ENVIRONMENTAL IMPACT STATEMENT

for the

SOUTH DOWNTOWN SUBAREA PLAN

March 26, 2013

prepared by the

City of Tacoma, Planning and Development Services Dept.

and

University of Washington, Capital Projects Office
This Draft Environmental Impact Statement (Draft EIS) for Tacoma’s South Downtown Subarea Plan has been prepared in compliance with the State Environmental Policy Act (SEPA) of 1971 (Chapter 43.21C, Revised Code of Washington); the SEPA Rules, effective April 4, 1984, as amended (Chapter 197-11, Washington Administrative Code); rules adopted by the City of Tacoma implementing SEPA (Tacoma Municipal Code, Chapter 13.12 – Environmental Code, and rules adopted by the University of Washington implementing SEPA (478-324 WAC). Whereas the City of Tacoma and the University of Washington Tacoma (through the University’s Capital Project’s Office) are co-lead agencies for SEPA compliance, the City is serving as the nominal SEPA Lead Agency\(^1\) for the South Downtown Subarea Plan EIS. Both the City and the University, through its SEPA Advisory Committee, have determined that this EIS has been prepared in a responsible manner using appropriate methodology. As nominal SEPA Lead Agency, the City has directed the areas of research and analysis that were undertaken in preparation of this EIS. In its final form – as a Final EIS – it will accompany the proposed South Downtown Subarea Plan and will be considered in making final decisions concerning the Subarea Plan, as well as new policies and regulations, and site-specific projects proposed within the South Downtown subarea.

Date of Draft EIS Issuance ................................................................. March 26, 2013

Date of Draft EIS Public Meeting ...................................................... April 25, 2013
   (Refer to pg. vii of this Draft EIS for time, location and intended meeting format)

Date Comments are Due on the Draft EIS ........................... May 3, 2013

\(^1\) A nominal lead agency is the public agency responsible for complying with the duties of lead agency (WAC 197-11-944) and complying with SEPA’s procedural requirements (WAC 197-11-758).
The purpose of this Draft Environmental Impact Statement (Draft EIS) is to:

- identify and evaluate probable adverse environmental impacts that could result from development associated with any one of three development alternatives and the No Action Alternative; and
- identify measures to mitigate those impacts.

This Draft EIS is unique in that:
1) it is jointly sponsored by the City of Tacoma and the University of Washington Tacoma (UWT);
2) it is a non-project document in that it addresses approximately a 600-acre area of South Downtown Tacoma and presents cumulative impact analyses for the entire subarea, rather than piecemeal analysis on a project-by-project basis;
3) it is an EIS aimed at comprehensiveness yet conciseness to improve usefulness; and
4) it is a “Planned Action” EIS with the objective of eliminating the need for subsequent environmental review associated with site-specific development or redevelopment -- providing certainty for future development and simplifying and expediting the permitting process in order to foster the realization of high quality urban development in the subarea.

The “Planned Action” EIS is an upfront environmental review of the South Downtown subarea prepared pursuant to the authorization and requirements of RCW 43.21C.420, .440, .229, regulations set forth in Chapter 197-11 WAC, and the requirements set forth in the Tacoma Municipal Code. Once complete, the EIS will allow the City Council to enact ordinances that use one or more or a hybrid of the upfront environmental review tools authorized by these statutory provisions, and to authorize or grant permits and approvals based upon certain “upfront” EIS provisions.

This Draft EIS also builds upon previous regional planning efforts conducted by the Puget Sound Regional Council (PSRC) to meet the requirements of the State Growth Management Act (GMA), which requires regions, counties, cities and towns to plan for forecasted growth. The two major regional plans put forth by PSRC are VISION 2040 and Transportation 2040, both of which were backed by comprehensive EIS’s. Pierce County establishes Countywide Planning Policies in conjunction with the cities and towns in the County and assigns population and employment growth allocations for the cities within its jurisdiction, including Tacoma, as mandated by the GMA. The development alternatives being analyzed in this Draft EIS have been designed in accordance with the two PSRC regional plans and the Pierce County growth allocations and, therefore, have already been analyzed and approved at the regional level. VISION 2040 is a regional strategy for accommodating the 5 million people expected to live in the central Puget Sound region by 2040. The Final EIS was issued in 2008, and in the preferred alternative, the largest shares of the region’s future growth would occur in the region’s five major metropolitan cities, including Tacoma. Transportation 2040 is an action for regional transportation for the next 30 years and the Final EIS for the plan was issued in 2010. Land use assumptions were based on VISION 2040. The preferred alternative in the EIS emphasizes greatly expanded employer and residential programs to reduce unnecessary travel and increase use of transit, vanpools, bicycling, and walking. Each EIS referenced in this paragraph is incorporated into this Draft EIS by this reference, as are the SEPA documents used for the Countywide Planning Policies and Population and Employment allocations (also referenced in this paragraph).

The Final Environmental Impact Statement (Final EIS) for the Subarea Plan will accompany the South Downtown Subarea Plan through the review process associated with Subarea Plan and will be the principal environmental document that will be considered in the decision-making process for the Subarea Plan, as well as new policies and regulations, and site-specific projects that are proposed within the South Downtown subarea.

Prior to issuing the Draft EIS, the lead agencies fulfilled the required notice and meeting requirements set forth in RCW 43.21C.420 and .440 and the associated requirements in the Tacoma Municipal Code.
comments, regarding the scope of the Draft EIS. At the conclusion of the Scoping process, the City and UWT confirmed the alternatives to be analyzed in this EIS and the range of environmental issues to be evaluated. Thirteen broad areas of environmental review are evaluated, including: earth, air quality, water, plants / animals, environmental health, noise, land use, population / housing, historic / cultural resources, aesthetics, transportation, public services, and utilities.

The Table of Contents for this Draft EIS begins on pg. ix of the Fact Sheet. In general, the Draft EIS is organized into four major sections:

- **Fact Sheet** (immediately following this Preface) -- provides an overview of the proposed project, its location, approvals needed, contact information, and the Table of Contents;
- **Section I** (starting on page S-1) -- summarizes the Proposed Action and the alternatives, and includes a comparative matrix describing adverse environmental impacts, mitigation measures, and potential significant adverse environmental impacts associated with the alternatives;
- **Section II** (beginning on page 2-1) -- provides a detailed description of the Proposed Action and the alternatives; and
- **Section III** (page 3-1) -- is an analysis of probable adverse environmental impacts that could result from implementation of any one of the alternatives. This section also identifies possible mitigation measures and potential significant adverse environmental impacts.
FACT SHEET

Name of Proposal
South Downtown Subarea Plan

Proponents
City of Tacoma
Planning and Development Services Dept.
747 Market St., Room 345
Tacoma, WA 98402

University of Washington Tacoma
1900 Commerce Street
Tacoma, WA 98402

Location
The South Downtown Subarea Plan addresses an area of approximately 600 acres -- extending generally from S. 15th St. on the north to Interstate 5 on the south and from S. Yakima Ave. on the west to E. “D” St. and E. “L” St. on the east. The Subarea encompasses the University of Washington Tacoma campus, bounded by Tacoma Way South, Pacific Ave, South 17th St, and South 21st St. Also included within the Subarea are properties located along the west edge of the Thea Foss Waterway between S. 15th St. and S. 4th St.

Proposed Action
The Proposed Action consists of several related decisions by the Tacoma City Council – with involvement, as appropriate, by UWT – regarding the South Downtown Subarea Plan, including:

- approval of the Final EIS as a document that is adequate for SEPA compliance, decision making, and implementation of the upfront SEPA process;
- implementation of the associated Planned Action ordinance for the project;
- adoption of the South Downtown Subarea Plan and the associated policies and implementing regulations, as well as site-specific projects that are proposed within the South Downtown subarea; and
- determination of whether one of the development alternatives contained in the Subarea Plan, a hybrid alternative derived from the development alternatives, or the No Action Alternative is the City’s preferred alternative for the South Downtown area.
The *No Action Alternative* and three development alternatives are evaluated in this Draft EIS. Key elements of each alternative include the following:

**No Action Alternative** – Tacoma’s existing *Comprehensive Plan*, *Zoning Map*, and the City’s *Land Use Code* would remain in effect. All existing planning and implementation policies and existing development regulations would continue to guide development decisions for properties within the South Downtown Subarea, including the campus of the University of Washington Tacoma. No Planned Action ordinance would be adopted and the advantages of upfront SEPA review would not be realized.

**Development Alternatives**

- **Alternative 1** – This alternative could result in a net increase of up to 30,000,000 total gross sq.ft. of net development within the South Downtown Subarea consisting of up to 15,000,000 sq.ft. of residential development, 15,000,000 sq.ft. of commercial development, 30,000 residents, and 40,000 jobs.

- **Alternative 2** – This alternative could result in a net increase of up to 20,000,000 total gross sq.ft. of net development within the South Downtown Subarea consisting of up to 10,000,000 sq.ft. of residential development, 10,000,000 sq.ft. of commercial development, 20,000 residents, and 26,667 jobs.

- **Alternative 3** – This alternative could result in a net increase of up to 10,000,000 total gross sq.ft. of net development within the South Downtown Subarea consisting of up to 5,000,000 sq.ft. of residential development, 5,000,000 sq.ft. of commercial development, 10,000 residents, and 13,333 jobs.

**SEPA Lead Agencies**

City of Tacoma
Planning and Development Services Dept.

and

University of Washington Tacoma

**SEPA Nominal Lead Agency**

City of Tacoma
Planning and Development Services Dept.

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3 A nominal lead agency is the public agency responsible for complying with the duties of lead agency (WAC 197-11-944) and complying with SEPA’s procedural requirements (WAC 197-11-758).
SEPA Responsible Official 4  Ian Munce, J.D., AICP
City of Tacoma Planning and Development Services Dept.
747 Market St., Room 345
Tacoma, WA 98402

EIS Contact Person  Ian Munce, J.D., AICP
City of Tacoma Planning and Development Services Dept.
747 Market St., Room 345
Tacoma, WA 98402

Telephone: 253.573.2748
Fax: 206.591.5433
E-mail: imunce@cityoftacoma.org

Final Actions  City of Tacoma
• Approval of the Final EIS for the South Downtown Subarea Plan as a document that is adequate for SEPA compliance, decision making, and implementation of the upfront SEPA process;
• Adoption of the South Downtown Subarea Plan;
• Implementation of the Planned Action Ordinance; and
• Determination of whether one of the three development alternatives, a hybrid of the three development alternatives, or the No Action Alternative is the preferred alternative for the Subarea.

University of Washington Tacoma
• Approval of the Final EIS for the South Downtown Subarea Plan as a document that is adequate for SEPA compliance, decision making, and implementation of the upfront SEPA process;

Phased Environmental Review 5

If one of the development alternatives or a hybrid of the three development alternatives is selected by the City, no additional SEPA review will be required for site specific development that is proposed within the Subarea if it (1) is consistent with the South Downtown Subarea Plan, (2) is consistent with the “Planned Action” ordinance enacted by the City Council, and (3) vests within 10 years of issuance of the Final EIS. After 10 years of issuance of the Final EIS, no additional SEPA review will be required for site specific development that is proposed within the Subarea if it (1) is consistent with the South Downtown Subarea Plan, (2) is consistent with the “Planned Action”

4 The Responsible Official is the designated person within the City of Tacoma’s Planning and Development Services Department that is responsible for compliance with the SEPA lead agency procedural responsibilities.
5 WAC 197-11-060(5)
ordinance enacted by the City Council, (3) is not an essential public facility, and (4) vests within 30 years of the issuance of the Final EIS.

In addition, if one of the development alternatives or a hybrid of the three development alternatives is selected by the City, no additional SEPA review will be required for site specific development that is proposed within the subarea if it is exempt under an “infill exemption” ordinance adopted by the City under RCW 43.21.229.

If the No Action Alternative is selected -- or development deviates substantially from what is envisioned in this EIS -- subsequent site-specific environmental review may be necessary; development regulation agreements pursuant to TMC 13.05.095 are by definition not to be considered as substantial deviations. In addition, mitigation measures proposed in the Subarea Plan will not be adopted, in which case development may occur without the benefit of the proposed mitigations.

### Required Approvals and/or Permits

This is a non-project EIS for a broad area of downtown Tacoma. While Final Actions by the City and UWT are noted above, the following interim approvals would likely be necessary:

**City of Tacoma**
- Authorization to publish the Draft South Downtown Subarea Plan for public review and comment;
- Authorization to publish the Draft EIS for the South Downtown Subarea Plan for public review and comment;

**University of Washington Tacoma**
- Review and comment regarding the pre-Draft EIS by the University’s SEPA Advisory Committee; or
- compliance with the University’s SEPA WAC 478.324.010 – 230; or
- Approval by UWT to publish the Draft EIS for the South Downtown Subarea Plan.

Additional permits or approvals will be needed in conjunction with future development activity. Depending upon the scope of development and the site, the following approvals could be required:

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6 Pursuant to RCW 43.21C.440(1)(f), an essential public facility is not subject to subsequent environmental review if it achieves the requirements listed above and is accessory to or part of a residential, office, school, commercial, recreational, service, or industrial development.
State Agencies
- Department of Labor & Industries
  - Elevator Permits for subsequent development

Regional Agencies
- Puget Sound Clean Air Agency
  - Asbestos surveys (associated with building renovation/demolition)
  - Demolition Permits
- Tacoma – Pierce Co. Health Department
  - Underground Storage Tank Decommissioning Permit (site-specific, if applicable)

City of Tacoma
- City Council
  - Final Actions noted above
  - Planning and Development Services Department
    - building permit
    - mechanical permits
    - Plumbing Permits
    - Concurrency Authorization
    - Certificates of Occupancy
- Public Works Department
  - Grading, Excavation and Erosion Control Permits
  - Street Use Permits (temporary – construction related)
  - Street Improvements (i.e., sidewalks, curbcuts, etc.)
- Tacoma Public Utilities
  - Electrical Permits
  - Utility Extensions

Authors and Principal Contributors to this EIS
This Tacoma South Downtown Subarea Plan Draft EIS has been prepared under the direction of the Tacoma Planning and Development Services Dept. Research and analysis associated with this EIS were provided by the following consulting firms:

- VIA Architecture – Subarea Plan preparation; EIS graphics; and
- EA Engineering, Science, and Technology, Inc. – lead EIS consultant; and
- Nelson \ Nygaard Consulting Associates – transportation, circulation, and parking.
Agencies, affected tribes, and members of the public are invited to comment on this Draft EIS. You may comment on the alternatives, probable significant adverse impacts, proposed mitigation measures, and licenses or other approvals that may be required. Methods for presenting your comments are described below. Please note that the City of Tacoma does not discriminate on the basis of disability in any of its programs, activities, or services. To request this information in an alternative format or a reasonable accommodation, please contact the City Clerk’s Office at 253-591-5505. TTY or speech-to-speech users please dial 711 to connect to Washington Relay Services.

Written comments should be submitted to the City of Tacoma Planning and Development Services Dept. at the following addresses:

Postal Address:
Mr. Ian Munce, Special Assistant to the Director
City of Tacoma
Planning and Development Services Department
747 Market St., Room 345
Tacoma, WA 98402

E-mail Address: imunce@cityoftacoma.org
Draft EIS Public Meeting

Date of the public meeting: April 25, 2013

Time of the public meeting: 5:30 PM

Meeting Location: Carwein Auditorium, which is in the Keystone Building (1900 Commerce St.) on the campus of the University of Washington Tacoma

The purpose of the public meeting is to provide an opportunity for agencies, organizations and individuals to learn more about the proposed South Downtown Subarea Plan and to present comments regarding the Draft EIS – in addition to submittal of written comments.

The agenda for the public meeting is:

- 5:00 pm – sign-in and open house
- 5:30 pm – opening remarks, introductions, purpose of the meeting, and Q&A
- 6:00 pm – public comments

Availability of this Draft EIS

Copies of this Draft EIS, together with the Draft South Downtown Subarea Plan, have been distributed by CD to agencies, organizations and individuals noted on the Distribution List (Appendix A to this document).

Hard copies of the Draft EIS, the Draft Subarea Plan, and the EIS’s incorporated by reference can be reviewed at the following locations:

- City of Tacoma Planning and Development Services Dept. -- 747 Market St., Room 1036;
- University of Washington Tacoma Library -- 1900 Commerce St.; and
- All branches of the Tacoma Public Library – Main Branch -- 1102 Tacoma Avenue S.

The Draft EIS and the Draft Subarea Plan can also be reviewed online at cityoftacoma.org/planning.

In addition, a limited number of complimentary hardcopies or CD’s of the Draft EIS and the Draft Subarea Plan are available (while the supply lasts) from the City of Tacoma Planning and Development Services Dept. Additional copies may be purchased at the Planning and Development Services Dept. for the cost of reproduction. The Planning and Development Services Dept. is open 8 AM to 5 PM Monday through Friday.
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SECTION I

SUMMARY
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SUMMARY

A. INTRODUCTION

This chapter provides a summary of the Draft Environmental Impact Statement (DEIS) for the Tacoma South Downtown Subarea Plan. It briefly describes the Proposed Action, the three development alternatives (Alternatives 1 – 3) and the No Action Alternative, and contains a comprehensive overview of significant environmental impacts identified for the alternatives. Please see Chapter 2 of this DEIS for a more detailed description of the alternatives, and Chapter 3 for a detailed presentation of the affected environment, significant impacts of the alternatives, mitigation measures, and significant unavoidable adverse impacts.

The proposed project involves development of an innovative, area-wide subarea plan for Tacoma’s South Downtown Subarea, which when approved by the Tacoma City Council will become an element of the City’s Comprehensive Plan. Please refer to Section 2.2 through 2.4 of this environmental impact statement and the South Downtown Subarea Plan for additional details.

The South Downtown Subarea Plan is designed to: (1) satisfy the requirements of the State’s Growth Management Act for Tacoma to plan for forecasted growth; and (2) to support the goals of the Puget Sound Regional Council’s (PSRC) VISION 2040 and Transportation 2040 (T2040) regional plans. Pierce County establishes Countywide Planning Policies in conjunction with the cities and towns in the County, and assigns population and employment growth allocations for the cities within its jurisdiction including Tacoma, in accordance with the requirements of the GMA. The purpose of VISION 2040 and T2040 is to provide regional planning frameworks that support accommodation of forecasted growth in a manner that results in the greatest overall benefits to the central Puget Sound region as a whole. Both of these regional plans were analyzed and approved through extensive EIS processes.

The fundamental goal of the South Downtown Subarea Plan is to promote economic development. In South Downtown today, lack of economic development is both the chief impediment to sustainable growth, and the most significant root cause of adverse impacts to the community and environment. The Subarea Plan is intended to provide innovative planning and policy interventions to help South Downtown achieve its tremendous potential for economic development, an outcome will deliver a broad range of equitable social and environmental benefits at both the local and regional scales.

The above goals have implications for how to accurately and comprehensively assess environmental impacts in this Draft EIS. First, based on typical development-related EIS's conducted in the past, it is commonly presumed that the “No Action” alternative—i.e. minimal development—is the most benign scenario. In contrast, in South Downtown Tacoma, well-planned, ambitious redevelopment can be expected to maximize net environmental and community benefits, and to promote the most sustainable outcomes for both people and the planet. Second, EIS's are typically focused on local impacts, but development in South Downtown would result in significant positive impacts at the regional scale. Because the Subarea Plan in grounded in in the approved regional growth strategies of VISION 2040 and T2040, these regional benefits merit substantial consideration in the EIS analysis.
Redevelopment is the critical step to unleashing South Downtown’s potential to provide equitable livability and a diverse, thriving economy with minimal environmental impact. This standpoint is endorsed by a plethora of public policy spanning the federal, State, regional, county, city, and neighborhood levels, as well as a mountain of research and studies on “smart growth.” Creating compact, mixed-use, transit-rich communities in South Downtown is precisely the kind of smart growth that will help Tacoma and the region achieve established goals for sustainable growth, as documented in the Tacoma Comprehensive Plan, the Pierce County Countywide Planning Policies, and the PSRC’s VISION 2040.

Over recent decades many areas of South Downtown have seen relatively low levels of development, resulting in a variety of negative impacts on the community, including underutilized property, buildings in disrepair, a loss of historic structures, perception of crime, compromised esthetics, poor walkability, limited economic opportunity, and lack of urban livability in general. This stagnancy of development, if it persists, will also preclude capitalizing on the valuable public and private infrastructure assets in South Downtown, such as the street grid, sidewalks, utilities, historic building stock, cultural attractions, a renovated waterfront, and freeway access. In particular, lack of development in South Downtown precipitates a drastic underutilization of the area’s major transit investments, most notably Tacoma Dome Station, one of the largest regional transit hubs in the Pacific Northwest.

The overarching local benefit that would be provided by development in South Downtown—housing development in particular—is equitable access to the amenities of the City, including economic opportunity, education, culture, entertainment, and perhaps the most valuable amenity of all, transportation choices. The cost of owning and operating a car is a significant portion of an average household’s expenses. Walkable, transit-rich neighborhoods that enable life without a car decrease the overall cost of living, thereby helping to create a more equitable community. New jobs and housing in South Downtown will expand the customer base for many existing businesses, retail in particular. Fortunately, because South Downtown currently has a relatively small resident population and a large amount of vacant land, the risk of displacement caused by redevelopment is less pronounced than it is in more typical urban areas.

Redevelopment has the potential to cause the loss of historic resources, but in the case of South Downtown, the biggest risk to historic buildings is economic stagnation. Because of the high cost of historic renovations relative to market rate rents, many historic buildings in South Downtown have been neglected and are falling further into disrepair. Eventually, if the economic situation does not improve, such buildings become more of a liability than they are worth, and end up being demolished. Tacoma’s Luzon building, demolished in 2009, is a notorious example of this process. Redevelopment of properties in proximity to historic structures in South Downtown will help raise property values and create an economic environment in which historic renovations become more feasible, thereby increasing the likelihood of historic preservation.

In addition, the Subarea Plan calls for new regulations intended to help protect both historic and cultural resources. The Plan proposes a Transfer of Development Rights (TDR) program that includes an option for historic properties to sell their unused development rights do developers who want increased development capacity. To address potential impacts of redevelopment on cultural resources—with a focus on archeological remains from historic Puyallup Tribe settlements—the Plan proposes that the extensive cultural resource protections required in the City’s shoreline areas be applied to the entire Subarea.
Further local benefits that development in South Downtown can be expected to provide include:

- Cleanup of existing brownfield sites with contaminated soils that currently pose environmental health risks
- Reduction of polluted stormwater runoff, due to the new stormwater regulations that apply to new construction
- Expansion of tree cover resulting from development regulations that require street trees

From the regional perspective, the business-as-usual scenario of minimal growth in South Downtown will perpetuate development pressure on farms and wildlife habitat on the urban fringe. As has been well-documented, this pressure resulting from regional population growth stimulates sprawling land use patterns known to have a host of negative environmental impacts. For example, the development of 50 single family homes in a previously undeveloped area outside Tacoma would cause substantially more loss of habitat and trees than would a 100-unit multifamily building developed in South Downtown.

Furthermore, a fair appraisal of the potential benefits of smart growth in South Downtown should include consideration of per capita impacts, not just total impacts. For example, development may result in an increase in total car trips locally. But while those car trips may add to local congestion, the development can also result in increased use of alternative transportation that would reduce vehicle miles traveled (VMT) on per capita basis. Since that outcome is aligned with widely agreed upon public policy goals to reduce car-dependence—including the State of Washington’s legislated goal to reduce per capita VMT by 50 percent by 2050—the regional, per capita impacts deserve substantial weight in any environmental assessment. The same per capita logic applies to other regional benefits of smart growth in South Downtown, such as lower greenhouse gas emissions, cleaner air, less polluted stormwater runoff, and reduced land consumption.

**B. PROPOSED ACTION**

The *Proposed Action* consists of several related decisions by the Tacoma City Council– with involvement, as appropriate, by UWT – regarding the *South Downtown Subarea Plan*:

- approval of the Final EIS as a document that is adequate for SEPA compliance, decision making, and implementation of the upfront SEPA process;
- implementation of the associated Planned Action ordinance for the project and the associated upfront SEPA compliance provision;¹
- adoption of the *South Downtown Subarea Plan* and the associated policies and implementing regulations, as well as site-specific projects that are proposed within the South Downtown Subarea; and
- determination of whether one of the development alternatives contained in the *Subarea Plan*, a hybrid alternative derived from the development alternatives, or the *No Action Alternative* is the City’s preferred alternative for the South Downtown area.

¹ Refer to Section 2.2.2 of this EIS.
C. ALTERNATIVES

The following is a discussion of the **No Action Alternative** and the development alternatives.

**No Action Alternative**

Under the **No Action Alternative**, the City of Tacoma’s existing **Comprehensive Plan**, **Zoning Map** and the **Tacoma Land Use Code** would remain in effect. All existing planning and implementation policies and existing development regulations would continue to guide development decisions for properties within the South Downtown Subarea, including the campus of the University of Washington Tacoma. **No Planned Action ordinance** would be adopted and the advantages of upfront SEPA compliance would not occur. In addition, mitigation measures proposed in the Subarea Plan would not be adopted, and development could occur without the benefit of those mitigations.

The levels of population and employment growth for the **No Action Alternative** are based on the 2030 projections that have been allocated by PSRC to Transportation Analysis Zones (TAZs) located within the South Downtown Subarea. However, because TAZs overlap the Subarea boundaries, informed assumptions have been made concerning how much of the population and employment that is allocated by PSRC to each TAZ could actually be located within the Subarea.

**Alternative 1**

**Alternative 1** could result in a net increase of up to 30,000,000 total gross sq.ft. of net development consisting of 15,000,000 sq.ft. of residential development, 15,000,000 sq.ft. of commercial development, 30,000 residents, and 40,000 jobs. Possible distribution of this amount of development is based on each of the five districts that comprise the Subarea.

- **University of Washington Tacoma / Museum District** – This district could experience full build-out of the district with additional mixed-use[^3] and office space located between S. 17th St. and S. 15th St. Office space could occupy an entire block and mixed-use could occupy two partial blocks.

    Within the campus boundaries of UWT, it is projected that Alternative 1 could result in a total net increase of approximately 4,723,008 sq.ft. of which an estimated 2,192,805 sq.ft. could be residential development (residential FAR = 7.0) and 2,530,203 sq.ft. could be commercial development (commercial FAR = 5.0-6.0).

- **Hillside District** – This district could experience additional residential development within portions of five blocks, mixed-use development of three blocks, and office development within two blocks.

- **Brewery District** – The predominant pattern of new development within this district could be mixed-use occupying two full blocks and portions of an additional 15 blocks. Office space could occupy portions of 16 blocks and residential, portions of three blocks.

[^2]: This includes increased certainty for future, site specific development proposals, as well as simplification and expediting of the permitting process for projects located within the South Downtown Subarea.

[^3]: This implies development that could include a mix of residential, commercial and office-related land uses.
• **Foss Waterway** – Buildout along the west side of the Foss Waterway would be the same for each development alternative. This is based on a realistic maximization of the zoning envelope and design standards defined for the S8 Shoreline District (TMC 13.10.110). Buildout could consist of 1,987,303 sq. ft. of residential and 1,148,400 sq. ft. of commercial space with an average FAR of 5.7. Site-specific details concerning the buildout are provided in the *South Downtown Subarea Plan*, Appendix A.

• **Dome District** – It is anticipated that this district could include a mixture of land uses consisting of office, mixed-use, industrial and residential. Office space could occupy portions of 15 blocks; mixed-use could occupy portions of eight blocks; residential, part of one block; and industrial -- portions of five blocks.

**Alternative 2**

**Alternative 2** could result in a net increase of up to 20,000,000 total gross sq.ft. of net development consisting of 10,000,000 sq.ft. of residential development, 10,000,000 sq.ft. of commercial development, 20,000 residents, and 26,667 jobs. Possible distribution of this amount of development is depicted in **Figure 2-5**, based on each of the five districts that comprise the Subarea.

• **University of Washington Tacoma / Museum District** – This district could experience full build-out of the district with additional mixed-use and office space located between S. 17th St. and S.15th St. Like **Alternative 1**, land use associated with **Alternative 2** could involve office space occupying an entire block and mixed-use on two partial blocks.

Within the campus boundaries of UWT, it is projected that **Alternative 2** could result in a total net increase of about 3,845,886 sq.ft., which is approximately 19 percent less than **Alternative 1**. Of this total square footage, an estimated 1,315,683 sq. ft. could be residential development (residential FAR = 4.2) and 2,530,203 sq.ft. could be commercial development (commercial FAR = 6.0).

• **Hillside District** – This district could experience additional residential development within portions of five blocks (same as **Alternative 1**), mixed-use development of two blocks (one block less than **Alternative 1**), and no office development (**Alternative 1** projects office development within a portion of two blocks).

• **Brewery District** – As with **Alternative 1**, the predominant pattern of new development within this district could be mixed-use occupying two full blocks (same as **Alternative 1** and portions of an additional 13 blocks (several blocks fewer than **Alternative 1**). Office space could occupy portions of 13 blocks (two blocks fewer than **Alternative 1**) and residential – portions of three blocks, similar to **Alternative 1**.

• **Foss Waterway** – Buildout along the west side of the Foss Waterway would be the same as **Alternative 1** – approximately 1,987,303 sq. ft. of residential and 1,148,400 sq. ft. of commercial space with an average FAR of 5.7.

• **Dome District** – It is anticipated that this district could include a mixture of land uses consisting of office, mixed-use, industrial and residential. Office space could occupy portions of 10 blocks (five fewer than **Alternative 1**); mixed-use could occupy portions of
eight blocks (same as Alternative 1); residential, part of one block (same as Alternative 1); and industrial -- portions of five blocks (same as Alternative 1).

Alternative 3

Alternative 3 could result in a net increase of up to 10,000,000 total gross sq.ft. of net development consisting of 5,000,000 sq.ft. of residential development, 5,000,000 sq.ft. of commercial development, 10,000 residents, and 13,333 jobs. Possible distribution of this amount of development is depicted in Figure 2-6, based on each of the five districts that comprise the Subarea.

- **University of Washington Tacoma / Museum District** – This district could experience partial build-out of the district with additional mixed-use and office space located between S. 17th St. and S.15th St. Unlike Alternative 1 and 2, land use associated with Alternative 3 could involve office space occupying a portion of one block (Alternative 1 and 2 projected full-block development) and mixed-use on a portion of one block (Alternative 1 and 2 projected development) two partial blocks).

  Within the campus boundaries of UWT, it is projected that Alternative 3 could result in a total net increase of about 3,015,207 sq.ft., which is approximately 36 percent less than Alternative 1. Of this total square footage, an estimated 720,493 sq. ft. could be residential development (residential FAR = 2.3) and 2,294,714 sq. ft. could be commercial development (commercial FAR = 5.1).

- **Hillside District** – This district could experience additional residential development within portions of two blocks (three fewer than Alternative 1), no mixed-use development (Alternative 1 projected three blocks), and no office development (Alternative 1 projects office development within a portion of two blocks).

- **Brewery District** – As with Alternative 1, the predominant pattern of new development within this district could be mixed-use occupying no full block areas (Alternative 1 and 2 proposed two full blocks) and portions of five blocks (Alternative 1 proposed mixed-use on 15 blocks). Office space could occupy portions of four blocks (Alternative 1 proposed 15 blocks) and residential -- portions of two blocks (Alternative 1 and 2 proposed residential on portions of three blocks).

- **Foss Waterway** – Buildout along the west side of the Foss Waterway would be the same as Alternative 1 – approximately 1,987,303 sq. ft. of residential and 1,148,400 sq. ft. of commercial space with an average FAR of 5.7.

- **Dome District** – Like the other development alternatives, it is anticipated that this district could include a mixture of land uses consisting of office, mixed-use, industrial and residential. Office space could occupy portions of three blocks (Alternative 1 proposed portions of 15 blocks); mixed-use could occupy portions of two blocks (Alternative 1 and Alternative 2 proposed portions of 8 blocks); residential, part of one block (same as Alternative 1 and 2); and industrial -- a portion of one block (Alternative 1 and Alternative 2 proposed portions of five blocks).
D. IMPACTS

Table 1-1 highlights the impacts that would potentially result from the alternatives analyzed in this DEIS. This summary table is not intended to be a substitute for the complete discussion of each element that is contained in Chapter 3.
## 3.1 EARTH

**Redevelopment activity would involve site-specific alteration of existing grades and earthwork.** Alternative 1 would have the greatest potential for earth-related impacts in that build-out could entail a net increase of 30 million sq.ft. of development. No significant earth-related adverse impacts are anticipated in that such projects would be required to fully comply with existing development regulations. If redevelopment occurs on sites with contaminated soils, regulations will require soil remediation, resulting in the positive impacts of cleaned up soils, and reduction of polluted stormwater runoff from contaminated sites.

**Earth impacts would be generally as described for Alternative 1, although re-development activity would be somewhat less at a net increase of 20 million sq.ft.** Earth impacts would be generally as described for Alternative 1, although re-development activity would be somewhat less at a net increase of 10 million sq.ft.

**Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to earth would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.**

## 3.2 AIR QUALITY

**Alternative 1** would have the greatest potential for air quality-related impacts in that build-out could entail a net increase of 30 million sq.ft. of development. Increases in localized air pollutant emissions are anticipated as a result of increases in localized automobile traffic, industrial manufacturing, and short-term construction activities. Additional urban activities and accompanying vehicular traffic would contribute to increases in emissions relative to suspended particulates (PM$_{10}$ and PM$_{2.5}$), ozone (O$_3$), and carbon monoxide (CO) within the study area.

**Air quality impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 20 million sq.ft.** Impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 10 million sq.ft.

**Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to air quality would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.**

## 3.3 WATER QUALITY

**Alternative 1** would have the greatest potential for water-related impacts in that build-out could entail a net increase of 30 million sq.ft. of development. If not properly designed or managed, development could result in adverse impacts to the quality of groundwater and stormwater runoff in the Subarea. Development may also increase impervious surfaces thereby increasing the quantity of surface water runoff that, if not properly managed according to existing regulations, can discharge pollutants into surface waters. However, development that adheres to existing regulations would not be expected to cause adverse impacts on water quality. In fact, impacts would be generally as described for Alternative 1 compared to the No Action Alternative.

**Impacts would be generally as described for Alternative 1, because re-development activity would be somewhat less at a net increase of 20 million sq.ft.** Impacts would be generally as described for Alternative 1, because re-development activity would be somewhat less at a net increase of 10 million sq.ft.

**Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to water resources would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.**

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**Table:**

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<thead>
<tr>
<th>Alternative 1</th>
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<th>No Action Alternative</th>
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<tr>
<td>Redevelopment activity would involve site-specific alteration of existing grades and earthwork. Alternative 1 would have the greatest potential for earth-related impacts in that build-out could entail a net increase of 30 million sq.ft. of development. No significant earth-related adverse impacts are anticipated in that such projects would be required to fully comply with existing development regulations. If redevelopment occurs on sites with contaminated soils, regulations will require soil remediation, resulting in the positive impacts of cleaned up soils, and reduction of polluted stormwater runoff from contaminated sites.</td>
<td>Earth impacts would be generally as described for Alternative 1, although re-development activity would be somewhat less at a net increase of 20 million sq.ft.</td>
<td>Earth impacts would be generally as described for Alternative 1, although re-development activity would be somewhat less at a net increase of 10 million sq.ft.</td>
<td>Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to earth would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.</td>
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<tr>
<td><strong>Alternative 1</strong> would have the greatest potential for air quality-related impacts in that build-out could entail a net increase of 30 million sq.ft. of development. Increases in localized air pollutant emissions are anticipated as a result of increases in localized automobile traffic, industrial manufacturing, and short-term construction activities. Additional urban activities and accompanying vehicular traffic would contribute to increases in emissions relative to suspended particulates (PM$<em>{10}$ and PM$</em>{2.5}$), ozone (O$_3$), and carbon monoxide (CO) within the study area.</td>
<td>Air quality impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 20 million sq.ft.</td>
<td>Impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 10 million sq.ft.</td>
<td>Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to air quality would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.</td>
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<td>Development would require site-specific construction equipment. Earthwork would result in localized increases in particulate levels as a result of the use of diesel-powered trucks and equipment. All construction-related impacts would be temporary and localized.</td>
<td>Impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 20 million sq.ft.</td>
<td>Impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 10 million sq.ft.</td>
<td>Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to earth would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.</td>
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<td>New development and activities would increase local GHG emissions. However, at the regional scale, per capita GHG emissions can be expected to decrease, because on average, households located in transit-rich urban centers such as South Downtown drive less than households in car-dependent suburban or rural areas. Transportation modeling projected a decrease in per capita vehicle-miles traveled Alternative 1 compared to the No Action Alternative.</td>
<td>Impacts would be generally as described for Alternative 1.</td>
<td>Impacts would be generally as described for Alternative 1.</td>
<td>Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to water resources would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.</td>
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<td>Development</td>
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<td>Development may improve the quality of stormwater runoff because in most cases new development must meet more stringent stormwater management requirements than what it replaces. In addition, existing regulations require soil remediation for development projects on contaminated sites, which permanently removes a potential source of contamination to both surface and ground water.</td>
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<td>From a regional perspective, increased urban infill development in South Downtown Tacoma is likely to reduce development on undeveloped land elsewhere in the region. Compared to urban infill, development in suburban or rural areas can have greater adverse impacts on water quality because it impacts more previously undeveloped land. Also, development is denser in urban areas than in suburban or rural areas, such that urban development has less impervious surface on a per capita basis. This regional perspective provides support Alternative 1, since it would result in the highest amount of development in the Subarea.</td>
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<td><strong>3.4 PLANTS AND ANIMALS</strong></td>
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<td>Alternative 1 would have the greatest potential for plant and animal-related impacts. Urban development, redevelopment, and associated construction activities, if not properly planned and regulated, could increase peak stormwater runoff, cause erosion, and result in siltation of surface waters with adverse effects on plant and animal populations. Also, site redevelopment would likely result in the removal of existing trees, shrubs and ground cover on individual lots and the displacement of animal habitats associated with that existing vegetation. However, it is expected that redevelopment would also involve the addition of new trees, shrubs and ground cover, consistent with the City's Land Use Code. Plant and animal-related impact mitigation presently exists and will continue, therefore no significant impacts would be anticipated.</td>
<td>Impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 20 million sq.ft.</td>
<td>Impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 10 million sq.ft.</td>
<td>Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to plants and animals would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.</td>
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<td>At the regional scale, development in the Subarea can reduce net adverse impacts to plants, animals and habitat. The more of the region's growth that is accommodated in South Downtown, the less development there will be in suburban and rural areas that typically have much more ecologically valuable plant and animal species and habitat. This regional perspective provides support Alternative 1, since it would result in the highest amount of development in the Subarea.</td>
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<td><strong>3.5 ENVIRONMENTAL HEALTH</strong></td>
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<td>Contaminated Soils Excavation and other construction activities associated with development can lead to exposure of contaminated soils and present environmental health risks to construction workers and others proximate to the construction site. Before any redevelopment can occur, impacts would be generally as described for Alternative 1.</td>
<td>Impacts would be generally as described for Alternative 1.</td>
<td>Impacts would be generally as described for Alternative 1.</td>
<td>Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to environmental health would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the</td>
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<td>Environmental conditions of concern relating to soil contamination -- whether suspected or encountered -- must be investigated and remediated according to existing local, State, and Federal standards. For these reasons, when development occurs on contaminated sites it will result in a reduction of the risk of exposure to contaminated soil.</td>
<td>Impacts would be generally as described for Alternative 1.</td>
<td>Impacts would be generally as described for Alternative 1.</td>
<td>Advantages of upfront SEPA compliance would not be possible.</td>
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<td>Indoor Air Quality</td>
<td>New development in the South Downtown Subarea would not be expected to result in increased risk of exposure to indoor air contaminants, because new buildings would be constructed and operated in accordance with modern building codes. Demolition or renovation of older buildings can increase the risk of exposure to asbestos. However, no significant, environmental health-related impacts are anticipated with the implementation of appropriate mitigation measures.</td>
<td>Impacts would be generally as described for Alternative 1.</td>
<td>Impacts would be generally as described for Alternative 1.</td>
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<td>Land Use Patterns</td>
<td>Urban environments that force residents to rely on cars for most trips, and that lack recreation opportunities and grocery stores within easy walking distance, can exacerbate many chronic diseases. The intended outcome of the South Downtown Subarea Plan is to create an urban environment in which residents can meet many of their daily needs via relatively short trips by walking, cycling, or transit, which will lead to a reduction in adverse health impacts.</td>
<td>Impacts would be generally as described for Alternative 1.</td>
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</tr>
<tr>
<td>Urban Forestry and Agriculture</td>
<td>Development may result in the loss of existing trees on private lots. However, development will also result in the planting of additional street trees as required by the Tacoma land use code. Development could result in the loss of land that could be used for urban agriculture unless careful attention is paid to this issue.</td>
<td>Impacts would be generally as described for Alternative 1.</td>
<td>Impacts would be generally as described for Alternative 1.</td>
</tr>
<tr>
<td>3.6 NOISE</td>
<td>The potential exists for noise-related impacts associated with new development - Alternative 1 would have the greatest potential for noise-related impacts in that build-out could entail a net increase of 30 million sq.ft. of development. However, considering the fact that this is an urbanized part of the City, that re-development is projected to occur over several decades and that noise-related impact mitigation presently exists and will continue, it is anticipated that the increased amount of urban activity within the South Downtown Subarea would not result in any significant noise-related impacts.</td>
<td>Impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 20 million sq.ft.</td>
<td>Impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 10 million sq.ft.</td>
</tr>
<tr>
<td>3.7 LAND USE</td>
<td>In general, development under Alternative 1 would result in increases in residential and commercial square footages, as well as the number of residents and employees within the Subarea. Development would likely result in the construction of buildings on formerly vacant lots, surface parking lots, and demolition of single family</td>
<td>Impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 20 million sq.ft.</td>
<td>Impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 10 million sq.ft.</td>
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Tacoma South Downtown Subarea Plan EIS  
Section I  
Summary  
1-10
and underutilized or devalued properties in order to accommodate higher density development. Such would change the use patterns and aesthetic character at the block-scale and potentially even at the neighborhood-scale. Redevelopment of surface parking lots could also potentially reduce the amount of parking available in the vicinity of a redevelopment site, resulting in increased competition for parking spaces and possibly encouraging more walking and transit use.

