8, 12, 14		The project will add a 10- to 14-foot-wide off-street path along the BNSF right-of-way from the southern city limits to the northern city limits. This is part of a proposed regional trail that would connect Eastside communities from Renton to Woodinville. Approximately 7.5 miles of the trail is located within the city of Bellevue. The regional trail shall have connections to pedestrian and non-motorized City facilities and be compliant with current trail standards. Potential trail connections include Newcastle Beach Park, Greenwich Crest, the I-90 Trail, Woodridge, the Wilburton area, Downtown Bellevue, Bel-Red, NE 15th St, the West Tributary Trail, and the SR 520 Trail, which is identified as Priority Bicycle Corridor NS-3 (BNSF Trail Corridor). Funding allocation is to support the initial scoping of the project, including coordination with the community and property owners.	Pedestrian/ Bicycle Network	None	None		

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-245	140th Ave NE/NE 24th St to NE 8th St	2, 9, 12		Option A: The project will add 5-foot-wide bicycle lanes on 140th Ave NE between NE 24th St and NE 8th St. Option B: The project will develop an off-street multi-use paved path along the east side of 140th Ave NE, replacing a separated gravel path that exists on much of the segment; it may be a boardwalk for part of the Bel-Red Rd to NE 20th St segment. With either option, the project will add a 10- to 14-foot-wide off-street path connecting the SR 520 Trail to 140th Ave NE, if feasible. This is a component of Priority Bicycle Corridor NS-4 (Somerset-Redmond Connection). The funding allocation is a placeholder that may be used to support project predesign or early implementation.	Pedestrian/ Bicycle Network	None	None		
TFP-246	150th Ave SE/south of SE 38th St to Newport Way	11		The project will evaluate the need for improvements for the segment south of SE 38th St to Newport Way, including the intersection at 150th Ave SE and Newport Way SE. Issues to be considered include vehicular safety and circulation, pedestrian accommodation, and bicycle mobility. The project is located on Priority Bicycle Corridor NS-4 (Somerset-Redmond Connection). Project elements will be determined through the predesign process and may include roadway widening and channelization changes, sidewalks, bicycle facility, street lighting, and landscaping.	Roadway and Pedestrian/ Bicycle Network	None	None		

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-247	Eastgate Way/Richards Rd to SE 35th Pl	10		The project will install bicycle lanes. Completion of the missing link in the sidewalk between Richards Rd and 139th Ave SE may be implemented in coordination with adjacent development. Funding will support implementation of bicycle lanes on a portion of the corridor (segment to be determined).	Pedestrian/ Bicycle Network	Partial implementation (location TBD)	None		
TFP-248	134th Ave NE/NE 20th St to NE 16th St	12	R-171	The project will develop a level cross section for NE 16th St to allow for future construction of 134th Ave NE as a through street between Bel-Red Rd and NE 20th St, as outlined in the Bel-Red Subarea Plan. The project will coordinate with the East Link project final design. Conceptual plans will be developed for roadway alignment to allow for future construction of 134th Ave NE as a through street. The roadway will include three lanes, landscape strip, and sidewalks on both sides. The segment between NE 16th St and NE 20th St is anticipated to be implemented with future private development in the immediate vicinity.	Roadway and Pedestrian/ Bicycle Network	None	None	X	
TFP-249	Hospital/NE 8th St Station Access Improvements	4		The project will improve rider access to the planned East Link station at NE 8th St, especially for pedestrians. Funding allocation may be used to identify and analyze potential access improvements, develop design concepts, and advance implementation of elements such as access links to 116th Ave NE, sidewalks, street crossings, and other features to facilitate connections between the station and nearby employment, housing, shopping, and services.	Pedestrian/ Bicycle Network	None	None		

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-250	148th Ave NE Master Plan improvements at Bel-Red Rd, NE 20th St, and NE 24th St	12	R-167	The project will construct improvements as described in the 148th Ave NE Master Plan as follows: 1) provide a third northbound through lane on 148th Ave NE from 350 feet south of Bel-Red Rd to the SR 520 eastbound on-ramp, 2) provide a northbound right-turn lane, and eastbound and westbound dual left-turn lanes at 148th Ave NE and Bel-Red Rd, 3) provide eastbound and westbound dual left-turn lanes at NE 20th St and 148th Ave NE, 4) extend the northbound and westbound right-turn lanes at NE 24th St and 148th Ave, 5) provide eastbound and westbound dual left-turn lanes at NE 24th St and 148th Ave NE, and 6) configure the northbound three-lane approach on 148th Ave NE at the SR 520 eastbound on-ramp to right turn only, through/optional HOV right turn, and through only. Improvements at NE 24th St will accommodate or implement a wide-lane east-west bicycle facility. The project may be phased with the initial phase focusing on the north end of the 148th Ave NE corridor. Scope and cost may be modified based on ongoing analysis and coordination with the City of Redmond associated with the design work for the 148th Ave NE Master Plan. Funding allocation will support work in coordination with Redmond to identify project phasing and conduct predesign work.	Roadway	None	None	X	

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-251	Coal Creek Pkwy/124th Ave SE to the southern city limits	11, 13, 14		The project will add a 10- to 14-foot-wide off-street path along the west side of Coal Creek Pkwy from 124th Ave SE to the southern city limits. To accommodate the path, existing bicycle lanes may be eliminated and the roadway narrowed. The project will coordinate with the City's Urban Boulevards program. This is a component of Priority Bicycle Corridor EW-5 (Coal Creek-Cougar Mtn. Connection). The funding allocation is a placeholder that may be used to support project predesign or early implementation.	Pedestrian/ Bicycle Network	None	None		
TFP-252	Snoqualmie River Rd/ Kelsey Creek Rd to Bellevue College southwest entrance	10		This project will upgrade the pavement to support transit buses and construct sidewalks and accessible bus stops. The project will likely be implemented by Bellevue College; the City may choose to collaborate with the college to advance overall project implementation. A Bellevue College Transit Center will be developed on an upgraded alignment.	Roadway and Pedestrian/ Bicycle Network	None	None		

Table 2-1. EIS Network Alternatives TFP Network (Proposed Action) and CIP Network (No Action) (Continued)

TFP #	Project Location	MMA	CIP #	Project Description	Project Type	Project Elements Implemented TFP Network	Project Elements Implemented CIP Network	X = Capacity Project	IF = Include in Impact Fee Project List*
TFP-253	150th Ave SE/Eastgate Way SE	10		The project will construct improvements as follows: Option A: Add a second northbound left-turn lane, add a second eastbound right-turn lane, add a second westbound through lane past 148th Ave SE, and add east-west bicycle lanes through the intersection. Option B: Construct a multi-lane roundabout. With either option, upgrade pedestrian and bicycle crossings, accommodate or implement planned Eastgate Way bicycle lanes, and install gateway treatment.	Roadway and Pedestrian/ Bicycle Network	Full implementation (Option A intersection improvements)	None	X	IF
TFP-254	Bel-Red Rd/NE 20th St to NE 24th St	12		The project will widen the roadway to five lanes, including two travel lanes in each direction, with a center-turn lane, and bicycle lanes. The funding allocation is a placeholder that may be used to support project predesign or early implementation.	Roadway and Pedestrian/ Bicycle Network	None	None	X	

*Capacity projects open for use by end of 2024 are included in the Impact Fee Project List.

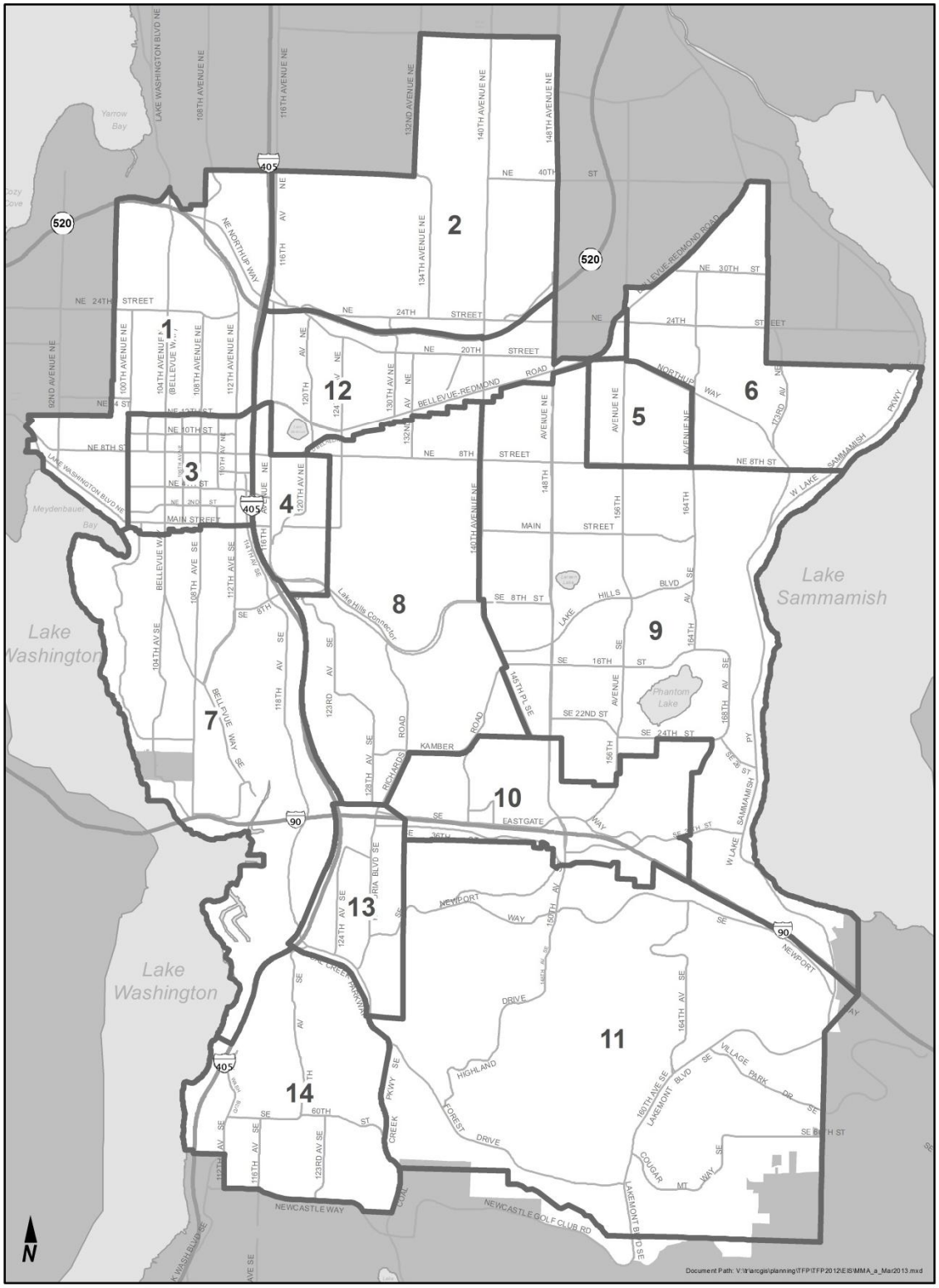


Figure 2-2. Mobility Management Areas

Table 2-2. Mobility Management Areas

MMA Number	Geographic Area
1	North Bellevue
2	Bridle Trails
3	Downtown
4	Wilburton
5	Crossroads
6	Northeast Bellevue
7	South Bellevue
8	Richards Valley
9	East Bellevue
10	Eastgate
11	Newcastle
12	Bel-Red
13	Factoria
14	Newport Hills

2.4.1. CIP Network Alternative

The CIP Network alternative includes all the projects that the City, along with its local jurisdiction and regional agency partners, has committed to fund and implement within the city limits; these projects are shown in Figure 1-1 and listed in Table 2-1.

There are 11 projects included in the CIP Network alternative—9 projects are from the adopted 2013–2019 CIP, and 2 projects are assumed to be built or funded by others within the city. Nine projects are roadway capacity projects and two are non-capacity improvement projects.

Because this alternative is based on existing project plans with secured funding, it is considered a "no action" alternative. The City Council is not required to take any additional action to implement the CIP Network alternative if it chooses not to adopt the proposed 2013–2024 TFP. This is consistent with the No Action alternatives used in previous TFPs.

2.4.2. TFP Network Alternative

The TFP Network alternative includes all of the 11 projects included in the CIP Network alternative plus an additional 32 roadway and non-motorized projects, for a total of 43 projects; Figure 1-1 shows these projects.

The TFP Network includes 28 capacity projects, with the remaining 15 addressing non-capacity needs (generally pedestrian and bicycle facilities and/or transit access). Eighteen of the capacity projects are designated as impact fee projects because the improvement is expected to be implemented and open for use by 2024.

Table 2-1 presents a list of project descriptions for all the projects included in the TFP Network; as mentioned above, this alternative also includes the projects in the CIP Network alternative.

This analysis also includes a variation on the TFP Network alternative, the Plus scenario. This scenario differs from the TFP Network alternative in one respect only: it fully implements TFP-209, opening for use by 2024 the NE 15th Street segment between 116th Avenue NE and 120th Avenue NE (as well as the connecting segment of NE 15th Street between 120th Avenue NE and 124th Avenue NE, which is implemented in the TFP Network alternative).

2.5. Benefits and Disadvantages of Delaying the Proposed Action Alternative

SEPA regulations require that an EIS evaluate the benefits and disadvantages of delaying implementation of the TFP Network alternative to some future time, compared with approval at this time. Particular attention is given to the potential for foreclosing future options by implementing the TFP Network alternative. The proposed TFP Network includes projects sequenced to coordinate with the Sound Transit East Link project (scheduled to open for service in 2023) as well as projects that support anticipated development, particularly in the Bel-Red and Wilburton areas. Delay would disrupt the sequential, orderly capital transportation planning process that the City uses and would prevent the integration of new capacity project costs into the calculations for transportation impact fees.

2.6. Major Issues to be Resolved

The key environmental issues facing decision-makers are the effects of additional traffic on area roadways, effects on air quality, effects of street-widening projects on adjoining land uses, and increases in impervious surfaces and other effects on the natural environment resulting from the transportation projects included in this TFP. These potential environmental issues are evaluated in Chapters 3 through 7 of this EIS.

Chapter 3. Transportation

This chapter reviews the existing conditions (2012) of the City's transportation system by subarea and identifies the potential impacts projected through 2024 of the CIP Network (No Action) and TFP Network (Proposed Action) alternatives. Also considered is the TFP Network Plus scenario, which includes completion of one additional new roadway link (NE 15th Street from 116th Avenue NE to 120th Avenue NE).

3.1. Affected Environment

The affected environment for transportation includes infrastructure and services. This section describes the following elements of the city's transportation system:

- Intersection and roadway operations
- Neighborhood conditions
- Traffic safety
- Travel alternatives
- Pedestrian and bicycle Network.

3.1.1. Intersection and Roadway Operations

Roadways in the city are characterized according to their functional classification, which reflects the relative access and mobility functions they serve. The major classifications are defined in the Comprehensive Plan as follows (Bellevue 2010).

- Major arterial. Major arterial streets provide efficient direct routes for long-distance automobile travel within the region. Streets connecting freeway interchanges to major concentrations of commercial activities are classified as major arterials. Traffic on major arterials is given preference at intersections, and some access control may be exercised in order to maintain the capacity to carry high volumes of traffic.
- Minor arterial. Minor arterial streets provide connections between major arterials and concentrations of residential and commercial activities. The amount of through traffic is less, and there is more service to abutting land uses. Traffic flow is given preference over lesser streets.
- Collector. Collector arterial streets are two- or three-lane streets that collect (or distribute) traffic in a neighborhood and provide the connections to minor or major arterials. Collectors serve neighborhood traffic and also provide access to abutting land uses. They do not carry much through traffic and are designated to be compatible with residential neighborhoods and local commercial areas.
- Local. Local streets provide access to abutting land uses and carry local traffic to the collector arterials. This classification includes both local and neighborhood collector streets as described in the City's Development Standards.

Figure 3-1 provides the functional classification of the main routes to and through the city (Bellevue 2010).

Level of service (LOS) is a measure of vehicular congestion that describes the traffic *volume* on a facility compared to its carrying *capacity* (calculated as volume to capacity ratio [V/C]). LOS is represented as a ratio of volume to capacity at intersections and can be evaluated by individual intersection or by an areawide average of key intersections. Lower values, for example 0.80 and under, reflect traffic flows with minimal delay; values between 0.80 and 0.90 reflect moderate and stable traffic conditions; values between 0.90 and 1.0 reflect conditions that approach capacity; and values above 1.0 reflect congested conditions with the potential for substantial user delay.

LOS standards are used to evaluate current conditions as well as the transportation impacts of long-term growth. The Washington State Growth Management Act (GMA) requires that development cannot occur unless existing infrastructure either exists or is built concurrent with development (Revised Code of Washington [RCW] 36.70A). This is known as concurrency. Under GMA, jurisdictions adopt standards by which the minimum acceptable roadway operating conditions are determined. Deficiencies are identified if operations fall below these standards. Table 3-1 summarizes the LOS standards that have been defined by the City for each of the MMAs, as shown in Figure 3-2. These standards are applied to weekday PM peak period volumes, which typically reflect the most congested conditions.

Traffic volumes for existing conditions are indicated in Table 3-2 and Figure 3-3.

The evaluation of transportation system performance is based on travel demand forecasting and analysis using the Bellevue-Kirkland-Redmond (BKR) Travel Demand Model. The model methodology and other analysis assumptions are described in Appendix D of this document. Table D-8 in Appendix D summarizes existing and future projected operations (LOS) of the 92 system intersections, located throughout the city, by which it measures concurrency. It is important to note that the TFP analysis of future conditions, while similar to the approach the City uses for concurrency analysis, differs from it in several important respects:

- The TFP analysis is for 12-year horizon conditions, whereas the GMA-required concurrency analysis uses a 6-year horizon.
- The TFP includes a forecast of land use growth over a 12-year period, whereas concurrency analysis is based only on existing land use plus additional development that has received permits (i.e., a more limited universe of land use).
- The TFP roadway network includes certain projects assumed to be completed by the City and by others (including WSDOT and private development) with projected funding to be received beyond the 6-year horizon of the 6- to 7-year Capital Investment Program (CIP), whereas concurrency analysis includes only projects (City-sponsored or otherwise) that have full funding secured within the 6-year horizon (i.e., a more limited set of projects).

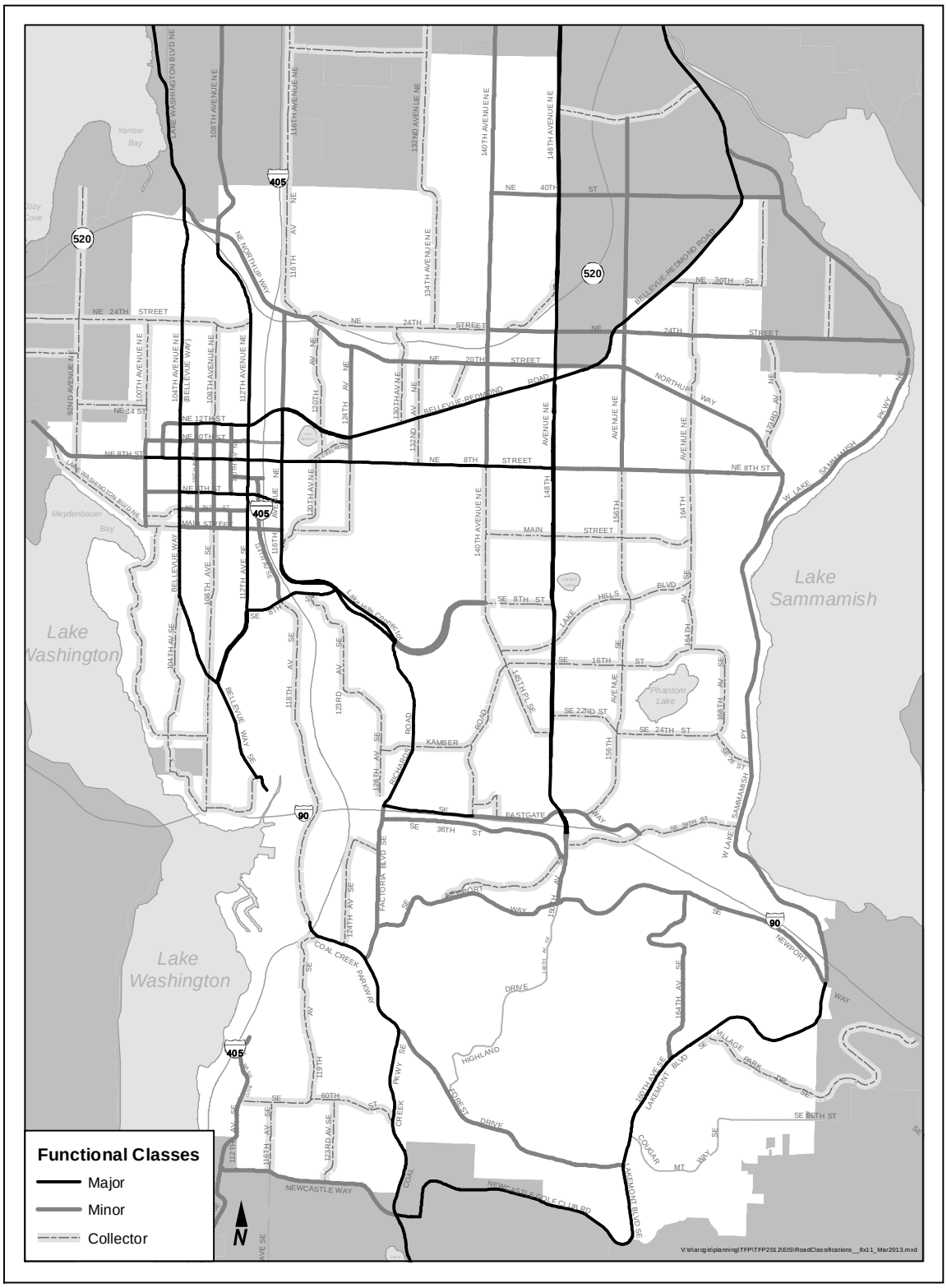


Figure 3-1. Roadway Classifications

Table 3-1. City of Bellevue Level of Service Standards

	MMA	Maximum Average V/C	Congestion Allowance[a]
1	North Bellevue	0.85	3
2	Bridle Trails	0.80	4
3	Downtown	0.95	9
4	Wilburton	0.90	3
5	Crossroads	0.90	2
6	Northeast Bellevue	0.80	2
7	South Bellevue	0.85	4
8	Richards Valley	0.85	5
9	East Bellevue	0.85	5
10	Eastgate	0.90	4
11	Newcastle	0.80	3
12	Bel-Red	0.95	7
13	Factoria	0.95	5
14	Newport Hills	0.80	N/A

[a] Congestion allowance is the number of system intersections that may exceed the areawide maximum.

N/A = No system intersections are currently identified in Newport Hills MMA.

Source: Bellevue City Code (BCC) 14.10.030

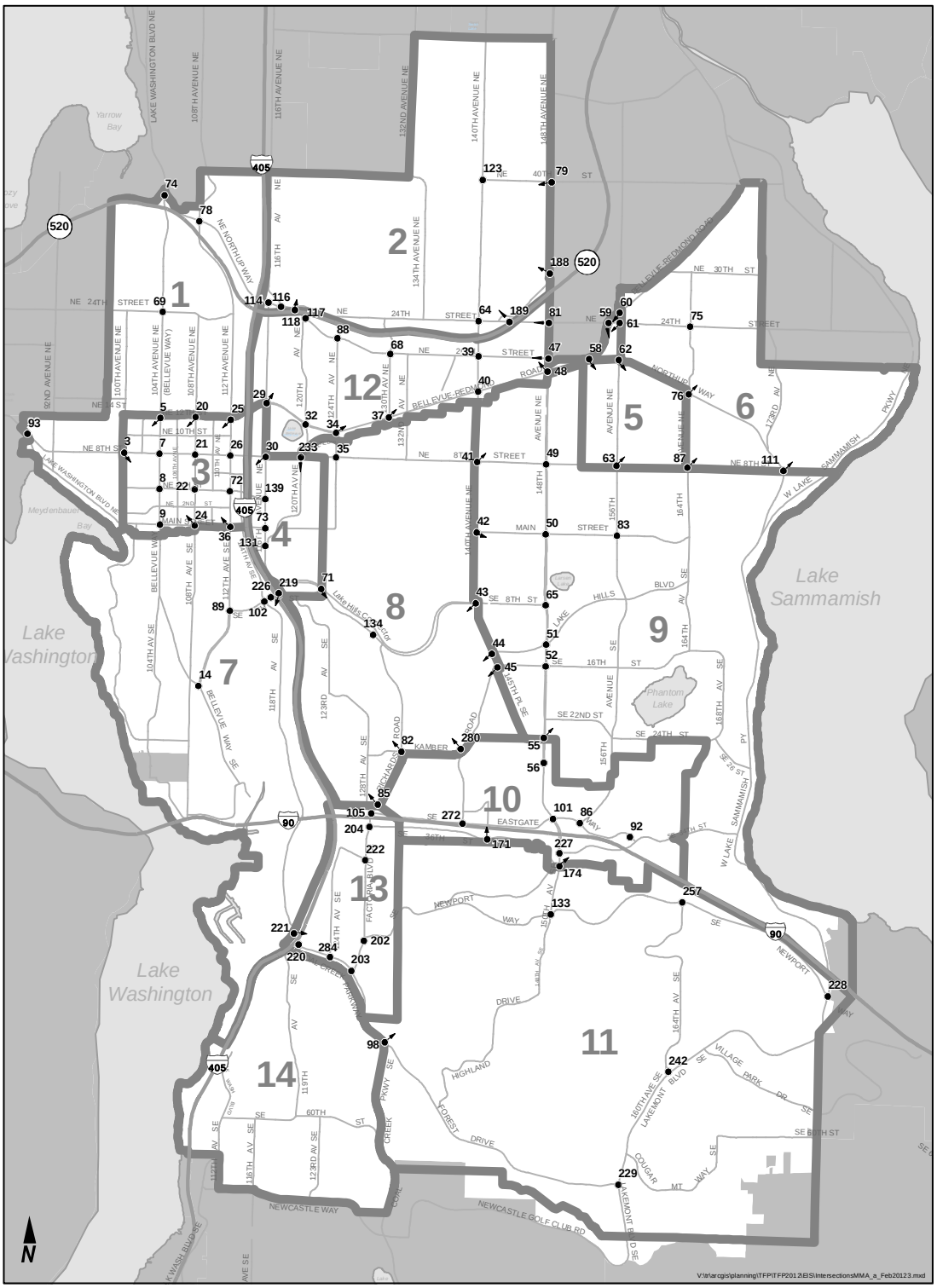


Figure 3-2. Mobility Management Areas and System Intersections

Table 3-2. Existing and Projected Future Traffic Volumes

Roadway Location Index	Roadway Location	MMA[a]	Average Traffic Volume (vehicles per hour averaged over 2 hours in PM peak period)				% Change in CIP Network over Existing	% Change in TFP Network over Existing	% Change in TFP Network Plus over Existing
			Existing (2012 Observed)	Future (2024) CIP Network	Future (2024) TFP Network	Future (2024) TFP Network Plus			
1	140th Ave NE, north of NE 40th St	2	994	1,147	1,157	1,148	15%	16%	15%
2	156th Ave NE, north of NE 40th St	0	1,278	1,262	1,272	1,270	-1%	0%	-1%
3	NE 40th St, west of 156th Ave NE	0	2,479	3,029	3,047	2,999	22%	23%	21%
4	NE 40th St, east of 156th Ave NE	0	1,588	2,301	2,299	2,304	45%	45%	45%
5	156th Ave NE, south of NE 40th St	0	2,045	2,434	2,460	2,415	19%	20%	18%
6	148th Ave NE, south of NE 40th St	2	1,954	2,128	2,124	2,132	9%	9%	9%
7	Bel-Red Rd, south of NE 40th St	0	1,001	1,129	1,131	1,128	13%	13%	13%
8	84th Ave NE, north of NE 24th St	0	1,263	1,161	1,163	1,154	-8%	-8%	-9%
9	NE 24th St, east of 84th Ave NE	0	311	289	287	286	-7%	-8%	-8%
10	98th Ave NE, north of NE 24th St	0	182	180	182	182	-1%	0%	0%
11	NE 24th St, east of 98th Ave NE	1	689	655	658	656	-5%	-4%	-5%
12	Bellevue Way NE, north of NE 24th St	1	1,592	1,950	1,967	1,943	22%	24%	22%
13	Northup Way, east of 108th Ave NE	1	1,285	1,466	1,481	1,493	14%	15%	16%
14	Bellevue Way NE, south of NE 24th St	1	1,549	1,922	1,936	1,916	24%	25%	24%
15	140th Ave NE, north of NE 24th St	2	1,080	1,044	1,043	1,051	-3%	-3%	-3%
16	NE 24th St, west of 140th Ave NE	2	954	1,305	1,288	1,288	37%	35%	35%
17	140th Ave NE, south of NE 24th St	2	1,916	1,999	2,007	2,043	4%	5%	7%
18	148th Ave NE, north of NE 24th St	12	3,809	4,377	4,375	4,369	15%	15%	15%
19	NE 24th St, east of 156th Ave NE	6	1,114	1,315	1,304	1,325	18%	17%	19%
20	148th Ave NE, south of NE 24th St	12	2,679	3,221	3,210	3,246	20%	20%	21%
21	Northup Way, west of 124th Ave NE	12	1,363	1,851	1,511	1,547	36%	11%	13%
22	130th Ave NE, south of NE 24th St	2	573	579	569	582	1%	-1%	2%
23	124th Ave NE, south of Northup Way	12	634	1,085	1,150	1,297	71%	81%	105%
24	Northup Way, east of 124th Ave NE	12	2,163	2,701	2,761	2,902	25%	28%	34%
25	NE 20th St, east of 140th Ave NE	12	1,719	2,308	2,346	2,330	34%	36%	36%

Table 3-2. Existing and Projected Future Traffic Volumes (continued)

Roadway Location Index	Roadway Location	MMA[a]	Average Traffic Volume (vehicles per hour averaged over 2 hours in PM peak period)				% Change in CIP Network over Existing	% Change in TFP Network over Existing	% Change in TFP Network Plus over Existing
			Existing (2012 Observed)	Future (2024) CIP Network	Future (2024) TFP Network	Future (2024) TFP Network Plus			
26	Bel-Red Rd, east of 148th Ave NE	12	1,423	1,847	1,843	1,864	30%	30%	31%
27	140th Ave NE, north of Bel-Red Rd	12	1,584	1,749	1,813	1,726	10%	14%	9%
28	140th Ave NE, south of Bel-Red Rd	12	1,558	1,735	1,724	1,724	11%	11%	11%
29	148th Ave NE, south of Bel-Red Rd	12	2,758	3,174	3,167	3,163	15%	15%	15%
30	Bellevue Way NE, north of NE 12th St	1	1,891	2,223	2,234	2,222	18%	18%	18%
31	108th Ave NE, north of NE 12th St	1	201	338	334	332	68%	66%	65%
32	112th Ave NE, north of NE 12th St	1	1,201	1,313	1,306	1,290	9%	9%	7%
33	116th Ave NE, north of NE 12th St	12	999	991	980	867	-1%	-2%	-13%
34	NE 12th St, west of 124th Ave NE	12	1,949	2,042	2,046	1,873	5%	5%	-4%
35	Bel-Red Rd, west of 130th Ave NE	12	2,571	3,093	3,130	3,085	20%	22%	20%
36	NE 8th St, east of 92nd Ave NE	1	722	701	697	693	-3%	-3%	-4%
37	Lake Washington Blvd NE, east of 92nd Ave NE	1	453	479	495	493	6%	9%	9%
38	100th Ave NE, south of NE 8th St	3	942	946	945	946	0%	0%	0%
39	Bellevue Way NE, south of NE 6th St	3	1,959	2,338	2,350	2,359	19%	20%	20%
40	NE 12th St, west of 112th Ave NE	3	1,614	2,050	2,059	2,095	27%	28%	30%
41	NE 8th St, west of 112th Ave NE	3	3,093	3,412	3,414	3,390	10%	10%	10%
42	NE 4th St, west of 112th Ave NE	3	2,259	2,739	2,738	2,737	21%	21%	21%
43	Main St, west of 112th Ave	3	1,666	2,058	1,984	2,004	24%	19%	20%
44	116th Ave NE, north of NE 8th St	4	2,235	2,733	2,733	2,829	22%	22%	27%
45	116th Ave NE, south of NE 8th St	4	2,303	2,133	2,116	2,135	-7%	-8%	-7%
46	NE 8th St, west of 140th Ave NE	8	1,914	2,485	2,490	2,493	30%	30%	30%
47	NE 8th St, east of 140th Ave NE	9	1,616	2,013	2,021	2,033	25%	25%	26%
48	140th Ave NE, south of NE 8th St	9	1,445	1,685	1,687	1,692	17%	17%	17%
49	NE 8th St, east of 148th Ave NE	9	1,513	1,743	1,755	1,761	15%	16%	16%
50	156th Ave NE, north of NE 8th St	5	1,785	2,301	2,300	2,289	29%	29%	28%
51	164th Ave NE, south of Northup Way	6	868	1,073	1,064	1,063	24%	23%	22%

Table 3-2. Existing and Projected Future Traffic Volumes (continued)

Roadway Location Index	Roadway Location	MMA[a]	Average Traffic Volume (vehicles per hour averaged over 2 hours in PM peak period)				% Change in CIP Network over Existing	% Change in TFP Network over Existing	% Change in TFP Network Plus over Existing
			Existing (2012 Observed)	Future (2024) CIP Network	Future (2024) TFP Network	Future (2024) TFP Network Plus			
52	NE 8th St, west of 164th Ave NE	5	1,026	1,240	1,244	1,242	21%	21%	21%
53	NE 8th St, east of 164th Ave NE	6	584	592	593	594	1%	2%	2%
54	Main St, east of 140th Ave	9	455	454	457	455	0%	0%	0%
55	156th Ave NE, north of Main St	9	1,219	1,556	1,555	1,550	28%	28%	27%
56	164th Ave NE, north of Main St	9	829	1,133	1,132	1,127	37%	37%	36%
57	Bellevue Way SE, south of SE 3rd St	7	2,399	2,844	2,921	2,910	19%	22%	21%
58	108th Ave SE, south of SE 4th St	7	348	441	520	509	27%	49%	46%
59	112th Ave SE, south of Main St	7	1,766	2,213	2,241	2,244	25%	27%	27%
60	116th Ave SE, south of Main St	4	2,428	2,787	2,733	2,733	15%	13%	13%
61	SE 8th St, west of Lake Hills Connector	8	1,418	1,405	1,433	1,439	-1%	1%	1%
62	Lake Hills Connector, south of SE 8th St	8	2,510	3,028	3,022	3,005	21%	20%	20%
63	Lake Hills Connector, east of Richards Rd	8	1,016	1,442	1,448	1,440	42%	43%	42%
64	140th Ave SE, north of SE 8th St	8	1,424	1,677	1,679	1,673	18%	18%	17%
65	148th Ave SE, south of Main St	9	3,080	3,334	3,331	3,321	8%	8%	8%
66	Bellevue Way SE, south of 112th Ave SE "Y" (total volume)	7	3,716	4,453	5,048	5,030	20%	36%	35%
66a	Bellevue Way SE, south of 112th Ave SE "Y"—northbound only	7	1,353	1,720	1,747	1,752	27%	29%	29%
66b	Bellevue Way SE, south of 112th Ave SE "Y"—southbound only, excluding HOV lane	7	2,363	2,733	2,410	2,398	16%	2%	1%
66c	Bellevue Way SE, south of 112th Ave SE "Y"—southbound HOV lane only	7	-	-	891	880	-	-	-
66b, 66c	Bellevue Way SE, south of 112th Ave SE "Y"—southbound total volume	0	2,363	2,733	3,301	3,278	0%	0%	0%
67	118th Ave SE, south of SE 8th St	7	758	1,090	1,085	1,077	44%	43%	42%
68	145th Pl SE, south of SE 8th St	8	1,338	1,654	1,650	1,646	24%	23%	23%
69	Lake Hills Blvd, east of 156th Ave SE	9	384	327	329	339	-15%	-14%	-12%
70	West Lake Sammamish Parkway, south of	9	1,216	1,519	1,515	1,509	25%	25%	24%

Table 3-2. Existing and Projected Future Traffic Volumes (continued)

Roadway Location Index	Roadway Location	MMA[a]	Average Traffic Volume (vehicles per hour averaged over 2 hours in PM peak period)				% Change in CIP Network over Existing	% Change in TFP Network over Existing	% Change in TFP Network Plus over Existing
			Existing (2012 Observed)	Future (2024) CIP Network	Future (2024) TFP Network	Future (2024) TFP Network Plus			
	Northup Way								
71	Richards Rd, north of Kamber Rd	8	1,976	2,378	2,368	2,353	20%	20%	19%
72	Kamber Rd east of Richards Rd	8	972	1,283	1,273	1,266	32%	31%	30%
73	148th Ave SE, south of SE 24th St	10	3,534	3,830	3,808	3,797	8%	8%	7%
74	SE 24th St, east of 156th Ave SE	9	238	270	271	271	13%	14%	14%
75	139th Ave SE, south of Kamber Rd	10	742	1011	1005	1003	36%	35%	35%
76	SE Eastgate Way, east of Richards Rd	13	925	1,304	1,310	1,304	41%	42%	41%
77	SE Eastgate Way, west of 150th Ave SE	10	1,309	1,655	1,668	1,665	26%	27%	27%
78	156th Ave SE, north of SE Eastgate Way	10	1,438	1,636	1,637	1,631	14%	14%	13%
79	SE Eastgate Way, west of 161st Ave SE	10	1,109	1,424	1,431	1,425	28%	29%	28%
80	Factoria Blvd, north of SE 41st St	13	2,242	2,612	2,609	2,607	17%	16%	16%
81	SE Newport Way, east of 128th Ave SE	13	1,325	1,466	1,464	1,460	11%	10%	10%
82	Coal Creek Parkway, west of SE Newport Way	13	2,460	2,327	2,324	2,330	-5%	-6%	-5%
83	150th Ave SE, north of SE Newport Way	11	1,957	2,317	2,327	2,319	18%	19%	18%
84	SE Newport Way, west of 150th Ave SE	11	784	877	873	873	12%	11%	11%
85	150th Ave SE, south of SE Newport Way	11	862	1,083	1,080	1,075	26%	25%	25%
86	SE Newport Way, west of 164th Ave SE	11	606	560	577	578	-8%	-5%	-5%
87	SE Newport Way, east of 164th Ave SE	11	388	344	363	362	-11%	-6%	-7%
88	119th Ave SE, north of SE 52nd St	14	713	1,115	1,104	1,105	56%	55%	55%
89	Coal Creek Parkway, south of Forest Drive SE	11	2,699	3,166	3,172	3,174	17%	18%	18%
90	Forest Drive SE, east of Coal Creek Parkway	11	847	1,192	1,187	1,184	41%	40%	40%
91	Lakemont Blvd SE, east of Village Park Drive SE	11	1,188	1,012	1,014	1,020	-15%	-15%	-14%
92	Village Park Drive SE, south of Lakemont Blvd SE	11	452	443	441	442	-2%	-2%	-2%
93	Lakemont Blvd SE, south of SE Newport Way	11	1,348	1,048	1,053	1,057	-22%	-22%	-22%
94	SE Newport Way, north of Village Park Drive	0	979	1,399	1,397	1,395	43%	43%	42%

Table 3-2. Existing and Projected Future Traffic Volumes (continued)

Roadway Location Index	Roadway Location	MMA[a]	Average Traffic Volume (vehicles per hour averaged over 2 hours in PM peak period)				% Change in CIP Network over Existing	% Change in TFP Network over Existing	% Change in TFP Network Plus over Existing
			Existing (2012 Observed)	Future (2024) CIP Network	Future (2024) TFP Network	Future (2024) TFP Network Plus			
95	North Village Rd, west of SE Newport Way	0	17	56	59	59	229%	247%	247%
96	Village Park Drive, west of SE Newport Way	0	751	1,151	1,153	1,150	53%	54%	53%
97	Lakemont Blvd SE, west of 164th Ave SE	11	1,046	1,130	1,129	1,126	8%	8%	8%
98	NE 29th Pl, north of NE 24th St	2	711	896	900	913	26%	27%	28%
99	124th Ave NE, south of NE 5th St	8	468	938	936	880	100%	100%	88%
100	132nd Ave NE, north of NE 8th St	8	310	550	456	450	77%	47%	45%
101	130th Ave NE, north of NE 16th St	12	595	760	902	934	28%	52%	57%
102	120th Ave NE, south of NE 15th St	12	485	2,444	2,400	1,717	404%	395%	254%
103	124th Ave NE, south of NE 15th St	12	595	971	1061	1048	63%	78%	76%
104	NE 15th St, west of 124th Ave NE	12	-	-	514	810	-	-	-
105	NE 15th St, west of 120th Ave NE	12	-	-	NA	1,628	-	-	-
106	120th Ave NE, south of Northup Way	12	469	712	760	901	52%	62%	92%
107	120th Ave NE, south of NE 12th St	12	490	2,003	2,021	2,012	309%	312%	311%
108	NE 8th St, west of 124th Ave NE	8	2,169	2,670	2,663	2,574	23%	23%	19%
109	NE 8th St, west of 120th Ave NE	4	2,787	3,381	3,381	3,276	21%	21%	18%
110	120th Ave NE, north of NE 6th St	4	1,364	4,039	4,055	4,004	196%	197%	194%
111	NE 6th St, west of 120th Ave NE	4	152	2,037	2,063	2,087	1240%	1257%	1273%
112	NE 4th St, west of 120th Ave NE	4	188	2,019	1,996	1,913	974%	962%	918%
113	SE 8th St, east of 112th Ave SE	7	776	1,160	974	953	49%	26%	23%
114	112th Ave SE, north of Bellevue Way SE	7	1,528	1,696	1,951	1,938	11%	28%	27%
115	Bellevue Way SE, west of 112th Ave SE	7	2,542	3,241	3,429	3,404	27%	35%	34%
116	Bellevue Way SE between the park-and-ride and 113th Ave SE (total count)	0	3,182	3,608	4,100	4,070	13%	29%	28%
116a	Bellevue Way SE between the park-and-ride and 113th Ave SE—northbound only	7	1,047	1,009	1,025	1,020	-4%	-2%	-3%
116b	Bellevue Way SE between the park-and-ride and 113th Ave SE—southbound only, excluding HOV lane	7	2,135	2,314	2,185	2,171	8%	2%	2%

Table 3-2. Existing and Projected Future Traffic Volumes (continued)

Roadway Location Index	Roadway Location	MMA[a]	Average Traffic Volume (vehicles per hour averaged over 2 hours in PM peak period)				% Change in CIP Network over Existing	% Change in TFP Network over Existing	% Change in TFP Network Plus over Existing
			Existing (2012 Observed)	Future (2024) CIP Network	Future (2024) TFP Network	Future (2024) TFP Network Plus			
116c	Bellevue Way SE between the park-and-ride and 113th Ave SE—southbound HOV lane only	7	-	285	890	879	-	-	-
116b, 116c	Bellevue Way SE between the park-and-ride and 113th Ave SE—southbound total volume	0	2,135	2,599	3,075	3,050	22%	44%	43%
117	113th Ave SE, southwest of Bellevue Way SE	7	95	228	186	189	140%	96%	99%
118	112th Ave SE, south of Bellevue Way SE	7	62	50	75	77	-19%	21%	24%
119	108th Ave SE, south of SE 25th St	7	219	307	230	226	40%	5%	3%

[a] MMA locations indicated as "0" fall outside of Bellevue city limits.

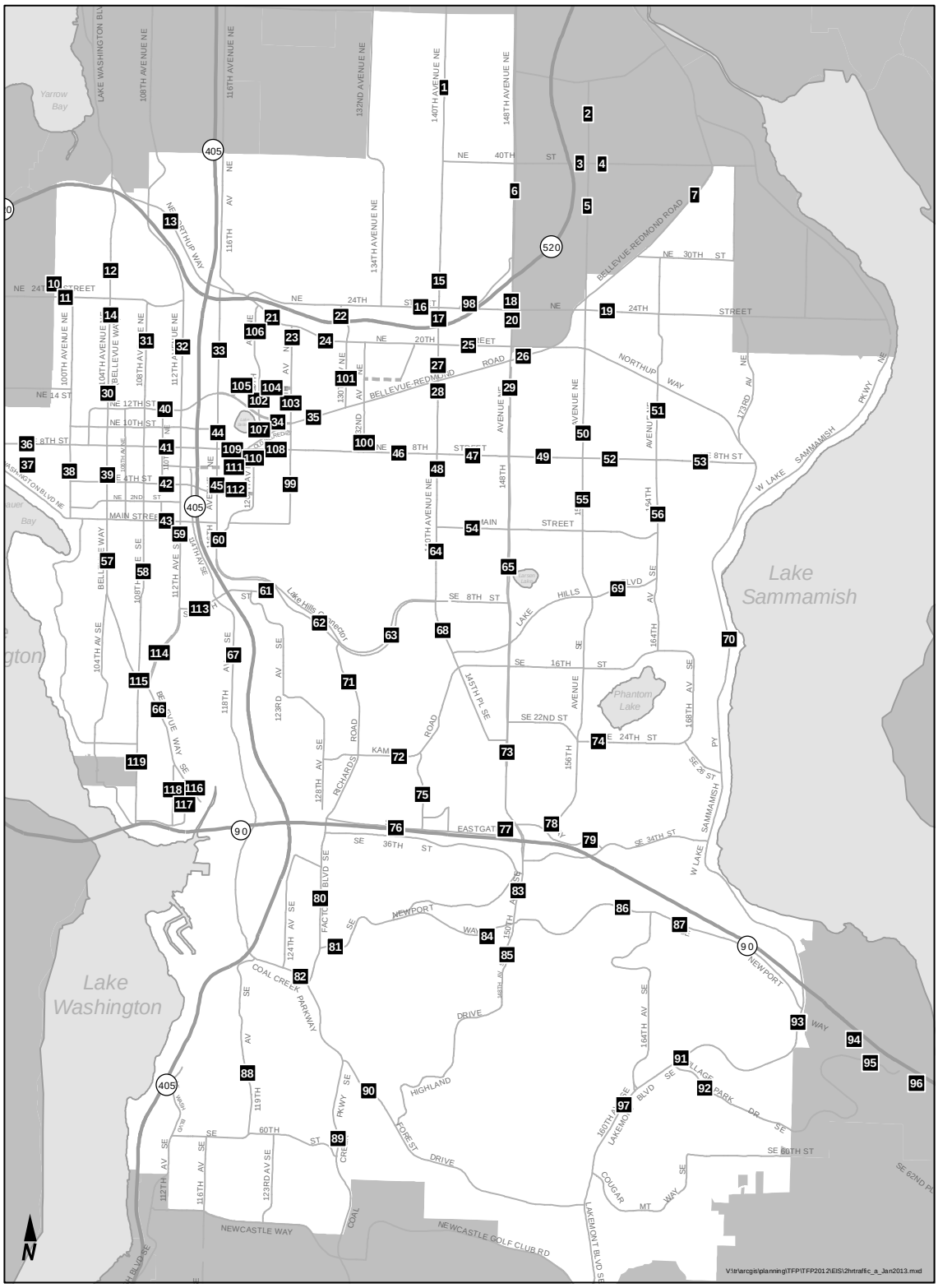


Figure 3-3. Traffic Volume Locations

Existing roadway operating conditions, as reflected by the 2012 V/C values presented in Appendix D, are discussed in the following sections. In general, the analysis indicates that most system intersections are currently operating at an acceptable V/C, with all except four locations operating within their respective standards. The few that are operating below V/C standards are often located in proximity to the interchanges with either State Route (SR) 520 or Interstate 405 (I-405). This indicates that high traffic volumes generated by the freeways are most likely to affect operations on the local roadways located near the interchanges.

3.1.1.1. North Bellevue/Bridle Trails

This area encompasses the North Bellevue (MMA 1) and Bridle Trails (MMA 2) subareas. Both MMAs have areawide average LOSs that are well below adopted standards (0.85 V/C for North Bellevue, 0.80 V/C for Bridle Trails). Of the 12 system intersections located in this area, 11 are operating within their respective V/C standards, and the following one intersection is operating at a V/C level that exceeds its standard:

- (188) 148th Avenue NE/NE 29th Place—V/C of 0.86 exceeds its V/C threshold of 0.80

This intersection is located at the SR 520 westbound off-ramp.

3.1.1.2. Downtown

This area encompasses the Downtown (MMA 3) subarea. Its areawide average of 0.65 V/C is well within standards adopted for this MMA (0.95 V/C). Of the 13 system intersections located in this area, 12 are operating within their respective standards, and the following one intersection is operating at a V/C level that exceeds its standard:

- (26) 112th Avenue NE/NE 8th Street—V/C of 1.07 exceeds its V/C threshold of 0.95

This intersection is located at the interchange of NE 8th Street and I-405.

3.1.1.3. Bel-Red/Wilburton

This area encompasses the Wilburton (MMA 4) subarea and the Bel-Red (MMA 12) subarea. Both MMAs have areawide average LOSs that are well below the V/C standard (0.95 V/C for Bel-Red, 0.90 V/C for Wilburton). Of the 20 system intersections located in this area, all are operating within their respective LOS standards.

3.1.1.4. Northeast Bellevue/Crossroads

This area encompasses the Crossroads (MMA 5) and Northeast Bellevue (MMA 6) subareas. Both MMAs have areawide average V/Cs that are well below adopted standards (0.80 V/C for NE Bellevue, 0.90 V/C for Crossroads). Of the seven system intersections located in this area, all are operating within their respective LOS standards.

3.1.1.5. Central Bellevue

This area encompasses the South Bellevue (MMA 7), Richards Valley (MMA 8), and East Bellevue (MMA 9) subareas. All three MMAs have areawide average V/Cs that are well below adopted standards (0.85 V/C for South Bellevue, Richards Valley, and East Bellevue). Of the 23 system intersections located in this area, all are operating within their respective LOS standards.

3.1.1.6. Eastgate

This area encompasses the Eastgate (MMA 10) subarea. This MMA has an areawide average V/C that is well below adopted standards (0.90 V/C). Of the eight system intersections located in this area, all are operating within their respective LOS standards.

3.1.1.7. Factoria

This area encompasses the Factoria (MMA 13) subarea. This MMA has an areawide average V/C that is well below adopted standards (0.95 V/C). Of the eight system intersections located in this area, seven are operating within their respective standards, and the following one intersection is operating at an LOS level that exceeds its standard:

- (284) 124th Avenue SE/Coal Creek Parkway—V/C of 1.01 exceeds its V/C threshold of 0.95

3.1.1.8. South Bellevue

This area encompasses the Newcastle (MMA 11) and Newport Hills (MMA 14) subareas. This area has an areawide average V/C that is below adopted standards (0.80 V/C for Newcastle and Newport Hills). There are six system intersections located in this area, of which three are currently signalized and thus included in the measurements. Of these three, two are operating within their respective LOS standards, and the following one intersection is operating at an LOS level that exceeds its standard (Note: No system intersections are located in MMA 14; all three are located in MMA 11.):

- (133) 150th Avenue SE/SE Newport Way—V/C of 0.81 exceeds its V/C threshold of 0.80

3.1.2. Neighborhood Conditions

Traffic and parking issues on residential streets can greatly affect neighborhood livability. When problems become a daily occurrence, the sense of community and personal well-being is compromised. When streets are safe and pleasant, quality of life is enhanced. The City addresses transportation concerns through its Neighborhood Traffic Safety Services (NTSS) group. NTSS is committed to working with residents to protect and preserve neighborhood livability by minimizing cut-through traffic, discouraging excessive vehicle speeds, encouraging walking and bicycling, and reducing overflow parking.

The City of Bellevue Residential Traffic Guidebook (Bellevue 2012a) provides a variety of tools to address neighborhood traffic concerns depending on traffic conditions. Areas of focus include changing driver behavior through education, encouragement, and enforcement efforts, as well as physically changing the street environment through traffic safety projects that may include speed humps, traffic circles, medians, raised crosswalks, and stationary radar signs.

The Residential Permit Parking Program effectively addresses neighborhood spillover parking. A Residential Permit Parking Zone (RPZ) is an area established by a City ordinance to restrict non-residential parking on neighborhood streets. A neighborhood may be eligible for zoned or general parking restrictions if it regularly experiences a significant amount of spillover parking from adjacent businesses, such as from Downtown Bellevue, or is near major generators of parked cars (high schools, shopping malls, etc.). RPZ restrictions require majority support from neighborhood residents, as well as City Council approval. The City has 15 designated permit parking zones.

3.1.3. Traffic Safety

The City uses an accident records database to help identify trends in collision occurrence and to assist in evaluating corrective measures to improve safety. This information includes intersections and mid-block locations, types of collision, and pedestrian and bicycle-related collisions. Some relevant statistics for accident trends are:

- In 2008 to 2012, overall annual collisions (including those involving bicycles and pedestrians) ranged from 1,725 (in 2008) to 1,519 (in 2009), with an average of 1,566.
- In 2011 (the most recent year for which detailed analysis has been completed), no single intersection had an accident rate higher than two accidents per million entering vehicles, and only two intersections had an accident rate greater than one accident per million entering vehicles.
- The trend line for pedestrian-involved collisions over the 5-year period from 2008 to 2012 showed some fluctuation year to year with 2011 having higher incidents (49) than 2012 or previous years (the average over 5 years is 37 collisions annually). One pedestrian fatality occurred in the 5-year period (in 2011).
- The trend line for bicycle-involved collisions over the same 5-year period has remained relatively flat, with a slight decrease in the past 3 years. (The 5-year average is 32 collisions annually, with an average of 30 collisions in each of the last 3 years.) There were no bicycle-related fatalities in the 2008 to 2012 period.
- Annual fatalities, including those involving pedestrians and bicyclists, ranged from 0 (in 2008 and 2010) to a high of 2 (in 2011). There was one fatality each year in 2009 and 2012.

Reviews to determine influences and causes for accidents are an ongoing effort, with higher risk locations being identified for safety improvement projects.