At the regional scale, increased development in the Subarea would likely result in reduced development in lower density areas outside the City. This would help prevent the proliferation of sprawling land use patterns that have been correlated with increases in numerous adverse environmental impacts, including greenhouse gas emissions, energy use, polluted stormwater runoff, infrastructure expense, and loss of farms and wildlife habitat. This regional perspective provides support Alternative 1, since it would result in the highest amount of development in the Subarea.

### 3.8 POPULATION HOUSING and EMPLOYMENT

Development under Alternative 1 would increase the population, housing and employment intensity in South Downtown, in accordance with the goals of the City’s Comprehensive Plan, and the State’s Growth Management Act, and would be expected to have a wide range of positive impacts including: a better jobs to housing ratio, and a more balanced spectrum of housing options and household incomes.

At the regional scale, increasing South Downtown’s population and employment would help achieve the regional planning goals established in the Puget Sound Regional Council’s VISION 2040 and T2040 regional plans. It is also possible that existing residents and/or businesses could be displaced as existing buildings are redeveloped. However, the South Downtown Subarea has a relatively high amount of undeveloped property, surface parking lots and vacant buildings that could be redeveloped without displacement impacts.

From an area-wide change perspective, Alternative 1 would have the greatest potential for impacts (beneficial, as well as displacement) in that build-out under this alternative could entail a net increase of 30 million sq.ft. of development. Impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 20 million sq.ft. Impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 10 million sq.ft. Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Land use-related impacts would be evaluated on a site-specific basis in conjunction with each proposed project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.
### 3.9 HISTORIC and CULTURAL RESOURCES

#### Historic Resources
Each of the proposed development alternatives would continue the redevelopment trend of properties in the South Downtown Subarea, at varying intensities, for urban uses and activities. Development could result in the loss of historic structures or degradation of historic character in certain areas of South Downtown, particularly in the Brewery District. However, the economic revitalization that is likely to occur along with the redevelopment of the Subarea could result in the preservation of historic structures historic renovation becomes more financially feasible.

Impacts would be generally as described for Alternative 1.

#### Cultural Resources
There is the potential for the study area to contain historic period and/or pre-contact archaeological resources, particularly in shoreline areas. Construction of new buildings within the South Downtown Subarea would require excavation, which has the potential to encounter archaeological deposits. However, the Subarea Plan proposes additional regulations to protect archeological resources, which can be expected to reduce the likelihood of the loss of resources compared to the No Action Alternative.

Impacts would be generally as described for Alternative 1.

### 3.10 AESTHETICS

#### Views
As projects develop according to existing zoning, views of, and within the Subarea are expected to change significantly. Views of existing low rise structures would be affected as neighboring buildings are demolished and redeveloped with taller structures. Low rise buildings that were constructed recently will be the last to redevelop and will be impacted the most. Structures with northeast-facing views of Commencement Bay, and southeast views of Mt. Rainier could be affected as a result of increased height and density within this Subarea and corresponding viewshed-related impacts. The Subarea Plan does not propose any changes to existing height or bulk regulations for buildings, so the potential for development to impact views is no different from the No Action Alternative.

Impacts would be similar to those described for Alternative 1, because re-development activity would be somewhat less at a net increase of 10 million sq.ft.

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in effect at the time development is proposed. Impacts to cultural resources would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

#### Urban Design
Development in the Subarea will result in a higher preponderance of buildings with greater height, bulk, and scale, as compared to existing buildings. It is possible that urban design within the Subarea could be favorably affected as all of the zoning districts within the Subarea include development standards that would ensure relatively high standards for urban design for new development and for renovations. Conversion of surface parking lots adjacent to city streets to buildings is expected to result in an improved pedestrian environment.

Impacts would be similar to those described for Alternative 1.
Shadows, Light and Glare

Development of taller buildings would result increased shading throughout the area, which could periodically affect smaller buildings and open spaces – particularly if such buildings and open spaces are located north of the redevelopment. The Subarea Plan does not propose any changes to existing height or bulk regulations for buildings, so the potential for development to impact shadows is no different from the No Action Alternative.

New and renovated structures would provide additional light sources within the Subarea, including interior and exterior building lighting and security lighting. Such would be noticeable from adjacent neighborhoods and the freeways. Additional vehicular traffic is also anticipated and would result in additional light from vehicles entering and leaving the Subarea.

The primary sources of glare from development would be direct glare from lighting sources and reflective solar glare from specular surfaces. New sources of light and glare would be similar to those that currently exist in the Subarea and could be perceived as a continuation of existing light and glare in the area. Glare impacts are also influenced by climatic conditions.

No significant light, glare or shadow-related impacts are anticipated.

3.11 TRANSPORTATION

Vehicular Traffic

For the greater region, in comparison to the No Action Alternative, VMT is projected to decrease by 0.41% to a daily average of 116,281,604, vehicle hours of delay are projected to increase by 1.01% to a daily average of 646,337 hours, and average travel speeds are projected to decline by 0.15% to 30.9 MPH.

For the local Study Area, in comparison to the No Action Alternative, VMT is projected to increase by 1.41% to a daily average of 1,004,531, vehicle hours of delay are projected to increase by 28% to a daily average of 3,584 hours, and average travel speeds are projected to decline by 12% to 33 MPH.

No impacts to rail transportation or waterborne transportation to, from, or within the Subarea would occur.

Public Transit

Development is projected to result in significant increases in demand for transit service within the Subarea, and connecting to other parts of the City, County and larger Puget Sound Region. Total daily transit person trips to and from the Study Area is projected to be 77,296 trips under Alternative 1. At current and potential future service levels, Tacoma Link, Sound Transit’s Sounder Commuter Rail and ST Express bus service have capacity to accommodate the projected growth in transit trips.

Increases in demand for transit service would occur. Total daily transit person trips to and from the Study Area is projected to be 68,865 trips under Alternative 2. At current and potential future service levels, Tacoma Link, Sound Transit’s Sounder Commuter Rail and ST Express bus service have capacity to accommodate the projected growth in transit trips.

Increases in demand for transit service would occur. Total daily transit person trips to and from the Study Area is projected to be 44,235 trips under Alternative 3. At current and potential future service levels, Tacoma Link, Sound Transit’s Sounder Commuter Rail and ST Express bus service have capacity to accommodate the projected growth in transit trips.

For the greater region, in comparison to the No Action Alternative, VMT is projected to decrease by 0.16% to a daily average of 116,583,576, vehicle hours of delay are projected at a daily average of 667,284 hours, and average travel speeds are projected to decline by 0.74% to 30.7 MPH.

For the Study Area, VMT is projected at a daily average of 667,284 hours, and average travel speeds are projected to decline by 0.74% to 30.7 MPH.

No impacts to rail transportation or waterborne transportation to, from, or within the Subarea would be expected.

Summary

Alternative 1

Alternative 2

Alternative 3

No Action Alternative

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<td>Total daily transit person trips to and from the Study Area is projected to be 31,919 trips under the No Action Alternative.</td>
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<tr>
<td><strong>Fire and EMS</strong></td>
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<td><strong>Law Enforcement</strong></td>
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<td><strong>Public Schools</strong></td>
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Non-Motorized Systems

Very significant and substantial increases in trips to/from and within the Study Area made by walking and bicycling are projected. Approximately 224,346 total average daily pedestrian person trips and 10,543 average daily cycling trips to/from the Study Area are expected under Alternative 1.

Parking

Projected increases in demand for vehicle travel to, from and within the Subarea may be associated with increased demand for short-term and long-term parking, but will not necessarily affect the availability of parking for residents and others traveling to and from the Subarea by car. In the near-term and long-term, no impact to the availability of parking or the auto accessibility of the Subarea is projected.

3.12 PUBLIC SERVICES

Development consistent with the proposed South Downtown Subarea Plan would generate new demands for fire and EMS service based on an increased number of residential, office, commercial and neighborhood service uses, as well as the associated employment and population increases. Under Alternative 1, approximately 3.27 apparatus and 0.48 EMS units could be necessary based on the City’s LOS requirements.

Law Enforcement

Increases in the South Downtown Subarea population and employment under Alternatives 1-3 would be incremental and would be accompanied by increases in demand for police service. Call volumes could increase under all of the proposed alternatives; however, the exact number of incremental new calls cannot be quantified. Under Alternative 1, according to the City’s adopted LOS standards, roughly 6,657.40 sq. ft. of law enforcement facilities could be necessary.

Public Schools

All alternatives will continue development of the lands within the South Downtown subarea for urban uses and activities at various intensities. Development will increase the residential population, requiring additional public school capacity. High-quality public schools are essential to the creation of a complete community in the South Downtown Subarea.
Parks and Open Space

Increases in the South Downtown Subarea population and employment under Alternatives 1-3 would be incremental and would be accompanied by increases in demand for public parks and open spaces.

3.13 PUBLIC UTILITIES

Wastewater

The increased density and intensity of development that would be permitted by Alternative 1 would result in greater demands on the wastewater collection and treatment system. Natural drainage strategies that are implemented with new development will help reduce the occurrence of sanitary sewer overflows. The City of Tacoma Public Works Department has an ongoing Rehabilitation/Replacement program to repair and upgrade wastewater pipes. With planned upgrade programs, new initiatives would not need to be developed, although no guarantee can be made that there is capacity in every line for every new development that could occur. The City is willing to adjust the timing of ongoing sewer programs to stimulate private investment and to partner with property owners through the use of local improvement district financing and construction mechanisms.

Stormwater

New development is not expected to significantly change the amount of impervious surface and the associated volume of runoff to the stormwater system. Furthermore, because new development must comply with increasingly stringent best management practices (BMPs), new development has the potential to reduce capacity demand on the stormwater system.

Potable Water

Water demand would increase relative to existing conditions. According to the existing LOS standard of 562 gallons per day per EDU, the additional residential projected under Alternative 1 could result in at least 8.43 million gallons per day of total water demand.

Power

The increased density and intensity of development that would be permitted could result in greater demands on electrical energy. Tacoma Power has evaluated their existing distribution system within the bounds of the South Downtown Subarea. Resources exist to support development for the near future. However, as development advances, additional resources will be required to support the additional electrical load. The

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<td>Electrical delivery infrastructure does not exist within each block to support full build out to the development capacities allowed by existing land use code.</td>
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<td>Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to communications/data would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.</td>
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<tr>
<td>Communications/Data</td>
<td>Higher intensity development would increase demand for telecommunications services. The Click! Network is committed to expanding its telecommunications services to meet the additional needs of future growth.</td>
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<td>Development will increase demand for solid waste services, which if not properly handled, may result in increased vectors and public nuisance. Under Alternative 1, 33,900 tons of waste could be generated by the additional residential population, according to the City's LOS standard.</td>
<td>Impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less. Under Alternative 2, 22,600 tons of waste could be generated by the additional residential population, according to the City's LOS standard.</td>
<td>Impacts would be similar to, but somewhat less than those described for Alternative 1, because re-development activity would be somewhat less. Under Alternative 3, 11,300 tons of waste could be generated by the additional residential population, according to the City's LOS standard.</td>
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E. MITIGATION MEASURES

Mitigation measures apply to all development alternatives, and are based on existing City policies, regulations, and other mitigation; new mitigation measures are proposed. Under all of the development alternatives, the Tacoma Comprehensive Plan (Amended Ordinance Number 27769), taken together with implementing regulations, will apply and will help to mitigate potential impacts.

F. POTENTIAL SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACTS

The following summarizes the potential significant adverse environmental impacts identified in this environmental analysis.

Earth

With application of appropriate mitigation measures, no significant unavoidable adverse impacts are anticipated relative to earth resources.

Air Quality

With adherence to applicable codes and regulations, as well as the mitigation measures noted above, no significant unavoidable adverse impacts are anticipated relative to air quality resources under any of the proposed alternatives.

Water Quality

With application of water-related codes and regulations and mitigation measures noted above, no significant unavoidable adverse impacts to water resources are anticipated under any of the proposed alternatives.

Plants and Animals

With application of plant and animal-related codes and regulations noted above, no significant unavoidable adverse impacts to plant and animal resources are anticipated under any of the proposed alternatives.

Environmental Health

With application of the environmental health-related guidelines noted above, no significant unavoidable environmental health impacts are anticipated in conjunction with any of the proposed alternatives.

Noise

With application of the noise-related regulations noted above, no significant unavoidable noise impacts due to temporary construction or long-term sources are anticipated in conjunction with any of the proposed alternatives.
**Land Use**

With application of the land use-related mitigation noted above, no significant unavoidable land use impacts are anticipated in conjunction with any of the proposed alternatives. Proposed redevelopment within the South Downtown Subarea would result in an intensification of development, additional employment opportunities, and increased population in the South Downtown area. While the intensity of redevelopment in this area would be substantially greater than the amount of existing development, such redevelopment would be consistent with the *South Downtown Subarea Plan* (if adopted), the intent of the City’s *Comprehensive Plan* and zoning, the goals and intent of the Puget Sound Regional Council’s VISION 2040 regional plan for growth, and the requirements of the Washington State Growth Management Act.

**Population, Housing and Employment**

With application of the population, housing and employment-related elements of the Subarea Plan, no significant unavoidable impacts are anticipated in conjunction with any of the proposed alternatives. Proposed redevelopment within the South Downtown Subarea would result in an intensification of development, additional employment opportunities, and increased population in the South Downtown area. While the intensity of redevelopment in this area would be substantially greater than the amount of existing development, such redevelopment would be consistent with the *South Downtown Subarea Plan* (if adopted), the intent of the City’s *Comprehensive Plan* and zoning, the goals and intent of the Puget Sound Regional Council’s VISION 2040 regional plan for growth, and the requirements of the Washington State Growth Management Act.

**Historic and Cultural Resources**

With application of appropriate mitigation measures, no significant unavoidable adverse impacts are anticipated relative to historic or cultural resources.

**Aesthetics**

No significant unavoidable adverse impacts are anticipated relative to aesthetic resources.

**Transportation**

With application of appropriate mitigation measures, no significant unavoidable adverse impacts are anticipated relative to vehicular traffic, waterborne/rail traffic, public transit, non-motorized systems or parking.

**Public Services**

No unavoidable adverse impacts are anticipated.

**Public Utilities**

With implementation of mitigation measures, no unavoidable adverse impacts are anticipated.
SECTION II

PROJECT DESCRIPTION

and

ALTERNATIVES
SECTION II

PROJECT DESCRIPTION AND ALTERNATIVES

2.0 PROPONEENT/PROJECT LOCATION

2.0.1 Proponent

The proposed Tacoma *South Downtown Subarea Plan* is sponsored by the City of Tacoma. The City and the University of Washington Tacoma (UWT) are joint lead agencies for this South Downtown Subarea Plan Draft EIS.

2.0.2 Project Location

The *South Downtown Subarea Plan* encompasses an area of approximately 600 acres -- extending generally from S. 15th St. on the north to Interstate 5 on the south and from S. Yakima Ave. on the west to E. “D” St. and E. “L” St. on the east. Also included within this study area are properties located along the west edge of the Thea Foss Waterway between S. 15th St. and S. 4th St. See Figures 2-1, 2-2 and 2-3.

Five distinct districts are part of the South Downtown Subarea: the University of Washington Tacoma/Museum District, the south portion of the Foss Waterway, the south portion of the Hillside Neighborhood, the Old Brewery District, and Tacoma’s Dome District.

2.1 PROJECT OVERVIEW

The proposed project involves development of an innovative, area-wide subarea plan for Tacoma’s South Downtown Subarea, which when approved by the Tacoma City Council will become an element of the City’s *Comprehensive Plan*. Please refer to Section 2.2 through 2.4 of this environmental impact statement and the *South Downtown Subarea Plan* for additional details.
Figure 2-2
Tacoma South Downtown Subarea—District Map

Source: VIA Architecture, 2012
Figure 2-3
Aerial: South Downtown Subarea
2.2 BACKGROUND INFORMATION

This section provides an overview of the proposed South Downtown Subarea Plan and an overview of the environmental review process associated with this project.

2.2.1 South Downtown Subarea Plan

The Subarea Plan

The proposed South Downtown Subarea Plan is available online at www.cityoftacoma.org/planning by clicking on “South Downtown Subarea Plan & EIS”, copies may be reviewed at all branches of the Tacoma Public Library and at the City of Tacoma Planning Counter (747 Market Street, Room 345, Tacoma, WA 98403), and CD's of the Subarea Plan are available from by contacting the project’s manager, Ian Munce at 253-573-2478 or imunce@cityoftacoma.org. The Subarea Plan should be reviewed along with this EIS for a comprehensive understanding of all aspects of the Plan and probable environmental impacts.

The South Downtown Subarea Plan is designed to: (1) satisfy the requirements of the State’s Growth Management Act for Tacoma to plan for forecasted growth; and (2) to support the goals of the Puget Sound Regional Council’s (PSRC) VISION 2040 and Transportation 2040 (T2040) regional plans. Pierce County establishes Countywide Planning Policies in conjunction with the cities and towns in the County, and assigns population and employment growth allocations for the cities within its jurisdiction including Tacoma, in accordance with the requirements of the GMA. The purpose of VISION 2040 and T2040 is to provide regional planning frameworks that support accommodation of forecasted growth in a manner that results in the greatest overall benefits to the central Puget Sound region as a whole. Both of these regional plans were analyzed and approved through extensive EIS processes.

In the preferred alternative of the VISION 2040 Final EIS, the largest shares of the region’s future growth would occur in the region’s five major metropolitan cities, including Tacoma. In this alternative, considerable redevelopment could occur in the region’s metropolitan and core cities, with most new jobs reinforcing these areas as major regional employment centers. Job growth would be accompanied by a significant concentration of new residential growth in a variety of types and styles including new high-rise and mid-rise apartments, condominiums and townhouses built near job centers and in areas close to high capacity transit systems.

The primary goals of T2040 are to improve mobility, ease congestion, and reduce greenhouse gas emissions and water quality impacts to Puget Sound. Land use assumptions for T2040 build upon VISION 2040 to further the goal of providing jobs vs. housing balance, and to pursue additional refinements through strategies such as transit-oriented development. The T2040 Final EIS preferred alternative emphasizes greatly expanded employer and residential programs to reduce unnecessary travel and increase use of transit, vanpools, bicycling, and walking, along with efficiency improvements through shifts in the chosen route, the time of travel, the mode of travel, and the patterns of trips taken to work and other activities. The preferred alternative would implement a comprehensive transit strategy, including completion of funded Sound Transit projects and additional Link light rail extensions to Tacoma.
The goals, policies, and recommendations of the South Downtown Subarea Plan are in complete alignment with the preferred strategies and outcomes of VISION 2040 and T2040 summarized above. Thus in effect, the Subarea Plan has already been analyzed and approved at the regional level. The Subarea Plan and Draft EIS provides the local focus and additional analysis necessary to coordinate and bridge planning efforts from the State, to the regional, and finally to the local level.

The Subarea Plan also supports the Downtown Tacoma Plan Update,¹ the City’s Comprehensive Plan² and the University of Washington Tacoma’s Campus Master Plan Update,³ while focusing on issues and opportunities at a scale more responsive to the subarea’s specific needs. This Subarea Plan builds upon two key previous City planning studies -- the Brewery District Development Concept Study⁴ and the Tacoma Dome District Development Strategy Update⁵ -- as well as UWT’s Campus Master Plan Update. In addition, the Subarea Plan draws from recommendations provided by the Urban Land Institute’s Brewery District Technical Assistance Panel.⁶

The overall goal of the South Downtown Subarea Plan is to promote transformation of South Downtown into:

- a thriving, equitable urban, center that offers a rich spectrum of opportunities to live, learn, work, and play;
- a vibrant, walkable, mixed-use community that provides a robust range of housing, health care, transportation, employment, and recreation choices, and is a welcoming home to people of all cultures, ages, and incomes; and
- an integrated component of the greater City that capitalizes on the unique character of its five districts and promotes cross-pollination between them, nurtures mutually supportive connections to surrounding communities, leverages its regional transit assets, and projects a compelling identity to the region and beyond.

The South Downtown planning effort is being undertaken in order to:

- promote equitable, sustainable development in Tacoma’s South Downtown area in accordance with the State’s Growth Management Act (GMA);⁷
- develop an innovative area-wide long-range plan for the south end of downtown Tacoma; and
- complete pre-development environmental review that will identify how to address environmental and community issues, ultimately reducing uncertainty, risk, and permit review time for future development projects.

¹ City of Tacoma, 2008a (refer to the References section of this EIS for the complete citation).
² City of Tacoma, 2011.
³ University of Washington Tacoma, 2008
⁴ City of Tacoma, 2010.
⁵ City of Tacoma, 2008b.
⁶ ULI, 2011.
⁷ Chapter 36.70A RCW
The City intends that the Subarea Plan should:

- establish a policy framework to guide and promote the transformation of South Downtown into a community that is thriving, healthy, equitable, and transit-oriented;
- catalyze economic development that provides benefits across the socio-economic spectrum;
- provide certainty and protect investment for both the community and developers;
- develop a collaborative, trusting relationship between the community, the city, and “city builders;” and
- document the policy and mitigation measures that are necessary;

The South Downtown Subarea Plan will amend current City of Tacoma policies governing the environment, land use, economics, transportation, design standards, parks and recreation, public services, and utilities. Actions that will implement the Subarea Plan include: new regulations that address land use, archeological and historic preservation, transportation, housing, zoning, capital improvement programs, as well as other Tacoma ordinances and regulations. Many of these actions are intended to provide mitigation for impacts that may be caused by development.

The South Downtown Subarea Plan will amend current City of Tacoma policies governing the environment, land use, economics, transportation, design standards, parks and recreation, public services, and utilities. Actions that will implement the Subarea Plan include: new regulations that address land use, archeological and historic preservation, transportation, housing, zoning, capital improvement programs, as well as other Tacoma ordinances and regulations. Many of these actions are intended to provide mitigation for impacts that may be caused by development.

The Subarea Plan includes the following major components:

- a vision statement that provides overarching guidance for the entire South Downtown Subarea Plan and EIS project;

- a policy framework arranged according to the following five strategies:
  - develop in relationship to transit;
  - leverage South Downtown’s assets;
  - enhance and connect the public realm;
  - cultivate synergies with the University of Washington Tacoma;
  - advance the Vision for the Foss Waterway;

- review of existing plans and policies that support the vision of the project and the intention of the Subarea Plan;

- proposed plans, policies and land use code updates that are intended to guide mitigation or provide mitigation, including the following:
  - Open Space Plan;
  - Mobility Plan;
  - Capital Facilities Plan;
  - Transfer of Development Rights Program;
  - Development standard updates;
  - Archeological and historic preservation strategies; and
  - Catalyst project strategies.

The South Downtown Subarea planning effort is funded through a $500,000 grant from Puget Sound Regional Council’s (PSRC) Growing Transit Communities program. The City was awarded the funding to carry out a demonstration project as part of PSRC’s new program called “Growing Transit Communities: A Corridor Action Strategy for the Central Puget Sound
The Growing Transit Communities program is funded by the U.S. Department of Housing and Urban Development (HUD), the Environmental Protection Agency, and the Department of Transportation through a joint Sustainable Communities initiative. The Puget Sound Region is one of 45 communities in the U.S. that was awarded such a grant. PSRC’s overall goal of the program is to integrate land use, economic, and transportation planning decisions to promote transit-oriented communities along light rail corridors in the region.

Specifics of the Proposed Action and the three development alternatives that could implement the proposed South Downtown Subarea Plan are described in Section 2-4 of this EIS, together with the No Action Alternative.

The Subarea Community Planning Process

The Subarea Plan was developed over approximately a one-year-long process and represents integration of input from a broad range of stakeholders and other interested parties, as outlined below. Further details concerning the outreach process are described in the South Downtown Subarea Plan.

- **Monthly Steering Committee** -- This group consists of highly engaged South Downtown property and business owners, along with representatives from agencies such as Pierce Transit, Tacoma Housing Authority, Downtown on the Go, Tacoma-Pierce County Chamber. Representatives from two important South Downtown community groups -- the Hillside Development Council and the Dome Business District Association -- brought the perspectives of their groups to the meetings.

- **Quarterly Working Group** -- Officially appointed by the City Council, this 39-member group was convened to bring a broader, more citywide perspective compared to the Steering Committee. Members include representatives from City Utilities, Metro Parks, and groups such as the Cross Cultural Collaborative, the Puyallup Tribe and Sound Transit.

- **Subarea Plan Community Meeting** -- A community meeting was held December 1, 2011 to inform agencies, organizations and the public of the planning process associated with the proposed South Downtown Subarea Plan, to define the geographical area of analysis, discuss the increased density and alternatives that are preliminarily being considered, and describe the interrelated EIS process. The meeting gave the public an opportunity to engage, learn, and ask questions.

- **EIS Scoping Meeting** – An EIS Scoping Meeting was held December 15, 2011 to provide an opportunity for agencies, organizations and the public to better understand the scope of the proposed South Downtown Subarea Plan and to present testimony regarding alternatives and environmental issues to be evaluated in the EIS.

- **Stakeholder Interviews** – Fifteen, 75-minute stakeholder interview sessions were held over a three day period involving 30 people. Each session addressed a specific topic, such as development, human services, transportation, etc. Participants were sent a
survey in advance of the interview session to guide the discussions. During the sessions, participants were asked to share their concerns, hopes, issues and visions for the South Downtown Subarea. Participants were encouraged to state their views and suggestions even when they strayed from the topics for which the focus groups were initially organized.

- **Opinion Survey** -- A 47-question survey was created to capture the opinions of members of the public interested in the South Downtown Subarea Plan and EIS project. In June 2012, a downloadable PDF version of the survey was made available on the City of Tacoma’s website for the project. A version of the survey for online participation was also posted on Survey Monkey, with a link on the City’s website. Most of the questions were multiple choice, requiring approximately 10 minutes to complete. As of January 2013, 95 people responded to the survey and 78 people had completed the survey; results are included in Appendix C of the Subarea Plan.

2.2.2 **Overview of the Environmental Review Process**

As noted, the South Downtown Subarea Plan is a land use plan that establishes the framework for future development, redevelopment and revitalization of the South Downtown Subarea -- based on several possible development scenarios or alternatives. The purpose of this EIS is to identify and evaluate the probable, significant environmental impacts associated with each development alternative, as well as the No Action Alternative.

This EIS for the South Downtown Subarea Plan is unique in that it is a:

- **Joint City of Tacoma and University of Washington Tacoma Effort** -- This EIS is being prepared jointly by the City of Tacoma and the University of Washington Tacoma (UWT). As shown in Figure 2-2, the University of Washington Tacoma (UWT) is centrally located within the study area; area-wise, UWT comprises approximately nine percent of the overall study area.

- **Non-project document** – This is a non-project EIS that addresses a broad geographical area (approx. 600 acres) and presents a cumulative impact analysis for the entire subarea. As such, rather than piecemeal analysis of environmental impacts and mitigation that is provided on a project-by-project or site-by-site basis, this EIS comprehensively evaluates environmental impacts and identifies reasonable mitigation measures for the entire subarea based on each of the alternatives.

- **Planned Action EIS** – This is a Planned Action EIS, prepared pursuant to RCW 43.21C.420, .031 and .229 and WAC 197-11-164 and -168 which is a streamlined environmental review process that applies to the specific geographical area associated with the South Downtown Subarea. In general, a Planned Action EIS differs from other EISs in that the impact analysis focuses largely on cumulative impacts based on future development that is anticipated to occur within a broad area -- rather than impact analysis associated with individual, sequential site-specific development projects. The objective of this Planned Action EIS is to evaluate probable environmental impacts of the development alternatives and the No Action Alternative for the entire study area as comprehensively and completely as possible to eliminate the need for subsequent
environmental review associated with site-specific development or redevelopment. Such is expected to provide certainty for future, site specific development proposals and both simplify and greatly expedite the permitting process for such projects. The no further environmental review provision applies to development that complies with the subarea’s development regulations, and occurs within 10 years of issuance of the Final EIS for this project.

- **Regional Perspective** – Because the actions being assessed are expected to have significant positive impacts at the regional scale, this EIS includes consideration of impacts well beyond the borders of the Subarea. As discussed above, the population and employment growth scenarios in the three Action Alternatives are derived from growth allocations based on the requirements of the GMA, and these allocations are intended to help the region achieve the goals of VISION 2040, the Puget Sound Regional Council’s adopted plan for accommodating regional growth. The regional impacts are important to consider because an impact seen as adverse at the local level could in fact be a net positive impact at the regional level. For example, if South Downtown experiences significant growth, the total amount of GHG emissions in the Subarea will increase. However, because a typical household located in a transit rich urban center such as South Downtown drives less than a household located in a low density suburban or rural area, the accommodation of regional growth in South Downtown can be expected to result in a reduction of GHG for the region as a whole.

- **Concise Analysis** – Consistent with the focus of simplifying and streamlining the development process for projects within the South Downtown Subarea, the intent of this EIS is to: 1) provide an objective, balanced analysis of each alternative; and 2) create a simplified, reader-friendly document. EIS’s that are voluminous can inhibit readability and severely limit the document’s usefulness as a resource for decision makers, agencies and the public. The aim of this EIS, therefore, is to create a document that is comprehensive, concise, and not overly technical\(^ {11}\) -- one that enables the reader to understand the most significant issues associated with the Proposed Action and the alternatives.

The EIS process consists of three phases: **EIS Scoping**, the **Draft EIS** and the **Final EIS**. Each phase is briefly described below:

- **EIS Scoping** – This is the first crucial step in the EIS process. This step defines the alternatives and the range of environmental issues to be evaluated in the EIS. The purpose of scoping is to narrow the focus of the EIS -- to address only those environmental parameters that could be significantly affected as a result of the alternatives.

The EIS Scoping process for this project occurred **December 6, 2011 through January 10, 2012**. An EIS Scoping meeting was held on December 15, 2011 to provide an opportunity for agencies, organizations and the public to present comments in addition to submittal of written comments. At the conclusion of the Scoping process, the City and UWT confirmed the scope of the EIS.

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\(^{11}\) Consistent with WAC 197-11-425. This is a section within Washington State’s SEPA Guidelines, which implements the State Environmental Policy Act (SEPA). A provision in this section provides guidelines regarding document size (e.g., not to exceed 75 pages unless the proposal is of unusual scope or complexity, in which case it may not exceed 150 pages).
• **Draft EIS** – This Draft EIS represents the City and UWT’s best determination of probable significant environmental impacts associated with each of the subarea plan alternatives. The *Proposed Action* and the alternatives are described in **Section 2.4** of this Draft EIS and each alternative is evaluated based on 12 environmental parameters (e.g., earth, air, etc.) in **Section III** of this Draft EIS. Copies of this Draft EIS have been distributed to agencies (federal, state, regional, City), organizations, and the public for a 45-day public review and comments.

• **Final EIS** -- The Final EIS completes the environmental review process for the project. It incorporates changes or clarifications regarding the Draft EIS, all comment letters and testimony that are received from agencies, organizations and individuals during the public comment period, and contains responses to the comments raised. The Final EIS is the SEPA document that the City and UWT will use to decide which subarea alternative to pursue. Copies of the Final EIS will be made available to those agencies (federal, state, regional, City), organizations, and the individuals that received the Draft EIS and/or provided comments on the Draft EIS.

### 2.3 PROJECT GOALS and OBJECTIVES

The City has identified five visions or strategies concerning the proposed **South Downtown Subarea Plan** and specific policies to implement those strategies. Together the strategies and the policies have shaped the three development alternatives that are described in **Section 2.4** and analyzed in **Section III** of this EIS.

#### Strategy 1: Develop in relationship to transit.

South Downtown is endowed with exceptional transit investments, including the LINK streetcar, Sounder Commuter Rail, Amtrak, and Pierce transit, which together have created the most important transit hub in the South Puget Sound region. Nearly all of the South Downtown Subarea lies within a half-mile of a high capacity transit station. Capitalizing on these investments calls for the careful execution of development to create balanced communities that provide equitable access to transit.

- **Policy 1.1:** Promote the creation of complete communities in close proximity to Tacoma Dome Station and the LINK streetcar stations
- **Policy 1.2:** Improve safety and convenience for non-motorized access to fixed-rail transit stations
- **Policy 1.3:** Coordinate with transit agencies to prioritize future high frequency transit service allocations that will help catalyze redevelopment and the creation of complete communities
- **Policy 1.4:** Manage parking to support transit access and promote transit ridership

#### Strategy 2: Leverage South Downtown’s assets.

With its rich historic fabric, functional urban street grid, prime location, and vibrant small business community, South Downtown has a unique, fertile foundation for placemaking and economic development. Planning for South Downtown should be crafted both to improve and build upon these assets.
Policy 2.1: Preserve, renovate, repurpose, and reuse existing structures.

Policy 2.2: Maximize the potential of the Prairie Line Trail as a redevelopment framework.

Policy 2.3: Target and coordinate public infrastructure investments (e.g., utilities, sewer etc.) in conjunction with any required environmental remediation to reduce developer risk and maximize opportunity in priority redevelopment areas.

Policy 2.4: Continue to encourage the expansion of South Downtown’s concentration of creative arts and design, urban recreation, business incubators, and other dynamic, small-scale businesses.

Strategy 3: Enhance and connect the public realm. A robust network of functional, connected open spaces enhances urban livability and promotes economic development. Creating these benefits in South Downtown will require planning for a diversity of open spaces, and establishing strong connections between them.

Policy 3.1: Provide ample open space for projected future growth.

Policy 3.2: Build a legible system of public walkways, trail corridors, and active street linkages that connect south downtown’s neighborhoods, waterfronts and key destinations.

Policy 3.3: Leverage the open space and connectivity potential of the right-of-way through continued improvements to the pedestrian and cycling environment on streets.

Policy 3.4: Apply natural drainage strategies to enhance both the livability and the sustainability of open spaces, and to reduce capacity demand on the City’s stormwater system.

Policy 3.5: Improve neighborhood navigability and aesthetics in the public realm.

Strategy 4: Cultivate Synergies with the University of Washington Tacoma (UWT). The UWT is a powerful force for the revitalization of South Downtown. UWT is a public benefit to the City of Tacoma and its citizens, providing education, research, buildings, open spaces, resources and services to the community.

Policy 4.1: Facilitate UWT’s role as an economic development engine for South Downtown.

Policy 4.2: Provide high-quality multi-modal access and connectivity within the UWT campus, and between the campus and surrounding neighborhoods.

Policy 4.3: Reinforce the campus design concepts established in the 2008 Campus Development Plan and the 2003 Master Plan. Recognize that the UWT must be managed on a campus-wide basis rather than by a individual site or project-by-project basis.

Policy 4.4: Advance sustainability on the UWT campus.

Strategy 5: Advance the vision for the Foss Waterway. The Foss Waterway is a work in progress that provides a unique set of uses and attractions that broaden the appeal and strengthen the economic viability of South Downtown. Plans and policies for South
Downtown as a whole should be crafted to reinforce the established Foss Waterway Vision and Plans, and to fully leverage the benefits that the Waterway has to offer.

**Policy 5.1:** Support the Foss Waterway Development Authority in its ongoing efforts to realize the community’s established vision for the Waterway.

**Policy 5.2:** Maximize redevelopment potential on the Foss through strategic planning and targeted investments.

**Policy 5.3:** Improve multi-modal connectivity between the Foss Waterway and adjacent neighborhoods.

**Policy 5.4:** Leverage the Waterway’s potential as an urban amenity that catalyzes economic development in South Downtown.

### 2.4 DESCRIPTION OF THE PROPOSED ACTION AND THE ALTERNATIVES

#### 2.4.1 Proposed Action

The *Proposed Action* consists of several related decisions by the Tacoma City Council -- with involvement, as appropriate, by UWT -- regarding the *South Downtown Subarea Plan*:

- approval of the Final EIS as a document that is adequate for SEPA compliance, decision making, and implementation of the upfront SEPA process;

- implementation of the associated Planned Action ordinance for the project and the associated upfront SEPA compliance provision;\(^{12}\)

- adoption of the *South Downtown Subarea Plan* and the associated policies and implementing regulations, as well as site-specific projects that are proposed within the South Downtown Subarea; and

- determination of whether one of the development alternatives contained in the *Subarea Plan*, a hybrid alternative derived from the development alternatives, or the *No Action Alternative* is the City’s preferred alternative for the South Downtown area.

#### 2.4.2 Alternatives

SEPA requires analysis of “reasonable alternatives” as part of an EIS and defines reasonable as “actions that could feasibly attain or approximate a proposal’s objectives, but at a lower environmental cost or decreased level of environmental degradation.”\(^ {13}\) In every EIS, the *No Action Alternative* must also be evaluated. The following is a discussion of the *No Action Alternative* and the development alternatives.

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\(^{12}\) Refer to Section 2.2.2 of this EIS.

\(^{13}\) WAC 197-11-440(5)
No Action Alternative

Under the No Action Alternative, the City of Tacoma’s existing Comprehensive Plan, Zoning Map and the Tacoma Land Use Code would remain in effect. All existing planning and implementation policies and existing development regulations would continue to guide development decisions for properties within the South Downtown Subarea, including the campus of the University of Washington Tacoma. No Planned Action ordinance would be adopted and the advantages of upfront SEPA compliance would not occur. In addition, adverse impacts of development could occur without any requirement for mitigation.

As shown in Table 2-1, the levels of population and employment growth for the No Action Alternative are based on the 2030 projections that have been allocated by PSRC to Transportation Analysis Zones (TAZs) located within the South Downtown Subarea. However, because TAZs overlap the Subarea boundaries, informed assumptions have been made concerning how much of the population and employment that is allocated by PSRC to each TAZ could actually be located within the Subarea.

Another No-Action-related consideration involves the possibility of delaying implementation of the proposed South Downtown Subarea Plan to some future time. If this course of action is taken, the following outlines possible benefits and disadvantages of such delay.

Benefits of Deferral

None known.

Disadvantages of Deferral

- Deferral could postpone implementation of pre-development environmental review that is one of the key features of the South Downtown Subarea Plan. As such, development uncertainty and risk would not be lessened and permit review timeframes for future development project would not necessarily be shortened.

- Deferral would not necessarily eliminate or lessen the severity of environmental impacts that are identified in this EIS, but merely postpone them. In some situations, this could result in greater cumulative impacts (e.g., traffic, noise, aesthetics, etc.) as a result of redevelopment that occurs, consistent with the City’s Comprehensive Plan, UWT’s Campus Master Plan Update and the City’s development regulations, due to changes in background conditions.

- It is anticipated that South Downtown and UWT will continue to grow and develop. By deferring adoption of a plan for South Downtown, the City, UWT and the surrounding community could lose opportunities for future development that may be more consistent with the direction outlined in the South Downtown Subarea Plan than that associated with the broader Comprehensive Plan.

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14 This includes increased certainty for future, site specific development proposals, as well as simplification and expediting of the permitting process for projects located within the South Downtown Subarea.
The proposed improvements and mitigations in the *South Downtown Subarea Plan* would likely not be implemented.

The *South Downtown Subarea Plan* and this EIS process are based on a partnership with the PSRC to implement VISION 2040. Deferral may be inconsistent with this partnership and result in a loss of potential implementation funding.

Deferral could limit the ability by the City of Tacoma and/or the University of Washington Tacoma to effectively respond to new development opportunities.

Deferral would likely lead to increased development outside of the designated regional urban center in downtown Tacoma, an outcome that runs counter to the goals of the State’s Growth Management Act.

The **No Action Alternative**, including potential deferral, does not meet the goals and objectives of either the City or UWT.

**Development Alternatives**

The City of Tacoma with involvement from UWT identified goals and objectives, which are included in the *South Downtown Subarea Plan* and were noted previously in part 2.3 of this section of the Draft EIS. Based on those goals and objectives, the City with input from UWT, developed assumptions for the Subarea – including the Foss Waterway; tables depicting this information are included in *Appendix B* of this Draft EIS. From this information, three development alternatives have been identified that could feasibly attain or approximate the project’s goals and objectives. Each of these alternatives (as well as the **No Action Alternative**) are summarized in **Table 2-1** and each of the alternatives are defined in terms of the net increase relative to:

- total gross square footage within the subarea;
- residential square footage;
- commercial square footage;
- number of residents living within the subarea; and
- number of jobs located within the subarea.

**Table 2-1**  
**EIS Alternatives**

<table>
<thead>
<tr>
<th>Development Parameter</th>
<th>No Action(^\text{15})</th>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sq. Ft.</td>
<td>4,816,500</td>
<td>30,000,000</td>
<td>20,000,000</td>
<td>10,000,000</td>
</tr>
<tr>
<td>Residential Sq. Ft.</td>
<td>1,684,500</td>
<td>15,000,000</td>
<td>10,000,000</td>
<td>5,000,000</td>
</tr>
<tr>
<td>Commercial Sq. Ft.</td>
<td>3,132,000</td>
<td>15,000,000</td>
<td>10,000,000</td>
<td>5,000,000</td>
</tr>
</tbody>
</table>

\(^{15}\) This represents the amount of existing development, number of residents, and number of jobs that presently exist within the South Downtown Subarea.
Basic data for *Alternatives 1, 2* and *3* was derived from the 2030 growth allocations for population and employment established by the Puget Sound Regional Council (PSRC) and Pierce County for the City of Tacoma, in accordance with the State of Washington’s Growth Management Act. The 2030 allocations for the entire City are 78,600 new residents (39% increase over 2008) and 64,200 new jobs (57% increase over 2008).

Conversion factors used in the Subarea Plan to convert from residents and jobs to residential and commercial building square footage are based on the following:

- average household square footage -- 1,000 square feet;
- average number of people per household -- 2 people; and.
- average amount of square footage per employee -- 375 square feet.

The levels of population and employment growth for the three development alternatives are based on assumptions concerning how much of Tacoma’s growth will be directed to the Downtown Tacoma Regional Growth Center and how much of that will be absorbed by South Downtown. Development assumptions associated with each of the alternative is summarized below.

- **Alternative 1** – This alternative represents the possibility that South Downtown will capture a share of Tacoma’s growth greater than what is assumed for **Alternative 2** or **3**, or the possibility that actual growth in Tacoma will exceed the PSRC’s year 2030 allocations.

- **Alternative 2** – This alternative is based on the following assumptions:
  - PSRC’s 2030 growth allocations for the City of Tacoma;
  - 50% of new households are captured in the Downtown Regional Growth Center;
  - 50% of new downtown households locate in South Downtown;
  - 80% of new jobs are captured in the Downtown Regional Growth Center; and
  - 50% of new downtown jobs locate in South Downtown.

- **Alternative 3** – This alternative assumes that the South Downtown Subarea only captures one-half of the growth that is assumed for **Alternative 2**.

All three of the development alternatives were tested for development capacity in the South Downtown Subarea under existing zoning. In each case, it was determined that there is sufficient capacity. Buildout scenarios for the University of Washington Tacoma campus and along the Foss Waterway were addressed separately from the remainder of the Subarea, because these two areas have special constraints. Parcels that were unlikely to develop for any the following reasons were assumed to remain unchanged in their existing land use:

- Recently constructed or renovated properties
• Buildings within the Union Depot-Warehouse Historic District and the Union Station Conservation District, and buildings with significant historic value or contributing historic character
• Schools, Churches, Cultural institutions (e.g. museums), and Important social services (e.g. Tacoma Rescue Mission)
• Parks (or future parks)
• Steep slopes or otherwise inaccessible areas
• Land beneath freeway overpasses
• Electrical sub stations
• Buildings with high improvement to land value ratio

The amount of buildout on each developable parcel was determined based on a set of assumptions regarding building type and FAR\(^{16}\); details on these assumptions are provided in the South Downtown Subarea Plan, Appendix B. Excluding the Foss Waterway zone, buildout within the Subarea is expected to be unique for each alternative. For the UWT campus, the level of development in each alternative was determined from previous master plans, as well as information provided by UWT planning staff. The following is an overview of the possible variation in land use patterns within each district of the Subarea for each development alternative. Information for Alternative 2 and 3 are also compared with Alternative 1.

- **Alternative 1** – As noted in Table 2-1, this alternative could result in a net increase of up to 30,000,000 total gross sq.ft. of net development consisting of 15,000,000 sq.ft. of residential development, 15,000,000 sq.ft. of commercial development, 30,000 residents, and 40,000 jobs. Possible distribution of this amount of development is depicted in Figure 2-4, based on each of the five districts that comprise the Subarea.

  - **University of Washington Tacoma / Museum District** – This district could experience full build-out of the district with additional mixed-use\(^{17}\) and office space located between S. 17th St. and S.15th St. Office space could occupy an entire block and mixed-use could occupy two partial blocks.

    Within the campus boundaries of UWT, it is projected that Alternative 1 could result in a total net increase of approximately 4,723,008 sq.ft., of which an estimated 2,192,805 sq. ft. could be residential development (residential FAR = 7.0) and 2,530,203 sq.ft. could be commercial development (commercial FAR = 5.0-6.0), though the mix of residential and commercial uses eventually developed will depend future conditions.

  - **Hillside District** – This district could experience additional residential development within portions of five blocks, mixed-use development of three blocks, and office development within two blocks.

  - **Brewery District** – The predominant pattern of new development within this district could be mixed-use occupying two full blocks and portions of an additional

\(^{16}\) FAR means Floor Area Ratio. This is the ratio of the amount of development on a site divided by the area of the site. For example, a 3-story, 60,000 sq.ft. building located on a 20,000 sq.ft. site would have an FAR of 3.0.

\(^{17}\) This implies development that could include a mix of residential, commercial and office-related land uses.
15 blocks. Office space could occupy portions of 16 blocks and residential, portions of three blocks.

- **Foss Waterway** – Buildout along the west side of the Foss Waterway would be the same for each development alternative. This is based on a realistic maximization of the zoning envelope and design standards defined for the S8 Shoreline District (TMC 13.10.110). Buildout could consist of 1,987,303 sq. ft. of residential and 1,148,400 sq. ft. of commercial space with an average FAR of 5.7. Site-specific details concerning the buildout are provided in the *South Downtown Subarea Plan*, Appendix A.

- **Dome District** – It is anticipated that this district could include a mixture of land uses consisting of office, mixed-use, industrial and residential. Office space could occupy portions of 15 blocks; mixed-use could occupy portions of eight blocks; residential, part of one block; and industrial -- portions of five blocks.
Tacoma South Downtown Subarea Plan
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Figure 2-4
Alternative 1 Potential Development—30 Million sq.ft.

Source: VIA Architecture, 2013
• **Alternative 2** – As noted in Table 2-1, this alternative could result in a net increase of up to 20,000,000 total gross sq.ft. of net development consisting of 10,000,000 sq.ft. of residential development, 10,000,000 sq.ft. of commercial development, 20,000 residents, and 26,667 jobs. Possible distribution of this amount of development is depicted in Figure 2-5, based on each of the five districts that comprise the Subarea.

  - **University of Washington Tacoma / Museum District** – This district could experience full build-out of the district with additional mixed-use and office space located between S. 17th St. and S.15th St. Like Alternative 1, land use associated with Alternative 2 could involve office space occupying an entire block and mixed-use on two partial blocks.

    Within the campus boundaries of UWT, it is projected that Alternative 2 could result in a total net increase of about 3,845,886 sq.ft., which is approximately 19 percent less than Alternative 1. Of this total square footage, an estimated 1,315,683 sq. ft. could be residential development (residential FAR = 4.2) and 2,530,203 sq.ft. could be commercial development (commercial FAR = 6.0), though the mix of residential and commercial uses eventually developed will depend future conditions.

  - **Hillside District** – This district could experience additional residential development within portions of five blocks (same as Alternative 1), mixed-use development of two blocks (one block less than Alternative 1), and no office development (Alternative 1 projects office development within a portion of two blocks).

  - **Brewery District** – As with Alternative 1, the predominant pattern of new development within this district could be mixed-use occupying two full blocks (same as Alternative 1) and portions of an additional 13 blocks (several blocks fewer than Alternative 1). Office space could occupy portions of 13 blocks (two blocks fewer than Alternative 1) and residential -- portions of three blocks, similar to Alternative 1.

  - **Foss Waterway** – Buildout along the west side of the Foss Waterway would be the same as Alternative 1 – approximately 1,987,303 sq. ft. of residential and 1,148,400 sq. ft. of commercial space with an average FAR of 5.7.

  - **Dome District** – It is anticipated that this district could include a mixture of land uses consisting of office, mixed-use, industrial and residential. Office space could occupy portions of 10 blocks (five fewer than Alternative 1); mixed-use could occupy portions of eight blocks (same as Alternative 1); residential, part of one block (same as Alternative 1); and industrial -- portions of five blocks (same as Alternative 1).
- **Alternative 3** – As noted in Table 2-1, this alternative could result in a net increase of up to 10,000,000 total gross sq.ft. of net development consisting of 5,000,000 sq.ft. of residential development, 5,000,000 sq.ft. of commercial development, 10,000 residents, and 13,333 jobs. Possible distribution of this amount of development is depicted in Figure 2-6, based on each of the five districts that comprise the Subarea.

  - **University of Washington Tacoma / Museum District** – This district could experience partial build-out of the district with additional mixed-use and office space located between S. 17th St. and S.15th St. Unlike **Alternative 1 and 2**, land use associated with **Alternative 3** could involve office space occupying a portion of one block (**Alternative 1** and 2 projected full-block development) and mixed-use on a portion of one block (**Alternative 1** and 2 projected development) two partial blocks).

    Within the campus boundaries of UWT, it is projected that **Alternative 3** could result in a total net increase of about 3,015,207 sq.ft., which is approximately 36 percent less than **Alternative 1**. Of this total square footage, an estimated 720,493 sq. ft. could be residential development (residential FAR = 2.3) and 2,294,714 sq. ft. could be commercial development (commercial FAR = 5.1), though the mix of residential and commercial uses eventually developed will depend future conditions.

  - **Hillside District** – This district could experience additional residential development within portions of two blocks (three fewer than **Alternative 1**), no mixed-use development (**Alternative 1** projected three blocks), and no office development (**Alternative 1** projects office development within a portion of two blocks).

  - **Brewery District** – As with **Alternative 1**, the predominant pattern of new development within this district could be mixed-use occupying no full block areas (**Alternative 1** and 2 proposed two full blocks) and portions of five blocks (**Alternative 1** proposed mixed-use on 15 blocks). Office space could occupy portions of four blocks (**Alternative 1** proposed 15 blocks) and residential -- portions of two blocks (**Alternative 1** and 2 proposed residential on portions of three blocks).

  - **Foss Waterway** – Buildout along the west side of the Foss Waterway would be the same as **Alternative 1** – approximately 1,987,303 sq. ft. of residential and 1,148,400 sq. ft. of commercial space with an average FAR of 5.7.

  - **Dome District** – Like the other development alternatives, it is anticipated that this district could include a mixture of land uses consisting of office, mixed-use, industrial and residential. Office space could occupy portions of three blocks (**Alternative 1** proposed portions of 15 blocks); mixed-use could occupy portions of two blocks (**Alternative 1** and **Alternative 2** proposed portions of 8 blocks); residential, part of one block (same as **Alternative 1** and 2); and industrial – a portion of one block (**Alternative 1** and **Alternative 2** proposed portions of five blocks).
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Figure 2-6
Alternative 3 Potential Development—10 Million sq.ft.
SECTION III

AFFECTED ENVIRONMENT, IMPACTS, MITIGATION MEASURES and UNAVOIDABLE ADVERSE IMPACTS
3.1 EARTH

Information presented in this section addresses topography, soils, and earth-related environmentally critical areas. This information is based on readily available secondary sources of data; primary research, such as soil borings, detailed topographic surveys, etc. have not been conducted for this analysis. The following information source formed the basis of data that is presented in this section and is, hereby, incorporated by reference\(^1\) into this Draft EIS:


3.1.1 Affected Environment

Topography

As shown by Figure 3.1-1, the topography of the South Downtown Subarea varies from sea level at the Foss Waterway to an elevation of approximately 300 feet along Yakima Ave., at the west edge of the Subarea. From the Waterway, the topography rises gradually to Pacific Ave, increases to approximately 7 percent\(^2\) between Pacific Ave. and Jefferson Ave., and then rises more steeply (roughly 15 percent gradient) to Yakima Ave.

The southwest portion of the South Downtown Subarea is defined by very steep grades rising 120 ft. or more above South Tacoma Way and Interstate 5. For the most part, the topography of the Dome District in the east portion of the Subarea is relatively uniform, rising from Puyallup Ave. to Interstate 5 at a gradient of about 6 percent.

Soils

The South Downtown Subarea is composed of Alderwood gravelly sandy loam soil (defined further by the degree of slope and the effects topography has on soil characteristics) and by Puyallup soils in the lowland near the Thea Foss Waterway. Alderwood 1C soils of 6 percent to 15 percent slope are found from S. Yakima Ave to Jefferson Ave., and Alderwood 1D soils of 15 percent to 30 percent slope at the southwest portion of the South Downtown Subarea overlooking South Tacoma Way and Interstate 5.

Geologic Hazardous Areas\(^3\)

In 2004 and 2008, the City of Tacoma mapped five types of geologic hazardous areas in the City. The following information relates each of these geologic hazardous areas to the South Downtown Subarea. The Tacoma Municipal Code defines each of these hazardous areas in Chapter 13.11.720, and establishes the general development standards associated with each type in Chapter 13.11.730.

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\(^1\) WAC 197-11-754 -- "Incorporation by reference" means the inclusion of all or part of any existing document in an agency's environmental documentation by reference (WAC 197-11-600 and 197-11-635).

\(^2\) This means a rise of 7 ft. in a horizontal distance of 100 ft.

\(^3\) Tacoma Municipal Code Chap. 13.11.700
Figure 3.1-1
Topography, 10’ Contours

Source: Tacoma Comprehensive Plan, 2012
Erosion Hazard Areas

As shown by Figure 3.1-2, there are no identified erosion hazard areas located within the South Downtown Subarea.

Landslide Hazard Areas

Figure 3.1-3 indicates that there are several areas of steep slopes of 40% or greater that are located along to S. Tacoma Way in the southwest corner of the Subarea, in the south-central portion of the Subarea, and in the Dome District on the south side of E. 27th St. between E. G and E. J Streets. All slopes greater than 40 percent are considered potential landslide hazardous areas. Figure 3.1-3 indicates that there are no identified unstable slope areas within the South Downtown Subarea.

Seismic (earthquake) Hazard Areas

In 2004, the WA Department of Natural Resources (DNR) published liquefaction maps in a report called Liquefaction Susceptibility and Site Class Maps of Washington State By County. Liquefaction is a phenomenon in which strong earthquake shaking causes a soil to rapidly lose its strength and behave like quicksand. Figure 3.1-4 depicts liquefaction areas within the Subarea. The Puyallup soils located in the Puyallup River valley, including all of the Port of Tacoma and both sides of Thea Foss Waterway, are considered susceptible to high liquefaction during an earthquake. The ravine that extends south from Thea Foss and under the SR-705 and I-5 interchange is also susceptible to high liquefaction during an earthquake.

Volcanic Hazard Areas

These areas are subject to debris flow and debris avalanche zones as a result of an eruption of Mount Rainier. Hazard zones are assessed on the basis of a likely occurrence of a volcanic event occurring on a low or 500-1000 year frequency, moderate or 500-1000 year frequency, or high based on a 100-500 year frequency. Figure 3.1-5 depicts volcanic hazard areas within the Subarea. As shown, the entire Puyallup River valley is subject to a high or 100-500 year volcanic eruption frequency including all of the Port of Tacoma and the east side of Thea Foss Waterway. The west side of Thea Foss Waterway and the South Downtown Subarea almost to Jefferson Ave. is subject to a low or 500-1000 year frequency due to mud flows generated by a possible pyroclastic mud flow.

Mine Hazard Areas

In addition to geologically hazardous areas due to soil and slope conditions, potential hazardous areas also include old and abandoned mines and railroad tunnels. As shown by Figure 3.1-6, an abandoned Union Pacific Railroad rail tunnel is located approximately below Center St. in the southwest corner of the South Downtown Subarea. Construction of that tunnel started in 1909, however, the tunnel was never completed due to problems with flooding. By 1913, the abandoned tunnel began to collapse in so many places that the railroad and the city undertook a new public works project to fill it, first with dirt and rock, then with cordwood.

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Figure 3.1-4
Seismic (Earthquake) Hazard Areas

This map was funded in part through a cooperative agreement with the National Oceanic and Atmospheric Administration with funds appropriated for the Coastal Zone Management Act of 1972 through a grant to the Washington Department of Ecology. The views expressed herein are those of the authors and do not reflect the views of NOAA or any of its sub-agencies.
Tacoma South Downtown Subarea Plan
Draft EIS

Figure 3.1-5
Volcanic Hazard Areas

Legend
City Boundary
Potential Volcanic Hazard Areas
- Low
- Moderate
- High

This map was funded in part through a cooperative agreement with the National Oceanic and Atmospheric Administration with funds appropriated for the Coastal Zone Management Act of 1972 through a grant to the Washington Department of Ecology. The views expressed herein are those of the authors and do not reflect the views of NOAA or any of its sub-agencies.

Source: Tacoma Comprehensive Plan, 2012
Figure 3.1-6

Mine Hazard Areas
Tsunami Hazards

Tsunamis are earthquake- or landslide-generated waves that occur in open water bodies generated directly by an earthquake or by an earthquake-induced landslide. A 2007 paper\(^5\) by the Tacoma Washington Tsunami Hazard Mapping Project modeled several scenarios, including:

- **Seattle Fault earthquake**: Approximately 14 min after generation, the tsunami starts to inundate the Port of Tacoma and the Thea Foss Waterway, building to a 3.5-m wave that overtops port facilities, the public esplanade, and adjacent low-lying neighborhoods.

- **Tacoma Fault earthquake**: The tsunami hits the Thea Foss Waterway and Port of Tacoma with an initial 0.6-m wave 10 min after generation. Resonance in the waterways and Puyallup River continue to overflow the channels, and the port and public esplanade are slowly inundated over a period of 3 hr.

The type of earthquakes needed to generate a significant tsunami generally has probabilities of occurrence in the range of 2 percent in a 50-year period. Overall, the risk of inundation from an earthquake-induced tsunami related to the Seattle or Tacoma Faults is considered low.

### 3.1.2 Impacts

**No Action Alternative**

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to earth would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

**Development Alternatives**

Each of the proposed development alternatives would continue the re-development trend of properties in the South Downtown Subarea, at varying intensities, for urban uses and activities. From an area-wide change perspective without mitigation, **Alternative 1** would have the greatest potential for earth-related impacts in that build-out could entail a net increase of 30 million sq.ft. of development, **Alternative 2** would be somewhat less at 20 million sq.ft., and **Alternative 3** would be the least with a potential net increase of 10 million sq.ft. However, considering the fact that such development is projected to occur over several decades and that earth-related impact mitigation presently exists and will continue, it is anticipated that the increased amount of urban activity within the South Downtown Subarea would not result in any significant earth-related impacts. While re-development activity would involve site-specific alteration of existing grades and earthwork, no significant earth-related impacts are anticipated.

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in that such projects would be required to fully comply with existing development regulations, as noted in part 3.1.3 of this section.

3.1.3 Mitigation Measures

The following mitigation measures apply to all alternatives, and are based on existing City policies, regulations, and other mitigation, as noted below.

City Policies

The following policies, together with City codes and other more specific measures, can mitigate impacts that are described in this section of the Draft EIS.

Comprehensive Plan -- Environmental Policy Element

The Environmental Policy Element of Tacoma’s Comprehensive Plan\(^6\) is intended to be a comprehensive, single source of Tacoma’s environmental policies. The Element has established a range of policies that provides mitigation for adverse impacts. The Element states:

\[\text{Managing growth within potentially hazardous natural areas prevents environmental problems as well as preserves open space. For example, steep slopes and floodplains that are potentially hazardous when developed provide scenic corridors and greenbelts when retained in a natural state. Development patterns and practices that preserve or enhance natural features add to community quality as well as protect water quality, wildlife and property.}\]

\[\text{Developments in potentially hazardous areas need to be subject to standards which may be stricter than the standards which apply in areas where natural constraints are not present. In cases where developments are permitted in these potentially hazardous areas, the developments need to be designed in harmony with natural systems. This approach is intended to protect the public health, safety and welfare by averting potential problems associated with development, and may also reduce needless public and private expenditures related to landslides, flooding, erosion, uneven settlement or other disruptions. Lastly, one of the purposes of the Environmental Policy Element is to insure that if development activities occur, undue hardships are not imposed on adjacent property owners and land owners, developers and buyers are made aware of natural constraints.}\]

\(^6\) Ord. No. 27295, adopted Nov. 16, 2004 and amended by Ord. No. 27996 of June 14, 2011
The **Environmental Policy Element** includes the following policies:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E-GD-1 Site Planning</strong></td>
<td>Encourage site planning and construction techniques that maintain natural landforms, retain native vegetation, and preserve open space.</td>
</tr>
<tr>
<td><strong>E-GD-2 Development Hazards</strong></td>
<td>Discourage development on lands where such development would pose hazards to life or property, or where important ecological functions or environmental quality would be adversely affected: (a) floodways of 100-year floodplains, (b) erosion hazard areas, (c) landslide hazards areas, (d) unique or significant wetlands or stream corridors, (e) fish and wildlife conservation areas and (f) seismic hazard areas.</td>
</tr>
<tr>
<td><strong>E-GD-3 Manage Development</strong></td>
<td>Encourage development standards in critical areas in accordance with the severity of natural constraints to reduce risks, minimize damage to life and property and mitigate potential hazards.</td>
</tr>
<tr>
<td><strong>E-GD-4 Educational/Aesthetic Appearance</strong></td>
<td>Encourage regulations or development limitations within areas of recognized educational, anthropological, historical, biological or aesthetic significance to avoid irreversible damage to such areas.</td>
</tr>
<tr>
<td><strong>E-GD-5 Environmental/Economic Consideration</strong></td>
<td>Recognize that management of environmental resources should consider protection of the public health, safety and welfare and economic development needs.</td>
</tr>
<tr>
<td><strong>E-ENF-1 Natural Features Value</strong></td>
<td>Recognize the value of natural features of the land within the urban environment; conserve as many natural features as is possible and appropriate. Natural features are not only important for ecological reasons but they both possess educational and recreational values as well.</td>
</tr>
<tr>
<td><strong>E-ENF-2 Preservation of Natural Resources</strong></td>
<td>Preserve through programs of acquisition, easement, design standards and zoning an optimum amount of the City's desirable natural features for public purposes. Included would be steep slope areas, water frontage, wooded areas, aquatic lands and other unique and significant natural areas.</td>
</tr>
<tr>
<td><strong>E-ENF-3 Environmental Considerations</strong></td>
<td>Emphasize careful planning in growth and development activities in order that the City's natural features may be preserved, soil stability maintained and renewable and non-renewable resources protected.</td>
</tr>
<tr>
<td><strong>E-ENF-4 Natural Features and Unstable Soil</strong></td>
<td>Carefully plan residential development in order that the city's natural features are preserved, if at all possible, and areas of unstable soil are not disturbed.</td>
</tr>
<tr>
<td><strong>E-ENF-5 Natural Features</strong></td>
<td>Avoid alteration of desirable natural features, where feasible, in the development of utilities and services facilities.</td>
</tr>
</tbody>
</table>
Other Mitigation

Under all alternatives, the Environmental Policy Element of the Tacoma Comprehensive Plan (Amended Ordinance Number 27769), taken together with implementing regulations, will protect environmentally sensitive lands. Therefore, no additional mitigation measures are necessary or proposed to address potential impacts associated with the proposal or alternatives.

Depending on the nature of future site-specific development, site-specific impacts may be mitigated through existing City of Tacoma regulations. In some cases, additional mitigation may be necessary under City Public Works and Building Codes to address site-specific impacts that could occur with development under any of the alternatives. Site specific measures may include reducing the size of the project, placing limits on project timing and schedule, or requiring additional practices during construction to avoid adverse impacts. Additional practices might include landscaping, supplemental drainage measures, water quality control, erosion control, and stabilization measures, all currently authorized under existing City codes and regulations.

Additional measures related to stormwater and its potential impact on soils are given in the Water Element of this document, and measures related to contaminated soils are given in the Environmental Health Element of this document. Large scale redevelopment is of critical importance to improving existing stormwater quality and cleaning up contaminated soils.

3.1.4 Unavoidable Adverse Impacts

With application of appropriate mitigation measures, no significant unavoidable adverse impacts are anticipated relative to earth resources.
3.2  AIR QUALITY

Information presented in this section addresses air quality in the South Downtown Subarea. Information contained in this section is based on readily available secondary sources of data; primary research, such as project-specific air quality monitoring or modeling have not been conducted as part of this analysis.

3.2.1  Affected Environment

Regulatory Overview

Three agencies have air quality jurisdiction in the Tacoma/Pierce County area: the US Environmental Protection Agency (EPA), Washington State Department of Ecology (Ecology), and the Puget Sound Clean Air Agency (PSCAA). Air quality regulations are designed to limit emissions from air pollution sources and to minimize concentrations of pollutants in the outdoor air. Standards established by each agency are provided in Table 3.2-1.

The Washington State Department of Ecology (DOE) and the Puget Sound Clean Air Agency (PSCAA) maintain a network of air quality monitoring stations throughout the region to measure existing air quality. Based on monitoring information collected over a period of years by these agencies and by EPA, regions are designated as “attainment” or “nonattainment” areas for each criteria air pollutant. A status of “attainment” for a given pollutant indicates that the air quality in an area complies with the National Ambient Air Quality Standards (NAAQS) for that pollutant. If the area does not meet the NAAQS for a particular pollutant, the area is designated “nonattainment” for that pollutant.

A plan, called a State Implementation Plan (SIP), is developed and implemented to reduce ambient pollutant concentrations below the NAAQS and bring the area back into attainment with the NAAQS. When the air quality in a nonattainment area has improved to the point that the standard is no longer exceeded for a specified period, the area is redesignated as “attainment” – this re-designation requires a maintenance plan (typically covering the first 10 years after re-designation) to ensure that ambient concentrations do not deteriorate back to nonattainment levels. These re-designated areas are called “maintenance areas.”

Conformity

Mandated by Clean Air Act Amendments, conformity is the process by which areas of nonattainment and air quality maintenance are protected from further air quality deterioration due to new development. The objective of the conformity regulation is to ensure that “Federal Actions” are consistent with the applicable State Implementation Plan (SIP). Federal actions can include the issuance of permits, funding of projects, etc.

The Washington State Environmental Policy Act (SEPA) requires that all major actions sponsored, funded, permitted, or approved by state and/or local agencies undergo planning to ensure environmental considerations such as impacts on air quality are given due weight in decision-making.\(^1\) The Clean Air Washington Act (CAWA) of 1991\(^2\) requires transportation

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1  WAC 197-11 and WAC 468-12
2  RCW 70.94
plans, programs, and projects to be consistent with the SIP to improve air quality in areas where federal air quality standards are not met. WAC 173-420 contains regulations to ensure conformity of transportation activities to the SIPs.

### Table 3.2-1
**Air Quality Regulations**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>U.S. Environmental Protection Agency</th>
<th>WA Department of Ecology</th>
<th>Puget Sound Clean Air Agency</th>
</tr>
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<tbody>
<tr>
<td><strong>Carbon Monoxide</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-hour average</td>
<td>35 ppm</td>
<td>35 ppm</td>
<td>35 ppm</td>
</tr>
<tr>
<td>8-hour average</td>
<td>9 ppm</td>
<td>9 ppm</td>
<td>9 ppm</td>
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<tr>
<td><strong>Particulate matter – PM$_{10}$</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Average</td>
<td>Revoked</td>
<td>50 ug/m$^3$</td>
<td>50 ug/m$^3$</td>
</tr>
<tr>
<td>24-hour average</td>
<td>150 ug/m$^3$</td>
<td>150 ug/m$^3$</td>
<td>150 ug/m$^3$</td>
</tr>
<tr>
<td><strong>Particulate matter – PM$_{2.5}$</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Annual average</td>
<td>15 ug/m$^3$</td>
<td>- - -</td>
<td>- - -</td>
</tr>
<tr>
<td>24-hour average</td>
<td>35 ug/m$^3$</td>
<td>- - -</td>
<td>- - -</td>
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<tr>
<td><strong>Total suspended Particles</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Annual average</td>
<td>60 ug/m$^3$</td>
<td>60 ug/m$^3$</td>
<td>60 ug/m$^3$</td>
</tr>
<tr>
<td>24-hour average</td>
<td>150 ug/m$^3$</td>
<td>150 ug/m$^3$</td>
<td>150 ug/m$^3$</td>
</tr>
<tr>
<td><strong>Ozone</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1-hour average</td>
<td>Revoked</td>
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<td>- - -</td>
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<tr>
<td>8-hour average</td>
<td>0.075 ppm</td>
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<tr>
<td><strong>Nitrogen dioxide</strong></td>
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<td></td>
</tr>
<tr>
<td>Annual average</td>
<td>0.053 ppm</td>
<td>0.05 ppm</td>
<td>0.05 ppm</td>
</tr>
<tr>
<td><strong>Sulfur dioxide</strong></td>
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<td></td>
</tr>
<tr>
<td>Annual average</td>
<td>0.03 ppm</td>
<td>0.02 ppm</td>
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<tr>
<td>24-hour average</td>
<td>0.14 ppm</td>
<td>0.10 ppm</td>
<td>- - -</td>
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<tr>
<td>1-hour average/yr</td>
<td>0.40 ppm</td>
<td>- - -</td>
<td>- - -</td>
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<tr>
<td>1-hour average/7 day</td>
<td>0.25 ppm</td>
<td>- - -</td>
<td>- - -</td>
</tr>
<tr>
<td><strong>Lead</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quarterly average</td>
<td>1.5 ug/m$^3$</td>
<td>- - -</td>
<td>- - -</td>
</tr>
</tbody>
</table>

*Source: Chapter 173, Sections 470-475 Washington Administrative Code (WAC).*
PSCAA is also responsible for enforcing several Washington State laws and regulations, including those concerning:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAC 173-400-040</td>
<td>General Regulation for Air Pollution Sources</td>
</tr>
<tr>
<td>WAC 173-400-110</td>
<td>General Standards for Maximum Emissions New Source Review</td>
</tr>
<tr>
<td>WAC 173-425</td>
<td>Open (Outdoor) Burning</td>
</tr>
<tr>
<td>WAC 173-430</td>
<td>Agricultural Burning</td>
</tr>
<tr>
<td>WAC 173-433</td>
<td>Solid Fuel Burning (woodstoves, etc)</td>
</tr>
<tr>
<td>WAC 173-460</td>
<td>Controls for New Sources of Toxic Air Pollutants</td>
</tr>
<tr>
<td>RCW 70-94</td>
<td>Washington State Clean Air Act</td>
</tr>
</tbody>
</table>

Source: Washington Administrative Code (WAC) and Revised Code of Washington (RCW)

For projects within the central Puget Sound region of Washington State, the Puget Sound Regional Council (PSRC) is responsible for developing the long range transportation plan, for maintaining the TIP and for undertaking regional conformity analysis to ensure that all projects listed in the MTP/TIP meet regional conformity standards.

Existing Air Quality

Particulate Matter

Particulate matter (PM) is a form of pollution composed of very small particles of dust, smoke, soot, and other materials. PM comes in many shapes, sizes, and compositions. The EPA has identified 2 sizes of PM that have identifiable health risks: PM\textsubscript{10} and PM\textsubscript{2.5}. PM\textsubscript{10} is composed of particles that are 10 microns or smaller in diameter and PM\textsubscript{2.5}, 2.5 microns or smaller in diameter. PSCAA measures and evaluates fine particle pollution levels through a network of monitors located throughout the 4-county jurisdiction.

Both long- and short-term exposure to PM pollution can pose a range of serious health effects. Exposure has been linked to respiratory disease, decreased heart and lung function, asthma attacks, heart attacks, strokes, and premature death. A 2009 study\footnote{Health Effects and Economic Impacts of Fine Particle Pollution in Washington, Washington State Department of Ecology, Air Quality Program, December 15, 2009.} conducted by DOE conservatively estimates that approximately 1,100 die every year in Washington due to fine particle pollution. Children, older adults and people with respiratory and cardiac illnesses are especially at risk. Breathing PM pollution can cause coughing, wheezing, and decreased lung function even in otherwise healthy children and adults. Certain types of PM contain chemicals known to cause cancer. In addition to health effects, fine particle pollution can limit visibility. Fine particle pollution can also deposit in lakes, rivers and the Puget Sound, affecting ecosystems and organisms.