3.1.4. Travel Alternatives

Reliable and responsive alternatives to the single-occupant vehicle (SOV) are a vital component of the transportation system. The City has a comprehensive Transportation Demand Management (TDM) program and a growing transit network. Following are some relevant data and facts:

- Most recent mode split surveys indicate that of the commercial MMAs, Factoria exceeded its Comprehensive Plan mode-split target, meaning that more people than anticipated in that area are choosing alternative modes of transportation for their daily commutes. The other commercial areas for which targets are specified in the Comprehensive Plan (Downtown, Bel-Red/Northup, Crossroads, and Eastgate) are still short of their respective targets (Bellevue 2009a, 2011a). Survey results are summarized in Appendix D, Table D-5.
- Journey to work data from the U.S. Census American Community Survey (ACS) show that citywide, 75 percent of people working in Bellevue drive alone to work, 11 percent carpool/vanpool to work, 7 percent use public transit, with other modes each below 5 percent. ACS data also show that 68 percent of Bellevue residents drive alone to work (in Bellevue or elsewhere), 9 percent carpool/vanpool, 10 percent use public transit, 7 percent work at home, and 5 percent walk to work, with other modes at very low levels (2007–2011 ACS 5-year estimates). Survey results are summarized in Appendix D, Table D-5.
- During 2012, the City worked with 60 worksites affected by the State Commute Trip Reduction (CTR) Act (sites with 100 or more employees commuting to work during the 6 a.m. to 9 a.m. peak period) to implement commute trip reduction efforts; approximately 35,000 employees work at these affected worksites. Data show that worksites that have participated in the program since the start in 1993 have reduced their average SOV commute rate by 11 percent, from a baseline of 79 percent in 1993 to 68 percent in 2011. The City adopted an updated Commute Trip Reduction Plan in March 2008 to conform to requirements of the State of Washington CTR Act.
- The City has a TDM plan for Downtown (adopted in March 2008) that has the objective of shifting 7,200 daily commute trips away from drive-alone mode by the end of 2015. The plan, Connect Downtown, was developed pursuant to the Growth and Transportation Efficiency Center program of the Washington State Department of Transportation (WSDOT); implementation of the plan is funded by federal, state, and local funds. Under the Connect Downtown plan, 148 downtown employers have been engaged and provided support in enhancing the commute benefits they offer to employees. Outreach to employers has resulted in 1,200 new transit passes in the hands of downtown employees. Through a new program called Downtown Bellevue On The Move, approximately 2,600 downtown workers and residents have logged nearly 330,000 non-drive-alone trips in an online trip calendaring tool.
- Transit service is provided by Sound Transit and King County Metro via two routes that offer all-day, very frequent service (15-minute headways or better); four routes that offer

all-day frequent service (15- to 30-minute headways); 10 routes providing all-day service at somewhat lesser service levels (30- to 60-minute headways); and 23 peak-period routes. There are 46,300 transit boardings and alightings on an average weekday. Eighty-four percent of boardings occur at bus stops located on city streets or the Downtown Bellevue Transit Center, with the balance (16 percent) occurring at the 11 park-and-ride facilities served by transit (5 of which are owned by transit agencies or WSDOT and the remaining 6 are church parking lots leased for use by transit riders).

In 2012, the City initiated an update of its transit master plan (which dates from 2003); the new plan—still under development—will be a comprehensive look ahead to the type of transit system that will be required to meet Bellevue's transit needs through 2030. Issues to be addressed in the planning process include identifying the most important transit corridors in the city, integrating transit capital facilities and services with walking and bicycling infrastructure, and using transit to make great places. Ways to enhance bus transit performance through roadway investments, such as traffic signal priority, will also be evaluated. The new plan will align with King County Metro's focus on creating a more productive transit system in accordance with the new Strategic Plan for Public Transportation (2011–2021) and associated service guidelines that influence transit resource allocation decisions (King County Metro 2012).

3.1.5. Pedestrian and Bicycle Network

The City of Bellevue Pedestrian and Bicycle Transportation Plan Update (Bellevue 2009a) identifies goals for accommodating walking and bicycling and specifies needed non-motorized transportation facilities. The City is making progress in implementing pedestrian and bicycle facility improvements along key routes, as identified in the plan. As of the end of 2012, the adopted Pedestrian Network is 70.5 percent complete and the Bicycle Network is 45.8 percent complete (Bellevue 2011b).

Pedestrian and Bicycle Transportation Plan Policy PB-2 calls for 25 miles of sidewalk to be constructed along arterials by 2019. By the end of 2012, the City had built approximately 3.8 miles of arterial sidewalk, or 15 percent of the total length of the sidewalks that the policy targets by 2019 (Bellevue 2011b).

Policy PB-2 also calls for at least one east-west and one north-south bicycle route through Downtown to be implemented by 2014, and at least two north-south and two east-west bicycle routes ("corridors") across the city to be implemented by 2019. Figure 3-4 shows the Priority Bicycle Corridors described below:

- The two east-west Priority Bicycle Corridors designated through Downtown are EW-2 (Downtown-Overlake Connection) and EW-3 (Lake to Lake Trail Corridor). Currently, neither of these has any elements completed within Downtown.
- The two north-south Priority Bicycle Corridors designated through Downtown are NS-1 (Enatai-Northtown Connection) and NS-2 (Lake Washington Loop Trail). Of these, NS-1 has no elements completed within Downtown and NS-2 is 61 percent complete within Downtown.

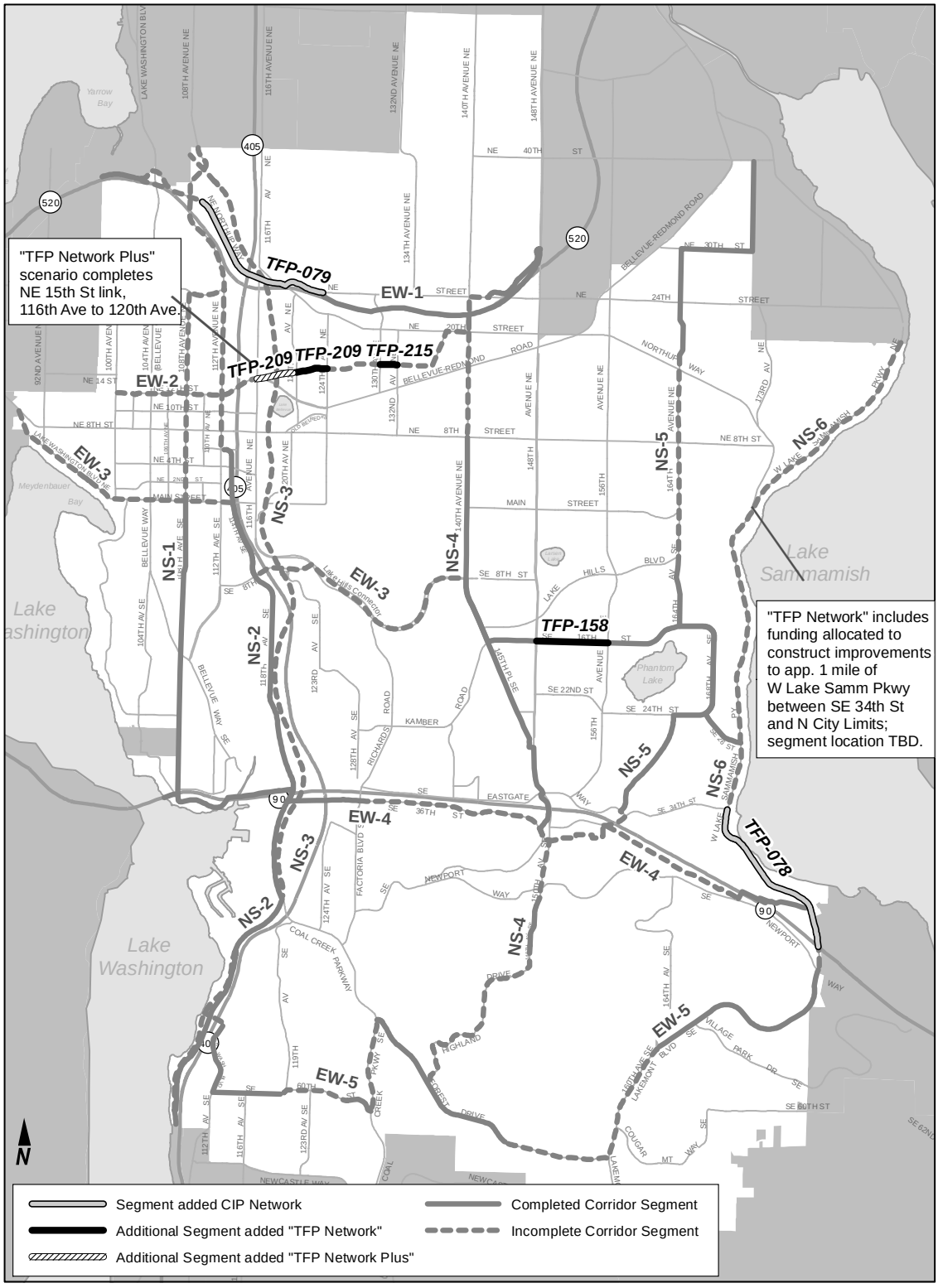


Figure 3-4. Priority Bicycle Corridors

- Citywide, the two east-west Priority Bicycle Corridors that are closest to completion are EW-1 (SR 520 Trail), which is 50.1 percent complete, and EW-5 (Coal Creek-Cougar Mountain Connection), which is 55.2 percent complete.
- Two north-south Priority Bicycle Corridors are more than 60 percent complete across Bellevue—NS-2 (Lake Washington Loop Trail), which is 68.6 percent complete; and NS-5 (Spirit Ridge-Sammamish River Connection), which is 61.5 percent complete (Bellevue 2011b).

3.2. Impacts

This section assesses the potential impacts of the CIP Network and TFP Network alternatives on the transportation system. As discussed in Chapter 2, the CIP Network alternative includes only the projects that are in the current CIP. The TFP Network alternative includes adoption of the full list of 2013–2024 TFP projects summarized in Table 2-1. Also considered is the TFP Network Plus scenario, which completes one additional link of NE 15th Street (from 116th Avenue NE to 120th Avenue NE).

The potential impacts of the CIP Network and TFP Network alternatives were assessed in the following areas:

- Overall system performance
- Intersection and arterial traffic operations
- Neighborhood impacts
- Safety
- Pedestrian and bicycle impacts.

3.2.1. Overall System Performance

Figure 3-3 shows the locations where traffic volumes were analyzed. Table 3-2 summarizes the 1-hour average of the 2-hour PM peak arterial volumes for current (2012) and projected 2024 volumes under the two alternatives and the Plus scenario at each of the analysis locations.

In general, volumes on arterials would increase at a rate consistent with the average over the next 12 years. As development, population, and traffic volumes increase, intersections in all MMAs are predicted to operate at worsened LOS conditions between now and 2024.

Areas with the greatest increase (i.e., worsening) in traffic volumes are the Wilburton and Bel-Red MMAs. In both of these areas, increases at some locations are projected to exceed 100 percent between now and 2024.

In general, the change of 2024 roadway volumes over existing are projected to be within 5 percent of each other under the two alternatives and the TFP Network Plus scenario. The CIP Network volumes are expected to be a little higher at some locations and the TFP Network or

TFP Network Plus volumes a little higher at others. The following locations have larger discrepancies between the alternatives:

- Projected volumes on Northup Way, west of 124th Avenue NE (ID #21), are lower under the TFP Network alternative and TFP Network Plus scenario than the CIP Network alternative while volumes on 124th Avenue NE, south of Northup Way (ID #23), are higher. This is likely due to the completion of the NE 15th Street roadway link between 120th Avenue NE and 124th Avenue NE, which is an element of the TFP Network alternative and TFP Network Plus scenario (but not the CIP Network alternative).
- Projected volumes on 130th Avenue NE, north of NE 16th Street (ID #101) are higher under the TFP Network alternative than the CIP Network alternative. This is likely due to completion of a new NE 16th Street link between 130th and 132nd Avenues NE, included in the TFP Network.
- The TFP Network Plus scenario would complete an additional link on NE 15th Street, between 116th Avenue NE and 120th Avenue NE, which would result in a decrease in volume on 120th Avenue NE, south of NE 15th Street (ID #102), compared to the CIP Network and TFP Network alternatives.

Projected volumes on a number of arterials in and around the South Bellevue subarea are projected to substantially increase or decrease with the TFP Network alternative and TFP Network Plus scenario compared to the CIP Network alternative. These traffic volume changes are likely due to the planned widening of Bellevue Way SE to include a southbound high-occupancy vehicle (HOV) lane. This improvement is inclded in the TFP Network alternative and TFP Network Plus scenario, but only a part of it is included in the CIP Network alternative. Locations with volume changes include:

- SE 8th Street, east of 112th Avenue SE (ID #113)—lower volumes with the TFP Network alternative and TFP Network Plus scenario compared to the CIP Network alternative
- 112th Avenue SE, north of Bellevue Way SE (ID #114)—higher volumes with the TFP Network alternative and TFP Network Plus scenario compared to the CIP Network alternative
- Bellevue Way SE, north of the “Y” intersection with 112th Avenue SE (ID #115)—higher volumes with the TFP Network alternative and TFP Network Plus scenario compared to the CIP Network alternative
- Bellevue Way SE, south of the “Y” intersection with 112th Avenue SE (ID #66)—higher volumes with the TFP Network alternative and TFP Network Plus scenario compared to the CIP Network alternative
- 113th Avenue SE, southwest of Bellevue Way SE (ID #117)—lower volumes with the TFP Network alternative and TFP Network Plus scenario compared to the CIP Network alternative

- 112th Avenue SE, south of Bellevue Way SE (ID #118)—higher volumes with the TFP Network alternative and TFP Network Plus scenario compared to the CIP Network alternative
- 108th Avenue SE, south of SE 4th Street (ID #58)—higher under the TFP Network alternative and TFP Network Plus scenario than the CIP Network alternative
- 108th Avenue SE, south of SE 25th Street (ID #119)—lower volumes with the TFP Network alternative and TFP Network Plus scenario compared to the CIP Network alternative.

3.2.2. Intersection and Arterial Traffic Operations

Existing and forecast future roadway operating conditions under the CIP Network and TFP Network alternatives are summarized in Table 3-3. See Appendix D, Table D-7 for a full listing of existing and forecast future conditions at all 92 system intersections.

Table 3-3. Existing and Forecast Traffic Conditions by MMA

			2012 Conditions (Existing)		2024 CIP Network Alternative		2024 TFP Network Alternative		2024 TFP Network Plus Scenario	
MMA	V/C Std	Congestion Allowance*	V/C	Intersection over Standard	V/C	Intersection over Standard	V/C	Intersection over Standard	V/C	Intersection over Standard
North Bellevue	0.850	3	0.490		0.521		0.522		0.517	
Bridle Trails	0.800	4	0.627	1	0.775	4	0.776	4	0.753	3
Downtown	0.950	9	0.649	1	0.771	1	0.779	2	0.785	2
Wilburton	0.900	3	0.739		**0.914**	2	**0.912**	2	**0.903**	2
Crossroads	0.900	2	0.604		0.745		0.746		0.741	
Northeast Bellevue	0.800	2	0.599		0.770	1	0.770	1	0.770	1
South Bellevue	0.850	4	0.599		0.650		0.687	1	0.685	1
Richards Valley	0.850	5	0.600		0.775	4	0.773	4	0.761	2
East Bellevue	0.850	5	0.699		0.829	5	0.827	5	0.824	5
Eastgate	0.900	4	0.624		0.701	2	0.689	1	0.689	1
Newcastle	0.800	3	0.771	1	**1.040**	3	**1.046**	3	**1.044**	3
Bel-Red	0.950	7	0.652		0.841	5	0.846	5	0.860	4
Factoria	0.950	5	0.789	1	0.897	3	0.898	3	0.895	3
Total Intersections over Standard				4		30		31		27

Notes:

Figures in **bold** exceed standard.

No values are listed for MMA 14 (Newport Hills) because no system intersections are currently identified in this area.

* “Congestion Allowance” is the number of intersections permitted to exceed the designated V/C standard for MMA.

Following is a discussion of forecast conditions in each area.

3.2.2.1. North Bellevue/Bridle Trails

This area encompasses the North Bellevue (MMA 1) and Bridle Trails (MMA 2) subareas. No capacity projects are proposed in these subareas. The areawide 2024 LOS for the North Bellevue and Bridle Trails subareas are projected to remain below the respective 0.85 and 0.80 V/C standards under all alternatives as indicated in Table 3-3. Table 3-4 summarizes intersection LOS at key locations within the North Bellevue/Bridle Trails MMA. Table 3-3 also shows that areawide average operations under the TFP Network alternative would be slightly worse compared to the CIP Network at all of the locations listed. The TFP Network Plus scenario is expected to improve one location, 115th Place NE/Northup Way NE, to a level within the LOS standard of 0.80 for Bridle Trails, which reduces the number of intersections over the V/C standard to 3 compared to 4 in the CIP and TFP Networks.

Table 3-4. 2024 Level of Service under CIP Network and TFP Network Alternatives for North Bellevue/Bridle Trails

		CIP Network Alternative	TFP Network Alternative		TFP Network Plus Scenario	
ID#	Intersection	V/C	V/C	V/C Difference[a]	V/C	V/C Difference[a]
64	140th Ave NE/NE 24th St	**0.894**	**0.894**	0	**0.911**	+0.017
79	148th Ave NE/NE 40th St	**0.825**	**0.828**	+0.003	**0.821**	-0.004
116	115th Pl NE/Northup Way	**0.803**	**0.811**	+0.008	0.761	-0.042
188	148th Ave NE/NE 29th Pl	**1.054**	**1.057**	+0.003	**1.059**	+0.005

Note: Figures in **bold** exceed standard.

[a] V/C difference compared to the CIP Network alternative.

3.2.2.2. Downtown

This area encompasses the Downtown (MMA 3) subarea. Table 3-5 shows that nine capacity projects are proposed in this area under the TFP Network alternative. Of these, one project is also included under the CIP Network alternative.

Table 3-5. TFP Projects for CIP Network and TFP Network Alternatives for Downtown

2013–2024 TFP#	MMA	Project Location	CIP Network Alternative	TFP Network Alternative
110	3	110th Ave NE/NE 6th St to NE 8th St[a]	X	X
190	3	NE 2nd St/Bellevue Way to 112th Ave NE		X
193	3	NE 10th St/I-405		X
197	3	NE 2nd St Extension and I-405 interchange		X
216	3	112th Ave NE/NE 2nd St[a]		X
219	3	NE 8th St/106th Ave NE[a]		X
222	3	Bellevue Way NE/NE 4th St[a]		X
223	3	Bellevue Way NE/NE 8th St[a]		X
225	3	Bellevue Way NE/NE 2nd St[a]		X

[a] Capacity (impact fee) project expected to be open for use by 2024 and included in the traffic model.

Table 3-6 summarizes intersection LOS at key locations within this area under the CIP Network and TFP Network alternatives and under the TFP Network Plus scenario. The table shows that one intersection, 112th Avenue NE/NE 8th Street, is forecast to exceed the LOS standard of 0.95 for Downtown under all the alternatives. An additional intersection at 112th Avenue/Main Street is forecast to exceed the LOS standard under the TFP Network alternative and the TFP Network Plus scenario. Overall, operations under the TFP Network alternative and TFP Network Plus scenario are generally projected to be slightly worse in this area than they are under the CIP Network alternative as indicated in Table 3-3. The Downtown areawide V/C, however, is expected to remain below the 0.95 standard under all alternatives.

Table 3-6. 2024 Level of Service under CIP Network and TFP Network Alternatives for Downtown

		CIP Network Alternative	TFP Network Alternative		TFP Network Plus Scenario	
ID#	Intersection	V/C	V/C	V/C Difference[a]	V/C	V/C Difference[a]
9	Bellevue Way/Main St	0.867	0.897	+0.030	0.898	+0.031
22	108th Ave NE/NE 4th St	0.922	0.934	+0.012	0.930	+0.008
25	112th Ave NE/NE 12th St	0.804	0.818	+0.014	0.881	+0.077
26	112th Ave NE/NE 8th St	**1.130**	**1.139**	+0.009	**1.156**	+0.026
36	112th Ave/Main St	0.942	**0.960**	+0.018	**0.955**	+0.013

Note: Figures in **bold** exceed standard.

[a] V/C difference compared to the CIP Network alternative.

3.2.2.3. Bel-Red/Wilburton

This area encompasses the Bel-Red (MMA 12) subarea and Wilburton (MMA 4) subarea. Table 3-7 shows that 14 capacity projects are proposed in this area under the TFP Network alternative. Of these, six projects are also included under the CIP Network alternative.

Table 3-7. TFP Projects for CIP Network and TFP Network Alternatives for Bel-Red/Wilburton

2013–2024 TFP#	MMA	Project Location	CIP Network Alternative	TFP Network Alternative
207	4	NE 4th St Extension/116th Ave NE to 120th Ave NE[a]	X	X
208	4,12	120th Ave NE (Stage 2)/south of NE 8th St to NE 12th St[a]	X	X
209	12	NE 15th St/116th Ave NE to 124th Ave NE[a]		X[b]
210	12	124th Ave NE/Planned to NE 14th St to Northup Way[a]	X[c]	X[c]
211	4	NE 6th St Extension[a]	X	X
213	12	124th Ave NE/NE 8th St to NE 14th St[a]		X[c]
215	12	NE 16th St/130th Ave NE to 136th Pl NE and 136th Pl NE/NE 16th St to NE 20th St[a]		X[c]
217	12	124th Ave NE at SR 520		X
218	12	130th Ave NE/NE 20th St to NE Bel-Red Rd		X
240	4	120th Ave NE improvements (Stage 1)/south of NE 4th to south of NE 8th St[a]	X	X
241	12	120th Ave NE (Stages 3 and 4)/NE 12th St to 16th St and to Northup Way[a]	X[c]	X[c]
248	12	134th Ave NE/NE 20th St to NE 16th St		X
250	12	148th Ave NE Master Plan improvements at Bel-Red Rd, NE 20th St, and NE 24th St		X
254	12	Bel-Red Rd/NE 20th St to NE 24th St		X

[a] Capacity (impact fee) project expected to be open for use by 2024 and included in the traffic model.

[b] For TFP-209, the TFP Network alternative includes a new NE 15th Street link from 120th Avenue NE to 124th Avenue NE; TFP Network Plus scenario constructs a new road connection from 116th Avenue NE to 124th Avenue NE.

[c] Project partially implemented. See project description in Table 2-1.

Table 3-8 summarizes intersection LOS at key locations in this area under the CIP and TFP Network alternatives and under the TFP Network Plus scenario. The table shows that operations under the TFP Network alternative and TFP Network Plus scenario will be slightly better at some locations and slightly worse at others compared to the CIP Network alternative. The TFP Network Plus scenario is expected to improve one location, 120th Avenue NE/NE 12th Street, to a level within the LOS standard of 0.95 for the Bel-Red/Northup subarea.

Although the areawide V/C for the Bel-Red/Northup subarea would remain below the LOS standard of 0.95 with the CIP and TFP Network alternatives and the TFP Network Plus scenario, it is expected to slightly worsen under both the TFP Network alternative and TFP Network Plus scenario compared to the CIP Network alternative.

The areawide V/C for the Wilburton subarea would exceed the LOS standard of 0.90 with the CIP and TFP Network alternatives and the TFP Network Plus scenario as indicated in Table 3-3, but would slightly improve with the TFP Network Plus scenario compared to the CIP Network and TFP Network alternatives. Future options for addressing this (anticipated) situation include adding capacity projects in future CIP and TFP plans, adding transit service, denying permits for future development, or raising the LOS standard for the Wilburton subarea.

Table 3-8. 2024 Level of Service under CIP Network and TFP Network Alternatives for Bel-Red/Wilburton

		CIP Network Alternative	TFP Network Alternative		TFP Network Plus Scenario	
ID#	Intersection	V/C	V/C	V/C Difference[a]	V/C	V/C Difference[a]
131	116th Ave SE/SE 1st St	0.761	0.747	-0.014	0.732	-0.029
139	116th Ave NE/NE 4th St	**1.190**	**1.210**	+0.020	**1.208**	+0.018
233	120th Ave NE/NE 8th St	**1.032**	**1.025**	-0.007	**1.039**	+0.007
32	120th Ave NE/NE 12th St	**1.020**	**1.001**	-0.019	0.761	-0.259
34	124th Ave NE/Bel-Red Rd	**1.067**	**1.043**	-0.024	**1.041**	-0.026
88	124th Ave NE / Northup Way NE	0.653	0.744	+0.091	0.835	+0.182
37	130th Ave NE/Bel-Red Rd	0.759	0.856	+0.097	0.832	+0.073
40	140th Ave NE/Bel-Red Rd	0.822	0.844	+0.022	0.867	+0.045
48	148th Ave NE/Bel-Red Rd	**1.019**	**1.020**	+0.001	**1.017**	-0.002
61	156th Ave NE/NE 24th St	0.892	0.892	0	0.889	-0.003
81	148th Ave NE/NE 24th St	**0.956**	**0.951**	-0.005	**0.956**	+0.000
47	148th Ave NE / NE 20th St	**1.032**	**1.032**	0	**1.020**	-0.012

Note: Figures in **bold** exceed standard.

[a] V/C difference compared to the CIP Network alternative.

3.2.2.4. Northeast Bellevue/Crossroads

This area encompasses the Crossroads (MMA 5) and Northeast Bellevue (MMA 6) subareas. No capacity projects are proposed in these subareas.

Table 3-9 summarizes intersection LOS at key locations within this area under the CIP and TFP Network alternatives and under the TFP Network Plus scenario. The table shows that operations under the TFP Network alternative and TFP Network Plus scenario would be slightly better at

some locations and slightly worse at others compared to the CIP Network alternative. One location, 164th Avenue NE/NE 8th Street, is projected to exceed its respective standards under the CIP and TFP Network alternatives and the TFP Network Plus scenario.

The areawide 2024 LOS forecast for Northeast Bellevue as indicated in Table 3-3 is projected to be below the standard of 0.80 with all alternatives. The TFP Network alternative and TFP Network Plus scenario are projected to have very little effect on the areawide average V/C in the Northeast Bellevue MMA. The LOS forecast for Crossroads is also projected to be below the standard of 0.90 with all alternatives.

Table 3-9. 2024 Level of Service under CIP Network and TFP Network Alternatives for Northeast Bellevue/Crossroads

		CIP Network Alternative	TFP Network Alternative		TFP Network Plus Scenario	
ID#	Intersection	V/C	V/C	V/C Difference[1]	V/C	V/C Difference[1]
62	156th Ave NE/Northup Way	0.834	0.839	+0.005	0.830	-0.004
63	156th Ave NE/NE 8th St	0.779	0.774	-0.005	0.770	-0.009
87	164th Ave NE/NE 8th St	**0.917**	**0.919**	+0.002	**0.919**	+0.002

Note: Figures in **bold** exceed standard.

[a] V/C difference compared to the CIP Network alternative.

3.2.2.5. Central Bellevue

This area encompasses the South Bellevue (MMA 7), Richards Valley (MMA 8), and East Bellevue (MMA 9) subareas. Table 3-10 shows that one capacity project is proposed in this area under both the CIP Network and TFP Network alternatives.

Table 3-10. TFP Projects for CIP Network and TFP Network Alternatives for Central Bellevue

2013–2024 TFP#	MMA	Project Location	CIP Network Alternative	TFP Network Alternative
242	7	Bellevue Way HOV lane/112th Ave SE "Y" to I-90 and multi-use path/SE 8th St to I-90[a]	X[b]	X

[a] Capacity (impact fee) project expected to be open for use by 2024 and included in the traffic model.

[b] Only portions of this project would be implemented with the CIP Network alternative. The south end from I-90 to the park-and-ride would be included; the segment from the park-and-ride to the "Y" would not be included in the CIP Network alternative; and the separated path from the park-and-ride to SE 8th Street would be included in both alternatives.

Table 3-11 summarizes intersection LOS at key locations within this area under the CIP and TFP Network alternatives and under the TFP Network Plus scenario. All intersections listed in the table are projected to exceed the LOS standard of 0.85 (the standard is the same for all three MMAs) under at least one of the alternatives. The table shows that operations under the TFP Network alternative and TFP Network Plus scenario will be slightly better at some locations and slightly worse at others compared to the CIP Network alternative.

The areawide 2024 LOS for the South Bellevue, Richards Valley, and East Bellevue MMAs, as shown in Table 3-3, are all expected to remain below the standard of 0.85 for the CIP and TFP Network alternatives and the TFP Network Plus scenario. The areawide average V/C in the South Bellevue MMA, however, is expected to increase slightly with the TFP Network alternative and TFP Network Plus scenario due to increased traffic on 112th Avenue SE and Bellevue Way SE. For the Richards Valley and East Bellevue MMAs, areawide average V/C is expected to be similar to or lower than the CIP Network alternative with the TFP Network alternative and TFP Network Plus scenario.

Table 3-11. 2024 Level of Service under CIP Network and TFP Network Alternatives for Central Bellevue

		CIP Network Alternative	TFP Network Alternative		TFP Network Plus Scenario	
ID#	Intersection	V/C	V/C	V/C Difference[a]	V/C	V/C Difference[a]
14	112th Ave SE/Bellevue Way SE	0.846	**0.877**[b]	+0.031	**0.871**[b]	+0.025
35	124th Ave NE/NE 8th St	**0.934**	**0.935**	+0.001	**0.883**	-0.051
43	140th Ave SE/SE 8th St	**0.853**	**0.852**	-0.001	0.848	-0.005
71	Lake Hills Connector/ SE 8th St/7th St	**0.977**	**0.981**	+0.004	**0.966**	-0.011
85	Richards Rd/SE 32nd St	**0.859**	**0.863**	+0.004	0.847	-0.012
41	140th Ave NE/NE 8th St	**0.874**	**0.880**	+0.006	**0.880**	+0.006
49	148th Ave NE/NE 8th St	**1.016**	**1.012**	-0.004	**1.014**	-0.002
50	148th Ave NE/Main St	**0.901**	**0.899**	-0.002	**0.896**	-0.005
51	148th Ave SE/Lake Hills Blvd	**0.875**	**0.871**	-0.004	**0.869**	-0.006
52	148th Ave SE/SE 16th St	**0.865**	**0.864**	-0.001	**0.862**	-0.003

Note: Figures in **bold** exceed standard.

[a] V/C difference compared to the CIP Network alternative.

[b] Analysis assumes added HOV turn lane on 112th Ave SE at the intersection.

3.2.2.6. Eastgate

This area encompasses the Eastgate (MMA 10) subarea. Table 3-12 shows that two capacity projects are proposed in this area under the TFP Network alternative. No capacity projects are included under the CIP Network alternative.

Table 3-12. TFP Projects for CIP Network and TFP Network Alternatives for Eastgate

2013–2024 TFP#	MMA	Project Location	CIP Network Alternative	TFP Network Alternative
195	10	150th Ave SE/SE 37th St/I-90 off-ramp[a]		X
253	10	150th Ave SE/Eastgate Way SE[a]		X

[a] Capacity (impact fee) project expected to be open for use by 2024 and included in the traffic model.

Table 3-13 summarizes intersection LOS at key locations within this area under the CIP and TFP Network alternatives and under the TFP Network Plus scenario. The table shows that operations under the TFP Network alternative and TFP Network Plus scenario would be slightly better at the key locations along 150th Avenue SE compared to the CIP Network alternative. The TFP Network alternative and TFP Network Plus scenario are expected to improve one location, 150th Avenue SE/I-90 eastbound off-ramp, to levels within the Eastgate LOS standard of 0.90. Overall, the areawide V/C for this area is expected to improve under the TFP Network alternative and TFP Network Plus scenario as indicated in Table 3-3.

Table 3-13. 2024 Level of Service under CIP Network and TFP Network Alternatives for Eastgate

		CIP Network Alternative	TFP Network Alternative		TFP Network Plus Scenario	
ID#	Intersection	V/C	V/C	V/C Difference[a]	V/C	V/C Difference[a]
101	150th Ave SE/SE Eastgate Way	**1.033**	**1.015**	-0.018	**1.013**	-0.020
227	150th Ave SE/I-90 Eastbound Off-Ramp	**0.938**	0.899	-0.039	0.895	-0.043

Note: Figures in **bold** exceed standard.

[a] V/C difference compared to the CIP Network alternative.

3.2.2.7. Factoria

This area encompasses the Factoria (MMA 13) subarea. Table 3-14 shows the one capacity project proposed in this area under the TFP Network alternative. This project is not included under the CIP Network alternative.

Table 3-14. TFP Projects for CIP Network and TFP Network Alternatives for Factoria

2013–2024 TFP#	MMA	Project Location	CIP Network Alternative	TFP Network Alternative
103	13	129th Pl SE/SE 38th St to Newport Way[a]		X

[a] Project is assumed to be coordinated with future private development when/if opportunity arises, and not constructed by the City per se; therefore, it is not assumed to be open for use in 2024 nor included in the traffic model network for that year.

Table 3-15 summarizes intersection LOS at key locations within this area under the CIP and TFP Network alternatives and under the TFP Network Plus scenario. Three locations—Factoria Boulevard SE/SE 36th Street, Factoria Boulevard SE/SE 38th Street, and 124th Avenue SE/Coal Creek Parkway—are projected to exceed the Factoria LOS standard of 0.95 under the CIP and TFP Network alternatives and the TFP Network Plus scenario. At these locations, the TFP Network alternative would result in slightly degraded operations and the TFP Network Plus scenario would result in slightly improved operations compared to the CIP Network alternative. With the CIP and TFP Network alternatives and the TFP Network Plus scenario, Table 3-3 indicates that the overall areawide LOS would remain within the LOS standard of 0.95.

Table 3-15. 2024 Level of Service under CIP Network and TFP Network Alternatives for Factoria

		CIP Network Alternative	TFP Network Alternative		TFP Network Plus Scenario	
ID#	Intersection	V/C	V/C	V/C Difference[a]	V/C	V/C Difference[a]
105	Richards Rd/SE Eastgate Way	0.913	0.916	+0.003	0.912	-0.001
202	Factoria Blvd SE/NE/SE Newport Way	0.905	0.905	0	0.901	-0.001
204	Factoria Blvd SE/SE 36th St	**0.958**	**0.966**	+0.008	**0.959**	-0.001
221	I-405 Southbound Ramps/Coal Creek Parkway	0.919	0.916	-0.003	0.922	-0.003
222	Factoria Blvd SE/SE 38th St	**1.020**	**1.021**	+0.001	**1.016**	-0.004
284	124th Ave SE/Coal Creek Parkway	**0.984**	**0.986**	+0.002	**0.980**	-0.004

Note: Figures in **bold** exceed standard.

[a] V/C difference compared to the CIP Network alternative.

3.2.2.8. South Bellevue

This area encompasses the Newcastle (MMA 11) and Newport Hills (MMA 14) subareas. Table 3-16 shows that one capacity project is proposed in this area under both the CIP Network and TFP Network alternatives.

Table 3-16. TFP Project for CIP Network and TFP Network Alternatives for South Bellevue

2013–2024 TFP#	MMA	Project Location	CIP Network Alternative	TFP Network Alternative
192	11	Lakemont Blvd (Phase 1)/Cougar Mtn. Way to Lewis Creek Park and 164th Ave SE to 171st Ave SE[a]	X	X

[a] Capacity (impact fee) project expected to be open for use by 2024 and included in the traffic model.

Table 3-17 summarizes intersection LOS at signalized locations within this area under the CIP and TFP Network alternatives and under the TFP Network Plus scenario; all intersections are in the Newcastle MMA and there are no designated system intersections in the Newport Hills

MMA. The CIP and TFP Network alternatives and the TFP Network Plus scenario intersections listed in the table have high PM peak-hour volumes and are projected to exceed the Newcastle (MMA 11) LOS standard of 0.80 under the CIP and TFP Network alternatives and under the TFP Network Plus scenario. The table shows operations under the TFP Network alternative are similar to or slightly worse compared to the CIP Network alternative.

The areawide LOS for the Newcastle subarea, as shown on Table 3-3, is forecast to exceed the V/C standard of 0.80 under the CIP Network alternative and both the TFP Network alternative and the TFP Network Plus scenario. Options for addressing this (anticipated) situation include adding capacity projects in future CIP and TFP plans at these intersections, or adding a signal to one or more of the three "system" intersections in the area that are not currently signalized. (Adding another better-performing intersection into the calculation would have the effect of bringing down the areawide average. Installing a planned signal or roundabout at the Lakemont Boulevard/Cougar Mountain Way intersection under all the alternatives, however, would not improve the areawide V/C level because it is not a designated "system" intersection.) The City could also increase the LOS standard for the area, but because the forecasted areawide V/C level is over 1.0, this is unlikely to be an approach used to fully address the forecasted condition. In 2013, the City is conducting an interim improvement that will increase capacity at the 150th Avenue and Newport Way SE intersection (this interim improvement is captured in the 2024 analysis). TFP-246 includes an evaluation of options for additional improvements to this intersection.

Table 3-17. 2024 Level of Service under CIP Network and TFP Network Alternatives for South Bellevue

		CIP Network Alternative	TFP Network Alternative		TFP Network Plus Scenario	
ID#	Intersection	V/C	V/C	V/C Difference[a]	V/C	V/C Difference[a]
98	Coal Creek Parkway/Forest Drive	**1.087**	**1.089**	+0.002	**1.089**	+0.002
133	150th Ave SE/SE Newport Way	**0.949**	**0.945**	-0.004	**0.943**	-0.006
228	Lakemont Blvd SE/SE Newport Way	**1.090**	**1.104**	+0.014	**1.100**	+0.010

Note: Figures in **bold** exceed standard.

[a] V/C difference compared to the CIP Network alternative.

3.2.3. Neighborhood Impacts

A significant concern of City residents in neighborhoods served by the major arterials is cut-through traffic, i.e., drivers attempting to bypass congested arterials on their way to the regional freeway system or other Eastside destinations, by traveling on local streets. The City's Neighborhood Traffic Safety Services (NTSS) program will continue to address those needs at problem locations by slowing traffic entering neighborhoods and discouraging cut-through routes using a combination of education, enforcement, and physical facilities.

With a couple of exceptions, the proposed capacity projects under the CIP Network alternative and TFP Network alternative do not directly respond to residents' concerns about traffic volumes or speeds on neighborhood streets. Capacity projects can reduce spillover traffic onto local streets, however, by improving the efficiency and traffic flow on the City's main arterials. Most of the capacity projects in the CIP Network and TFP Network alternatives either directly or indirectly address this concern. Two projects that specifically identify neighborhood traffic mitigation are TFP-207 and TFP-213. TFP-207 extends NE 4th Street from 116th Avenue NE to 120th Avenue NE and includes, in its scope, consideration of measures to discourage cut-through traffic on NE 5th Street east of 120th Avenue NE. TFP-213 expands 124th Avenue NE between NE 14th Street and Bel-Red Road, adds bicycle lanes between Bel-Red Road and NE 8th Street, and includes, in its scope, evaluation of measures to limit through traffic on 124th Avenue NE south of NE 8th Street. TFP-207 is included in the CIP Network and TFP Network alternatives and the TFP Network Plus scenario; TFP-213 is included in the TFP Network alternative and the Plus scenario.

Overall, more capacity projects are proposed under the TFP Network alternative; therefore, it is expected to address the issue of cut-through traffic to a greater extent than the CIP Network alternative.

3.2.4. Safety

One of the purposes of the TFP is to identify projects at specific locations to address inherent design or engineering deficiencies that may result in accidents. In some cases, capacity projects help resolve hazards resulting from traffic congestion, or project improvements, such as the addition of turning lanes, may improve safety by lowering the number of potential vehicle conflict points. Sidewalk and bicycle projects (detailed in the next section) improve safety conditions for pedestrians and bicyclists by separating them from vehicular traffic. One proposed project, TFP-192, includes intersection improvements at Lakemont Boulevard and Cougar Mountain Way, a location that was determined in 2011 to meet requirements for a signal. The funded project scope, under both the CIP Network alternative and the TFP Network alternative, includes analysis of the intersection to determine whether a signal or roundabout is most appropriate, as well as resources to implement the selected improvement at the intersection.

3.2.5. Pedestrian and Bicycle Impacts

Table 3-18 summarizes the bicycle and pedestrian improvement projects included in the CIP Network and TFP Network alternatives. These projects primarily provide increased mobility for non-motorized travel and complete missing links in the citywide pedestrian and bicycle Network. The table shows two projects are included in the CIP Network alternative and 11 additional projects are included in the TFP Network alternative.

Table 3-18. Bicycle and Pedestrian Projects under the CIP Network and TFP Network Alternatives

2013–2024 TFP#	MMA	Project Location	CIP Network Alternative	TFP Network Alternative
078	6, 9	West Lake Sammamish/north city limit to I-90	X[a]	X
079	1, 2	Northup Way/NE 33rd Pl to NE 24th St and NE 24th St to the SR 520 Regional Trail	X	X
158	9	SE 16th St/148th Ave SE to 156th Ave SE		X
173	1	108th/112th Ave NE/north city limit to NE 12th St		X[b]
230	3	108th Ave NE/NE 12th St to Main St		X[b]
232	6, 9	164th Ave NE/SE–NE 18th St to SE 14th St		X[b]
234	3, 4	Main St/100th Ave to 116th Ave		X[b]
243	10, 11, 13	Mountains to Sound Greenway/Factoria Blvd to Lakemont Blvd		X[b]
244	1, 2, 4, 7, 8, 12, 14	BNSF bicycle path/southern city limits to northern city limits		X[b]
245	2, 9, 12	140th Ave NE/NE 24th St to NE 8th St		X[b]
247	10	Eastgate Way/Richards Rd to SE 35th Pl		X
249	4	Hospital/NE 8th St Station Access Improvements		X[b]
251	11, 13, 14	Coal Creek Parkway/124th Ave SE to the southern city limits		X[b]

[a] CIP Network alternative assumes implementation of a smaller portion of this project.

[b] Funding allocation supports predesign or design work only; not sufficient for actual implementation.

Table 3-19 summarizes capacity projects that also include pedestrian and/or bicycle elements under the CIP Network and TFP Network alternatives. The table shows that 7 capacity projects under the CIP Network alternative include non-motorized improvements and an additional 10 capacity projects under the TFP Network alternative also add pedestrian and bicycle improvements.

Table 3-19. Capacity Projects that Include Bicycle and/or Pedestrian Projects under the CIP Network and TFP Network Alternatives

2013–2024 TFP#	MMA	Project Location	CIP Network Alternative	TFP Network Alternative
103	13	129th Pl SE/SE 38th St to Newport Way		X
207	4	NE 4th St Extension/116th Ave NE to 120th Ave NE	X	X
208	4, 12	120th Ave NE (Stage 2)/south of NE 8th St to NE 12th St	X	X
209	12	NE 15th St/116th Ave NE to 124th Ave NE		X[b]
210	12	124th Ave NE/Planned NE 14th St to Northup Way	X	X
211	4	NE 6th St Extension	X	X
213	8, 12	124th Ave NE/NE 8th St to NE 14th St		X
215	12	NE 16th St/130th Ave NE to 136th Pl NE and 136th Pl NE/NE 16th to 20th St		X
218	12	130th Ave NE/NE 20th to NE Bel-Red Rd		X[c]
240	4	120th Ave NE improvements (Stage 1)/south of NE 4th St to south of NE 8th St	X	X
241	12	120th Ave NE (Stages 3 and 4)/NE 12th St to 18th St and to Northup Way	X	X
242	7	Bellevue Way HOV lane/112th Ave SE "Y" to I-90 and multi-use path/SE 8th St to I-90	X[a]	X
246	11	150th Ave SE/south of SE 38th St to Newport Way SE		X[c]
248	12	134th Ave NE/NE 20th St to NE 16th St		X[c]
252	10	Snoqualmie River Rd/Kelsey Creek Rd to Bellevue College southwest entrance		X[c]
253	10	150th Ave SE/Eastgate Way SE		X
254	12	Bel-Red Rd/NE 20th St to NE 24th St		X[c]

[a] CIP Network alternative assumes implementation of a smaller portion of this project.

[b] For TFP-209, the TFP Network alternative includes a new NE 15th Street link from 120th Avenue NE to 124th Avenue NE; TFP Network Plus scenario constructs a new road connection from 116th Avenue NE to 124th Avenue NE.

[c] Funding allocation supports predesign or design work only; not sufficient for actual implementation.

Table 3-20 indicates the contribution of each alternative to the City's Pedestrian Network and Bicycle Network (which are identified in the Pedestrian and Bicycle Transportation Plan Update; Bellevue 2009a, 2011b). By implementing the CIP Network, 71.9 percent of the Pedestrian Network and 48.5 percent of the Bicycle Network will be completed. The TFP Network increases these numbers to 72.7 percent Pedestrian Network completion and 49.6 percent Bicycle Network completion. The TFP Network Plus scenario increases the totals to 72.8 percent Pedestrian Network completion and 49.8 percent Bicycle Network completion. The greater extent of system completion under the TFP Network alternative and TFP Network Plus scenario would result in greater improvement to non-motorized mobility than what would be expected under the CIP Network alternative.

Table 3-20. Pedestrian and Bicycle Network Completion

	Completed by End of 2012	After CIP Network Alternative	After TFP Network Alternative	After TFP Network Plus Scenario
Pedestrian Network	70.5%	71.9%	72.7%	72.8%
Bicycle Network	45.8%	48.5%	49.6%	49.8%

Note: The numbers above correspond to linear segments of the network.

Table 3-21 indicates the contribution of each alternative to the policy goal of completing 25 miles of sidewalk along arterial roadways by 2019 (from the base level at adoption of the Pedestrian and Bicycle Transportation Plan in 2009; Bellevue 2009a, 2011b). The CIP Network alternative adds 2.6 miles of arterial sidewalks to the 3.8 miles already completed since 2009, which would bring the total to 6.5 miles or 25.8 percent of the 25 miles of added arterial sidewalks identified (for 2019) in Policy PB-2. The TFP Network alternative includes an additional 1.6 miles of arterial sidewalks, for a total of 8.0 miles or 32.1 percent of the target in Policy PB-2. The TFP Network Plus scenario completes one additional segment of NE 15th Street, increasing these values to 8.6 total miles and 34.3 percent completion toward the policy target.

Table 3-21. Arterial Sidewalk Completion

Policy Goal	Completed by End of 2012	After CIP Network Alternative	TFP Network Alternative	After TFP Network Plus Scenario
Progress to 25-mile target	15.3%	25.8%	32.1%	34.3%

Table 3-22 indicates the current status of the designated Priority Bicycle Corridors, as well as the contribution to completion associated with the CIP Network and TFP Network alternatives and with the TFP Network Plus scenario. See Figure 3-4 for a map of the Priority Bicycle Corridors and indication of new links associated with each alternative.

Table 3-22. Priority Bicycle Corridors Completion

Corridor	Name	Total Length (miles)	Percent Complete at End of 2012	Percent Complete with CIP Network Alternative	Percent Complete with TFP Network Alternative	Percent Complete with TFP Network Plus Scenario
EW-1	SR 520 Trail	4.2	50.1%	**79.2%**[1]	79.2%[1]	79.2%[1]
EW-2	Downtown-Overlake Connection	3.6	20.5%	20.5%	**30.2%**	**38.1%**
EW-3	Lake to Lake Trail	7.3	43.7%	43.7%	**50.6%**	50.6%
EW-4	Mountains to Sound Greenway	5.4	43.2%	43.2%	43.2%	43.2%
EW-5	Coal Creek-Cougar Mountain Connection	7.4	55.2%	55.2%	55.2%	55.2%
NS-1	Enatai-Northtown Connection	3.8	54.4%	54.4%	54.4%	54.4%
NS-2	Lake Washington Loop Trail	7.5	68.6%	68.6%	68.6%	68.6%

Table 3-22. Priority Bicycle Corridors Completion (Continued)

Corridor	Name	Total Length (miles)	Percent Complete at End of 2012	Percent Complete with CIP Network Alternative	Percent Complete with TFP Network Alternative	Percent Complete with TFP Network Plus Scenario
NS-3	BNSF Trail Corridor	7.5	8.1%	8.1%	8.1%	8.1%
NS-4	Somerset-Redmond Connection	7.1	54.8%	54.8%	54.8%	54.8%
NS-5	Spirit Ridge-Sammamish River Connection	6.0	61.5%	61.5%	61.5%	61.5%
NS-6	West Lake Sammamish Parkway	4.9	0.0%	**25.8%**	**46.0**%	46.0%

Note: **Bold** face figures indicate corridor completion improves with alternative.

[a] Corridor to be complete with WSDOT Eastside Transit and HOV project.

The CIP Network adds 1.2 miles to Priority Bicycle Corridor EW-1 (SR 520 Trail), resulting in 79.2 percent completion of the corridor. (The remaining 0.9 mile will be constructed by WSDOT as part of the Eastside Transit and HOV project, now underway.) The CIP Network also begins the construction of Priority Bicycle Corridor NS-6 (West Lake Sammamish Parkway) with the first segment of 1.3 miles, completing 25.3 percent of the corridor. The TFP Network alternative and TFP Network Plus scenario add another mile to the corridor, increasing it to 46 percent completion.

The TFP Network alternative and TFP Network Plus scenario add segments to two east-west Priority Bicycle Corridors—EW-2 (Downtown-Overlake Connection) and EW-3 (Lake to Lake Trail)—increasing them to 30.2 percent and 50.6 percent completion, respectively. The TFP Network Plus scenario adds another link of EW-2, bringing it to 38.1 percent completion.

None of the alternatives meets the City's Policy PB-2 target of achieving two north-south and two east-west bicycle routes ("corridors") across Bellevue (targeted in the policy to occur by 2019). Policy PB-2 also calls for at least one east-west and one north-south bicycle route through Downtown Bellevue to be implemented by 2014; none of the alternatives would contribute to that target. Consideration of bicycle mobility into and through Downtown is a focus of the Downtown Transportation Plan update underway in 2013 and due for completion in early 2014.

3.3. Mitigation Measures

Overall, the capacity, safety, operations, and non-motorized projects included in both alternatives would reduce congestion, improve mobility, and improve safety for vehicular traffic, bicyclists, and pedestrians. The TFP Network alternative and TFP Network Plus scenario include more projects than the CIP Network alternative and thus are expected to improve overall safety and mobility conditions to a greater extent. The projects included in the CIP and TFP Network alternatives and the TFP Network Plus scenario would be expected to improve transportation conditions; therefore, no mitigation is recommended.

3.4. Significant Unavoidable Adverse Impacts

The analysis of 2024 conditions indicates that V/C levels are forecast to exceed areawide LOS standards in two MMAs under the CIP and TFP Network alternatives and under the TFP Network Plus scenario. Wilburton (MMA 4) is forecast to exceed its standard of 0.90, and Newcastle (MMA 11) is forecast to exceed its standard of 0.80. As compared to the CIP Network alternative, the TFP Network alternative is forecast to slightly improve the areawide V/C level in Wilburton and slightly degrade the areawide V/C in Newcastle. The TFP Network Plus scenario is expected to improve the areawide V/C in Wilburton compared to the CIP Network and TFP Network alternatives and would have virtually no effect on areawide V/C in Newcastle. Although the TFP Network alternative and TFP Network Plus scenario have little or no adverse effect on the areawide LOS of these MMAs and generally improve conditions, the exceedance of the areawide standard in itself can be considered a significant unavoidable adverse effect.

No other significant unavoidable adverse impacts on the transportation system were identified as a result of the CIP Network and TFP Network alternatives and the TFP Network Plus scenario.

Chapter 4. Air Quality

This section addresses air quality impacts associated with the implementation of the TFP. This study includes a discussion of existing air quality conditions, a summary of local policies and regulations related to air quality, and an analysis of the environmental impacts of the CIP Network alternative and the TFP Network alternative.

4.1. Affected Environment

This section presents an overview of current air quality and associated regulations in the TFP project area. The affected environment provides the foundation by which impacts are assessed.

4.1.1. Regulatory Overview

The Clean Air Act (CAA), as amended in 1990, is the federal law that governs air quality in the United States. Its counterpart in Washington State is the Washington Clean Air Act of 1991. These laws set standards for the concentration of pollutants that can be in the air. At the federal level, the U.S. Environmental Protection Agency (EPA) administers the CAA. The Washington Clean Air Act is administered by the Washington State Department of Ecology (Ecology) at the state level and by local clean air agencies at the regional levels. The TFP area and surrounding areas are located in the Puget Sound region, in which the Puget Sound Clean Air Agency (PSCAA) has local jurisdiction over the project area of the proposed TFP.

4.1.1.1. Ambient Air Quality Standards

EPA and Ecology have established regulations designed to limit emissions from air pollution sources and to minimize concentrations of pollutants in the outdoor ambient air. Although their regulations are similar in stringency, each agency has established its own standards. Unless the state or local jurisdiction has adopted more stringent standards, EPA standards apply.

Table 4-1 lists both the national and Washington State ambient air quality standards for six criteria pollutants: carbon monoxide (CO), ozone, particulate matter less than 10 micrometers in size (PM_{10}), particulate matter less than 2.5 micrometers in size ($PM_{2.5}$), lead (Pb), sulfur dioxide (SO_2), and nitrogen dioxide (NO_2). The National Ambient Air Quality Standards (NAAQS) consist of primary standards designed to protect public health and secondary standards designed to protect public welfare (e.g., preventing air pollution damage to vegetation). Ecology has established additional ambient standards for total suspended particulates and SO_2, which are more stringent than the federal requirements.

Table 4-1. National and Washington State Ambient Air Quality Standards

Pollutant	Federal		State
	Primary	Secondary	
Carbon Monoxide			
8-hour average[a] 1-hour average[a]	9 ppm 35 ppm	No standard No standard	9 ppm 35 ppm
Ozone[b]			
8-hour average,[a,c]	0.075 ppm	0.075 ppm	0.075 ppm
Total Suspended Particles			
Annual average 24-hour average[d]	No standard No standard	No standard No standard	60 µg/m^3 150 µg/m^3
Particulate Matter—PM_{10}			
24-hour average[d]	150 µg/m^3	150 µg/m^3	150 µg/m^3
Particulate Matter—$PM_{2.5}$			
Annual average 24-hour average[d]	12 µg/m^3 35 µg/m^3	15 µg/m^3 35 µg/m^3	12 µg/m^3 35 µg/m^3
Lead			
Quarterly average	0.15 µg/m^3	0.15 µg/m^3	0.15 µg/m^3
Sulfur Dioxide			
Annual average 24-hour average[e] 3-hour average[e] 1-hour average[e]	0.03 ppm 0.14 ppm No standard 0.075 ppm	No standard No standard 0.50 ppm No standard	0.02 ppm 0.10 ppm No standard 0.75 ppm
Nitrogen Dioxide			
Annual average 1-hour average	0.053 ppm 0.1 ppm	0.053 ppm No standard	0.05 ppm[a] 0.1 ppm

Notes: Annual standards are never to be exceeded. Short-term standards are not to be exceeded more than once per year unless noted. ppm = parts per million; PM_{10} = particles 10 microns or less in size; $PM_{2.5}$ = particles 2.5 microns or less in size; µg/m^3 = micrograms per cubic meter

[a] Source: Chapter 173- 475 WAC

[b] In March 2008, EPA lowered the federal standard for 8-hour ozone from 0.08 ppm to 0.075 ppm to better protect public health.