Fine particle pollution comes primarily from combustion (burning) of fuels, such as wood and fossil fuels. This includes exhaust from motor vehicles (trucks, buses, ships, etc.) and smoke from burning in fireplaces and wood stoves, as well as land-clearing burning and backyard burning of yard waste. Industrial operations also contribute a small portion of fine particle pollution.
**Pierce County Non-attainment Area:**

Most of Pierce County was designated a nonattainment area for particulate matter (PM) in 2009, becoming one of 32 nonattainment areas in the country and the only nonattainment area in the state. The non-attainment area includes all of the South Downtown Subarea and most of Pierce County's urban growth area, as shown in the map in Figure 3.2-1. Over the past decade PM pollution levels in Tacoma have remained somewhat stable, but in 2006 EPA tightened the federal limit for fine particle pollution from 65 micrograms per cubic meter to 35 micrograms per cubic meter.

PM pollution in the non-attainment area is most severe during the fall and winter months, as shown in Figure 3.2-2. During January, February, November and December between 2000 and 2010, pollution levels violated the Federal air quality standard. The biggest source of this wintertime PM pollution is wood smoke on cold, clear winter days when air is trapped close to the land ("inversion" conditions) and there is little wind to blow the smoke away. The worst pollution levels in Pierce County were recorded at the air monitoring station that is located at South L Street in Tacoma’s South End neighborhood. During the summer, fine PM pollution levels are lower overall, when motor vehicles typically contribute more than other sources. Industrial operations also contribute a small portion of fine particle pollution. By law, Pierce County is required to clean up the air by 2019.

**Carbon Monoxide (CO)**

Carbon monoxide (CO) is a product of incomplete combustion. It is generated by transportation sources (e.g., motor vehicles, marine vessels) and other fuel-burning activities such as residential space heating, especially heating with solid fuels like coal or wood. CO is usually the pollutant of greatest concern related to roadway transportation sources, because it is the pollutant emitted in the greatest quantity for which short-term health standards exist.

Pierce County was a maintenance area for CO through 2006. As part of the maintenance plans, a second maintenance plan was developed and submitted for a second consecutive 10 year period (2006-2016). This second 10-year maintenance plan for CO was approved by EPA in 2004. CO levels around Puget Sound have decreased significantly in the past 15 years. Levels are well below federal standards and there has not been a violation of the National Ambient Air Quality Standards (NAAQS) for CO in the Tacoma area since 1992, due primarily to cleaner car technology.

**Ozone (O₃)**

Ozone is a form of oxygen created by the action of the sun on hydrocarbons and nitrous oxides like those found in automobile exhaust and emissions from coal-fired power plants, garbage incinerators, and oil refineries. Even at low concentrations ground level ozone adversely affects human health and has detrimental effects on other species.

Pierce County regained “attainment” status of the ozone standard in 1996, meaning Pierce County was a maintenance area for the 1-hour ozone standard through 2006. A second maintenance plan was developed and submitted for 2006-2016 and was approved by EPA in 2004. However, in 2005, EPA revoked the 1-hour ozone standard for Pierce County, such that Tacoma is no longer designated as a 1-hour ozone maintenance area.
Tacoma South Downtown Subarea Plan
Draft EIS

Figure 3.2-2
Tacoma South L Street, Fine Particulate, 98th Percentile per Month, 2000 - 2010

Source: Puget Sound Clean Air Agency, 2013
Nitrogen Oxides (NOx)

Nitrogen oxides (nitrogen dioxide, nitric acid, nitrous oxide, nitrates, and nitric oxide) are highly reactive gases, many of which are colorless and odorless. Nitrogen oxides react with other substances in the air to form ground level ozone, acid rain, and particulate matter. NOx reacts readily with common organic chemicals to form a wide variety of toxic products, some of which may cause biological mutations. Nitrate particles and nitrogen dioxide can block the transmission of light, reducing visibility. Nitrous oxide is a greenhouse gas.

South Downtown is in attainment of ambient standards for NOx.

Sulfur Dioxide (SO2)

Sulfur dioxide belongs to the family of sulfur oxide (SOx) gases, which are formed when fuel containing sulfur (such as coal and oil) is burned, when gasoline is extracted from oil, or when metals are extracted from ore. Sulfur dioxide dissolves in water vapor to form acid and interacts with other gases and particles in the air to form sulfates. Sulfur dioxide causes a wide variety of health and environmental impacts.

South Downtown is in attainment of ambient standards for SO2.

Lead (Pb)

Exposure to lead can lead to a wide range of well documented human health issues. In the past, the largest sources of lead emissions have been motor vehicles and industrial sources, however, since the phase-out of leaded gasoline, airborne-related lead levels have decreased significantly.

South Downtown is in attainment of the ambient standards for lead.

Greenhouse Gas Emissions (GHG)

There is broad consensus that greenhouse gas emissions caused by humans have already caused measurable increases in global temperature and are expected to result in significantly greater increases in temperature in the future. A wide range of policies and actions to reduce GHG emissions have been enacted -- globally and locally -- but emissions trends are still on the rise globally.

The most significant GHGs are carbon dioxide (CO2), nitrous oxide (NO2), and methane (CH4), of which CO2 emissions are by far the largest in terms of mass emissions and total global warming potential. In the central Puget Sound Region, transportation produces roughly one-half of all GHG emissions. Buildings are the second largest source.

Tacoma’s 1990 estimated GHG emissions level was 1,990,830 tons, based on an emissions inventory that was conducted in 2007. Because Tacoma has already implemented a series of sustainability programs, for 2012 the city was on pace to reduce its emissions by 104,775 tons, which is more than 5 percent of Tacoma’s 1990 estimated emissions level.
### 3.2.2 Impacts

#### No Action Alternative

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to air quality would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

#### Development Alternatives

Each of the proposed development alternatives would continue the re-development trend of properties in the South Downtown Subarea, at varying intensities, for urban uses and activities. As such, increases in localized air pollutant emissions are anticipated as a result of increases in localized automobile traffic, industrial manufacturing, and short-term construction activities. Additional urban activities and accompanying vehicular traffic would contribute to increases in emissions relative to suspended particulates (PM\(_{10}\) and PM\(_{2.5}\)), ozone (O\(_3\)), and carbon monoxide (CO) within the study area.

Each of the proposed development alternatives would continue the re-development trend of properties in the South Downtown Subarea, at varying intensities, for urban uses and activities. From an area-wide change perspective, **Alternative 1** would have the greatest potential for air quality-related impacts in that build-out could entail a net increase of 30 million sq.ft. of development, **Alternative 2** would be somewhat less at 20 million sq.ft., and **Alternative 3** would be the least with a potential net increase of 10 million sq.ft. Considering the fact that development is projected to occur over several decades for each alternative, and that air quality-related impact mitigation presently exists and will continue (as described in part 3.2.3 of this section), it is anticipated that the increased amount of urban activity within the South Downtown Subarea would not result in any significant air quality-related impacts or create air pollutant conditions at a point where EPA, DOE, or PSCAA standards would be at risk.

Development associated with each of the alternatives would require site-specific construction activity consisting of earthwork and the use of construction equipment. Earthwork would result in localized increases in particulate levels and the use of diesel-powered trucks and equipment would result in localized increases in air quality emissions as a result of the equipment and indirectly from idling vehicles as a result of construction-related traffic delays. All construction-related impacts would be temporary and localized.

All alternatives would generate new development and activities that would increase GHG emissions at the local level. However, because GHG gases are a global, not local, phenomenon, a full accounting of their impacts must include consideration of the per capita emissions across the greater region. It is well established that households in transit-rich, walkable neighborhoods drive less than households in lower-density, car-dependent neighborhoods, and this reduction in driving translates to reduced GHG emissions. Given that a certain amount of growth is expected to occur in the region, the more of that growth that can

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4 See for example, *Growing Cooler*, by Reid Ewing, Keith Bartholomew, Steve Winkelman, Jerry Walters, and Don Chenm, Urban Land Institute, 2008.
be captured in the transit-rich, walkable South Downtown Subarea, the less that will end up in the more car-dependent urban fringe. Therefore, at the regional scale, total per capita GHG emissions can be expected to decrease as a larger share of the region’s growth is accommodated in South Downtown. This result is in fact projected by the transportation modeling detailed in the Transportation Element of this DEIS, which estimates a net reduction of per capita regional transportation-related GHG emissions for each of the three development alternatives, as compared to the No Action alternative. Based on this regional perspective, the highest intensity alternative would result in the greatest benefits in terms of GHG emissions reductions.

Directing regional growth to urban centers to reduce environmental impacts is a central strategy of the PSRC’s VISION 2040 regional plan. By planning for, and encouraging significant redevelopment in South Downtown, the South Downtown Subarea Plan is in alignment with VISION 2040. As described above, the reduction of regional GHG emissions that would result from significant redevelopment in South Downtown is an outcome that would further the intended goals of VISION 2040.

### 3.2.3 Mitigation Measures

In addition to general mitigation, PM non-attainment, construction and operational measures that are outlined below – are necessary or proposed to address probable environmental impacts associated with the development alternatives. Furthermore, best management practices that provide mitigation will continue to evolve and improve.

#### General Mitigation Measures

Numerous federal, state, and local regulations have been enacted that address air quality in the central Puget Sound region. Such regulations include those under the Federal Clean Air Act and the Washington Clean Air Act.

Washington’s Operating Permit Regulation (Chapter 173-401 (WAC), complies with Title V of the Federal Clean Air Act and requires a facility to obtain an Operating Permit if it has the potential to emit any of the following:

- more than 100 tons per year of any pollutant, such as nitrogen oxides (NOₓ), volatile organic compounds (VOCs), carbon monoxide (CO), sulfur dioxide (SO₂), and particulate matter (PM). Lower thresholds may apply in “nonattainment areas”;
- more than 10 tons per year of any hazardous air pollutant (HAP), as listed in subsection 112(b) of the Federal Clean Air Act; or
- more than 25 tons per year of a combination of any HAPs.

A facility may also be required to have an Operating Permit if it is subject to certain federal air quality requirements, including:

- Title IV Acid Rain Program;
- New Source Performance Standards (NSPS); or
Also, to address hazardous emissions at the regional level, site-specific demolition activity is required to obtain a demolition permit from PSCAA when such demolition involves asbestos-contained material.

**Tacoma Comprehensive Plan Policies on Air Quality**

The Environmental Policy Element of Tacoma’s Comprehensive Plan includes the following general policies that help mitigate adverse impacts on air quality:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E-P-1 Environmental Protection</strong></td>
<td>Acknowledge the dangers to health presented by all forms of environmental pollution and degradation by individuals as well as by industries, and support education and technical assistance, as well as rigorous enforcement of regulations when necessary, to alleviate these dangers.</td>
</tr>
<tr>
<td><strong>E-P-2 Air and Water Pollution</strong></td>
<td>Support education and technical assistance, as well as strict enforcement when necessary, of air, water, noise and other pollution laws and regulations with the ultimate purpose of eliminating these problems as negative features of the environment.</td>
</tr>
<tr>
<td><strong>E-P-3 Prevention and Mitigation</strong></td>
<td>Prioritize prevention and avoidance of pollution when possible. Use SEPA Substantive Authority, where warranted, in conjunction with adopted policies to provide mitigation for unavoidable impacts to environmental quality.</td>
</tr>
<tr>
<td><strong>E-AQ-1 Air Pollution</strong></td>
<td>Support the control and ultimate elimination of the contaminating by-products of transportation equipment.</td>
</tr>
<tr>
<td><strong>E-AQ-2 Air Quality Studies</strong></td>
<td>All developments subject to SEPA environmental review procedures should address air quality impacts resulting from the development and its operation. In order to adequately assess impacts, any development proposal that requires state or federal air permits or reporting shall provide a quantitative study as part of their environmental analysis.</td>
</tr>
</tbody>
</table>

**PM Non-Attainment Mitigation Measures**

Regulations associated with the particulate matter (PM) “non-attainment” designation in Pierce County ensure that none of the alternatives would create adverse PM-related impacts. By law, the non-attainment area must be cleaned-up by 2019 and the following conditions must be met:

- air quality monitoring data shows the area meets the standard;
- reductions in the area's emissions are permanent and enforceable;
- the State Implementation Plan (SIP) that has been developed for the area has met the requirements of the *Federal Clean Air Act* and been fully approved by EPA;
- EPA has fully approved a 10-year Maintenance Plan for the area submitted by DOE as a revision to the SIP; and
- the Subarea meets requirements of the Clean Air Act for general SIPs and nonattainment areas.

Federal, State and local projects must meet SIP conformity requirements.
Tacoma-Pierce County Clean Air Task Force:

To achieve attainment status for PM pollution, PSCAA is working with DOE -- with input from the Tacoma-Pierce County Clean Air Task Force -- to develop a plan to reduce PM pollution from all sources, particularly wood smoke. Formed by the PSCAA, the Tacoma-Pierce County Clean Air Task Force is a diverse cross-section of community leaders representing Pierce County residents, including those who heat their homes with wood, and volunteers from business, government and health.

The Task Force transmitted its recommendations to PSCAA in December 2011 with three primary recommendations:

1. Improve Enforcement of Air Quality Burn Bans;
2. Require the Removal of Uncertified Wood Stoves and Inserts by a Certain Date; and
3. Reduce Pollution from Gasoline Vehicles, Diesel Vehicles, Industries, Ships.

DOE submitted the SIP modifications to EPA in December 2012 for review and approval. In addition, PSCAA has been developing plans and implementing actions to improve air quality in the nonattainment area. The attainment timeline is as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>Health studies cause EPA to tighten standard for PM pollution</td>
</tr>
<tr>
<td>December 2009</td>
<td>EPA designates Tacoma-Pierce County as a nonattainment area</td>
</tr>
<tr>
<td>Summer 2011</td>
<td>PSCAA convenes Tacoma-Pierce County Clean Air Task Force</td>
</tr>
<tr>
<td>Fall 2011</td>
<td>Clean Air Task Force makes recommendations to PSCAA</td>
</tr>
<tr>
<td>Winter 2011</td>
<td>PSCAA submits recommendations to Ecology</td>
</tr>
<tr>
<td>December 2012</td>
<td>Ecology submits State Implementation Plan to EPA</td>
</tr>
<tr>
<td>2014</td>
<td>Target for Tacoma-Pierce County nonattainment area to reduce PM pollution to meet federal standard</td>
</tr>
<tr>
<td>2019</td>
<td>Final deadline to meet federal standard for fine particle pollution</td>
</tr>
</tbody>
</table>

Additional PM Pollution Policies and Regulations:

An estimated 25-33 percent of the emission reductions needed to meet the PM pollution standard by 2019 in Pierce County will be accomplished from new federal regulations and local initiatives relating to non-wood smoke sources of pollution (e.g., vehicles, ships, etc.). Nationally, the focus for reducing fine particle pollution related to gasoline vehicles has been on creating cleaner standards for both engines and fuels. Washington State has adopted the California Clean Car Standards for vehicles—the most stringent automobile standards in the country—which will help reduce fine particle pollution. Local governments have adopted several programs to reduce fine particle pollution related to gasoline engines, including installing electric vehicle charging stations, using electric and biodiesel vehicles, and adopting anti-idling programs. The regional transportation plan 5 adopted by the Puget Sound Regional Council has several policy goals that will help reduce fine PM pollution. A number of planned transportation capital investments will also help, such as high occupancy vehicle (HOV) lane extensions, ramp metering, Sound Transit Sounder rail improvements, and other investments in alternatives to travel by motor vehicle.

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5 Transportation 2040, Puget Sound Regional Council, adopted May 20, 2010
Among the industrial sources of PM pollution within the nonattainment area, six have been identified by DOE and PSCAA as the largest emitters. These six contribute more than 90% of the PM pollution from industrial sources in the nonattainment area. The federal Clean Air Act establishes a requirement for working with industries to reduce their levels of pollution called Reasonably Available Control Technology (RACT). DOE and PSCAA are reviewing the existing pollution controls and operations at these six industrial sources to determine if they already meet RACT.

For ocean-going ships, beginning in 2012 new international standards require the use of lower sulfur fuel. More restrictive levels are required by 2015, which will reduce the fine particle pollution from ships. The Port of Tacoma and its tenant, Totem Ocean Trailer Express (TOTE), have also installed shore power facilities and retrofitted ships so that ships can use shore power instead of operating diesel engines to create power when they are berthed.

**Greenhouse Gas Emissions Mitigation**

**Tacoma’s Climate Action Plan:**

In 2008 the City of Tacoma adopted a *Climate Action Plan*. One of the main “realities” articulated in the Plan is aligned with goals of the *South Downtown Subarea Plan*:

> “Tacoma must demonstrate leadership to accept population growth, while increasing the quality of life and attractiveness of living within the urban core. Providing spectacular, affordable opportunities for people to live closer to where they work, shop and entertain themselves is not just an economic development issue, it’s a climate change solution, and Tacoma must invest in the tools to encourage this growth while increasing the quality of life of its residents.”

The Plan established the following targets:

- **By 2012**: Tacoma’s greenhouse gas emissions should be reduced to 15% below 1990 levels.
- **By 2020**: Tacoma’s greenhouse gas emissions should be reduced to 40% below 1990 levels.
- **By 2050**: Tacoma’s greenhouse gas emissions should be reduced to 80% below 1990 levels.

The Plan proposes the following five GHG emission reduction strategies to help meet the above targets:

1. City leading by example;
2. Moving people and goods more efficiently;
3. Enhancing compact/livable neighborhoods;
4. Energy efficiency in buildings, homes and industries; and
5. Reuse and recycle … from buildings to food waste.

**Prior Greenhouse Gas Policy in Tacoma:**

Tacoma’s Mayor signed the US Mayors *Climate Protection Agreement* in April 2005, pledging that Tacoma would strive to meet or exceed the reduction target set in the Kyoto Protocol to cut emissions from 1990 levels by 7% by 2012. In April 2006, the Tacoma City Council adopted a

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6 City of Tacoma, 2008
resolution supporting efforts to curb global warming and reduce greenhouse gases, while encouraging the continued growth and development of clean technology businesses in the City.

**State Greenhouse Gas Policy:**

Washington has adopted a set of coordinated policies to grow the State’s economy and reduce greenhouse gas emissions, including:

- enacted State greenhouse gas emissions reduction limits into law (RCW 70.235.020)
  - Return to 1990 levels by 2020;
  - By 2035, reduce emissions to 25% below 1990 levels; and
  - By 2050, reduce emissions to 50% below 1990 levels.
- required that persons operating single facility, source, or site that emits at least 10,000 metric tons of greenhouse gases annually must report to the Department of Ecology their emissions of certain greenhouse gases (RCW 70.94.151);
- established Evergreen Jobs Initiative with the goal of, by 2020, increasing the number of green economy jobs to 25,000 from the 8,400 green economy jobs the state had in 2004. (RCW 43.330.310 and RCW 43.330.370);
- authorized financing of the upfront costs of renewable energy and energy-efficiency improvement projects and establish the Sustainable Energy Trust Program. (RCW 43.180);
- adopted California “Clean Car” Greenhouse Gas Tailpipe Standards in 2005. (RCW 70.120A.010);
- enacted minimum renewable fuel content requirements and fuel quality standards. (RCW 19.11.110, RCW 19.11.120);
- required that starting in 2010, new vehicles must disclose greenhouse gas emissions. (RCW 70.120A.050)
- enacted electric vehicles planning and infrastructure provisions with Chapter 459, Laws of 2009 and codified in several RCWs;
- required the WA Department of Transportation to establish an alternative fuels corridor pilot project along I-5. (RCW 47.38.070);
- required implementation of the Commute Trip Reduction program required from all large employers. (RCW 70.94.537);
- adopted the Energy Independence Act (Initiative 937), which sets energy conservation and renewable energy targets. Large utilities must acquire renewable resources like wind and solar to meet part of their electricity needs and must implement all cost-effective energy-efficiency measures. (RCW 19.285);
- required as part of State Energy Codes that are adopted from 2013 through 2031 must incrementally move towards achieving seventy percent reduction in annual net energy consumption for new residential and commercial buildings by 2031. (RCW 19.27A.160);
- required that the WA Department of Commerce develop and implement a strategic plan (by December 31, 2010) for enhancing energy efficiency in and reducing greenhouse gas emissions from homes, buildings, districts, and neighborhoods (RCW 19.27A.150). The strategic plan must be used to help direct the future code increases in RCW 19.27A.020. The strategic plan needs to identify barriers to achieving net zero energy use in homes and buildings and identify how to overcome these barriers in future energy code updates and through complementary policies;
required that all new electric generating resources, including those under long term contract, must meet a greenhouse gas emission performance standard. (RCW 80.80.040);
- required net metering for all small renewable energy systems (RCW 80.60); and
- required that State Agencies financing infrastructure and economic development projects must take into consideration GHG emissions reduction goals and reduction in vehicle miles traveled. (RCW 70.235.070).

Additional analysis of transportation-related GHG emissions is provided in Section 3.11 – Transportation of this Draft EIS.

Construction Mitigation

Construction-related impacts that cause a temporary increase in emissions do not have to be taken into account as part of a conformity determination (WAC 173-420-100).

All construction-related development that is proposed within Tacoma is required to comply with relevant federal, state, and local air quality regulations. In addition, the City requires that air quality control plans be implemented, which include best management practices (BMP) to control fugitive dust and emissions from diesel construction equipment. Typical construction-related mitigation includes:

- using water sprays or other non-toxic dust control methods on unpaved roadways,
- minimizing vehicle speeds while traveling on unpaved surfaces,
- preventing the track out of mud onto public streets,
- covering soil piles when practical,
- minimizing work during periods of high winds when practical,
- maintaining construction equipment engines according to manufacturers’ specifications, and
- minimizing idling of equipment while not in use.
- use of ultra-low sulfur diesel fuel (ULSD)
- traffic management plan be in place during construction and any alternative routes will be well signed

Construction contractors are required to comply with all relevant federal, state, and local air quality regulations, including the preparation of a plan for minimizing dust and odors. WAC 173-420-100 states that construction-related impacts that cause a temporary increase in emissions do not have to be taken into account in a conformity determination.

Operational Mitigation

It is expected that the City will adopt the South Downtown Subarea Plan and one of the development alternatives noted in this Draft EIS – or a hybrid. As such, the goals of each development alternative will be to shift mode share from private automobiles to walking, biking, and transit. Specifically, the following policies in the Subarea Plan mitigate impacts of vehicular use on air quality, including carbon monoxide (CO), ozone (O₃) and GHGs:

- Promote the creation of complete communities in close proximity to Tacoma Dome Station and the LINK streetcar stations;
• Improve safety and convenience for non-motorized access to fixed-rail transit stations;
• Coordinate with transit agencies to prioritize future high frequency transit service allocations that will help catalyze redevelopment and the creation of complete communities;
• Manage parking to support transit access and promote transit ridership;
• Continue to encourage the expansion of South Downtown’s concentration of creative arts and design, urban recreation, business incubators, and other dynamic, small-scale businesses;
• Build a highly visible system of public walkways, trail corridors and active street linkages that connect south downtown’s neighborhoods, waterfronts and key destinations; and
• Leverage the open space and connectivity potential of the right-of-way through continued improvements to the pedestrian and cycling environment on streets.

3.2.4 **Unavoidable Adverse Impacts**

With adherence to applicable codes and regulations, as well as the mitigation measures noted above, no significant unavoidable adverse impacts are anticipated relative to air quality resources under any of the proposed alternatives.
3.3 WATER

This section addresses the effects of the proposed alternatives on water resources (i.e., groundwater, wetlands, stormwater, Thea Foss Waterway, and flood hazard areas) located within or proximate to the South Downtown Subarea. Information contained in this section is based on readily available secondary sources of data; primary research, such as project-specific water quality monitoring or modeling have not been conducted as part of this analysis.

3.3.1 Affected Environment

Groundwater

Tacoma’s most important source of groundwater is the South Tacoma Channel, an approximately 4-mile long valley that is located in the northwest part of the Clover-Chambers Creek Watershed (Figure 3.3-1). The South Tacoma Channel’s geology is characterized by highly porous sands and gravels; these geologic factors make this aquifer not only highly productive but also highly susceptible to contamination. The City of Tacoma Water Division has extensively developed the groundwater resources of the South Tacoma Channel through the construction of a well field consisting of 13 high-yield production wells. Groundwater from the channel produces about 10 percent of the 80,000,000 gallon per day average demand for Tacoma Water, and about 36 percent of the 140,000,000 gallon per day peak water demand.

A clear relationship exists between uses of land and the quantity and quality of groundwater. Rainfall replenishes the aquifer in a process known as recharge. Contaminants from land use activities, if not controlled, can seep into the groundwater. The City of Tacoma’s policy is to emphasize prevention, and to commit to a long-term effort to adopt and implement groundwater protection programs. Effective groundwater protection requires the combined efforts of a number of governmental departments and agencies, including Tacoma Water, Pierce County, the City of Lakewood, the Tacoma-Pierce County Health Department, Washington State Department of Health, and others.

Generally, groundwater in the South Downtown Subarea is of good quality. However, depending on location and intensity of adjacent urban uses, groundwater deposits can be contaminated by unfiltered stormwater runoff containing surface fertilizers, oil and grease pollutants and on occasion, by animal wastes. The groundwater deposits may be tapped for agricultural or commercial purposes, but can be limited for public consumption in some areas.
Figure 3.3-1

Aquifer Recharge and Wellhead Protection Areas

This map was funded in part through a cooperative agreement with the National Oceanic and Atmospheric Administration with funds appropriated for the Coastal Zone Management Act of 1972 through a grant to the Washington Department of Ecology. The views expressed herein are those of the authors and do not reflect the views of NOAA or any of its sub-agencies.
**Wetlands**

Wetlands are land areas that are inundated or saturated with surface water or groundwater at a frequency and duration to support vegetation adapted to life in saturated soil conditions. Wetlands generally include small lakes, ponds, streams, wet meadows, shallow or deep marshes, bogs and swamps that are inundated or saturated by surface or groundwater at a frequency and duration to support a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wetlands slow and store floodwaters, reduce shoreline erosion from wind and tidal action and help recharge groundwater supplies. Wetlands function naturally to improve water quality by filtering out sediments, using excess nutrients and breaking down some toxic chemicals. Loss of wetlands can result in degraded water quality, soil erosion, increased public safety and property damage risk, and loss of open space and wildlife habitat.

A variety of Federal and State laws are now in effect which help control wetland loss. Wetlands in Tacoma are designated in accord with the Washington State *Wetland Identification and Delineation Manual*¹ and evaluated using the Washington Department of Ecology (DOE) 5 class rating system. An additional “wetlands and/or streams of local significance” designation protects wetlands and/or streams to a degree higher than that afforded by strict application of the state and local criteria.

The City of Tacoma has mapped its wetlands as shown in Figure 3.3-2. The majority of Tacoma’s original wetlands have been filled and developed into commercial, industrial or residential land uses. Within the South Downtown Subarea there are two very small areas located on either side of the south end of the Thea Foss Waterway that have been designated as wetlands of “high probability.” These wetlands have been identified and set aside from infill development, but have not been categorized as wetlands of local significance by the City of Tacoma.²

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² A wetland of local significance (WOLS) is described by the Washington State Department of Ecology as any wetland, identified and adopted by a local government as part of its Planning process, following public review and appeals, and satisfying certain criteria. The purpose of criteria for WOLS is to provide ways for local government to protect wetlands within the wetlands rating system to a degree higher than that afforded by strict application of the other state criteria.
Stormwater

Surface water drainage, known as stormwater, is generated when rainfall encounters hard or impervious surfaces. The stormwater runoff generated from roadways, roofs, parking lots, and other impervious surfaces created by urban development is typically of a higher volume than what occurred in a pre-developed state. Runoff from roadways, driveways, and parking lots can transport pollutants such as gas and oil as well as residues from pesticides, fertilizers, and other chemicals used in lawn care, as well as animal waste in agricultural areas. This “non-point” source pollution accumulates as water runs over impervious surfaces toward a receiving body of water.

Stormwater in the South Downtown Subarea is collected through a system of catch basins and a network of piped storm sewers that are located within the street rights-of-way. The South Downtown Subarea drains into the Puyallup River and the Thea Foss Waterway, then into Commencement Bay and Puget Sound. Stormwater management in Tacoma is managed by the City Public Works Department’s Surface Water and Environmental Compliance Sections of the Environmental Services, Science and Engineering Division. Responsibilities include:

- Inspecting business activities and permitting and inspecting new construction projects.
- Collecting and evaluating stormwater and sediment quality monitoring data.
- Implementing a source control and monitoring program focused in the watershed of the Thea Foss Waterway Superfund Cleanup, and enhancing habitat areas to restore beneficial uses.
- Mapping, maintaining and cleaning a stormwater system that includes approximately 575 miles of storm pipe, 10,000 manholes, 18,300 catch basins, 400 outfalls, 4 pump stations, and 47 stormwater ponds and other treatment and flow control facilities.
- Rehabilitating and replacing aging infrastructure and improving the storm system with capital projects to address identified water quantity and quality issues.
- Providing public education about stormwater and surface water management and sharing information with staff from federal, state and neighboring municipal governments, environmental groups, businesses and interested citizens.
- Participating in regional watershed councils and committees.
- Ensuring the city activities and operations are in compliance with National Pollutant Discharge Eliminations System (NPDES) permit requirements.

Thea Foss Waterway

The South Downtown Subarea includes shoreline parcels on the Thea Foss Waterway. The nearshore environment along the Foss Waterway is intensely developed and highly altered, with minimal vegetated areas remaining. Shoreline modifications include docks and bulkhead structures, as well as large overwater piers and structures that are supported by pilings.

Under EPA’s Superfund Program, contaminated bottom sediments were remediated in the Thea Foss and the Wheeler-Osgood Waterways at a cost of $105,000,000. Sources of Contaminants of Concern (COCs) continue to exist in the drainage basins and are conveyed to the Waterways via stormwater (municipal and private), aerial deposition, marinas, and groundwater seeps. The contaminants identified as having the greatest potential to affect sediment quality following the cleanup action include polycyclic aromatic hydrocarbons (PAHs) and phthalates.
Under a Unilateral Administrative Order dated September 30, 2002, and a Consent Decree with EPA dated May 9, 2003, Tacoma implemented a stormwater monitoring and source control strategy for the municipal storm drains entering the Thea Foss and Wheeler-Osgood Waterways to help provide long-term protection of sediment quality in the waterways. The strategy uses a multifaceted approach consisting of aggressive source control efforts, a comprehensive monitoring program, a computer model to predict impacts, and a decision matrix to identify the need for additional source controls; parts of the program exceed NPDES requirements. Results to-date are provided in the *Thea Foss and Wheeler-Osgood Waterways 2009 Source Control and Water Year 2009 Stormwater Monitoring Report*. All trends indicated decreasing concentrations of contaminants.

Basin-wide stormwater line cleaning of three entire drainage basins was completed during summer 2007 and 2008 to remove residual sediments in the storm drains. Contaminants seen in sediments in the Foss Waterway may not be from new sources, but from legacy contamination in the pipe that could be contaminating stormwater or base flow through re-suspension and/or dissolution. The cleaning appears to have been most effective at removing lead and PAHs from stormwater.

### Flood Hazard Areas

Located within the Department of Homeland Security, the Federal Emergency Management Agency (FEMA) is responsible for coordinating the federal government’s response to natural and manmade disasters. A service that FEMA provides includes mapping the approximate locations of frequently flooded areas on Flood Insurance Rate Maps (FIRM). Additional information is found on community panel maps prepared by FEMA for the National Flood Insurance Program (NFIP), which identify the following flood zones:

- **Zone A**: This is an area of 100-year flood with base flood elevations and flood hazard factors undetermined; and
- **Zone B**: These are areas located between the 100-year flood and 500-year flood, or certain areas subject to 100-year flooding with average depths less than one foot, or where the contributing drainage area is less than one square mile, or areas protected by levees from the base flood.

Tacoma’s Flood Hazard Areas are mapped in *Figure 3.3-3*. Within the South Downtown Subarea the only identified flood zone is along the shoreline of the Foss Waterway, which is designated Zone A to an elevation of 9 ft. above sea level. Outside the Subarea, segments of the Puyallup River east of Interstate 5 in Fife and Puyallup are subject to Zone B or 500-year flood occurrences.

The potential impacts of climate change on mean sea level elevation in Commencement Bay and the Thea Foss Waterway are difficult to accurately predict. A 2008 report by the University of Washington (UW) Climate Impacts Group in collaboration with DOE termed *Sea Level Rise in the Coastal Waters of Washington State* projects that sea level rise by 2100 could range from between 6 and 50 inches. The Flood Hazard Areas identified on the Foss Waterway may be more vulnerable to the potential impacts of sea level rise due to the susceptibility to flooding in these areas.
Tacoma South Downtown Subarea Plan
Draft EIS

Figure 3.3-3
Flood Hazard Areas

Source: Tacoma Comprehensive Plan, 2012

3.3.2 Impacts

No Action Alternative

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to water resources would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

Development Alternatives

Each of the proposed development alternatives would continue the re-development trend of properties in the South Downtown Subarea, at varying intensities, for urban uses and activities. As such, the potential exists for impacts to water resources within the Subarea. From an area-wide change perspective, Alternative 1 would have the greatest potential for water-related impacts in that build-out could entail a net increase of 30 million sq.ft. of development, Alternative 2 would be somewhat less at 20 million sq.ft., and Alternative 3 would be the least with a potential net increase of 10 million sq.ft. However, considering the fact that such development is projected to occur over several decades and that water-related impact mitigation presently exists and will continue, it is anticipated that the increased amount of urban activity within the South Downtown Subarea would not result in any significant water-related impacts. Such development would be required to fully comply with existing development regulations, as noted in part 3.4.3 of this section.

If not properly regulated, designed, or managed, urban development could result in impacts to groundwater in the Subarea, which may affect the City’s aquifer and domestic water supplies. Stormwater runoff can carry sedimentation and other pollutants (e.g., automobile oils and greases, fertilizers, pesticides, effluent from failed septic systems, and industrial discharges, etc.), which could adversely affect the two wetlands adjacent to the Thea Foss Waterway, result in degradation of water quality and associated impacts to habitats that are in or proximate to the receiving water bodies. It should be noted, however, that since the South Downtown area has been intensely developed, these wetlands and habitats are of relatively low quality. The degree of erosion and sedimentation-related impacts would be influenced by the timing of construction, the amount of soil exposed to wind and water erosion, and the effectiveness of construction-related and long-term erosion control measures.

Without effective grading and landscaping measures, development on slopes can cause severe erosion risks with irreversible damage to surface water runoff and stormwater collection outfalls into sensitive wetlands and anadromous fish-bearing waters including Puget Sound. Inadequately located or designed urban infrastructure including roads, parking lots, and other improvements that are not sited on level lands and/or that are not planted with adequate ground covering materials can cause settling conditions to contaminate surface water and stormwater systems and fill and pollute plant and fish-bearing waters including Puget Sound. The degree of erosion and sedimentation may be affected by several factors, including the timing of construction; degree of vegetation removed; amount of un-vegetated soil or fill material to be exposed to the forces of rainfall and runoff; effectiveness of on-site erosion control measures; and the implementation of required best management practices.
In general, development may increase impervious surfaces thereby increasing the quantity of surface water runoff that, if not properly managed, can discharge pollutants into surface waters, including automobile oils and greases, fertilizers, pesticides, effluent from failed septic systems, and industrial discharge sources. These pollutants may degrade fish habitat and threaten the use of surface and groundwater for domestic water supplies. However, given the stringent stormwater requirements already in place in the City of Tacoma, in the case of South Downtown, redevelopment can be expected to improve the quality of stormwater runoff for the following reasons:

- Since most development would occur on previously developed sites, the amount of impervious surface would not increase in most cases.
- Regulations establish strict limits on runoff volumes from development sites that in many cases can be expected to reduce runoff volumes compared to existing conditions.
- The City’s existing policies that promote “low-impact development” can be expected to improve stormwater quality as redevelopment occurs.
- Redevelopment on contaminated sites will require cleanup of soils, which can eliminate a potential source of polluted runoff (see Section 3.5 – Environmental Health of this Draft EIS).

In sum, large-scale redevelopment is likely to have significant positive impacts on stormwater quality.

At the regional scale, redevelopment in South Downtown also has the potential to improve water quality. Each of the development alternatives would help direct regional growth into a previously developed urban area, thereby reducing development on less developed or undeveloped lands on the urban fringe. Compared to urban infill, new development in previously undeveloped suburban or rural areas is likely to have greater adverse impacts on water quality for the following reasons:

- Suburban areas have more roads and more driving per capita that leads to greater amounts of polluted runoff streets.
- Development in previously undeveloped areas typically involves more conversion of surfaces from pervious to impervious states
- Previously undeveloped areas on the urban fringe are more likely to have sensitive areas such as wetlands or salmon habitat that are particularly sensitive stormwater runoff.
- Higher-density urban development has less impervious surface on a per capita basis.

As is the case with any previously developed area, abandoned wells may be present in the South Downtown Subarea. Abandoned wells present extreme concerns to children, adults and animals, as well as health risks as a result of groundwater contamination. State law mandates certain procedures for decommissioning abandoned wells and anyone who violates the regulations can be held accountable. As a result, development in the South Downtown Subarea could help remove risks caused by any abandoned wells that may exist in the Subarea.

The other water-related issue noted in the Affected Environment portion of this section is Flood Hazard Areas. With an overall rise in sea level, the flood hazard potential would continue. However, redevelopment as a result of the development alternatives would involve modifying redevelopment sites to remove or significantly lessen this potential occurrence.
3.3.3 Mitigation Measures

The following mitigation measures apply to all alternatives, and are based on existing City policies, regulations, and other mitigation, as noted below.

Comprehensive Plan -- Environmental Policy Element

The Environmental Policy Element of Tacoma’s Comprehensive Plan identifies the goals, policies, guidelines, and requirements of the State Growth Management Act (GMA) (RCW 36-70A-170) “to designate and classify ecologically sensitive and hazardous areas and to protect these areas and their functions and values, while also allowing for reasonable use of private property.”