[c] To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm.

[d] Source: Chapter 173-470 WAC

[e] Source: Chapter 173-474 WAC

4.1.1.2. Attainment Status Designation

Ecology maintains a network of air quality monitoring stations throughout the state. These stations are placed in areas where there may be air quality problems, usually in or near urban areas or close to large air pollution sources. A limited number of additional stations are located in remote areas to provide an indication of regional air pollution levels.

Based on monitoring information collected over a period of years, EPA and Ecology designate regions as being attainment or nonattainment areas for regulated air pollutants. Attainment status indicates that air quality in an area meets the federal, health-based ambient air quality standards,

and nonattainment status indicates that air quality in an area does not meet those standards. If the measured concentrations in a nonattainment area improve so they are consistently below the federal standards, Ecology and EPA can reclassify the nonattainment area to a maintenance area. In that case, Ecology and PSCAA are required to implement maintenance plans to ensure ongoing emission reductions and continuous compliance with the federal standards.

The Puget Sound region (including the TFP area) is currently designated as a maintenance area for CO and an attainment area for all other air pollutants, except for fine particulate in the Tacoma-Pierce County area. In December 2009, EPA designated the Tacoma-Pierce County area as being in nonattainment of the fine particulate ($PM_{2.5}$) standard, based upon 2008–2010 monitoring data.

In March 2008, EPA lowered its 8-hour ozone standard from 0.08 parts per million (ppm) to 0.075 ppm to better protect public health. Under the new standard, the 3-year average (2006–2008) concentration measured at the Enumclaw station in King County exceeded the 8-hour ozone standard. PSCAA will work with Ecology to make recommendations to EPA about ozone designations. Monitored concentrations in 2010 were within the 0.075 ppm standard; currently, the region is still designated an attainment area for ozone although a lower standard of 0.06 ppm is proposed by EPA.

4.1.1.3. Transportation Conformity Regulations

Regionally significant transportation projects (regardless of the funding source) proposed for construction within nonattainment areas or maintenance areas are subject to the Transportation Conformity regulations specified under federal regulations (EPA; 40 Code of Federal Regulations [CFR] Parts 51 and 93) and state regulations (Chapter 173-420 WAC). Regionally significant projects include construction or widening of new roadways and widening of signalized intersections. The intent of these regulations is to ensure that transportation projects, plans, and programs affecting regional and local air quality will conform to existing plans and timetables for attaining and maintaining federal health-based air quality standards. The City must demonstrate transportation conformity by the following steps:

- The City must conduct a regional air quality analysis (and confirm the findings with the Puget Sound Regional Council [PSRC]) to include in its long-range transportation plan and in PSRC's regional air quality modeling for its required periodic Air Quality Conformity Analysis, and confirm that the regional emissions (including the proposed TFP) are within the allowable emission budget specified by Ecology.
- The City must conduct a project-level CO hot-spot analysis to model the worst-case concentrations at the most heavily congested intersections and confirm that the modeled CO concentrations are below the NAAQS.

The preceding air quality demonstrations must be included in SEPA and/or NEPA documentation for the proposed future roadway improvement projects.

4.1.1.4. Mobile Source Air Toxics Regulations

Mobile source air toxics (MSATs) are compounds emitted from highway vehicles and non-road mobile equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline. EPA has identified seven priority MSATs: benzene, formaldehyde, naphthalene, diesel particulate matter/diesel exhaust organic gases, acrolein, 1,3-butadiene, and polycyclics.

EPA has issued a number of regulations that will dramatically decrease MSATs by mandating the use of cleaner fuels and cleaner engines. The MSAT regulations were issued under the authority of CAA Section 202. In its regulations, EPA examined the impacts of existing and newly promulgated mobile source control programs, including the reformulated gasoline program, national low emission vehicle standards, Tier 2 motor vehicle emissions standards, gasoline sulfur control requirements, proposed heavy-duty engine and vehicle standards, and on-highway diesel fuel sulfur control requirements. According to a Federal Highway Administration (FHWA) analysis, even if nationwide vehicle miles traveled (VMTs) increase by 102 percent between 2010 and 2050, reductions of 83 percent in MSATs are projected (FHWA 2012).

4.1.1.5. Greenhouse Gas and Climate Change Issues

The issue of how emissions from human activities may affect the global climate has been the subject of extensive international research during the past several decades. There is now a broad consensus among atmospheric scientists that emissions generated by humans have already caused measurable increases in global temperature and are expected to result in significantly greater increases in temperature in the future. There is still considerable uncertainty, however, about the exact magnitude of future global impacts and the best approach to mitigate the impacts.

Global Climate Change Initiatives

The United Nations' Intergovernmental Panel on Climate Change (IPCC) published its most recent sets of 5-year progress reports in 2007, summarizing worldwide research on global climate change between 2001 and 2007 (IPCC 2007). These reports indicated that some level of global climate change is likely to occur and that there is a significant possibility of adverse environmental effects. Several alternative mitigation measures were evaluated by the worldwide scientific community to reduce global emissions, including the first round of worldwide reductions in greenhouse gases (GHGs), as prescribed by the Kyoto Protocol. A new round of reports is due for publication in 2013 and 2014 and is expected to further document the evidence of climate change, identify prospective future impacts, and outline mitigation and adaptation strategies.

Global climate change is a cumulative issue related to worldwide GHG emissions. No single project emits enough GHG to influence global climate change by itself. GHG emitted anywhere on the planet remains active for roughly 100 years and eventually disperses throughout the world. Therefore, future climate change in Washington State would be influenced as much by, for example, new industrial activity in China as it would be by the future improvements of the City's roadway system.

State of Washington GHG Initiatives

In response to growing worldwide concerns, Washington State Governor Christine Gregoire issued Executive Order 07-02 in February 2007. GHG reduction goals in the Executive Order were to:

- Reduce emissions to 1990 levels by 2020 and 50 percent below 1990 levels by 2050
- Increase green economy jobs to 25,000
- Reduce expenditures on fuel imported into the state by 20 percent by 2020 (Ecology 2008a).

In 2008, Engrossed Substitute House Bill (ESHB) 2885, an act to create a framework to reduce GHG emissions in Washington State, codified the GHG reduction goals of Executive Order 07-02, and also added a fourth requirement to help achieve the GHG reduction targets. This requirement is to decrease the annual per capita VMT 18 percent by 2020, 30 percent by 2035, and 50 percent by 2050. Transportation accounts for 47 percent of overall GHG emissions in Washington State (Ecology 2008a).

In order to achieve these goals, the Washington Climate Action Team (CAT) was formed to develop a full range of state-level policy recommendations, including mitigation strategies, policies, and programs. The recommendations in the CAT report focus on four areas: the built environment, transportation, reducing the waste stream, and the role of SEPA in climate change. The recommended actions build a future in which citizens and goods move more efficiently with less pollution; infrastructure investments and good planning create transportation choices and sustainable communities; buildings are constructed and operated with less energy; energy is produced and used more efficiently and with less carbon; solid waste is reduced and more materials are recycled; natural ecological systems are healthier and store carbon more effectively; the impacts of development on the environment are analyzed to maximize the effectiveness of mitigating climate change and avoid needless litigation; and government, business, labor, and environmental advocates work together to support entrepreneurial creativity and economic opportunities for all (Ecology 2008a). The recommended actions to reduce transportation-related GHG emissions are summarized below:

- Expand and enhance transit, rideshare, and commuter choice
- Encourage compact and transit-oriented development
- Use GHG/VMT as criteria for funding and pursue new revenue sources to support transportation choices
- Use transportation pricing to reduce per capita VMT and GHG emissions, raise revenue, and manage the system for better efficiency and reliability
- Pursue additional non-VMT actions to reduce GHG emissions from the transportation sector, including rail use, diesel engine improvements, transportation systems management, plug-in hybrid and electric vehicles, and a low-carbon fuel standard.

In May 2009, Governor Christine Gregoire issued Executive Order 09-05, Washington's Leadership on Climate Change. Transportation-related elements of this order include:

- Develop emission reduction strategies to help meet the state's statutory GHG reduction limits
- Recommend how to implement a low-carbon fuel standard or alternative measures to reduce carbon emission from transportation fuels
- Join with other West Coast states and the private sector to develop and implement a "West Coast Green Highway" that supports electric and alternative-fuel vehicles
- Develop additional strategies for reducing GHG emissions from the transportation sector
- Work with the five largest metropolitan planning organizations to increase transit options.

King County GHG Initiatives

King County updated its Strategic Climate Action Plan in December 2012. The County has set ambitious reduction targets, calling for GHGs to be 80 percent below 2007 levels by 2050. While the City is not currently subject to the emission-reduction goals described in King County's Climate Action Plan or Ecology's GHG regulations, the recent state and county goals illustrate the importance of local action to reduce GHG emissions.

City GHG Initiatives

In 2007, the City adopted a community-wide target to reduce GHG emissions to 7 percent below their 1990 level by 2012. While this goal, articulated by Resolution 7517, applied to community-wide emissions, the base majority of signatories to the U.S. Mayors' Climate Protection Agreement also strive to meet or exceed this target for municipal operations. The City updated its emissions inventory in 2012. The following are the major elements of the City's program:

- In February 20, 2007, the Bellevue City Council passed Resolution 7517, which adopted the goal of reducing GHG emissions to 7 percent below 1990 levels by 2012.
- In August 2007, the City became a signatory to the U.S. Mayors' Climate Protection Agreement, joining over 800 communities in all 50 states to affirm its commitment to reduce GHG emissions in a manner consistent with the international targets set by the Kyoto Protocol.
- In order to implement these resolutions, the City joined more than 400 local governments in the United States and 1,000 local governments worldwide in the International Council for Local Environmental Initiatives (ICLEI) Cities for Climate Projection Campaign. In partnering with ICLEI, the City has committed to ICLEI's Five Milestone Process to fight global warming:
  - Milestone 1—Conduct a baseline emissions inventory and forecast
  - Milestone 2—Adopt an emissions reduction target
  - Milestone 3—Develop a Climate Action Plan for reducing emissions

- Milestone 4—Implement policies and measures
- Milestone 5—Monitor and verify results.

The City completed its initial emissions inventory in 2007, and updated the inventory in 2008 and 2012 (Bellevue 2012b). The City's proposed Climate Action Plan was completed in September 2008 and updated in 2012 (Bellevue 2012b).

Table 4-2 presents a summary of the City's historical municipal and community emissions output, and projected future emissions with and without the targeted reductions. In order to meet the 7 percent reduction target:

- Municipal emissions must be reduced by 22 percent from 2011.
- Community emissions must be reduced by 21.5 percent from 2011.

Table 4-2. Overview of Municipal and Community Emissions and Reduction Targets

	Municipal Analysis CO_2e (metric tons)	Community Analysis CO_2e (metric tons)
Emissions Target: 7% below 1990 Emissions Level	11,246	1,238,203
1990 – Back-cast Year Emissions	12,092	1,331,401
2001 – Base Year Emissions	13,958	1,569,631
2006 – Interim Year Emissions	16,527	1,572,987
2011 – Emissions	14,511	1,577,511
Volume of Emissions Reduction Needed to Meet Target in 2012	3,265	339,308

CO_2e = carbon dioxide equivalent

Source: Bellevue (2012b).

4.1.1.6. City Air Quality Policies

The City's air quality policies are presented in the Comprehensive Plan and focus on coordinating with other agencies in developing long-term strategies to address many contributors to air pollution (Policies EN-78, 82). Other policies to reduce air quality emissions include reduction of vehicle trip growth (Policy EN-79), growth management strategies to reduce automobile dependency (Policy EN-85), and development of transportation improvement program measures that not only reduce congestion but also provide air quality benefits at problem locations (Policies EN-80, 81) (Bellevue 2010).

4.1.2. Existing Air Quality

Typical air pollution sources in Bellevue include vehicular traffic, the activities of commercial and retail businesses, and light industrial facilities, as well as residential wood-burning devices. While many types of pollutant sources are present, the single largest contributor to most criteria pollutant emissions is on-road mobile sources. Of the various vehicular emissions for which there

are ambient air quality standards, CO is the pollutant emitted in the largest quantities. Therefore, for the transportation plans that could redistribute traffic volumes or result in additional vehicular traffic, CO is the major concern among the criteria pollutants.

Other pollutants generated by vehicular traffic include the ozone precursors: volatile organic compounds (VOCs) and nitrogen oxides (NOx), which could be important in the future if there is at some point a re-designation to nonattainment status for ozone. Particulate matter (PM_{10} and $PM_{2.5}$) also is emitted in vehicle exhaust and generated by tire action on pavement (or unpaved areas). In winter, residential fireplaces and stoves are the predominant sources of $PM_{2.5}$; in the summer, motor vehicles are the largest source. Sulfur oxides (SOx) and NO_2 also are emitted by motor vehicles, but concentrations of these pollutants are usually not high, except near large industrial facilities.

The following paragraphs describe the key criteria pollutants considered for this analysis.

4.1.2.1. Carbon Monoxide

CO is a product of incomplete combustion generated by mobile sources, residential wood combustion, and industrial fuel-burning sources. CO is a concern related to on-road mobile sources because it is the pollutant emitted in the greatest quantity for which short-term health standards exist. The impact of the pollutant CO is usually localized, and CO concentrations typically diminish within a short distance of roads. The highest ambient concentrations of CO usually occur near congested roadways and intersections during periods of air stagnation in winter.

The TFP area (Bellevue) is located in the Puget Sound region, which was designated by EPA as a CO nonattainment area until the early 1990s. As older, more polluting cars have been replaced with new, highly efficient cars, no monitoring stations have recorded violations of the air quality standards in recent years. In 1996, EPA re-designated the region as attainment for CO. The region remains an air quality maintenance area for CO, but there have been no measured violations of the standards in many years. Measured CO levels at the 148th Avenue NE station have also been below ambient air quality standards since its monitoring began in 2002. The highest 8-hour concentration measured in 2010 was 1.1 ppm compared to the 9 ppm standard.

4.1.2.2. Ozone

Ozone is a highly reactive form of oxygen created by atmospheric chemical reaction of NOx and VOCs, both of which are emitted directly from industrial sources and mobile sources. Ozone problems tend to be regional in nature because the atmospheric chemical reactions that produce ozone occur over a period of time, and because during the delay between emission and ozone formation, ozone precursors can be transported far from their sources. Transportation sources such as automobiles and trucks are some of the sources that produce ozone precursors.

In the past due to violations of the federal ozone standards, the Puget Sound region was designated as nonattainment for ozone until early 1990s. After this period, more stringent emission limits on mobile sources and industrial facilities greatly reduced emission rates for the NOx and VOC precursors. In 1996, having met the federal standards for several years, the region was re-designated by EPA as a maintenance area for ozone. In 2005, EPA eliminated the 1-hour ozone standard; since then, ozone compliance is based solely on the 8-hour standard. Because the region had always complied with the 8-hour ozone standard, EPA re-classified the region as an attainment area for ozone.

As discussed previously in the Attainment Status Designation section, the region is still designated as an attainment area for ozone.

4.1.2.3. Particulate Matter (PM_{10} and $PM_{2.5}$)

Particulate matter is generated by industrial emissions, residential wood combustion, motor vehicle tailpipes, and fugitive dust from roadways and unpaved surfaces. When first regulated, particle pollution was based on "total suspended particulate," which included all size fractions. As sampling technology has improved and the importance of particle size and chemical composition have become more clear, ambient standards have been revised to focus on the size fractions thought to be most dangerous to people. At present, there are standards for PM_{10} and $PM_{2.5}$ because they contribute the most to human health effects, regional haze, and acid deposition. The highest ambient concentrations generally occur near the emission sources. $PM_{2.5}$ has a greater impact than PM_{10} at locations far from the emitting source because it remains suspended in the atmosphere longer and travels farther.

The Puget Sound region has been below the daily and annual federal standards for PM_{10} and $PM_{2.5}$ since the early 1990s. In 2001, EPA designated the region in attainment for PM_{10} and $PM_{2.5}$. In 2006, EPA revoked the annual PM_{10} standard due to a lack of evidence linking health problems to long-term exposure to PM_{10} pollution. Since then, PSCAA ceased all PM_{10} monitoring and has focused its efforts on $PM_{2.5}$ monitoring.

In 2006, EPA also lowered its daily $PM_{2.5}$ standard from 65 micrograms per cubic meter ($\mu g/m^3$) to 35 $\mu g/m^3$ to better protect public health. Under the new standard, the Bellevue Way station measured an exceedance or near exceedance of the new $PM_{2.5}$ daily standard, but measured concentrations decreased in the following years to below-standard levels. The maximum 24-hour concentration in 2010 was 17 $\mu g/m^3$ compared to the 35 $\mu g/m^3$ standard.

4.2. Impacts

All components of the CIP Network alternative are included as part of the TFP Network alternative; therefore, this impacts section discusses impacts that are common to both alternatives.

4.2.1. Mobile Source Air Toxics

According to traffic data provided by the City, the future (2024) VMT would be higher than existing levels. The magnitude of the EPA-projected MSAT emission reductions, however, is so great (even after accounting for VMT growth) that MSAT emissions in the project area are likely to be lower in the future in nearly all cases.

The proposed roadway and intersection widening improvements, including new roadway links contemplated as part of both the CIP Network alternative and the TFP Network alternative, would have the effect of moving some traffic closer to nearby homes and businesses. The TFP Network alternative includes more such projects than the CIP Network alternative; therefore, there may be localized areas where ambient concentrations of MSAT emissions could be higher with the TFP Network alternative than under the CIP Network alternative. The magnitude and the duration of these potential increases between the two alternatives cannot be accurately quantified due to the inherent mathematical and validation deficiencies of current emission models. In sum, when a roadway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions for the TFP Network alternative could be higher relative to the CIP Network alternative, but this effect could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). On a regional basis, however, EPA's vehicle and fuel regulations, together with ongoing future fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause regionwide MSAT levels to be significantly lower than today.

4.2.2. Greenhouse Gas Emissions

This TFP EIS adopts by reference the analysis of GHGs and climate change contained in Transportation 2040—the Metropolitan Transportation Plan developed by the PSRC and adopted by its Regional Assembly in 2010.

The PSRC analysis was based on two technology scenarios: a "likely" scenario and an "aggressive" scenario; these are indicated in Table 4-3.

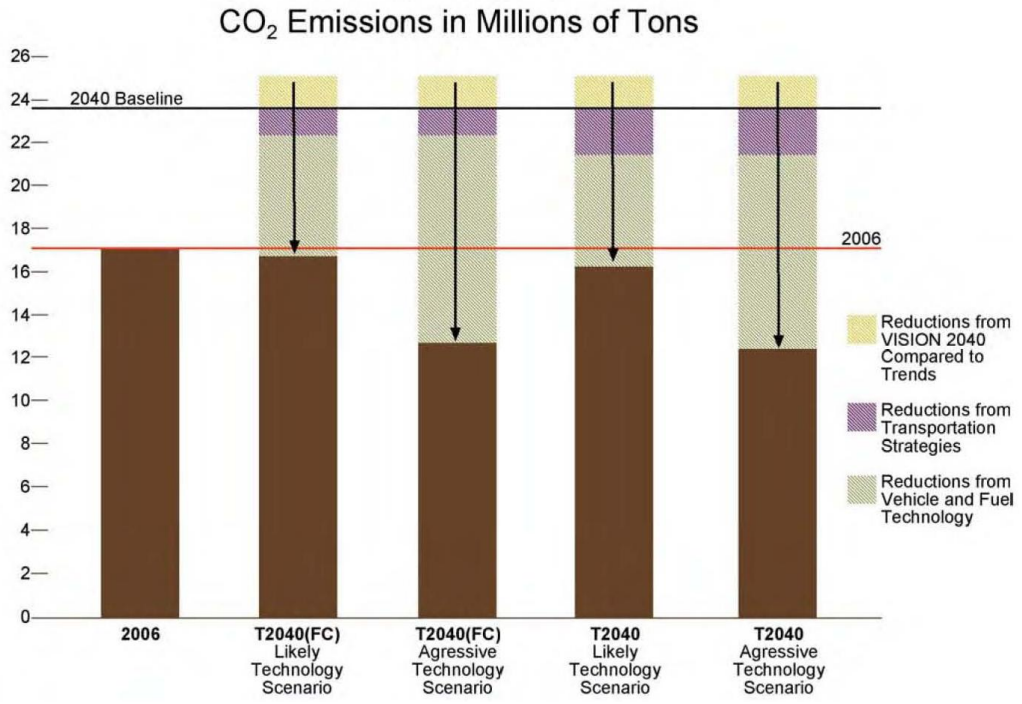
Table 4-3. PSRC GHG Emission Scenarios

Incentive	Likely Technology Scenario	Aggressive Technology Scenario
Percent of Electric Vehicles in Fleet	20%	45%
Improvements to Fuel Economy	40 mpg	50 mpg
Reduction of Carbon Intensity of Fuel	10%	25%
Improvements to Heavy Duty Vehicles	5%	10%

Source: Transportation 2040, Appendix L (PSRC 2010). Note: mpg = miles per gallon

These results for the entire four-county area are illustrated in Figure 4-1 and demonstrate a reduction in emissions of between 5 percent and 28 percent below 2006 levels. These reductions occur despite increases in VMT from 79,457,000 in 2006 to 102,519,000 in 2040. Because the same factors of gas mileage, fuel mix, and heavy vehicle emissions would affect Bellevue, the

"aggressive" scenario would be required to address Bellevue's community goal of 21.5 percent emission reduction. Forecast VMT on Bellevue roadways is almost the same under the CIP Network and TFP Network alternatives.



Note: FC = Financially Constrained portion of the plan
Source: PSRC (2010)

Figure 4-1. Greenhouse Gas CO_2 Emissions

4.2.3. Construction Emissions

The construction phase of projects in the CIP Network alternative or the TFP Network alternative will include numerous tasks, each generating a variety of pollutants. Table 4-4 summarizes these tasks and sources of pollutant emissions.

Table 4-4. Pollutants Generated by Construction Activities

Construction Task	Source of Emissions	Pollutant
Conducting Demolition for Right-of-way	Track/wheel loaders, bulldozer, and haul trucks	CO, PM_{10}, $PM_{2.5}$, NOx, SO_2, fugitive dust, and MSATs
Removing Existing Concrete and Paved Surfaces	Track/wheel loaders, bulldozer, and haul trucks	Same as above
Removing Concrete Debris	Haul trucks and dump trucks	Same as above
Re-grading Roadbed and Laying the Aggregate Base	Track/wheel loaders, bulldozer, and grader	Same as above
Trenching for New Utilities	Backhoe and gravel trucks	Same as above
Paving Roadway	Concrete trucks, asphalt trucks, and asphalt rollers	CO, PM_{10}, $PM_{2.5}$, NOx, SO_2, and MSATs
Painting Lane Markers	Paint spray equipment	Odorous compounds and MSATs

Construction contractors would have to comply with PSCAA regulations requiring all reasonable precautions be taken to minimize fugitive dust emissions (Regulation I, Section 9.15).

Construction activities would likely require the use of diesel-powered, heavy trucks and smaller equipment such as generators and compressors. These engines would emit air pollutants that could slightly degrade local air quality in the immediate vicinity of the activity. These emissions would be temporary and localized, however, and the resulting construction emissions would likely be far outweighed by emissions from existing traffic around the construction area.

Some construction activities could cause odors detectible to some people in the vicinity of the activity, especially during paving operations that use tar and asphalt. Such odors would be short-term and localized. Stationary equipment used for the construction activities must comply with PSCAA regulations requiring the best available measures to control the emissions of odor-bearing air contaminants (Regulation I, Section 9.11). In addition, no slash burning would be permitted in association with either alternative.

Construction equipment and material hauling can affect general traffic flow on city streets adjacent to a construction area. If construction delays traffic enough to significantly reduce travel speeds in the area, general traffic-related emissions would increase. Given that there is heavy traffic during some periods of the day, scheduling haul traffic during off-peak times (e.g., between 9 a.m. and 4 p.m.) would have the least effect on other traffic and would minimize indirect increases in traffic-related emissions.

4.2.4. Transportation Conformity Analysis

Cars and trucks traveling on city streets would be the major source of air pollutant emissions associated with implementation of the proposed projects for either alternative. Potential air quality impacts caused by increased tailpipe emissions are divided into two general categories: 1) regional photochemical smog caused by combined emissions throughout the Puget Sound region, and 2) CO hot-spots caused by localized emissions at heavily congested intersections.

4.2.4.1. Regional Air Quality Conformity

PSRC annually performs an air quality conformity analysis for the Puget Sound region, which forecasts regional transportation emissions produced by the region's long-range transportation plan (Transportation 2040) and the regional Transportation Improvement Program (TIP). Those projects in the CIP Network and the TFP Network alternatives that are considered regionally significant are submitted to the PSRC for its regional air quality analysis. The regional growth in traffic anticipated in the Transportation 2040 framework accommodates the growth in traffic and emissions associated with the implementation of the CIP Network alternative or the TFP Network alternative. The PSRC analysis associated with Transportation 2040 conforms to the CO and PM_{10} maintenance plans, as required by the federal CAA and the state Clean Air Act, and would not cause or contribute to regional exceedances of the federal standards.

Carbon Monoxide and PM_{10}

The conformity analysis provided as part of PSRC's Quality Conformity Analysis for the 2013–2016 Regional TIP was required to show that the total regional emissions produced by projects in the TIP, plus activity on the existing travel network, do not exceed the motor vehicle emissions budget identified in the maintenance plan for each respective criteria pollutant. The emissions budget is a ceiling of total emissions that cannot be exceeded. Emissions are calculated on an individual link basis, based on the VMT and speed of each link. This calculation is performed separately for each of five time periods (AM peak, midday, PM peak, evening, and nighttime). Emissions are calculated for both intrazonal and interzonal trips. The calculated emissions of individual links are then summed for each of the five time periods, which in turn are summed for the total daily emissions in each maintenance area.

$PM_{2.5}$

The State Implementation Plan for $PM_{2.5}$ is currently in progress; at present, there is no approved motor vehicle emissions budget established for this pollutant. According to interagency consultation and the interim conformity test requirements established by EPA, the regional emissions analysis is compared to the 2008 base year for the nonattainment area (which is in Pierce County). For the interim emissions test, the federal conformity rule requires analysis of the horizon year of the long-range plan, a year not more than 5 years in the future, and interim analysis years no more than 10 years apart. The interim emissions test, which is the conformity test applicable for areas with no motor vehicle emissions budget in place, requires either a build-baseline year comparison or a build-no build comparison for each analysis year. This current conformity analysis performs the build-baseline year comparison, where estimated emissions for each forecast analysis year of 2015, 2020, 2030, and 2040 are compared to the estimated 2008 baseline year emissions. Also, according to interagency consultation and the interim conformity test requirements, both direct $PM_{2.5}$ and NOx are analyzed.

4.2.4.2. Results

The projects in the 2013–2016 Regional TIP have been included in the most recent regional conformity finding in early 2012, as part of the Transportation 2040 amendment completed in June 2012. There were no new regionally significant projects submitted to the TIP that were not already included in the plan, nor were there any changes significant enough to be modeled for the regionally significant projects. Therefore, the analysis conducted in June 2012 accurately reflects the conformity analysis for the 2013–2016 Regional TIP. The results from this analysis are shown in Tables 4-5 and 4-6. A full listing of projects included in the 2013–2016 Regional TIP is available on PSRC's website at: http://www.psrc.org/transportation/tip.

Table 4-5. Regional CO Analysis Results

Analysis Year	Regional Emissions (tons per day)
Motor Vehicle Emissions Budget[a]	2,512.00
2016	1,031.80
2020	942.14
2030	1,134.72
2040	1,189.54

[a] The Central Puget Sound region maintenance plan for the national PM_{10} standard includes only Seattle, Kent, and Tacoma; results are not reported for Bellevue.

Table 4-6. Regional $PM_{2.5}$ and NOx Analysis Results

Analysis Year	$PM_{2.5}$	NOx
2008	413,051	24,038,398
2015[a]	278,638	12,859,507
2020	216,456	7,764,837
2030	204,732	7,030,416
2040	210,327	7,100,153

Note: The values represent the modeled base year emissions for each pollutant; according to the interim conformity test requirements, future estimated emissions must be less than the base year emissions.

[a] According to interagency consultation, the 2015 emissions estimation was derived from an interpolation between the base year (2008) and 2020 modeled analyses.

As shown in Tables 4-5 and 4-6, the emissions from the projects and programs in the 2013–2016 Regional TIP for each of the analysis years are below the established daily motor vehicle emission budgets for the criteria pollutant CO as identified in their respective maintenance plans. The emissions of $PM_{2.5}$ and NOx are below the 2008 base year emissions in accordance with the interim conformity test requirements established by EPA.

Conclusions

This analysis provides sufficient basis for PSRC to determine that the 2013–2016 Regional TIP conforms to the CO and PM_{10} maintenance plans, as required by the federal CAA and the state Clean Air Act, and meets the interim conformity test requirements for $PM_{2.5}$. The Bellevue TFP is in conformance with these projections because the vehicle trips and emissions included in the land use and transportation scenarios are consistent with the regional analysis.

Project-Level CO Hot-Spot Concentrations

A project-level CO hot-spot analysis is required for future project-level SEPA/NEPA documentation because the City is located in a CO maintenance area. This analysis was performed based on the Guidebook for Conformity (KJS Associates 1995), which was prepared for WSDOT in accordance with EPA guidance (EPA 1992). Based on these guidelines, signalized intersections within the TFP area were screened to identify the most heavily congested intersections for the CO hot-spot analysis.

To establish which intersections to consider, the City provided traffic data for system intersections in Bellevue. The intersection traffic data include PM peak-hour traffic volumes and V/C for the existing year (2012) and the 2024 horizon year (CIP Network alternative and TFP Network alternative). The following four signalized intersections were selected for CO hot-spot analysis to represent the most congested intersections during the PM peak hour (see Figure 4-2):

1. 112th Avenue NE/NE 8th Street (Downtown)
2. 116th Avenue NE/NE 8th Street (Wilburton)
3. 120th Avenue NE/NE 8th Street (Wilburton)
4. 148th Avenue NE/NE 8th Street (Bel-Red).

Table 4-7 summarizes the data used to select intersections for Washington State Intersection Screening Tool (WASIST) modeling.

Table 4-7. Summary of Data Used to Select Intersections for Modeling

Intersection and Scenario	PM Peak-Hour Entering Volumes	Intersection LOS
112th Ave NE and NE 8th St		
Existing Conditions (2012)	5,023	V/C 1.073
2024 CIP Network	5,259	V/C 1.125
2024 TFP Network	5,296	V/C 1.148
116th Ave NE and NE 8th St		
Existing Conditions (2012)	5,779	V/C 0.793
2024 CIP Network	5,856	V/C 0.799
2024 TFP Network	5,862	V/C 0.782
120th Ave NE and NE 8th St		
Existing Conditions (2012)	3,193	V/C 0.788
2024 CIP Network	6,541	V/C 1.029
2024 TFP Network	5,837	V/C 1.060
148th Ave NE and NE 24th St		
Existing Conditions (2012)	4,993	V/C 0.754
2024 CIP Network	6,108	V/C 0.949
2024 TFP Network	6,124	V/C 0.945

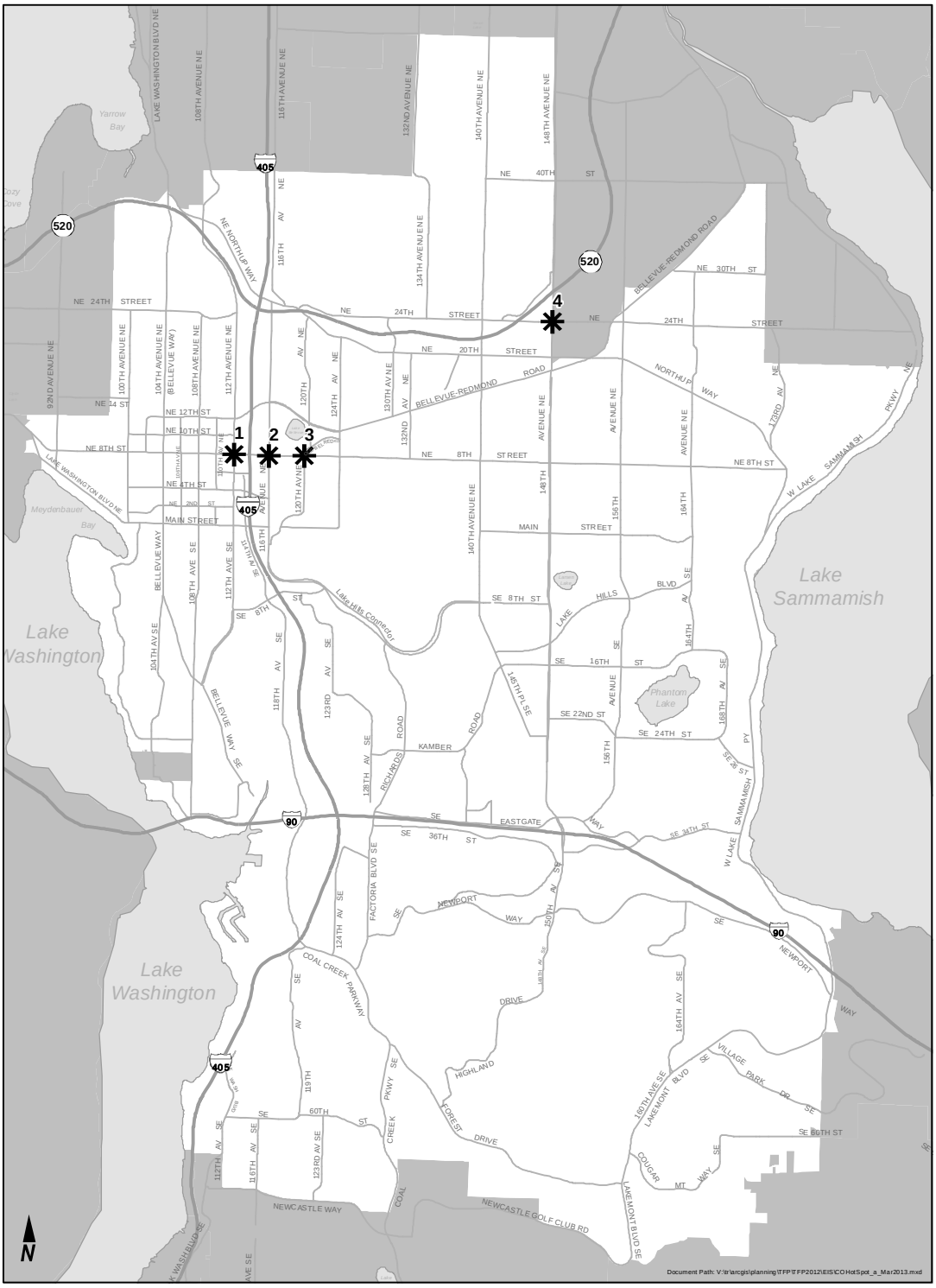


Figure 4-2. CO Hot-Spot Analysis Locations

Project-level CO hot-spot analyses for the selected intersections were conducted using WASIST (WSDOT 2009). WASIST is a computerized screening model used to estimate worst-case CO concentrations near signalized intersections. The results from WASIST are based on inputs from EPA-approved vehicle emission and dispersion models—Mobile 6 version 2.03 and CAL3QHC.

General data inputs required for WASIST to model the intersections include analysis year, background concentration, county name, name of CO maintenance area, and land use type surrounding the intersection. Traffic input parameters required to describe the analysis intersections include lane configurations, traffic volumes, approach speeds, and signal timing for each turning movement of each intersection. Receptor inputs required to describe the receptor positions include number of receptors and distance from the edge of roadways. A receptor is the position where the CO concentration is estimated. The WASIST model was run with the following input values:

- The CO hot-spot modeling was performed for the 2012 base year and the 2024 horizon year.
- Background CO concentrations of 3 ppm were used for 1-hour and 8-hour averaging periods, respectively, as specified in the WASIST User's Manual (WSDOT 2009). The modeled 1-hour CO concentration was converted to an estimated 8-hour concentration by applying a 0.7 scale factor.
- Land use types surrounding the analysis intersections were based on existing land uses at each intersection.
- The approach speed at intersections was 5 miles per hour as suggested in the WASIST User's Manual.
- The PM peak-hour traffic volume of each analysis intersection was provided by the City for 2012 existing conditions and 2024 horizon year conditions.
- Existing lane configurations at analysis intersections were applied to existing conditions at all four intersections and to conditions for all three of the intersections (where no changes are proposed under either alternative). At one of the intersections, NE 8th Street and 120th Avenue NE, changes are anticipated under both the CIP Network and the TFP Network alternatives. At this location, the proposed future lane configurations were applied for the 2024 horizon year analysis.

Table 4-8 shows the CO hot-spot analysis results for existing conditions, the CIP Network alternative, and the TFP Network alternative.

Table 4-8. Carbon Monoxide Hot-Spot Modeling Results

Intersection and Scenario	Highest 1-hour Concentration	Highest 8-hour Concentration
112th Ave NE and NE 8th St		
Existing Conditions (2012)	7.7 ppm	6.3 ppm
2024 CIP Network	8.0 ppm	6.5 ppm
2024 TFP Network	8.0 ppm	6.5 ppm
116th Ave NE and NE 8th St		
Existing Conditions (2012)	7.5 ppm	6.2 ppm
2024 CIP Network	7.7 ppm	6.3 ppm
2024 TFP Network	7.5 ppm	6.2 ppm
120th Ave NE and NE 8th St		
Existing Conditions (2012)	6.1 ppm	5.2 ppm
2024 CIP Network	8.3 ppm	6.7 ppm
2024 TFP Network	8.3 ppm	6.7 ppm
148th Ave NE and NE 24th St		
Existing Conditions (2012)	7.2 ppm	5.9 ppm
2024 CIP Network	8.1 ppm	6.6 ppm
2024 TFP Network	8.1 ppm	6.6 ppm

Note: All listed values include a background concentration of 3.0 ppm.

Table 4-8 shows that modeled 1-hour and 8-hour average CO concentrations do not exceed NAAQS limits for the existing year at any of the intersections. The model indicates that CO concentrations would increase slightly from 2012 to 2024 primarily due to increasing traffic volumes and the fact that emission rates per vehicle remain unchanged or increase slightly over the 2012–2024 period.

The modeled concentrations in Table 4-8 apply to the PM peak hour. CO impacts for the AM peak hour were not modeled because traffic volumes for the AM peak period are expected to be lower compared to the PM peak period. Therefore, the maximum CO impacts during the AM peak period would also be lower than the NAAQS limits.

The CO hot-spot analysis results at the analysis intersections for the CIP Network alternative are shown in Table 4-8. The table shows that modeled 1-hour average and 8-hour average CO concentrations at all intersections under the CIP Network alternative are below the NAAQS under 2024 conditions. Therefore, the CIP Network alternative would have no significant impacts on localized air quality.

In general, the modeled ambient CO concentrations for the TFP Network alternative are the same as those for the CIP Network alternative. The modeled ambient CO concentrations at all intersections are below the allowable federal limits. Therefore, the TFP Network alternative would also have no significant impacts on localized air quality. Because volumes at these

locations would be similar or less under the TFP Network Plus scenario, similar CO concentrations would be assumed in that scenario.

4.3. Mitigation Measures

This section discusses mitigation measures that should be implemented for the proposed projects, whether they are part of the CIP Network alternative or the TFP Network alternative.

4.3.1. Incorporated Plan Features

The City should require all construction contractors to implement air quality control plans for construction activities. These air quality control plans should include best management practices (BMPs) to control fugitive dust and odors emitted by diesel construction equipment.

During construction, dust from excavation and grading could cause temporary, localized increases in the ambient concentrations of fugitive dust and suspended particulate matter. The City should adopt fugitive dust control measures specified in the Guide to Handling Fugitive Dust from Construction Projects published by the Washington Associated General Contractors of Washington (AGC and Fugitive Dust Task Force 1997). Contractors would conduct the following BMPs to control fugitive dust:

- Use water sprays or other non-toxic dust control methods on unpaved roadways
- Minimize vehicle speed while traveling on unpaved surfaces
- Prevent track-out of mud onto public streets
- Cover soil piles when practical
- Minimize work during periods of high winds when practical.

Mobile construction equipment and portable stationary engines would emit air pollutants including NOx, CO, and highly toxic diesel particulate matter. These emissions would be temporary and localized. It is highly unlikely that the temporary emissions would cause ambient concentrations at adjoining parcels to approach the federal ambient air quality limits. Typical mitigation measures to minimize air quality and odor issues caused by tailpipe emissions include the following:

- Maintain the engines of construction equipment according to manufacturers' specifications
- Minimize idling of equipment while the equipment is not in use
- Locate stationary equipment as far as practical from sensitive receptors.

Burning of slash or demolition debris would not be permitted without express approval from PSCAA. No burning of woody debris is anticipated for any construction projects in the project area.

4.3.2. Applicable Regulations and Commitments

As part of future project-specific SEPA and NEPA documentation for individual new roadway improvement projects, the City may be required to conduct CO hot-spot modeling (per WAC 173-420) to demonstrate that the projects would not cause localized impacts related to increased CO emissions from vehicle tailpipes at congested intersections.

4.3.3. Other Potential Reduction Measures

Table 4-9 lists additional mitigation measures that could reduce GHG emissions caused by transportation facilities (Ecology 2008b). The table lists potential GHG reduction measures and indicates where the emission reductions might occur. The City could identify the reduction measures in its projects and explain why other measures are not included or are not applicable.

Table 4-9. Potential Greenhouse Gas Reduction Measures

Reduction Measures	Comments
Develop and implement a marketing/information program that includes posting and distribution of ridesharing/transit information.	Reduces direct and indirect VMT.
Subsidize transit passes. Reduce employee trips during peak periods through alternative work schedules, telecommuting, and/or flex-time. Provide a guaranteed ride home program.	Reduces employee VMT.
Provide bicycle storage and showers/changing rooms.	Reduces employee VMT.
Utilize traffic signalization and coordination to improve traffic flow and support pedestrian and bicycle safety.	Reduces transportation emissions and VMT.
Apply advanced technology systems and management strategies to improve operational efficiency of local streets.	Reduces emissions from transportation by minimizing idling and maximizing transportation routes and systems for fuel efficiency.

Source: Ecology (2008b).

4.4. Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts on regional or local air quality are anticipated. Temporary, localized dust and odor impacts could occur during the construction activities.

Chapter 5. Noise

This section addresses the effects of noise from construction activities and increased vehicle traffic associated with implementation of the TFP. This study includes a discussion of existing conditions, a summary of applicable policies and regulations related to noise levels in the community, and an analysis of the direct environmental impacts of the CIP Network and TFP Network alternatives.

5.1. Affected Environment

This section presents an overview of current noise conditions in Bellevue and the TFP project area. The affected environment provides the foundation by which impacts are assessed.

5.1.1. Noise Terminology and Criteria

The following are brief definitions of acoustical terms used in this discussion:

- Sound. A vibratory disturbance created by a vibrating object which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism such as the human ear or a microphone.
- Noise. Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- Ambient Noise. The composite of noise from all sources near and far in a given environment, exclusive of particular noise sources to be measured.
- Decibel (dB). A unitless measure of sound on a logarithmic scale that indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micropascals.
- A-Weighted Decibel (dBA). An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear. Typical A-weighted noise levels for various types of noise sources are shown in Table 5-1.
- Equivalent Sound Level (Leq). Leq represents the average of sound energy occurring over a specified interval of time. In effect, Leq is the steady-state sound level over a given time interval that contains the same amount of acoustical energy as the time-varying sound that actually occurs during that time interval. For example, the 1-hour A-weighted equivalent sound level (Leq [1h]) is the energy average of the varying A-weighted sound levels occurring during a 1-hour period.

Table 5-1. Typical A-Weighted Sound Levels

Sound Source	Sound Level (dBA)	Typical Experience or Response
Carrier deck jet operation	140	Painfully Loud
Limit of amplified speech	130	
Jet takeoff (200 feet) Automobile horn (3 feet)	120	Threshold of feeling and pain
Riveting machine Jet takeoff (2,000 feet)	110	Very annoying
Shout (0.5 foot) New York subway station	100	
Heavy truck (50 feet) Pneumatic drill (50 feet)	90	Hearing damage (8-hour exposure)
Passenger train (100 feet) Helicopter (in flight, 500 feet) Freight train (50 feet)	80	Annoying
Freeway traffic (50 feet)	70	Intrusive
Air conditioning unit (20 feet) Light automobile traffic (50 feet)	60	
Normal speech (15 feet) Quiet urban daytime	50	Quiet
Living room Bedroom Library	40	
Soft whisper (15 feet)	30	Very quiet
Broadcasting studio	20	
	10	Just audible
	0	Threshold of hearing

Source: Federal Transit Administration (2006).

A doubling of acoustical energy from a noise source results in a 3-dB increase in sound. Given a sound level change measured with precise instrumentation, however, the subjective human perception of a doubling of loudness will usually be different from what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000 Hertz [Hz] to 8,000 Hz) range. It is widely accepted that people are able to begin to detect sound level changes of 3 dB for typical noisy environments in instances where the new intruding noise is similar to the existing background (e.g., an increase in traffic noise compared to existing traffic noise). Where the intruding noise has a character different from the background, however (e.g., construction equipment operating in an otherwise quiet rural area), most people can clearly discern the new intruding noise even if increases in the overall noise level are less than 1 dB.

5.1.2. Surrounding Noise-Sensitive Land Uses

Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Noise-sensitive land uses typically include residences, hospitals, schools, guest lodgings, libraries, parks, places of worship, and certain types of recreational uses. Single-family and multi-family residences, including areas of frequent outdoor use, such as residential back yards and neighborhood parks, are types of uses that could be affected by increases in traffic noise due to implementation of the TFP.

5.1.3. Ambient Noise Environment

Within most of the city, local motor vehicle traffic is the dominant noise source for dwellings and businesses within 500 feet of a major arterial or freeway. High volumes of traffic on SR 520, I-405, and I-90 contribute significantly to background noise levels in residential areas. Other sources contributing to ambient or background outdoor noise levels include equipment noise and aircraft overflights. Typical background noise levels in downtown urban environments generally fall in the range of 60 to 70 dBA. Noise levels near suburban residential streets are quieter, generally within the range of 50 to 60 dBA.

5.1.4. Noise Monitoring

In order to characterize the existing noise environment, daytime sound levels were measured at 28 locations for the 2006–2017 TPF EIS (Bellevue 2006), and were supplemented by 5 additional locations in 2008 for the 2009–2020 TFP EIS (Bellevue 2009b).

For the 2006 measurements, locations were selected by first screening the 2006–2017 TFP for projects that would shift or alter a roadway alignment, potentially affecting the degree to which traffic noise would be heard at nearby receivers. A list of these projects was generated and then evaluated in the field to identify those projects that would be close to potentially sensitive receiving locations (a home, park, school, etc.). Those locations where future projects would not adversely affect sensitive receivers were not considered for sound level measurements. The remaining locations were selected to reflect representative noise-sensitive locations that could be affected by changes in traffic circulation on the network as a whole to create a data set that represented the entire city (Bellevue 2006). For the 2009–2020 TFP update, the City selected five additional noise monitoring sites. Sites were selected to document existing ambient noise levels at representative locations where noise-sensitive land uses are currently located, and at locations where future development is anticipated (Bellevue 2009b). Short-term measurements of 15 minutes in duration were conducted at the monitoring locations.

Traffic was the dominant noise source observed during all short-term noise measurement periods. Aircraft over-flights and neighborhood landscaping noise was audible during the measurements, but these sources were overshadowed by traffic noise during vehicle pass-bys. Because the roadway and adjacent physical environment remain largely consistent from the time of the 2006 and 2008 baseline measurements to 2013, the primary variable is the traffic volume. Current noise levels can be reasonably determined by adjusting the base measurement using current traffic volume values.

Figure 5-1 shows the locations of the noise monitoring locations. The locations that were measured in 2006 are labeled 1 through 28. The additional locations that were measured in 2008 to supplement these data are labeled 29 through 33.

The information gathered during the short-term monitoring conducted in 2006 is summarized in Table 5-2; the information gathered during the additional short-term monitoring conducted in 2008 is summarized in Table 5-3.

Table 5-2. Summary of Short-Term Sound Level Measurements in the City of Bellevue—May 31 to June 19, 2006

Monitor Site	Monitor Location	Date, Measurement Start Time	Duration of Measurement (minutes)	Measured Sound Level (dBA Leq, all noise sources)
1	Bellevue Way NE, north of NE 24th St	5/31/06, 11:56	15	66.7
2	134th Ave NE, north of NE 24th St	5/31/06, 15:52	15	60.5
3	148th Ave NE, north of NE 40th St	6/14/06, 11:44	15	66.3
4	140th Ave NE, at NE 48th Pl	6/19/06, 13:54	15	63.6
5	140th Ave NE, north of NE 36th Pl	6/19/06, 14:45	15	66.3
6	NE 12th St, west of 112th Ave NE	6/15/06, 13:14	15	65.2
7	NE 8th St, west of 108th Ave NE	6/15/06, 13:47	15	65.0
8	110th Ave NE, north of NE 6th St	6/19/06, 16:04	15	65.1
9	NE 2nd St, west of 108th Ave NE	6/19/06, 15:33	15	61.3
10	112th Ave SE, south of Main St	5/31/06, 12:50	15	69.1
11	112th Ave SE, north of SE 8th St	5/31/06, 12:50	15	68.2
12	108th Ave SE, north of SE 25th St	6/14/06, 12:50	15	59.9
13	SE 20th Pl, east of 127th Ave SE	6/15/06, 10:59	15	56.2
14	132nd Ave NE, south of Bel-Red Rd	5/31/06, 15:16	15	53.1
15	145th Pl SE, west of 144th Ave SE	6/14/06, 14:26	15	61.1
16	148th Ave NE, south of Bel-Red Rd	5/31/06, 15:16	15	69.3
17	148th Ave SE, south of SE 22nd St	6/15/06, 12:11	15	67.6
18	Northup Way, east of 156th Ave NE	6/8/06, 13:41	15	62.8
19	156th Ave SE, north of Main St	6/8/06, 14:45	15	64.0
20	156th Ave SE, north of Lake Hills Blvd	6/8/06, 15:16	15	63.1
21	164th Ave NE, south of NE 24th St	6/8/06, 13:13	15	59.7
22	West Lake Sammamish Parkway, south of NE 15th Pl	6/14/06, 12:40	15	62.4
23	West Lake Sammamish Parkway, south of Northup Way	6/8/06, 16:40	15	69.3
24	West Lake Sammamish Parkway, south of SE 38th St at Vasa Park	6/8/06, 16:10	15	63.8
25	Factoria Blvd SE, north of Newport Way	6/14/06, 11:55	15	66.5
26	119th Ave SE, south of SE 54th St	6/14/06, 13:33	15	60.7
27	Lakemont Blvd, north of SE 63rd St	6/14/06, 13:16	15	63.9
28	Lakemont Blvd, west of Village Park Drive	6/14/06, 13:41	15	65.5

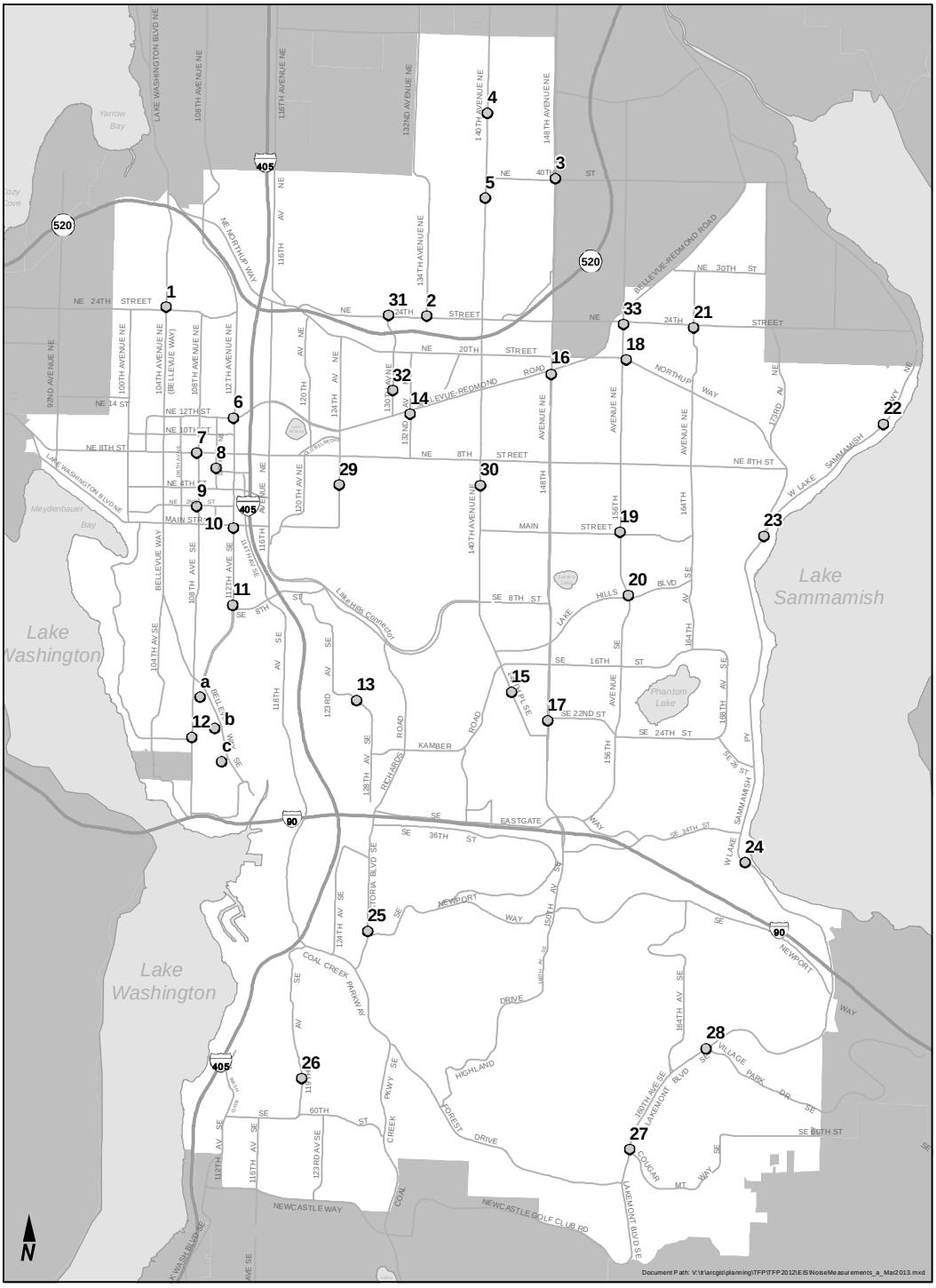


Figure 5-1. Short-Term Noise Measurement Locations

Table 5-3. Summary of Short-Term Sound Level Measurements in the City of Bellevue—November 10, 2008

Monitor Site	Monitor Location	Measurement Start Time	Duration of Measurement (minutes)	Measured Sound Level (dBA Leq, all noise sources)	Noise Sources Observed
29	124th Ave NE/NE 4th Pl	4:00 p.m.	15	60.8	Local traffic, helicopter, sirens, aircraft, lawnmower
30	140th Ave NE across from NE 6th Pl	12:08 p.m.	15	69.2	Local traffic, high altitude aircraft
31	130th Ave NE/NE 24th St	12:45 p.m.	15	60.1	Traffic on NE 24th St, turboprop aircraft
32	130th Ave NE/NE 15th Pl	1:10 p.m.	15	62.8	Local traffic, heavy trucks
33	156th Ave NE, south of NE 24th St	3:12 p.m.	15	69.3	Local traffic

In conjunction with the environmental analysis for the East Link Extension project, Sound Transit commissioned the collection of noise data at multiple locations along the route of the rail corridor. For the purposes of the proposed 2013–2024 TFP, the data collected along Bellevue Way SE is of particular relevance because this is a location not included in the earlier city sampling and is the location of one project, TFP-242, which is included in the TFP Network alternative. Table 5-4 shows noise measurements taken at three single-family residences along Bellevue Way SE in the area of project TFP-242 (at the north end, center, and south end of the proposed TFP project [Sound Transit 2013]).

Table 5-4. Sound Level Measurements for Existing Conditions and Parcel Locations, Sound Transit East Link

Location ID	Parcel No.	Land Use	General Location	Measured Sound Level (dBA Leq, existing, all noise sources)
a	3001	Single-Family Residential	Bellevue Way/112th Ave SE	71
b	2275	Single-Family Residential	Bellevue Way/SE 24th Pl	70
c	2160	Single-Family Residential	Bellevue Way/SE 27th Pl	72

Source: East Link Extension 2013 Addendum. Attachment E1, Table A3 (Sound Transit 2013).

5.1.5. Regulatory Setting

This section summarizes City noise regulations applicable to the TFP. Capacity-increasing TFP projects built with state funding may also be subject to WSDOT traffic noise regulations and noise abatement evaluation protocols under 23 CFR 772.

5.1.5.1. Noise Limits for Stationary Industrial and Commercial Sources

Bellevue City Code (BCC) Chapter 9.18 establishes limits on the levels and durations of noise crossing property boundaries. Maximum allowable sound levels at a receiving land use depend on the district zoning of both the source and receiving properties.

The land use zones are classified by Environmental Designation for Noise Abatement (EDNA) as follows:

- Class A EDNA. Residential land use districts
- Class B EDNA. Commercial land use districts
- Class C EDNA. Industrial land use districts.

Permissible noise limits are shown in Table 5-5.

Table 5-5. Maximum Permissible Noise Levels at Receiving Property Line

EDNA of Sound Source	Permissible Noise Level (in dBA) EDNA of Receiving Source			
	Class A	Class B	Class C	
	Daytime	Nighttime	All Hours	All Hours
Class A	55 dBA	45 dBA	57 dBA	60 dBA
Class B	57 dBA	47 dBA	60 dBA	65 dBA
Class C	60 dBA	50 dBA	65 dBA	70 dBA

Source: BCC Section 9.18.030.

For noise levels that exceed the above levels for short durations, maximum permissible sound levels are presented in Table 5-6.

Table 5-6. Adjustment to Maximum Permissible Noise Levels at Receiving Property Line for Noises of Short Duration

Duration of Sound Level within a 1-Hour Interval	Add Amount to Maximum Permissible Sound Level
15 minutes	+ 5 dB
5 minutes	+ 10 dB
1.5 minutes	+ 15 dB

Source: BCC Section 9.18.030.

The following sounds are exempt, at all times, from the maximum permissible sound levels established in BCC Section 9.18.030, including but not limited to:

- Sounds originating from aircraft in flight.
- Warning devices or alarms.
- Sounds created by construction equipment at temporary construction sites, between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, and 9:00 a.m. and 6:00 p.m. on Saturdays. Noise from construction sites on Sundays, legal holidays, or during hours outside of

exempt work hours described above are prohibited under BCC Section 9.18.040, unless expanded hours of operation are authorized by the applicable City department director.

- Traffic noise originating from vehicles traveling on public roads, when such vehicles are regulated by WAC 173-62. The City may require an acoustical analysis, however, if traffic noise exceeds City standards for arterial improvement projects (see below).

5.1.5.2. Standards for Arterial Improvement Projects (TFP projects)

For the purposes of studying environmental traffic noise, arterial improvement projects considered here do not include minor widening (widening projects that do not increase capacity), addition of bicycle lanes, or walkways. The City will require a noise analysis component for an arterial improvement project that passes through a residential area (Class A EDNA), if any of the following conditions are met:

- The existing exterior peak-hour traffic noise level exceeds 67 dBA Leq (1 hour).
- The exterior peak-hour traffic noise level is predicted to exceed 67 dBA Leq (1 hour) due to resulting future traffic demands as a result of the arterial improvements; or
- The exterior peak-hour noise level is expected to increase by 5 dB or more because of future traffic demands predicted to result from arterial improvements.

The location of exterior noise exposure under these standards is 5 feet above existing grade at a distance of 60 feet from the arterial centerline.

In cases where traffic noise levels are predicted to exceed these thresholds, mitigation may be considered if the averaged day-night sound level (Ldn) could be reduced to 60 dBA or lower.

An acoustical analysis for a given arterial improvement project should include feasible alternatives for noise mitigation and expected noise reduction for each mitigation alternative, where noise impacts are predicted.

5.2. Impacts

This section presents potential impacts that might occur if the CIP Network or TFP Network alternative is implemented. Because all components of the CIP Network alternative are included as part of the TIP Network, this section initially discusses impacts that are common to both alternatives.

5.2.1. Exposure of Noise-Sensitive Land Uses to Noise during Construction Activities

Construction of roadways would temporarily increase noise levels at residential locations in the vicinity of the construction site. Noise increases would result from on-site construction activities, especially during site preparation, grading, and other earthmoving activities, as well as from construction-related vehicle traffic delivering materials to and from the construction site.

Table 5-7 summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects. Construction equipment is expected to generate noise levels ranging from 70 to 90 dB at a distance of 15 meters (50 feet), and noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance.

Construction activity is prohibited in the city at night, on Sundays, or legal holidays, unless special approval is issued by the City. Construction noise that occurs outside of the exempt daytime hours is therefore considered to be potentially significant, and must comply with the allowable noise limits described in Section 5.1.5.

Table 5-7. Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level 50 feet from Source (dBA)
Air Compressor	81
Backhoe	80
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Bulldozer	85
Excavator/Shovel	82
Generator	81
Grader	85
Loader	85
Scraper	89
Truck	88

Source: Federal Transit Administration (2006).

5.2.2. Exposure of Noise-Sensitive Land Uses to Increased Traffic Noise

Traffic noise from increased vehicle demand for public roadways will result in increased noise levels along roadway locations throughout the city resulting from changes in traffic volumes under all network scenarios. In order to predict the magnitude of the increase under different alternatives and scenarios, a noise model was utilized.

5.2.2.1. Traffic Noise Model

Future noise levels were analyzed by using the FHWA Traffic Noise Model (TNM) Version 2.5 (FHWA 1998. 2004). TNM accounts for roadway and receiver location, ground or noise path conditions, roadway geometry, traffic volumes and speeds, intersection control, and vehicle classifications. From these data, the model calculates hourly equivalent sound levels (Leq dBA) due to vehicular traffic. For this analysis a simplified version of the TNM was used. This “straight line” use of the model is essentially a distance-decay calculation that does not account for changes in elevation, roadway alignments, or other noise-attenuating features (buildings,

vegetation, etc.). The noise levels predicted by this model generally represent a worst-case scenario because the noise-attenuating features of the local environment are not considered. Table 5-8 shows the predicted noise levels at all modeled locations for all alternatives.

Table 5-8. Predicted Noise Levels

No.	Roadway Location	Existing (2012) dBA Leq	CIP Network Alternative (2024) dBA Leq	TFP Network Alternative (2024) dBA Leq	TFP Network Plus Scenario (2024) dBA Leq	TFP Network Increase over Existing dBA Leq	TFP Network Increase over CIP Network dBA Leq
1	Bellevue Way NE, north of NE 24th St	**67.7**	**68.5**	**68.6**	**68.6**	0.9	0.1
2	134th Ave NE, north of NE 24th St	57.9	58.8	58.8	58.8	0.9	0.0
3	148th Ave NE, north of NE 40th St	**68.2**	**68.6**	**68.7**	**68.6**	0.5	0.1
4	140th Ave NE at NE 48th Pl	64.3	64.9	64.9	64.9	0.6	0.0
5	140th Ave NE, north of NE 36th Pl	64.0	63.8	63.8	63.9	-0.2	0.0
6	NE 12th St, west of 112th Ave NE	**67.0**	**68.1**	**68.1**	**68.2**	1.1	0.0
7	NE 8th St, west of 108th Ave NE	**67.4**	**68.0**	**68.4**	**68.5**	1.0	0.4
8	110th Ave NE, north of NE 6th St	63.1	**67.2**	**67.3**	**67.3**	4.2	0.1
9	NE 2nd St, west of 108th Ave NE	64.9	65.9	65.8	65.9	0.9	-0.1
10	112th Ave SE, south of Main St	**68.1**	**69.2**	**69.2**	**69.2**	1.1	0.0
11	112th Ave SE, north of SE 8th St	66.2	**67.2**	**67.3**	**67.3**	1.1	0.1
12	108th Ave SE, north of SE 25th St	56.9	59.3	58.1	58.0	1.2	-1.2
13	SE 20th Pl, east of 127th Ave SE (east of school)	59.8	62.2	62.1	61.9	2.3	-0.1
14	132nd Ave NE, south of Bel-Red Rd	54.3	57.3	58.2	57.9	3.9	0.9
15	145th Pl SE, west of 144th Ave SE	68.5	**71.6**	**71.6**	**71.6**	3.1	0.0
16	148th Ave NE, south of Bel-Red Rd	**68.0**	**68.6**	**69.6**	**69.6**	1.6	1.0
17	148th Ave SE, south of SE 22nd St	**70.4**	**70.7**	**70.7**	**70.7**	0.3	0.0
18	Northup Way, east of 156th Ave NE	66.7	**67.3**	**67.3**	**67.3**	0.6	0.0
19	156th Ave NE, north of Main St	65.1	66.2	66.2	66.2	1.1	0.0

Table 5-8. Predicted Noise Levels (continued)

No.	Roadway Location	Existing (2012) dBA Leq	CIP Network Alternative (2024) dBA Leq	TFP Network Alternative (2024) dBA Leq	TFP Network Plus Scenario (2024) dBA Leq	TFP Network Increase over Existing dBA Leq	TFP Network Increase over CIP Network dBA Leq
20	156th Ave SE, north of Lake Hills Blvd	64.8	66.0	66.0	65.9	1.2	0.0
21	164th Ave NE, south of NE 24th St	61.5	62.9	62.9	62.9	1.4	0.0
22	West Lake Sammamish Parkway, south of NE 15th Pl	62.3	63.8	63.8	63.8	1.5	0.0
23	West Lake Sammamish Parkway, south of Northup Way	**68.5**	**71.0**	**71.0**	**71.0**	2.5	0.0
24	West Lake Sammamish Parkway, north of SE 38th St at Vasa Park	**67.5**	**69.9**	**69.8**	**69.8**	2.3	-0.1
25	Factoria Blvd SE, north of Newport Way	**68.5**	**69.2**	**69.2**	**69.2**	0.7	0.0
26	119th Ave SE, south of SE 54th St	62.9	63.9	65.1	65.1	1.2	0.0
27	Lakemont Blvd, north of SE 63rd St	63.4	63.8	64.1	64.0	0.7	0.3
28	Lakemont Blvd, west of Village Park Drive	63.2	63.1	63.3	63.3	0.1	0.2
29	124th Ave NE, south of NE 5th St	61.8	64.8	64.9	64.5	3.1	0.1
30	140th Ave NE, south of NE 8th St	66.5	**67.2**	**67.2**	**67.2**	0.7	0.0
31	130th Ave NE/NE 24th St (east leg)	**68.8**	**69.5**	**69.4**	**69.4**	0.6	-0.1
32	130th Ave NE, south of NE 16th St	66.8	**67.8**	**68.4**	**68.3**	1.6	0.6
33	156th Ave NE, south of NE 24th St	**67.0**	**68.3**	**68.3**	**68.3**	1.3	0.0

Note: Figures in **bold** are forecast to exceed the City threshold of 67 dBA Leq at which detailed noise analysis may be required at project implementation.

5.2.2.2. 2024 CIP Network Alternative

The analysis shows a change in noise levels from a reduction of -0.2 dBA to an increase of 4.2 dBA from the existing conditions. No locations are expected to increase greater than 5.0 dBA (considered “definitely noticeable”).

Two sound level measurement locations (locations Nos.5 and 28) are expected to experience noise level reductions (0.2 and 0.1 dBA, respectively) from existing conditions. Both of these locations maintain the existing roadway width, and are expected to have reduced traffic volumes.

Twenty-nine locations are expected to increase less than 3 dBA, which is considered "typically unnoticeable." These 29 locations are all expected to have increased traffic volumes.

Four locations (Table 5-9) are expected to experience an increase in noise levels between 3.0 and 5.0 dBA (considered "slightly noticeable"). These locations had significant increases in traffic volumes over the existing traffic volumes (52 percent to 156 percent).

Table 5-9. CIP Network Alternative: Locations Expected to Experience Noise Increase between 3.0 and 5.0 dBA

No.	Location	Increase over Existing (dBA)	Traffic Increase	Widening Project?
8	110th Ave NE, north of NE 6th St	4.1	156%	Yes
14	132nd Ave NE, south of Bel-Red Rd	3.0	102%	No
15	145th Pl SE, west of 144th Ave SE	3.1	22%	No
29	124th Ave NE, south of NE 5th St	3.0	101%	No

Noise levels exceeding the City threshold of 67 dBA Leq at which detailed noise analysis may be required at project implementation are projected at 18 of the measurement locations (an increase of six locations from the 2012 baseline). The Sound Transit analysis shows the three locations on Bellevue Way SE also exceeding the 67 dBA Leq threshold under existing and forecast future conditions (Sound Transit 2013).

5.2.2.3. 2024 TFP Network Alternative

The noise analysis for this alternative shows a change in noise levels from a reduction of -0.2 dBA to an increase of 4.2 dBA from the existing condition, similar to the CIP Network alternative.

No locations are expected to increase greater than 5.0 dBA (considered "definitely noticeable").

Twenty-nine locations are expected to increase less than 3 dBA, which is considered "typically unnoticeable," and 28 of the 29 are expected to have increased traffic volumes over existing volumes.

Four locations are expected to experience an increase in noise levels between 3.0 and 5.0 dBA (considered "slightly noticeable") (see Table 5-10). These are the same four locations as the CIP Network alternative).

Table 5-10. TFP Network Alternative: Locations Expected to Experience Noise Increase between 3.0 and 5.0 dBA

No.	Location	Increase over Existing (dBA)	Traffic Increase	Widening Project?
8	110th Ave NE, north of NE 6th St	4.2	163%	Yes
14	132nd Ave NE, south of Bel-Red Rd	3.0	132%	No
15	145th Pl SE, west of 144th Ave SE	3.1	22%	No
29	124th Ave NE, south of NE 5th St	3.0	102%	No

One location (No. 5) is expected to experience a reduction in noise levels (0.2 dBA). The roadway width at this location did not change from the existing conditions, and future traffic volumes are anticipated to reduce by about 4 percent.

Noise levels are expected to exceed the City threshold of 67 dBA Leq, at which detailed noise analysis is required at project implementation at the same 18 locations as predicted to exceed the threshold in the CIP Network alternative. In comparing the TFP Network alternative with the CIP Network alternative, the maximum noise level increase among the 33 locations modeled is 2.2 dBA.

Additional detailed modeling of noise impacts on Bellevue Way SE for the Sound Transit East Link Extension project, together with the HOV lane (included as TFP-242), was conducted in 2012–2013 by Sound Transit (Sound Transit 2013). The results of this analysis (shown in Table 5-11) indicate that the additional traffic on this arterial would have little effect on future noise levels, as compared to existing conditions. See Figure 5-1 and Table 5-4 for location information for these parcels. Predicted noise levels are almost the same with or without the HOV project. This analysis also included an analysis of noise walls that tended to reduce noise levels between 5 and 10 dBA at the receiving property.

Table 5-11. Future Predicted Noise Levels in dBA for Sound Transit East Link and HOV

Location ID	Parcel No.	Existing	Future (2030) No Project	Future (2030) with ST without HOV	Future (2030) with ST with HOV	Future (2030) with Noise Wall
a	3001	71	72	72	73	63
b	2275	70	70	70	70	65
c	2160	72	72	73	72	63

Source: East Link Extension 2013 SEPA Addendum, Attachment E1, Tables A3, A4, and A5 (Sound Transit 2013).

5.2.2.4. 2024 TFP Network Plus Scenario

This scenario does not have additional capacity/widening improvements at modeled locations, which results in the analysis reflecting only changes in traffic volumes.

No locations are expected to increase greater than 5.0 dBA from existing levels (considered "definitely noticeable").

Three locations (Table 5-12) are expected to experience an increase in noise levels between 3.0 and 5.0 dBA (considered "slightly noticeable") and are the same as in the CIP and TFP Network alternatives with the exception of location 29.

Table 5-12. TFP Network Plus Scenario: Locations Expected to Experience Noise Increase between 3.0 and 5.0 dBA

No	Location	Increase over Existing (dBA)	Traffic Increase	Widening Project?
8	110th Ave NE, north of NE 6th St	4.2	166%	Yes
14	132nd Ave NE, south of Bel-Red Rd	3.6	115%	No
15	145th Pl SE, west of 144th Ave SE	3.1	22%	No

5.3. Mitigation Measures

Potential noise impacts and mitigation measures may be studied through project-level acoustical analysis when a proposed project affecting one or more of the noise-affected roadway segments identified above in Table 5-7 reaches the design stage.

5.3.1. Construction Noise Mitigation

Roadway construction occurring outside of exempt hours should follow noise-reducing construction practices ensuring that City noise ordinance standards are not exceeded. Measures to limit noise include, but are not limited to:

- Locating equipment as far as practical from noise sensitive uses
- Using equipment that is quieter than standard equipment
- Selecting haul routes that affect the fewest number of people
- Using noise-reducing enclosures around noise-generating equipment
- Constructing barriers between noise sources and noise-sensitive land uses
- Establishing a 24-hour complaint hotline
- Offering temporary hotel rooms in exceptionally loud cases where nighttime noise limits cannot be achieved.

5.3.2. Traffic Noise Mitigation

Noise abatement is considered where noise impacts are predicted in areas of frequent human use that would benefit from a lowered noise level. Potential noise abatement measures include the following:

- Avoiding the impact by using design alternatives, such as altering the horizontal and vertical alignment of the project
- Constructing noise barriers

- Acquiring property to serve as a buffer zone
- Using traffic management measures to regulate types of vehicles and speed
- Acoustically insulating public-use or non-profit institutional structures.

Noise walls are generally the most common and effective measure to reduce noise levels. In the project area, however, noise walls may not be desirable because of their effects on community cohesion, safety, and aesthetics (including the potential to block views). "Quiet pavements," such as rubberized asphalt, are sometimes considered as an effective measure to reduce traffic noise levels due to noise from the tire-pavement interface. Rubberized asphalt would be minimally effective for urban projects because travel speeds on surface streets are lower than on highways, and the primary source of vehicle noise is expected to be car and truck engines and exhaust, not tire noise.

A detailed noise analysis would determine which, if any, mitigation measures would be acoustically effective. In order to meet approval, noise barriers should be studied in detail to ensure that they do not conflict with existing utility and safety requirements.

As indicated in Section 5.1.5, the City will require a noise analysis component for an arterial expansion project that passes through a residential area (Class A EDNA), if any of the following conditions are met:

- The existing exterior peak-hour traffic noise level exceeds 67 dBA Leq (1 hour).
- The future exterior peak-hour traffic noise level is predicted to exceed 67 dBA Leq (1 hour) due to resulting future traffic demands as a result of the arterial improvements; or
- The exterior peak-hour noise level is expected to increase by 5 dB or more because of future traffic demands predicted to result from arterial improvements.

In cases where traffic noise levels are predicted to exceed these thresholds, mitigation may be considered if the average Ldn could be reduced to 60 dBA or lower.

An acoustical analysis for a given arterial improvement project should include feasible alternatives for noise mitigation and expected noise reduction for each mitigation alternative where noise impacts are predicted.

5.4. Significant Unavoidable Adverse Impacts

The number of residential areas within the city predicted to be exposed to traffic noise levels exceeding 67 dBA Leq will increase during the 2012–2024 period under any of the alternatives. Future traffic noise levels are basically equivalent among the CIP Network and TFP Network alternatives (including the Plus scenario). Most residential areas within the city require access to the roadways where traffic noise impacts are predicted to occur under either alternative. This access requirement may conflict with placement of a noise barrier as a potential mitigation measure for affected residences that have driveway access to these roadways. Therefore, detailed analyses could conclude that future traffic noise impacts might be significant and unavoidable.

Chapter 6. Land Use and Aesthetics

This chapter evaluates land use and aesthetics and the potential impacts from implementation of the CIP Network or TFP Network alternative. This analysis includes a review of existing land use patterns and compatibility, consistency with the City's plans and policies as represented by the City's Comprehensive Plan, and the visual quality of the current natural and built environment. The impacts analysis identifies how existing conditions could change with implementation of either alternative.

Potential mitigation measures are also discussed in this chapter. Mitigation includes the features incorporated into the alternative that are designed to mitigate impacts, applicable regulations and commitments that will apply to future development allowed by the alternatives, and other potential mitigation measures that may further reduce the significant environmental impacts of the alternatives.

Land use projections by Traffic Analysis Zone and demographic information by subarea are presented in detail in Appenix E and Appendix F.

6.1. Affected Environment

This section presents an overview of current land uses in Bellevue. The aesthetics and visual quality along transportation corridors and neighborhoods are also discussed. Describing the affected environment and the existing conditions of the project area helps decision-makers understand the potential effects of the alternatives.

6.1.1. Land Use Patterns

Existing land use patterns in Bellevue consist of large areas of single-family residential development surrounding five major commercial and mixed-use centers. Pursuant to the City's Land Use Element in the Comprehensive Plan (Bellevue 2010), new growth and development is targeted for the following five areas:

- Downtown (MMA 3)
- Bel-Red (MMA 12)
- Wilburton (MMA 4)
- Eastgate/Factoria (MMA 10 and north MMA 13)
- Crossroads (MMA 5).

Land use capacity analyses performed by the City show that with little vacant land, the majority of future development and growth in Bellevue will occur through redevelopment and infill. Much of this redevelopment and infill will occur in the areas listed above.

Downtown (MMA 3) is the city's central urban area. Most new buildings in Downtown are multi-story with a mix of uses, including office, retail, and, in some cases, residential. Streetscapes are generally urban in nature with wide sidewalks connecting to building entrances. Landscaping consists of street trees in gratings or in some cases planter strips between the curb and the sidewalk. Portions of the Downtown that have not experienced recent redevelopment have a more suburban character that includes narrower sidewalks and surface parking that generally separates a building from the streetscape. Older buildings are more likely to be single-story.

The remaining four commercial and mixed-use centers are also transforming to a more urban land use. In these areas, building heights tend to be lower with more surface parking (than in Downtown). These areas are witnessing more of a shift to structured parking, however, given the increased cost of land in these areas. The five commercial and mixed-use hubs are predominantly characterized by single-family detached residential buildings, which are set back from the street with yards and landscaping. Mixed in among these neighborhoods are small-scale neighborhood commercial centers. Pockets of multi-family buildings are located along arterials. These areas are characterized by parking and landscaping separating the buildings from the street.

The City, in its Bel-Red Corridor Project Final EIS, reviewed potential growth and redevelopment scenarios for the Bel-Red/SR 520 subarea. These scenarios included a review of current and proposed plans and policies, including future transportation projects and infrastructure requirements. The proposed projects identified in the 2013–2024 TFP are consistent with the findings and recommendations in the Bel-Red Corridor Project Final EIS and the subsequent Addendum (Bellevue 2007, 2009c).

6.1.2. Land Use Plans and Policies

The City's Comprehensive Plan guides long-term growth, and provides the framework for land use and transportation decisions for the City. The GMA requires comprehensive plans to be internally consistent across subjects. For purposes of this Final EIS, the Land Use and Transportation Elements are addressed, as well as policy direction that comes from the City's 14 subarea plans.

The Comprehensive Plan is guided by its vision of a "City in a Park." As part of this vision, a primary goal is for the city to be "the Eastside's transportation hub, offering an array of mobility choices." Other goal statements envision the city as:

- A dedicated steward of environmental quality, where key natural features are preserved and restored
- A model of superior design and "people places"
- A regional economic center with a strong and diverse economy
- A city served by outstanding facilities and services.

The City's vision and goal statements are reinforced through many land use and transportation policies presented in the Comprehensive Plan's various elements.

Land Use Element

The Comprehensive Plan's Land Use Element directs that the City:

- Maintain and strengthen the vitality of its residential neighborhoods
- Support the Downtown Urban Center and the other commercial and mixed-use areas serving the city and the larger region
- Support and be supported by a variety of mobility options.

These themes permeate the City's Land Use Element and provide guidance for future transportation projects. Key policies related to transportation projects include:

- Policy LU-3. Accommodate growth targets of 10,117 additional households and 40,000 additional jobs for the 2001–2022 period. These targets represent the City's commitment to developing the zoning and infrastructure to accommodate this level of growth.
- Policy LU-10. Access high-traffic-generating land uses from arterials whenever possible. If this is not possible, provide mitigation to address access impacts.
- Policy LU-18. Adopt and maintain policies, codes, and land use patterns that promote walking in order to increase public health.
- Policy LU-28. Support Downtown Bellevue's development as an Urban Center, maintaining it as a financial, retail, and business hub of the Eastside.
- Policy LU-31. Encourage and foster economic development in areas designated for commercial uses.

Transportation Element

The goal of the Comprehensive Plan's Transportation Element is to maintain and enhance mobility for residents and businesses through the creation and maintenance of a balanced system of transportation alternatives that:

- Provides a wide range of travel choices
- Supports the land use vision of the City
- Protects our neighborhoods from adverse transportation impacts
- Reflects the regional role of the City in transportation issues
- Reduces the overall dependency on automobiles throughout the city.

Additional goals of the Transportation Element are to:

- Implement a fully multi-modal transportation system that supports the land use vision of the Comprehensive Plan and the role of Downtown Bellevue as the Eastside urban center
- Reduce the use of SOVs by creating a land use pattern that allows for shorter vehicle trips and the use of alternative travel options.

The Transportation Element strengthens the integration of land use and transportation planning in Bellevue. It supports the City's land use vision as expressed in the Land Use Element and Comprehensive Land Use Plan map.

Most of the transportation policies contained in the Transportation Element are relevant to this TFP. Several of the transportation policies direct the City's transportation investments to support its land use vision and urban growth strategy. Other policies support the vision of making Downtown Bellevue the major urban center of the Eastside by creating an area with pedestrian emphasis and providing alternatives to SOVs.

The Transportation Element directs the reader to the City's CIP, the TFP, Pedestrian and Bicycle Transportation Plan, Transit Plan, and six subarea transportation plans for further information and guidance on the City's transportation plans and investments.

6.1.3. Aesthetics

Bellevue's aesthetic character is derived from the visual quality of the environment. Bellevue has areas characterized by urban high-rise development (e.g., MMA 3 – Downtown) and areas that are characterized by low-density suburban residential development surrounding natural areas (e.g., MMA 2 – Bridle Trails). As a transportation facility is developed, it can either make a transportation corridor feel more like the predominant character of an area, or it might transform an area from one type of area to another (e.g., create more of an urban feel in an otherwise low-intensity suburban environment).

Much of a city's aesthetic quality is influenced by community character and design. The Urban Design Element of the Comprehensive Plan includes guidance for the design quality of future city development—both private and public. Of particular importance for the TFP are the City's "Public Places and Connections" design policies because they relate to the design of streets, parks, and other public facilities.

The City's policies related to street corridors include directives that:

- Promote development of visually appealing connections in the community
- Advocate for development of boulevards as an attractive and distinct form of connection in the city
- Develop special streetscapes at gateways
- Incorporate dramatic and imaginative landscape and art features when reconstructing streets or sidewalks.

As Bellevue continues to grow, implementation of these policies will become more critical to ensure the City meets its vision of becoming a "City in a Park."

6.2. Impacts

This section presents potential impacts that may occur if either the CIP Network or TIP Network alternative is implemented. Overall, the CIP Network alternative would have lesser impacts on land use and aesthetics within Bellevue because it includes one-fourth the number of projects that are in the TFP Network alternative. Impacts of the proposed TFP projects are summarized in Table 6-1, Land Use Impacts Rating System, and Table 6-2, Potential Land Use Impacts.

6.2.1. General Land Use Impacts

This section discusses general impacts that might result from implementation of either the CIP Network alternative or the TFP Network alternative.

6.2.1.1. Land Use Patterns

The implementation of projects in either alternative could potentially affect existing land uses adjacent to the projects. Some impacts could be permanent, while others would be only short-term or temporary.

Short-Term Impacts

During construction of any project, short-term impacts are typical. Impacts could range from vehicular detours to loud noises, such as construction noise and dust near project areas or construction staging areas, and changes in access or detours for pedestrians, motorists, and building occupants in the project area.

Although short-term inconvenience is possible during construction, project features such as lighting, landscaping, crosswalks, sidewalks, and bicycle lanes can ultimately improve the pedestrian environment, which could increase pedestrian usage and generally enhance adjacent land uses.

Permanent Impacts

The TFP roadway construction and widening projects could result in direct displacement or removal of existing physical uses, including structures, parking areas, landscaping, sidewalks, and utilities.

Table 6-1. Land Use Impacts Rating System

Structures		Landscaping or Native Growth	
0	No displaced or removed structures.	0	No change. Existing landscaping is retained or replaced in kind; no loss of adjacent vegetation.
1	Loss of 1 to 2 residences or less than 5,000 square feet (SF) of building space for other uses.	1	Minimal disruption of existing landscaping or vegetation and wildlife habitat adjacent to the roadway.
2	Loss of 3 to 5 residences or 5,000 to 10,000 SF of building space.	2	Displacement of existing landscaping on parcels adjacent to the roadway, and replacement with less than 50% of the width of existing landscaping and/or displacement of up to 20,000 SF of existing vegetation.
3	Loss of 5 to10 residences or 10,000 to 30,000 SF of building space.	3	Displacement of existing landscaping on parcels adjacent to the roadway, and replacement with less than 25% of the width of existing landscaping and/or displacement of up to 1 acre of existing vegetation, or displacement of up to 40 significant trees (6-inch diameter or greater).
4	Loss of more than 10 residences or more than 30,000 SF of building space.	4	Displacement of existing landscaping on parcels adjacent to the roadway such that there is no replacement landscaping provided and/or displacement of more than 1 acre of existing vegetation, or displacement of more than 40 significant trees (6-inch diameter or greater).
Parking		Aesthetics	
0	No net loss of parking capacity.	0	Slight change in visual character of existing arterial configuration; little noticeable difference for users and not readily apparent from the adjacent neighborhood.
1	Net displacement of up to 10 parking spaces.	1	Minor alteration in visual character of existing arterial configuration; existing character is altered, but is similar to the existing view as seen by users and from the adjacent neighborhood.
2	Net displacement of 10 to 20 parking spaces.	2	Moderate alteration in visual character of existing arterial configuration; users may notice modest change in existing character as seen from the adjacent neighborhood. (For example, the arterial is substantially screened from views from the neighborhood and the existing screening vegetation is reduced or removed.)
3	Net displacement of 20 to 50 parking spaces.	3	New arterial or substantial alteration in visual character of existing arterial in terms of number of lanes and framing vegetation. Existing character of the arterial as seen by users and as seen from the adjacent neighborhood is changed substantially. (For example, the arterial is substantially screened from views from the neighborhood, the existing screening vegetation is removed, and new visually intrusive retaining walls, noise walls, or other structures are introduced.)

Table 6-1. Land Use Impacts Rating System (Continued)

Structures		Landscaping or Native Growth	
4	Net displacement of over 50 parking spaces.	4	New arterial or substantial alteration in visual character of existing arterial in terms of number of lanes and framing vegetation. Existing character of the arterial for users and as seen from the adjacent neighborhood is changed substantially and there is loss of view amenity. (For example, existing screening vegetation is removed and new visually intrusive retaining walls, noise walls, or other structures are introduced, and existing scenic elements such as views of mountains or water bodies are blocked.)
Sidewalks, Bicycle Facilities, and Street Trees			
0	Improves conditions by adding sidewalks and/or bicycle facilities and/or street trees where none exist or upgrades existing facilities that are substandard. If standard facilities are already in place, then net change to existing conditions is minimal. Assumes standard street frontage sidewalks and street trees replaced and the existing character of street trees is less than 4-inch caliper.		
1	Replacement of existing standard street frontage and replacement of street trees of greater than 4-inch caliper with substantially smaller specimens.		
2	Replacement of standard street frontage with sidewalks (and planter strips, if present) and/or bicycle facilities smaller in width than the present, or reduction in extent of planter strip and replacement of street trees with substantially fewer and/or substantially smaller size of street trees.		
3	Displacement of existing street frontage that meets greater than standard specifications by sidewalks (and planter strips, if present) and/or bicycle facilities smaller in width, and replacement of street trees and existing landscaping with substantially fewer and/or substantially smaller street trees, and/or reduction of planter strips.		
4	Displacement of significant existing amenities, such as wide sidewalks, public congregation areas, and substantial amounts of retained vegetation.		

Table 6-2. Potential Land Use Impacts

2013–2024 TFP Project No.	Included in CIP Network Alternative	Displacement or Removal				General Aesthetics
		Structure(s)	Parking	Sidewalks, Bicycle Facilities, and Street Trees	Landscaping or Native Growth	
078	X (partial)	0	0	0	4	2
079	X	0	1	0	2	3
103		0	0	0	4	3
110	X	0	2	0	0	0
158		0	0	0	3	3
173		0	0	0	3	2
190		0	2	0	0	2
192	X (partial)	0	0	0	2	1
193		3	4	0	4	1
195		0	0	0	2	2
197		3	4	0	3	3
207	X	3	4	0	3	4
208	X	1	4	0	2	3
209		4	4	0	3	4
210	X	0	3	0	3	3
211	X	4	4	1	1	4
213		0	2	0	2	3
215		3	4	0	3	4
216		1	2	1	0	1
217		0	0	0	4	1
218		0	4	0	1	3
219		0	2	0	0	0
222		1	2	1	0	1
223		0	2	0	0	1
225		1	1	0	0	1
230		0	2	0	0	2
232		0	4	0	0	1
234		0	3	0	2	3
240	X	0	3	1	2	3

Table 6-2. Potential Land Use Impacts (Continued)

2013–2024 TFP Project No.	Included in CIP Network Alternative	Displacement or Removal				General Aesthetics
		Structure(s)	Parking	Sidewalks, Bicycle Facilities, and Street Trees	Landscaping or Native Growth	
241	X	0	3	0	2	3
242	X (partial)	2	0	0	4	4
243		0	0	0	4	2
244		0	0	0	2	1
245		0	3	0	3	2
246		0	0	0	2	2
247		0	0	0	3	2
248		4	4	0	0	3
249		0	0	0	0	0
250		0	3	1	2	1
251		0	0	0	4	1
252		0	4	0	1	2
253		0	0	0	1	1
254		0	4	0	4	3

Depending on the type of project being implemented, permanent impacts could include:

- Intrusive traffic noise and pollution levels for nearby structures, making affected buildings less desirable for tenants, and potentially leading to the need for investment in abatement measures.
- Displacement of driveways, removal of parking areas, and changing landscaping and public facilities, which could require reorienting entrances or similar features.
- Direct displacement or removal of parking spaces, especially parking areas located between streets and buildings. Widening a street by one lane reduces the depth of a standard parking stall that is perpendicular to the street by approximately two-thirds. (This assumes that the required landscaping between the street or sidewalk and parking area is restored.) This parking configuration is typical for commercial and multi-family development in many areas of the city. The severity of the impact from the loss of existing parking spaces will vary from site to site based on parking capacity, layout design, and vehicular circulation within the parking area. Generally, the loss of parking more severely affects small sites where the amount of displaced parking area is a relatively high proportion of the total area available and where the size of the parking area limits redesign options.

- Entire parcels or large parts of existing parcels could be acquired for rights-of-way. Where new roadways are proposed, potential alignments would often fall on property lines, which generally divide the burden of acquisition between parcels, resulting in less severe impact on any one parcel.
- Displacement of residences or impacts to buildings (either a partial or entire loss).

Potential permanent impacts are identified in Table 6-2, based on information currently available. As projects progress to final design, actual level of impact may be found to differ from what is indicated in Table 6-2.

6.2.1.2. Aesthetics

Construction of the new transportation facilities proposed in either alternative could result in a variety of impacts on the visual quality of the project area. The major impact from any of the proposed projects would be the change to the roadway as perceived by a roadway user (driver, bicyclist, pedestrian) or adjacent people (office or apartment building occupant). Of primary concern is whether the project alters the existing character of the area. This can occur by adding elements of an urban environment to an area with a more rural character, reducing landscaping features, changing road configurations, or affecting view corridors. In addition, the appearance of new facilities such as wider streets together with new or relocated sidewalks, street trees, medians, and signalizations in an urbanized setting would also result in visual changes. These changes could affect the overall aesthetics of a neighborhood or street corridor as suburban areas become more urban.

6.2.2. Project-Specific Land Use Impacts

The amount of project-specific information each project includes in the TFP varies. Some projects are well into the design phase so there is sufficient information about the project to make reasonable assessments about potential impacts. Other projects are still conceptual and there is less information on which to base assessments. For the land use impact assessment in this section, assessments were made after reviewing the design information currently available for each project. The criteria presented in Table 6-1 form the basis for assessing land use impacts.

6.2.2.1. Land Use Patterns

The previous section presented potential general impacts that could occur regardless of the alternative chosen. This section discusses respective potential impacts of the CIP Network alternative and the TFP Network alternative.

CIP Network Alternative

All projects included in the CIP and TFP Network alternatives involve some form of construction activity that would have the potential to temporarily disrupt traffic and/or create pedestrian or motorist detours during construction. The CIP Network alternative includes two projects that create new roadway links (TFP-207 and TFP-211) and one project that realigns and widens an existing roadway (TFP-208). The CIP Network alternative also includes five capacity projects that widen existing roadway links (TFP-110, TFP-210, TFP-240, TFP-241, and TFP-242). All of

the new roadway links and roadway widening projects will affect adjacent areas to a greater or lesser degree. In particular, projects TFP-207, TFP-208, and TFP-211 have the potential to displace existing land uses for right-of-way acquisition. Also in the CIP Network alternative two non-capacity projects widen the roadway prism by adding pedestrian and bicycle facilities (TFP-078 and TFP-079).

TFP Network Alternative

There are 32 projects included in the TFP Network alternative that are not part of the CIP Network alternative. Most of the new projects are located in the commercial/mixed-use Downtown (MMA 3), Bel-Red (MMA 12), and northern Wilburton (MMA 4) areas. In addition to the impacts associated with the CIP Network alternative, five projects under the TFP Network alternative have the potential to displace land uses by creating new roads and/or re-aligning existing roadways. One project (TFP-197) extends the Downtown street grid at NE 2nd Street to improve access to/from I-405 and the Wilburton area. Four projects (TFP-193, TFP-209, TFP-215, and TFP-248) create a street grid or re-align streets in the Bel-Red area, or provide I-405 access improvements in support of anticipated growth and redevelopment of this area, which is currently characterized by low-rise office, warehouse, and automobile-related uses. All five projects would acquire property for right-of-way, which might displace buildings, on-site parking, and/or landscape elements. One other project, TFP-103, would connect the dead ends of 129th Place SE to create a through-street connection between SE 38th Street and Newport Way in Factoria; however, it is anticipated this would be implemented in coordination with future development of property in the "missing link" area and would not displace any existing land use.

Many of the other projects in the TFP Network alternative may require acquisition of smaller amounts of land to widen existing roadways, bring roadways up to urban standards, or to improve traffic conditions to accommodate expected future growth. These projects may not displace existing land uses, but may remove on-site parking, require re-alignment of parking, or remove and replace landscape elements.

Project TFP-242 involves impacts along Bellevue Way SE due to widening of the roadway to the west of the current footprint for an HOV lane. Impacts involve loss of residences or property impacts to residential parcels, removal of native growth vegetation, introduction of a retaining wall, and potential loss of views from residences by the likely introduction of a noise wall in addition to the retaining wall. Land use impacts of TFP-242 are documented in the East Link Extension 2013 SEPA Addendum (although the HOV lane is no longer expected to be implemented in conjunction with the East Link project).

6.2.2.2. Plans and Policies

The projects included in the CIP Network alternative and TFP Network alternative are consistent with the City's land use, transportation, and transportation-related subarea goals and policies. Projects are either specifically listed in a plan policy or subarea transportation facility plan, or are supported by more general land use and transportation policies related to mobility, access, and design. Projects included in both alternatives support the City's ability to meet its population and

employment targets by providing capacity not just for automobile travel, but also for pedestrian and bicycle travel in many of Bellevue's fastest growing subareas. New streets and roadways, as well as improved streets and roadways, will comply with the City's urban design standards for streetscapes and transportation corridors.

CIP Network Alternative

The projects included in the CIP Network alternative are consistent with the City's land use, transportation, and transportation-related subarea goals and policies. Similarly, the projects contained in the 2013–2024 TFP are either specifically listed in a plan policy or subarea transportation facility plan, or are supported by more general land use and transportation policies related to mobility, access, and design.

TFP Network Alternative

The projects included in the TFP Network alternative are consistent with the City's land use, transportation, and transportation-related subarea goals and policies. Similarly, the projects contained in the 2013–2024 TFP are either specifically listed in a plan policy or subarea transportation facility plan, or are supported by more general land use and transportation policies related to mobility, access, and design. The rationale for inclusion of TFP Network alternative projects not specifically listed in the Comprehensive Plan is available in the project file.

6.2.2.3. Aesthetics

Several projects included in the CIP Network and the TFP Network alternatives involve creation of new roadway corridors or re-alignment of existing roadways. By the very fact of introducing a new roadway where none previously existed, these projects have significant impacts on aesthetics. Adverse impacts of these projects will be ameliorated by including pedestrian and bicycle facilities, streetscape design elements (including gateway treatments where appropriate), and landscape elements to soften the urban environment and help ensure continuity with surrounding streetscapes.

CIP Network Alternative

New or realigned roadway links in the CIP Network alternative are provided with five projects (TFP-207, TFP-208, TFP-201, TFP-211, and TFP-240). The CIP Network alternative projects that involve widening roadways along their existing alignment are TFP-110, TFP-241, and TFP-242 (south segment from park-and-ride to I-90 only). The CIP Network alternative projects that primarily focus on pedestrian and bicycle facility improvements along corridors are TFP-078 and TFP-079.

TFP Network Alternative

The projects identified in the TFP Network alternative includes three additional projects that construct new roadway links—TFP-209, TFP-215, and TFP-248. TFP Network alternative projects that involve widening roadways along their existing alignment are TFP-190, TFP 213, TFP-250, and TFP-254. The TFP Network alternative also includes implementation of one

project that focuses on implementation of pedestrian and bicycle facility improvements along a corridor (TFP-158) and multiple projects for preliminary scoping or early design of pedestrian and bicycle facility improvements to corridors (TFP-173, TFP-230, TFP-232, TFP-234, TFP-243, TFP-247, TFP-244, TFP-245, and TFP-251).

As noted in the land use discussion above, project TFP-242 involves impacts along Bellevue Way SE due to the widening of the current roadway footprint for an HOV lane. Project impacts include loss of residences or property impact to residential parcels, removal of native growth vegetation, introduction of a retaining wall, and potential loss of views from residences by likely introduction of a noise wall in addition to the retaining wall. Aesthetic impacts of TFP-242 are documented in the East Link Extension 2013 SEPA Addendum (although the HOV lane is no longer expected to be implemented in conjunction with the East Link project).

6.3. Mitigation Measures

If an adverse impact is anticipated due to one of the TFP projects, one or more of the mitigation measures listed below could be implemented.

6.3.1. Land Use Patterns

Land use mitigation measures are:

- Prepare a relocation plan for displaced residential or commercial uses.
- Remove or relocate underground storage tanks and other hazardous materials if a gas station is displaced.
- Redesign and reconfigure parking areas to minimize the number of lost spaces. Potential parking lot redesign measures include providing a greater area for compact car spaces with smaller dimensions, reducing aisle width by designing one-way circulation systems within the lots, and reducing the width of perpendicular spaces by using angled stalls.
- Where possible, minimize the loss of existing buildings and land uses by developing new transportation corridors and/or re-aligning existing transportation corridors.
- Mitigate land acquisition impacts by combining parcels that are not for sale with adjacent parcels, and incorporating undeveloped parcels into roadway designs.
- Minimize the loss of landscaping and vegetation by shifting street alignments to avoid significant stands of vegetation; preserving significant specimen trees within sidewalk and planting strips by meandering sidewalks; and reducing the extent of cleared areas by using retention structures, where practical, in place of long, fill slopes.

6.3.1.1. Plans and Policies

Mitigation measures related to plans and policies include:

- Any transportation facility projects not identified in the Comprehensive Plan or associated subarea plans should be included in a Comprehensive Plan amendment to maintain consistency between the 2013–2024 TFP and the Comprehensive Plan.

6.3.2. Aesthetics

Mitigation measures to maintain or enhance the aesthetics of the project area could include:

- Preserve natural vegetation to the greatest extent possible
- Replace landscaping, including street trees when roadway widening or re-alignment removes landscaping and street trees
- Design and align new transportation corridors and other improvements to minimize adverse aesthetic impacts, particularly in residential neighborhoods
- Implement consistent streetscapes along roadway corridors by using common designs for streets and freeway structures and common landscaping and street trees for visual unity
- Coordinate closely with adjacent land owners to identify significant features that should be considered for retention or replacement in design improvements
- Relocate utility lines underground
- Consider use of retaining walls rather than extensive fill, which can affect aesthetics by widening the area of impact
- Incorporate interesting and attractive elements into retaining walls
- Construct gateway elements at appropriate locations, in coordination with the City's enhanced Right of Way and Urban Boulevards program
- Incorporate public art into streetscapes.

6.4. Significant Unavoidable Adverse Impacts

The areas most likely to be affected by the 2013–2024 TFP are Downtown (MMA 3), Wilburton (MMA 4), Bel-Red (MMA 12), and South Bellevue (MMA 7). These areas correspond to the major activity centers in Bellevue, except for South Bellevue through which vehicular and transit routes pass to access the Downtown. The infrastructure improvements focused in these areas are consistent with policies in the Comprehensive Plan.

Permanent displacement of adjacent buildings, open space, or residences related to transportation projects is considered a potential significant adverse impact. Projects TFP-207, TFP-208, and TFP-211, which are included in both the CIP Network and TFP Network alternatives, have the potential to displace existing land uses for right-of-way acquisition. With the TFP Network

alternative, five additional projects have the potential to displace buildings by creating new roads and/or re-aligning existing streets or roadways. One project (TFP-197) extends the Downtown street grid at NE 2nd Street to improve access to/from I-405 and the Wilburton area. Four projects (TFP-193, TFP-209, TFP-215, and TFP-248) create a street grid or re-align streets in the Bel-Red area, or provide I-405 access improvements in support of anticipated growth and redevelopment of this area, which is currently characterized by low-rise office, warehouse, and automobile-related uses. All eight projects hold the greatest possibility for acquiring property for right-of-way, which could displace pre-existing buildings, on-site parking, and/or landscape elements.

Project TFP-242 involves impacts along Bellevue Way SE due to the widening of the current roadway footprint. In particular, the segment of TFP-242 included in the TFP Network alternative (which adds a southbound HOV lane on Bellevue Way between the 112th Avenue SE "Y" intersection and the South Bellevue Park-and-Ride) would involve loss of residences or property impacts to residential parcels, removal of native growth vegetation, introduction of a retaining wall, and potential loss of views from residences by likely introduction of a noise wall in addition to the retaining wall. Land use and aesthetic impacts of TFP-242 are documented in the East Link Extension 2013 SEPA Addendum (although the HOV lane is no longer expected to be implemented in conjunction with the East Link project).

No other significant unavoidable adverse impacts on land use and aesthetics were identified as a result of the CIP Network or TFP Network alternative.

Chapter 7. Natural Environment

This chapter describes the natural environment in Bellevue, natural resources that are present in the project area, and the potential cumulative effects on these resources from the projects included in the CIP Network or TFP Network alternative.

Information on natural resources in this section is based upon review of the following data sources:

- City of Bellevue Information Technology Department, Geographic Information System (GIS) Critical Areas Maps (Bellevue 2013)
- Bellevue Urban Wildlife Habitat Literature Review (Bellevue 2009d)
- Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) database (WDFW 2011)
- Final EIS for the 2009–2020 TFP (Bellevue 2009b).

Potential impacts from implementation of the TFP projects on the natural environment are addressed qualitatively in this chapter because a reasonable estimate of direct and indirect impacts of each project on the natural environment, as well as contribution to cumulative impacts, can only be made after preliminary project design has been completed and a project footprint established. When the preliminary design is developed for a project, a project-level analysis will be completed, which will include quantification of direct, indirect, and cumulative impacts on the natural environment. The project-level analysis also will identify project-specific design elements and mitigation measures to avoid or minimize impacts. Implementation of the preliminary project design is conditioned upon the project's inclusion in the adopted 2013–2024 TFP, which is the subject of this Final EIS.

7.1. Affected Environment

This section presents an overview of the natural environment features in Bellevue, including critical areas, geology and soils, wetlands, aquatic resources, vegetation and wildlife, and shorelines. The affected environment provides the foundation by which impacts are assessed.

7.1.1. Critical Areas

Bellevue City Code (BCC), Part 20.25, regulates development in Critical Areas Overlay Districts. Critical Areas Overlay Districts include "any site that is in whole or in part designated as a critical area or critical area buffer." The function of the overlay district is to recognize natural conditions that affect the use and development of property. The City designates and classifies ecologically sensitive and hazard areas and regulates development of these areas to protect their functions and values, and to protect public health, safety, and welfare, while allowing reasonable use of private property.

The City regulates the following as critical areas:

- Geologic hazard areas
- Wetlands
- Streams, shorelines, and habitat associated with species of local importance
- Areas of special flood hazard.

The Critical Areas Overlay District does not apply to the Downtown subarea (Ordinance 5680, 6-26-06, Section 3).

7.1.2. Geology and Soils

Bellevue's geology is characterized by pronounced north-south orientation of ridges and valleys that resulted from glacial actions ending about 11,000 years ago. The underlying geology of the area consists of glacial till with some areas of glacial outwash. Glacial till is an unsorted mixture of clay- to boulder-sized materials, while outwash tends to be more stratified and is generally sand- to gravel-sized materials. Soils in Bellevue are predominantly of the Alderwood association, consisting primarily of moderately well-drained, undulating to hilly, gravelly, loam soils. These soils have very dense, very slowly permeable glacial till at a depth of 20 to 40 inches. This relatively shallow, underlying till creates areas of seasonal high groundwater. In general, Alderwood soils are suitable for roadway construction without the use of specialized construction techniques. Recent soil mapping by the City has determined that additional soil types exist and suggests that there may be a higher incidence of glacial outwash soil types within Bellevue than currently mapped. Outwash soils have relatively high permeability that could facilitate low impact development. Soil types will be evaluated at the project-level analysis for consideration in construction design.

Landslide hazard areas and steep slopes of 40 percent or more are designated as critical areas under BCC 20.25H. On undeveloped sites, buffers from landslide hazard areas and steep slopes are 50 feet from the top of slope; structure setbacks of 75 feet are required from the toe of slope where mass slope movement has occurred or could occur. New or expanded public rights-of-way are an allowable use within critical areas under BCC 20.25H.055.B, subject to the specific performance standards described in BCC 20.25.H.055.C. Coal mine hazards are present in certain areas of South Bellevue and development in such areas is subject to provisions of BCC 20.25.H.130.

7.1.3. Wetlands

The City classifies wetlands into four categories, depending upon a variety of factors, and regulates buffers adjacent to wetlands. Where there are existing easements on a site, specifically Native Growth Protection Area (NGPA) or Native Growth Protection Easement (NGPE), the regulatory buffer is assumed to be included within these areas and the site is considered to be developed for regulatory purposes; therefore, no additional buffer is required (BCC 20.25H). Table 7-1 shows the range of buffer widths for each wetland category on undeveloped sites.

Table 7-1. Wetland Buffer Width Ranges by Wetland Type

Wetland Type	Buffer (feet)
Category I	75 to 225
Category II	75 to 225
Category III	60 to 110
Category IV over 2,500 square feet	40

Source: City of Bellevue Land Use Code Part 20.25H.035.

Wetland buffer modification is allowed. In addition, if an established right-of-way, such as a road, is located within a wetland buffer, the buffer is reduced to the edge of the developed right-of-way if the portion of the buffer located on the opposite side of the right-of-way does not contribute significant biological or hydrological function in relation to the portion of the buffer adjacent to the wetland.

Several projects included in the TFP would be located within a wetland or a wetland buffer; Table 7-2 lists these projects by MMA.

Table 7-2. Mapped Wetlands or Wetland Buffers Located in Potential Project Areas

MMA	TFP Project Number
2 Bridle Trails	079, 244
4 Wilburton	197, 234
7 South Bellevue	242
12 Bel-Red	210, 241, 245
10 Eastgate	247

Note: Only those projects with the potential to affect mapped wetlands or wetland buffers are included.