The Environmental Policy Element establishes the following policies concerning groundwater:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E-ARA-1 Groundwater Protection</strong></td>
<td>Protect and preserve the quantity and quality of Tacoma’s groundwater supply.</td>
</tr>
<tr>
<td><strong>E-ARA-2 Natural Area Retention</strong></td>
<td>Encourage the retention of sufficient natural areas to maintain a balance between development and the need for adequate recharge of the aquifer in order to assure a continued adequate groundwater supply.</td>
</tr>
<tr>
<td><strong>E-ARA-3 Management Techniques</strong></td>
<td>Encourage the development and use of alternative mechanisms for preventing and reducing the risk of groundwater contamination (e.g., by process or product changes) and disposal (e.g., through resource recovery and recycling).</td>
</tr>
<tr>
<td><strong>E-ARA-4 Performance Criteria</strong></td>
<td>Encourage the development of performance criteria and guidelines which address siting, design, construction and operation of commercial and industrial structures and activities to prevent groundwater contamination.</td>
</tr>
<tr>
<td><strong>E-ARA-5 Economic Benefit</strong></td>
<td>Coordinate with the Chamber of Commerce and the Economic Development Board to ensure that the groundwater protection program is used as a positive factor in attracting new business and industry to the area.</td>
</tr>
<tr>
<td><strong>E-ARA-6 Groundwater Protection Program</strong></td>
<td>Support a coordinated effort of City, County, State and Federal departments and agencies to develop a comprehensive program that will ensure incorporation of groundwater protection measures into all potentially disruptive development activities.</td>
</tr>
<tr>
<td><strong>E-ARA-7 Public Awareness Education</strong></td>
<td>Support a public awareness/education program for users and handlers of toxic and hazardous materials and the general public concerning groundwater pollution problems and necessary remedial actions.</td>
</tr>
<tr>
<td><strong>E-ARA-8 Monitoring</strong></td>
<td>Support an ongoing effort to monitor groundwater quality in order to determine the effectiveness of the groundwater program over time.</td>
</tr>
</tbody>
</table>

The Environmental Policy Element also establishes the following policies concerning wetlands:
### Water

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E-ARA-8 Monitoring</strong></td>
<td>Support an ongoing effort to monitor groundwater quality in order to determine the effectiveness of the groundwater program over time.</td>
</tr>
<tr>
<td><strong>E-WS-1 Preservation of Wetlands</strong></td>
<td>Strive to preserve and maintain desirable small bodies of water or wetlands such as holding ponds basins, creeks, stream corridors and marshes for open space, flood control, drainage, water quality, aquifer recharge and habitat purposes.</td>
</tr>
<tr>
<td><strong>E-WS-2 No Net Wetland Loss</strong></td>
<td>Ensure that in the short term there is no net loss of wetland, stream, and aquatic habitat functions and acreage and, in the long term, there is a measurable gain of wetland, stream and aquatic habitat function and acreage.</td>
</tr>
<tr>
<td><strong>E-WS-3 Wetland Protection</strong></td>
<td>Ensure that new development adjacent to a wetland preserve, protect and improve the wetland and provide vegetated habitat or buffer adjacent to the wetland adequate to protect its natural functions.</td>
</tr>
<tr>
<td><strong>E-WS-4 Wetland Development</strong></td>
<td>Allow development in wetlands only if impacts are unavoidable and such development can successfully mitigate potential hazards and compensate for wetland loss.</td>
</tr>
<tr>
<td><strong>E-WS-5 Wetland Filling/Draining</strong></td>
<td>Prohibit indiscriminate filling or draining of wetlands and stream corridors.</td>
</tr>
<tr>
<td><strong>E-WS-6 Salt Water Intrusion</strong></td>
<td>Discourage draining of wetlands lying on marine shorelands if such activity will cause salt water intrusion.</td>
</tr>
</tbody>
</table>

The Environmental Policy Element establishes the following policies regarding water quality:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E-WQ-1 Water Quality</strong></td>
<td>Recognize the need for an increase in the level of sewage treatment and potential treatment of stormwater to meet the National Pollutant Discharge Elimination System (NPDES) Phase I Municipal Stormwater permit requirements.</td>
</tr>
<tr>
<td><strong>E-WQ-2 Retain Vegetation Near Water</strong></td>
<td>Encourage the retention of natural vegetation along lakes, ponds, and streams, where appropriate, in order to help preserve water quality, protect fishery resources and control erosion and runoff.</td>
</tr>
<tr>
<td><strong>E-WQ-3 Shoreline</strong></td>
<td>Encourage cooperation between public and private efforts in the management and development of Tacoma’s shorelines.</td>
</tr>
</tbody>
</table>

The Environmental Policy Element establishes the following policies concerning stormwater runoff:
Policy | Intent
--- | ---
**E-WQ-1 Water Quality** | Recognize the need for an increase in the level of sewage treatment and potential treatment of stormwater to meet the National Pollutant Discharge Elimination System (NPDES) Phase I Municipal Stormwater permit requirements.

**E-SWR-1 On-Site Retention Facilities** | Encourage the use of on-site retention and water quality facilities that are designed in accordance with the City's Surface Water Management Manual where not prohibited by identified critical drainage areas and the South Tacoma Groundwater Protection District.

**E-SWR-2 Natural Watercourses** | Prohibit any filling of natural watercourses without adequate mitigation, proper environmental processing and permitting, and provisions to accommodate the existing drainage through the modified watercourse in accordance with the City's regulations.

**E-SWR-3 Natural Land Features and Erosion** | Protect existing natural gulches, watercourses, ravines, and similar land features from the adverse erosional effects of increased storm water runoff that is generated by new development.

**Shoreline Master Program**

The City of Tacoma recently completed an update to its Shoreline Master Program (SMP) in compliance with the State’s Shoreline Management Act\(^3\) and the SMP is currently undergoing review by DOE. With regard to Flood Prevention and Flood Damage Minimization, the SMP establishes the following objectives:

- Manage flood protection in accordance with the City’s current flood hazard regulations; Sections 2.12.040 through 2.12.050, Flood Hazard and Coastal High Hazard Areas, and Chapter 12.08 of the City’s *Surface Water Management Manual* provide general and specific flood hazard protection.

- Participate in regional efforts on flood protection issues, coordinating with the Federal Emergency Management Agency (FEMA), the State of Washington, Pierce County as well as other jurisdictions, particularly those with jurisdiction over the Puyallup River and neighboring Puget Sound shorelines.

**Other Mitigation Measures**

The South Downtown Subarea Plan contains multiple policies and actions aimed at mitigating impacts on water resources, including:

- Apply natural drainage strategies to enhance both the livability and sustainability of open spaces, and to reduce capacity demand on the City’s stormwater system:
  - Maximize the integration of natural drainage features in the design of the Prairie Line;

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\(^{3}\) WAC 173-26-201(2)(C)
- Create a “green street” with natural drainage features on East C St between E 27th St and Puyallup Ave.;
- Explore S Holgate St as a location for natural drainage features that also function as placemaking features for a shared-street “woonerf” open space;
- Allow private development to implement natural drainage and rainwater harvesting to meet stormwater management requirements;
- Allow private development to utilize the right-of-way for natural drainage; and
- Encourage designs that celebrate stormwater as an amenity

- Ensure coordination between Tacoma Public Utilities, City Departments and private developers such that all utility and street construction projects can be fully leveraged.

As noted previously (see the Impacts section above), redevelopment has the potential to improve the quality of stormwater runoff and reduce adverse impacts on water quality. This is because, in most cases, new development must meet more stringent stormwater management requirements than what it replaces. In addition, regulations require soil remediation for development projects on contaminated sites, which permanently removes a potential source of contamination to both surface and ground water (for details see Section 3.5 – Environmental Health of this Draft EIS). Therefore, redevelopment itself provides mitigation for potential water quality impacts. Similarly, at the regional scale redevelopment itself provides mitigation for water quality impacts region-wide.

The following mitigation measures apply to all alternatives.

- **City of Tacoma Stormwater Management Program (SWMP)**

  The Department of Ecology issues National Pollutant Discharge Elimination System (NPDES) Stormwater Permits for the City of Tacoma. The City of Tacoma Stormwater Management Program (SWMP) guides the operation of Tacoma’s Surface Water Management Utility to comply with the NPDES permit. SWMP policies and measures are implemented in Chapter 12.08 of the Tacoma Municipal Code.

  The SWMP was updated in 2010 to reflect NPDES modifications issued by DOE on June 17, 2009. On August 1, 2012 DOE reissued, with limited changes, the Phase I municipal stormwater permit, effective September 1, 2012 – July 31, 2013. DOE also reissued the updated 2013-2018 Phase I permit on August 1, 2012 that will become effective on August 1, 2013. The City’s 2010 SWMP does not yet reflect these changes, but in general new City-issued permits will require tighter controls on stormwater than the existing permit process.

  The SWMP establishes a wide range of NPDES compliance measures that provide mitigation for potential impacts on stormwater that could be caused by development within the South Downtown Subarea. In particular, section S5.C.5 addresses Development Regulations to Control Runoff from New Development and Redevelopment, with the intention to ensure that:

  - proposed land use actions are conditioned with stormwater minimum development requirements;
  - construction projects are inspected for erosion and sediment control during construction and installation of permanent stormwater management facilities; and
• existing stormwater facilities are inspected for ongoing maintenance.

Compliance measures include the following:

• ongoing program to control stormwater impacts from development, redevelopment, and construction;
• adopt stormwater and erosion control standards equivalent to the 2005 Stormwater Management Manual for Western Washington;
• revise development standards to incorporate Low Impact Development (LID) projects;
• legal authority to enforce maintenance standards for private stormwater facilities approved by the City of Tacoma;
• permitting, plan review, inspection, and enforcement of standards equivalent to the 2005 Manual;
• Notice of Intent (NOI) forms for Construction and Industrial Stormwater General Permits; and
• training for development permitting and construction inspection personnel.

• Industrial Stormwater General Permit

In 2010, DOE reissued the Industrial Stormwater General Permit (ISWGP) that includes new requirements. It is anticipated that under DOE’s ISWGP and the existing Construction Stormwater Permit, contaminants in stormwater will be reduced over time from industrial facilities and construction sites.

• City of Tacoma Stormwater Compliance, Maintenance, and Operations

The City of Tacoma has adopted the following compliance and maintenance measures to mitigate the potential impacts of stormwater runoff:

• The City of Tacoma’s Environmental Services Division is generating an inventory of potential stormwater pollutant generating sites for source control inspections. The list of 4,907 commercial and business facilities and 1,401 multi-family facilities is compiled and distilled from city stormwater utility account information.
• A wastewater and stormwater survey has been developed and attached to Tacoma’s annual business license renewal forms to identify potential pollutant generating sites with existing stormwater facilities and the maintenance frequency of those facilities.
• All Pollution Complaint responses are investigated promptly and coordinated with other agencies, as appropriate. The complaints are documented in the Source Control database and are used to identify other pollutant generating sources, such as mobile or home-based businesses.
• Environmental Compliance staff review all new and renewed home occupational business licenses. Inspectors are trained to regularly perform drive-by observations while travelling through areas of concern.
• Environmental Compliance has adopted a geographic inspection strategy that focuses on door-to-door compliance inspections in assigned areas throughout the city. The inspectors inspect a minimum of 20% of these sites annually (including follow up compliance inspections at the same site toward the 20%
inspection rate) to assure BMP effectiveness and compliance with source control requirements.

- Since 2003, Environmental Compliance has been using a custom database used for tracking spills, complaints, business inspections and flooding claims. Regular updates and refinements have been made to facilitate advanced data management for tracking inspections.

- Environmental Compliance uses incremental enforcement as defined in the City’s Draft Stormwater Compliance Policy and Tacoma Municipal Code 12.08. Enforcement procedures may include phone calls, reminder letters, follow-up inspections, warning letters, Notices of Violation, and civil penalties.

- Environmental Compliance inspectors contact DOE as standard operating procedure for all serious source control violations that present a severe threat to human health or the environment. In addition, Environmental Compliance requests assistance from DOE with non-responsive enforcement cases and continues to do so to facilitate prompt compliance. Environmental Compliance refers violations in the South Tacoma Groundwater Protection District to the Tacoma-Pierce County Health Department for follow up.

- The City documents all inspection and enforcement activities in the Environmental Services inspection database and business inspection files.

- The allocation of maintenance resources within the Surface Water Utility is prioritized by the asset management program, which includes impacts to receiving waters as key criteria.

- Tacoma’s stormwater outreach efforts include a school district environmental curriculum, car wash kits, catch basin stenciling program, and EnviroChallenger.

The City of Tacoma has adopted the following operations programs and measures to mitigate the potential impacts of stormwater runoff from streets and parking lots:

- Public Works employees follow the guidelines in the Regional Road Maintenance Endangered Species Act (ESA) Program (RRMP) for street and parking lot maintenance. The Regional Road Maintenance ESA Program provides a consistent, regional program designed to limit, reduce, or eliminate the prohibition on take of threatened species under the ESA 4(d) Rule. The Program Guidelines provide BMPs for maintenance work that reduces surface water impacts on receiving waters.

- The ESA guidelines and the BMPs listed in Tacoma’s Surface Water Management Manual are implemented in maintenance of parking lots, streets, and highways that are owned or operated by the City, as well as for the maintenance activities listed in the NPDES Municipal Stormwater Permit Section S5.C.9.b.vi, including pipe cleaning, cleaning of culverts, ditch maintenance, street cleaning, road repair and resurfacing, snow and ice control, utility installation, vegetation management, dust control and pavement striping maintenance.

- The City provides documentation to DOE of the BMPs implemented under the ESA guidelines in the Annual NPDES Stormwater Report.

- Tacoma’s Street Sweeping Program removes sediment and associated contaminants from street surfaces before it enters the municipal separate storm sewer system (MS4). The program provides street sweeping services on a scheduled rotation for major arterials, 12 business districts (including South
Downtown), and residential areas which are divided into 7 sweeping districts. The Sewer Transmission Maintenance Section also provides sweeping services as needed in response to emergency calls, special events, and customer requests.

- **Critical Areas Protection Ordinance**

  The City’s *Comprehensive Plan* policies on water-related critical areas are implemented through its Critical Areas Preservation Ordinance, which was updated in 2012, and in Chapter 13.11 of the Tacoma Municipal Code. The Growth Management Act requires local governments to protect critical areas, including critical aquifer recharge areas and wetlands. Best Available Science (BAS) was used to develop Tacoma’s policies and development regulations to protect the functions and values of critical areas (WAC 365-195-900 through 365-195920). Typically, buffer zones are regulated around critical areas to preserve their functions.

- **South Tacoma Groundwater Protection District**

  Chapter 90.44 RCW and the Department of Ecology’s Chapter 246-290 WAC call for DOE, in cooperation with local governments, to develop groundwater protection programs. In 1988, the City of Tacoma adopted the South Tacoma Groundwater Protection District, which is codified in Chapter 13.09 of the Tacoma Municipal Code (last updated in 2006). As shown in Figure 3.3-1, the District includes a narrow area in the southwest corner of South Downtown Subarea that borders the east side of Yakima Ave. between S. 25th St. and I-5.

  The regulations address business use and handling of hazardous materials within the South Tacoma area and are implemented principally by the Tacoma-Pierce County Health Department, in cooperation with Tacoma Water Division, Tacoma Public Works Environmental Services Division, and others. Stormwater infiltration is generally prohibited within the District due to the potential movement of contaminants to the underlying aquifers.

  If a development proposal contains an abandoned well, site inspection and approval are required in order to comply with Tacoma-Pierce County Board of Health, Environmental Health Code, Chapter 3 (Resolution 2010-422). To protect groundwater from possible contamination, any abandoned wells known or discovered must be properly decommissioned per WAC 173-160 and Tacoma-Pierce County Board of Health, Environmental Health Code, Chapter 3 (Resolution 2010-422). The decommissioning of all water wells in Pierce County must be approved by Tacoma-Pierce County Health Department. Decommissioning involves the following:

  - engage the services of a licensed well driller;
  - submit a Notice of Intent to Decommission a Wellform to the Department of Ecology;
  - complete a Tacoma-Pierce County Health Department Well Decommissioning Application; and
  - obtain approval from the Tacoma-Pierce County Health Department.
• **Shoreline Master Program**

As shown by Figure 2-2, the South Downtown Subarea includes shoreline parcels along both sides of the Thea Foss Waterway. These areas fall into the City’s Shoreline District and are subject to the City’s Shoreline Master Program (SMP), including those areas located between the ordinary high water mark of Puget Sound and a line running parallel to and 200-feet upland of the ordinary high water mark. Section 6.82 of the SMP establishes regulations that pertain to water quality on the Foss Waterway.

The SMP provisions protect against adverse impacts to public health, to the land and its vegetation and wildlife, and to the waters of the state and their aquatic life. SMP policies and regulations prevent impacts to water quality and storm water quantity that would result in a net loss of shoreline ecological functions, or a significant impact to aesthetic qualities, or recreational opportunities. Relevant regulations include:

- Shoreline use and development shall incorporate measures to protect and maintain surface and ground water quantity and quality in accordance with all applicable laws and in such a manner as to ensure no net loss of ecological function.
- All proposed developments shall include measures to prevent contamination of surface waters, depletion and contamination of ground water supplies, and generation of increased surface runoff.
- All phases of development shall be consistent with TMC 12.08 and the City’s current *Surface Water Management Manual* and shall provide an ‘enhanced’ level of surface water management.
- Best management practices (BMPs) for control of erosion and sedimentation shall be implemented for all development in shorelines through an approved temporary erosion and sediment control (TESC) plan, or administrative conditions.
- Low Impact Development (LID) techniques shall be considered and implemented to the greatest extent feasible throughout the various stages of development.
- All materials that may come in contact with water shall be constructed of materials that will not adversely affect water quality or aquatic plants or animals.
- Chemical pesticides using aerial spraying techniques within the shoreline jurisdiction shall be prohibited unless specifically permitted by the Washington Departments of Agriculture or Public Health.

• **Thea Foss Waterway Cleanup and Monitoring**

The Thea Foss Post-Remediation Source Control Strategy described above (Affected Environment) will provide ongoing assurance of water quality. Reduction of contaminant loads to the Foss Waterway is expected to continue through Tacoma’s implementation of stormwater source controls, as well as through the control of other sources (many of which are outside the city’s jurisdiction). In addition, through new development and redevelopment, stormwater runoff from industrial and commercial sites throughout Thea Foss Basin are being converted from untreated to treated runoff (i.e., removal of solids from stormwater runoff).

In 2010, as a result of a $1,000,000 grant from DOE, the City began rehabilitating up to
25,000 linear feet of existing deteriorating stormwater collection and conveyance piping. Rehabilitation is focused on aging pipes that discharge into the Foss Waterway. The resulting reduction in inflow and infiltration is expected to reduce the contaminant load from existing defects (cracks, holes, etc.) in the aging system where potentially contaminated groundwater and soil from historic “hot spots” enter the system and ultimately discharge to the Foss Waterway.

**Thea Foss Waterway Design Guidelines**

In 2011, the City adopted the *Thea Foss Waterway Design Guidelines*. These guidelines include a section on Low-Impact Development and standards to further mitigate stormwater runoff:

<table>
<thead>
<tr>
<th>Guideline</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.10.1</td>
<td>Encourage the identification and characterization of all contaminated sites which adversely affect the City’s shoreline areas, surface waters, groundwater, and soils.</td>
</tr>
<tr>
<td>3.10.1</td>
<td>Minimize the amount of impervious surfacing (including the building footprint coverage) on a site through site planning and design.</td>
</tr>
<tr>
<td>3.10.2</td>
<td>Preserve existing and provide new vegetated areas to the maximum extent possible.</td>
</tr>
<tr>
<td>3.10.3</td>
<td>Maintain natural drainage patterns.</td>
</tr>
<tr>
<td>3.10.4</td>
<td>Seek to direct stormwater runoff from impervious areas into vegetated or pervious areas on the site rather than into the city stormwater system.</td>
</tr>
<tr>
<td>3.10.5</td>
<td>Stormwater control features, if required, should be located in close proximity to the impervious surfacing impact.</td>
</tr>
<tr>
<td>3.10.6</td>
<td>Small-scale stormwater control features that use natural systems, processes, and materials are preferred.</td>
</tr>
<tr>
<td>3.10.7</td>
<td>Site grading should encourage the sheet flow of stormwater runoff and lengthen runoff flow paths over permeable areas.</td>
</tr>
<tr>
<td>3.10.8</td>
<td>Ensure soils are appropriate for the intended stormwater control feature functions (such as runoff infiltration, flow control, and water quality treatment).</td>
</tr>
<tr>
<td>3.10.9</td>
<td>Green (vegetated) roofs and green walls are highly encouraged in the Thea Foss Waterway.</td>
</tr>
</tbody>
</table>

**Washington State Department of Fish & Wildlife**

The Washington State Department of Fish & Wildlife (DFW) specifies guidelines for water quality (and sometimes quantity) impacts on downstream fish and shellfish resources that apply to projects of more than 5,000 square feet of impervious surface. DFW also requires pre- and post-development runoff rates be analyzed using a continuous simulation model (such as the US EPA HSPF computer program) or a rainfall event simulation model.

DFW guidelines also specify water quality best management practice guidelines for the development of bio-filtration channels for sedimentation and erosion control practices, and channel maintenance. DFW guidelines require cities bordering natural drainage features to develop stormwater runoff, operation, and maintenance ordinances. DOE has published a technical guidance manual for meeting DFW requirements.

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*Tacoma South Downtown Subarea Plan EIS*  
Section 3.3  
*Water*  
3.3-18
3.3.4 Unavoidable Adverse Impacts

With application of water-related codes and regulations and mitigation measures noted above, no significant unavoidable adverse impacts to water resources are anticipated under any of the proposed alternatives.
3.4 PLANTS and ANIMALS

Information presented in this section addresses the effects of the proposed alternatives on plants and animals located within or proximate to the South Downtown Subarea. This information is based on readily available secondary sources of data; primary research has not been conducted for this analysis. The following information sources formed the basis of data that is presented in this section and are, hereby, incorporated by reference into this Draft EIS:

1. City of Tacoma Critical Areas Preservation Ordinance and Cumulative Impact Analysis;
2. Washington State Critical or Priority Habitat and Species List
3. City of Tacoma, November 2011.

3.4.1 Affected Environment

Plants

The South Downtown Subarea is an area that has been urbanized for well over 100 years. As depicted by Figure 2-3 (in Section II of this Draft EIS), the predominant land cover is urban surfaces (e.g., pavement and structures). Existing plant communities include a variety of native and non-native species.

As shown in Figure 2-3, areas within the Subarea with the greatest concentrations of vegetative cover include the:

- northwest portion of the Subarea between S. 23rd St. and S. 19th and S. Court D and Yakima Ave.;
- in the southwest portion of the Subarea between Jefferson Ave. and I-5; and
- in the southeast portion of the Subarea south of E. 27th St.

The extent and quality of tree coverage varies widely in the South Downtown Subarea, but on average the Subarea is well below the City’s target of 30 percent canopy coverage by the year 2030. Street trees are sparse on most streets, the most notable exceptions being several blocks along Yakima Ave, and a few partial blocks along Pacific Ave. Numerous relatively large trees are present in Don Pugnetti Park, and on vacant and single-family private lots scattered throughout the Subarea. Much of the UWT campus has significant trees and a park-like feel.

The Strategic Urban Forest Management Plan includes a street tree inventory in the Dome Neighborhood Business District that identified 74 planting sites, including 45 small tree sites, 26 medium tree sites, and 3 large tree sites.

In general, native plant cover is largely restricted to small, typically steep-sloped areas within the Subarea. Vegetation in the northwest portion of the Subarea is largely grass-covered portions of blocks that are currently undeveloped. The lineal configuration of these areas limits the type and amount of vegetation and wildlife that are able to exist in these locations.

1 WAC 197-11-754 -- "Incorporation by reference" means the inclusion of all or part of any existing document in an agency's environmental documentation by reference (WAC 197-11-600 and 197-11-635).
Consequently, what is found is a complex mixture of native and invasive plant species and animals that are able to withstand exposure and competition with limited territorial requirements.

Vegetation in other portions of the Subarea, generally west of Market St., is predominantly non-native trees and shrubs, ornamental herbs, and lawns. These landscaped areas are important as pervious surfaces where stormwater can infiltrate. However, they also represent non-point pollutant sources, because of chemicals commonly applied during landscape management and because of the presence of pet feces.

Vegetation in the other two areas is largely deciduous trees with an understory and ground cover of broadleaf shrubs, vines, herbs and grasses. Fern, moss, fungus and lichen species are also prevalent.

Animals

Overview

The Open Space, Habitat and Recreation Element of the City’s Comprehensive Plan has a section dedicated to Habitat Areas and Corridors. Open Space Habitat Areas are lands that support, nurture and preserve natural wildlife habitats and vegetation.

- **Habitat Areas** – These can range in size from a few hundred square feet to many acres and provide a broad range of benefits to the people of Tacoma, including low-impact recreation, health benefits, storm water retention, waterfront access, bird and wildlife observation, climate regulation, increased property values, improved air and water quality, and a greener more livable city. Many of the functions and values provided by habitat areas are dependent on connectivity with other habitat areas.

- **Habitat Corridors** – These areas contain Tacoma’s most valuable undeveloped habitats. They are generally larger, geographically connected or contiguous areas that combine multiple habitat functions and features (such as streams, wetlands, slopes and larger contiguous habitat areas). The City’s vision is to conserve and restore habitat for as much of these areas as possible. Reflecting their greater degree of habitat features and connectivity, designated Habitat Corridors are considered priority areas for habitat-related open space programs, including habitat acquisition and restoration. If feasible, Corridors that encompass existing development should be managed to enhance the habitat function of the overall Corridor via vegetation planting and maintenance and other approaches.

The Open Space, Habitat and Recreation Element of the City’s Comprehensive Plan identifies Habitat Corridors; these are depicted in Figure 3.4-1. Within the Subarea, designated Habitat Corridors include the following:

- an area beneath I-705 extending from I-5 to the south end of the Thea Foss Waterway; note that this includes the area known as the B-Street Gulch
- the area in the southwest portion of the Subarea between Jefferson Ave. and I-5; and,
- in the steep wooded area in the southeast portion of the Subarea, south of E. 27th St.
Policies of the City’s Comprehensive Plan relating to Critical Areas are implemented through the City’s Critical Areas Preservation Ordinance:\(^6\)

“…sites that contain critical areas may be developed only if Tacoma officials determine that all significant environmental concerns and hazards have been eliminated or ameliorated. Such sites can only be developed with no more impact than a similarly unaffected site. Tacoma may impose mitigation measures restricting or eliminating development in areas outside of the sensitive area portion of the site if necessary in order to protect the sensitive portion of the site.”

The Ordinance defines procedural measures for safeguarding sensitive areas, including the authority to require special studies and assurances should Tacoma officials deem appropriate.

**Existing Habitats**

Along the shoreline of Thea Foss Waterway and Commencement Bay, numerous water birds are resident and large numbers of migratory birds feed and rest. Offshore, large numbers of marine diving birds and several marine mammals occur in season.

The lower Puyallup River provides migration and rearing habitat for several priority salmonid species, including Chinook, pink, chum, and coho salmon, steelhead and bull trout. Adult salmonids are typically found in Commencement Bay between August and November. Nearshore habitat is an important environment for juvenile salmonids, where the shallow water depth obstructs the presence of larger predator species. Juvenile Chinook salmon use the areas of Commencement Bay within 500 to 1,000 feet of the shoreline and in the Waterways. Juvenile salmonids are known to rear and forage within the delta areas at the mouth of the Puyallup River in Commencement Bay, in particular.

Critical habitat has been designated at the federal level for Pacific salmon and steelhead in Washington, Oregon, and Idaho, including the Puget Sound Evolutionarily Significant Unit (ESU) Chinook salmon. Designated Chinook Critical Habitat in Tacoma includes nearshore marine areas of both Commencement Bay and the Tacoma Narrows from the extreme high tide line to a depth of 30 meters relative to Mean Lower Low Water (MLLW). Critical Habitat has also been designated for bull trout, which may be present in the nearshore areas of Tacoma.

Designated Critical Habitat for bull trout includes marine waters of Commencement Bay and the Tacoma Narrows to a depth of 33 feet (10 meters) relative to MLLW.

Designated Habitat Corridors contain the City’s most valuable undeveloped habitat areas - generally areas that are larger, connected or contiguous to other habitat areas, and combining multiple valuable functions and features (such as wetlands, streams, slopes and forests). Habitat Corridors will be the priority areas for Tacoma’s habitat conservation and stewardship efforts. The vision is to conserve and restore habitat functions within the Corridors and, where appropriate, foster low-impact access and recreation. Restoration sites in shoreline and marine habitat areas are also shown. Potential Joint Habitat Planning Areas are areas where habitat features span the City’s borders, calling for interjurisdictional planning and coordination.

Source: Tacoma Comprehensive Plan, 2012

Figure 3.4-1
Habitat Corridors
Other protected species commonly found in the area include harbor seals, California and Steller sea lions, killer whales and other cetaceans, hawks, owls, songbirds, flying squirrels, chipmunks and turtles. Rare or endangered species occasionally found in shoreline areas are given special protection; examples are the peregrine falcon, sandhill crane, bluebirds, osprey, bald eagle and the western grey squirrel. A total of 203 bird species have been recorded in the Commencement Bay area. Of these species, 162 are found regularly, and 36 breed within the area. Two reptile species, the sharp-tiled snake and the western pond turtle, may possibly occur, but most likely in the Wapato Lake area of South Tacoma.

Vegetation in the South Downtown Subarea supports a variety of wildlife species including many birds, mammals, and amphibians. There are no streams in the Subarea and only two small wetlands that do not support significant habitat (see Section 3.3 – Water of this Draft EIS). Due to the highly urbanized nature of most of the South Downtown Subarea, mammal species are likely to primarily include species tolerant of human activity such as opossums, Pacific moles, big brown bats, Norway rats, eastern gray squirrels, deer mice, eastern cottontail rabbits, feral cats, raccoons, striped skunks, and perhaps coyotes. Common birds likely include Canada geese, mallards, California gulls, red-tailed hawks, northern flickers, American robins, and song sparrows. Common reptiles are likely to include northwestern salamanders, long-toed salamanders, Pacific tree frogs, and bullfrogs. Two species that may also occur in the South Downtown Subarea, which have special status designations as protected species or species of concern under state and/or federal regulations, are the western pond turtle and the bald eagle.

3.4.2 Impacts

No Action Alternative

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to plants and animals would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

Development Alternatives

Urban development, redevelopment, and associated construction activities, if not properly planned and regulated, can increase peak stormwater runoff, cause erosion, and result in siltation of surface waters with adverse effects on plant and animal populations. Any fish breeding and rearing areas that may be located near stormwater outflows into Thea Foss Waterway and the Puyallup River are especially sensitive.

Each of the proposed development alternatives would continue the re-development trend of properties in the South Downtown Subarea, at varying intensities, for urban uses and activities. As such, the potential exists for impacts or changes to plant and animal populations within the Subarea. From an area-wide change perspective, Alternative 1 would have the greatest potential for plant and animal-related impacts in that build-out could entail a net increase of 30 million sq.ft. of development, Alternative 2 would be somewhat less at 20 million sq.ft., and

\[7\] 1995 Commencement Bay Natural Resources Damage Assessment, Chapter 3. (also cited in the City of Tacoma Cumulative Impact Analysis)
**Alternative 3** would be the least with a potential net increase of 10 million sq.ft. However, considering the fact that this is an urbanized part of the City, that re-development is projected to occur over several decades and that plant and animal-related impact mitigation presently exists and will continue, it is anticipated that the increased amount of urban activity within the South Downtown Subarea would not result in any significant plant and animal-related impacts. Such development would be required to fully comply with existing development regulations, as noted in part 3.4.3 of this section.

Site redevelopment would likely result in the removal of existing trees, shrubs and ground cover on individual lots and the displacement of animal habitats associated with that existing vegetation. However, it is expected that redevelopment would also involve the addition of new trees, shrubs and ground cover, consistent with the City’s Land Use Code, which would result in an improvement in plant and animal populations and habitat compared to existing conditions.

### 3.4.3 Mitigation Measures

The following mitigation measures apply to all alternatives, and are based on existing City policies, regulations, and other mitigation, as noted below.

**City Policies**

**Comprehensive Plan -- Environmental Policy Element**

The Environmental Policy Element of Tacoma’s Comprehensive Plan was updated in 2011, and is intended “to designate and classify ecologically sensitive and hazardous areas and to protect these areas and their functions and values, while also allowing for reasonable use of private property.” The Element complies with SEPA, which is intended to ensure that environmental values are considered, in addition to technical and economic considerations, when local governmental decisions are made or interpreted with regards to environmental impact. The Element also complies with the State Growth Management Act, which requires local jurisdictions to identify critical areas and adopt regulations to protect such areas, including fish and wildlife habitat conservation areas.

The Environmental Policy Element addresses Fish and Wildlife Habitat Conservation Areas and states:

… it is possible to accommodate development needs and, yet, retain important vegetation. Where significant wooded areas occur, the application of innovative development techniques that cluster dwellings and maximize the acreage of undisturbed areas is an appropriate alternative for conventional grid subdivisions. Such projects can be designed to provide a green space buffer or vegetated habitat that will provide important functions for wildlife. Where existing vegetation is removed, extensive landscaping should be installed in appropriate locations. …Habitat improvement is encouraged to intentionally improve the overall processes, functions and values of critical habitats, including wetland, stream and aquatic habitats. Such actions may or may not be in conjunction with a specific development proposal, and include, but not be limited to, restoration, creation, enhancement, preservation, acquisition, maintenance and monitoring.

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8 RCW Chapter 36.70A
<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-FW-1 Wildlife and Natural Environment</td>
<td>Support and enforce laws, regulations and programs designed to protect wildlife and natural resources.</td>
</tr>
<tr>
<td>E-FW-2 Retain Vegetation</td>
<td>Encourage the retention of native vegetation and the installation of landscaping designed to complement local wildlife and native vegetation and help mitigate the loss of wildlife habitat areas that results from development.</td>
</tr>
<tr>
<td>E-FW-3 Landscaping Stabilization</td>
<td>Ensure that sufficient and appropriate native landscaping be installed to stabilize and beautify areas and improve habitat where extensive removal of vegetation has occurred.</td>
</tr>
<tr>
<td>E-FW-4 Specimen Trees</td>
<td>Encourage the identification and preservation of specimen trees of historic merit and/or outstanding size.</td>
</tr>
<tr>
<td>E-FW-5 Removal of Native Vegetation</td>
<td>Discourage the indiscriminate removal of native vegetation to preserve green space and protect habitats.</td>
</tr>
<tr>
<td>E-FW-6 Innovative Development Techniques</td>
<td>Encourage innovative development techniques such as clustering to maximize the amount of open space and preserve habitats.</td>
</tr>
<tr>
<td>E-FW-7 Habitat Protection</td>
<td>Identify, locate and protect habitats of endangered, threatened, priority or sensitive species.</td>
</tr>
<tr>
<td>E-FW-8 Maintain Habitat Diversity</td>
<td>Encourage the preservation of large blocks of land around critical areas to ensure maximum habitat diversity.</td>
</tr>
<tr>
<td>E-FW-9 Strengthen Habitat Connections</td>
<td>Encourage actions which protect and improve natural resources in both the upper and lower areas of the Puyallup River watershed and strengthen connections within and between them.</td>
</tr>
<tr>
<td>E-FW-10 Integrate Development Projects</td>
<td>Promote the integration of development projects into their surrounding environments, promoting a “greenbelt natural corridor” for movement and use by species.</td>
</tr>
<tr>
<td>E-FW-12 Protect in Perpetuity</td>
<td>Encourage the protection of habitat improvement project sites in perpetuity.</td>
</tr>
<tr>
<td>E-FW-15 Improve Altered Habitats</td>
<td>Encourage the improvement of habitat along the edges of shorelines and creeks, migration corridors, and productive areas that have been altered by past shoreline activities.</td>
</tr>
<tr>
<td>E-FW-16 Sustainable Habitat</td>
<td>Encourage acquisition, preservation and restoration of remaining sustainable habitat and improvement of existing habitat corridors.</td>
</tr>
<tr>
<td>E-FW-18 Performance Standards</td>
<td>Encourage design and performance standards that promote source control and habitat restoration efforts.</td>
</tr>
<tr>
<td>E-FW-19 Integrate Improvement Actions</td>
<td>Encourage the integration of habitat improvement actions with other regulatory efforts, including environmental remediation, source control, and site development actions, as well as long range planning activities.</td>
</tr>
</tbody>
</table>
Plants & Animals

### Policy

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
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</thead>
<tbody>
<tr>
<td><strong>E-FW-20 Habitat Improvement Actions</strong></td>
<td>Encourage new development to provide or incorporate habitat improvement actions as appropriate.</td>
</tr>
<tr>
<td><strong>E-FW-24 Private Conservation Efforts</strong></td>
<td>Encourage community based or nonprofit local and regional trusts and private conservation efforts.</td>
</tr>
<tr>
<td><strong>E-FW-25 Cleanup Coordination</strong></td>
<td>Promote coordination among diverse cleanup and regulatory programs and agencies.</td>
</tr>
<tr>
<td><strong>E-FW-27 Habitat Zones</strong></td>
<td>Adopt a Habitat Zones map to identify locally important habitat areas in order to provide greater scrutiny and review of development proposals and to identify priority areas for restoration and enhancement programs and activities.</td>
</tr>
<tr>
<td><strong>E-FW-28 Habitats of Local Importance</strong></td>
<td>Establish regulations that will provide greater protection to areas designated as habitats of local importance.</td>
</tr>
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</table>

### Comprehensive Plan – Urban Forestry and Agriculture Element

The **Urban Forestry and Agriculture Element of the Tacoma Comprehensive Plan** includes policies designed to promote preservation and augmentation of trees in Tacoma. Policies most pertinent include the following:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
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</thead>
<tbody>
<tr>
<td><strong>UF-15 Equity</strong></td>
<td>Provide equitable urban forest resources and services throughout the city regardless of geographic, racial or social differences.</td>
</tr>
<tr>
<td><strong>UF-PR-1 Retention of Trees</strong></td>
<td>Encourage and promote the retention of trees, whenever practicable and appropriate, through education, outreach and incentives.</td>
</tr>
<tr>
<td><strong>UF-PR-3 Protection of Trees During Development</strong></td>
<td>Promote the long-term health and survival activities of trees that are retained during construction.</td>
</tr>
<tr>
<td><strong>UF-PR-4 Heritage Trees</strong></td>
<td>Establish a Heritage Tree Program for the voluntary recognition and protection of trees with unusual or unique historical, ecological, cultural and/or aesthetic significance.</td>
</tr>
<tr>
<td><strong>UF-PCM-1 Planting Priorities</strong></td>
<td>Prioritize tree planting and landscaping in street and freeway rights-of-way, in particular in highly visible locations such as business districts and major corridors.</td>
</tr>
<tr>
<td><strong>UF-PCM-5 Tree Canopy Cover</strong></td>
<td>Achieve 30 percent citywide tree canopy cover by the year 2030 as an important step in becoming a healthy and sustainable city.</td>
</tr>
<tr>
<td><strong>UF-PCM-11 Partnerships</strong></td>
<td>Partner with federal, state, regional, tribal, and local governmental jurisdictions, community non-profits, the private sector and others to increase the reforestation of Tacoma.</td>
</tr>
</tbody>
</table>
The Urban Forestry and Agriculture Element of the Tacoma Comprehensive Plan also contains policies aimed at promoting urban agriculture:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UF-UA-3 Community Gardens</strong></td>
<td>Establish a target level of service for community gardens. Identify and prioritize the establishment of new gardens in the UFMP for areas that do not meet this level of service.</td>
</tr>
<tr>
<td><strong>UF-UA-6 Land</strong></td>
<td>Identify existing and potential community garden sites and give high priority to community gardens in appropriate locations, in consideration of the full range of community benefits. Work to secure additional community gardening sites through long-term leases or through ownership as permanent public assets.</td>
</tr>
<tr>
<td><strong>UF-UA-7 Zoning</strong></td>
<td>Adopt zoning regulations that establish community gardens as a permitted or conditional use in appropriate locations.</td>
</tr>
<tr>
<td><strong>UF-UA-8 New Housing Developments</strong></td>
<td>Encourage new affordable housing units to contain designated yard or other shared space for residents to garden.</td>
</tr>
<tr>
<td><strong>UF-UA-9 New Construction</strong></td>
<td>Encourage development in Mixed-Use Centers, Downtown, and commercial areas to incorporate green roofs, edible landscaping, and the use of existing roof space for community gardening. Community garden space should count towards open space requirements.</td>
</tr>
</tbody>
</table>

The Open Space, Habitat and Recreation Element of the Tacoma Comprehensive Plan includes policies designed regarding open space and vegetation/plantings. Policies most pertinent include the following:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
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</thead>
<tbody>
<tr>
<td><strong>OS-MUC-8 Public Streets as Linear Urban Parks</strong></td>
<td>Seek opportunities, including joint ventures with public or private partners, to create a park-like environment within public rights-of-way, incorporating features such as widened sidewalks, street amenities and furniture, and landscape planting.</td>
</tr>
<tr>
<td><strong>OS-GI-1 Green Neighborhoods</strong></td>
<td>Establish an achievable goal to increase the forest canopy cover by 2028 to a citywide percentage that achieves Tacoma’s vision as an environmentally sustainable community.</td>
</tr>
<tr>
<td><strong>OS-GI-2 Green Streets</strong></td>
<td>Designate specific streets, trails and other public rights-of-way which are the most appropriate for implementation of green infrastructure practices, based on their location, width, traffic volumes, adjacent uses, prominence, potential to enhance habitat connectivity, contiguity with open space areas and/or other considerations.</td>
</tr>
<tr>
<td><strong>OS-GI-5 Tree Planting and Maintenance</strong></td>
<td>Actively engage in tree planting, maintenance of native and climate-adapted trees and plants, and preservation of large trees city-wide.</td>
</tr>
<tr>
<td><strong>OS-CG-1 Community Gardens</strong></td>
<td>Support and develop existing and new community gardens within parks and on appropriate public and private lands. Consider creative approaches to managing community gardens, such as support by education institutions or volunteer management by community organizations.</td>
</tr>
</tbody>
</table>
**OS-GI-9 Highway Planting**

Partner with the Washington State Department of Transportation (WSDOT) to initiate and maintain landscape plantings along interstate and highway routes within the City.