The category of each wetland and its associated buffer will be determined during project-specific analysis for each of the projects. If there are additional wetlands located in the project areas, they will be identified during the project-specific environmental review process.

Wetlands perform a variety of important functions in the landscape, including water storage, water filtration, and providing habitat for fish and wildlife. During periods of high water, wetlands can store water that otherwise might run off to streams and rivers, contributing to potential flooding. Wetlands often also retain water during dry periods, providing a water source for terrestrial wildlife and habitat for aquatic species. Water stored in wetlands may move through the soil and contribute to flows in streams or rivers. Wetland soils filter many of the pollutants potentially contained in this water, thereby providing cleaner water for rivers and streams. This process of stream or river recharge is much slower than direct runoff, and helps to modulate flows. Wetlands also provide habitat for a variety of species of fish, amphibians, birds, and mammals. Species that may inhabit wetlands in Bellevue include juvenile salmonids, Pacific chorus frog (*Pseudacris regilla*), northwestern salamander (*Ambystoma gracile*), long-toed salamander (*Ambystoma macrophyllum*), waterfowl including mallard *(Anas platyrhynchos*) and

Canada goose (*Branta canadensis*), and mammals such as muskrat (*Ondatra zibethicus*). The individual functions and values of wetlands potentially affected by the proposed projects will be evaluated at the project level using Ecology's wetland rating system for Western Washington (Hruby 2004).

7.1.4. Aquatic Resources

The City classifies streams into four types, depending upon a variety of factors, and regulates buffers adjacent to streams. Buffer widths vary by stream type, depending upon whether the stream is located on an undeveloped or a developed site. Open segments of the West Tributary of Kelsey Creek have separate buffer requirements (BCC 20.25H.035, 20.25H.075). Table 7-3 shows the buffer widths of each type of open stream. Closed stream segments, defined as segments of streams located in underground culverts, are regulated separately.

Table 7-3. Standard Stream Buffer Widths for Open Streams per Bellevue Land Use Code Part 20.25

Stream Type[a]	Buffer, Undeveloped Site (feet)	Buffer, Developed Site[b](feet)	West Tributary, Kelsey Basin (feet)
Type S	100	50	50
Type F	100	50	50
Type N	50	25	50
Type O	25	25	50

[a] Type S Streams are those designated shorelines of the state; Type F waters are those that are not Type S waters that contain fish or fish habitat; Type N waters are those that are not Type S or F waters and are physically connected to a Type S or F water by an aboveground channel system, stream, or wetland; Type O waters are those that are not Type S, F, or N waters and that are not physically connected to Type S, F, or N waters by an aboveground channel system, stream, or wetland (BCC 20.25H.075.B).

[b] The actual buffer is the greater of the buffer width shown in this table or the buffer established with the existing NGPE/NGPA.

Stream buffer modification, with specific constraints, is allowed. In addition, if an established right-of-way, such as a road, is located within a stream buffer, the buffer is reduced to the area between the right-of-way and the stream only if the portion of the buffer located on the opposite side of the right-of-way does not contribute significant biological or hydrological function in relation to the portion of the buffer adjacent to the stream.

The proposed projects are located in Water Resource Inventory Area (WRIA) 8, Lake Washington/Cedar/Sammamish Watershed. Each stream within a WRIA is given a unique identifying number. Several projects included in the TFP would either cross mapped streams or would potentially be located within stream buffers. Table 7-4 lists these projects by MMA.

Table 7-4. Mapped Streams or Stream Buffers Located in Potential Project Areas

MMA[a]	TFP Project Number	Stream Type	Stream Name	WRIA Number
1 North Bellevue	079, 173, 244	F	Yarrow Creek	08-0252
2 Bridle Trails	245	F	Valley Creek	08-0266
4 Wilburton	197, 211, 234, 249	F	Sturtevant Creek	08-0260
8 Richards Valley	244	F	Kelsey Creek	08-0259
9 East Bellevue	078, 158	F	Vasa Creek Phantom Creek South Sammamish Northern Stream South Sammamish Middle Stream South Sammamish Southern Stream Kelsey Creek	08-0156 08-0162 08-0160 None assigned 08-0161 08-0259
	078	N	Wilkins Creek Unnamed tributaries to Lake Sammamish	08-0151 None assigned
10 Eastgate	243	Potentially Fish Bearing	Vasa Creek	08-0156
	243, 247,	F	Richards Creek	08-0261
11 Newcastle	192, 243	F	Lewis Creek 0160, 0161	08-0162
	192	Potentially Fish Bearing	Lewis Creek	08-0162K
	192	Not Typed	Unnamed tributary to Coal Creek	08-0276A-1
12 Bel-Red	210, 215, 241, 245	F	Goff Creek West Tributary Kelsey Creek	None assigned 08-0264 08-0259
	215	N	Kelsey Creek	08-0264
13 Factoria	251	F	Coal Creek	08-0268
	251	N	Coal Creek	08-0268U
14 Newport Hills	244	N	Lakehurst Northern Stream	08-0281, 08-0281B, 08-0281C
	251	F	Coal Creek	08-0268
	251	N	Coal Creek	08-0268U

[a] Only those projects with the potential to affect mapped streams or stream buffers are included.

Type F waters are those that are not designated as shorelines of the state (Type S waters) and which contain fish or fish habitat. Type N waters are those that are not Type S or F waters but are physically connected to Type S or F waters by an aboveground channel system, stream, or wetland (BCC 20.25H 075 B).

Fish species documented in streams located in potential project areas are Chinook salmon (*Oncorhynchus tshawytshca*), coho salmon (*Oncorhynchus kisutch*), sockeye salmon (*Oncorhynchus nerka*), Lake Sammamish kokanee (*Oncorhynchus nerka*), steelhead trout

(*Oncorhynchus mykiss*), coast resident cutthroat trout (*Oncorhynchus clarki clarki*), and rainbow trout (*Oncorhynchus mykiss*) (WDFW 2011). Figure 7-1 shows the location of these streams, and Table 7-5 lists the fish species present in these streams. Species of salmonid that are listed as threatened under the Endangered Species Act that affect Bellevue are Chinook salmon, bull trout, and steelhead.

Watersheds with significant impervious surface areas typically show some impairment to fish habitat due to alterations in hydrology, sediment quality and dynamics, or pollutant loads, compared to undeveloped watersheds. An analysis incorporating the results of 225 studies, including several in the Pacific Northwest, on the effects of impervious surface on water quality found that, in general, watersheds with 1 to 10 percent impervious surface had high water quality; watersheds with 11 to 25 percent impervious surface had reduced water quality; and watersheds with greater than 25 percent impervious surface had poor water quality (Center for Watershed Protection 2003). The City has calculated that approximately 39 percent of citywide surface area is impervious under existing conditions. Table 7-6 summarizes the percentage of the total impervious surface area in each storm drainage basin located in Bellevue. The existing amount of impervious surface in each storm drainage basin indicates that fish habitat is currently impaired by poor water quality within the drainage basins.

The City has conducted an inventory of culverts within the city limits and has evaluated each for its potential to act as a barrier to fish passage; many culverts that are barriers to fish passage are within the city limits. Several of the proposed TFP projects would require the replacement of culverts as part of the project. The result would be improved fish passage because BCC 20.25H.055C.3.e requires that any new culverts be designed according to guidelines contained in the Design of Culverts for Fish Passage Manual (WDFW 2003). In May 2013, WDFW released updated guidance, Water Crossing Design Guidelines (Barnard et al. 2013). Under Bellevue City Code, provisions of this newer guidance would typically apply for new project designs. Critical areas ordinance requirements for new or improved culverts are described in detail in Section 7.2.3.

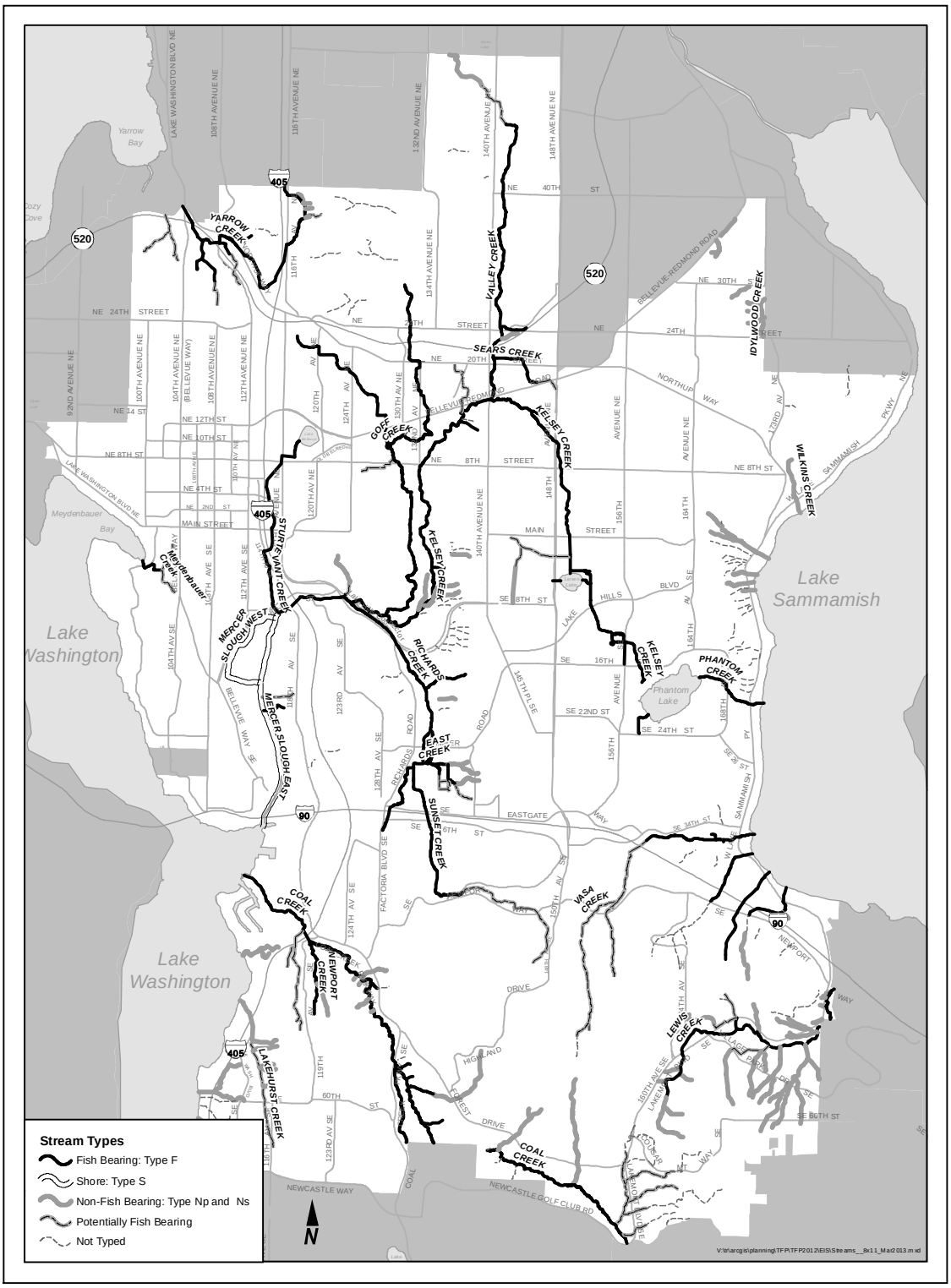


Figure 7-1. Bellevue Streams

Table 7-5. Fish Species by Stream

Stream Name (WRIA Number)	Fish Species
Coal Creek (08-0268)	Chinook salmon Coho salmon Sockeye salmon Steelhead trout Coast resident cutthroat trout
Goff Creek (No WRIA number assigned)	Chinook salmon Coho salmon Sockeye salmon Coast resident cutthroat trout
Kelsey Creek (08-0259)	Chinook salmon Coho salmon Sockeye salmon Coast resident cutthroat trout
Lakehurst, Northern Stream (08-0281)	No observed fish use
Lewis Creek (08-0162)	Coast resident cutthroat trout Kokanee Sockeye salmon Chinook salmon
Phantom Creek (08-0162)	Unknown salmonid use Migratory fish use presumed in reaches downstream of West Lake Sammamish Parkway Warm water fish found in lake outlet channel
Richards Creek (08-0261)	Chinook salmon Coho salmon Sockeye salmon Coast resident cutthroat trout
Sears Creek (08-0267)	Coast resident cutthroat trout Chinook salmon Sockeye salmon Coho salmon
South Sammamish Northern Stream (08-0160)	Unknown
South Sammamish Middle Stream (No WRIA number assigned)	Unknown
South Sammamish Southern Stream (08-0161)	Coast resident cutthroat trout (through Sunrise Park)
Sturtevant Creek (08-0260)	Coho salmon Sockeye salmon Coast resident cutthroat trout
Valley Creek (08-0266)	Coast resident cutthroat trout Chinook salmon Sockeye salmon Coho salmon
Vasa Creek (08-0156)	Coho salmon Kokanee Sockeye salmon Coast resident cutthroat trout

Table 7-5. Fish Species by Stream (Continued)

Stream Name (WRIA Number)	Fish Species
West Tributary (08-0264)	Chinook salmon Sockeye salmon Coho salmon Coast resident cutthroat trout
Wilkins Creek (08-0151)	Unknown
Yarrow Creek (08-0252)	Coho salmon Coast resident cutthroat trout

Table 7-6. Percent Impervious Surface in Storm Drainage Basin

Storm Drainage Basin	Basin Area (acres)	Existing Impervious Surface (acres)	Existing Impervious Surface (percent)	Bellevue Right-of-Way Area (acres)	Bellevue Right-of-Way Area (percent)
Ardmore	451	193.06	43	67.06	15
Beaux Arts	419	143.98	34	32.57	8
Clyde Beach	292	136.84	47	33.12	11
Coal Creek	3,990	814.04	20	248.79	6
East Creek	462	220.34	48	37.20	8
Goff Creek	674	199.94	30	46.59	7
Kelsey Creek	2,822	1137.98	40	276.17	10
Lakehurst	1,284	427.21	33	79.33	6
Lewis Creek	1,004	416.26	29	100.51	7
Mercer Slough	1,327	419.67	32	174.07	13
Meydenbauer Creek	927	547.91	59	118.81	13
Newport	571	224.04	39	59.52	10
North Sammamish	621	200.43	32	64.38	10
Phantom Creek	537	190.38	35	38.70	7
Richards Creek	901	404.38	45	102.20	11
Rosemont	432	163.81	38	50.83	12
Sears Creek	358	365.06	63	35.40	6
South Sammamish	337	186.41	31	70.64	12

Table 7-6. Percent Impervious Surface in Storm Drainage Basin (Continued)

Storm Drainage Basin	Basin Area (acres)	Existing Impervious Surface (acres)	Existing Impervious Surface (percent)	Bellevue Right-of-Way Area (acres)	Bellevue Right-of-Way Area (percent)
Spirit Ridge	193	77.17	40	20.62	11
Sturtevant Creek	773	551.45	71	137.37	18
Sunset Creek (includes Sunset Creek Island)	890	371.60	42	152.72	17
Valley Creek	1.307	478.72	34	80.63	6
Vasa Creek	1,085	430.63	40	150.54	14
West Tributary	1,006	460.52	46	94.91	9
Wilkins Creek	305	126.02	41	43.28	14
Yarrow Creek	926	524.45	31	139.91	8

7.1.5. Wildlife and Vegetation

Wildlife species expected to be present in Bellevue include those typically associated with urban environments, including mammals such as raccoon (*Procyon lotor*) and eastern gray squirrel (*Sciurus carolinensis*), and birds such as American robin (*Turdus migratorius*) and American crow (*Corvus brachyrhynchos*). As a result of large patches of undeveloped wildlife habitat in Bellevue, primarily in the vicinity of Mercer Slough and the large wetland complex that extends from NE 8th Street to Larsen and Phantom Lakes, including the presence of large conifer and hardwood trees throughout many of the residential neighborhoods, species that are less common in urban environments may also occur. Species expected to occur include coyote (*Canis latrans*), beaver (*Castor canadensis*), red-tailed hawk (*Buteo jamaicensis*), and pileated woodpecker (*Dryocopus pileatus*). Species that have been documented in Bellevue include bald eagle (*Haliaeetus leucocephalus*) and peregrine falcon (*Falco peregrinus*) (WDFW 2011). The City has identified 23 species as species of local importance (Table 7-7); habitat for these species is regulated under BCC 20.25H.

Table 7-7. Species of Local Importance

Common Name	Scientific Name	Common Name	Scientific Name
Bald eagle	*Haliaeetus leucocephalus*	Western big-eared bat	*Plecotus townsendii*
Peregrine falcon	*Falco peregrinus*	Keen's myotis	*Myotis keenii*
Common loon	*Gavia immer*	Long-legged myotis	*Myotis volans*
Pileated woodpecker	*Dryocopus pileatus*	Long-eared myotis	*Myotis evotis*
Vaux's swift	*Chaetura vauxi*	Oregon spotted frog	*Rana pretiosa*
Merlin	*Falco columbarius*	Western toad	*Bufo boreas*
Purple martin	*Progne subis*	Western pond turtle	*Clemmys marmorata*
Western grebe	*Aechmophorus occidentalis*	Chinook salmon	*Oncorhynchus tshawytscha*
Great blue heron	*Ardea herodias*	Bull trout	*Salvelinus confluentus*
Osprey	*Pandion haliaetus*	Coho salmon	*Oncorhynchus kisutch*
Green heron	*Butorides striatus*	River lamprey	*Lampetra ayresi*
Red-tailed hawk	*Buteo jamaicensis*		

Source: City of Bellevue Land Use Code Part 20.25H.150

Of the species in Table 7-7, WDFW (2011) has documented the presence of only the bald eagle, peregrine falcon, and osprey, although there is a high probability that most of the species do occur in areas of suitable habitat within Bellevue. Potential habitat for species of local importance will be identified during the project-level analysis for each of the projects included in the TFP.

There are two bald eagle nesting territories in Bellevue, but they are not located near a proposed project. Peregrine falcon and osprey have been documented in Downtown Bellevue. Also, peregrine falcons have been seen in the vicinity of project TFP-230 and osprey in the vicinity of project TFP-173. A peregrine falcon aerie has been documented on a building in Downtown Bellevue in the vicinity of projects TFP-110 and TFP-230.

Many residential neighborhoods in Bellevue, particularly those developed in the 1950s and 1960s, are characterized by relatively large lot sizes and numerous residual trees, including both conifers and hardwoods. Douglas-fir is a common conifer in residential neighborhoods, with western red cedar and a variety of ornamental species also occurring. These trees, and an abundance of shrubs associated with private yards and gardens as well as public spaces, provide habitat for birds and small mammals. Pileated woodpeckers typically are found in urban habitats, including Bellevue, utilizing remnant habitat patches and individual trees. Pileated woodpeckers nest and forage in large conifers, and remnant conifers within Bellevue provide habitat for them. They also forage in smaller coniferous and deciduous trees, down logs, and stumps (Lewis and Azerrad 2004). Larger patches of suitable habitat for pileated woodpecker occur in city parks and green belts containing forested habitat and forested wetlands; however, the remaining trees in residential and commercial areas of Bellevue also provide habitat for this species. Slope areas often provide habitat for various species because they are less suitable for development and thus tend to have more extensive vegetation than more level areas (which are better candidates for development).

7.1.6. Shorelines

The City's Land Use Code contains requirements and guidelines that preserve Bellevue's shorelines. The Shoreline Overlay District defines the shoreline areas in Bellevue (BCC 20.25E). This overlay district includes lakes that are 20 acres in size or greater and streams with a mean annual water flow exceeding 20 cubic feet per second; the lands underlying them; the lands extending landward for 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward 200 feet from such floodways associated with such streams and lakes; and marshes, bogs, swamps, and river deltas associated with such streams and lakes. Where steep slopes are located adjacent to streams, the stream bank may be wider than a standard buffer width and based on the location of the top of the bank instead. BCC 20.50.048 defines top-of-bank as:

- The point closest to the boundary of the active floodplain of a stream where a break in the slope of the land occur such that the grade beyond the break is flatter than 3:1 at any point for a minimum distance of 50 feet measured perpendicularly from the break
- For a floodplain area not contained within a ravine, the edge of the active floodplain of a stream where the slope of the land beyond the edge is flatter than 3:1 at any point for a minimum distance of 50 feet measured perpendicularly from the edge.

This Shoreline Overlay District also specifically includes the following water resources:

- Lake Washington (including Mercer Slough upstream to I-405). Lake waters, underlying lands, and the area 200 feet landward of the ordinary high water mark, plus associated floodways, floodplains, marshes, bogs, swamps, and river deltas
- Lake Sammamish. Lake waters, underlying lands, and the area 200 feet landward of the ordinary high water mark, plus associated floodways, floodplains, marshes, bogs, swamps, and river deltas
- Lower Kelsey Creek. Creek waters, underlying lands, and territory between 200 feet on either side of the top of the banks, plus associated floodways, floodplains, marshes, bogs, swamps, and river deltas
- Phantom Lake. Lake waters, underlying lands, and the area 200 feet landward of the ordinary high water mark, plus associated floodways, floodplains, marshes, bogs, swamps, and river deltas.

7.2. Impacts

This section presents the potential impacts that might result from implementation of the alternatives. Under Bellevue City Code, new or expanded public rights-of-way are an allowable use within critical areas (BCC 20.25H.055.B); however, they must meet the specific performance standards described in BCC 20.25H.055.C. Under these performance standards, right-of-way corridors may be located or expanded in critical areas or critical area buffers only where there is

no technically feasible alternative with less impact on the critical area and buffer. A determination of technical feasibility must consider:

- The location of existing infrastructure
- The function or objective of the proposed new or expanded facility or system
- Demonstration that no alternative or configuration outside of the critical area or critical area buffer achieves the stated function or objective, including construction of new or expanded facilities or systems outside the critical area
- Whether the cost of avoiding disturbance is substantially disproportionate as compared to the environmental impact or proposed disturbance
- The ability of both permanent and temporary disturbance to be mitigated.

If no technically feasible alternative with less impact on a critical area or critical area buffer exists, then the City must comply with the following requirements:

- Location and design shall result in the least impacts on the critical area or critical area buffer.
- Disturbance of the critical area and critical areas buffer, including disturbance of vegetation and soils, shall be minimized.
- Disturbance shall not occur in habitat used for salmonid rearing or spawning or by any species of local importance unless no other technically feasible location exists.
- Any crossing of a wetland or a stream shall be designed to minimize critical area and critical area buffer coverage and critical areas and critical area buffer disturbance, for example, by using a bridge, boring, or open cut and perpendicular crossings, and shall be the minimum width necessary to accommodate the intended function or objective; however, the Director may require that the facility be designed to accommodate additional facilities where the likelihood of additional facilities exists, and where one consolidated corridor would result in fewer impacts to the critical area or critical area buffer than multiple intrusions.
- All work shall be consistent with applicable City codes and standards.
- The facility or system shall not have a significant adverse impact on overall aquatic area flow peaks, duration or volume of flood storage capacity, or hydroperiod.
- Associated parking and other support functions, including, for example, mechanical equipment and maintenance sheds, must be located outside the critical area or critical area buffer except where no feasible alternative exists.
- Areas on new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of BCC 20.25H.210.

Specific mitigation for potential impacts to each critical area is discussed in Section 7.3.

In many cases, it is anticipated that during the course of project review, particularly compliance with the Critical Areas Overlay District (BCC 20.25H), many of the probable adverse environmental impacts of the proposed TFP projects likely would be adequately addressed by development regulations in accordance with RCW 43.21C.240.

Table 7-8 lists the TFP projects that may have potential impacts on natural resources in the project area.

Table 7-8. TFP Projects with Potential Impacts on Natural Resources

TFP Project	Natural Resources Affected				
	Geology and Soils	Wetlands	Aquatic Resources	Wildlife and Vegetation	Shorelines
078	X		X	X	X
079		X	X	X	
158			X	X	
173	X		X	X	
192			X	X	
197		X	X	X	
207	X				
210		X	X		
211	X		X	X	
215			X	X	
230				X	
234		X	X	X	
241		X	X		
242	X	X		X	X
243	X		X	X	
244	X	X	X		X
245	X	X	X	X	
247		X	X	X	
251	X		X	X	
253			X	X	

7.2.1. Geology and Soils

This section discusses the potential impacts related to geology and soils that might result from implementation of the alternatives. Such impacts could include landslides in steep slope areas, liquefaction of soils due to earthquakes, and settlement of soils. The geological conditions in the project area are a factor in the occurrence of these types of impacts.

While some individual projects could extensively disturb surface soils, most improvements would occur where soils are already highly disturbed by previous urbanization and paving. If not properly mitigated, construction activities, such as clearing, excavation, grading, and filling activities could result in erosion and sedimentation of exposed soils. Soils normally protected by vegetation or pavement could be worn away when exposed to wind and rain during earthwork operations. These eroded soils then become sediments entering surface waters (streams, wetlands, and lakes) and could damage both physical and biological functions of the water body.

Construction activity in potentially unstable ground could destabilize hillsides, if mitigating measures, such as groundwater interception, engineered retaining systems, or bridges, are not employed. Moderate amounts of excavation and fill would be required for most of the proposed roadway widening projects and intersection improvements. In most cases, the earthwork volumes are not anticipated to be significant. Site-specific earth resource impacts will be evaluated and mitigated through the environmental review process for individual projects. It is assumed that all road improvements proposed would conform to City policies and regulations. Roadway development in areas of potentially unstable slopes would be mitigated to ensure stability and safety during and after construction. As part of project-specific design and review, alternative alignments within the same basic corridors that reduce disturbance to critical areas would be examined.

The City will comply with the applicable land use requirements for development in geologic hazard areas. These standards will ensure that engineering solutions address potential stability and erosion impacts. Some projects, however, may not fully comply with performance standards that require conformance to existing topography and preservation of natural landforms and vegetation because of limited right-of-way and the desire to minimize impacts on adjacent land uses.

7.2.1.1. CIP Network Alternative

The CIP Network alternative has several projects located in areas with geologic hazards. Portions of TFP-078, TFP-207, and TFP-211 are located in the vicinity of slopes greater than 40 percent, which could mean that they are especially vulnerable to erosion and landslides. Project TFP-078, along the western shore of Lake Sammamish, is the only project that has a section located in an area with a moderate to high liquefaction hazard rating. Additional areas may be identified during project-level review.

7.2.1.2. TFP Network Alternative

Portions of TFP-078, TFP-173, TFP-207, TFP-211, TFP-242, TFP-243, TFP-244, TFP-245, and TFP-251 are located in the vicinity of slopes greater than 40 percent, which could mean that they are especially vulnerable to erosion or landslides. The Sound Transit East Link Project Final EIS (Sound Transit 2011) and East Link Extension 2013 SEPA Addendum (Sound Transit 2013) analyze potential impacts from widening the Bellevue Way SE footprint, including with the incorporation of the HOV lane in project TFP-242. Three projects, TFP-078, TFP-173, and TFP-244, have sections located in an area with a moderate to high liquefaction hazard rating. Additional areas may be identified during project-level review.

7.2.2. Wetlands

This section discusses the potential impacts on wetlands greater than or equal to 20,000 square feet that may result from implementation of the alternatives. If there are wetlands of a smaller size within proposed project areas, they will be identified and potential project impacts evaluated during project-level environmental review. Development in a wetland or buffer would result in the direct filling and subsequent loss of the resource. Development outside of the wetlands and buffers but immediately adjacent to the resource would likely result in some indirect impacts on the wetlands. Indirect impacts on wetlands could include sedimentation from stormwater runoff, increased nutrient loading from road and lawn runoff, changes in the amount or time water is in the wetland, and associated changes to wetland vegetation and habitat. Development would also increase the probability of non-native plant species invading the wetland and buffer vegetation communities. Potential impacts on individual wetlands and changes in the functions and values of these wetlands from the proposed projects will be evaluated at the individual project level.

As described in Section 7.2 above, new or expanded public rights-of-way are an allowable use in critical areas under BCC 20.25H.055.B. The City will comply with the applicable land use requirements for development in critical areas.

7.2.2.1. CIP Network Alternative

The CIP Network alternative projects TFP-079, TFP-210, and TFP-241 could affect wetlands. These projects would not cross a wetland, but they are adjacent to wetland areas and could encroach on a wetland or its buffer.

7.2.2.2. TFP Network Alternative

Under the TFP Network alternative, nine proposed projects could potentially affect wetlands. These projects are TFP-079, TFP-197, TFP-210, TFP-234, TFP-241, TFP-242, TFP-244, TFP-245, and TFP-247. The Sound Transit East Link Project Final EIS (Sound Transit 2011) and East Link Extension 2013 SEPA Addendum (Sound Transit 2013) analyze potential impacts from widening the Bellevue Way SE footprint, including with the incorporation of the HOV lane in project TFP-242. The extent of on-site wetlands affected, as well as wetland functions and values, would be assessed during project-level environmental review for each of the proposed projects.

7.2.3. Aquatic Resources

This section discusses the potential impacts on aquatic resources that might result from implementation of the alternatives. Table 7-9 identifies the streams in the project area that would be potentially affected by the alternatives.

Table 7-9. Streams Potentially Affected by the Proposed Alternatives

MMA	TFP Project Number(s)[a]	Stream Type	Stream Name[b]	WRIA Number	Existing Right-of-Way (percent)	Impervious Area	
						Existing Basin (percent)	Increase (percent)
1 North Bellevue	079, 173, 244	F	Yarrow Creek	08-0252	8%	31%	>0.01%
2 Bridle Trails	245	F	Valley Creek	08-0266	6%	34%	>0.01%
4 Wilburton	197, 211, 234, 244, 249	F	Sturtevant Creek	08-0260	18%	71%	>0.01%
8 Richards Valley	244	F	Kelsey Creek	08-0259	10%	40%	>0.01%
9 East Bellevue	**078**,	F	Vasa Creek	08-0156	14%	40%	>0.01%
	078	F	South Sammamish	08-0160	12%	31%	>0.01%
	158, *245*	F	Kelsey Creek	08-0259	10%	40%	>0.01%
10 Eastgate	243	Potentially Fish Bearing	Vasa Creek	08-0156	14%	40%	>0.01%
	243, 247	F	Richards Creek	08-0261	11%	45%	>0.01%
11 Newcastle	243	F	Lewis Creek	08-0162	7%	29%	>0.01%
	192	Potentially Fish Bearing	Lewis Creek	08-0162K	7%	29%	>0.01%
	192	Not Typed	Coal Creek	08-0267A-1	6%	20%	>0.01%
12 Bel-Red	**215**	F	Goff Creek	None assigned	7%	30%	>0.05%
	210, **241**	F	West Tributary	08-0264	9%	46%	>0.01%
	215, *245*	N	Kelsey Creek	08-0264	10%	40%	>0.01%
	245	F	Valley Creek	08-0266	6%	34%	>0.01%
13 Factoria	*251*	F	Coal Creek	08-0268	6%	20%	>0.01%
14 Newport Hills	*251*	F	Coal Creek	08-0268	6%	20%	>0.01%

[a] Project numbers in **bold** will improve conditions for fish passage (or maintain conditions, if existing condition is fish passable).
Project numbers in *italics* are at locations where other, non-TFP, projects will improve fish passage.
Project numbers with underline are at locations where no change to existing conditions is anticipated (typically because there is no added capacity or widening of the culvert).
Project numbers without formatting are at locations where project design is not yet sufficiently developed to characterize crossing treatment.

[b] See Table 7-5 for fish species associated with streams.

Most of the proposed projects would result in an increase in impervious surface, specifically those projects that would provide additional lanes for traffic on existing roads, new road segments, and the construction of bicycle lanes and sidewalks. Impervious surfaces can result in increased stormwater runoff; therefore, watersheds with significant impervious surface areas typically show some impairment of fish habitat due to alterations in hydrology, sediment quality and dynamics, or pollutant loads, compared to undeveloped watersheds. Potential changes in hydrology include increases in runoff volume, peak discharge rate, bankfull flow, and base flow. These increases can in turn cause changes in bank erosion or bank stability, embeddedness, and the amount and distribution of large woody debris in the stream. The threshold level at which impervious surfaces contribute to an impaired fish habitat condition varies depending on the specific conditions in a given watershed. In addition, the peak flows resulting from increased stormwater runoff are typically stronger, last longer, and occur with a different timing. This can result in concentrated flows, increased stream channel and bank erosion, and a concentration of pollutants being transported into streams.

Bicycle lanes and sidewalks would increase impervious surface and may increase the amount of stormwater runoff, but these surfaces do not generate the pollutant loads that roadways do; therefore, they would contribute comparably less to pollutants entering the environment. Many of the proposed projects include plans to create a vegetated median or to provide a planted strip between new sidewalks and existing roadways. Such features would provide pervious surface areas that could infiltrate stormwater, which could offset (albeit minimally) increases in impervious surfaces created by the projects.

Potential project impacts from increased stormwater runoff would be minimized through implementation of the City's Stormwater Management Program, consistent with its permit obligations under the National Pollutant Discharge Elimination System. In addition, BCC 24.06.065 requires that all new facilities and expansion of existing facilities of 5,000 square feet or more incorporate design features to limit the amount of runoff and minimize pollutants in the runoff. According to Ecology's Western Washington Phase II Municipal Stormwater Permit, with which the City must comply, stormwater drainage basins that have been urbanized for 40 years or more need only address impacts of added impervious surface, not total impervious surface.

Prior to implementation of each individual project, project-level environmental analysis would identify potential impacts from the generation of additional stormwater runoff, and would identify appropriate avoidance or minimization measures in consultation with regulatory agencies. This analysis also will identify the streams and fish species that would be directly affected by the project, quantify the potential direct and indirect impacts to the species and their habitat, and assess their contribution to cumulative impacts. Specific required and recommended mitigation measures will also be identified.

The proposed projects that would potentially have direct impacts on streams or stream buffers could have direct impacts on salmonids species and other fish species. Direct impacts may be caused by changes in water temperature due to vegetation removal, changes in water quality due to stormwater runoff, and changes in sedimentation from construction and maintenance activities.

The proposed projects that include new lighting could also affect fish. Construction of new sidewalks could also increase pedestrian use of an area, which could allow increased human or pet activity in or near streams, potentially increasing disturbance to species. The project-level analyses would identify potential impacts, and appropriate avoidance or minimization measures would be determined at that time in consultation with regulatory agencies. Projects affecting Type S or F streams or associated buffers must incorporate performance standards listed in BCC 20.25H.080, and under Mitigation, Section 7.3.3 (Aquatic Resources).

The removal of fish passage barriers could increase the amount of habitat available in a watershed, and may help to increase productivity of the watershed. Bridges and improved culvert design may also improve habitat in the stream system by facilitating the transport of wood, water, and sediment within the system. Project-level analysis would assess the feasibility of bridging streams and would also identify culverts that would be replaced or improved, and would identify mitigation measures necessary for culverts that are extended.

BCC 20.25H.055C.3.e requires that any new culverts be designed according to guidelines contained in the Design of Culverts for Fish Passage Manual (WDFW 2003); as noted in Section 7.1.4 above, the recently released Water Crossing Design Guidelines (Barnard et al. 2013) will apply to design of future projects. Depending on the individual transportation project, existing culverts may be extended in length, rather than replaced; however, they are considered a new culvert and so are subject to the guidelines if they meet the following criteria:

- There are fish present downstream.
- There is potential fish habitat upstream.
- The benefits of so designing the culvert are substantial when compared to expanding the culvert based on its then-existing design.

In addition, new or expanded public right-of-way projects,which do not demonstrate a technically feasible alternative with less critical area impact, are prohibited from disturbing habitat used for salmonid rearing or spawning (or by any species of local importance), unless no other technically feasible location exists (BCC 20.25H.055.C.2b). Similarly, any crossings over a stream must be designed to minimize stream and stream buffer aerial coverage and disturbance, and be the minimum width necessary to accommodate the function or objective (BCC 20.25H.055.C.2b). Minimizing aerial coverage and disturbance can reduce impacts on riparian forest habitat and large woody debris recruitment into streams from such habitats.

Stream channel crossings are also required to have no significant adverse impact on overall peak flows, duration, volume of flood storage capacity, or hydroperiod (BCC 20.25H.055.C.2b). Such hydraulic requirements can be met by bridging stream channels.

Typically, relocating a stream channel or closing a stream channel in a culvert or pipe is not allowed under the City's Critical Areas Ordinance. As an allowed use under BCC 20.25H.055, however, new or expanded public right-of-way projects can be allowed to relocate an open stream channel or close a channel in a culvert or pipe (BCC 20.25H.080B) by completing a critical areas report process. The critical areas report process requires that projects demonstrate that the

proposal would lead to equivalent or better protection of critical area functions (e.g., stream functions) than would occur under the standard application of the code (i.e., no relocation or piping allowed).

Any stream channel modification, including in-stream structures such as culverts, would require a critical areas report to be completed. A critical areas report requires the use of best available science to identify impacts to critical areas, including cumulative impacts, and to describe both required and recommended mitigation (BCC 20.25H.250). Project-level analysis will be conducted for each TFP project in light of these requirements. Bridging and the WDFW culvert design guidelines will be applied as appropriate.

As described in Section 7.2, new or expanded public rights-of-way are an allowable use within critical areas under BCC 20.25H.055.B. The City will comply with the applicable land use requirements for development in critical areas that contain aquatic resources in the project area.

Potential impacts to critical areas by the proposed projects will be evaluated at the individual project level.

7.2.3.1. CIP Network Alternative

The CIP Network alternative contains several projects that could affect aquatic resources when implemented. These projects are TFP-079, TFP-192, TFP-210, TFP-211, and TFP-241; see Table 7-9 for the potentially affected streams. Additional aquatic resource effects may be identified during project-level environmental review.

Fewer projects are included in the CIP Network alternative; therefore, there would be lesser impact on aquatic resources resulting from increased impervious surface, as compared to the TFP Network alternative.

7.2.3.2. TFP Network Alternative

A number of streams could potentially be affected by the proposed projects included in the TFP Network alternative. These projects are listed in Table 7-9 and include the projects in the CIP Network alternative that could affect the aquatic resources discussed above as well as several others.

The TFP Network alternative would result in more new impervious surface area than there is today. This alternative would also result in more new impervious surface than with the CIP Network alternative because this alternative includes more projects that propose improvements requiring new impervious surface.

Projects that include bridges or new culverts may benefit fish species by removing barriers to passage. The TFP Network alternative includes four projects that could remove fish passage barriers (TFP-078, TFP-210, TFP-215, and TFP-241).

7.2.4. Wildlife and Vegetation

Vegetation in Bellevue that may be affected by the proposed projects includes wetland vegetation, vegetated stream and wetland buffers, as well as the sidewalk trees, landscaping, and right-of-way vegetation discussed in Chapter 6, Land Use. Wetland, stream, and buffer impacts for each project are discussed above in the Wetlands and Aquatic Resources impact discussions. Vegetation removal would result in the loss of habitat for wildlife species in Bellevue. Where vegetated medians and planting strips between new sidewalks and existing roads are provided, some replacement habitat would be created. Several of the projects would, however, result in the loss of large residual trees such as Douglas-fir and western red cedar, and it is unlikely that these would be replaced due to their size when mature. These native species that attain a large size are important habitat for a variety of species, including bald eagles that often use them as nesting trees.

Impacts on the peregrine falcon are not expected because the existing aerie is located on a building ledge in Downtown Bellevue. It is therefore assumed that the peregrine falcons associated with it are accustomed to noise and activity from construction activities.

Removal of large trees, particularly conifers, would reduce the amount of habitat available for pileated woodpecker and would further fragment existing habitat. Removal of large conifers may affect other cavity-nesting birds as well, reducing the amount of available habitat.

Projects that include bridges or new culverts may benefit fish species by removing barriers to passage. The removal of fish passage barriers could increase the amount of habitat available in a watershed, and may help to increase productivity of the watershed. Bridges and improved culvert design may also improve habitat in the stream system by facilitating the transport of wood, water, and sediment within the system. The projects that could include the construction of new bridges or culverts are discussed above in the Aquatic Resources impact section.

A project-level analysis would also be conducted to determine the presence or potential presence of other species of local importance within areas that would be affected by the proposed projects; appropriate avoidance or minimization measures would be determined at that time.

As described in Section 7.2 above, new or expanded public rights-of-way are an allowable use within critical areas under BCC 20.25H.055.B. The City will comply with the applicable land use requirements for development in critical areas that could affect wildlife and vegetation in the project area.

7.2.4.1. CIP Network Alternative

Peregrine falcon, a WDFW priority species, is found in Downtown Bellevue, in the vicinity of project TFP-230. Three projects in the CIP Network alternative cross fish-bearing streams (TFP-078, TFP-079, and TFP-211). Additional projects with potential impacts may be identified during project-level review.

7.2.4.2. TFP Network Alternative

Peregrine falcon and osprey, both WDFW priority species, are found in Downtown Bellevue. As noted above, peregrine falcon has been observed in the area near project TFP-230, and osprey has been observed near project TFP-173. Sixteen of the TFP Network alternative projects, identified in Table 7-8, potentially affect wildlife or vegetation resources. The Sound Transit East Link Extension project Final EIS and 2013 Addendum analyze potential impacts from widening the Bellevue Way SE footprint, including with the incorporation of the HOV lane in project TFP-242. Additional projects with potential impacts may be identified during project-level review.

7.2.5. Shorelines

This section discusses the potential impacts on shorelines and floodplains that might result from implementation of the proposed alternatives.

7.2.5.1. CIP Network Alternative

A project-level analysis will be conducted to determine impacts on shorelines and whether a conditional use permit would be required for the proposed activity. Project TFP-078 is being designed to allow for improvements to fish passage, water quality, and storm drainage and could improve conditions in the shoreline master program jurisdiction area.

7.2.5.2. TFP Network Alternative

A project-level analysis will be conducted on individual projects to determine how shorelines would be affected and whether a conditional use permit would be required for the proposed activity. Three projects in the TFP Network alternative are located in shoreline management areas. These projects are TFP-078, which would run along the west shore of Lake Sammamish; TFP-242 near the Mercer Slough; and TFP-244 adjacent to a portion of the southeast shore of Lake Washington. Three projects are located in or immediately adjacent to a floodplain, and could require design considerations to address potential flooding impacts. These projects are TFP-242 near the Mercer Slough, TFP-245 adjacent to a section of the Valley Creek floodplain, and TFP-251, which would cross Coal Creek and utilize the new culvert already planned for construction on Coal Creek Parkway over Coal Creek in 2013 and 2014. Cumulatively, the increase in impervious surface from the proposed projects may negatively affect shoreline functions by increasing runoff and associated pollutant loads to receiving water bodies; however, stormwater treatment for these projects will comply with applicable regulations.

As described in Section 7.2 above, new or expanded public rights-of-way are an allowable use within critical areas under BCC 20.25H.055.B. The City will comply with the applicable land use requirements for development in shoreline and floodplain areas.

7.3. Mitigation

Where unavoidable impacts to critical areas are identified in association with a project, mitigation is required in accordance with BCC 20.25H.210 through 20.25H.225. Priorities for mitigation are to avoid the impact, if possible, by not constructing the project; minimize impacts by limiting the degree or magnitude of the project or using other measures to reduce the impact; or perform the following mitigation activities:

- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment
- Reducing or eliminating the impact over time by preservation and maintenance operation during the life of the action, or
- Compensating for the impact by replacing, enhancing, or providing substitute resources or environments
- Monitoring and taking remedial action as needed.

If unavoidable impacts are identified, a mitigation and restoration plan must be prepared. This plan must identify plan phases; provide the mitigation and restoration plan details, provide the timing of the work; and include a monitoring program, contingency plan, and assurance devices. Temporary impacts must also be mitigated, but a mitigation and restoration plan may not be required.

Any necessary project mitigation will be in accordance with the City's Environmental Best Management Practices & Design Standards (Bellevue 2012c).

If an adverse impact is anticipated from one of the TFP projects included in either of the proposed alternatives, one or more of the mitigation measures described below could be implemented.

7.3.1. Geology and Soils

Site-specific earth resource impacts will be evaluated and mitigated through the environmental review process for individual projects. It is assumed that all road improvements proposed will conform to City policies and regulations, particularly in accordance with BCC 20.25H.125. Roadway development in areas of potentially unstable slopes would be mitigated to ensure stability and safety during and after construction. As part of project-specific design and review, alternative alignments within the same basic corridors that reduce disturbance to critical areas would be examined.

7.3.2. Wetlands

If a project results in impacts on wetlands, performance standards described in BCC 20.25H.100 would be implemented. Performance standards applicable to transportation projects within wetland areas include:

- Directing lights away from wetlands
- Routing toxic runoff away from wetlands

- Potentially allowing treated runoff to enter the wetland buffer
- Planting the outside edge of buffers with dense vegetation to limit pet or human use
- Applying pesticides, insecticides, and fertilizers within 150 feet of the edge of the buffer in accordance with the City's Environmental Best Management Practices & Design Standards (Bellevue 2012c).

Direct impacts on wetlands would be mitigated according to BCC 20.25H.105, with mitigation selected in the following order of preference:

1. Restore wetlands on upland sites that were formerly wetlands
2. Create wetlands on disturbed upland sites, such as those supporting primarily non-native vegetation, in areas where existing hydrology would support a wetland
3. Enhance significantly degraded wetlands.

Direct impacts on wetland buffers would be mitigated in the following order of preference:

1. On-site, through replacement of lost critical area buffer
2. On-site, through enhancement of the functions and values of remaining critical area buffer
3. Off-site, through replacement or enhancement, in the same sub-drainage basin, or
4. Off-site, through replacement or enhancement, out of the sub-basin drainage basin but in the same drainage basin.

Table 7-10 shows the mitigation ratios for wetlands that would be directly affected. These ratios may be increased if the proposed mitigation would result in a lower category of wetland or reduced functions compared to the affected wetland.

Table 7-10. Wetland Mitigation Ratios

Wetland Category	Acreage Affected	Replacement Acreage
Category I	1	6
Category II	1	3
Category III	1	2
Category IV	1	1.5

Source: BCC 20.25H.105.C.1.

7.3.3. Aquatic Resources

If a project affects aquatic resources, performance standards described in BCC 20.25H.080 would be implemented on sites with a Type S or F stream or associated buffer. Performance standards applicable to transportation projects include:

- Directing lights away from streams

- Routing toxic runoff from new impervious areas away from streams
- Allowing treated water to enter the critical area buffer of streams
- Planting the outer edge of the stream critical area buffer with dense vegetation to limit pet or human use
- Applying pesticides, insecticides, and fertilizers within 150 feet of the edge of the stream critical area buffer in accordance with the City's Environmental Best Management Practices & Design Standards (Bellevue 2012c), as currently published or hereafter amended (Ordinance 5680).

Direct impacts on streams must be mitigated, and a mitigation plan is required. Direct impacts on streams or associated buffers would be mitigated in the following order of preference, as required by BCC 20.25H.085:

- On-site, through replacement of lost critical area buffer
- On-site, through enhancement of the functions and values of remaining critical area buffer
- Off-site, through replacement or enhancement, in the same sub-drainage basin, or
- Off-site, through replacement or enhancement, out of the sub-basin drainage basin but in the same drainage basin.

The required replacement ratio of streams and stream buffers is one-to-one (1:1); however, the City may increase the ratio at its discretion.

If a project results in allowable development within a floodplain, the City will implement performance standards described in BCC 20.25H.180. If mitigation is required it will comply with the requirements in BCC 20.25H.220, which could include a mitigation and restoration plan as part of the project's permit or approval process.

Project-specific mitigation measures will be developed during individual project-level analysis. Depending on project impacts, fish habitat restoration may be included in mitigation plans. Examples of habitat restoration projects include enhancement or creation of pools and side channel habitat, installation of large woody debris, and wetland enhancement projects.

7.3.4. Wildlife and Vegetation

A project-level analysis would also be conducted to determine the presence or potential presence of other species of local importance within areas that would be affected by the proposed projects; appropriate avoidance or minimization measures would be determined at that time. The potential presence would be determined by the presence of potentially suitable habitat for these species, even if the species itself is not documented. If it is found that a species of local importance, or potentially suitable habitat for a species of local importance, is present in a project area, performance standards described in BCC 20.25H.160 would be implemented. If performance standards cannot be met due to infeasibility, mitigation measures would be implemented, as

described in BCC 20.25H.210 through 20.25H.225. This would require the development of a wildlife management plan in consultation with WDFW.

A habitat assessment consisting of an investigation of the site to evaluate the potential presence or absence of designated species of local importance or habitat for species of local importance would also be required. A habitat assessment includes preparation of a critical areas report assessing habitat for species of local importance, including the following site- and proposal-related information at a minimum:

- A detailed description of vegetation on and adjacent to the site
- Identification of any species of local importance that have a primary association with habitat on or adjacent to the site, and assessment of potential project impacts on the use of the site by the species
- A discussion of any federal, state, or local special management recommendations, including WDFW habitat management recommendations, that have been developed for species or habitats located on or adjacent to the site
- A detailed discussion of the direct and indirect potential impacts on habitat by the project, including potential impacts on water quality
- A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed use or activity, and to be conducted in accordance with the mitigation sequence set forth in BCC 20.25H.215
- A discussion of ongoing management practices that will protect habitat after the site has been developed, including proposed monitoring and maintenance programs (Ordinance 5680).

Additional species may be added to the list of species of local importance prior to project-level analysis for individual TFP projects. Habitat assessments prepared for individual projects will use the most current list available in BCC 20.25H for analysis purposes.

7.3.5. Shorelines

Adverse impacts on shorelines would be mitigated in accordance with BCC 20.25H.118. Direct impacts on shorelines and shoreline critical area buffers would be mitigated in the following order of preference:

- On-site, through replacement of lost critical area buffer
- On-site, through enhancement of the functions and values of the remaining critical area buffer
- Off-site, through replacement or enhancement, in the same sub-drainage basin, or
- Off-site, through replacement or enhancement, out of the sub-basin drainage basin but in the same drainage basin.

Mitigation off-site and out of the drainage basin will be permitted only through a critical areas report. Shoreline critical area buffers that are disturbed or affected would be replaced at a ratio of one-to-one (1:1).

7.4. Significant Unavoidable Adverse Impacts

Significant adverse impacts would be avoided or minimized through implementation of mitigation measures as described in Section 7.3. Although the proposed projects would be designed to minimize or avoid adverse impacts, it is possible that such impacts may occur. The proposed projects would increase pollution-generating impervious surfaces within Bellevue and would reduce the amount of vegetative cover available. Stormwater would be treated as required, and current BMPs would be employed to reduce volumes of stormwater runoff from reaching streams or rivers. The increase in impervious surface would likely result in an increase in stormwater volumes entering streams and rivers, however, and could result in a corresponding increase in associated pollutants.

Chapter 8. References

AGC (Association of General Contractors) and the Fugitive Dust Task Force. 1997. Guide to Handling Fugitive Dust from Construction Projects. Seattle, WA.

Barnard, R.J., J. Johnson, P. Brooks, K.M. Bates, B. Heiner, J.P. Klavas, D.C. Ponder, P.D. Smith, and P.D. Powers. 2013. Water Crossing Design Guidelines. Washington Department of Fish and Wildlife. Olympia, WA.

Bellevue, City of. 2006. Final Environmental Impact Statement for the City of Bellevue 2006–2017 Transportation Facilities Plan. Bellevue, WA.

———. 2007. Final Environmental Impact Statement for the Bel-Red Corridor Project. Bellevue, WA.

———. 2009a. Pedestrian and Bicycle Transportation Plan Update. Bellevue, WA. Available at: http://www.bellevuewa.gov/pdf/Transportation/2011_PedBikeProgressReport.pdf.

———. 2009b. Final Environmental Impact Statement for the City of Bellevue 2009–2020 Transportation Facilities Plan. Bellevue, WA.

———. 2009c. Addendum to Final Environmental Impact Statement for the Bel-Red Corridor Project. February 12, 2009. Bellevue, WA. Available at: http://www.bellevuewa.gov/bel-red_feis.htm.

———. 2009d. Bellevue Urban Wildlife Habitat Literature Review. Bellevue, WA.

———. 2010. Comprehensive Plan and Plan Amendments for 2012. City of Bellevue. Bellevue, WA.

———. 2011a. Mode Share Survey for Downtown Summary Report, Bellevue, WA. Available at: http://www.ci.bellevue.wa.us/modeshare_survey.htm.

———. 2011b. Pedestrian and Bicycle Transportation Plan Progress Report. Bellevue, WA.

———. 2012a. Residential Traffic Guidebook. Updated July 2012. Available at: http://www.ci.bellevue.wa.us/pdf/Transportation/Guidebook_Web.pdf.

———. 2012b. Bellevue 2011 Greenhouse Gas Emissions Inventory. Updated December 2012

_____. 2012c. Environmental Best Management Practices &Design Standards. City of Bellevue Parks & Community Services. Available at: http://www.bellevuewa.gov/Parks_Env_Best_Mgmt_Practices.htm.

———. 2013. Critical Areas Maps. City of Bellevue IT Department, GIS Services. Bellevue, WA.

Center for Watershed Protection. 2003. Impacts of Impervious Cover in Aquatic Systems. Center for Watershed Protection. Ellicot City, MD.

Ecology (Washington State Department of Ecology). 2008a. Leading the Way: Implementing Practical Solutions to the Climate Change Challenge. Ecology Publication #08-01-008. November.

———. 2008b. State Environmental Policy Act (SEPA) Implementation Working Group: Report to the Climate Action Team. Appendix G. SEPA Mitigation Strategies for Climate Change Impacts.

EPA (U.S. Environmental Protection Agency). 1992. Guidelines for Modeling Carbon Monoxide from Roadway Intersections. EPA-454/R-92-005. Office of Air Quality Planning and Standards. November.

Federal Transit Administration. 2006. Transit noise and vibration impact assessment. (FTA-VA-90-1003-06.) Office of Planning and Environment. Washington, D.C.

FHWA (Federal Highway Administration). 1998a. FHWA Traffic Noise Model,® Version 1.0: User's Guide. Report No. FHWA-PD-96-009 and DOT-VNTSC-FHWA-98-1. Prepared by Anderson, G.S., C.S.Y. Lee, G.G. Fleming, and John A. Volpe. National Transportation Systems Center, Acoustics Facility. Cambridge, MA. January.

_____. 1998b. FHWA Traffic Noise Model (FHWA TNM ®) Technical Manual. FHWA-PD-96-010. DOT-VNTSC-FHWA-98-2. Final report, February 1998. Cambridge, MA.

_____.2004. FHWA Traffic Noise Model. Highway Traffic Noise - Release and Phase-In of the FHWA Traffic Noise Model Version 2.5. http://www.fhwa.dot.gov/environment/noise/traffic_noise_model/tnm_v25/other/tnm25fhwamemo.cfm

_____. 2012. Interim Guidance on Mobile Source Air Toxics. Available at: http://www.fhwa.dot.gov/ENVIRONMENT/air_quality/air_toxics/Policy_and_guidance. March 10, 2013.

Hruby, J. 2004. Washington State wetland rating system for western Washington – Revised. Washington State Department of Ecology Publication #04-06-025. Olympia, WA.

IPCC (Intergovernmental Panel on Climate Change). 2007. Climate Change 2007: Synthesis Report. November.

King County Metro. 2012. King County Metro Transit Strategic Plan for Public Transportation 2011-2021, adopted July 2011 and revised August 2012. Available at: http://issuu.com/metro-transit/docs/strategic-plan-2011-2021/1.

KJS Associates, Inc. 1995. Guidebook for Conformity on Project-Level Air Quality Analysis Assistance for Nonattainment Areas. September.

Lewis, J. and J. Azerrad. 2004. Pileated Woodpecker. Pages 29-1 to 29-9 in E. Larsen, J.M. Azerrad, N. Nordstrom, editors. Management Recommendations for Washington's

Priority Species, Volume IV: Birds. Washington Department of Fish and Wildlife. Olympia, WA.

PSRC (Puget Sound Regional Council). 2010. Transportation 2040 Final Environmental Impact Statement. Seattle, WA.

Sound Transit (Central Puget Sound Regional Transit Authority). 2011. East Link Project Final Environmental Impact Statement. Prepared by Sound Transit, Washington State Department of Transportation, and Federal Transit Administration. Seattle, WA.

_____. 2013. East Link Extension 2013 SEPA Addendum. Attachment E1 Noise Technical Memorandum—Proposed Refinements, Table A6. March. Available at: http://www.soundtransit.org/x11885.xml.

WDFW (Washington Department of Fish and Wildlife). 2003. Design of Road Culverts for Fish Passage. Washington Department of Fish and Wildlife. Olympia, WA.

_____. 2011. Priority Habitats and Species database. Washington Department of Fish and Wildlife. Olympia WA.

WSDOT (Washington State Department of Transportation). 2009. Washington State Intersection Screening Tool (WASIST) User's Manual, Version 2.0. June.

Chapter 9. Distribution List

A notice of availability or a copy of the Draft EIS was sent to the following agencies and organizations. A notice of availability was also published in the City's Weekly Permit Bulletin. The Bulletin is posted on the City website at: http://www.bellevuewa.gov/weekly_permit_bulletin.htm. An alert email is sent to those who sign up for the alert service when a new Bulletin is posted, and the City mails hard copies of the Bulletin to anyone who requests to be on the City's permit mailing list.

Federal Agencies

U.S. Environmental Protection Agency, Region 10
Federal Highway Administration, Washington Division
U.S. Department of Housing and Urban Development, Region 10

Tribal, State, and Regional Agencies

Muckleshoot Indian Tribe/Fisheries Department
Suquamish Tribe
Snoqualmie Nation
The Tulalip Tribes
Washington State Department of Commerce
Washington State Department of Ecology
Washington State Department of Fish and Wildlife
Washington State Department of Social and Health Services
Washington State Department of Transportation
Puget Sound Clean Air Agency
Puget Sound Partnership
Sound Transit
Puget Sound Regional Council
Puget Sound Energy

County Agencies

King County Department of Development and Environmental Services
Office of the King County Executive
King County Department of Transportation
King County Department of Transportation, Metro Transit Division

Cities and Towns

City of Issaquah
City of Kirkland, Planning Department
City of Medina
City of Mercer Island
City of Newcastle
City of Redmond, Planning Department
City of Renton
Town of Clyde Hill
Town of Hunts Point
Town of Yarrow Point
Beaux Arts Village

Libraries and School Districts

Bellevue Regional Library, Main Branch
Lake Hills Library
Newport Way Library
Seattle Public Library, Documents Unit
University of Washington College of Architecture and Urban Planning Library
Bellevue School District
Issaquah School District

City Associations

Bellevue Chamber of Commerce
Bellevue Downtown Association
East Bellevue Community Council
Seattle Chamber of Commerce

Media

Daily Journal of Commerce
Seattle Times
Seattle Post Intelligencer
Bellevue Reporter

Appendix A

Comments Received on the Draft Environmental Impact Statement

Comments were received from three parties: The Muckleshoot Indian Tribe Fisheries Division, Kemper Development Company, and Wright Runstad & Company.

From: Karen Walter [mailto:KWalter@muckleshoot.nsn.us]
Sent: Friday, May 10, 2013 2:23 PM
To: LeClair, Kevin
Subject: Bellevue's 2013-2024 Transportation Facility Plan, 12-127104-LE, Draft Environmental Impact Statement

Kevin,

We have reviewed Bellevue's the Draft Environmental Impact Statement for the 2013-2024 Transportation Facility Plan. We offer the following comments in the interest of protecting and restoring the Tribe's treaty protected fisheries resources.

1. As this is a long-range planning document and environmental assessment, we recommend that the City plan now to make all existing fish passage barrier culverts fish passable in the planning area under either the existing CIP network plan or the proposed Transportation Facilities Plan Network alternatives. We recognize that the projects will be done individually and over time; however, in our experience, it is best if fish passage barrier projects are included early in the planning and conducted when there is construction work already occurring in the vicinity. While, there are some culvert projects listed within Table 2-1 but there may be other barrier culverts that are not fully identified or described and should be as part of an individual road project identified in the plan.

2. When planning and designing replacement and extended culverts affected by the chosen alternative and assuming that the stream crossing cannot be removed, we recommend that the City use either a bridge structure that avoids the affected stream channels and their floodplains or WDFW's stream simulation culvert design method where a culvert, rather than a bridge, is the appropriate crossing method. The DEIS suggest this will be the approach used by the City, but we wanted to make sure the City knows what our recommendations are, too. Please note that WDFW has updated its 2003 Fish Passage Guidelines (referenced in the DEIS) and is now using the 2013 Water Crossing Design Guidelines (see http://wdfw.wa.gov/publications/01501/). This is the manual that should be used for any new, replacement, modified or extended culvert projects.

3. We also recommend that coordinate with us early for projects that affected wetlands and aquatic resources, generally as shown in Tables 7-8 and 7-9. Early coordination will ensure that issues have a greater chance for resolution, potentially avoiding delays in the SEPA and permitting processes.

We appreciate the opportunity to review this proposal and look forward to the City's responses. Please let me know if you have any questions.

Thank you!
Karen Walter
Watersheds and Land Use Team Leader

Following are responses to issues raised in the Muckleshoot Indian Tribe comment communication.

1. Existing culverts that are fish passage barriers.

City response: Table 7-9 indicates the TFP projects that cross over or are in the vicinity of streams. For the Final EIS, Table 7-9 has been revised to clarify which projects are expected to improve conditions for fish passage and the associated stream. Table 7-5 indicates the fish species present in streams. As indicated in Section 7.2.3 of the Draft EIS, it is anticipated that four proposed TFP projects (TFP-078 on West Lake Sammamish Parkway, TFP-210 on 124th Avenue NE, TFP-215 on NE 16th Street and TFP-241 on 120th Avenue NE) will improve conditions for fish passage.

For the Final EIS, Table 2-1 descriptions of TFP-211 (NE 6th Street extension to 120th Avenue NE) and TFP-215 (NE 16th Street in the Bel-Red area) have been augmented to include information about anticipated treatment of stream crossings. Other projects are not yet as advanced in design to know details of crossing treatment or impact.

In addition to fish passage barriers addressed in conjunction with transportation projects, the City has a Fish Passage Improvement Program (CIP-D-81) that addresses key fish passage barriers and a Stream Channel Modification Program for improving in-stream habitat for fish. The City also has a major project now underway to replace the culvert under Coal Creek Parkway with a fish-friendly bridge (CIP D-103) and planned projects to restore the West Tributary and Goff Creeks in the Bel-Red Area, including replacement of fish-blocking culverts under Bel-Red Road.

2. Design of stream crossings

City response: City code (BCC 20.25H.055C.3.e) specifies that culvert expansions shall be considered new culverts and are required to be designed in accordance with "Design of Road Culverts for Fish Passage" now or as hereafter amended (see below) when the expansion is associated with a project increasing vehicular capacity and (i) there are fish present downstream; (ii) there is potential fish habitat upstream; and (iii) the benefits of so designing the culvert are substantial when compared to expanding the culvert based on its then-existing design. In most cases, the replacement is an open bottom box culvert and in some cases, the analysis may show a bridge is the preferred design (as, for example, in the Coal Creek Parkway crossing mentioned in #1 above).

Thank you for noting the new WDFW 2013 "Water Crossing Design Guidelines". As noted above, City code indicates these new Guidelines will be a primary resource for addressing stream crossings in Bellevue. The Final EIS includes reference to this new document, where appropriate.

3. Coordination with Tribe for projects that affect wetlands and aquatic resources.

City response: The City regularly invites the Muckleshoot Tribe, agencies and other stakeholders to engage early in the design process on projects, including those identified in the proposed TFP. Hearing about concerns early in the process can help to resolve potential problems and avoid delay at a later stage.

The following communication was received from Kemper Development Company.

Kemper Development Company

May 13, 2013

Kevin LeClair,
kleclair@bellevuewa.gov (sent via email)
City of Bellevue
450 110th Ave NE
P.O. Box 90012
Bellevue, WA 98009

Ref: Comments concerning DEIS for the 2013 – 2024 Transportation Facility Plan

Dear Mr. LeClair:

This letter contains comments on behalf of Kemper Development Company concerning the Draft Environmental Impact Statement issued by the City of Bellevue for the 2013 – 2024 Transportation Facilities Plan. We appreciate the opportunity to ask the questions below and make comments also.

Kemper Development Company supports the nine projects shown below for the Central Business District. These projects will support planned development in the CBD by facilitating ingress, egress and circulation with in the CBD. We believe the City will fund these projects in the future since they are necessary to continue the plan for the CBD as adopted by the City.

1. For downtown Bellevue, 9 projects are listed and shown in the table below (source: pp. 2-5 through 2-8). "None" refers to funding being inadequate for implementation.

TFP #	Project Location	Project Elements Implemented "TFP Network"	Project Elements Implemented "CIP Network"
TFP-110	110th NE from NE 6th to NE 8th widening	Full implementation	Full implementation
TFP-190	NE 2nd from Bellevue Way to 112th NE widening	None	None
TFP-193	NE 10th at I-405, southbound off-ramp	None	None
TFP-197	NE 2nd Extension and I-405 half-diamond	None	None
TFP-216	112th/NE 2nd Realignment	Full Implementation	None

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Kemper Development Company, Post Office Box 4186, Bellevue, WA 98009, (425) 646-3660

TFP-219	NE 8th/106th NE, realignment to south to allow 3rd westbound lane	Full Implementation	None
TFP-222	Bell. Way/NE 4th,add southbound right-turn lane	Full Implementation	None
TFP-223	Bell. Way/NE 8th, add southbound right-turn lane	Full Implementation	None
TFP-225	Bell. Way/NE 2nd, add northbound right turn lane and 2nd southbound left-turn lane	Full Implementation	None

2. With regard to the Wilburton Mobility Management Area exceeding the allowed .9 Volume to Capacity Ration we do not support raise the V/C Ration to .95. Has the City evaluated the V/C Ratio with additional improvements at the two intersections with Level of Service "F"? These intersections are NE4th St and 116th St and NE 8th St and 120th Ave NE. Also, if these intersections cannot be improved then we urge other improvements within the Wilburton Grid.

3. Chapter 1 refers to a "fully-financed" CIP alternative (p. 1-1). However, the proposed TIP provided to the Transportation Commission on 9-May-2013 showed 37 projects from the Adopted 2013-2124 CIP. About 63% of the total cost was shown as unfunded. Which is correct?

4. In Chapter 3, one downtown intersection exceeds the V/C standard of 0.95: 112th NE/NE 8th in 2012 (p. 3-6). Yet, a December 13, 2012, presentation to the Transportation Commission suggested this intersection would operate at LOS D in 2030 (slide #32, "Downtown Transportation Demand Modeling). Admittedly, these two estimates were based on different measures and perhaps difference networks, but how can the wide difference be reconciled? Did the estimate in the December presentation follow proper procedures for estimating LOS?

5. Why does Section 3.2.2 show some projects as included in TFP networks, which, according to Chapter 2 have no funding? For example, Table 3-5 (p. 74) shows TFP # 190 "proposed" under the TFP Network Alternative. However, Table 2-1 (p.45) shows "none" for implementation under both the TFP and CIP networks.

6. Concerning the values in the CBD TAZ areas we do not understand why the City does not use the maximum FAR values to determine the amount of square footage that can be calculated. And explanation of how and why the City arrives at the values shown in the DEIS would be useful. This seems to be particularly applicable in the CBD O-1 Zone.

Page **2** of **3**

Your attention to our questions and suggestions in finalizing the 2013 – 2024 Transportation Facilities Program will be very much appreciated.

Sincerely,

Bruce L. Nurse, Vice President – Transportation
Kemper Development Company
575 Bellevue Square
Bellevue, WA 98004
425-460-3660

Following are responses to issues raised in the Kemper Development Company comment communication.

1. Support for nine projects in Downtown.
   City response: Noted.

2. The areawide level of service standard for Wilburton should not be increased to v/c 0.95 (from the current adopted standard of v/c 0.90). Has the City evaluated impacts to areawide level of service that might be associated with additional improvements to the two intersections with forecast LOS of F: 116th Avenue NE/NE 4th Street and 120th Avenue NE/NE 8th Street?

   City response: The level of service standard for Wilburton is a policy issue. The current areawide standard (v/c 0.90) was established in 2009, following completion of the Wilburton and Bel-Red subarea planning processes. The City Council may choose to reassess the level of service standard for Wilburton in conjunction with the 2014 Comprehensive Plan update process (the public outreach component of this initiative is now getting started). The City has not conducted analysis in conjunction with the TFP to determine the effect on future areawide level of service that might be associated with improvements to the two intersections cited.

3. The Draft EIS refers to the CIP as "fully-financed", yet the TIP indicates that some projects listed in the CIP lack full funding.

   City response: Both the 7-year CIP and the12-year TFP are financially-constrained plans, meaning estimated project costs must be matched by realistic revenue forecasts. By contrast, the City's Local Transportation Improvement Program (or TIP, required by the State and updated annually) can include all projects (and costs) the City would implement if funding were available.

   The CIP is a fully-financed 7-year plan. This does not mean every project or investment identified in the plan is fully funded. Each project description included in the plan indicates whether the project is fully funded or which phases or scope elements are funded. There are several reasons why projects in the "fully-financed" CIP may not have sufficient funding to be fully implemented. These include,

   - Some projects in the CIP are planned for implementation by phase (usually design, property acquisition, or construction phases) or by segment or "stage" (usually a division of a project's full length or inclusive of certain elements of project's scope but less than the full or ultimate scope). The TIP project amount typically shows the estimated full

project cost. The CIP allocation covers the project elements in the phase(s) or segment(s) that the City anticipates implementing in the CIP timeframe.

- Some projects are assumed to be built by others. These include projects associated with enhanced access to/from I-405 (at NE 2nd Street, NE 6th Street, NE 10th Street)

4. The 112th Avenue NE/NE 8th Street intersection exceeds its level of service standard under existing and forecast (2024) conditions. However, a presentation to Transportation Commission regarding the Downtown Transportation Plan update shows this intersection operating significantly better in 2030.

City response: The Downtown Transportation Plan presentation to the Transportation Commission includes forecast of off-peak conditions as well as peak period conditions. The particular slide referenced shows forecast conditions in the off-peak period. [In addition, the unit of measure in the slide referenced (average delay at intersection) differs from the measurement used for the TFP analysis (volume/capacity), so the measurements are not directly comparable.] Because of its location at a highway access point and along a key east-west corridor, this intersection is expected to continue to have peak period conditions that exceed the areawide level of service standard.

5. Why are some projects listed in the TFP Network that appear to not have funding? An example is TFP-190, which is listed in the TFP Network, but has no elements anticipated to be implemented in the TFP.

City response: All projects in the TFP will have some level of funding allocation. In some cases, the level of funding is less than needed to implement the improvement. Reasons why a project may have less than full funding include:

- Timing—a project may be started in TFP timeframe, but completed outside of the 2024 horizon year.
- Phasing—a project may be planned for implementation in phases or segments and the TFP allocation funds one or more phases but not the entire project scope. (See response to comment #3 above.)
- Lead agency—in some situations, the City has a stake in advancing a project, but is not the appropriate entity to lead the project funding or implementation (examples include TFP-193 and TFP-197, which add access to/from I-405; the City has an interest in advancing these projects, but the State is the logical lead for funding and implementation).

In the example noted, TFP-190 (widening of NE 2nd Street from Bellevue Way to 112th Avenue NE), there is a footnote to Table 3-5 that flags those projects that will add capacity and are anticipated to be open for service in 2024. TFP-190, though listed in the table as an element of the TFP Network Alternative, does not have the footnote marker and thus is not an element of the network expected to be in service in 2024. Figure 1-1, the EIS Network Alternatives map, clearly indicates which projects are expected to be open for service in 2024 and which are not.

6. Why do the Land Use projections for TAZs in downtown show square footage that is less than full buildout allowed under the code (maximum FAR).

City response: Land use forecasts predict the amount of development that is expected to occur within an area given a horizon year. The forecasts for the 2013-2024 Transportation Facilities Plan are based primarily on development opportunities and growth trends within the City, and as stated in section 1.2.3 of the Draft EIS, t*his EIS presents the potential citywide impacts that could occur if or when "…1. The City's 12-year land use growth projections are*

realized …". Square footages used in the DEIS are based on forecasted job and population growth that has been allocated to forecast analysis zones (FAZs) across the region. These forecasts are further distributed within the City's Transportation Analysis Zones (TAZs) based on development potential and growth trends. In some cases, the forecast may assume that a block or area is developed at its maximum density by the given horizon year. In other cases, a specific block or area will not be forecast for redevelopment to the maximum density by 2024.

As further noted in section 1.2.3 of the Draft EIS,

> *…because this is a non-project EIS, it is not possible to predict the exact location or amount of new development between the present and 2024. In addition, new development may be permitted on parcels for which the land use estimates did not project sufficient growth; therefore,* ***the analysis presented in this EIS must be regarded as a comparison of potential impacts rather than a strict projection****. Actual land use growth and its impacts on the transportation system and other elements of the built and natural environment are not likely to exceed the cumulative land use projections and impacts disclosed in this TFP EIS.* (Emphasis added.)
>
> *If future growth exceeds estimates used in this EIS analysis, the City can address these changes by one, or a combination of, the following options:*
>
> - *Address the additional growth and impacts as part of a future TFP EIS. The TFP and its related EIS are updated approximately every two to three years. Updates are a crucial part of the process so that the reality of actual development patterns, updated land use growth projections, adjustments to the existing transportation network and the evolution of future transportation plans are reflected in the citywide impact analysis.*
> - *Issue a supplement to the 2013–2024 TFP EIS to incorporate the additional land use growth and its associated impacts.*
> - *Require the development to implement additional transportation system improvements, reduce the scope of the proposed development, or defer the development until the CIP and/or TFP are updated to include such improvements. Improvements required of developers as part of the development review process are included in subsequent TFP networks, once those improvements are guaranteed for implementation.*

The following communication was received from Wright Runstad & Company.

WRIGHT
RUNSTAD
&COMPANY

PRINCIPALS:
H. JON RUNSTAD
WALTER R. INGRAM
GREGORY K. JOHNSON

May 13, 2013

Mr. Michael Ingram
City of Bellevue
PO Box 90012
Bellevue, WA 98009

2013-2024 TRANSPORTATION FACILITIES PLAN
DRAFT EIS COMMENTS

Dear Mr. Ingram:

On behalf of The Spring District development, this letter provides comments in regard to the City's 2013-2024 Transportation Facilities Plan (TFP) Draft Environmental Impact Statement (DEIS).

1. The TFP "Plus" alternative should be adopted as the preferred alternative. This alternative includes full implementation of TFP-209, 15th Street between 116th Ave NE and 120th Ave NE. This segment of NE 15th Street provides an important connection between the hospital district, BelRed, the 120th Street light rail station and downtown.

2. Further develop and define the alternative analysis background information and rerun the alternatives analysis.

   As stated in Appendix C of the TFP DEIS, transportation mode choices and travel patterns are a result of land use patterns and planned network improvements. It appears that baseline assumptions for the Mobility Management Areas in 2013 are used in the 2024 model analysis. This could result in inaccurate model results as land use will greatly change during this time in MMA's such as Bel-Red. Assumptions that should be updated and expanded to include:

   a. Commute Mode Share data based on 2008 survey, show that the Bel-Red MMA has an 85% drive alone, and 2% bus mode choice. As the Bel-Red MMA redevelops to currently adopted zoning the mode share will greatly shift, lowering the drive alone percentage significantly.
   b. Sound Transit East Link will be operational in 2024. The DEIS states it includes the Sound Transit East Link Integration table, but does not elaborate on the details of what is included in regard to the light rail and land use. The impacts of light rail to the roadway network and commute mode share need to be updated to reflect 2024 ridership use as a result of the light rail.

INVESTMENT BUILDERS AND REAL ESTATE ASSET MANAGERS
SUITE 2700, 1201 THIRD AVENUE, SEATTLE, WASHINGTON 98101-3274
TELEPHONE (206) 447-9000 FAX (206) 223-3221

Mr. Michael Ingram
May 13, 2013
Page 2

3. Increase the Wilburton MMA maximum average volume to capacity ratio (v/c) from 0.90 to 0.95.

   a. The Wilburton MMA sits between the Downtown and Bel-Red MMA's which each have a 0.95 v/c and similar projected land use per Table C-2 of the DEIS.
   b. Major City CIP projects such as the NE 4th Street extension and 120th Avenue NE go through the Wilburton MMA. These projects connect the Downtown and Bel-Red MMA's to regional transportation networks as well as providing connectivity through Bellevue.
   c. The Wilburton MMA area, which is a much smaller area from what is often considered the Wilburton area, is made up of mostly office and retail space with 76-single family dwelling units and 577 multi-family dwelling units.

Please feel free to contact me if you have any questions on the comments provided.

Sincerely,

Gregory K. Johnson
President

GKJ/jkh

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Following are responses to issues raised in the Wright Runstad & Company comment communication.

1. TFP Plus alternative should be adopted as the preferred alternative.

   City response: Noted. This environmental analysis has included consideration (under the TFP Network "Plus" scenario) of the NE 15th Street link from 116th Avenue NE to 120th Avenue NE. The City Council will determine the projects that are included in the final, adopted TFP.

2. Analysis of 2024 conditions needs to use valid assumptions for mode share in the 2024 horizon year, when land uses in some areas, such as Bel-Red, will be different and East Link will be operational.

   City response: The travel demand model actually does not assume anything about mode share. It computes mode share by taking into account both the forecast 2024 future land use and transit service, including East Link Light rail service. Forecast 2024 land use is summarized in Table D-2 and detailed in Table E-1. Changes in land use type and intensity as well as in transit service will impact travel demand and modes used. Transit service assumptions are consistent with the Sound Transit East Link Bus Rail Integration table. The result is the 2024 forecast by mode including both walk and park & ride access to transit. The information regarding commute modes (from the City Mode Share Surveys and the American Community Survey) included in Appendix C of the Draft EIS is intended as a point of reference regarding current conditions. It is not intended to characterize anticipated future

conditions. For this Final EIS, the text of the corresponding section (Appendix D, Trip Generation/Mode Choice) has been revised to clarify that mode choice is determined within the travel demand model (and that the survey data is jus a reference for current conditions).

3. Increase the Wilburton MMA maximum volume to capacity ratio (v/c) from 0.90 to 0.95.
   City response: The level of service standard for Wilburton is a policy issue. The current areawide standard (v/c 0.90) was established in 2009, following completion of the Wilburton and Bel-Red subarea planning processes. The City Council may choose to reassess the level of service standard for Wilburton in conjunction with the 2014 Comprehensive Plan update process (the public outreach component of this initiative is now getting started).

Appendix B

Scoping Notice, Comments, and Responses

2013-2024 Transportation Facilities Plan: Summary of Scoping Process & Comments Received

Prepared by Michael Ingram, Bellevue Transportation Department, December 12, 2012

A *Notice of Determination of Significance, Notice of Environmental Impact Statement Scoping Period, and Notice of Public Meeting* was published on October 25, 2012 in the City's Weekly Permit Bulletin (2 pages, posted at http://www.bellevuewa.gov/pdf/Land%20Use/10-25-12_WeeklyPermitBulletin.pdf).

The Weekly Permit Bulletin

October 25, 2012

Providing official notice of land use applications, meetings, decisions, recommendations, hearings, and appeals of land use decisions within the City of Bellevue

GENERAL INFORMATION REGARDING USE OF OPTIONAL DNS PROCESS

When the SEPA field indicates a **Determination of Nonsignificance (DNS)** is expected, the optional DNS process is being used and a DNS is likely. This may be the only opportunity to comment on the environmental impacts of the proposal. The proposal may include mitigation measures under applicable codes and the project review process may incorporate or require mitigation measures regardless of whether an Environmental Impact Statement (EIS) is prepared. The Threshold Determination will also be noticed in a subsequent issue of this Weekly Permit Bulletin. A copy of the subsequent Threshold Determination for the proposal may be obtained upon request.

Notice of Application

NOTICE OF APPLICATION
West Lake Sammamish Parkway Slide Repair
Location: 540 W Lake Sammamish Parkway SE
Neighborhood: Sammamish/East Lake Hills
File Number: 12-126716-LO
Description: Application for Critical Areas Land Use Permit approval to review completed emergency repairs to West Lake Sammamish Parkway to restore the road and adjacent slopes following a landslide in the winter of 2012.
Approvals Required: Critical Areas Land Use Permit approval and ancillary permits and approvals
SEPA: Exempt
Minimum Comment Period Ends: Thursday, November 8, 2012, 5 PM. Refer to page one for information on how to comment on a project.
Date of Application: October 9, 2012
Completeness Date: October 17, 2012
Applicant Contact: City of Bellevue, Transportation Department, Paul Krawczyk, 425-452-7905
Planner: Reilly Pittman, 425-452-4350
Planner Email: rpittman@bellevuewa.gov

NOTICE OF PUBLIC MEETING
Alamo Manhattan Main Street
Location: 10505 Main Street
Neighborhood: West Bellevue
File Number: 12-117760-LD
Description: Second public meeting to discuss the development of a multi-family, mixed-use project with 260 residential units, approximately 7,000 square feet of retail at the ground level, and underground parking with 319 spaces.
Approvals Required: Design Review approval and ancillary permits and approvals
SEPA: Determination of Non-Significance is expected. Refer to page one General Information Regarding Use of Optional DNS Process.
Public Meeting: Wednesday, November 14, 2012, 6:30 PM; Bellevue City Hall; 450 110th Ave NE.
Conference Room: 2E-106 (meet at Service First desk on 1st Floor
Date of Application: July 13, 2012
Completeness Date: August 2, 2012
Notice of Application Date: August 16, 2012
Applicant: Alamo Manhattan Main Street, LLC
Applicant Contact: Robert Lamkin; Hensley Lamkin Rachel, Inc., 972-726-9400 ext. 102
Planner: Sally Nichols, 425-452-2727
Planner Email: spnichols@bellevuewa.gov

Notice of Decision

NOTICE OF DECISION
Washout Way Trail Repair and Construction
Location: 5803 Forest Drive SE
Neighborhood: Somerset
File Number: 12-121501-LO
Description: Critical Areas Land Use Permit approval to repair and restore a portion of a nature trail that failed due to a small landslide, to construct 22 feet of timber boardwalk supported by Diamond Pier footings, and to construct 150 feet of nature trail supported by Envirolok bagged erosion control system. The project also includes installation of native plantings. The project is located within a Type F stream critical area buffer and a steep slope critical area.
Decision: Approval with Conditions
Concurrency Determination: N/A
SEPA: Determination of Non-Significance is issued. Refer to page one for how to appeal SEPA.
Appeal Period Ends: Thursday, November 8, 2012, 5 PM. Refer to page one for information on how to appeal a project.
Date of Application: August 8, 2012
Completeness Date: August 30, 2012
Notice of Application Date: September 6, 2012
Applicant Contact: Kevin Husemann, Bellevue Parks, 425-452-4154

THE WEEKLY PERMIT BULLETIN –October 25, 2012, Page 1

Planner: Kevin LeClair, 425-452-2928
Planner Email: kleclair@bellevuewa.gov

Notice of Recommendation

NOTICE OF PUBLIC HEARING, STAFF RECOMMENDATION AND SEPA DETERMINATION
2012 Annual Amendments to the Bellevue Comprehensive Plan (CPA)
Approvals required: Planning Commission recommendation after public hearing on proposed annual amendments to the Comprehensive Plan. The City Council takes final action under RCW 36.70A.130 and RCW 36.70A.470.
Decision: Recommendation
Public Hearing before the Planning Commission: 6:30 p.m., Wednesday, November 14, 2012, Council Conference Room, Lobby Floor, Bellevue City Hall, 450 110th Ave NE. Any person may participate in the public hearing by submitting written comments to the Director prior to the public hearing or by submitting written comments or making oral comments to the Planning Commission at the hearing. All written comments received by the Director will be transmitted to the Planning Commission no later than the date of the public hearing.
SEPA Determination: Determination of Non-Significance (DNS)
SEPA Appeal: Any appeal of this SEPA threshold determination must wait until final action is taken on this proposal by the City Council. Following final action by the City Council an appeal of the SEPA threshold determination may be filed together with an appeal of the underlying City Council action by petition to the Growth Management Hearings Board (LUC 20.35.250C).
SEPA Planner: Matthews Jackson, 425-452-2729
SEPA Planner email: mjackson@bellevuewa.gov
Concurrency Determination: N/A

A **Description** of the individual amendment under consideration follows.

Lorge-Benis
Description: Map change of .83 acres from PO (Professional Office) to CB (Community Business)
Location: 4307, 4317 and 4301 Factoria Blvd SE
File Number: 12-104629-AC
Subarea: Factoria
Neighborhood: Factoria
Staff Recommendation: Do not recommend approval.
Date of Application: January 31, 2012
Completeness Date: February 28, 2012
Applicant: Lorge-Benis
Applicant/Agent Contact: R.W. Thorpe and Assoc., Inc. 206-624-6239

Planner: Nicholas Matz AICP 425-452-5371
Planner email: nmatz@bellevuewa.gov

NOTICE OF DETERMINATION OF SIGNIFICANCE, NOTICE OF ENVIRONMENTAL IMPACT STATEMENT SCOPING PERIOD, AND NOTICE OF PUBLIC MEETING
2013-2024 Transportation Facilities Plan
Location: City Wide
File Number: 12-127104-LE
Description: The City of Bellevue Transportation Department is proposing to update the existing 2009-2020 Transportation Facilities Plan (TFP). The TFP is a financially constrained program of transportation improvements to be implemented over the next 12 years and provides the basis for the City's Transportation Impact Fee Program. The TFP serves as the City's intermediate-range transportation facility planning document.
EIS Required: The City of Bellevue (Lead Agency) has determined that this proposal is likely to have probable significant environmental impacts and an EIS is required.
Approvals required: City Council Adoption
SEPA EIS Scoping and Comment Deadline Ends: November 15, 2012, 5 p.m. Comments are invited on the scope of the referenced Environmental Impact Statement pursuant to WAC 197-11-408. Comments on the scope of the impacts to be analyzed may be submitted in writing through November 15, 2012 and should be addressed to the Lead Agency contact below. Agencies, affected tribes, and members of the public are invited to comment. Comments on the scoping of the EIS may address reasonable alternatives; probable significant adverse impacts; mitigation measures and impacts that are not significant and may be eliminated from detailed study. Areas of analysis preliminarily identified by the Lead Agency include transportation, air quality, land use, noise, aesthetic and elements of the natural environment. The proposed adoption of this citywide plan is a nonproject action as devined by WAC 197-11-704(b); additional project level review of impacts will occur at the time that individual projects are implemented.
Public Meeting/Open House: Scoping meeting scheduled for November 8 from 5:30-6:30PM at Bellevue City Hall, Room 1E-112.
Applicant Contact: Michael Ingram, City of Bellevue Transportation Dept., 425-452-4166
Applicant Contact Email: mingram@bellevuewa.gov
Mp
Lead Agency Contact: Kevin Leclair, 425-452-2928
Lead Agency Contact Email: kleclair@bellevuewa.gov

A public scoping meeting was held on November 8, 2012 at 5:30 p.m. in Room 1E-112, Bellevue City Hall. Following is a summary of the meeting.

CITY OF BELLEVUE
2013-2024 TRANSPORTATION FACILITIES PLAN
PUBLIC SCOPING MEETING
MINUTES

November 8, 2012 — Bellevue City Hall
5:30 p.m. — Conference Room 1E-112

STAFF PRESENT: Michael Paine, Development Services Department ;
Kevin LeClair, Development Services Department;
Michael Ingram, Transportation Department;
Eric Miller, Transportation Department

MEMBERS OF THE PUBLIC PRESENT: Jo Scott, Hal Scott

RECORDING SECRETARY: Gerry Lindsay

Environmental Planning Manager Michael Paine opened the meeting at 5:44 p.m.

Mr Paine provided an overview of State Environmental Policy Act (SEPA) requirements and procedures as they pertain to the proposed 2013-2024 Transportation Facilities Plan update now undergoing environmental review. The Transportation Facilities Plan (TFP) serves as the city's 12-year, or intermediate-range, transportation planning document. SEPA provides a procedural framework for considering environmental consequences in the decision making of state and local government and confers substantial authority to state and local government to make decisions on the basis of environmental values.

The Transportation Facilities Plan update, explained Mr. Paine, is considered a Nonproject action. He further noted that an Environmental Impact Statement (EIS) is required when there is a reasonable likelihood of more than a moderate adverse impact on environmental quality. An EIS for a Nonproject action is a comprehensive analysis of a plan or policy and involves an analysis of alternatives and the potential consequences of future project actions. The EIS identifies impacts of each alternative on various elements of the environment and suggests mitigation for impacts that are identified. The EIS takes into account application of existing regulations in evaluating cumulative impacts

"Scoping," explained Mr. Paine, refers to the process of narrowing the range of issues and alternatives that need to be evaluated in an EIS. The scoping comment period allows the public and other agencies to help identify those issues that should be addressed in the EIS. Generally, comments should be confined to: the range of reasonable alternatives; the environmental elements identified for study; proposed methodology for the analysis; the need for additional information; and, likely mitigation measures. The City will prepare a

record of the scoping process and provide a summary or "scoping report" in the Draft EIS.

Mr. Paine opened the floor to comments from the public.

There were no comments from the public.

Mr. Paine adjourned the meeting at 5:53 p.m.

Written comments were received from one individual, Jo Scott, via two communications, both dated November 15, 2012. The first is "Scott Comment on TFP EIS Scoping, 15 November 2012", followed by a separate "Scott Comment Addendum on TFP EIS Scoping, 15 November 2012." Written comments were also received from the Muckleshoot Indian Tribe Fisheries Division via email, 13 November 2012.

P.O. Box 40042
Bellevue, WA 98015-4042
Thursday, November 15, 2012

Kevin LeClair
Senior Land Use Planner
City of Bellevue
P.O. Box 90012
Bellevue, WA 98009-9012

Re: Public Comment on 2013-2024 Transportation Facilities Plan (TFP)
Environmental Impact Statement (EIS) Scoping, File 12-127104-LE

Dear Mr. LeClair:

Thank you for holding a public meeting on November 8th to discuss TFP EIS scoping. The following comments are offered in a spirit of cooperation, with deference to the Transportation Commission and City staff members who work so hard to make Bellevue a more livable community. Thank you.

I would like to dedicate these comments to the memory of my former employer, Dr. Lynton K. Caldwell of the School of Public and Environmental Affairs at Indiana University, who worked tirelessly to make the National Environmental Policy Act a reality. His 99th birth anniversary is November 21st.

To a large extent, the TFP EIS needs to be based on a more comprehensive and wide-ranging risk analysis than previous issues. It is commendable that our City intends to work closely with Sound Transit in developing this version. The success or failure of transportation facilities in Bellevue impacts our neighbors and the region, since we have three major freeways passing through at various levels of congestion.

These comments are suggestions for process improvement. At the outset, please state the City's intention to honor the SEPA rule to *"Encourage public involvement in decisions."*

AREAS OF ANALYSIS

A

According to the scoping notice, *"Areas of analysis preliminarily identified by the Lead Agency include transportation, air quality, land use, noise, aesthetic and elements of the natural environment."* Please use the language of the SEPA checklist [in WAC 197-11-960 *Environmental checklist*] to identify and organize areas of analysis in the TFP EIS. This will make it much easier to communicate with the public and facilitate downstream processes, which refer to the TFP EIS. Since this is a nonproject EIS, address the questions on the Supplemental Sheet for Nonproject Actions (part D of the environmental checklist).

Scott Comment on TFP EIS scoping, 15 November 2012 *Page 1*

A

When you identify potential adverse impacts, please focus your analysis on the following environmental elements. (Part D speaks to many of these areas.)

(1) Earth (including air)
(2) Water
(3) Plants
(4) Animals
(5) Energy and Natural Resources
(6) Environmental Health (including noise)
(7) Land and shoreline use
(8) Housing
(9) Aesthetics
(10) Light and glare
(11) Public Services
(12) Recreation
(13) Historical and cultural preservation
(14) Transportation
(15) Public Services
(16) Utilities

B

Alternatively, since the TFP EIS is often used with the *Bel-Red Corridor Final Environmental Impact Statement* for planning and justifying projects, you might find it convenient to use the same terms for comparison and flow through from the Bel-Red FEIS to the TFP EIS, as listed in Table 1-3 of the Bel-Red FEIS, *Summary of Impacts and Mitigation Measures for Bel-Red Corridor Alternatives*. However, my suggestion is to use the language of SEPA's environmental checklist, with a focus on Part D. This will streamline the process for the applicant and the public.

C

Please add public safety (to include school safety, pedestrian safety, and risk of infrastructure failure).

IDENTIFYING MITIGATION

D

When possible, refer to Bellevue City Code when specifying mitigation measures to avoid potential conflict and confusion. (A key example from the previous issue of the TFP EIS: fugitive dust emissions.) Incorporate the code by reference. It is then possible to specify additional measures when needed, but baseline must be code.

REFERENCING

E

Where possible, use *incorporation by reference* [WAC 197-11-625 and 754]; ensure that any documents or sections incorporated by reference are available to the public on-line via links from the City's TFP EIS webpage.

IDENTIFYING ALTERNATIVES

F

As presented in the scoping meeting, "no action" is a misnomer. Please use a more descriptive term, such as "funded projects," for this alternative.

F Please include a true "no action" (i.e., no TFP project) alternative for baseline environmental comparison. This becomes immensely valuable when justifying projects. When comparing alternatives, please look at system-wide impacts over the transportation network.

C Please add an alternative comprising the top three TFP projects needed for safety in each Mobility Management Area in the City, with special attention to seismic hazards and potential for roadway failure due to landslides. (By doing the risk assessment now, you will have laid the groundwork if the City must move quickly following a natural disaster.)

IDENTIFYING ADDITIONAL POSSIBLE ADVERSE IMPACTS

When there is an essential public facility in the immediate project vicinity, analyze effects on its operations, public health, and safety *in addition to* the environmental issues chosen for the TFP EIS.

G When proposed mitigation measures for a TFP project (such as neighborhood traffic calming or diversion) could affect the operational integrity of an essential public facility or pose potentially harmful environmental consequences, evaluate those impacts at the programmatic level (if known at the time). Alternatively (if side effects of mitigation could not be predicted at the time of TFP EIS issuance or even as late as the project EIS), provide a detailed addendum or supplement to the project-level EIS.

Since there are *known,* potential adverse impacts from the NE 5th Street traffic calming proposal as part of the NE 4th and 120th corridor project, those impacts can be addressed now, whether in the TFP EIS or an addendum to the project EIS. Please include impacts on operations of the essential public facility (Bellevue School District Transportation), as well as specific environmental and public safety effects.

EVALUATING CUMULATIVE CORRIDOR IMPACTS FOR PHASED PROJECTS

H When there is a roadway corridor being planned in phases, include a comprehensive assessment of its cumulative impacts at full build. Then assess impacts from ***not completing*** later segments (phases) of that corridor. An example which must be addressed now is the NE 15th/NE 16th corridor, a project which the Bel-Red Subarea Plan calls, *"critically important both to the functioning and character of the Bel-Red Subarea."* If it is truly critical, other capacity projects should take a back seat.

I If projects are being driven by nearby private development, name it. State the environmental consequences of timing. For example, if light rail and NE 15th are not in place by the time The Spring District office complex is fully populated, what are the consequences for the citywide and neighboring regional transportation networks?

Please let me know if there are questions about the intent or meaning of these comments.

Best wishes moving forward,

Jo Scott

Following are the City's responses to the issues raised in the first communication:

A. Use language of SEPA checklist to identify and organize areas of analysis in TFP EIS.

Response: The SEPA checklist is a tool to identify areas that are most impacted by a proposed project or program. While the City appreciates this comment from a stylistic and a future comparison standpoint, it is not necessary when drafting an environmental impact statement to analyze each area in detail, if impacts are moderate or less. The City issued a Determination of Significance for the proposed 2013-2024 TFP because, in view of environmental programs staff, some of the impacts of the proposal, when looked at cumulatively, were more than moderate and thus rose to the threshold sufficient to require an EIS. The goal of the scoping period is to identify which areas are likely to be adversely impacted by the proposal in order to analyze them in greater detail in the EIS. The proposed TFP is a non-project action in which primary impacts are to transportation as well as land uses adjacent to projects and elements of the natural environment. If, during development or review of the draft environmental impact statement (DEIS), impacts in other areas are identified, then a more in-depth investigation may be warranted at that time.

B. Alternatively, use terms in Bel-Red EIS Table 1-3

Response: The areas of focus for the analysis of the proposed 2013-2024 TFP will not necessarily match those in the Bel-Red Corridor Alternatives analysis, as the areas of impact may differ. A summary table is, however, often a useful format to show key impacts and differences between alternatives. The TFP EIS will, very likely, include such a summary table.

C. Include public safety—including school safety, pedestrian safety, and risk of infrastructure failure—as an area of analysis. Add an alternative comprising the top 3 projects needed for "safety" in each MMA (safety being defined to include vulnerability to natural hazards).

Response: Safety is a criterion used in the initial identification of candidate TFP projects and in the evaluation and prioritization of projects proposed for inclusion in 2013-2024 TFP. Safety is also a consideration in the selection process for projects in the 2013-2019 Capital Investment Program Plan, which are the projects included in the No Action alternative. Thus, safety considerations are integrated into the selection for projects in both the Action and the No Action alternatives. The EIS document will include general discussion of traffic safety. The EIS will also be augmented with a brief discussion of the general considerations involved in the design and construction of infrastructure to ensure its safe operation through a range of adverse environmental conditions, e.g., culvert sizing for excessive stream and flood flows and seismic reinforcements for earthquakes.

D. Include Bellevue code references when referring to mitigation.

Response: References to applicable City Codes or standards will be included whenever relevant.

E. Incorporate relevant regulations and documents by reference. Include links to references on the TFP webpage.

Response: References to applicable regulations and documents will be included where relevant. Links may be posted on the TFP webpage if there are references to regulations or documents that are particularly significant or difficult to locate.

F. Use a more accurate term for the "No Action" alternative. Include a "true" no action alternative.

Response: A more descriptive term, such as "Base Action" will be used for the base alternative that includes the 2013-2019 Capital Investment Program Plan (along with projects to be implemented by others). The proposed two alternatives cover the range of options that are reasonably anticipated as potential future courses of action. An alternative with no capital investment in transportation improvements is not considered a plausible scenario considering the capital improvement programs

that have already been adopted by City Council and transportation improvements anticipated to be implemented by others. The standards for preparation of an environmental impact statement call for analysis of all reasonable alternatives.

G. Analyze effects of projects on essential public facilities in vicinity of projects.

Response: The analysis will consider impacts on all adjacent land uses. A defining characteristic of essential public facilities is that they are public facilities which are typically difficult to site (WAC 365-196-550). To the extent that any potentially significant land use impacts are identified at such facilities, the analysis will include reference to the essential public facility siting process. The Comprehensive Plan, within the Capital Facilities Element, contains a process for identifying and siting essential public facilities. Any displacement of an existing or proposed essential public facility would follow the siting procedure in this section of the Comprehensive Plan.

H. For phased, corridor projects, assess cumulative impacts of full build out. Consider also implications if later phases are NOT built.

Response: The TFP analysis is for a 12-year horizon and considers cumulative project impacts at the level of detail that is understood at this time. Additional analysis is done at the time of project implementation and, for corridor projects, typically involves consideration of all linked segments or phases.

I. Timing of development and transportation improvements needs to be coordinated.

Response: As required by Washington State law (RCW 36.70A.070), the City has a concurrency ordinance that requires coordination of transportation capacity and development. All proposed real estate developments that generate 30 or more trips in the peak hour undergo analysis to ensure that traffic will not fall below the City's adopted standards. The TFP environmental analysis will include evaluation of future (2024) traffic conditions with overall anticipated growth in land use under two alternative packages of transportation improvements: a limited set of transportation improvements (2013-2019 CIP projects) or a more extensive set of improvements (proposed 2013-2024 TFP).

Following is the "addendum" communication, also received on November 15, 2012.

P.O. Box 40042
Bellevue, WA 98015-4042
Thursday, November 15, 2012

Kevin LeClair
Senior Land Use Planner
City of Bellevue
P.O. Box 90012
Bellevue, WA 98009-9012

Re: Public Comment Addendum on 2013-2024 Transportation Facilities Plan (TFP) Environmental Impact Statement (EIS) Scoping, File 12-127104-LE

Dear Mr. LeClair:

Questioning whether Bel-Red traffic mitigation is feasible and capable of being accomplished, attorney Keith Dearborn said we are "dealing with a house of cards" in his opening testimony to The Spring District public hearing in September. This statement could also apply to some unintended consequences of the Wilburton Connections TFP projects in Mobility Management Area 4, extending into MMA 12.

J

This addendum to public comment provided earlier today focuses on proposed mitigation measures for a TFP project which could affect the operational integrity of an essential public facility and/or pose potentially harmful environmental consequences. As a neighbor, I am providing specific concerns about the NE 5th Street traffic calming proposal (part of the NE 4th and 120th corridor project). Because of the unusual nature of the mitigation, its environmental impacts need to be assessed, whether the City chooses to incorporate the analysis in the current TFP EIS or as an addendum to the project EIS.

1. Installing a one-way lane restriction (chicane) on a steep hill poses serious safety issues, particularly in the dark or during inclement weather. At the western edge of the proposed chicane, a small Honda with automatic transmission rolls backward after coming to a full stop for a postal vehicle trying to access a curbside mailbox. What happens if the stopped vehicle has significantly more mass (such as a school bus or emergency vehicle) and there is a long queue on the hill, waiting to pass through the chicane?
2. Delay of emergency vehicles affects our public services. NE 5th is a critical east-west route into the Wilburton neighborhood from 120th and the hospital district, especially when NE 8th traffic is blocked. There is a group home on NE 5th where elderly residents sometimes require emergency aid.
3. Increased idle time for small vehicles waiting to go through the chicane might have some air quality impact. However, increased idle time for large diesel vehicles such as school

buses and delivery trucks could have more significant air quality impacts, especially for particulates.

4. Due to routing, many of the large vehicles will be entering the chicane going uphill, requiring additional fuel for an uphill start.
5. As we were told at the November 1st public meeting on the Bellevue School District Transportation Facility Re-Build, the BSD site is an essential public facility. Installation of a chicane next to the BSD parcel on NE 5th compromises operational integrity, adding delay and possibly unnecessary danger to an already complex routing. This facility serves the entire district. The chicane could require changes in operations or re-routing at significant cost to BSD and Bellevue taxpayers.
6. Since mitigation does not include a signalized NE 5th intersection at 120th, our neighborhood will have even less chance to turn left onto 120th than currently during daytime peaks (noon and evening). For example, to access Home Depot or Best Buy from NE 7th, 6th, 5th, 4th, 3rd or 2nd in the Wilburton residential neighborhood, many of us already take 124th southbound to Main and SE 1st to go north on 120th **OR** go north on 124th to take left turns at NE 8th and 120th. This is a workaround in the true sense. More traffic, more taking the "long way."
7. There is currently a crosswalk over 120th at NE 5th. This pedestrian crossing has become increasingly dangerous over the years since our big-box neighbors moved to the west side of 120th, attracting more traffic. There is no signal planned for this intersection as a 120th widening (TFP-240) mitigation measure. We have been told repeatedly that the City does not want to impede traffic flow at that intersection and a pedestrian bridge is too expensive. Although the City plans to put a signal at NE 6th and 120th, residents in the neighborhood do not know when it will be installed. Thus, we will be using the signalized intersections at NE 4th and NE 6th when they are constructed in lieu of the crosswalk at NE 5th.

   BSD bus drivers must use the NE 5th crosswalk to walk from the BSD Transportation Facility to the bus parking lot. As 120th is widened to make way for more traffic volume from the NE 4th extension, BSD plans to remove the existing pedestrian gate to the school bus lot across from NE 5th. School bus drivers will have to walk to the NE 6th intersection to cross 120th and access the bus lot from 6th. This is additional delay for a time-critical function: getting Bellevue children to school on time.

J

It is a bit ironic that Wilburton Connections will serve to dis-connect much of our residential neighborhood from the west side of 120th Avenue. Without being able to take a left turn from NE 5th onto 120th, the NE 4th extension is functionally one-way east for many of us.

I trust that you will determine whether these potential adverse impacts are at an appropriate level of detail for a non-project EIS; they do, however, need to be evaluated.

Thank you,

Jo Scott

The following issue was raised in the "addendum" communication:

J. The chicane proposed for NE 5th Street as mitigation for the NE 4th Street + 120th Avenue NE projects should undergo environmental analysis, either in the TFP process or in the project-level environmental review.

Response: The chicane is planned as mitigation for the NE 4th Street Extension and 120th Avenue projects, so as to protect the residential neighborhood to the east from additional cut-through traffic. The plan for installation of a chicane (along with certain other improvements on NE 5th St and 124th Ave NE) was developed through an extensive process involving residents of the neighborhood. Current plans are to install the chicane and, if following an initial evaluation period, it does not function appropriately and/or the neighborhood does not support it, then it will be removed. The chicane and other improvements planned for NE 5th Street and 124th Avenue are considered minor construction and do not reach thresholds that would trigger SEPA environmental review.

The following communication was received from the Muckleshoot Indian Tribe. It was inadvertently omitted from the Draft EIS.

From: Karen Walter
Sent: Tuesday, November 13, 2012 10:49 AM
To: Kevin LeClair
Subject: 2013-2024 Transportation Facilities Plan, Determination of Significance Scoping Notice

Kevin,

We have reviewed the available materials for the City's 2013-2024 Transportation Plan Facilities Plan and the associated Determination of Significance scoping notice. Previously we commented on the City's 2009-2020 Transportation Facilities Plan's Environmental Impact Statement and our scoping comments are similar to these past comments as noted below:

1. The 2013-2024 Transportation Facilities plan includes a list of project only three of which explicitly describe culverts and stream crossings (i.e. TFP-079; TFP-210; and TFP-078). It seems that more projects shown in the plan list (i.e. TFP 243; TFP217, etc) will cross streams and could have impacts as a result. The DEIS should explicitly describe which of the approved projects in the plan list could have potential stream impacts, the nature of those potential impacts and potential mitigation measures for unavoidable impacts. As part of this discussion, the DEIS should discuss which stream crossings will be improved to provide fish passage and the proposed method of culvert design and which stream crossings will not be improved. From all of this information, the DEIS should include an assessment of stream impacts, including but not limited to, stream culverts that will continue to be fish passage barriers post-project and the associated impacts to salmon from these barriers.

2. For those projects that show as "full implementation" in the 2013-2024 plan update, the DEIS should analyze the direct, indirect and cumulative impacts associated with these projects to streams, wetlands, and their buffers and impacts to salmon. These projects likely have design work completed to enable such analyses in the DEIS. Many of the impacts were identified in our 2009 comments, which are attached for reference and review.

We appreciate the opportunity to review this proposal and look forward to reviewing the DEIS when it is available. Please let me know if you have any questions.

Thank you,
Karen Walter
Watersheds and Land Use Team Leader

Muckleshoot Indian Tribe Fisheries Division
Habitat Program
39015 172nd Ave SE
Auburn, WA 98092
253-876-3116

Following is the City's response to the issues raised in the current scoping comments from the Muckleshoot Indian Tribe.

City response to Comment #1

Pursuant to comments received in the 2009 TFP, descriptions of certain projects in this TFP update have been expanded to include indication of stream crossings. In particular, stream crossings are acknowledged in the descriptions of projects that cross fish-bearing streams and are scoped for actual implementation or significant design work (i.e., projects TFP-078 West Lake Sammamish Parkway, TFP-079 Northup Way, TFP-210 124th Avenue NE, TFP-211 NE 6th Street Extension*, TFP-215 NE 16th Street*, TFP-241 120th Avenue). To the extent that detail is known about the scope of project impact to stream crossings or type of crossing treatment, this information is included in the project descriptions. All projects with potential impacts to shoreline areas and aquatic habitat are identified in the analysis of the Natural Environment in the EIS document (Tables 7-8 and 7-9)**. Table 7-5 lists fish species associated with streams affected by TFP projects.

In the case of TFP-243 (the Mountains to Sound Greenway trail), the City has done preliminary design work and determined that the three at the east end (crossing 08-0162, 08-0161 and 08-0160) will be located on new bridges and will not impact fish passage (which is impaired by the WSDOT culverts downstream under I-90). The three crossings further west (crossing Vasa Creek, Sunset Creek and Richards Creek) will be located on existing WSDOT culverts that pass under I-90 and not expand or impact the existing culverts.

TFP-217 involves expanding the SR 520 access at 124th Avenue NE to include access to and from the east (in addition to the existing access to and from the west). There are no streams or aquatic habitat in the immediate vicinity of this project.**

*For the FEIS, additional detail added to TFP-211 and TFP-215 project descriptions in Table 2-1.