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**Comprehensive Plan -- Open Space, Habitat and Recreation Element -- Habitat Policies**

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
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<tbody>
<tr>
<td>S-HA-1 Citywide Gain In Habitat Functions Citywide</td>
<td>Proactively seek not only to reverse the decline but to achieve the greatest possible gain in habitat functions city-wide over the next 20 years.</td>
</tr>
<tr>
<td>OS-HA-2 Habitat Corridors</td>
<td>Target habitat-related resources and programs within the designated Habitat Corridors—the City’s priority areas for habitat conservation and stewardship depicted on the Open Space System Map.</td>
</tr>
<tr>
<td>OS-HA-3 Delineate High Value Habitat Lands</td>
<td>Work with the Green Tacoma Partnership and other partners to delineate and designate all habitat lands with high natural habitat values within the City, in order to guide their future land use and management.</td>
</tr>
<tr>
<td>OS-HA-4 Acquire, Conserve and Restore Habitat Areas</td>
<td>Acquire ownership or interest in all high value habitat lands depicted on the Open Space System map, or otherwise delineated, by 2028. Proactively seek permanent conservation and restoration.</td>
</tr>
<tr>
<td>OS-HA-5 Funding for Habitat Acquisition</td>
<td>Use innovative, creative methods to fund opportunities to conserve habitat areas. Consideration should be given to developing a fund that would provide match for any privately raised funds.</td>
</tr>
<tr>
<td>OS-HA-8 Conserve Threatened Properties</td>
<td>Partner with non-profits, private parties and public agencies to conserve habitat areas from development both permanently and temporarily, until such time as they may be permanently conserved.</td>
</tr>
</tbody>
</table>

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**Comprehensive Plan -- Open Space, Habitat and Recreation Element -- Critical Areas Preservation Policies:**

<table>
<thead>
<tr>
<th>Policy</th>
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<tbody>
<tr>
<td>OS-CAPO-3 Streamlined Permitting Process for Restoration</td>
<td>Review regulations to identify opportunities to streamline permitting for restoration projects, including invasive species control, hazard tree removal, and other standard restoration activities, while ensuring that impacts to critical areas and their buffers are avoided.</td>
</tr>
<tr>
<td>OS-CAPO-4 Habitat Management Plans</td>
<td>Develop regulations and a supporting review criteria and framework for Habitat Management Plans that support and streamline habitat restoration activities.</td>
</tr>
</tbody>
</table>
Shoreline Master Program

The City of Tacoma recently completed an update to its Shoreline Master Program (SMP) in compliance with the State’s Shoreline Management Act\(^9\) and the SMP is currently undergoing review by DOE. The SMP establishes policies and land use code provisions that regulate development in the shoreline areas on the Foss Waterway within the South Downtown Subarea and provide mitigation for impacts to plants and animals.

The Conservation Element of the SMP provides for the protection of natural resources, and shoreline ecological functions and processes. Resources to be conserved and protected include, but are not limited to: wetlands; riparian, nearshore, and aquatic habitats, and priority fish and wildlife habitats and species. The Restoration Element provides for the timely restoration and enhancement of ecologically impaired areas in a manner that achieves a net gain in shoreline ecological functions and processes.

Chapter 6.4 of the SMP addresses Marine Shoreline and Critical Areas Protection, providing policies and regulations that protect the shoreline environment as well as the critical areas found within the shoreline jurisdiction. These policies and regulations apply to all uses, developments and activities that may occur within the shoreline jurisdiction regardless of the SMP environment designation and require full mitigation of impacts to achieve no-net-loss of ecological functions.

Chapter 6.6 of the SMP addresses Vegetation Conservation, and includes activities to protect and restore vegetation along or near marine and freshwater shorelines that contribute to the ecological functions of shoreline areas. Vegetation conservation provisions include the prevention or restriction of plant clearing and earth grading, vegetation restoration, and the control of invasive weeds and nonnative species. Vegetation conservation provisions apply even to those shoreline uses and developments that are exempt from the requirement to obtain a permit.

The City’s Cumulative Impacts Analysis for the City’s Shoreline Master Program, prepared by the consulting firm ESA,\(^10\) found that the development regulations and mitigation standards of the SMP would result in no net loss of ecological functions associated with hydrology, water quality, large woody debris and organic contributions, and habitat, over the next 20 years.

Endangered Species Act (ESA), State Law, and City Code

The Endangered Species Act of 1972 addresses the protection of rare, endangered and threatened plant and animal species. Title 77 RCW revises and reorganizes the game code of the State of Washington to clarify and improve the administration of the state’s game laws. Title 75 RCW addresses food fish and shellfish management in the State of Washington. Chapter 13.08 of the Official Code of the City of Tacoma addresses the maintenance, preservation and conservation of open space lands within the city.

The Growth Management Act declares that cities shall develop comprehensive plans that address “critical areas” management for preservation and protection. Engrossed Substitute

\(^9\) WAC 173-26-201(2)(C)
\(^10\) Available at the City web site: http://cms.cityoftacoma.org/Planning/Shoreline/Planning_Commission/Public_Review_Document/Exhibit_G_CIA.pdf
House Bill 1933 that became effective on July 27, 2003, clarifies the relationship between the Growth Management Act and the Shoreline Management Act as it pertains to critical areas and it states that "the legislature intends that critical areas within the jurisdiction of the shoreline management act shall be governed by the shoreline management act and that critical areas outside the jurisdiction of the shoreline management act shall be governed by the growth management act." Fish and wildlife habitat conservation areas are one of several critical areas designated by Tacoma.

**Washington State Critical or Priority Habitat and Species (PHS)**

In accordance with the provisions of ESA and GMA, the Washington State Department of Fish & Wildlife (WDFW) developed minimum guidelines (WAC 365-190-080(5)(c)(ii) for classifying and designating critical or priority habitats and species (PHS). Priority species require protective measures for their survival due to their population status, sensitivity to habitat alteration, and/or recreational, commercial, or tribal importance. Priority species include State Endangered, Threatened, Sensitive, and Candidate species; animal aggregations (e.g., heron colonies, bat colonies) considered vulnerable; and species of recreation, commercial, or tribal importance that are vulnerable.

**Pierce County Priority Habitat and Species (PHS)**

WDFW has compiled a list of the most important habitats and species and management recommendations that may be employed to protect and preserve critical habitat areas, along with maps that identify the location of critical habitats within Pierce County. The species and habitats for Pierce County were developed using the distribution maps found in the Priority Habitat & Species (PHS) List (http://WDFW.wa.gov/hab/phslist.htm). WDFW periodically reviews and updates the distribution maps in the PHS List.

**Other Mitigation Measures**

Final action by the City involves adoption of the **South Downtown Subarea Plan**. The Open Space portion of the Plan proposes improvements and restoration of the habitat corridor in the “B-Street Gulch,” beneath I-705 and connecting to habitat areas south of the Subarea.

In general, redevelopment can be expected to involve the addition of significant numbers of new trees, shrubs and ground cover, consistent with the City’s Land Use Code. This increase in planted area would help provide habitat for animals such as birds and insects. In particular, existing policies and regulations that apply to the South Downtown Subarea encourage the protection of existing trees, and in most cases require the addition of street trees when properties are developed. Thus, in most cases, it can be expected that the more development occurs, the more the tree canopy will be expanded in the South Downtown Subarea, especially if supplemented by funding for the **Strategic Urban Forest Management Plan**.

At the regional scale, redevelopment in the South Downtown Subarea inherently provides mitigation for potential impacts on plants, animals and habitat elsewhere in the region. It is well established that growth is coming to the Tacoma region, and the more of that growth that can be accommodated in South Downtown Tacoma, the less development there will be in suburban and rural areas throughout the region. Compared to a highly urbanized area like South Downtown, surrounding suburban and rural areas typically have much more ecologically
valuable plant and animal species and habitat. Development in South Downtown can be expected to have net positive effect on preserving and improving plant and animal populations regionally. It follows that this regional perspective supports the highest intensity alternative, Alternative 1.

3.4.4 **Unavoidable Adverse Impacts**

With application of plant and animal-related codes and regulations noted above, no significant unavoidable adverse impacts to plant and animal resources are anticipated under any of the proposed alternatives.
3.5 ENVIRONMENTAL HEALTH

Information presented in this section addresses the effects of the proposed alternatives on sites with contaminated soils that are located within or proximate to the South Downtown Subarea. This information is based on readily available secondary sources of data; primary research has not been conducted for this analysis.

3.5.1 Affected Environment

Contaminated Soils

After nearly 140 years of settlement, areas within the South Downtown Subarea have contaminated soils – resulting from leaks associated with underground storage tanks (USTs), oils and fluid contamination from former vehicle maintenance facilities, and former industries (including laundries) that spilled or discharged chemical solvents. In addition, historically a wide variety of materials were used as structural fill throughout the area.

Available information on the location of known, potentially contaminated sites in the South Downtown Subarea is depicted in Figure 3.5-1. Whereas contaminated sites are located throughout the Subarea, the greatest concentration is between S. Tacoma Ave. and Pacific Ave., S. 15th St. and I-5. However, the possibility always exists that unidentified sources of contamination may exist (e.g., undocumented large heating oil USTs). The three types of sites identified on Figure 3.5-1 include:

- **Abandoned Commercial Tanks** -- The Tacoma-Pierce County Health Department identified Abandoned Commercial Tank (ACT) sites at former gas station locations with the Subarea that are potentially contaminated from on-site historical activities for which there are no records of storage tank removal or environmental cleanup.

- **Confirmed and Suspected Contaminated Sites** -- The Tacoma-Pierce County Health Department has also identified sites that have had storage tanks removed, and sites for which DOE has recorded a cleanup. These cleanup sites may or may not have been gas stations and could have been industrial activities, such as laundries and vehicle maintenance shops that contributed contaminants.

- **Leaking Underground Storage Tanks (LUSTs)** -- DOE maintains a database\(^1\) of leaking underground storage tanks (LUSTs). While many of these tanks have been removed, the status indicates contamination remains. DOE also tracks various “contaminated sites,” including USTs and other miscellaneous spills.

\(^1\) [https://fortress.wa.gov/ecy/tcpwebreporting/Default.aspx](https://fortress.wa.gov/ecy/tcpwebreporting/Default.aspx)
Figure 3.5-1
Contaminated Sites
In most cases, particularly on level sites, possible contaminants may be contained on-site and can be remediated through soil excavation and replacement. In some instances, contaminants have infiltrated the soil and flowed downslope to collect in subsurface deposits. It is also possible that contaminants originally located outside the South Downtown Subarea have over time migrated into the Subarea.

According to the University of Washington Tacoma Campus Master Plan Update,\(^2\) studies performed by the University identified seven contamination plumes located between Market St. and the Thea Foss Waterway. These are the result of previous land uses that occupied this portion of campus. Further information can be found in the Draft Feasibility Study\(^3\) and the Draft Supplemental Remedial Investigation Work Plan.\(^4\) The studies indicate that the seven plumes contain the following contaminants:

- Trichloroethene (TCE);
- Benzene (B);
- Total Petroleum Hydrocarbons (TPH);
- Vinyl Chloride (VC); and,
- Tetrachloroethene (PCE).

As shown in Figure 3.5-2, the largest area of contamination extends from Market St. to Pacific Ave. and from S. 19th St. to S. 21st St. Numerous monitoring wells have been placed in this area and are being monitored by the University. The depths to groundwater in these locations has been found to vary from approximately 4.5 ft. to 53.5 ft., depending on the location of the monitoring well. The University’s Infrastructure Master Plan\(^5\) notes further that “a recent study found TCE contamination between Court E and Fawcett Ave.”

For nearly 100 years, the American Smelting and Refining Company (ASARCO) and its predecessors\(^6\) conducted a smelting and refining operation at a site in the Ruston/North Tacoma area, which emitted arsenic and, to a lesser degree, lead pollutants. These emissions affected much of the region. An area known as the Tacoma Smelter Plume has elevated levels of arsenic in the soil and DOE has mapped contamination levels caused by the plume. Based on this data, indications are that the entire South Downtown Subarea is located outside the area in which arsenic levels in the soil exceeded a level of 20 parts per million, at or below which is considered a safe level.

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\(^2\) UW, 2008
\(^3\) UW, 2003
\(^4\) UW, 2006
\(^5\) UW, 2009
\(^6\) Tacoma Milling and Smelting Co. (1888), Tacoma Smelting and Refining Co. (1890), and American Smelting and Refining Co. (1905)
Figure 3.5-2
Approximate Groundwater Contamination Limits (with Campus Development Plan underlay)
Indoor Air Quality

Studies show that people spend 65 to 90 percent of their time indoors and indoor air quality can be two to five times more polluted than outside air. Poor building design (e.g., inadequacies in ventilation, building maintenance and operation, etc.) can affect indoor air quality. The most common indoor air contaminants that can have negative health consequences include:

- volatile organic compounds caused by building materials;
- carbon monoxide;
- mold;
- environmental tobacco smoke and electronic smoking devices; and
- asbestos; given the age of existing buildings in the South Downtown Subarea, it is anticipated that some may contain asbestos, which is classified as a hazardous air pollutant by EPA.

Land Use Patterns

Studies indicate that the layout and the density of the built environment can play a vital role in offering affordable and accessible healthy lifestyle choices to diverse populations. The burden of urban sprawl and automobile dependency on public health are well documented in many scholarly articles. People living in communities characterized by urban sprawl or land-extensive developments engage in less physical activity compared to those living in more compact and walkable communities. A related issue is access to healthy food. Research (Powell, Auld, Chaloupka, et al., 2007) suggests that individuals living near supermarkets have a higher quality diet, are more likely to eat the daily recommended amounts of fruits and vegetables, and less likely to be obese.

In 2005, the Tacoma-Pierce County Board of Health passed Resolution 2005-3698 declaring obesity to be a serious threat to the health and well-being of Pierce County citizens. This resolution calls for community sectors, including community planners, to design environments conducive to active living and healthy eating. To meet the U.S. Department of Health and Human Services 2008 Physical Activity Guidelines for Americans’ recommended “minimum 30 minutes per day of moderate physical activity,” any development proposals should attempt to: 1) integrate physical activity into people’s everyday life; and 2) make healthy food environments, including supermarkets, farmers’ markets and community gardens, accessible and affordable to all segments of the community.

The overall goal of the South Downtown Subarea Plan is to create walkable, transit-oriented communities in which residents, workers, and visitors can meet most of their daily needs without relying on a private automobile. As noted above, the environmental health benefits of this type of land use pattern are well established. The South Downtown Subarea already has in place the infrastructure to support walkability and transit, including commuter rail, street car, and bus transit, along with a street grid well-suited for walking and numerous adopted plans and policies.

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7 Tacoma Pierce County Health Department
8 Measuring the Health Effects of SPRAWL, A National Analysis of Physical Activity, Obesity and Chronic Disease, Barbara A. McCann and Reid Ewing, Smart Growth America Surface Transportation Policy Project, September 2003
intended to improve walking and cycling options (see Section 3.11 Transportation and Section 3.7 Land Use -- Relationships to Existing Plans and Policies Elements in this EIS). The main ingredient that’s lacking is sufficient numbers of people and jobs to provide the complementary uses that can take full advantage of the Subarea’s existing assets.

**Urban Forestry and Agriculture**

As noted in the *Tacoma Strategic Urban Forest Management Plan*, in urban environments trees “boost property values, support retail activity, improve municipal health, protect water quality, reduce stormwater runoff, counter climate change, and ensure roadway safety.” Specifically regarding benefits to public health and well-being, the Plan states:

“Public spaces with trees receive more visitors, increasing the frequency of casual social interactions and strengthening the sense of community. Trees along transportation corridors narrow a driver’s field of vision, reducing traffic speeds, and increasing pedestrian safety by providing a natural, physical barrier. Studies have found that urban highways lined with trees decrease driver stress, resulting in fewer incidents of road rage. Trees foster safer, more sociable neighborhood environments and have been shown to reduce levels of crime, including domestic violence. Views of nature reduce the stress response of both body and mind when stressors of urban conditions are present. Hospital patients with window views of trees recover significantly faster and with fewer complications than comparable patients without access to such views.”

The extent and quality of tree coverage varies widely in South Downtown, but on average the Subarea is far below the City of Tacoma’s target of 30 percent canopy coverage by the year 2030. Street trees are sparse on most streets, the most notable exceptions being several blocks on Yakima Ave, and a few partial blocks on Pacific Ave. Numerous relatively large trees are present in Don Pugnetti Park and on vacant and single-family private lots scattered throughout the Subarea. The *Strategic Urban Forest Management Plan* includes a street tree inventory in the Dome Neighborhood Business District that identified 74 planting sites, including 45 small tree sites, 26 medium tree sites, and 3 large tree sites.

Urban agriculture encompasses comprehensive and diverse food production—including community gardens and animal husbandry—involving the raising, cultivation, processing, marketing and distribution of food in urban areas. Urban agriculture offers multiple public health benefits, including providing food security for residents, preventing undesired or illegal activities through fostering community ownership of open spaces, creating a sense of community, and improving health, and providing residents with access to fresh produce while supporting physical activity and general well-being. The South Downtown Subarea currently has one community garden located at the corner of South G and South 18th Streets.

**Environmental Justice**

The United States Environmental Protection Agency defines Environmental Justice (EJ) as "the fair treatment and meaningful involvement of all people regardless of race, color, sex, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations, and policies."

10 The *Strategic Urban Forest Management Plan* and is available on the City of Tacoma website: http://www.cityoftacoma.org/Page.aspx?hid=9219
There are two interrelated components of EJ most relevant to the South Downtown Subarea Plan and EIS: 1) participatory planning that meaningfully engages the full spectrum of affected populations; and 2) reduction of potential adverse impacts that may disproportionately affect underserved populations.

As documented in Section 3.8 – Population, Housing, and Employment, the South Downtown Subarea has a relatively high concentration of minorities and lower-income households. These circumstances call for careful consideration of the above two aspects of EJ. Involving all population groups—particularly the traditionally underserved populations—in efforts to address diverse health needs and create a common vision can help build social capital and community cohesion, reduce gentrification impacts, prevent displacement, mitigate health disparities, and promote overall quality of life.

Other Environmental Health-related Issues

Additional environmental health-related issues are covered in other sections of this EIS, including:

- Solid Waste and Recycling: Public Utilities Element
- Surface and Ground Water: Water Element
- Urban Design, Density, and Walkability: Relationships to Existing Plans and Policies Element, Land Use Element, Transportation Element
- Outdoor Air: Air Element
- Hazardous Areas (slopes, floods, etc): Earth Element
- Open Space: Public Services Element

3.5.2 Impacts

No Action Alternative

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to environmental health would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible. Compared to the three development alternatives, the lower level of development expected with the No Action Alternative could result in greater risk of exposure to contamination from undeveloped brownfield sites, and in loss of potential health benefits provided by a walkable community.

Development Alternatives

Each of the proposed development alternatives would continue the re-development trend of properties in the South Downtown Subarea, at varying intensities, for urban uses and activities. As such, the potential exists for environmental health-related impacts within the Subarea. From an area-wide change perspective, Alternative 1 would have the greatest potential for environmental health-related impacts in that build-out could entail a net increase of 30 million sq.ft. of development, Alternative 2 would be somewhat less at 20 million sq.ft., and Alternative 3 would be the least with a potential net increase of 10 million sq.ft. However,
considering the fact that this is an urbanized part of the City, that re-development is projected to occur over several decades and that environmental health-related impact mitigation presently exists and will continue, it is anticipated that the increased amount of urban activity within the South Downtown Subarea would not result in any significant environmental health-related impacts. Such development would be required to fully comply with existing development regulations, as noted in part 3.5.3 of this section. The following addresses environmental health mitigation relative to contaminated soils, indoor air quality, land use patterns, urban forestry and agriculture, and environmental justice.

**Contaminated Soils**

Excavation and other construction activities associated with development can lead to exposure of contaminated soils and present environmental health risks to construction workers and others proximate to the construction site. Uncertainty of whether contaminated soils exist, the chemical makeup of those contaminants, and the extent of contamination, presents financial risks for future site redevelopment and private investment, thereby, impeding local economic redevelopment. Site redevelopment would comply with the mitigation measures noted in part 3.5.3 of this section (Mitigation Measures) and no significant environmental impacts are anticipated.

Before any redevelopment can occur, environmental conditions of concern relating to soil contamination -- whether suspected or encountered -- must be investigated and remediated according to existing local, State, and Federal standards, as noted in part 3.5.3 of this section. In almost all cases, contaminated soils would be identified before any development excavation could start, so it is unlikely that excavation would lead to the spread of contaminants off-site. In the unlikely event that contamination is encountered during construction, the following environmental impacts could occur:

- direct exposure (contact, inhalation, ingestion) of personnel to hazardous materials;
- improper containment and disposal of contaminated media;
- prohibited access for needed investigation and remediation;
- accidental migration of hazardous materials to surface water, groundwater, and stormwater or sewer conveyances;
- fire/explosion from abandoned underground storage tanks; and
- inadvertent violation of local/state/federal laws concerning management of hazardous materials.

Potential occurrence of the above impacts is reduced by existing regulations that require cleanup when contamination is unexpectedly encountered.

**Indoor Air Quality**

Health effects caused by exposure to indoor air contaminants may include eye irritation, respiratory irritation, exacerbation of asthma, headaches, nausea/vomiting, dizziness; and, in the case of carbon monoxide or asbestos-containing materials, even death. New development in the South Downtown Subarea would not be expected to result in increased risk of exposure to indoor air contaminants, because new buildings would be constructed and operated in accordance with modern building codes, which in fact, can be expected to improve indoor air quality compared to existing buildings.
Demolition or renovation of older buildings is highly regulated to reduce the risk of exposure to asbestos. Activities can cause asbestos to break down (become “friable”) into tiny fibers and enable asbestos to become airborne, be easily inhaled, and settle deep into the lungs. Medical research indicates that asbestos fibers can cause lung cancer, asbestosis, or mesothelioma, a related terminal cancer of the tissue lining the chest cavity, years after inhalation. However, no significant, environmental health-related impacts are anticipated if mitigation measures noted in part 3.5.3 of this section are followed.

**Land Use Patterns**

Urban environments that force residents to rely on cars for most trips, and that lack recreation opportunities and grocery stores within easy walking distance, can exacerbate many chronic diseases, such as obesity, diabetes, heart disease, hypertension; and other forms of mental stress, such as depression and anxiety.\(^{11}\) The intended outcome of the **South Downtown Subarea Plan** is to create an urban environment in which residents can meet many of their daily needs via relatively short trips by walking, cycling, or transit—essentially the polar opposite of the built environment described above. If this outcome can be achieved, it will lead to a reduction in each of the adverse environmental health impacts listed above and improve overall environmental health.

**Urban Forestry and Agriculture**

Development may result in the loss of existing trees on private lots. However, development will also result in the planting of additional street trees as required by the Tacoma land use code. Development could result in the loss of land that could be used for urban agriculture, however the City has already established in the Comprehensive Plan intended to promote urban agriculture, as listed below in Section 3.5.3.

**Environmental Justice**

Social and economic conditions can influence the risk of illness and the actions taken to prevent or treat illness. These conditions are shaped by the circumstances in which people are born, grow up, live, work and age, as well as by the systems put in place to deal with illness. They also can be influenced by larger forces, such as regional economics, social policies, and politics. Lack of control over the conditions shaping one’s life can trigger a chronic stress response, which can weaken the body’s immune systems and increase the risk of disease, and these adverse health impacts may be exacerbated when people feel that they are not involved in urban planning and development decisions in their communities.

It is well established that urban development can lead to gentrification of neighborhoods and involuntary displacement of the poor and other underserved populations. Gentrification can segregate income groups, ethnicities, and life cycles. The social and physical isolation of underserved populations, particularly low-income minorities and the elderly, often limits access to jobs, healthy eating, and active lifestyles. Those living in areas of concentrated poverty disproportionally suffer from a variety of health impacts, including violence, sexually transmitted

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diseases, weather-related deaths, poor nutrition and traffic fatalities.\textsuperscript{12} Conversely, high social capital is associated with increased life expectancy.\textsuperscript{13}

The Subarea Plan includes multiple components intended to address the potential impacts described above, including a chapter on affordable housing strategies, and further details are provided below in Section 3.5.3. The overarching goal of the Subarea Plan to provide equitable access to the benefits of walkable, transit-rich communities can be expected to promote environmental justice.

### 3.5.3 Mitigation Measures

The following mitigation measures apply to all alternatives, and are based on existing City policies, regulations, and other mitigation, as noted below.

**City Policies**

**Comprehensive Plan -- Environmental Policy Element**

The Environmental Policy Element of the Tacoma Comprehensive Plan has adopted the following policies for dealing with contaminated sites:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-ER-1 Comprehensive Cleanup Strategies</td>
<td>Encourage improvement of the environmental quality of Commencement Bay, its associated waterways, and the Tacoma watershed, including all nearshore and adjacent upland areas through comprehensive cleanup strategies.</td>
</tr>
<tr>
<td>ER-2 Contaminated Sites</td>
<td>Encourage the identification and characterization of all contaminated sites which adversely affect the City’s shoreline areas, surface waters, groundwater, and soils.</td>
</tr>
<tr>
<td>E-ER-3 Source Control</td>
<td>Encourage source control of all contaminated sites within and adjacent to the City’s shoreline areas or which impact shoreline areas or surface waters.</td>
</tr>
<tr>
<td>E-ER-4 Public/Private Partnerships</td>
<td>Encourage public and public/private partnerships to ensure the most comprehensive, timely and cost-effective cleanup actions.</td>
</tr>
<tr>
<td>E-ER-5 Best Management Practices</td>
<td>Ensure the use of Best Management Practices by private industry and municipal government to prevent recontamination of wetlands, streams, shorelines, groundwater and other aquatic areas.</td>
</tr>
<tr>
<td>E-ER-6 Best Available Science</td>
<td>Ensure the use of Best Available Science Practices by private industry and municipal government to prevent recontamination of wetlands, streams, shorelines, groundwater and other aquatic areas. Special attention should be placed on anadromous fisheries.</td>
</tr>
</tbody>
</table>


E-ER-7 Intergovernmental Partnerships

Coordinate and cooperate with State and Federal programs (e.g., Department of Ecology, Environmental Protection Agency) in encouraging and monitoring the remediation of contaminated sites.

In 2011, the City of Tacoma adopted the *Thea Foss Waterway Design Guidelines*. These guidelines include a policy concerning contaminated sites:

- 3.10.1: Encourage the identification and characterization of all contaminated sites which adversely affect the City’s shoreline areas, surface waters, groundwater, and soils.

The Urban Forest Policy Element of the Tacoma Comprehensive Plan includes policies designed to promote the preservation and augmentation of trees in Tacoma. Policies most pertinent to providing mitigation for potential adverse impacts to environmental health are given in the table below:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>UF-15 Equity</td>
<td>Provide equitable urban forest resources and services throughout the city regardless of geographic, racial or social differences.</td>
</tr>
<tr>
<td>UF-PR-1 Retention of Trees</td>
<td>Encourage and promote the retention of trees, whenever practicable and appropriate, through education, outreach and incentives.</td>
</tr>
<tr>
<td>UF-PR-3 Protection of Trees</td>
<td>Promote the long-term health and survival activities of trees that are retained during construction.</td>
</tr>
<tr>
<td>During Development</td>
<td></td>
</tr>
<tr>
<td>UF-PR-4 Heritage Trees</td>
<td>Establish a Heritage Tree Program for the voluntary recognition and protection of trees with unusual or unique historical, ecological, cultural and/or aesthetic significance.</td>
</tr>
<tr>
<td>UF-PCM-1 Planting Priorities</td>
<td>Prioritize tree planting and landscaping in street and freeway rights-of-way, in particular in highly visible locations such as business districts and major corridors.</td>
</tr>
<tr>
<td>UF-PCM-5 Tree Canopy Cover</td>
<td>Achieve 30 percent citywide tree canopy cover by the year 2030 as an important step in becoming a healthy and sustainable city.</td>
</tr>
<tr>
<td>UF-PCM-11 Partnerships</td>
<td>Partner with federal, state, regional, tribal, and local governmental jurisdictions, community non-profits, the private sector and others to increase the reforestation of Tacoma.</td>
</tr>
</tbody>
</table>

The Urban Forest Policy Element of the Tacoma Comprehensive Plan has adopted the following policies that mitigate potential adverse impacts to environmental health by promoting urban agriculture:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>UF-UA-3 Community Gardens</td>
<td>Establish a target level of service for community gardens. Identify and prioritize the establishment of new gardens in the UFMP for areas that do not meet this level of service.</td>
</tr>
<tr>
<td>UF-UA-6 Land</td>
<td>Identify existing and potential community garden sites and give high priority to community gardens in appropriate locations, in consideration of the full range of community benefits. Work to secure additional community gardening sites through long-term leases or through ownership as permanent public assets.</td>
</tr>
<tr>
<td>UF-UA-7 Zoning</td>
<td>Adopt zoning regulations that establish community gardens as a permitted or conditional use in appropriate locations.</td>
</tr>
<tr>
<td>UF-UA-8 New Housing Developments</td>
<td>Encourage new affordable housing units to contain designated yard or other shared space for residents to garden.</td>
</tr>
<tr>
<td>UF-UA-9 New Construction</td>
<td>Encourage development in Mixed-Use Centers, Downtown, and commercial areas to incorporate green roofs, edible landscaping, and the use of existing roof space for community gardening. Community garden space should count towards open space requirements.</td>
</tr>
</tbody>
</table>
The Open Space, Habitat, and Recreation Element of the Tacoma Comprehensive Plan has adopted the following policies that mitigate potential adverse impacts to environmental health by promoting urban forestry and agriculture:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OS-MUC-8 Public Streets as Linear Urban Parks</strong></td>
<td>Seek opportunities, including joint ventures with public or private partners, to create a park-like environment within public rights-of-way, incorporating features such as widened sidewalks, street amenities and furniture, and landscape planting.</td>
</tr>
<tr>
<td><strong>OS-GI-1 Green Neighborhoods</strong></td>
<td>Establish an achievable goal to increase the forest canopy cover by 2028 to a citywide percentage that achieves Tacoma’s vision as an environmentally sustainable community.</td>
</tr>
<tr>
<td><strong>OS-GI-2 Green Streets</strong></td>
<td>Designate specific streets, trails and other public rights-of-way which are the most appropriate for implementation of green infrastructure practices, based on their location, width, traffic volumes, adjacent uses, prominence, potential to enhance habitat connectivity, contiguity with open space areas and/or other considerations.</td>
</tr>
<tr>
<td><strong>OS-GI-5 Tree Planting and Maintenance</strong></td>
<td>Actively engage in tree planting, maintenance of native and climate-adapted trees and plants, and preservation of large trees city-wide.</td>
</tr>
<tr>
<td><strong>OS-CG-1 Community Gardens</strong></td>
<td>Support and develop existing and new community gardens within parks and on appropriate public and private lands. Consider creative approaches to managing community gardens, such as support by education institutions or volunteer management by community organizations.</td>
</tr>
<tr>
<td><strong>OS-GI-9 Highway Planting</strong></td>
<td>Partner with the Washington State Department of Transportation (WSDOT) to initiate and maintain landscape plantings along interstate and highway routes within the City.</td>
</tr>
</tbody>
</table>

**Other Mitigation**

The following mitigation measures apply to all alternatives.

**Contaminated Soils**

In most cases, development itself is mitigation for the environmental impacts associated with contaminated soils. When contaminated sites remain undeveloped, their contaminants remain in the soil unremediated, creating the risk of exposure to people and the risk that such contaminants could spread offsite affecting groundwater, surface water, and Puget Sound. In contrast, when contaminated sites are redeveloped, existing regulations require that contamination be remediated, thereby removing the environmental hazards.

Development of a site with suspected or known contaminated soils is almost invariably precluded by investigation and remediation of the contamination. In nearly all cases, lenders will require a Phase I -- Preliminary Contaminated Site Investigation and, depending upon results of the Phase I analysis, possibly a Phase II -- Detailed Contaminated Site Assessment regardless of whether an area-wide EIS has been conducted.

In Washington, the Department of Ecology manages contaminated soil cleanups under the Model Toxics Control Act (MTCA),\(^\text{14}\) which sets strict cleanup standards to ensure that the quality of the cleanup and the protection of human health and the environment are not

\(^{14}\) 173-340 WAC
compromised. At the same time, the rules that guide cleanup under the MTCA have built-in flexibility to allow cleanups to be addressed on a site-specific basis. Site cleanup typically involves the following steps:

1. Site Discovery;
2. Initial Investigation;
3. Site Hazard Assessment;
4. Hazard Ranking;
5. Remedial Investigation/Feasibility Study;
6. Selection of Cleanup Action; and
7. Site Cleanup.

Underground storage tanks (UST) are regulated by the Department of Ecology and the Tacoma-Pierce County Health Department.15 UST removal is also regulated by the City of Tacoma (Chapter 5.47 of the Tacoma Municipal Code) and by Pierce County (Chapter 8.34).

The Tacoma – Pierce County Health Department's regulations for USTs are applicable when a tank is to be removed from the ground or there has been a leak of hazardous substances from a tank. A UST Decommissioning Permit must be obtained from the Health Department prior to the decommissioning (removal) of any regulated UST within all incorporated and unincorporated areas of Pierce County. If a UST is found to be leaking, the tank owner and/or property owner would be required to clean up the leaking material, as well as any soil or groundwater that has been impacted by that leak.16

A brownfield site is “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.”17 The City of Tacoma has demonstrated a long-term commitment to addressing contaminated soils and brownfields and has been engaged in the following brownfield-related efforts:

- In 2011, the City of Tacoma was awarded a $300,000 EPA Brownfields grant to provide job training to assess, manage and clean-up solid and hazardous waste sites. EPA established the Brownfields Job Training Program to help residents take advantage of jobs created by the assessment, as well as to spur cleanup and sustainable reuse of brownfields sites, and to ensure that the economic benefits derived from brownfields redevelopment remain in the affected communities.

- The Brownfields Coalition is a partnership of the WA Department of Commerce, King County/Seattle, Spokane, Tacoma, and the Department of Ecology. The coalition works together to make it easier for local governments, property owners and developers to return brownfields to a useful purpose by helping with the logistics and funding. The primary source of funding is the Brownfields Revolving Loan Fund (BRLF).

- The Evergreen Tacoma Initiative offers a whole systems model and a new organizational framework to address complex brownfields redevelopment. The initiative

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15 see Environmental Health Code, Chapter 4, Underground Storage Tanks, Board of Health Resolution 2010-4225
16 Costs to remediate contaminated soils on a development site can vary broadly. For example, a typical gas station cleanup can cost in the range of $20,000 to $50,000.
merges broad-based organization, integrated technical solutions, new policy and the business case for sustainable development into a unified strategy. Partners include the City of Tacoma, Tacoma-Pierce County Health Department, Department of Ecology, and the University of Washington Tacoma, in addition to Senator Maria Cantwell’s office and Congressman Norm Dicks’ office.

- In 2011, The City of Tacoma applied for an EPA Brownfields Assessment Grant for the South Downtown Subarea. The City was not awarded the grant, but will continue to pursue funding opportunities to support brownfield assessment and remediation throughout the City, including the South Downtown Subarea.

The UWT Campus Master Plan Update recommends that “further studies should be implemented to examine the soil and groundwater conditions west of Market St. It is also recommended that a detailed geotechnical report, including contaminated soil and construction water handling recommendations, be obtained prior to construction in all areas of campus.” The UWT represents an exceptional opportunity for improvement of contaminated soils in the Subarea because it is developing its urban campus more rapidly than surrounding areas.

Depending on the nature of future site-specific development, mitigation may be necessary to address site-specific impacts that could occur under any of the alternatives. Mitigation measures that could be required during future property redevelopment include:

- further site investigations to determine the potential for contamination to be present on the property;
- soil and groundwater investigations to evaluate the type, concentration, and extent of contamination, if present;
- cleanup of contamination sources (e.g., removal of underground storage tanks, excavation of contaminated soil); and
- handling and disposal of contaminated soil and groundwater according to local and state regulations.

The above mitigations would be implemented in collaboration with the Department of Ecology, and in compliance with existing Federal and State regulations. Existing policies and regulations that provide mitigation for the potential migration of contaminated soils to surface or groundwater are described in **Section 3.3 – Water** of this Draft EIS.

**Indoor Air Quality**

New development in the South Downtown Subarea would be required to comply with following regulations relative to indoor air quality:

- Washington State Building Codes for ventilation requirements specific to the proposed development;
- the Addendum to the WA Clean Indoor Air Act, “Initiative 901 or I-901.” This includes, but is not limited to, the prohibition of smoking in all public places and places of employment. Retail stores and retail service establishments must post signs at each entrance and throughout the establishment; and
- the Tacoma-Pierce County Board of Health, Environmental Health Code, Chapter 8 “Smoking in Public Places”, and Chapter 9 “Restriction on Sale, Use, and Availability of Electronic Smoking Devices and Unregulated Nicotine Delivery Products.”
Asbestos is classified as a hazardous air pollutant by EPA and demolition and renovation projects must comply with asbestos removal regulations before they can proceed. For projects within the South Downtown Subarea, the Puget Sound Clean Air Agency is responsible for regulating the removal of asbestos containing materials. The Agency requires the following information and a permit for demolition projects that contain asbestos:

1. conduct an asbestos survey (if positive, continue with the following steps);
2. file an Asbestos/Demolition Notification;
3. verify that all asbestos is properly removed;
4. properly dispose of the asbestos; and
5. demolish the structure.

Existing policies and regulations that provide further mitigation for the potential adverse environmental impacts on air quality caused by demolition and construction activities are provided in Section 3.2 – Air Quality of this Draft EIS.

**Urban Forestry and Agriculture**

Tacoma’s Comprehensive Plan policies are implemented in the following Title 13 Tacoma Land Use Code regulations:

- 13.06A.070.C Basic Design Standards for all Downtown Districts: *Street trees at a rate of 1 per 25 linear feet of frontage (with the exception of the WR District, in which street trees are not required)*
- 13.06A.080 Design Standards for Increasing Allowable FAR: *Exterior public space equivalent to at least 5 percent of the site area and including the following attributes: trees and other plantings (etc)*.
- 13.06.502.D Landscaping Standards for X-Districts: *Street Trees – 3 per 100 feet of site street frontage*
- 13.06.502.B, Residential District Landscaping, Planting Requirements (R4 District):
  - *Tree size and quantity:*
    - A minimum of 1 tree per 1,000 square feet of parking lot area shall be provided.
    - For parking areas behind buildings of 20 stalls or less that are shielded by buildings from public street view, a minimum of 1 tree per 2,000 square feet of parking lot area is required.
  - *Interior landscaping distribution:*
    - Trees and planting areas shall be at aisle ends and evenly distributed throughout the parking lot with no stall more than 50 feet from a tree trunk.
    - At least 1 tree shall be located within 10 feet of required walkway for each 40 feet of said walkway.
  - *Street trees:*
    - 3 trees per 100 feet of site street frontage shall be provided.

---

18 see Article 4: Asbestos Control Standards
Environmental Justice

The Washington State Growth Management Act (36.70a RCW) prescribes procedural criteria for adopting comprehensive plans and development regulations (Chapter 365-196 WAC). In particular, WAC 365-196-600 requires early and continuous public participation. Development in the South Downtown Subarea will be guided and regulated by the Tacoma’s Comprehensive Plan and the City’s existing development regulations. These policies and regulations were developed with robust public engagement, as stipulated by the Growth Management Act. Pierce County’s Countywide Planning Policies require municipalities and the county to promote physical, social and mental well-being so that all people can live healthier (HW1); and incorporate provisions addressing health and well-being into appropriate local planning and decision-making processes (HW-2).

Additional Mitigation: Alternatives 1-3

Alternatives 1-3 will result in the adoption of a Subarea Plan and Upfront SEPA process that is designed to facilitate development within the Subarea compared with the No Action Alternative. Increased development can be expected to provide enhanced mitigation for adverse impacts to Environmental Health in the following areas:

Contaminated Soils

Increased development provides increased opportunities for mitigation of contaminated soils. When contaminated sites remain undeveloped, exposure risks remain and contamination may spread offsite affecting groundwater, surface water and Puget Sound. In contrast, when contaminated sites are developed, existing regulations require that contamination be remediated, mitigating the environmental hazards.

Indoor Air Quality

Because new buildings must adhere to modern building codes, they would have better indoor air quality than many of the existing buildings in the South Downtown Subarea. Thus, the more new development occurs, average indoor air quality within the Subarea is expected to improve.

Land Use Patterns

This project’s intention of creating a walkable, transit-oriented community in the South Downtown Subarea is itself a mitigation for adverse impacts to human health associated with car-dependent urban environments. This goal is supported by existing policies and regulations at the Federal, State, regional, County and local levels, as documented in Section 3.7 – Land Use, Relationships to Existing Plans and Policies. Additional documentation on policies and regulations that support various aspects of a walkable, transit-oriented community can be found in the Aesthetics; Historic and Cultural Resources; Population, Housing, and Employment; and Transportation sections of this EIS.

The South Downtown Subarea Plan establishes policies and actions supporting the creation of walkable, transit-oriented communities that will help mitigate adverse impacts on environmental health that are caused by the lack of alternatives to travel by private automobiles. The most relevant policies are as follows (see the Subarea Plan for recommended actions associated with each policy):
• Promote the creation of complete communities in close proximity to Tacoma Dome Station and the LINK streetcar stations;
• Improve safety and convenience for non-motorized access to fixed-rail transit stations;
• Coordinate with transit agencies to prioritize future high frequency transit service allocations that will help catalyze redevelopment and the creation of complete communities;
• Manage parking to support transit access and promote transit ridership;
• Provide ample open space for projected future growth;
• Build a highly visible system of public walkways, trail corridors and active street linkages that connect south downtown’s neighborhoods, waterfrons and key destinations;
• Leverage the open space and connectivity potential of the right-of-way through continued improvements to the pedestrian and cycling environment on streets; and
• Improve neighborhood navigability and aesthetics in the public realm.

Furthermore, walkable, transit-oriented communities provide the greatest environmental health benefits when the densities of population and jobs reach a certain critical mass that supports a rich mix of uses—including grocery stores—and frequent transit service. The No Action Alternative would not be expected to result in sufficient population and job growth to fully catalyze the environmental health benefits offered by a highly functioning transit-oriented community. In contrast, each of the development alternatives is intended to significantly boost population and employment in the South Downtown Subarea, such that the benefits of a walkable, transit-oriented community are more likely to be realized.

Urban Forestry

Existing policies and regulations that apply to the South Downtown Subarea encourage the protection of existing trees, and in most cases require the addition of street trees when properties are developed. Thus, in general, it is expected that the more development occurs, the more the tree canopy will be expanded in the South Downtown Subarea, especially if supplemented by funding for the Strategic Urban Forest Management Plan.

Environmental Justice

Development of the South Downtown Subarea Plan and this EIS involved multiple efforts to engage all populations, including underserved populations. These efforts included:

• EIS Public Community Meeting (included stringent pre-notification requirements)
• EIS Scoping Public Meeting: 10 people provided oral testimony, including representatives of the United Commercial Food and Commercial Workers Union Local 367, Asia Pacific Cultural Center, Jobs with Justice, and Catholic Community Services.
• EIS Scoping comment period: Written comments were received from Tacoma-Pierce County Health Department, Jobs with Justice, Tacoma Catholic Worker, Catholic Community Services
• Engaged local church groups and other community organizations
• Focus Groups: Invitees included seventeen representatives of social service organizations and church groups
• Online South Downtown Opinion Survey posted on the City’s web site since June 2012
• Monthly Steering Committee: Members comprised of local residents, workers, property owners, and organizations including the Tacoma Housing Authority
• Quarterly Working Group Meeting: Members include representatives from Tacoma-Pierce County Health Department, Tacoma-Pierce County Affordable Housing Consortium, Tacoma Housing Authority, Puyallup Tribe, and the Cross Cultural Collaborative of Pierce County.
• Subarea Plan Public Workshop: Will be widely promoted and open to the public
• DEIS public meeting: Oral public comments will be solicited.
• DEIS comment period: Written public comments will be solicited.
• FEIS public meeting: Oral public comments will be solicited.

As detailed in Section 3.8 – Population, Housing, and Employment, the South Downtown Subarea currently has a relatively low density of households and employment, with a demographic profile revealing a community that lacks a balanced range of family types. A primary goal of the South Downtown Subarea Plan is to encourage development that will create a more vibrant and balanced community, which will provide benefits to those who already live and work in South Downtown, as well as to those who may live and work there in the future. In particular, the further development of the UWT campus can be expected to not only increase educational opportunities, but also to collaborate with a wide range of community groups and integrate into the fabric of the community.

By encouraging the creation of walkable, transit-oriented communities, the South Downtown Subarea Plan will help make not owning a car a viable option for South Downtown residents. This opportunity presents a significant potential benefit to lower-income households, because the cost of owning a car typically represents a large fraction of their household expenses. When households can lower their transportation expenses in this way, their total cost of living is reduced, leaving more of their income available for housing, food, and other non-transportation-related expenses.

3.5.4 Unavoidable Adverse Impacts

With application of the environmental health-related guidelines noted above, no significant unavoidable environmental health impacts are anticipated in conjunction with any of the proposed alternatives.
3.6 NOISE

Information presented in this section addresses the effects of the proposed alternatives relative to noise levels on sites that are located within or proximate to the South Downtown Subarea. This information is based on readily available secondary sources of data; primary research (e.g., noise monitoring, etc.) has not been conducted for this analysis.

3.6.1 Affected Environment

Noise is sometimes defined as unwanted sound and the terms noise and sound are used more or less synonymously in this section. The human ear responds to a wide range of sound intensities. The decibel (dB) scale that is used to describe and quantify sound is a logarithmic scale that provides a convenient system for considering the large differences in audible sound intensities. On this scale, a 10-dB increase represents a perceived doubling of loudness to someone with normal hearing. Therefore, a 70-dB sound level would seem twice as loud as a 60-dB sound level.

People generally cannot detect sound level differences (increases or decreases) of 1 dB in a given noise environment. Although differences of 2 or 3 dB can be detected under ideal laboratory conditions, such changes are difficult to discern in an active outdoor noise environment. A 5-dB change in a given noise source, however, would likely be perceived by most people under normal listening conditions.

When addressing the effects of noise on people, it is necessary to consider the "frequency response" of the human ear, or those frequencies that people hear best. Sound-measuring instruments are, therefore, often programmed to "weight" sounds based on the way people hear. The frequency-weighting most often used to evaluate environmental noise is A-weighting and measurements using this system are reported in "A-weighted decibels" or dBA. All sound levels discussed in this evaluation are reported in A-weighted decibels.

As mentioned above, the decibel scale used to describe noise is logarithmic. On this scale, a doubling of sound-generating activity (i.e., a doubling of the sound energy) causes a 3-dBA increase in average sound produced by that source, not a doubling of the loudness of the sound (which requires a 10-dBA increase). For example, if traffic along a street is causing a 60-dBA sound level at some nearby location, twice as much traffic on this same street would cause the sound level at this same location to increase to 63 dBA. Such an increase might not be discernible in a complex acoustical environment.

Relatively long, multi-source "line" sources such as roadways emit cylindrical sound waves. Due to the cylindrical spreading of these sound waves, sound levels from such sources decrease with each doubling of distance from the source at a rate of 3 dBa. Sound waves from discrete events or stationary "point" sources (such as a backhoe operating in a stationary location) spread as a sphere, and sound levels from such sources decrease 6 dBa per doubling of the distance from the source. Conversely, moving half the distance closer to a source increases sound levels by 3 dBa for line and 6 dBa for point sources.

For a given noise source, a number of factors affect the sound transmission from the source, which in turn affects the potential noise impact. Important factors include distance from the source, frequency of the sound, absorbency and roughness of the intervening ground surface,
the presence or absence of obstructions and their absorbency or reflectivity, and the duration of the sound. The degree of impact on humans also depends on existing sound levels and who is listening.

Federal regulatory agencies often use the equivalent sound level (Leq) to characterize sound levels and to evaluate noise impacts. The Leq is the level that if held constant over the same period of time would have the same sound energy as the actual, fluctuating sound. As such, the Leq can be considered an energy-average sound level. But this metric should not be confused with an arithmetic average which tends to de-emphasize high and low values; the Leq gives most weight to the highest sound levels because they contain the most sound energy.

Typical sound levels of familiar noise sources are presented in **Table 3.6-1**.

As noted previously in this Draft EIS, the South Downtown Subarea covers an area of approximately 600 acres. The ambient sound level within the Subarea is typical of an urban setting and is the result of a broad range of factors both in and proximate to the South Downtown Subarea including:

- motor vehicles operating on I-5, I-705, the SR-509 bridge, and City streets throughout the Subarea;
- transit buses, particularly along Pacific Ave.;
- passenger, commuter, and freight trains;
- aircraft overflights, principally from Joint Base Lewis-McCord and SeaTac International Airport;
- motorized watercraft on the Foss Waterway;
- industrial/manufacturing activities, primarily in the east end of the Dome District;
- heating, ventilating, and air conditioning (HVAC) equipment located on building rooftops; and
- site-specific construction activity.
### Table 3.6-1
Sound Levels Produced by Common Noise Sources

<table>
<thead>
<tr>
<th>Noise Source</th>
<th>DBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft Carrier Flight Deck Operations</td>
<td>140</td>
</tr>
<tr>
<td>Threshold of Pain</td>
<td>130-140</td>
</tr>
<tr>
<td>Fireworks</td>
<td>130</td>
</tr>
<tr>
<td>Jet Takeoff (200 ft. distance)</td>
<td>120</td>
</tr>
<tr>
<td>Jack Hammer</td>
<td>120</td>
</tr>
<tr>
<td>Auto Horn (3 ft. distance)</td>
<td>120</td>
</tr>
<tr>
<td>Chain Saw/Noisy Snowmobile</td>
<td>110</td>
</tr>
<tr>
<td>Jet Takeoff (2,000 ft. distance)</td>
<td>105</td>
</tr>
<tr>
<td>Lawn Mower, Power Tools (3 ft. distance)</td>
<td>85-100</td>
</tr>
<tr>
<td>Noisy Motorcycle (50 ft. distance)</td>
<td>100</td>
</tr>
<tr>
<td>Heavy Truck (50 ft. distance)</td>
<td>90</td>
</tr>
<tr>
<td>Quiet Snowmobile, Motorcycle (50 ft. distance)</td>
<td>80</td>
</tr>
<tr>
<td>Busy Urban Street</td>
<td>80</td>
</tr>
<tr>
<td>Normal Automobile, Commercial Area</td>
<td>70</td>
</tr>
<tr>
<td>Seagulls and Crows</td>
<td>70</td>
</tr>
<tr>
<td>Normal Conversation (3 ft. distance)</td>
<td>60</td>
</tr>
<tr>
<td>Quiet Residential Area</td>
<td>50</td>
</tr>
<tr>
<td>Moderate Rainfall</td>
<td>50</td>
</tr>
<tr>
<td>Quiet Residence, Library</td>
<td>40</td>
</tr>
<tr>
<td>Bedroom at Night or Whisper</td>
<td>30</td>
</tr>
<tr>
<td>Background Level in a Concert Hall</td>
<td>30</td>
</tr>
<tr>
<td>Broadcasting Studio</td>
<td>10</td>
</tr>
<tr>
<td>Rustle of Leaves</td>
<td>10</td>
</tr>
<tr>
<td>Threshold of Hearing</td>
<td>0</td>
</tr>
</tbody>
</table>

*Source: EPA, 1978; EPA, 1972*

A major consideration for noise impact analyses is the effect that the proposal may have on noise sensitive land uses. These are land uses that require low levels of sound. Typical noise sensitive receptors include: schools, hospitals, long-term care facilities, residential uses, libraries, churches, passive recreational areas, etc. In the South Downtown Subarea, key noise sensitive land uses include the following:

- Multiple University of Washington classroom buildings and open spaces
- Tacoma School of the Arts
- Churches: Holy Rosary, Living Grace, St. Paul Lutheran, Christ Life Center, Greater Christ Temple, St. Nicholas Greek Orthodox, Tacoma Buddhist Temple
- Pugnetti Park
- Foss Esplinade
- Numerous single-family homes and multifamily residential buildings
- Triwest Health Care Alliance building
- Though outside the Subarea boundary, St. Joseph Hospital and McCarver Elementary School on the west side of Yakima Ave.
3.6.2 Impacts

No Action Alternative

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Noise-related impacts would be evaluated on site-specific basis in conjunction with each proposed project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

Development Alternatives

Each of the proposed development alternatives would continue the re-development trend of properties in the South Downtown Subarea, at varying intensities, for urban uses and activities. As such, the potential exists for noise-related impacts associated with new development that is consistent with the South Downtown Subarea Plan. From an area-wide change perspective, Alternative 1 would have the greatest potential for noise-related impacts in that build-out could entail a net increase of 30 million sq.ft. of development, Alternative 2 would be somewhat less at 20 million sq.ft., and Alternative 3 would be the least with a potential net increase of 10 million sq.ft. However, considering the fact that this is an urbanized part of the City, that re-development is projected to occur over several decades and that noise-related impact mitigation presently exists and will continue, it is anticipated that the increased amount of urban activity within the South Downtown Subarea would not result in any significant noise-related impacts. Such development would be required to fully comply with existing development regulations, as noted in part 3.6.3 of this section.

Construction

Future site-specific development under any of the alternatives is expected to result in occasional, localized noise-related impacts from construction-related activities. Noise from project-specific demolition and construction activity, while typically short-term and temporary in nature, would cause the most noticeable and disruptive noise impacts and have the greatest potential to affect sensitive noise receptors. For daytime construction activities, the Tacoma Noise Ordinance limits construction hours from 7 a.m. to 9 p.m. The temporary nature of construction activity together with the timeframe limit is expected to lessen the potential for significant impacts from construction activities and equipment. Existing regulations adequately mitigate these impacts, as noted below in Section 3.6.3.

Table 3.6-2 lists typical noise levels from construction activities and equipment. As shown, construction activities at a distance of 50 ft. have the potential to exceed 85 dBA. Therefore, construction noise management plans should be conceived and implemented for construction projects within 50-100 ft. of potentially affected receivers, particularly those containing more sensitive residential uses. The lower portion of that table shows the range of sound levels (i.e., minimum to maximum levels) that can be expected from different kinds of equipment. As noted earlier, in the absence of intervening terrain or structures, sounds from construction equipment and activities (usually point sources) decrease about 6 dBA for each doubling in distance from the actual source.
### Table 3.6-2
Typical Noise Levels from Construction Activities and Equipment (dBA)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Range of Hourly Leqs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At 50 ft.</td>
</tr>
<tr>
<td>Clearing</td>
<td>83</td>
</tr>
<tr>
<td>Grading</td>
<td>75-88</td>
</tr>
<tr>
<td>Paving</td>
<td>71-88</td>
</tr>
<tr>
<td>Erection</td>
<td>72-84</td>
</tr>
</tbody>
</table>

| Construction Equipment | Range of Noise Levels |                               |
|------------------------|-----------------------|
|                        | At 50 ft. | At 100 ft. | At 200 ft. |
| Bulldozer              | 77-96      | 71-90      | 65-84      |
| Dump Truck             | 82-94      | 76-88      | 70-82      |
| Scraper                | 80-93      | 74-87      | 68-81      |
| Paver                  | 86-88      | 80-82      | 74-76      |
| Generators             | 71-82      | 65-76      | 59-70      |
| Compressors            | 74-81      | 68-75      | 62-69      |
| Pneumatic Wrenches     | 83-88      | 77-82      | 71-76      |
| Jackhammers            | 81-98      | 75-92      | 69-86      |

Source: EPA, 1971

### Operation

**Mechanical Equipment**

Rooftop HVAC units would likely be installed in support of commercial/retail uses and possibly new residences. Refrigeration units also may be required for potential, future restaurants and/or cafes. Specific noise levels generated by such equipment would depend on the location, height, and design of individual equipment and building systems. Noise from these sources would need to be controlled to comply with the City’s noise limits that prohibit day time noise from any source to be no more than 10 decibels above background noise levels and night time noise levels to be no more than 5 decibels above background noise levels. With proper placement and design, it is likely that future HVAC units and related mechanical equipment would meet these limits. If the development site is adjacent to a sensitive receptor, site-specific mitigation may be necessary.

### Traffic

The overall aim of the South Downtown Subarea Plan is to create an urban environment that is less dependent upon motor vehicles. However, increases in population density and commercial activity associated with each of the alternatives would likely result in traffic increases on the local street network, which would increase traffic-related noise levels in the Subarea. As mentioned previously, a doubling of sound-generating activity – in this case traffic – causes a 3-dBA increase in average sound produced by a noise source.

Based on the traffic analysis that is contained in this Draft EIS (Section 3.11 – Transportation), traffic-related noise is not expected to increase by up to 3 dBA on major arterials within the Subarea. As described previously, increases of up to 3 dB are difficult to discern in an active

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1  Tacoma Noise Ord. #27695
outdoor noise environment. Therefore, no significant noise-related impacts are anticipated from changes in traffic volumes as a result of any of the development alternatives.

In October 2012 Sound Transit extended Sounder commuter rail service to Lakewood via the newly completed "D-to-M" connector. In accordance with Federal Railroad Administration’s Train Horn Rules, Sounder trains sound their horns at the at-grade street crossings east of the Tacoma Dome Station, including East D St, East C St, and South C St. According to Dome District residents and business owners, the horns blow about 160 times per day between 4:45 AM and 7:30 PM creating significant noise that is not only an unpleasant disturbance for residents, but is also having adverse impacts on local businesses. In response to these concerns, representatives from the City of Tacoma and Sound Transit have begun discussions on establishing a “Quiet Zone”.

### 3.6.3 Mitigation Measures

The following mitigation measures apply to all alternatives, and are based on existing City policies, regulations and other mitigation, as noted below.

**City Policies**

The following policies, together with City codes and other more specific measures, can help mitigate impacts that are described in this section of the Draft EIS.

**Tacoma Comprehensive Plan**

Section ST-8 of the Neighborhood Element of the Comprehensive Plan articulates strategies for noise reduction, stating that:

> “New residential development should be constructed using noise reduction measures to reduce noise levels within the structures to an acceptable level. Care should be exercised in locating land uses, particularly residential developments and other noise sensitive uses such as schools, nursing homes and churches, in high noise areas.”

**Comprehensive Plan -- Environmental Policy Element and Neighborhood Element**

These elements of the Comprehensive Plan contain the following policies regarding noise:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E-N-1, ST-8.1 Buffer Noise Sources</strong></td>
<td>Encourage the use of buffer areas and/or noise absorbing barriers between sources of noise and residential areas or other noise sensitive land uses.</td>
</tr>
<tr>
<td><strong>E-N-2, ST-8.2 Noise Reduction Measures</strong></td>
<td>Promote the use of construction techniques, building siting and other means that reduce the level of internal and external noise, particularly in high noise areas.</td>
</tr>
<tr>
<td><strong>E-N-3, ST-8.3 Noise Impacted Areas</strong></td>
<td>Discourage development in noise impacted areas that will significantly increase noise levels by either a direct contribution or by removing an</td>
</tr>
</tbody>
</table>

2 [http://www.fra.dot.gov/Pages/1773.shtml](http://www.fra.dot.gov/Pages/1773.shtml)
Existing natural feature that acts as a noise absorbing barrier.

| E-N-4, ST-8.4 Noise Sensitive Land Uses | Discourage the development of noise sensitive land uses within or near high noise areas. |

Additional policies in the Comprehensive Plan intended to mitigate noise include:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>LU-MUD-1 Compatibility</td>
<td>Ensure that new development within centers is compatible with existing development and/or the desired character of the area in terms of building location and orientation, pedestrian and vehicular access, building massing and scale, light and glare, outdoor storage areas, noise generating activities, service elements and mechanical equipment location and design, landscaping design, and signage. Compatible and sensitive design is most critical in areas bordering designated single-family areas.</td>
</tr>
<tr>
<td>H-NQ-5 Neighborhood Design Concepts</td>
<td>Develop standards to buffer the edges of residential areas from impacts of nonresidential uses and mixed-use center developments such as noise and glare.</td>
</tr>
<tr>
<td>T-ES-2 Noise and Air Pollution</td>
<td>Encourage the reduction of noise and air pollution from various modes of transportation.</td>
</tr>
</tbody>
</table>

The Growth Strategy and Development Concept Element of the Comprehensive Plan further reinforces policy T-ES-2 by stating

“Transportation plans and policies concerned with traffic congestion and related air and noise pollution will focus on a multi-modal transportation system and the curtailment of single-occupancy vehicle use.”

City Codes

Tacoma Municipal Code

Chapter 8.122 of the Tacoma Municipal Code addresses Noise Enforcement, and establishes the following limits:

8.122.080 -- General prohibitions.

A. No person shall make, continue, or cause or permit to be made or continued any sound attributable to any device that, increases the total sound level by the limits shown in the Table below when measured at or within a receiving property:

<table>
<thead>
<tr>
<th>Time</th>
<th>Outdoors</th>
<th>Indoors</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 a.m. to 10:00 p.m.</td>
<td>10 dBA</td>
<td>6 dBC</td>
</tr>
<tr>
<td>10:00 p.m. to 7:00 a.m.</td>
<td>5 dBA</td>
<td>3 dBC</td>
</tr>
</tbody>
</table>
B. No person shall make, continue, or cause or permit to be made or continued any impulsive sound, attributable to the source, that increases the total sound level by 15 dB(A) or more above the ambient sound level, when there are less than ten impulses per hour between the hours of 7:00 a.m. and 10:00 p.m., less than four impulses within one hour between the hours of 10:00 p.m. and 7:00 a.m.

8.122.090 -- Construction.

A. All construction devices used in construction and demolition activity shall be operated with a muffler if a muffler is commonly available for such constructing device.

B. Construction and demolition activity, excluding emergency work, shall not be performed between the hours of 9:00 p.m. and 7:00 a.m. on weekdays or between the hours of 9:00 p.m. and 9:00 a.m. on weekends and federal holidays, except as otherwise provided in this code.

C. After hours work on weekdays and weekends shall be allowed, provided that no sound created by the work exceeds the limits in 8.122.080(a).

8.122.100 -- Commercial music.

A. No person shall make or cause or permit to be made or caused any music originating from or in connection with the operation of any commercial establishment or enterprise when the level of sound attributable to such music, as measured inside any receiving property dwelling unit:

1. causes a 6 dB(A) or more increase in the total sound level above the ambient sound level as measured in decibels in the "A" weighting network; or

2. causes a 6 dB(C) or more increase in the total sound level above the ambient sound level as measured in decibels in the "C" weighting network.

B. No person shall make or cause or permit to be made or caused any music originating from or in connection with the operation of any commercial establishment or enterprise when the level of sound attributable to such music is plainly audible from a distance of at least one hundred feet in any direction from the property line of the commercial establishment.

Chapter 8.12.060 of the Tacoma Municipal Code addresses Public Disturbance Noises:

A. It is unlawful for any person to cause, or for any person in possession of property to allow originating from the property, sound that is:

1. an unreasonable noise, as defined in subsection 8.122.010(KK) TMC; or

2. any sound that is plainly audible (as that term is defined in Chapter 8.122 TMC) within any dwelling unit; or

3. any sound produced by a sound reproduction device (as that term is defined in Section 8.122.010) that is plainly audible (as that term is defined in Section 8.122.010
TMC) 50 feet from the source of the sound; Provided, that this subsection c shall not apply to commercial music under TMC 8.122.100; or


B. In addition to the provisions of Section 8.12.060(1), the following sounds are determined to be public disturbance noises:

1. The frequent, repetitive, or continuous sounding of any horn or siren attached to a motor vehicle, except as a warning of danger or as specifically permitted or required by law;

2. The creation of frequent, repetitive or continuous sounds in connection with the starting, operation, repair, rebuilding or testing of any motor vehicle, motorcycle, off-highway vehicle or internal combustion engine within a residential district, so as to disturb or interfere with the peace, comfort, and repose of a reasonable person of normal sensibilities.

C. Yelling, shouting, hooting, whistling or singing on or near the public streets, particularly between the hours of 11:00 p.m. and 7:00 a.m., or at any time and place so as to unreasonably disturb or interfere with the peace, comfort and repose of owners or possessors of real property;

D. The creation of frequent, repetitive or continuous sounds which emanate from any building, structure, apartment, or condominium, which unreasonably interfere with the peace, comfort, and repose of owners or possessors of real property, such as sounds from audio equipment, musical instruments, band sessions, or social gatherings;

E. Sound from audio equipment, such as tape players, radios, and compact disc players, operated at a volume so as to be audible greater than 50 feet from the source, and if not operated upon the property of the operator. The foregoing provisions shall not apply to regularly scheduled events at parks, such as public address systems for baseball games or park concerts.

F. Noise from an animal that unreasonably disturbs one or more person's reasonable expectation of peace and quiet. Factors to be considered in making such a determination include, but are not limited to, the nature, duration, volume, frequency, time, and location of the noise.

**Other Mitigation**

Depending on the nature of future development, additional mitigation may be warranted in order to address site-specific impacts that could occur under any of the alternatives. With regard to potential long-term noise-related impacts associated with noise sensitive receptors, if HVAC units and related mechanical equipment are placed in areas proximate to the sensitive receptor, equipment vendors and contractors should ensure that the equipment would be installed with effective noise mitigating enclosures and/or directed away from sensitive areas.
With regard to horn noise from Sound Transit trains, representatives from the City of Tacoma and Sound Transit have begun discussions on establishing a “Quiet Zone”:\(^4\) The following describes the particulars of such a zone.

“In 1994, Congress mandated that the FRA [Federal Railroad Administration] issue a federal regulation requiring the sounding of locomotive horns or whistles at all public highway-rail grade crossings; and to provide for exceptions to that requirement by allowing communities to establish "quiet zones."

“A new quiet zone must be at least ½ mile in length and have at least one public highway-rail grade crossing. Every public grade crossing in a new quiet zone must be equipped at minimum with the standard or conventional flashing light and gate automatic warning system. A quiet zone may be established to cover a full 24-hour period or only during the overnight period from 10:00 P.M. to 7:00 A.M.”

The primary goal of the South Downtown Subarea Plan is to plan for and encourage new residents and businesses in South Downtown, prioritizing areas with excellent transit access such as the Tacoma Dome Station area. In anticipation of this future outcome, the establishment of a quiet zone would be an important objective for helping create a livable, economically vibrant neighborhood in the Dome District. The Subarea Plan includes a recommendation to establish a quiet zone in South Downtown centered around the Tacoma Dome Station and the at-grade rail crossings to the east.

### 3.6.4 Unavoidable Adverse Impacts

With application of the noise-related regulations noted above, no significant unavoidable noise impacts are anticipated in conjunction with any of the proposed alternatives.

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\(^4\) http://www.fra.dot.gov/rpd/freight/1318.shtml
3.7 LAND USE

Information presented in this section addresses the effects of the proposed alternatives relative to land use patterns on sites that are located within or proximate to the South Downtown Subarea, as well as consistency of the proposed South Downtown Subarea Plan relative to adopted land use plans and development regulations. The analysis of Land Use Patterns is presented in Part A of this section and the consistency analysis is in Part B.

PART A – LAND USE PATTERNS

3.7.1 Affected Environment

The South Downtown Subarea comprises of roughly one-half of Tacoma’s downtown, covering a geographic area of approximately 633 ac. Roughly 61 percent of this area (385 ac.) is private property in tax parcels, 34 percent (212 ac.) are in streets and railroad rights-of-way, and the remaining 5-6 percent (36 ac.) is land area that is underwater on the Foss Waterway. As depicted by Figure 2-2 (in Section II of this Draft EIS), the South Downtown Subarea consists of five distinct districts – the University of Washington Tacoma (UWT) / Museum District, the Old Brewery District, the southern portion of the Hillside neighborhood, the southern portion of the Thea Foss Waterway, and the Dome District. The Subarea is bordered by the downtown commercial core to the north, the Martin Luther King Jr. mixed-used residential district to the west, industrial lands and the Port of Tacoma to the east, and south -- the McKinley Hill, Lincoln, and South Tacoma residential neighborhoods (south of I-5).

The Subarea encompasses a wide range of existing land uses, as shown in the generalized land use map (Figure 3.7-1) that is based on standard City of Tacoma land use description designations at the parcel level. The area breakdown of each use within the South Downtown Subarea is shown in Figure 3.7-2. As shown, of the developable area (properties that are not in streets, railroad rights-of-way, or public parks), commercial, industrial/wholesale, and institutional properties comprise approximately 60 percent of the total area. Parking lots comprise roughly 11 percent, and 14 percent of the South Downtown Subarea is vacant land.

Commercial uses occur throughout the Subarea, though less so in the hillside proximate to the west edge of the Subarea where residential uses predominate. Educational uses are primarily found on the UWT campus. Most of the industrial uses are located in the southeast portion of the Brewery District and in the Dome District. Two important characteristics revealed in Figure 3.7-2 are the relatively low amount of residential uses and relatively high amount of vacant land within the Subarea. Parking also consumes a large percentage of the land area within the Subarea.

1 In the context of the UWT campus, “educational” uses may include research facilities and mixed-use housing.
South Downtown Subarea Existing Land Uses
The pattern (location and distribution) of land uses within the South Downtown Subarea is based on City policies associated with the Comprehensive Plan and, more specifically, on zoning that has been adopted consistent with the Comprehensive Plan policies. Seven zoning districts comprise the South Downtown Subarea. Each is briefly summarized in Table 3.7-1 and depicted in Figure 3.7-3.

The only purely residential zoning in the Subarea is located in the southwest corner of the Subarea in the area known as “Knob Hill.” The concentration of residential uses on the west hillside is reflected in the Downtown Residential zoning district located west of Tacoma Ave. Similarly, the concentration of industrial uses to the east of East G street is reflected in the Industrial Zoning found there. Otherwise, the Subarea is zoned for mixed-use and in general allows for relatively high density development.
Table 3.7-1
Zoning in the South Downtown Subarea

<table>
<thead>
<tr>
<th>Zoning District</th>
<th>Land Area Within the Subarea (ac.)</th>
<th>Maximum Building Height (ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downtown Mixed Use (DMU)</td>
<td>52</td>
<td>100</td>
</tr>
<tr>
<td>Warehouse/Residential (WR)</td>
<td>72</td>
<td>100</td>
</tr>
<tr>
<td>Downtown Residential (DR)</td>
<td>53</td>
<td>90</td>
</tr>
<tr>
<td>Downtown Commercial Core (DCC)</td>
<td>11</td>
<td>400</td>
</tr>
<tr>
<td>Urban Center Mixed-Use (UCX-TD)</td>
<td>28</td>
<td>70 - 120</td>
</tr>
<tr>
<td>Urban Center Mixed-Use (UCX-TD-225)</td>
<td>43</td>
<td>225</td>
</tr>
<tr>
<td>Multiple Family Dwelling (R-4)</td>
<td>17</td>
<td>60</td>
</tr>
<tr>
<td>Light Industrial (M-1)</td>
<td>32</td>
<td>75</td>
</tr>
<tr>
<td>Heavy Industrial (M-2)</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>Shoreline (S-8)</td>
<td>73</td>
<td>65 - 180</td>
</tr>
</tbody>
</table>

Tacoma’s Title 13 Land Use Regulatory Code, Chapter 13.06 establishes the land use and development code regulations concerning the following zoning districts within the Subarea:

- **R-4 Multiple-Family Dwelling District** – This zoning district is intended primarily to accommodate medium density multiple-family housing. Other appropriate uses may include day care centers and certain types of special needs housing. The district is characterized by a more active living environment and is located generally along major transportation corridors and between higher and lower intensity uses.

- **UCX-TD Urban Center Mixed-Use District** – This zoning district is intended to provide for a dense concentration of residential, commercial, and institutional development, including regional shopping centers, supporting business and service uses, and other regional attractions. These centers are to contain the highest densities outside the Central Business District. An urban center is a focus for both regional and local transit systems. The TD designation is used for the Urban Center Mixed-Use District in the Tacoma Dome area to provide specific transit-oriented development, consistent with the Tacoma Dome Area Plan. Walking and transit use is facilitated through designs which decrease walking distances and increase pedestrian safety. Residential uses are encouraged in UCX Districts as integrated development components.

- **M-1 Light Industrial District** – This district is intended as a buffer between heavy industrial uses and less intensive commercial and/or residential uses. M-1 districts may be established in new areas of the City. However, this classification is only appropriate inside Comprehensive Plan areas that are designated for medium and high intensity uses.

- **M-2 Heavy Industrial District** – This zone is intended to allow most industrial uses. The impacts of these industrial uses include extended operating hours, heavy truck traffic,
and higher levels of noise and odors. This classification is only appropriate inside *Comprehensive Plan* areas that are designated for medium and high intensity uses.

**Downtown Districts**

Land use and development regulations pertaining to special downtown zoning districts are included in Chapter 13.06A of the City’s Municipal Code. The following Downtown Districts are located within the South Downtown Subarea:

- **Downtown Commercial Core (DCC)** – This zoning district is intended to focus high rise office buildings and hotels, street level shops, theaters, and various public services into a compact, walkable area, with a high level of transit service.

- **Downtown Mixed-Use (DMU)** – This district is intended to contain a high concentration of educational, cultural, and governmental services, together with commercial services and uses.

- **Downtown Residential (DR)** – This zone is intended to contain a predominance of mid-rise, higher density, urban residential development, together with places of employment and retail services.