**For the FEIS, Table 7-9 has been augmented to indicate projects that are anticipated to improve fish passage, projects that are at locations where fish passage improvements will occur separately from the TFP and locations where no change is anticipated or sufficient information on project design is not yet known. The table is also corrected to clarify that TFP-217 is not in the vicinity of any stream.

City response to Comment #2

At this point in the process, most project designs are not sufficiently developed to understand details of impacts. What we are able to look at, and include in EIS analysis, is a relatively high-level review of potential impacts to wetlands, aquatic resources, wildlife, vegetation and shorelines. The EIS analysis identifies projects that may have impacts in these categories and includes an overall review of conditions, where information is available and relevant (as with levels of impervious surfaces in the drainage basins). Impacts of individual projects will be further evaluated as projects advance into the design process and are subject to project-level SEPA review. Several projects are further advanced in the design process and information developed in these designs is used in the review of impacts identified for these projects and the overall cumulative analysis.

Following are the comments submitted previously (in conjunction with the 2009-2020 TFP EIS process); these were attached to the Muckleshoot Indian Tribe scoping comments (above).

MUCKLESHOOT INDIAN TRIBE
Fisheries Division
39015 - 172nd Avenue SE • Auburn, Washington 98092-9763
Phone: (253) 939-3311 • Fax: (253) 931-0752

February 23, 2009

Mr. Michael Paine
City of Bellevue Department of Development Services
P.O. Box 90012
Bellevue, WA 98009-9012

RE: Bellevue's 2009-2020 Transportation Facilities Plan, Draft Environmental Impact Statement

Dear Mr. Paine:

The Muckleshoot Indian Tribe Fisheries Division has reviewed the Draft Environmental Impact Statement (DEIS) for the above referenced project. We are forwarding the attached comments in the interest of protecting and restoring the Tribe's treaty protected fisheries resources.

We appreciate the opportunity to comment on this proposal and would be happy to meet with the City to discuss these comments. You can reach me at 253-876-3116 if the City would like to meet.

Sincerely,

Karen Walter
Watersheds and Land Use Team Leader

Cc: Larry Fisher, WDFW, Region 4

I. Impact Concerns

As noted in the DEIS, there are several projects that have the potential to adversely affect streams and wetlands and their buffers within WRIA 8 (ex. Table 7-2, Table 7-4, Table 7-7). The DEIS acknowledges some, but not all of the potential impacts that may occur as result of implementing both the no-action and proposed action projects.

The impacts that may occur that should be identified in the FEIS are as follows:

1. The projects may result in additional artificial lighting impacts to streams used by salmonids which could lead to an increase in predation of juvenile salmonids from fish and birds predators that use visual cues for hunting.

2. The construction of sidewalks could increase the amount of human disturbance to salmonids in the affected streams as people and pets may have increased access to these areas.

3. The DEIS fails to identify and quantify the potential cumulative impacts to streams, wetlands, and their buffers as a result of implementing either the No Action or Proposed Action projects. The DEIS specifically states that project-level analysis would identify potential impacts and appropriate avoidance or minimization measures, which means that the impact assessment is left to individual projects. Based on our experience, few projects ever consider cumulative impacts and as a result, these impacts likely occur without mitigation.

4. The potential impacts to salmonids list on page 7-17 are incomplete. As mentioned above, there may be increases in predation and disturbance as a result of both alternatives. Other impacts not considered in the DEIS include those associated with stormwater and culverts as discussed below.

Stormwater Impacts

There will also likely be stormwater impacts that are not discussed in the DEIS, which were identified in our scoping comments. These impacts include displacement from preferred habitats; loss of feeding opportunities; increased chronic and acute response to metals, pesticides, and other toxic contaminants, increased stress and disease; increased predation, etc. Unless stormwater can be treated and infiltrated, the projects will result in increases in stormwater discharges as noted in the DEIS. The DEIS fails to consider that increases in receiving water volumes and flow durations may adversely impact juvenile salmonids because stormwater discharged from the project sites has the potential to increase the duration of water velocities in the receiving water that exceed juvenile resting, holding and swimming speeds. The result is that juvenile salmonids are flushed from habitats; forced to maintain station without feeding subjecting them to reduced growth, increased susceptibility to disease and predation. All of these conditions can result in reductions in survival and fish production.

Part of the problem is that most of the affected streams have been modified from historical conditions. Changes in the duration of elevated water velocities, combined with the historical loss of salmonid overwintering or high flow refugia habitats; the conversion of stream channels to predominately riffle and glides, and the reduction of the number and sizes of in-channel wood has resulted in adverse impacts to salmonid habitat and likely impacts to overwintering salmonids as a result as described above. It is important to note that compliance with the NPDES permit and compliance with the Washington Department of Ecology's Stormwater Manual does not sufficiently address impacts to salmonids and will require additional mitigation.

Culvert impacts

There are impacts to salmonid habitat as a result of culverts that is not discussed in the DEIS. For example, culverts result in the direct loss of habitat due to construction activities for the culvert and the culvert replacing the native streambed material and the disconnection between the stream channel and its adjacent banks and riparian areas. Culvert construction can require significant channel realignment, eliminating natural meanders, bends, spawning riffles and other diversity in the channel that provide salmonids with their habitat needs. Culverts can also shorten the length of stream channels, leading to increased velocities and bed instability that reduce spawning opportunities and decrease egg survival. Existing riffles and gravel bars immediately downstream of culverts can be scoured if flow velocity is increased through the culvert. Gravel scour while salmonid eggs are incubating in redds can result in high egg mortality. Culverts can cause changes in sediment transport and deposition rates due to construction or due to a change in hydraulics caused by changes to the alignment, siting or design of the culvert that can all lead to salmonid habitat degradation.

Culvert construction can negatively impact rearing habitat by causing a direct loss of rearing habitat when it is replaced with a pipe. Any reduction in stream length is a reduction in usable rearing habitat. Culverts cut off natural bends, meanders, side channels and backwater channels, directly eliminating such habitat. Most side channels and backwater channels experience higher fish usage than the main stream channel, especially during winter flood flows, so the loss of such habitat can be especially harmful to fish survival. Culvert placement that lowers the natural water level of pools, ponds, backwaters or wetlands within or adjacent to the stream can decrease the amount and type of rearing habitat. Culvert projects may also require the removal of trees and woody debris at the site, thus eliminating the function of channel structure, pool formation, channel stability, food production, and instream cover. The removal of these trees and woody debris can occur for the entire right-of-way width as a regular maintenance activity.

In addition, road maintenance activities at stream crossings can adversely affect salmonids by removing trees on the streambank; removing spawning sized gravels from culverts and streambeds through dredging; and removing wood from culverts and adjacent stream banks due to concerns for culvert blockages and flow conveyance. These activities often occur without mitigation.

Finally, if existing culverts that are fish passage barriers are not removed or replaced through this plan, then existing fish passage barriers will continue to adversely affect salmon distribution and productivity, likely without mitigation.

The FEIS should discuss all of the potential impacts identified above for all affected streams and identify potential mitigation measures as discussed in the mitigation recommendations below.

II. Mitigation Recommendations

1. To address lighting concerns, the projects should be required to minimize lighting at all stream crossings and for any lighting that is needed, the light should be shielded and directed away from streams.

2. For projects that could increase the amount of human disturbance to salmonids in streams, these sites should have native trees and shrubs that encourage visual buffers and discourage stream access.

3. To address cumulative impacts from these projects, the FEIS needs to quantify these impacts (i.e. loss of riparian area; increases in road fill and culvert extensions that affect streams; increases in stormwater discharges, etc.) and develop mitigation measures for all of the impacted streams. Mitigation measures may need to occur outside of the right of ways to avoid a loss in stream and riparian habitat functions

and values. Some of these measures are considered on page 7-23; however, since there is no real cumulative impact assessment the extent of these mitigation measures is unknown at this time. Furthermore, using a replacement ratio of 1:1 for streams and stream buffers will likely result in a net loss of these resources.

4. To address stormwater impacts from discharged stormwater into affected streams, the affected streams should be enhanced to increase the amount of low velocity habitats to offset the increases in flow volumes and durations.

To address culvert impacts, the projects identified in Tables 7-4 and 7-7 should replace all existing culverts that are fish passage barriers with a bridge or a culvert large enough to pass wood, water, and sediment loads relevant to the affected stream. If any culverts need to be extended, then the impacted stream will need mitigation to address the loss of existing habitat (length and type) and the loss of riparian area and tree removal. If future maintenance is needed at these sites, then these maintenance activities need to include the relocation of wood and sediment that would otherwise transport to downstream areas.

Appendix C

Completed or Deleted Projects from the Previous 2009–2020 Transportation Facilities Plan

Tables C-1 and C-2 summarize the projects that were included in the previous 2009–2020 Transportation Facilities Plan (TFP) but are not included in the CIP Network alternative or the 2013–2024 TFP Network alternative. Table C-1 lists projects that have been completed since the adoption of the 2009–2020 TFP. Table C-2 lists projects that were not completed but are not proposed for inclusion in the 2013–2024 TFP Network.

Table C-1. Completed 2009–2020 TFP Projects

TFP #	CIP #	Project Name/Location
091/106	R-133	Northup Way / 120th Ave NE to 124th Ave NE
156	W/B-72	SE 60th St / Lake Washington Blvd to Coal Creek Parkway. Partially completed; remaining elements not included in 2013-2024 TFP Network.
159	W/B-71	108th Ave SE / Bellevue Way to I-90
160	R-151	145th Pl SE / SE 16th St to SE 24th St and SE 22nd St / 145th Pl SE to 156th Ave SE
163	W/B-74	152nd Ave SE / SE 45th St/SE 46th St to Newport Way
165		124th Ave Bicycle Trail / SE 38th St to I-90 Bicycle Trail
170	W/B-76	128th Ave SE / SE 25th St to SE 32nd St
178	W/B-76	SE 26th St / SE 24th St to West Lake Sammamish Parkway
184	R-152	NE 8th St / 106th Ave NE to 108th Ave NE
191	W/B-73	NE 8th St / Lake Washington Blvd to 96th Ave NE
221		148th Ave (four intersections). Partially completed (one intersection at SE 24th St); remaining elements not included in 2013-2024 TFP Network.
238	W/B-76	Somerset Ave SE / SE Somerset Blvd to 136th Pl SE

Table C-2. Deleted 2009–2020 TFP Projects

TFP #	CIP #	Project Name/Location
090		116th Ave NE / NE 12th St to 1600 block
094	I-76 / R-167	148th Ave NE / Bel-Red Rd (replaced by TFP-250)
101	I-78 / R-167	148th Ave NE / NE 20th St (replaced by TFP-250)
102		Bel-Red Rd / NE 24th St
120		Factoria Boulevard / Newport Way SE
154		148th/150th Ave SE / I-90 westbound on-ramp to I-90 westbound off-ramp
157	R-167	148th Ave NE / NE 24th St (replaced by TFP-250)
162		156th Ave SE / SE Eastgate Way (I-90 westbound off-ramp)
164		173rd Ave NE / Northup Way to city limits
168		148th Ave NE / NE 8th St
171		NE 40th St / 140th Ave to 14500 block
172		106th Ave NE / 108th Ave one-way couplet (Downtown)
175	W/B-75	SE 34th St / 162nd Pl SE to West Lake Sammamish Parkway
194		164th Ave SE / Cougar Mountain Way to SE 63rd St
196		NE 20th St / Bel-Red Rd to 156th Ave NE
198		Bel-Red Rd / NE 20th Pl
205		Lakemont Boulevard (Phase 2) / Lewis Creek Park to 164th Ave SE
214		124th Ave NE/Bel-Red Rd/Old Bel-Red Rd (combined with TFP-213)
220		Factoria Boulevard / SE 40th Lane
224		Bel-Red Rd / NE 20th St
226		NE 11th St / NE 12th St to 116th Ave Connection (across from Overlake Hospital)
227		123rd Ave SE / SE 60th St to SE 64th Pl
228		148th Ave SE / SE 44th St to SE 46th St
229		116th Ave SE / SE 60th St to Newcastle Way
231		SE 7th Pl / Lake Hills Connector to cul-de-sacs
233		130th Pl/Ave SE / Newport Way to SE 47th Pl
235		108th Ave NE / NE 24th St to NE 12th St
236		NE 24th St / 108th Ave NE to 112th Ave NE
237		123rd Ave SE / SE 20th St to SE 26th St
239		156th Ave NE / NE 24th St

Appendix D

Transportation System Impact Analysis Methodology

This appendix supports Chapter 3, Transportation, and contains background on existing conditions and the results of the transportation system analysis.

Background on the Analysis

The analysis of transportation system impacts includes the following considerations pertaining to each of the alternatives:

- Changes in arterial traffic volumes
- Changes in intersection operating conditions
- Use of high occupancy vehicles.

The analysis of impacts is based on a comparison of conditions expected in 2024 with and without the different sets of transportation improvements included in the Transportation Facilities Plan (TFP) alternatives. Rather than predicting future conditions, the analysis compares the differences in impacts between the two alternatives. This analysis recognizes that the context in which future impacts occur will be defined by a combination of three factors: economic development, investment in infrastructure, and transportation operating conditions.

Economic development in the region and within Bellevue will generate trip demand, that is, the type and number of trips using the transportation system. Economic development is represented in the transportation model by land use projections. The projections include residential dwelling units—where people live—and industrial, office, and commercial land uses—where people work. Commercial and service uses are also used to determine the destinations for other types of trips. All together, these projections are used in the transportation model to estimate the trip demand between these various locations of economic activity. The model produces trip tables that project the destinations for trips of various types, such as home-to-work trips, home-to-service trips (such as shopping), and non-home-based trips, such as trips from one business to another.

Investment in infrastructure includes the planned and committed investments in transportation improvements by the City of Bellevue (City), Washington State Department of Transportation, and other entities. It also includes investments in transit and programs to encourage alternatives to the automobile. Together, these investments provide the circulation system on which trips are made.

Transportation operating conditions are commonly measured by level of service (LOS). This is a measure of performance of the transportation system based on driver perceptions of acceptable delay. LOS standards have been adopted by various agencies and jurisdictions to measure the adequacy of transportation system operations. The standards for levels of service adopted by the City of Bellevue in its Comprehensive Plan and Traffic Standards Code are expressed in terms of volume (of traffic) to capacity (of the roadway) ratios. Using volume to capacity (V/C) ratios allows measuring the extent to which a facility is operating close to its theoretical capacity. This environmental impact statement (EIS) presents V/C ratios following the process set out in the Highway Capacity Manual and described below.

These three factors are closely interrelated. The decision to maintain a given level of service may affect economic development, as severe traffic congestion can suppress economic development. The cost of

development and economic returns enjoyed may also be affected by regulations to restrict growth in congested areas or increase the cost of development through transportation impact fees. For this analysis, economic conditions have been held constant among the alternatives so that the results could reflect the extent to which differences in the circulation system affect future operating conditions.

Travel Demand Model

The City of Bellevue uses a standard 4-step travel demand model. The model is known as the Bellevue-Kirkland-Redmond (BKR) Travel Demand Model and is maintained under terms of an inter-local agreement between those three cities. The BKR model includes land use projections from the Puget Sound Regional Council (PSRC) for King, Snohomish, Pierce and Kitsap counties, but the focus of the model is King County in general and specifically the three cities. The base year model used for development of the 2024 horizon year forecasts was developed and validated to match 2010 traffic counts.

The first step in forecasting travel demand is the identification of land use information for transportation analysis zones (TAZs) in the study area. A table with Bellevue's land uses by TAZ can be found in Appendix D. The land use information for each TAZ is translated from square feet of office, commercial, residential, and other land uses to trips using different trip generation rates for each type of land use. Some are generated as trips produced by land use and others as trips that the land use will attract.

The next step in transportation modeling is to link trips generated between productions and attractions. This is done using a gravity model that has been calibrated with survey data on how far people travel for work, shopping, school, etc. The survey information was obtained from the PSRC and U.S. Census data.

The model then evaluates how many trips are made by each motorized travel mode (single-occupant vehicle [SOV], carpool, transit, etc.) between each pair of TAZs in the study area. Person trips are attributed to a particular mode for each trip based on a variety of factors including convenience, cost, travel time, household income, number of autommobiles available, etc. At this time the BKR model does not represent trips made by walk or bicycle modes due to a lack of consistent data source on these modes.

PSRC's survey data also provide information about the proportions of daily trips made during peak periods and the remainder of the day for different trip purposes, direction, and travel modes. These data are used to construct peak-hour vehicle and transit trip tables. The traffic model is then used to determine route choices for trips made between zone pairs. This procedure considers roadway speeds and delay due to congestion on each section of roadway. It also represents how transit is accessed and each element of the transit trip is represented. These steps cycle back and iterate until they are balanced to a standard whereby supply and demand converge.

At this point, the base year model results are compared to actual counts to test the model accuracy. This is done by comparing the total model volume and actual counts crossing an imaginary line, or 'screenline.' The model and observed volumes should closely match at the screenline level. The BKR model has an overall correlation between counts and model volumes of 0.93, with 1.00 being perfect correlation. At this point the V/C ratio can be measured for reference to City standards.

Upon validation that the base year model properly replicates travel in current conditions it is then deemed reasonable to use it for future horizon year forecasts. For this TFP the 2024 model platform was built to evaluate the improvements called for in the 12-year cycle. The early evaluations of projects were done on this new 2024 model. During this final step, intersection turn-movement volumes are prepared using a 'post-processing' technique. At the time of final analysis, 2012 traffic counts and land use were available. These values were then used to develop the final refined intersection turn volumes upon which the LOS calculations are based. Current year model turn forecasts are compared to observed turn movement counts, and the difference between the two is defined as 'calibration error.' These values are then used in a mathematically rigorous process to adjust future-year model forecast volumes in a manner to reduce the impact of model error.

Land Use Projections

The City's projections of future commercial and residential development begin with the regional economic forecasts of jobs and population developed by the PSRC (the region's metropolitan planning organization). PSRC allocates forecasted jobs and population to forecast analysis zones (FAZs) throughout the region. Job and population forecasts for each FAZ are then distributed by the City into smaller TAZs that are used for modeling purposes. (For example, Downtown Bellevue is one PSRC FAZ, but 43 TAZs as defined by the City.) These distributions are based primarily on development opportunities and growth trends. Parcels that are currently vacant are projected to have the highest potential for future development, followed by properties in which the difference between the current intensity of development and future potential intensity is the greatest. This procedure provides a reasonable basis for projecting the location of future development trends, but will not exactly match future development decisions made by specific property owners and developers. Land use projections are not necessarily equal to the total capacity for development within an area, but instead they forecast the amount of development that will likely occur within an area by a given horizon year.[1]

The land use projections used in this EIS are for the year 2024. The 2024 land use projections are applied to both the CIP Network alternative and the TFP Network alternative. Refer to Table D-1 for 2012 (existing) and Table D-2 (projected 2024) for land use by major category for each Mobility Management Area (MMA). Table D-3 summarizes the projected change in land use in each MMA between 2012 and 2024. See Figure D-1 for a map of MMAs.

[1] Land use projections by traffic analysis zones are found in Appendix E. Projections outside Bellevue are based on PSRC's projections with additional detail provided by the staffs of Bellevue, Kirkland, and Redmond.

Table D-1. Land Use by Major Category—Year 2012

	2012 Square Footage			2012 Dwelling Units	
MMA	Office	Retail	Others	Single Family	Multi-Family
1 North Bellevue	1,449,549	180,899	407,334	2,186	2,174
2 Bridle Trails	697,636	405,611	511,940	1,678	3,252
3 Downtown	8,905,623	3,874,590	1,990,627	-	7,405
4 Wilburton	1,271,252	658,289	929,540	76	577
5 Crossroads	153,921	734,693	167,073	51	3,365
6 Northeast Bellevue	426,995	12,816	469,632	3,308	255
7 South Bellevue	1,168,056	261,203	1,270,155	2,594	1,984
8 Richards Valley	211,470	76,782	279,557	2,465	3,507
9 East Bellevue	505,637	365,917	1,165,582	6,676	2,403
10 Eastgate	4,006,455	464,802	1,874,720	313	654
11 Newcastle	156,521	128,412	714,042	8,190	1,017
12 Bel-Red	2,563,750	2,362,388	3,371,096	1	113
13 Factoria	1,463,466	852,832	434,742	330	1,150
14 Newport Hills	13,464	94,510	155,943	2,638	472
Totals	22,993,795	10,473,744	13,741,983	30,506	28,328

Table D-2. Land Use by Major Category—Year 2024

	2024 Square Footage			2024 Dwelling Units	
MMA	Office	Retail	Others	Single-Family	Multi-Family
1 North Bellevue	1,508,785	194,921	419,704	2,194	2,365
2 Bridle Trails	805,160	435,814	596,764	1,678	3,269
3 Downtown	13,560,588	5,121,525	3,454,314	0	12,974
4 Wilburton	1,699,594	845,205	864,996	76	857
5 Crossroads	260,806	868,470	248,565	52	3,534
6 Northeast Bellevue	491,868	17,950	490,369	3,313	276
7 South Bellevue	1,379,077	256,007	1,344,101	2,575	2,433
8 Richards Valley	274,462	81,101	317,950	2,469	3,521
9 East Bellevue	751,373	460,773	1,249,251	6,778	2,685
10 Eastgate	4,833,763	508,046	3,152,770	320	840
11 Newcastle	267,405	137,548	798,376	8,199	1,051
12 Bel-Red	5,356,993	2,667,141	2,480,981	23	3,007
13 Factoria	1,601,097	939,438	506,621	332	1,529
14 Newport	152,215	167,436	166,941	2,645	472
Totals	32,943,186	12,701,374	16,091,704	30,652	38,812

Table D-3. Change in Land Use by Major Category—Change from 2012 to 2024

	Delta Square Footage			Delta Dwelling Units	
MMA	Office	Retail	Other*	Single-Family	Multi-Family
1 North Bellevue	59,236	14,022	12,370	8	191
2 Bridle Trails	107,524	30,203	84,824	-	17
3 Downtown	4,654,965	1,246,935	1,463,687	-	5,569
4 Wilburton	428,342	186,916	(64,544)	-	280
5 Crossroads	106,885	133,777	81,492	1	169
6 Northeast Bellevue	64,873	5,134	20,737	5	21
7 South Bellevue	211,021	(5,196)	73,946	(19)	449
8 Richards Valley	62,992	4,319	38,393	4	14
9 East Bellevue	245,736	94,856	83,669	102	282
10 Eastgate	827,308	43,244	1,278,050	7	186
11 Newcastle	110,884	9,136	84,334	9	34
12 Bel-Red	2,793,243	304,753	(890,115)	22	2,894
13 Factoria	137,631	86,606	71,879	2	379
14 Newport	138,751	72,926	10,998	7	-
Totals	9,949,391	2,227,630	2,349,721	146	10,484

* Other" commercial includes institutional, industrial and hotel uses.

The analysis presented here must be regarded as a comparison of probable impacts of alternative transportation network improvements rather than a strict prediction of future conditions because of the following factors:

- The amount of development which occurs in the future may not exactly match projections.
- It is not possible to exactly predict the location of new development.
- The potential amount of development allowed by land use codes is much greater than the demand projected for the future. (This may result in the location of development on parcels where growth was not predicted.)

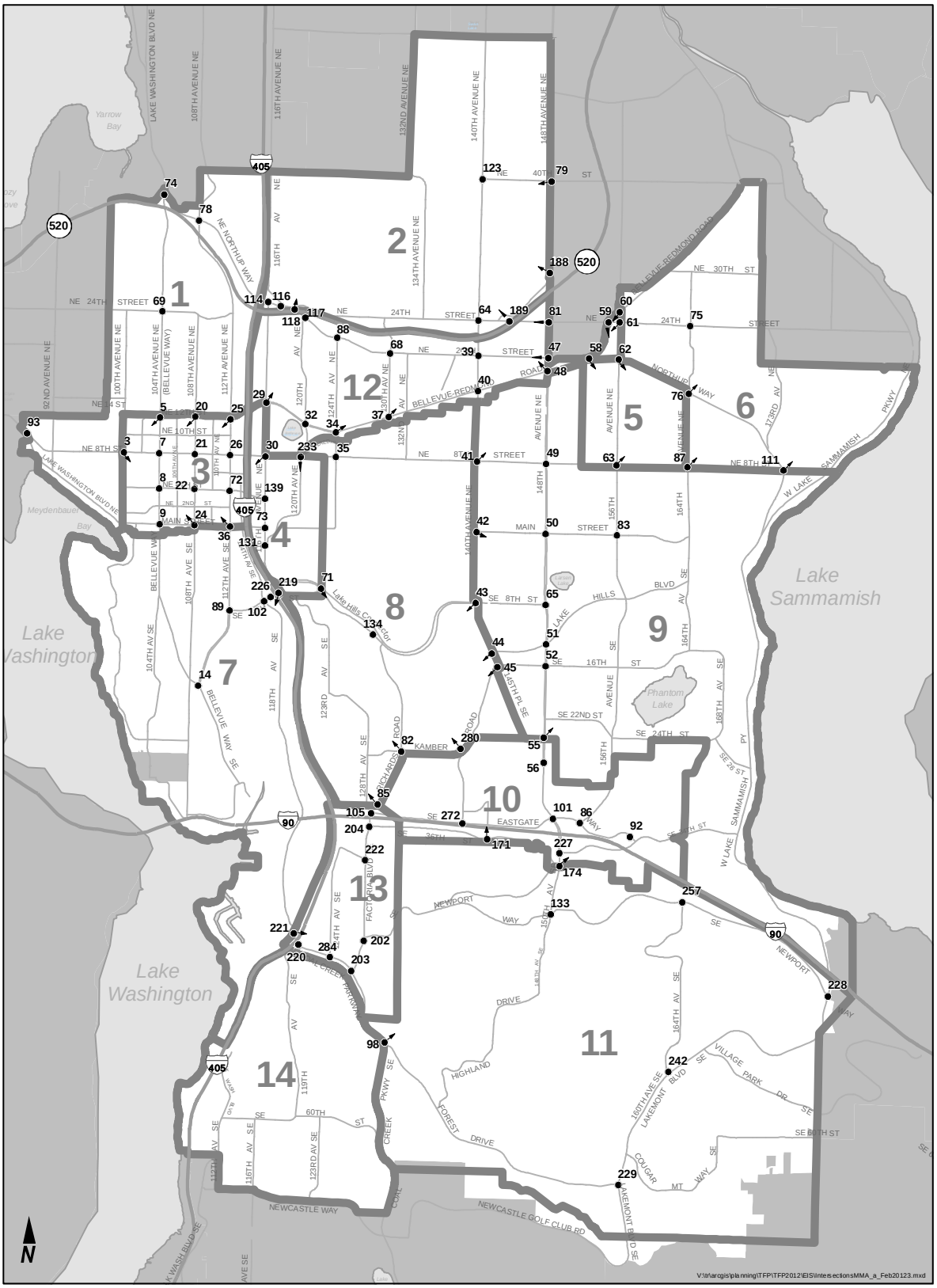

Figure D-1. Mobility Management Areas and System Intersections

Trip Generation/Mode Choice

As the first step in the traditional four-step transportation demand forecasting process, trip generation takes land use data as input and produces a number of trips (in a specific mode and purpose) entering and exiting a traffic analysis zone. Trip-type categories are home-based work trips, home-based school trips, home-based other trips, and non-home-based trips. Trip modes are walk, bicycle, bus, train, ferry, SOV, and high-occupancy vehicle (HOV). Only trips by motorized modes are modeled.

Because land use patterns differ in different parts of Bellevue, mode choices and travel patterns differ. Thus, Downtown Bellevue will have different trip generation/mode choice characteristics than more suburban employment centers. The traffic model assigns modal choice for each trip based on a variety of factors, including transit service characteristics (route directness, frequency, cost), level of vehicle availability in households in origin area, parking costs at destination, and other factors.

Reference for existing patterns of mode use for commute trips is provided by two sources: periodic mode share surveys sponsored by the City and by the U.S. Census American Community Survey (ACS). These do not directly relate to the traffic model, but can provide an external reference for use in initial development of the model.

The Bellevue surveys of commute mode share are conducted approximately every 3 years to measure conditions against target levels for non-drive-alone commuting and assess changes in commute trip mode use over time. The surveys look at both large employers (with 100 or more employees) and small employers (with fewer than 100 employees). The most recent mode share survey was conducted in 2011 in Downtown and in 2008 in other activity centers. Table D-4 summarizes the findings.

Table D-4. Commute Mode Share—Surveys of Bellevue Activity Centers[1]

Mobility Management Area	Drive Alone	Carpool/ Vanpool	Bus	Other[2]
Downtown (MMA-3)	65%	11%	17%	7%
Bel-Red (MMA-12)	85%	10%	2%	3%
Wilburton (MMA-4)	77%	15%	4%	4%
Crossroads (MMA-5)	85%	8%	3%	4%
Eastgate (MMA-10)	73%	10%	4%	13%
Factoria (MMA-13)	69%	13%	5%	13%

[1]. Based on respondents report of “modes used during previous week.” Figures for Downtown are from 2011 survey; other areas are from 2008 survey.

[2]. ”Other” modes include walk and bicycle as well as trips avoided via telework and compressed work weeks.

The U.S. Census ACS provides citywide information on commute modes used by residents and workers in Bellevue. ACS data are collected by surveying a sample of residents, and because sample sizes are limited, results are best cited for 3-year or 5-year averages of the data. Most recent available 5-year average survey results (for the years 2007–2011) are summarized in Table D-5.

Table D-5 Commute Modes for Bellevue Residents and Workers

	Drive alone	Carpool/Vanpool	Public Transportation	Walked	Other	Worked at Home
Residents of Bellevue	68%	9%	10%	5%	2%	7%
Workers in Bellevue	75%	11%	7%	2%	1%	4%

U.S. Census Bureau 2007- 2011; American Community Survey Tables B0810, B08501.

Regional Network

Regional background roadway transportation projects are included in all future-year scenarios. In addition, the transit network includes East Link light rail to the Overlake station, and the transit system changes included in the Sound Transit East Link integration table. Regional roadway network assumptions include implementation of tolling on the I-90 bridge crossing and various freeway improvement projects detailed in Table D-6.

Table D-6. Freeway Projects Assumed in 2024 Roadway Network

	Freeway Improvement Project Name	Location	Agency	Improvement
1	I-90 Removal of Reversible Express Lane and Ramps: Stage 3	Two HOV operation. Changes in on/off ramps and bus flyer stops	WSDOT	Remove
2	I-90 WB Aux lane DOT-1	Lakemont Blvd to 148th Ave SE	WSDOT	Extra lane
3	I-90 EB Aux lane DOT-2	148th Ave SE to Lakemont Blvd	WSDOT	Extra lane
4	I-90 & LkMt Blvd EB off Ramp	New ramp to Newport Way	WSDOT	New ramp
5	108th & SR-520 HOV modification	On/Off HOV Ramps from center lane to intersection on 108th Ave	WSDOT	New ramps
6	Bellevue Way & SR-520 Ramp reconfiguration	Removal of EB to NB Off-Ramp SR-520 to Bellevue Way. Signal & Ramp metering	WSDOT	New ramps
7	NE 84th St and SR-520	New EB HOV and ramp metering	WSDOT	HOV lane
8	SR-520 EB/WB HOV lane	On Floating Bridge btw I-5 & Evergreen Point	WSDOT	HOV lane
9	SR-520 EB HOV lane	Evergreen Point & I-405	WSDOT	HOV lane
10	SR-520 WB HOV lane	Evergreen Point to Floating Bridge (I-405 to EFB already exists)	WSDOT	HOV lane
11	SR-520 EB/WB center roadway Bus lane	Evergreen Point to Bellevue Way	WSDOT	Bus lanes
12	132nd St Half Diamond Ramps to I-405	132nd St & I-405	WSDOT	New ramps
13	I-405 EL-Tolling, I-90 to SR-167 (Renton) - Open Access	NB/SB Add one GP lane to HOV lane for 2ETL, allow unrestricted weaving	WSDOT	Tolling/extra lane
14	I-405 EL-Tolling lanes through Bellevue NE 6th to I-90 - Open Access	NB/SB Change HOV lane to 1ETL, allow unrestricted weaving	WSDOT	Tolling
15	NE 6th (112th-120th Ave) HOV and access to I-405	With Tolling, change HOV only to allow GP to access ramps	WSDOT	Tolling
16	I-405 EL-Tolling lanes through Bellevue NE 6th to I-5 (Lynnwood) - Limited Access	NB/SB Add one GP lane to HOV lane for 2ETL, restrict weaving	WSDOT	Tolling/extra lane

Traffic Operating Conditions

The City's standards for mobility on roadways are based on an average of V/C measurements at designated "system" intersections within each of 14 zones or Mobility Management Areas (MMAs). "System" intersections are a subset of the signalized intersections, selected for their critical function in the roadway network. (See Figure D-1 for a map of MMAs and locations of system intersections.) For each MMA, there are two parameters to the performance standard:

- An areawide average of the LOS level at the designated system intersections
- A limit on the number of system intersections permitted to exceed the designated LOS standard for the area. This is termed the "Congestion Allowance."

Table D-7 shows the Level of Service and Congestion Allowance levels for the MMAs in Bellevue.

Table D-7. Level of Service Standards and Congestion Allowances[1]

Mobility Management Area	Area-Average LOS Standard(Maximum V/C Ratio)	Congestion Allowance
Regional Center		
3 Downtown	0.950	9
Mixed Commercial/ Residential Areas		
12 Bel-Red	0.950	7
4 Wilburton	0.900	3
5 Crossroads	0.090	2
10 Eastgate	0.090	4
13 Factoria	0.950	5
Residential Group 1		
1 North Bellevue	0.850	3
7 South Bellevue	0.850	4
8 Richards Valley	0.850	5
9 East Bellevue	0.850	5
Residential Group 2		
2 Bridle Trails	0.800	4
6 Northeast Bellevue	0.800	2
11 Newcastle	0.800	3
14 Newport[2]	0.800	--[2]

1. Excerpted from BCC 14.10.030
2. No system intersections are currently identified in this mobility management area.

The intersection analysis presented in this report is based on the Highway Capacity Manual (HCM) 209/2-hour average method. This is the City's adopted LOS analysis procedure as outlined in the Traffic Standards Code (BCC 14.10). The City adopted this method in 1998. The operational method provides a complex set of procedures to analyze intersection-specific geometric, traffic and signal conditions for a performance rating, or level of service. Parameters used for the analysis include:

- Peak-hour traffic by movement is calculated by dividing by 2 the two-hour volume for each movement between the hours of 4 p.m. and 6 p.m. which generally represents the most congested traffic conditions.
- Uniform traffic demand is assumed over the two-hour period (as represented by a peak-hour factor [PHF] of 1).
- Intersection utilization is reported as a ratio of critical movement volume to available intersection capacity (V/C).

For areawide analysis, the intersection V/C ratios are averaged for the System intersections in each MMA and then compared with the adopted standards for each MMA to estimate available reserve capacity. For each area, an additional check is made against the "congestion allowance," which is the maximum number of System intersections allowed to exceed the standard V/C ratio for that MMA.

Table D-8 provides information on existing and projected levels of service at all system intersections for one-hour average traffic in the two-hour PM peak period. Table D-8 also shows the applicable mobility targets (in terms of volume-to-capacity ratios) for each of the MMAs.

Table D-8. Existing and Projected Levels of Service (Two-Hour Averaged PM Peak)

Shaded cells exceed standard.

ID No	Intersection	Existing (2012)	CIP Network (2024)		TFP Network (2024)		TFP Network Plus (2024)	
		V/C	V/C	% Change Over Existing	V/C	% Change Over Existing	V/C	% Change Over Existing
MMA 1 North Bellevue – LOS Standard D+ or V/C 0.85; Congestion Allowance: 3								
69	Bellevue Way NE - NE 24th St	0.527	0.561	6.45%	0.559	6.07%	0.556	5.50%
74	Bellevue Way NE - Northup Way NE	0.605	0.623	2.98%	0.624	3.14%	0.616	1.82%
78	108th Ave NE - Northup Way NE	0.692	0.749	8.24%	0.748	8.09%	0.742	7.23%
93	Lake Washington Blvd - NE 1st/NE 10th	0.135	0.152	12.59%	0.156	15.56%	0.153	13.33%
	Areawide Average	0.490	0.521	6.33%	0.522	6.53%	0.517	5.51%
MMA 2 Bridle Trails – LOS Standard C or V/C 0.80; Congestion Allowance: 4								
64	140th Ave NE – NE 24th St	0.735	0.894	21.63%	0.894	21.63%	0.911	23.95%
79	148th Ave NE – NE 40th St	0.594	0.825	38.89%	0.828	39.39%	0.821	38.22%
114	116th Ave NE – Northup Way NE	0.673	0.715	6.24%	0.712	5.79%	0.596	-11.44%
116	115th Pl NE – Northup Way	0.621	0.803	29.31%	0.811	30.60%	0.761	22.54%
118	Northup Way - NE 24th St	0.444	0.548	23.42%	0.540	21.62%	0.544	22.52%
123	140th Ave NE - NE 40th St	-----	-----		-----		-----	
188	148th Ave NE – NE 29th Pl	0.861	1.054	22.42%	1.057	22.76%	1.059	23.00%
189	NE 29th Pl – NE 24th St	0.461	0.585	26.90%	0.591	28.20%	0.582	26.25%
	Areawide Average	0.627	0.775	23.60%	0.776	23.76%	0.753	20.10%
MMA 3 Downtown – LOS Standard E+ or V/C 0.95; Congestion Allowance: 9								
3	100th Ave NE - NE 8th St	0.510	0.551	8.04%	0.555	8.82%	0.554	8.63%
5	Bellevue Way NE - NE 12th St	0.590	0.749	26.95%	0.751	27.29%	0.744	26.10%
7	Bellevue Way NE - NE 8th St	0.623	0.715	14.77%	0.717	15.09%	0.717	15.09%
8	Bellevue Way NE - NE 4th St	0.654	0.693	5.96%	0.713	9.02%	0.704	7.65%
9	Bellevue Way - Main St	0.755	0.867	14.83%	0.897	18.81%	0.898	18.94%
20	108th Ave NE - NE 12th St	0.407	0.564	38.57%	0.564	38.57%	0.560	37.59%
21	108th Ave NE - NE 8th St	0.721	0.715	-0.83%	0.721	0.00%	0.723	0.28%
22	108th Ave NE - NE 4th St	0.599	0.922	53.92%	0.934	55.93%	0.930	55.26%
24	108th Ave - Main St	0.445	0.608	36.63%	0.603	35.51%	0.612	37.53%
25	112th Ave NE - NE 12th St	0.647	0.804	24.27%	0.818	26.43%	0.881	36.17%
26	112th Ave NE - NE 8th St	1.073	1.130	5.31%	1.139	6.15%	1.156	7.74%
36	112th Ave - Main St	0.774	0.942	21.71%	0.960	24.03%	0.955	23.39%
72	112th Ave NE - NE 4th St	0.640	0.763	19.22%	0.758	18.44%	0.769	20.16%
	Areawide Average	0.649	0.771	18.78%	0.779	20.02%	0.785	20.94%

Table D-8. Existing and Projected Levels of Service (Two-Hour Averaged PM Peak) (continued)

ID No	Intersection	Existing (2012)	CIP Network (2024)		TFP Network (2024)		TFP Network Plus (2024)	
		V/C	V/C	% Change Over Existing	V/C	% Change Over Existing	V/C	% Change Over Existing
MMA 4 Wilburton – LOS Standard D+ or V/C 0.85; Congestion Allowance: 3								
30	116th Ave NE - NE 8th St	0.793	0.797	0.50%	0.802	1.13%	0.761	-4.04%
73	116th Ave - Main St	0.672	0.791	17.71%	0.775	15.33%	0.773	15.03%
131	116th Ave SE - SE 1st St	0.727	0.761	4.68%	0.747	2.75%	0.732	0.69%
139	116th Ave NE - NE 4th St	0.717	1.190	65.97%	1.210	68.76%	1.208	68.48%
233	120th Ave NE - NE 8th St	0.788	1.032	30.96%	1.025	30.08%	1.039	31.85%
	Areawide Average	0.739	0.914	23.61%	0.912	23.34%	0.903	22.13%
MMA 5 Crossroads – LOS Standard D- or V/C 0.90; Congestion Allowance: 2								
58	Bellevue-Redmond- NE 20th St	0.495	0.621	25.45%	0.626	26.46%	0.623	25.86%
62	156th Ave NE - Northup Way	0.691	0.834	20.69%	0.839	21.42%	0.830	20.12%
63	156th Ave NE - NE 8th St	0.626	0.779	24.44%	0.774	23.64%	0.770	23.00%
	Areawide Average	0.604	0.745	23.34%	0.746	23.51%	0.741	22.68%
MMA 6 Northeast Bellevue – LOS Standard C or V/C 0.80; Congestion Allowance: 2								
75	164th Ave NE - NE 24th St	0.527	0.702	33.21%	0.702	33.21%	0.702	33.21%
76	164th Ave NE - Northup Way	0.562	0.690	22.78%	0.688	22.42%	0.689	22.60%
87	164th Ave NE - NE 8th St	0.708	0.917	29.52%	0.919	29.80%	0.919	29.80%
111	Northup Way - NE 8th St	-----	-----		-----		-----	
	Areawide Average	0.599	0.770	28.55%	0.770	28.55%	0.770	28.55%
MMA 7 South Bellevue – LOS Standard D+ or V/C 0.85; Congestion Allowance: 4								
14	112th Ave SE - Bellevue Way SE	0.730	0.846	15.89%	0.877	20.14%	0.871	19.32%
89	112th Ave SE - SE 8th St	0.584	0.610	4.45%	0.750	28.42%	0.742	27.05%
102	118th Ave SE - SE 8th St	0.651	0.747	14.75%	0.762	17.05%	0.762	17.05%
219	I-405 NB Ramps - SE 8th St	0.516	0.611	18.41%	0.607	17.64%	0.604	17.05%
226	I-405 SB Ramps - SE 8th St	0.514	0.437	-14.98%	0.439	-14.59%	0.444	-13.62%
	Areawide Average	0.599	0.650	8.51%	0.687	14.69%	0.685	14.36%
MMA 8 Richards Valley – LOS Standard D+ or V/C 0.85; Congestion Allowance: 5								
35	124th Ave NE - NE 8th St	0.701	0.934	33.24%	0.935	33.38%	0.883	25.96%
43	140th Ave SE - SE 8th St	0.634	0.853	34.54%	0.852	34.38%	0.848	33.75%
44	145th Pl SE - Lake Hills Blvd	0.505	0.650	28.71%	0.644	27.52%	0.639	26.53%
45	145th Pl SE - SE 16th St	0.536	0.650	21.27%	0.640	19.40%	0.639	19.22%
71	Lake Hills Connect - SE 8th St/7th St	0.812	0.977	20.32%	0.981	20.81%	0.966	18.97%
82	Richards Rd - Kamber Rd	0.638	0.812	27.27%	0.805	26.18%	0.800	25.39%
85	Richards Rd - SE 32nd St	0.626	0.859	37.22%	0.863	37.86%	0.847	35.30%
134	Richards Rd - Lake Hills Connector	0.509	0.611	20.04%	0.618	21.41%	0.613	20.43%
280	139th Ave SE - Kamber Rd	0.438	0.625	42.69%	0.616	40.64%	0.617	40.87%
	Areawide Average	0.600	0.775	29.19%	0.773	28.86%	0.761	26.86%

Table D-8. Existing and Projected Levels of Service (Two-Hour Averaged PM Peak) (continued)

ID No	Intersection	Existing (2012)	CIP Network (2024)		TFP Network (2024)		TFP Network Plus (2024)	
		V/C	V/C	% Change Over Existing	V/C	% Change Over Existing	V/C	% Change Over Existing
MMA 9 East Bellevue – LOS Standard D+ or V/C 0.85; Congestion Allowance: 5								
41	140th Ave NE - NE 8th St	0.715	0.874	22.24%	0.880	23.08%	0.880	23.08%
42	140th Ave NE - Main St	0.527	0.630	19.54%	0.627	18.98%	0.623	18.22%
49	148th Ave NE - NE 8th St	0.841	1.016	20.81%	1.012	20.33%	1.014	20.57%
50	148th Ave NE - Main St	0.795	0.901	13.33%	0.899	13.08%	0.896	12.70%
51	148th Ave SE - Lake Hills Blvd	0.756	0.875	15.74%	0.871	15.21%	0.869	14.95%
52	148th Ave SE - SE 16th St	0.752	0.865	15.03%	0.864	14.89%	0.862	14.63%
55	148th Ave SE - SE 24th St	0.679	0.795	17.08%	0.794	16.94%	0.790	16.35%
65	148th Ave SE - SE 8th St	0.672	0.813	20.98%	0.809	20.39%	0.802	19.35%
83	156th Ave - Main St	0.552	0.689	24.82%	0.687	24.46%	0.684	23.91%
	Areawide Average	0.699	0.829	18.60%	0.827	18.31%	0.824	17.88%
MMA 10 Eastgate – LOS Standard D- or V/C 0.90; Congestion Allowance: 4								
56	148th Ave SE - SE 27th St	0.567	0.571	0.71%	0.572	0.88%	0.568	0.18%
86	156th Ave SE - SE Eastgate Way	0.638	0.552	-13.48%	0.550	-13.79%	0.553	-13.32%
92	161st Ave SE - SE Eastgate Way	0.444	0.526	18.47%	0.528	18.92%	0.526	18.47%
101	150th Ave SE - SE Eastgate Way	0.895	1.033	15.42%	1.015	13.41%	1.013	13.18%
171	142nd Ave SE - SE 36th St	-----	-----		-----		-----	
174	150th Ave SE - SE 38th St	0.699	0.742	6.15%	0.742	6.15%	0.740	5.87%
227	150th Ave SE - I-90 EB Off-Ramp	0.849	0.938	10.48%	0.899	5.89%	0.895	5.42%
272	139th Ave SE - SE Eastgate Way	0.273	0.545	99.63%	0.515	88.64%	0.531	94.51%
	Areawide Average	0.624	0.701	12.42%	0.689	10.49%	0.689	10.49%
MMA 11 Newcastle – LOS Standard C or V/C 0.80; Congestion Allowance: 3								
98	Coal Creek Parkway - Forest Drive	0.729	1.087	49.11%	1.089	49.38%	1.089	49.38%
133	150th Ave SE - SE Newport Way	0.814	0.949	16.58%	0.945	16.09%	0.943	15.85%
228	Lakemont Blvd SE- SE Newport Way	0.771	1.090	41.37%	1.104	43.19%	1.100	42.67%
229	Lakemont Blvd - Forest Drive	-----	-----		-----		-----	
242	164th Ave SE - Lakemont Blvd	-----	-----		-----		-----	
257	164th Ave SE - SE Newport Way	-----	-----		-----		-----	
	Areawide Average	0.771	1.042	35.09%	1.046	35.61%	1.044	35.35%

Table D-8. Existing and Projected Levels of Service (Two-Hour Averaged PM Peak) (continued)

ID No	Intersection	Existing (2012)	CIP Network (2024)		TFP Network (2024)		TFP Network Plus (2024)	
		V/C	V/C	% Change Over Existing	V/C	% Change Over Existing	V/C	% Change Over Existing
MMA 12 Bel-Red – LOS Standard E+ or V/C 0.95; Congestion Allowance: 7								
29	116th Ave NE - NE 12th St	0.616	0.740	20.13%	0.743	20.62%	0.850	37.99%
32	120th Ave NE - NE 12th St	0.482	1.020	111.62%	1.001	107.68%	0.761	57.88%
34	124th Ave NE - Bellevue-Redmond Rd	0.824	1.067	29.49%	1.043	26.58%	1.041	26.33%
37	130th Ave NE - Bellevue-Redmond Rd	0.597	0.759	27.14%	0.856	43.38%	0.832	39.36%
39	140th Ave NE - NE 20th St	0.686	0.759	10.64%	0.770	12.24%	0.790	15.16%
40	140th Ave NE - Bellevue-Redmond Rd	0.672	0.822	22.32%	0.844	25.60%	0.867	29.02%
47	148th Ave NE - NE 20th St	0.805	1.032	28.20%	1.032	28.20%	1.020	26.71%
48	148th Ave NE - Bellevue-Redmond Rd	0.870	1.019	17.13%	1.020	17.24%	1.017	16.90%
59	Bellevue-Redmond - NE 24th St	0.653	0.842	28.94%	0.839	28.48%	0.847	29.71%
60	156th Ave NE - Bellevue-Redmond Rd	0.617	0.877	42.14%	0.876	41.98%	0.873	41.49%
61	156th Ave NE - NE 24th St	0.697	0.892	27.98%	0.892	27.98%	0.889	27.55%
68	130th Ave NE - NE 20th St	0.508	0.657	29.33%	0.655	28.94%	0.694	36.61%
81	148th Ave NE - NE 24th St	0.754	0.956	26.79%	0.951	26.13%	0.956	26.79%
88	124th Ave NE - Northup Way NE	0.652	0.653	0.15%	0.744	14.11%	0.835	28.07%
117	120th Ave NE - NE 20th St	0.340	0.522	53.53%	0.423	24.41%	0.624	83.53%
	Areawide Average	0.652	0.841	29.08%	0.846	29.85%	0.860	32.00%
MMA 13 Factoria – LOS Standard E+ or V/C 0.95; Congestion Allowance: 5								
105	Richards Rd - SE Eastgate Way	0.760	0.913	20.13%	0.916	20.53%	0.912	20.00%
202	Factoria Blvd - SE Newport Way	0.725	0.905	24.83%	0.905	24.83%	0.901	24.28%
203	SE Newport Way - Coal Creek Parkway	0.698	0.760	8.88%	0.761	9.03%	0.757	8.45%
204	Factoria Blvd - SE 36th St	0.836	0.958	14.59%	0.966	15.55%	0.959	14.71%
220	I-405 NB Ramps - Coal Creek Parkway	0.591	0.714	20.81%	0.713	20.64%	0.710	20.14%
221	I-405 SB Ramps - Coal Creek Parkway	0.836	0.919	9.93%	0.916	9.57%	0.922	10.29%
222	Factoria Blvd - SE 38th Pl	0.858	1.020	18.88%	1.021	19.00%	1.016	18.41%
284	124th Ave SE - Coal Creek Parkway	1.008	0.984	-2.38%	0.986	-2.18%	0.980	-2.78%
	Areawide Average	0.789	0.897	13.69%	0.898	13.81%	0.895	13.43%
MMA 14 Newport Hills – LOS Standard C or V/C 0.80; Congestion Allowance: 0								
	No Analysis Intersections	-----	-----		-----		-----	
	Areawide Average	-----	-----		-----		-----	

Appendix E

Land Use Projections

Figures E-1 and E-2 illustrate the Transportation Analysis Zones (TAZs) that have been defined for the City of Bellevue transportation analysis.

Table E-1 presents existing (2012) and projected 2024 land use that has been allocated to each TAZ. For each TAZ:

- Projected 2024 land use is presented in the unshaded row.
- Existing (2012) land use is presented in the shaded row.

As explained in Appendix D, City of Bellevue projections of future commercial and residential development begin with the regional economic forecasts of jobs and population developed by the Puget Sound Regional Council (PSRC, the region's metropolitan planning organization). PSRC allocates forecasted jobs and population to forecast analysis zones (FAZs) throughout the region. Job and population forecasts for each FAZ are then distributed by the City into smaller transportation analysis zones (TAZs) that are used for modeling purposes. (For example: Downtown Bellevue is one PSRC FAZ, but 43 TAZs as defined by the City of Bellevue.) These distributions are based primarily on development opportunities and growth trends. Parcels that are currently vacant are projected to have the highest potential for future development, followed by properties in which the difference between the current intensity of development and future potential intensity is the greatest. This procedure provides a reasonable basis for projecting the location of future development trends, but will not exactly match future development decisions made by specific property owners and developers. Land use projections are not necessarily equal to the total capacity for development within an area, but instead they forecast the amount of development that will likely occur within an area by a given horizon year.

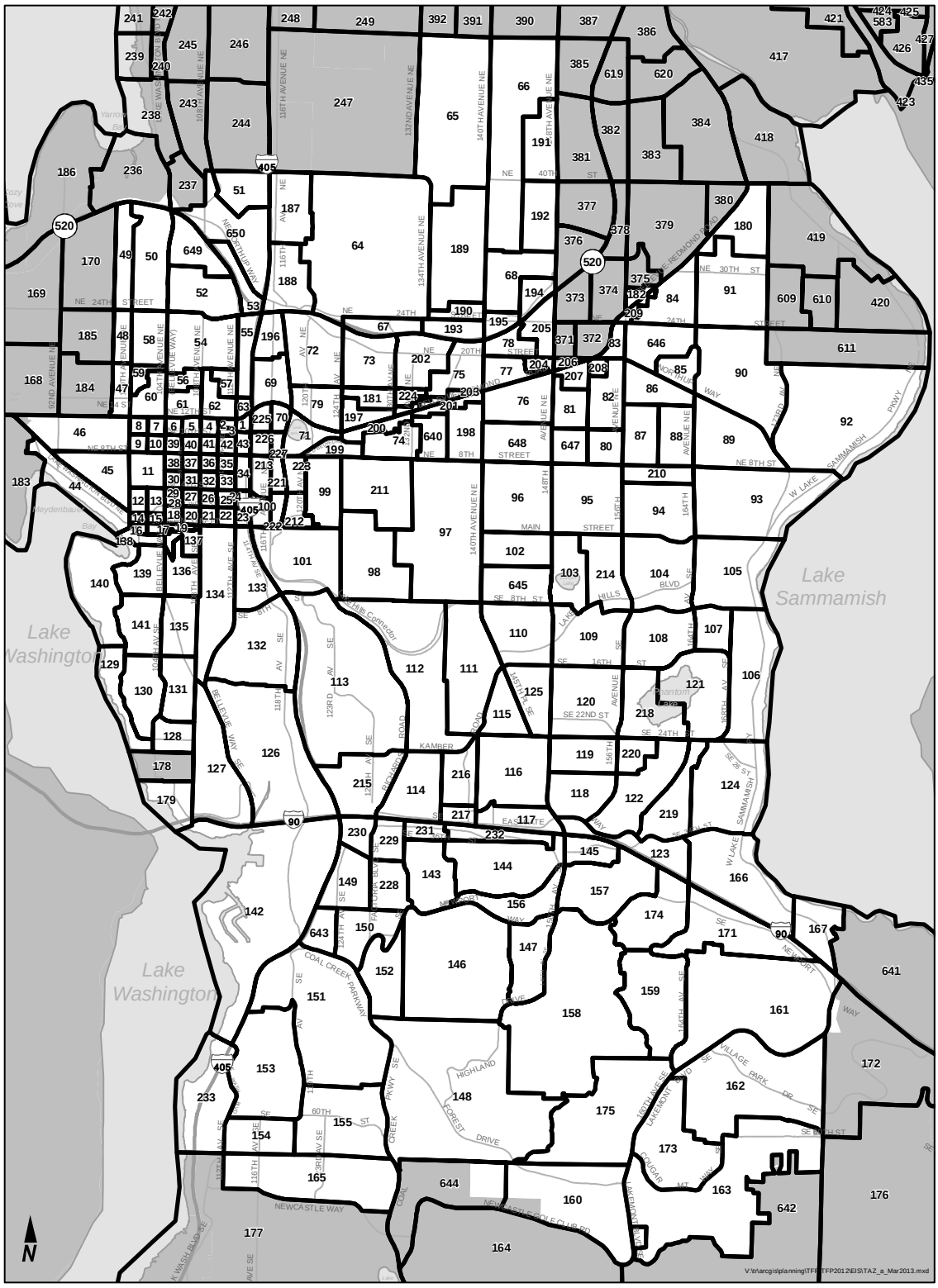

Figure E-1. Citywide Transportation Analysis Zones

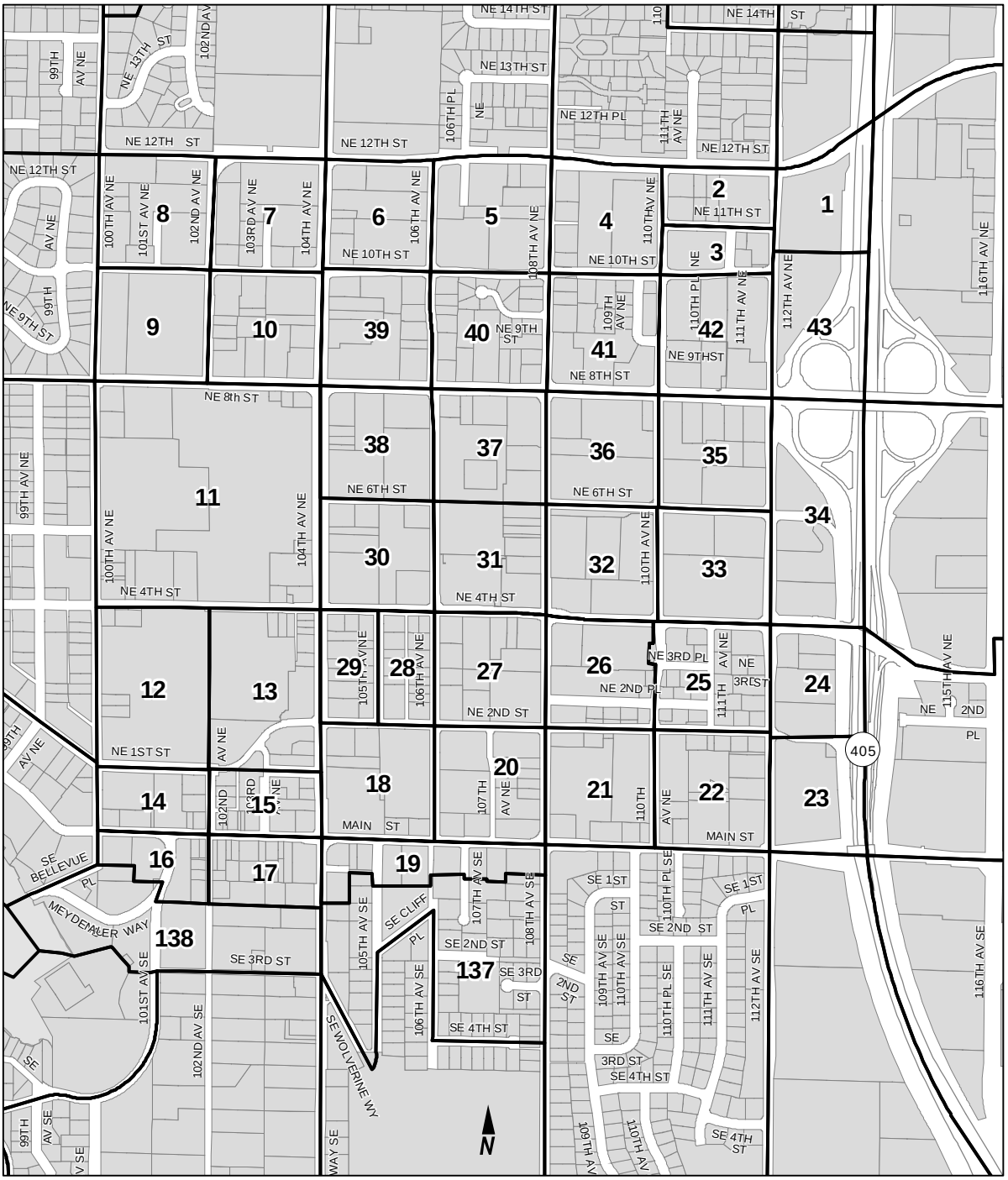

Figure E-2. Downtown Transportation Analysis Zones (Detail from Figure E-1)

Table E-1. Existing (2012) and Projected Future (2024) Land Use

Year	TAZ	Commercial (Square Footage)			Dwelling Units	
		Office	Retail	Others*	SFDU	MFDU
2024	1	475,550	0	0	0	0
2012	1	475,550	0	0	0	0
2024	2	60,117	3,327	0	0	413
2012	2	60,117	1,987	0	0	360
2024	3	6,721	4,398	2,756	0	274
2012	3	18,188	2,488	2,756	0	202
2024	4	2,173	32,259	177,386	0	192
2012	4	53,258	32,259	86,467	0	161
2024	5	26,504	36,643	83,299	0	875
2012	5	156,088	36,643	209,752	0	809
2024	6	5,587	90,392	0	0	385
2012	6	4,623	90,392	0	0	0
2024	7	9,805	78,955	71,078	0	350
2012	7	25,139	69,890	44,663	0	0
2024	8	11,246	3,836	0	2	210
2012	8	17,031	0	0	0	131
2024	9	4,208	125,646	0	0	359
2012	9	12,120	75,050	0	0	79
2024	10	216,012	141,845	9,376	0	609
2012	10	6,012	141,845	8,084	0	396
2024	11	17,062	1,680,409	70,000	0	25
2012	11	17,062	1,298,697	0	0	0
2024	12	1,194	907	10,910	0	19
2012	12	0	0	2,160	0	19
2024	13	246	60,096	792	0	214
2012	13	820	46,816	2,641	0	0
2024	14	6,472	23,606	42,439	0	456
2012	14	6,472	23,374	1,464	0	381
2024	15	8,590	98,819	4,722	0	246
2012	15	12,700	43,841	15,740	0	71
2024	16	0	16,357	0	0	189
2012	16	0	16,357	0	0	100
2024	17	12,516	70,232	6,664	0	333
2012	17	6,528	43,314	5,413	0	140
2024	18	0	220,272	0	0	700
2012	18	0	128,966	0	0	0
2024	19	21,657	47,142	293	0	279
2012	19	29,513	49,295	975	0	74
2024	20	260,431	85,502	0	0	574

Table E-1. Existing (2012) and Projected Future (2024) Land Use (continued)

Year	TAZ	Commercial (Square Footage)			Dwelling Units	
		Office	Retail	Others*	SFDU	MFDU
2012	20	260,431	169,846	0	0	348
2024	21	3,800	70,850	0	0	490
2012	21	3,800	121,660	0	0	0
2024	22	348,802	12,569	0	0	552
2012	22	326,850	2,745	0	0	423
2024	23	0	6,876	292,624	0	0
2012	23	0	17,947	98,380	0	0
2024	24	156,435	0	3,238	0	0
2012	24	86,435	0	0	0	0
2024	25	19,078	123,632	185,080	0	605
2012	25	19,078	127,904	0	0	565
2024	26	707,645	22,971	0	0	248
2012	26	492,666	17,936	0	0	248
2024	27	838,532	68,682	1,219	0	294
2012	27	833,368	32,705	4,064	0	0
2024	28	111,620	40,365	3,515	0	245
2012	28	6,620	46,239	11,717	0	0
2024	29	0	89,225	0	0	368
2012	29	0	92,861	0	0	368
2024	30	916,932	316,537	78,750	0	140
2012	30	28,227	104,889	0	0	0
2024	31	766,953	248,595	0	0	540
2012	31	405,508	157,132	0	0	540
2024	32	1,544,587	53,907	19,799	0	0
2012	32	1,491,242	44,898	0	0	0
2024	33	376,789	0	157,500	0	0
2012	33	376,789	0	0	0	0
2024	34	135,363	18,322	3,224	0	0
2012	34	120,254	5,563	0	0	0
2024	35	761,767	301,994	281,379	0	455
2012	35	761,767	301,994	124,048	0	455
2024	36	1,126,751	40,262	27,975	0	0
2012	36	232,845	5,536	26,458	0	0
2024	37	1,634,891	88,557	0	0	0
2012	37	909,517	62,587	27,239	0	0
2024	38	1,144,240	360,737	157,741	0	148
2012	38	680,421	295,567	377,999	0	148
2024	39	680,694	75,380	802,045	0	93
2012	39	447,985	60,684	674,562	0	0

Table E-1. Existing (2012) and Projected Future (2024) Land Use (continued)

Year	TAZ	Commercial (Square Footage)			Dwelling Units	
		Office	Retail	Others*	SFDU	MFDU
2024	40	515,834	58,732	105,226	0	641
2012	40	27,779	44,108	752	0	377
2024	41	485,483	5,150	36,400	0	375
2012	41	485,483	5,150	0	0	210
2024	42	136,931	61,025	144,783	0	1,012
2012	42	136,931	55,425	292,532	0	801
2024	43	0	0	0	0	0
2012	43	0	0	0	0	0
2024	44	25,785	0	17,014	126	201
2012	44	25,785	0	17,014	125	201
2024	45	15,841	10,920	26,198	176	267
2012	45	9,631	17,130	26,198	171	263
2024	46	0	0	0	272	0
2012	46	0	0	0	273	0
2024	47	0	0	0	91	7
2012	47	0	0	0	90	7
2024	48	0	0	4,766	76	0
2012	48	0	0	4,766	76	0
2024	49	0	0	0	163	0
2012	49	0	0	0	160	0
2024	50	0	0	0	266	0
2012	50	0	0	0	255	0
2024	51	0	0	0	110	108
2012	51	0	0	0	110	108
2024	52	0	36,189	44,177	200	0
2012	52	0	36,189	44,177	198	0
2024	53	157,053	0	62,484	0	0
2012	53	118,210	0	49,612	0	0
2024	54	174,330	2,650	41,970	136	49
2012	54	174,330	1,200	42,920	136	48
2024	55	304,498	2,331	1,220	0	0
2012	55	296,584	0	4,067	0	0
2024	56	0	0	0	75	0
2012	56	0	0	0	72	3
2024	57	0	0	0	57	0
2012	57	0	0	0	57	0
2024	58	5,246	0	123,882	174	32
2012	58	5,246	0	123,882	174	31
2024	59	0	0	0	35	17

Table E-1. Existing (2012) and Projected Future (2024) Land Use (continued)

Year	TAZ	Commercial (Square Footage)			Dwelling Units	
		Office	Retail	Others*	SFDU	MFDU
2012	59	0	0	0	33	17
2024	60	0	0	0	44	527
2012	60	0	0	0	42	527
2024	61	0	0	0	113	211
2012	61	0	0	0	113	176
2024	62	0	0	0	99	0
2012	62	0	0	0	101	0
2024	63	115,173	0	9,338	0	0
2012	63	115,173	0	9,338	0	0
2024	64	0	0	33,015	798	56
2012	64	0	0	33,015	793	56
2024	65	0	1,248	0	267	0
2012	65	0	1,248	0	269	0
2024	66	0	5,608	7,120	203	75
2012	66	0	5,608	7,120	203	75
2024	67	183,257	0	1,426	18	24
2012	67	183,257	0	1,426	18	24
2024	68	0	0	0	98	636
2012	68	0	0	0	98	621
2024	69	380,632	5,245	31,586	0	0
2012	69	353,396	5,245	31,740	0	4
2024	70	281,470	46,845	0	0	0
2012	70	109,899	86,150	0	0	0
2024	71	239,289	179,706	4,156	0	148
2012	71	203,984	185,273	13,854	0	97
2024	72	722,037	176,315	583,944	0	490
2012	72	97,988	251,332	813,719	0	0
2024	73	234,545	131,418	304,351	0	353
2012	73	170,496	110,368	444,150	0	10
2024	74	0	0	0	67	201
2012	74	0	0	0	67	201
2024	75	231,523	396,563	272,950	0	105
2012	75	179,279	372,045	425,445	0	0
2024	76	157,524	0	12,188	158	73
2012	76	104,738	0	12,188	154	38
2024	77	60,138	177,900	18,403	0	105
2012	77	50,309	167,852	16,718	0	0
2024	78	140,067	212,069	30,208	0	0
2012	78	79,444	167,188	88,303	0	0

Table E-1. Existing (2012) and Projected Future (2024) Land Use (continued)

Year	TAZ	Commercial (Square Footage)			Dwelling Units	
		Office	Retail	Others*	SFDU	MFDU
2024	79	1,502,020	128,792	366,941	0	420
2012	79	158,453	86,366	118,904	0	0
2024	80	65,218	0	0	26	600
2012	80	42,393	0	0	26	579
2024	81	0	0	0	141	0
2012	81	0	0	0	141	0
2024	82	74,399	78,104	0	1	1,308
2012	82	40,910	64,104	0	1	1,203
2024	83	13,300	135,279	0	0	350
2012	83	0	127,528	0	0	0
2024	84	13,154	0	4,200	244	0
2012	84	12,347	0	0	243	0
2024	85	0	4,867	0	102	0
2012	85	0	0	0	102	0
2024	86	2,520	6,734	49,353	22	946
2012	86	0	0	48,420	21	938
2024	87	51,407	749,757	70,000	0	210
2012	87	16,102	587,492	56,222	0	70
2024	88	8,278	33,875	110,403	3	459
2012	88	0	26,875	110,403	3	460
2024	89	0	0	21,461	464	88
2012	89	0	0	21,461	464	88
2024	90	0	5,279	55,489	813	38
2012	90	0	5,279	55,489	805	38
2024	91	0	0	0	471	0
2012	91	0	0	0	468	0
2024	92	0	0	41,934	890	0
2012	92	0	0	41,934	885	0
2024	93	0	0	0	735	0
2012	93	0	0	0	733	0
2024	94	0	720	71,993	315	0
2012	94	0	720	71,993	315	0
2024	95	16,646	39,065	48,420	294	175
2012	95	16,646	39,065	47,869	287	140
2024	96	9,763	14,583	140,444	247	542
2012	96	9,763	14,583	140,444	247	542
2024	97	9,593	38,318	48,893	217	164
2012	97	9,593	38,318	48,893	213	164
2024	98	0	0	90,319	204	0

Table E-1. Existing (2012) and Projected Future (2024) Land Use (continued)

Year	TAZ	Commercial (Square Footage)			Dwelling Units	
		Office	Retail	Others*	SFDU	MFDU
2012	98	0	0	90,319	204	0
2024	99	291,304	32,893	14,400	72	271
2012	99	291,304	32,893	14,400	70	228
2024	100	31,290	14,942	66,225	0	0
2012	100	0	17,862	66,225	0	0
2024	101	285,589	131,454	142,404	14	336
2012	101	287,325	131,454	52,085	6	349
2024	102	17,460	1,600	242,090	72	138
2012	102	17,460	1,600	242,090	69	138
2024	103	45,909	156,361	16,903	4	0
2012	103	0	0	0	4	0
2024	104	0	0	0	572	33
2012	104	0	0	0	572	33
2024	105	0	0	0	294	0
2012	105	0	0	0	295	0
2024	106	0	0	0	162	0
2012	106	0	0	0	156	0
2024	107	0	0	0	172	0
2012	107	0	0	0	172	0
2024	108	0	0	89,885	227	0
2012	108	0	0	89,885	226	0
2024	109	33,783	24,133	14,748	264	167
2012	109	33,783	24,133	14,748	264	167
2024	110	1,590	50,151	44,762	377	74
2012	110	1,886	50,151	44,762	379	21
2024	111	2,457	20,535	8,460	268	309
2012	111	2,457	20,535	8,460	261	304
2024	112	12,415	0	9,299	105	651
2012	112	12,415	0	9,299	111	651
2024	113	5,768	2,400	76,921	901	0
2012	113	5,768	2,400	76,921	899	0
2024	114	612,093	27,749	594,718	0	0
2012	114	281,951	40,500	539,027	0	0
2024	115	0	1,721	0	133	54
2012	115	0	1,721	0	142	54
2024	116	255,492	61,440	797,723	44	340
2012	116	151,640	54,440	553,153	42	296
2024	117	889,211	73,296	123,364	0	350
2012	117	339,448	51,558	123,364	0	0

Table E-1. Existing (2012) and Projected Future (2024) Land Use (continued)

Year	TAZ	Commercial (Square Footage)			Dwelling Units	
		Office	Retail	Others*	SFDU	MFDU
2024	118	414,035	205,424	180,087	0	0
2012	118	411,155	201,924	180,087	0	0
2024	119	8,253	4,595	13,510	126	0
2012	119	8,253	4,595	13,510	126	0
2024	120	19,298	0	45,172	358	156
2012	120	20,546	0	47,326	358	156
2024	121	0	0	0	328	0
2012	121	0	0	0	326	0
2024	122	1,778,546	10,644	246,909	1	5
2012	122	1,708,546	3,644	246,909	1	5
2024	123	0	0	0	31	153
2012	123	0	0	0	20	153
2024	124	0	1,694	1,694	584	29
2012	124	0	1,694	1,694	576	29
2024	125	0	4,885	33,289	181	148
2012	125	0	4,885	37,919	180	148
2024	126	31,237	11,222	54,664	0	343
2012	126	31,237	8,512	54,664	0	308
2024	127	0	0	16,060	422	0
2012	127	0	0	16,060	416	0
2024	128	0	0	45,532	80	0
2012	128	0	0	45,532	76	0
2024	129	0	0	0	83	0
2012	129	0	0	0	83	0
2024	130	0	0	0	167	0
2012	130	0	0	0	167	0
2024	131	3,500	12,655	467	171	35
2012	131	0	7,182	0	170	0
2024	132	670,266	44,270	188,131	0	50
2012	132	669,006	42,768	181,310	0	50
2024	133	413,912	192,705	642,215	0	0
2012	133	343,912	175,905	687,121	0	0
2024	134	64,732	451	850	354	116
2012	134	69,039	1,502	850	360	145
2024	135	6,207	6,020	46,686	150	68
2012	135	6,207	6,790	46,686	147	73
2024	136	14,873	0	155,014	25	87
2012	136	14,873	0	155,014	24	87
2024	137	17,685	0	2,800	42	155

Table E-1. Existing (2012) and Projected Future (2024) Land Use (continued)

Year	TAZ	Commercial (Square Footage)			Dwelling Units	
		Office	Retail	Others*	SFDU	MFDU
2012	137	17,685	0	0	42	155
2024	138	25,592	9,428	5,600	0	291
2012	138	12,506	10,708	67,664	0	285
2024	139	2,101	0	1,743	88	689
2012	139	824	0	1,743	88	687
2024	140	0	0	0	176	116
2012	140	0	0	0	175	116
2024	141	0	0	0	138	0
2012	141	0	0	0	139	0
2024	142	2,767	7,836	13,831	591	78
2012	142	2,767	7,836	13,511	590	78
2024	143	109,803	5,558	172,179	118	10
2012	143	260	18,526	223,365	114	10
2024	144	68,713	5,295	0	526	14
2012	144	71,733	5,295	10,025	525	14
2024	145	76,288	112,841	50,190	2	70
2012	145	44,294	96,138	0	8	0
2024	146	0	2,816	142,983	1,020	0
2012	146	0	2,816	142,983	1,017	0
2024	147	0	34,917	368	189	0
2012	147	0	34,917	368	189	0
2024	148	0	0	34,279	1,237	0
2012	148	0	0	34,279	1,235	0
2024	149	26,712	615,213	63,024	0	668
2012	149	3,884	528,618	70,080	0	294
2024	150	10,865	14,556	283,823	19	292
2012	150	10,865	14,556	283,823	18	292
2024	151	1,344	4,733	0	642	30
2012	151	1,344	4,733	0	641	30
2024	152	0	0	71,498	196	0
2012	152	0	0	71,498	190	0
2024	153	19,120	32,357	107,470	346	0
2012	153	12,120	25,357	107,470	345	0
2024	154	0	0	0	258	0
2012	154	0	0	0	250	0
2024	155	10,500	64,420	41,861	393	617
2012	155	0	64,420	49,861	378	442
2024	156	23,124	0	24,630	191	65
2012	156	23,124	0	25,360	189	65

Table E-1. Existing (2012) and Projected Future (2024) Land Use (continued)

Year	TAZ	Commercial (Square Footage)			Dwelling Units	
		Office	Retail	Others*	SFDU	MFDU
2024	157	35,110	9,020	90,413	288	52
2012	157	35,110	9,020	223,222	292	52
2024	158	0	0	68,629	1,167	75
2012	158	0	0	68,629	1,168	56
2024	159	0	0	0	532	4
2012	159	0	0	2,050	539	4
2024	160	0	0	0	329	0
2012	160	0	0	0	329	0
2024	161	0	13,910	55,839	707	0
2012	161	0	13,910	67,639	703	0
2024	162	24,057	50,928	0	492	400
2012	162	24,057	43,928	0	490	400
2024	163	1,174	0	36,354	323	232
2012	163	2,237	0	37,133	269	232
2024	165	0	0	6,877	858	0
2012	165	0	0	6,877	840	0
2024	166	0	0	16,961	383	0
2012	166	0	0	17,041	341	0
2024	167	2,680	11,223	93,371	68	112
2012	167	2,680	9,588	93,371	64	112
2024	171	0	0	0	155	0
2012	171	0	0	0	154	0
2024	173	0	0	0	198	0
2012	173	0	0	0	205	0
2024	174	0	0	11,340	313	0
2012	174	0	0	11,340	304	21
2024	175	0	0	10,483	469	163
2012	175	0	0	10,483	468	163
2024	179	0	0	0	121	0
2012	179	0	0	0	117	0
2024	180	0	0	0	345	0
2012	180	0	0	0	341	0
2024	181	66,611	82,699	104,350	0	210
2012	181	23,702	42,330	347,833	0	0
2024	182	67,465	0	59,569	0	0
2012	182	67,465	0	59,569	0	0
2024	187	0	0	0	55	0
2012	187	0	0	0	52	0
2024	188	220,212	17,023	36,038	35	0

Table E-1. Existing (2012) and Projected Future (2024) Land Use (continued)

Year	TAZ	Commercial (Square Footage)			Dwelling Units	
		Office	Retail	Others*	SFDU	MFDU
2012	188	193,991	21,348	36,038	34	0
2024	189	0	0	0	211	1
2012	189	0	0	0	207	0
2024	190	123,377	0	175,683	4	0
2012	190	113,055	0	150,483	4	0
2024	191	21,952	254,820	24,457	0	1,089
2012	191	21,952	254,820	24,457	0	1,089
2024	192	5,938	0	0	0	1,387
2012	192	5,938	0	0	0	1,387
2024	193	14,590	100,213	11,667	0	0
2012	193	3,132	94,900	0	0	0
2024	194	180,059	0	79,490	0	0
2012	194	145,197	0	233,338	0	0
2024	195	25,714	57,775	19,952	0	0
2012	195	31,114	27,687	26,063	0	0
2024	196	279,987	533	58,405	0	1
2012	196	163,926	1,775	84,136	0	2
2024	197	27,432	82,714	302,957	0	70
2012	197	17,789	59,344	233,436	0	0
2024	198	15,200	0	0	0	1,282
2012	198	20,318	6,158	0	0	1,282
2024	199	163,194	10,065	48,533	0	292
2012	199	123,980	7,650	0	0	292
2024	200	286,326	3,413	4,543	1	70
2012	200	208,589	0	0	1	0
2024	201	152,425	7,672	3,360	0	70
2012	201	107,881	25,573	0	0	0
2024	202	570,802	205,076	110,451	0	280
2012	202	441,598	172,760	368,169	0	0
2024	203	47,930	65,303	140,848	0	35
2012	203	3,445	30,729	168,968	0	0
2024	204	0	133,989	0	0	140
2012	204	0	116,182	0	0	0
2024	205	98,218	274,375	75,827	0	70
2012	205	145,966	216,235	73,975	0	0
2024	206	0	25,616	27,301	0	0
2012	206	0	25,616	27,301	0	0
2024	207	48,953	3,883	101,261	0	131
2012	207	2,945	5,174	98,461	0	123

Table E-1. Existing (2012) and Projected Future (2024) Land Use (continued)

Year	TAZ	Commercial (Square Footage)			Dwelling Units	
		Office	Retail	Others*	SFDU	MFDU
2024	208	58,985	0	18,808	0	116
2012	208	54,516	0	8,250	0	115
2024	209	71,421	7,804	67,772	0	129
2012	209	49,116	7,537	68,830	0	129
2024	210	102,665	30,666	15,736	24	101
2012	210	85,165	30,666	15,736	24	100
2024	211	0	0	0	350	77
2012	211	0	0	0	349	77
2024	212	204,826	105,700	0	0	0
2012	212	204,826	105,700	0	0	0
2024	213	115,426	91,111	27,559	0	0
2012	213	66,442	56,273	91,864	0	0
2024	214	65,706	76,992	104,716	264	63
2012	214	8,671	2,688	97,716	264	0
2024	215	36,939	0	45,665	180	482
2012	215	36,939	0	45,665	180	482
2024	216	158,722	0	66,931	10	48
2012	216	301,593	0	57,031	0	48
2024	217	468,852	5,183	98,230	0	0
2012	217	302,461	5,183	98,230	0	0
2024	218	0	1,104	0	80	0
2012	218	0	1,104	0	79	0
2024	219	87,438	0	40,332	176	152
2012	219	86,128	0	69,698	167	152
2024	220	0	0	0	75	0
2012	220	0	0	0	75	0
2024	221	10,871	153,338	445	0	0
2012	221	10,871	79,460	1,484	0	0
2024	222	7,167	148,584	0	0	0
2012	222	7,167	63,614	0	0	0
2024	223	11,038	165,534	16,000	0	175
2012	223	11,038	165,534	16,000	0	0
2024	224	91,613	74,547	34,334	0	70
2012	224	32,377	61,824	114,445	0	0
2024	225	532,084	1,650	512,683	0	0
2012	225	392,279	5,499	512,683	0	0
2024	226	140,000	0	174,799	0	0
2012	226	0	0	174,799	0	0
2024	227	0	125,795	0	0	0

Table E-1. Existing (2012) and Projected Future (2024) Land Use (continued)

Year	TAZ	Commercial (Square Footage)			Dwelling Units	
		Office	Retail	Others*	SFDU	MFDU
2012	227	0	50,673	0	0	0
2024	228	129,461	73,342	3,757	29	581
2012	228	101,138	65,877	3,757	32	564
2024	229	1,114,066	168,760	3,360	2	56
2012	229	1,052,816	151,120	0	1	0
2024	230	381,140	99,661	55,774	0	84
2012	230	294,763	92,661	5,584	0	0
2024	231	187,489	13,118	7,221	0	0
2012	231	152,454	11,415	7,221	0	0
2024	232	261,785	0	0	0	0
2012	232	226,785	0	0	0	0
2024	233	0	0	0	188	0
2012	233	0	0	0	184	0
2024	234	0	0	0	0	0
2024	235	0	0	0	0	0
2024	640	0	0	0	59	0
2012	640	0	0	0	39	0
2024	643	0	0	0	90	0
2012	643	0	0	0	89	0
2024	645	2,580	0	7,987	64	636
2012	645	2,580	0	7,987	62	637
2024	646	305,573	0	222,349	0	0
2012	646	298,067	0	222,349	0	0
2024	647	0	0	0	122	0
2012	647	0	0	0	121	0
2024	648	118,055	8,974	67,389	141	67
2012	648	118,055	6,579	67,389	141	19
2024	649	269,031	0	18,350	0	317
2012	649	269,031	0	18,350	0	317

* Other" commercial includes institutional, industrial and hotel uses.

Appendix F

Title VI and Environmental Justice Analysis

Introduction

Bellevue is an increasingly diverse community. Forty-one percent of Bellevue residents identified themselves as a minority race or ethnicity in the 2010 Census, up from 25 percent in 2000 and 13 percent in 1990. Bellevue's youth were a minority majority in 2010, indicating that this trend is likely to continue in the future. Consistent with Title VI of the Civil Rights Act and Executive Order 12898 (Environmental Justice), the Transportation Department monitors its programs, projects, and activities to ensure the benefits and impacts are shared by all population groups in the affected area. This appendix will summarize the results of an Equity Analysis conducted on the proposed 2013-2024 Transportation Facilities Plan.

Demographic Summary

This analysis divides the City into eight subareas:

- Northwest Bellevue / Bridle Trails / Bel-Red
- Downtown
- West Bellevue / Woodridge
- Wilburton
- Crossroads / West Lake Hills
- Northeast Bellevue / Sammamish / East Lake Hills
- Factoria / Eastgate
- Newport Hills / Somerset / Cougar Mountain

The subareas align with Census boundary geography; they generally do not match the zones used for transportation system analysis in other parts of this document. See Figure F-1 for indication of zone locations and boundaries. For this analysis, data on race/ethnicity and age are derived from the 2010 Census; data on language and poverty are derived from the 2007-2011 American Community Survey; and data on disabilities are derived from the 2000 Census, all at the block group level. It should be noted that American Community Survey estimates are derived from samples of the population not complete counts. Therefore, margins of error exist. Margins of error were added to estimates to determine whether threshold values were exceeded.

Table F-1 summarizes the general concentrations of protected classes across the subareas. The shaded figures reflect areas where Title VI/Environmental Justice thresholds are exceeded and therefore, consideration of the impacts on the group's housing, employment, and transportation needs is warranted. In general, thresholds are established based on reported concentrations greater than the citywide average or when the number of individuals is significant enough to trigger extra consideration. The one exception is for disabled populations where the threshold is capped at 10 percent despite an overall citywide average of 15 percent. Thresholds for each category are described in Table F-2.

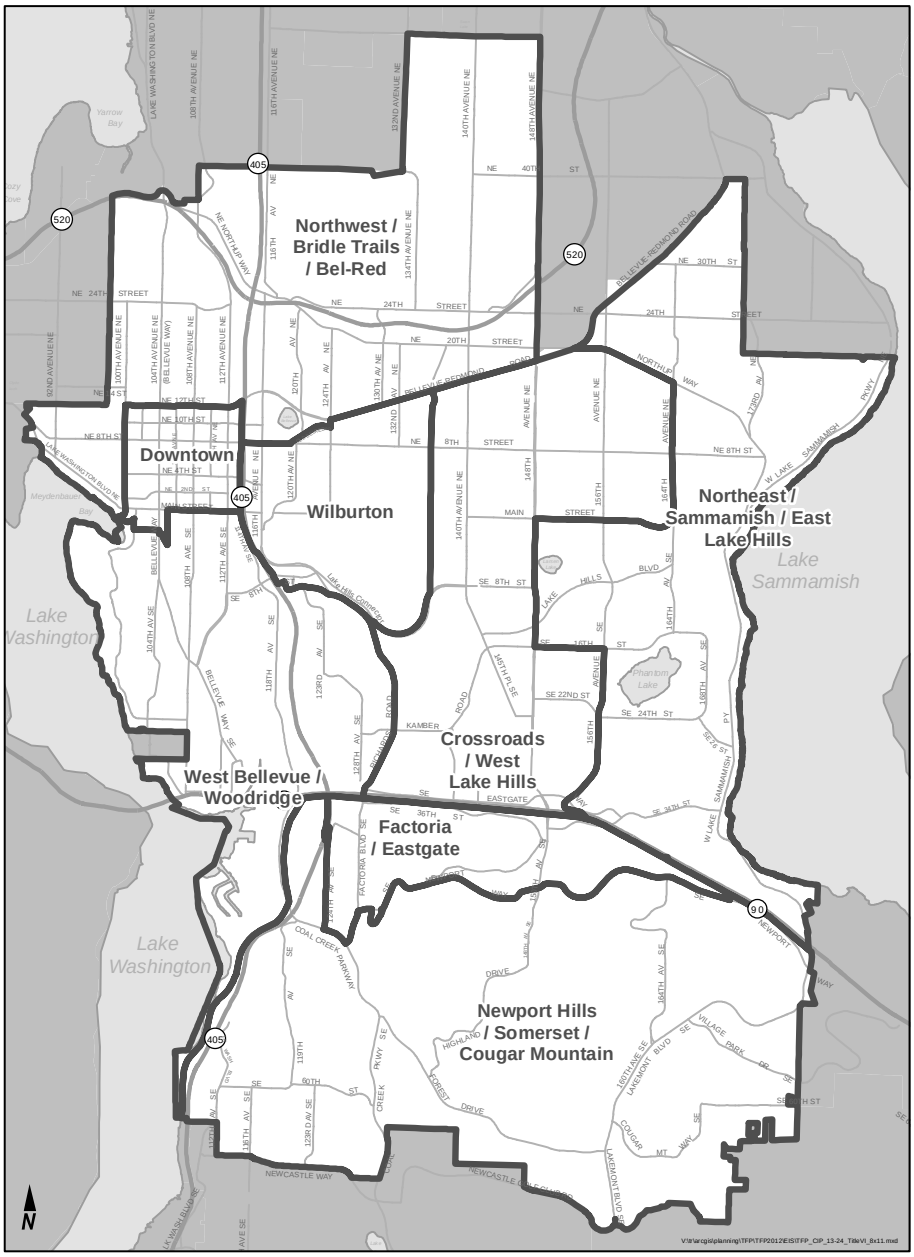

Figure F-1. Demographic Impact Analysis Subareas

Table F-1. Demographic Summary by Subarea

Subarea	Total Population	Total Households	% Minority	% Older Adults (65+)	% Living in Poverty*	% Speak a language other than English at home*	% of people with a disability**	# of Capacity Projects: TFP Network	# of Non-Capacity Projects: TFP Network
Northwest Bellevue/ Bridle Trails/ Bel-Red	19,881	8,708	40.5%	12.6%	**5%**	**37%**	**15%**	10	5
Downtown	7,147	4,641	**43.7%**	**15.6%**	**9%**	**41%**	**26%**	8	2
Wilburton	3,812	1,662	36.0%	**16.7%**	**7%**	**38%**	**17%**	5	2
West Bellevue/ Woodridge	12,828	5,360	28.1%	**15.6%**	**8%**	26%	**12%**	1	1
Crossroads/ West Lake Hills	25,915	10,797	**55.8%**	12.7%	**10%**	**49%**	**20%**	2	3
Northeast Bellevue/ Sammamish/ East Lake Hills	22,011	8,015	30.5%	**16.5%**	**5%**	26%	**15%**	1	4
Factoria/ Eastgate	5,668	2,246	**48.1%**	11.0%	**7%**	**43%**	**16%**	3	1
Newport Hills/ Somerset/ Cougar Mtn.	30,613	10,923	38.8%	13.1%	3%	**37%**	**11%**	1	1

Sources: U.S. Census Bureau 2010 Census, *2007-2011 American Community Survey, and **2000 Census for data on disabilities.
Please note: Areas reflect the City of Bellevue's boundaries as of August 1, 2012, yet data are from the periods given in the source information.

Note: Bold figures indicate areas where Title VI/Environmental Justice thresholds are exceeded.

Table F-2. Title VI / Environmental Justice Threshold Definitions

Category	Threshold Triggers			Considerations
	Concentration exceeds:		*Size exceeds:*	
Race and Ethnicity	2.2%	Black or African American	100	• Avenues for community-based outreach • Housing and employment commute impacts
	0.3%	American Indian and Alaska Native	n/a	
	27.5%	Asian	500	
	0.2%	Native Hawaiian and Other Pacific Islander	n/a	
	0.3%	Some Other Race	n/a	
	3.4%	Two or More Races	200	
	7.0%	Hispanic or Latino	400	
With a Disability	10%	Any disability that exceeds 10% of the population or 500 people. Disabilities tracked are: sensory, physical, mental, self-care, go-outside home, and employment.	500	• Non-motorized and transit access • Noise • Housing impacts
Primary Language Spoken at Home	36%	Speak a language other than English	1,000	• Peer to Peer outreach • Translation of key project information
	6%	Spanish or Spanish Creole	500	
	11%	Other Indo-European languages	500	
	18%	Asian and Pacific Island languages	500	
	1%	Other languages	500	
Individuals in Poverty	5%	Concentration exceeds 5%	500	• Non-motorized and transit connections • Housing and employment commute impacts
Older Adults (65 or older)	13.9%	Concentration exceeds 13.9%		• Non-motorized and transit connections • Noise • Housing impacts

Summary of Subarea Characteristics, Project Distribution, and Program

Impacts

Northwest Bellevue/ Bridle Trails/Bel-Red

The Northwest Bellevue and Bridle Trails areas are primarily residential with higher concentrations of single-family homes. Multi-family residential is concentrated along 148th Ave NE. Retail and services are limited to those meeting residential needs; commercial activity is concentrated in a few office buildings along SR-520 and 112th Avenue NE. The 481-acre Bridle Trails State Park is also adjacent to the area.

The Bel-Red area, in contrast, is currently characterized by commercial and light industrial uses with pockets of residential neighborhoods. A new subarea plan for Bel-Red envisions a transformation of the area to a transit-oriented mixed-use development pattern leading to significantly higher housing and employment densities. This greater subarea is also home to the City's medical district and has convenient access to freeways and the City's principal arterials.

The population's racial distribution in this area closely matches the citywide distribution– only exceeding the threshold for Asian residents. Higher concentrations of people who speak Asian, other Indo-European and other languages can be found in this area, as can a somewhat higher percentage of people living in poverty. The percentage of residents with one or more disabilities matches the citywide average, but exceeds the threshold of 10 percent. This area is one of four that does not exceed the threshold for older adults.

The CIP Network alternative includes four projects in this area. TFP-208, TFP-210 and TFP-241 support the anticipated growth in this area by expanding segments of 124th and 120th Avenue NE to provide additional capacity, add pedestrian and bicycle facilities and are timed to coordinate with the construction of the East Link light rail line that will cross these two roads. TFP-079 will construct sidewalks and bicycle lanes on Northup Way and NE 24th Street between NE 33rd Place and 124th Avenue NE; when completed, these improvements will connect on the east to the existing SR 520 Trail and on the west to non-motorized facilities included in the Eastside Transit and HOV project now under construction by the State.

The TFP Network alternative includes eleven additional projects in this area. TFP-209, TFP-213, TFP-215, TFP-217, TFP-218 and TFP-248 are capacity projects to build, advance design or initiate design for roadway segments (and associated pedestrian and bicycle facilities) in the Bel-Red area. These are consistent with the growth planned and anticipated in the area and provide necessary coordination with East Link light rail construction. TFP-250 is intended to address congestion on 148th Avenue NE, along the border with Redmond in the Overlake area. TFP-173, TFP-244 and TFP-245 involve preliminary scoping and public engagement for north-south pedestrian and bicycle facilities through the area. TFP-249 involves scoping options for improving access—especially for pedestrians—to the planned East Link station at NE 8th Street.

Impacts of these projects include property acquisition (partial and, potentially, whole parcels). Because of the planned and anticipated growth in the Bel-Red area as well as East Link light rail, there is a concentration of projects in this area. And, because several of the capacity projects include building entirely new roadways or widening existing roadways, the potential impact of the projects is proportionately greater than in other subareas. In general, impacts are not deemed disparate.

Downtown

Downtown Bellevue is a regional growth center, characterized by a mix of high-rise office and residential buildings along with major concentrations of retail and a variety of cultural uses. This subarea also hosts Downtown Park.

One of the most notable demographic elements of Downtown is its high concentration of individuals with one or more disabilities: 26 percent versus a citywide average of 15 percent. This concentration is likely correlated to Downtown's relatively high percentage of older adults who live in retirement homes and assisted living facilities. It also has one of the highest percentages of individuals living in poverty, with 13 percent versus a citywide average of 5 percent. Downtown has higher concentrations of minorities, specifically Black or African Americans, Asians and Native Hawaiians and Pacific Islanders, as well as higher concentrations of people who speak Asian, other Indo-European and other languages.

The CIP Network alternative includes one project in this area, TFP-110. It is anticipated this project, which will widen 110th Avenue NE to the west to accommodate an additional lane and standard sidewalks, would be implemented in conjunction with redevelopment of properties along the west side of the street, so impacts would be limited.

The TFP Network in Downtown includes five projects to add turn lanes at intersections: TFP-216, TFP-219, TFP-222, TFP-223 and TFP-225. It is envisioned that these projects also would be implemented in conjunction with redevelopment of adjacent properties, so impacts would be limited. TFP-190 will widen NE 2nd Street to five lanes between Bellevue Way and 112th Avenue NE and improve sidewalks. Adjacent development built in the last two decades or so has been set back and/or can be accommodated in this planned widening but portions of property may need to be acquired for right-of-way and some older buildings may lose parking. TFP-230 and TFP-234 would revise roadway channelization and improve pedestrian and/or bicycle accommodation on 108th Avenue and Main Street (from Bellevue Way to 116th Avenue). TFP-193 and TFP-197 involve coordination with the State to add access to or from I-405 at NE 10th Street and NE 2nd Street, respectively.

Impacts of these projects include may include property acquisition (partial and, potentially, whole parcels). In general, impacts are not deemed disparate. City staff must take care during the property acquisition phase of these projects to ensure that the senior population is not disproportionately affected. The Downtown Transportation Plan update process now underway may cause review of the scope and/or priority of projects in Downtown.

Wilburton

In Wilburton, the mix of residential and commercial uses is balanced by expansive open space in Bellevue Botanical Gardens, Glendale Golf and Country Club, and Kelsey Creek and Wilburton Hill Community Parks.

The current population is comprised of 36 percent minorities, somewhat less than the citywide average. Concentrations of Black and American Indian/Alaska Native residents, slightly higher than average, trigger the minority threshold. Despite relatively few racial triggers, Wilburton triggers every language category, with upwards of 24 percent of the population speaking an Asian language, 15 percent speaking other Indo European languages, 12 percent speaking Spanish, and 6 percent speaking other languages. About 10 percent of Wilburton's population lives in poverty compared to 5 percent citywide, and 17 percent have one or more disabilities. Notably, this area has the highest percentage of older adults, with 16.7 percent compared to the citywide average of 13.9 percent.

The CIP Network includes four capacity projects in this area. TFP-207 and TFP-211 extend NE 4th Street and NE 6th Street to 120th Avenue NE, creating a linkage to I-405 and downtown. This will support planned development in Wilburton and Bel-Red as well as bring increased traffic volumes. TFP-207 includes neighborhood protection features, to limit the movement of traffic into the residential area east of 120th Avenue NE. TFP-240 will support the NE 4th and NE 6th extensions by widening 120th Avenue from NE 4th Street to NE 8th Street and adding bicycle facilities.

The TFP network adds one capacity project: TFP-197 (also discussed in the Downtown section, above) involves coordinating with the State to add access to I-405 and could include extending NE 2nd Street to 116th Avenue NE. The south segment of TFP-213 (discussed in the Bel-Red section, above) includes adding bicycle lanes on 124th Avenue from NE 8th Street northward (to NE 18th Street); this improvement would connect to existing bike lanes on 124th Avenue south of NE 8th Street. Two non-capacity projects are included in the TFP Network. TFP-234 (also discussed in the Downtown section, above) will add bike lanes on Main Street from 116th Avenue to Bellevue Way. TFP-244 involves initial scoping and stakeholder engagement for a multiuse path along the BNSF rail corridor.

Impacts include increased traffic volumes and worsened LOS, and significant property acquisition (whole and partial parcels). Because several of the capacity projects include building entirely new roadways or widening existing roadways, the potential impacts of the projects is greater than in other subareas. These projects are consistent with the long-range subarea plan and place no undue burden, in general, on any one population group. As with the Downtown, however, care must be taken during the property acquisition phase of the projects to not disproportionately impact the minority or low income residents of the area.

West Bellevue / Woodridge

West Bellevue and Woodridge are primarily residential with higher concentrations of single-family homes. Multi-family residential is concentrated south of Downtown, along I-405 and 112th Ave SE. Most commercial activity is concentrated in hotel and office buildings south of Downtown, in the Bellefield Office Park, and on industrial lands lining I-405 and I-90.

The area's population has relatively low concentrations of people of a minority race or ethnicity, exceeding only the threshold for populations of two or more races. The area exceeds, however, the thresholds for people who speak other Indo-European languages and other languages. It also has one of the highest estimates of people living in poverty, with 11 percent compared to a citywide average of 5 percent. It also exceeds the threshold for older adults with 15.6 percent. Though the area has a relatively low concentration of people with a disability at 12 percent, the area also exceeds the threshold of 10 percent.

The CIP Network includes one project in this area: partial implementation TFP-242 to add a southbound HOV lane on Bellevue Way from the South Bellevue Park and Ride to I-90. Also included in TFP-242 is a multiuse off-street path on the east side of 112th Avenue SE and Bellevue Way SE between SE 8th Street and I-90. Both elements are anticipated to be implemented in conjunction with the Sound Transit East Link project (although extent of implementation of the multiuse path may depend on the actual alignment selected for the rail line between the Park and Ride and SE 8th Street).

The TFP Network alternative adds the remaining element of TFP 242: a southbound HOV lane on Bellevue Way SE segment from the "Y" intersection with 112th Avenue SE to the South Bellevue Park and Ride. The TFP Network also includes TFP-244 which, as noted in the Wilburton section above, involves initial scoping and stakeholder engagement for a multiuse path along the BNSF rail corridor.

Impacts include property acquisition, particularly in the case of full implementation of TFP-242 under the TFP Network, where the HOV lane between the 112th Avenue SE "Y" and the Park and Ride would (it is anticipated) involve several residential displacements and multiple partial acquisitions for right-of-way. There would also be aesthetic impacts for residents associated with the removal of screening vegetation and introduction of retaining walls and noise walls.

Crossroads / West Lake Hills

The Crossroads/ West Lake Hills area runs north to south from Bel-Red Road down to I-90 encompassing two major hubs of activity including Crossroads Mall and Bellevue College as well as several smaller commercial centers and industrial lands in Richards Valley. In the south, it is an axis of travel between eastside communities and Seattle with the Eastgate Park & Ride. Single-family and multi-family residential areas surround these hubs with schools and parks interspersed among them.

Demographically, this is the most racially diverse area in the City with nearly 56 percent of its population being of a minority race or ethnicity. It has the highest concentrations of every minority racial category except for some other race and two or more races. Most notably, the area

has the highest proportion of Hispanic or Latino residents, with nearly 15 percent compared to the citywide average of seven percent. Commensurately, every language category is triggered as well, with upwards of 23 percent of the population speaking an Asian language, 18 percent speaking Spanish, 13 percent speaking other Indo-European languages and 4 percent speaking other languages. This area also has the second highest percentage of people living in poverty and the second highest percentage of people with one or more disabilities. Despite having pockets with high concentrations of older adults, the area as whole does not exceed the threshold for older adults.

Due to its high concentrations of protected classes, it will be important to compare transportation investment and impacts in this area with other areas, to ensure protected classes are receiving their fair share of investment dollars and not receiving an undue level of impacts.

The CIP Network includes no projects in this area. The TFP Network includes two capacity and three non-capacity projects in this area. TFP-253 is a capacity project that expands the 150th Avenue SE/Eastgate Way intersection to reduce congestion. TFP-252 involves coordination with Bellevue College and King County Metro to develop an alternative transit routing through the college campus. TFP-158 will construct sidewalk on the north side and bike lanes on both sides where missing along SE 16th Street between 156th Avenue SE and 148th Avenue SE. TFP 245 will involve preliminary scoping and public engagement for pedestrian and bicycle facility improvements along 140th Avenue between NE 8th Street and NE 24th Street (also discussed in Bel-Red section, above). TFP-246 will install sidewalks where missing and bike lanes along Eastgate Way. As envisioned, TFP-252 will place transit routing closer to a multifamily residential condominium complex, potentially impacting residents.

Northeast Bellevue / Sammamish / East Lake Hills

This area spans the eastern edge of Bellevue north of I-90 hugging the shores of Lake Sammamish to the east. It includes predominantly single-family homes with pockets of commercial office in the north by Overlake and in the south by I-90, including the Boeing complex and Advanta office buildings housing high-tech companies. The Lake Hills Greenbelt and Phantom Lake are also significant features in this subarea.

Compared to other areas in the City, this area has relatively low concentrations of people of a minority race or ethnicity, exceeding only the thresholds for populations of American Indian/Alaska Native and two or more races. The area exceeds, however, the thresholds for people who speak other Indo-European languages and other languages. It has one of the lowest estimates of people living in poverty, yet still exceeds the threshold, and the proportion of people with a disability matches the citywide average of 15 percent. Notably, this area has one of the highest percentages of older adults with 16.5 percent compared to the citywide average of 13.9 percent.

The CIP Network includes one project in this area. TFP-078 will rebuild a segment of West Lake Sammamish Parkway and include improved pedestrian and bicycle accommodation. The TFP Network adds an additional segment of TFP -078 (of five along corridor) and four additional projects. TFP-232 will add bike lanes/bike shoulder along 164th Avenue from NE 18th Street to

SE 14th Street. TFP-158 (also discussed in the West Lake Hills section, above) will construct sidewalk on the north side and bike lanes on both sides where missing along SE 16th Street between 156th Avenue SE and 148th Avenue SE. TFP-247 will add bike lanes on Eastgate Way (as discussed in the West Lake Hills section, above). TFP-254 will add a center turn lane and bike lanes to Bel-Red Road between NE 20th Street and NE 24th Street. TFP-232 is expected to displace parking along the east side of 164th Avenue for at least part of the segment. TFP-254 will involve widening the roadway (the west side of which is in Redmond) and, potentially, some property acquisition (partial parcels). No displacements or significant impacts for residents are anticipated and the impact is not deemed disparate.

Factoria / Eastgate

The Factoria/Eastgate subarea comprises the Factoria Mall and commercial lands eastward, which are home to major corporations and community shopping centers. The remainder of the subarea is primarily residential, with a mix of single-family and multi-family homes including most of the recent Eastgate annexation area.

This area is one of the most racially diverse in the City, having the highest percentage of Asian residents at 34 percent compared to the citywide average of 28 percent, and the highest percentage of people of two or more races at 4 percent. It also exceeds the thresholds for Black and African American, and Native Hawaiian and Pacific Islander populations. Language thresholds are triggered for residents who speak Asian languages, Spanish and other languages. This area has one of the higher proportions of people living in poverty with 10 percent compared to the citywide average of 5 percent. The proportion of people with a disability is slightly higher, at 16 percent, than the citywide average. This area has the lowest percentage of older adults, however, with 11 percent compared to the citywide average of nearly 14 percent.

The CIP Network includes no projects in this area. The TFP Network includes three capacity projects and one non-capacity project in this area. TFP-103 will connect the stub ends of 129th Avenue SE to create a through connection. It is anticipated this project will occur in conjunction with development on the parcels in the missing link, so although some property acquisition would be required, no displacement would occur. TFP-195 will expand capacity at the I-90 eastbound off-ramp exiting to 150th Avenue SE. TFP-246 involves scoping and predesign for improvements to 150th Avenue SE from south of SE 38th Street to Newport Way, in the new Eastgate annexation area. TFP-243 involves design for completion of the Mountains to Sound Greenway trail where a gap exists between Factoria Boulevard and the east city limit. No adverse or disparate impacts to residents are noted.

Newport Hills / Somerset / Cougar Mountain

The Newport Hills / Somerset / Cougar Mountain subarea covers the major portion of the City south of I-90. It is primarily residential with pockets of neighborhood-serving commercial areas. Several neighborhoods within the subarea are characterized by steep terrain and ravines, which provide for a more extensive tree canopy than other subareas. The subarea has relatively newer housing developments than other areas, especially in the east.

Race/ethnicity thresholds are exceeded for the concentration of Asian residents and residents of two or races. Thresholds for Asian and other languages are also exceeded. Despite having the lowest proportion of residents with one or more disabilities, the area exceeds the threshold of 10 percent. It is the only subarea in the City that does not exceed the poverty threshold; nor does it exceed the threshold for older adults.

The CIP Network includes one project in this area: TFP-192 will add a signal or roundabout to the Lakemont Boulevard / Cougar Mountain Way intersection. The TFP network adds an additional element of TFP-192 (pedestrian, bicycle and streetscape improvements to Lakemont Boulevard north of the Cougar Mountain Way intersection). It also includes TFP-251, which will involve preliminary scoping and public engagement for a separated multiuse path adjacent to Coal Creek Parkway between 124th Avenue SE (in Factoria) and the south city limit.

With or without the planned improvements, the Newcastle MMA will exceed its areawide level of service standard. In this MMA, because only three of the six designated "system" intersections are currently signalized, the level of service standard is calculated based on only three intersections. Adding a signal to one of the three intersections that currently lack signals would improve the areawide level of service figure (and potentially, bring area into compliance with the standard). Current evaluation indicates, however, that the Lakemont Boulevard / Cougar Mountain Way location is where intersection control is warranted. Thus, both the CIP and TFP Network alternatives include funding for a roundabout or signal at this location. Since this location is not designated as a "system" intersection, the improvement will not register on the areawide average metric. TFP-251 (discussed in the Factoria / Eastgate section, above) may identify improvements for the 150th Avenue SE / Newport Way intersection which, once implemented, would affect the areawide average figure for the Newcastle MMA. Overall, project distribution and impacts in this area are not deemed disproportionate in the citywide context.

Conclusion

Citywide programs of capital improvements are influenced by a variety of factors that may alter the assumed equitable distribution of projects. Those factors include, but are not limited to:

- Recent completion of updated subarea plans (such as those for Bel-Red, Wilburton and Eastgate) that identify desired and anticipated levels of growth and identify high-priority projects;
- Growth Management Act requirements to not allow development if sufficient infrastructure is not available to accommodate increased housing and employment densities; and
- Available capital funding.

Given these factors, the program of projects within the proposed 2013-2024 TFP is not deemed disproportionate (i.e., more projects serving non-protected classes or protected classes shouldering more of the project impacts). It is important to track citywide plans over time, however, to ensure that longer term trends demonstrate an equitable balance.

Given the diverse characteristics of Bellevue, it is recommended that future TFP development processes include a robust community outreach component. Targeted efforts should be made to garner comment and input from all segments of the population through all stages of the process, from project identification through evaluation of the draft environmental impact statement.