- **Warehouse Residential (WR)** – This zoning district is intended to consist principally of a mixture of industrial activities and residential buildings in which occupants maintain a business involving industrial activities.

**S-8 Shoreline District**

The lands along the Thea Foss Waterway are regulated by the “S-8” Shoreline District (Chapter 13.10.110), which is intended to improve the environmental quality of the Waterway; provide continuous public access to the Waterway; encourage the reuse and redevelopment of the area for mixed-use pedestrian-oriented development, cultural facilities, marinas and related facilities, water-oriented commercial uses, maritime activities, water-oriented public parks and public facilities, residential development, and waterborne transportation; and to encourage existing industrial and terminal uses to continue their current operations and leases to industrial tenants.

**3.7.2 Impacts**

**No Action Alternative**

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Land use-related impacts would be evaluated on a site-specific basis in conjunction with each proposed project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.
Development Alternatives

Each of the proposed development alternatives would continue the re-development trend of properties in the South Downtown Subarea, at varying intensities, for urban uses and activities. As such, the potential exists for land use-related impacts associated with new development that is consistent with the South Downtown Subarea Plan. Development under any of the three development alternatives would increase the land use intensity in South Downtown, in accordance with VISION 2040 and the goals of the City’s Comprehensive Plan, which, in the Generalized Land Use Element, states:

“The Downtown Tacoma Center is to be the highest concentration of urban growth found anywhere in the City and within Pierce County. The center also is a designated regional growth center providing a focal point for new housing and employment for the Central Puget Sound region.”

From an area-wide change perspective, Alternative 1 would have the greatest potential for land use-related impacts in that build-out could entail a net increase of 30 million sq.ft. of development, Alternative 2 would be somewhat less at 20 million sq.ft., and Alternative 3 would be the least with a potential net increase of 10 million sq.ft. However, considering the fact that this is an urbanized part of the City, that re-development is projected to occur over several decades and that land use-related impact mitigation presently exists and will continue, it is anticipated that the increased amount of urban activity within the South Downtown Subarea would not result in any significant land use-related impacts. Such development would be required to fully comply with existing development regulations, as noted in part 3.7.3 of this section.

As indicated by Table 2-1 (in Section II of this Draft EIS), in general, development resulting from any one of the development alternatives would result in increases in residential and commercial square footages, as well as the number of residents and employees within the Subarea. For example, between Alternative 3 and Alternative 1, there is a net increase of 10,000,000 square feet in both residential square footage and commercial square footage. Correspondingly, the net increase in the number of residents varies by 20,000 between Alternative 3 and Alternative 1 and the net increase in the number of jobs varies by 26,667 between Alternative 3 and Alternative 1. See Section II for a discussion of differences in land use patterns within each of the subareas relative to each development alternative.

Development within the South Downtown Subarea would likely result in the construction of buildings on formerly vacant lots, surface parking lots, and demolition of single family and underutilized or devalued properties in order to accommodate higher density development. Such would change the use patterns and aesthetic character at the block-scale and potentially even at the neighborhood-scale.

Redevelopment of surface parking lots could, depending on how much structured parking is provided in conjunction with the redevelopment project, reduce the amount of parking available in the vicinity of a redevelopment site. This would result in increased competition for on-street and off-street parking spaces in the vicinity of the redevelopment site. As noted in the proposed South Downtown Subarea Plan, a reduction in the amount of surface parking could create a more pedestrian-friendly environment that would encourage walking and transit use, and help reduce the use of single-occupant vehicles.
At the regional scale, redevelopment in the South Downtown Subarea would result in land use outcomes that would help achieve the regional land use intent of the PSRC’s VISION 2040 regional plan. One of the primary goals of VISION 2040 is to focus the majority of regional growth in urban centers. It is well established that growth is coming to the Tacoma region, and the more of that growth that can be accommodated in the South Downtown urban center, the less growth there will be in suburban and rural areas elsewhere in the region. Compared to suburban and rural areas, typical land use patterns in urban centers such as South Downtown can be expected to provide numerous beneficial environmental impacts, including:

- reduced energy use and GHG emissions
- less consumption of land and reduced development pressure on farms and forests;
- reduction of polluted water runoff
- lower cost of infrastructure such as roads and utility lines
- increased operational efficiency of transit

The more development that occurs in the Subarea, the more of the above benefits will be realized, and so it follows that from the regional land use perspective the highest intensity alternative, Alternative 1, would be the preferred alternative.

3.7.3 Mitigation Measures

The following mitigation measures apply to all alternatives, and are based on existing City policies, regulations and other mitigation, as noted below.

City Policies

The following policies, together with City codes and other more specific measures, can help mitigate impacts that are described in this section of the Draft EIS.

Tacoma Comprehensive Plan -- Generalized Land Use Element

This element of the Comprehensive Plan contains the following policies that can provide mitigation by supporting the land use changes necessary to achieve the growth goals of the proposed South Downtown Subarea Plan.

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LU-MUDTC-1 Maximize Development</strong></td>
<td>Encourage maximum development of the downtown with diverse types of uses and facilities such as major financial, professional, office, cultural, retail and high density residential developments, giving the City of Tacoma a recognizable focal point that has continuous, vigorous use and affords maximum safety and convenience.</td>
</tr>
<tr>
<td><strong>LU-MUDTC-2 Preservation of Historical, Cultural and Scenic Resources</strong></td>
<td>Recognize the abundance and prominence of historical, cultural, and scenic resources within downtown and preserve these unique assets.</td>
</tr>
<tr>
<td><strong>LU-MUDTC-3 Parking</strong></td>
<td>Emphasize on-street parking and parking within structures to meet the majority of parking needs in the downtown area.</td>
</tr>
<tr>
<td><strong>LU-MUDTC-4 Residential Development</strong></td>
<td>Encourage quality residential development including high-rise apartments and other concentrated housing types that are designed not</td>
</tr>
</tbody>
</table>
only to support compactness of the center but also to improve the
livability of the urban area.

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>LU-MUDTC-5 Integrated Downtown</td>
<td>Encourage the development of an integrated transportation system consisting of automobile, transit, cycling, and pedestrian linkages that complements activities in the downtown center.</td>
</tr>
<tr>
<td>LU-MUDTC-6 Parking/Transit Relationship</td>
<td>Recognize the availability and cost of parking in downtown substantially influences public transit’s viability as a transportation alternative.</td>
</tr>
<tr>
<td>LU-RDHI-1 Locate Near or Within Regional Activity Centers</td>
<td>High-density residential developments should be located near and within regional mixed-use centers where utilities, transit facilities, employment opportunities and commercial conveniences and services are available to accommodate developments of this nature.</td>
</tr>
<tr>
<td>LU-RDHI-2 Maximize Marine View</td>
<td>Locate new high-rise, high-density residential development within and in areas adjacent to the downtown in order to take maximum advantage of the marine and territorial views.</td>
</tr>
<tr>
<td>LU-RDHI-4 Housing for a Variety of Incomes</td>
<td>Encourage the construction of high, medium and low-income residential developments within high intensity areas.</td>
</tr>
<tr>
<td>LU-RDHI-6 Mixed-use</td>
<td>Promote residential development for the upper floors of commercial buildings to achieve greater densities and support transit use, particularly within mixed-use centers.</td>
</tr>
<tr>
<td>LU-CDLA-4 Locate in Existing Commercial Areas and in Mixed-use Centers</td>
<td>Encourage new commercial development to locate within existing commercial areas and in mixed-use centers in order to maximize the use of the land and maintain the economic viability of established commercial developments.</td>
</tr>
<tr>
<td>LU-CDLA-9 Commercial Uses within Residential High-Rise</td>
<td>Encourage commercial development that provides convenience goods to be situated within mid and high-rise residential structures in order to serve the needs of the persons within.</td>
</tr>
<tr>
<td>LU-CDLA-13 Residential Development within Commercial Areas</td>
<td>Encourage the development of residential uses within and near commercial areas, particularly within mixed-use centers.</td>
</tr>
<tr>
<td>LU-CDD-3 Pedestrian-friendly Design</td>
<td>Site and design commercial areas with safe, convenient, connected and attractive pedestrian access.</td>
</tr>
<tr>
<td>LU-CDD-4 Bicycle Amenities</td>
<td>Encourage commercial developments to provide bicycling facilities including paths, parking, employee showers, and changing areas in commercial areas.</td>
</tr>
<tr>
<td>LU-CDHI-1 Open Space/Landscaping</td>
<td>Open spaces, including parks, plazas and squares, and landscaping with street trees should be developed to complement and enhance high intensity commercial areas.</td>
</tr>
<tr>
<td>LU-IDG-1 Industrial Land Needs</td>
<td>Allow for concentrations of land of sufficient size and quantity to meet the needs of industry, provide employment opportunities, support economic development, and promote efficient use of land, utilities and transportation facilities.</td>
</tr>
<tr>
<td>LU-IDG-2 Utilize Existing Industrial Areas</td>
<td>Strongly encourage new industrial development to locate in existing industrial areas to limit land use and transportation conflicts.</td>
</tr>
</tbody>
</table>

The Public Services Element of the Comprehensive Plan also includes policies that address potential adverse impacts and mitigation associated with land use and open space.
Regulations

Land Use Regulatory Code

The Comprehensive Plan policies noted above are implemented through Tacoma’s Title 13 Land Use Regulatory Code. As established in Chapters 13.06 and 13.06A, existing zoning in the South Downtown Subarea provides a wide range of regulations that mitigate potential adverse impacts of development. Each zone in the Subarea has a set of allowed uses that are intended to reinforce the desired character of the zone. Zone-specific regulations are summarized below.

Residential, Mixed-Use Center, and Industrial Districts

The R-4, UCX-TD, M1, and M2 zones have established uniform development standards that include:

- 13.06.501 Building Design Standards;
- 13.06.502 Landscaping and/or buffering standards;
- 13.06.503 Residential transition standards;
- 13.06.510 Off-street parking and storage areas;
- 13.06.511 Transit Supportive Facilities; and
- 13.06.512 Pedestrian and bicycle support standards.

The R-4 zone preserves residential character by requiring minimum setbacks (front yard - 15 ft., side yard - 5 ft., back yard - 25 ft.), and requiring a yard area of at least 10 percent of the lot area.

The UCX-TD zone requires the following standards that support the intended pedestrian-oriented, mixed-use environment and provide mitigation for potential adverse impacts of development:

- no minimum setbacks; 5 foot maximum front and corner side setbacks;
- upper level setbacks of 10 ft. from adjacent lot line for portion over 50 ft. in height;
- minimum density of 30 housing units per acre in residential buildings;
- allowed height increase from 75 ft. to 120 ft. for a cultural institution, or at least 25 percent of floor area residential, including hotels, or through use of TDRs;\(^2\)
- in specified areas adjacent to the Tacoma Dome (see Figure 3.7-3, above), allowed height may be increased to 225 ft. if at least four of the design elements and two of the special features for downtown districts (see next section) are included;
- designated pedestrian streets on Puyallup Ave., E. 25th St., E. 26th St., and E. D St. – provisions include use restrictions and design requirements, such as increased transparency, weather protection and street furniture standards; and

\(^2\) Transfer of Development Rights (TDR) is a regulatory strategy by which development rights are transferred from places that are appropriate for preservation (sending areas), to places that are appropriate for increased development (receiving areas).
The M2 zone mitigates for building heights above 100 ft. by requiring a one foot setback on all four sides for every four ft. of height above 100 ft.

**Downtown Districts**

The downtown zoning districts (DCC, DMU, DR, WR) are subject to the following basic design standards that support the intended pedestrian-oriented mixed-used environment and provide mitigation for potential adverse impacts of development:

- rooftop mechanical screening;
- one street tree per each 25 linear ft. of frontage;
- surface parking lot perimeter landscaping strip;
- ground-level facades of parking garages designed to obscure the view of parked cars;
- on Pacific Ave., at least 25 percent of the linear sidewalk level frontage shall consist of specified active uses;
- on Pacific Ave, at least 20 percent of the area located between 2 ft. above grade and 12 ft. above grade be transparent, through the use of windows, doors, or window displays; and
- more stringent standards apply in the DCC zone on the west side of Pacific Ave. between S. 15th and S.17th Avenues.

The downtown zoning districts also have design standards and “special features” for increasing the allowable floor-area-ratio (FAR), as shown in **Table 3.7-2**. This mechanism provides additional mitigation for development at higher intensities. Tables depicting this information are included in Appendix B of this Draft EIS. At least four of the following design standards are required for the first tier of FAR increase:

1. Architectural expression;
2. Architectural delineation of the tops of buildings;
3. Enhanced pedestrian elements at the sidewalk level;
4. Exterior public space equivalent to at least 5 percent of the site area;
5. Incorporation of works of art into the public spaces, exterior facade, or entrance lobby;
6. Landscaping covering at least 15 percent of the surface of the roof and/or the use of “green roofs;”
7. Including a Public Benefit Use within the development;
8. Retention and renovation of any designated or listed historic structure(s) located on the site;
9. Parking contained entirely within structures or structures on the site; and
10. Include mixed-rate housing in a housing or mixed-use project.

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3 **Floor Area Ratio (FAR)** -- Tacoma Municipal Code 13.06.700F -- The amount of floor area within a building as a multiple of the lot area. Right-of-way that has had its air rights vacated shall be considered as lot area for calculating FAR. For the purposes of calculating allowable FAR within the downtown area, floor area shall exclude the following areas when calculating the maximum FAR: 1) Spaces below grade; 2) Space used for retail uses or restaurants that front the sidewalk; 3) Space devoted to special features; 4) Area used for parking; 5) Mechanical equipment, elevators, and stair shafts; and 6) Exterior decks, balconies, and corridors open to the air.
Table 3.7-2
Options for Increased FAR Limits in Downtown Districts

<table>
<thead>
<tr>
<th>ZONE</th>
<th>Residential FAR</th>
<th>Commercial FAR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>As of Right</td>
<td>With Design Standards</td>
</tr>
<tr>
<td>DMU</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>WR</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>DR</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>DCC</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

Incorporation of each of the following special features provides an additional FAR of 2 towards achieving the maximum allowable FAR:

1. Provide a “hill climb assist” in the form either of a landscaped public plaza or an interior public lobby with an escalator or elevator.
2. Provide works of art or water features equivalent in value to at least 1 percent of construction costs within publicly accessible spaces on site or off site within the downtown zoning district where the development is located.
3. Build an off-site park, open space, or community gardens with a value equivalent to at least 1 percent of construction costs within the downtown zoning district where the development is located.
4. Alternatively, a payment may be paid to the City in lieu of actual park development.
5. Provision of public rest rooms, open to the public at least 12 hours each weekday.
6. Contribution to a cultural, arts organization or to the Municipal Art Fund for a specific development or renovation project located downtown, in an amount equal to at least 1 percent of the construction cost of the development.
7. Provide public parking, in addition to that required by this code, at a ratio of at least 0.25 stalls per 1000 gsf.
8. Include residential use with non-residential uses in the same development, with the residential use in an amount that is at least 20 percent of the total floor area of the development.

Lastly, Pacific Ave. between S. 7th and S. 25th Streets is a designated Primary Pedestrian Street, subject to policies and regulations that provide mitigation for development. Such streets are considered key streets in the intended development and utilization of the area due to pedestrian use, traffic volumes, transit connections, and/or visibility. The streetscape and adjacent development on these streets should be designed to support pedestrian activity throughout the day. They are designated for use with certain provisions in the Downtown zoning regulations, including setbacks and design requirements.

**S-8 Shoreline District**

Development standards within the S-8 District are divided between the west and east sides of the Thea Foss Waterway. The west side of the S-8 District is subject to the following regulations and standards that provide mitigation for potential adverse impacts of development:
Area Regulations

- The Foss Waterway Development Authority (FWDA) shall administer development of publicly-owned properties and shall conduct design review of projects on public property on the west side of the Waterway.
- Project proponents shall conduct a view impact analysis for all new development that exceeds 35 feet in height.
- Any new building adjacent to Dock St. view/access corridors, or the esplanade must provide pedestrian-oriented uses and activities which are directly accessible from adjacent public spaces.
- Blank walls (walls that do not contain doors, windows, or ventilation structures) between two feet and eight feet above the adjacent sidewalk shall be no longer than 20 feet in length.

View/Access Corridors

In the S-8 portion of the South Downtown Subarea, fourteen 80-foot wide view/access corridors between Dock Street and the inner harbor line are established: Three primary view/access corridors at the alignment with South 13th, 15th, and 17th Streets, and eleven secondary view/access corridors are established immediately south of the Dock Building, north and south of the Puget Sound Freight Building, north of the Municipal Dock Building, and at the alignment of South 9th, 11th, 12th, 14th, 16th, 18th, and 20th Streets.

Development Standards

Height and modulation requirements vary depending on the site location on the Foss Waterway. Maximum building heights range from 65 feet at the south end of the Waterway to 180 feet near the north end of the Waterway for a tightly specified tower configuration. Allowed site coverage is 100 percent up to 50 feet in height, 70 percent between 50 and 100 feet, and 50 percent above 100 feet. Buildings must extend to the site edge for a minimum of 60 percent of the site perimeter (except the tower option noted above).

The east side of the S-8 District is subject to the following regulations and standards that provide mitigation for potential adverse impacts of development:

- A minimum side yard/view corridor of 30 percent of the shoreline frontage of the site (with some exceptions)
- A minimum front yard having a depth of 20 feet (with some exceptions)
- A 20-foot minimum rear yard setback (with some exceptions)
- Minimum average lot width of 50 feet, a minimum lot frontage of 25 feet, and an area of not less than 5,000 square feet.

Shoreline Master Program

In compliance with the State’s Shoreline Management Act, the City of Tacoma recently completed an update to its Shoreline Master Program (SMP), which is currently being reviewed by the Department of Ecology. The South Downtown Subarea includes shoreline parcels along

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4 WAC 173-26-201(2)(C)
the Foss Waterway that are within the Shoreline District and, therefore, subject to the City’s SMP. The SMP’s overarching land use goal (3.2.1) is “to preserve and develop shorelines in a manner that allows for an orderly balance of uses.” Policies and regulations intended to support this land use goal are established in Chapter 6.1 of the SMP, and primarily address requirements for water-based uses.

Chapter 9.10 the SMP establishes development regulations specific to the S-8 Thea Foss Waterway District, which are intended to:

“provide continuous public access to the Waterway; encourage the reuse and redevelopment of the area for mixed-use pedestrian-oriented development, cultural facilities, marinas and related facilities, water-oriented commercial uses, maritime activities, water oriented public parks and public facilities, residential development, and waterborne transportation; and to allow new water-oriented industrial uses where appropriate.”

Regulations require that a minimum of 75 percent of the esplanade frontage and 20 percent of the Dock Street frontage shall be occupied by water-oriented uses, with exceptions allowed to account for short-term market conditions.

Other Mitigation

The South Downtown Subarea Plan will guide redevelopment of the South Downtown area over the long-term. This plan, along with individual project review by the City, would serve as mitigation to preclude potential significant land use-related impacts from future redevelopment and ensure compatibility between uses. Mitigation measures for indirect land use impacts (i.e., noise, aesthetics, transportation/parking, etc) are addressed in their respective sections of this Draft EIS and through existing, applicable City codes.

The proposed South Downtown Subarea Plan is intended to accommodate the amount of growth that is projected to occur as a result of any one of the proposed development alternatives. An overall objective of the Subarea Plan is to improve the economic vitality and quality of life in South Downtown. The Plan is grounded in a Policy Framework that establishes the following main strategies:

1. Develop in relationship to transit;
2. Leverage South Downtown’s assets;
3. Enhance and connect the public realm;
4. Cultivate synergies with the University of Washington Tacoma; and
5. Advance the Vision for the Foss Waterway.

Together, these five strategies and their associated policies and actions will provide the framework for implementing regulations, programs, and public investments that will mitigate adverse impacts of intensified land use in South Downtown.

Live-Work and Work-Live

Development of the Subarea Plan led to the adoption of new Land Use Code language that applies to Live-Work and Work-Live uses in Downtown (including all of the South Downtown Subarea), and mixed-use centers. The City wishes to encourage these uses in order to
promote the following positive outcomes:

- Stimulate additional economic activity in conjunction with residential uses;
- Reduce vacant space and underutilized buildings;
- Help preserve architectural and cultural past;
- Establish a live-work and residential community;
- Create a more balanced ratio between housing and jobs in the region's primary employment center;
- Facilitate the development of a "24-hour city;" and
- Improve air quality and reduce vehicle trips and vehicle miles traveled by locating residents, jobs, hotels and transit services near each other.

The new Live-Work code allows all buildings (with some exceptions) to add a home occupation (pursuant to TMC 13.06.100 E) without being subject to the limitation in TMC 13.06.100 E(6) that no employees outside the members of the family residing on the premises be involved in the home occupation.

Under the new Work-Live code, adding a minor residential component to an existing or historic building does not trigger change of use requirements under the City's Land Use Code. A Work-Live unit is a combined living and work unit that includes a kitchen and a bathroom that occupies no more than 33 percent of the total floor area of the legal non-residential use and is not separated from the work space. The residential use must be clearly incidental and subordinate to the work space use and must not generate impacts to any greater extent than what is usually experienced in the surrounding area. New roof structures are not considered as adding new floor area or to trigger change of use requirements provided that they are used solely for accessory uses. Adding a "work-live" unit is not subject to density requirements in the underlying zone.

Additional features of the new code that apply to both Live-Work and Work-Live uses include:

- No additional parking spaces are required;
- Up to 10 percent of new floor area may be added without triggering a change in use;
- External additions are exempt from all prescriptive design standards;
- Non-conforming floor area, Floor Area Ratio (FAR), setbacks, height, and site landscaping are "grandparented in;"
- Mezzanine spaces may be added so long as they do not exceed a 10 percent increase in floor area or one third the area of the floor below;
- These provisions do not extend to adaptive reuses that involve more than 20 dwelling units or more than 12,000 sq.ft. of commercial space in a particular building.

**Land Use Code Updates**

The **South Downtown Subarea Plan** proposes several updates to the land use code that are designed to encourage high-quality development, as summarized below:

**Convert the UCX-TD District in the Dome District to DMU**

The bulk of the South Downtown Subarea is zoned as Downtown Districts, the major exception being the Dome District, most of which is zoned as one of the City's Mixed-use Center Districts,
namely UCX-TD. Established more recently than the Mixed-used Center Districts, the Downtown Districts are less prescriptive about development standards such as setbacks, modulation, materials, and landscaping. The four most significant differences between UCX-TD and the Downtown Districts are:

- UCX-TD carries more specific design, pedestrian and parking standards;
- UCX-TD must meet Landscaping per 13.06.502 for site and perimeter landscaping;
- UCX-TD has a minimum density for residential developments (30 units per acre); and
- UCX-TD allows fewer uses.

The more stringent development regulations of UCX-TD can be expected to make the Dome District a less attractive option for development compared to neighboring parts of South Downtown located in Downtown Districts, all else being equal. This discrepancy could result in more development in coming to the Brewery District at the expense of development in the Dome District, creating an imbalance between the two areas. One potential solution to this problem is to rezone the UCX-TD in the Dome District to a Downtown District.

In addition, the Dome District is significantly different in character from the more typical Tacoma Mixed Use Center: it has major transit investments, it’s part of the Downtown Urban Growth Center, and it’s a target for relatively high density development. Thus, it makes logical sense that the Dome District would be a zoned as a Downtown District, and the most appropriate choice would be Downtown Mixed-Use (DMU). Such a re-designation would help to better unify the Dome District with the rest of South Downtown, and make the regulatory framework simpler overall.

**Update the Downtown District FAR Bonus System:**

As shown in Table 3.7-2 above, the Downtown Districts include a system by which developers can achieve an increase in allowed floor-area-ratio (FAR) in exchange for the inclusion of design features that provide public benefit, as described above. There are several modifications that could help bring FAR bonus system more in line with the economic development goals of South Downtown and Downtown as a whole, while also maintaining sufficient regulation to ensure a positive design outcome for the community. First of all, the following deletions should be made:

- Design standards #1 and #2. It was generally agreed among South Downtown stakeholders that these requirements are too architecturally subjective, and that developers shouldn’t be incentivized for doing something that they can be expected to do anyway.
- Special Feature #6. Incentivizing the production of new parking facilities is counter to the primary goal of South Downtown to create walkable, transit-oriented communities. Downtown as a whole already has an excess of off-street parking.
- Special Feature #7. It is not a high priority to incentivize the production commercial buildings that include housing in Downtown.

**Transfer of Development Rights**

The FAR bonus system should also be modified to incorporate transferrable development rights (TDR). As noted in the TDR Section of this Chapter, a recent report commissioned by the City
recommended that TDR become the only mechanism for achieving the highest tier of FAR bonus. The first step toward this end is to rearrange the FAR bonus table, as shown in Table 3.7-3 below:

**Table 3.7-3**

As-of-Right FAR and Allowed Increases for Downtown Districts

<table>
<thead>
<tr>
<th>District</th>
<th>Residential FAR</th>
<th>Commercial FAR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>As-of-right</td>
<td>Maximum with Design Features</td>
</tr>
<tr>
<td>DMU</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>WR</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>DR</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>DCC</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

Note that none of the allowed FAR maximums has been altered from the existing system. The proposed system would allow developers to apply TDRs to increase the as-of-right FAR by any amount desired up to the specified maximum with TDR.

The proposed FAR bonus system retains the original Design Standards and Special Features, but allocates them together as “Design Features” to provide a range of options for achieving the 1st tier of FAR bonus in Table 3.7-3. In order to enable a flexible combination of Design Features, the existing requirement for four Design Standards to achieve the 1st FAR tier is removed, and replaced with an allowance to “mix and match” Design Features to achieve any FAR bonus desired, up to the 1st tier maximum. In accordance with the FAR values assigned in the existing system, Design Features derived from the original Design Standards are worth 0.5 FAR each, and those derived from the original Special Features are worth 2.0 FAR each. Because of the relative importance and level of effort required for structured parking, Design Standard #9 is assigned an FAR value of 2.0.

The City’s proposed TDR Program will include options that credit TDRs toward in-city open space, historic buildings, and affordable housing. To eliminate overlap, Design Standards #9 and #11, and Special Feature #3 can be deleted because they would promote the same three outcomes.

**Expand the Reduced Parking Area**

The City of Tacoma recently adopted a Reduced Parking Area (RPA) in which parking minimums are set to zero for residential and commercial uses (while still requiring accessible parking). The RPA covers most of Tacoma’s downtown core, including a large portion of the South Downtown Subarea. In November 2011 the City of Tacoma Planning Commission issued the following statement in support of the action:

*The existing minimum parking requirements for new development in downtown are largely considered to be unnecessarily burdensome and a barrier to new development,*
as the requirement increases project costs and potentially adds unnecessary parking stalls in areas of downtown where parking is plentiful. The Planning Commission concludes that eliminating minimum parking requirements for new development in the core of downtown will remove a barrier to new investment and move the City toward a market-based parking system.

Furthermore, the Planning Commission recognizes that transportation investments, like parking are closely tied to land use and personal transportation decisions. The more available facilities are for personal vehicles, the more likely individuals are to choose a single-occupancy vehicle over an alternate travel mode. The same holds true for bicycle and pedestrian facilities. Based on a review of the Comprehensive Plan and development regulations, the Commission concludes that downtown’s off-street parking regulations should be modified to address city policies and goals supporting environmental sustainability, multimodal transportation options and a compact and walkable urban form in addition to economic development.

The above words are in alignment with goals of the South Downtown Subarea Plan. As such the City should extend the RPA to include appropriate portions of the South Downtown Subarea. Following the model of the currently established RPA boundaries, the RPA should be established on all DMU, WR, and UCX-TD Districts in South Downtown.

Designate Primary Pedestrian Streets

Tacoma’s Downtown Districts include designated Primary Pedestrian Streets that:

“...are considered key streets in the intended development and utilization of the area due to pedestrian use, traffic volumes, transit connections, and/or visibility. The streetscape and adjacent development on these streets should be designed to support pedestrian activity throughout the day. They are designated for use with certain provisions in the Downtown zoning regulations, including setbacks and design requirements.”

Within the Downtown Districts of South Downtown, the only designated Primary Pedestrian Street is Pacific Ave, north of S. 25th St. As South Downtown gains population and employment, the numbers of pedestrians using the streets will rise accordingly. To meet this need, additional streets should be identified for Primary Pedestrian Street designation. Based on existing and expected future uses, the two highest priority streets for near-term designation are:

- S. Jefferson between S. 21st St. and S. 25th St.
- S. 25th St. between I-705 and S. Fawcett Ave.
- South C St.
- East C St.

Downtown District Administrative Variances

The Downtown District land use code is relatively unforgiving with respect to administrative variances. With very few exceptions, variances are not permitted on use, development standards, parking standards, design standards, and the design features required to achieve an
FAR bonus. Because every development project has a unique context and set of requirements, departures from regulations can often enable an unconventional design solution that still satisfies the needs of both the developer and the community. Granting the option of variances allows for such circumstances, thereby providing greater flexibility to developers if they need to make a project more economically feasible.

Proposed language for an update to Chapter 13.06A.110 Variances, reads as follows:

“The Director of Planning and Development Services may, except where otherwise noted, grant a variance by act or interpretation of the regulations. The Land Use Administrator may issue such conditions as necessary to maximize possible compliance with the intent of the regulation from which relief is sought. The applicant carries the burden of proof to demonstrate applicability of the appropriate test.”

The proposed language would also address specific variance-related sections of Chapter 13.06A, as follows:

“A variance to the standards may be authorized, pursuant to Section 13.06A.110.”

3.7.4 Unavoidable Adverse Impacts

With application of the land use-related mitigation noted above, no significant unavoidable land use impacts are anticipated in conjunction with any of the proposed alternatives. Proposed redevelopment within the South Downtown Subarea would result in an intensification of development, additional employment opportunities, and increased population in the South Downtown area. While the intensity of redevelopment in this area would be substantially greater than the amount of existing development, such redevelopment would be consistent with the South Downtown Subarea Plan (if adopted), the intent of the City’s Comprehensive Plan and zoning.

PART B – RELATIONSHIP TO PLANS and POLICIES

The objectives and policies of the South Downtown Subarea Plan are consistent with existing plans and policies at the Federal, State, regional, and local levels. The following is a synopsis of applicable plans and policies, together with an analysis of project consistency with each.

Federal Partnership for Sustainable Communities

Tacoma’s South Downtown Subarea Plan and this EIS are funded by the Puget Sound Regional Council’s (PSRC) Growing Transit Communities (GTC) Partnership, which in turn was funded through a $5 million Regional Planning Grant from the Federal Partnership for Sustainable Communities. The Partnership for Sustainable Communities is a multi-disciplinary collaboration between the Environmental Protection Agency (EPA), the Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT), with the mission of promoting “places that have a variety of housing and transportation choices, with destinations close to home.” The Partnership has established the following six livability principles for sustainable communities:

5 http://www.sustainablecommunities.gov/
• Provide more transportation choices;
• Promote equitable, affordable housing;
• Enhance economic competitiveness;
• Support existing communities;
• Coordinate and leverage federal policies and investment; and
• Value communities and neighborhoods.

The PSRC has designed the GTC Partnership in accordance with the above principles and South Downtown Subarea was chosen for a “catalyst” project because of its exceptional potential to realize those principles and become a regional model for sustainable development.

Discussion:

South Downtown already possesses many of the important ingredients of a sustainable community, including high quality transit, a walkable street grid, historic character, access to open space and a waterfront, educational institutions, cultural attractions, and a spectacular natural setting. The main piece that’s missing is significantly more people and jobs to take advantage of these great assets. Accordingly, the primary goal of the South Downtown project is to plan for absorbing a large portion of the City’s allocated population and employment growth.

Washington State Growth Management Act

Adopted in 1990, the Growth Management Act (GMA) sets forth 13 goals, including the following that are most directly aligned with the overall objectives of the South Downtown Subarea Plan:

• Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.
• Reduce the inappropriate conversion of undeveloped land into sprawling, low-density development.
• Encourage efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans.
• Promote economic opportunity… especially for unemployed and for disadvantaged persons, promote the retention and expansion of existing businesses and recruitment of new businesses… encourage growth in areas experiencing insufficient economic growth.
• Protect the environment and enhance the state’s high quality of life, including air and water quality…
• Identify and encourage the preservation of lands, sites, and structures that have historical… significance.

The GMA requires municipalities to plan for accommodating growth, and grants counties, in consultation with cities, authority to assign growth allocations for population and employment. In general, the goals of the GMA will be most successfully achieved by maximizing the portion of growth that can be accommodated in urbanized areas with adequate infrastructure. Assigned by the Pierce County Regional Council (within parameters set by the Puget Sound Regional
Council), the City of Tacoma’s growth allocations are 78,600 new residents and 64,200 new jobs between 2008 and 2030.

Discussion:

The South Downtown Subarea Plan is intended to play a key role in helping the City accommodate the growth allocations that are projected.

Within Tacoma, GMA goals would be best served by maximizing accommodation of the growth allocations in the downtown core where there is plentiful development capacity, a concentration of employment, and significant infrastructure, including a regional transit hub. A 2009 Pierce County study6 estimated that downtown Tacoma has the capacity for an additional 62,400 people and 42,200 jobs, which represents a large portion of the growth allocations.

In accordance with the intent of GMA, a key component of the South Downtown Subarea Plan and this EIS is to assess the upper limits of how much growth can be accommodated in South Downtown, in particular. It is felt that an understanding of these upper limits will help ensure that the City is fully leveraging opportunities for the sustainable accommodation of growth and the potential of South Downtown to contribute to the realization of a sustainable region, in accordance with the primary goals of GMA.

VISION 2040

VISION 2040 is the PSRC’s vision and strategy for accommodating the 5 million people and 3 million jobs that are expected in the Puget Sound region by 2040, while promoting the “well-being of people and communities, economic vitality, and a healthy environment.” VISION 2040 is also the policy document that provides the rationale for assigning growth allocations to meet the requirements of GMA, as noted above.

One of the six overarching goals of VISION 2040 is to “focus growth within already urbanized areas to create walkable, compact, and transit-oriented communities that maintain unique local character.” Even more pertinent to South Downtown Tacoma, VISION 2040 establishes the following policy: “Encourage efficient use of urban land by maximizing the development potential of existing urban lands, such as advancing development that achieves zoned density.”7 One of VISION 2040’s key strategies is to concentrate growth in urban centers, defined as “locations identified to take a greater proportion of future population and employment in order to curb sprawl.” Centers are characterized by “compact, pedestrian-oriented development, a mix of different office, commercial, civic, entertainment, and residential uses,” along with “improved accessibility and mobility for walking, biking, and transit.”

At the top of VISION 2040’s hierarchy of Centers are Regional Growth Centers, “envisioned as major focal points of higher density population and employment, served with efficient multimodal transportation infrastructure and services.”

Discussion: Downtown Tacoma is one of the 27 designated Regional Growth Centers within the region. The South Downtown Subarea comprises most of the southern half of Tacoma’s downtown area.

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6 Identifying Redevelopable Lands, Application of a Land Value Potential (LVP) approach in Urban Centers, Pierce County, 2009
7 http://psrc.org/growth/vision2040
The objectives of the South Downtown Subarea Plan are consistent with VISION 2040’s intention to target growth and leverage the potential of Regional Growth Centers. South Downtown has exceptional physical and cultural assets and plenty of development capacity. The Plan will develop strategies for how growth and livability can be maximized in tandem, an outcome that supports both the local and regional goals of VISION 2040, and that results in attracting significantly more residents and jobs.

Pierce County Countywide Planning Policies

In accordance with GMA, the Pierce County Regional Council maintains the Pierce County Countywide Planning Policies (PCCPP) to coordinate planning countywide. PCCPPs were updated in 2012 and the include a wide range of policies; the most relevant policies are summarized below.\(^8\)

- **COMMUNITY AND URBAN DESIGN:** Each municipality in the County will develop high quality, compact communities that:
  1. Impart a sense of place;
  2. preserve local character;
  3. provide for mixed uses and choices in housing types; and
  4. encourage walking, bicycling, and transit use.

- **ECONOMIC DEVELOPMENT AND EMPLOYMENT:** The County, and in each municipality in the County, will work to achieve a prospering and sustainable regional economy by supporting business and job creation, investing in all people, sustaining environmental quality, and creating great central places, diverse communities, and high quality of life... by:
  - providing ... an adequate supply of housing with good access to employment centers;
  - determining a reasonable “jobs/housing” balance and then coordinating land use and development policies to help achieve the designated balance of adequate affordable housing accessible to employment centers;
  - providing opportunities and locations for incubator industries;
  - marketing development opportunities;
  - encouraging redevelopment of underutilized commercial areas;
  - encouraging the location of economic development activities in areas served by public transit and adequate transportation facilities;
  - reducing inefficient, sprawling development patterns;
  - reducing transportation demand;
  - promoting development in areas with existing available public facility capacity;
  - encouraging joint public/private development as appropriate;
  - concentrating a significant amount of economic growth in designated centers;
  - promoting infill development to assist in maintaining a viable market for existing businesses;
  - utilizing redevelopment or other public financing mechanisms, where appropriate, to maintain existing businesses; and
  - streamlining permit processing.

\(^8\) http://www.co.pierce.wa.us/pc/abtus/ourorg/pcrc/index.htm
- **HEALTH AND WELL-BEING**: The County, and each municipality in the County, will be designed to promote physical, social, and mental well-being so that all people can live healthier and more active lives by:
  - designing communities to provide an improved environment for walking and bicycling;
  - developing and implementing design guidelines to encourage construction of healthy buildings and facilities to promote healthy people; and
  - developing and implementing community plans and programs, such as community gardens and farmer's markets, that provide support for agricultural, farmland, and aquatic uses that facilitate the production of fresh and minimally processed healthy foods, and encourage community access to those resources.

- **NATURAL RESOURCES, OPEN SPACE, PROTECTION OF ENVIRONMENTALLY SENSITIVE LANDS AND THE ENVIRONMENT**:
  - **Air Quality**: Strengthening efforts to reduce pollutants from transportation activities by:
    - reducing vehicle miles traveled and auto dependence;
    - designing and prioritizing compact communities and neighborhood accessibility for goods and services;
  - **Climate Change**:
    - direct development into urban areas and compact centers to prevent and reduce the urbanization of ecologically sensitive areas and natural resources;
    - increase alternatives to driving alone; and
    - encourage private and public development of transit-oriented development throughout the country to reduce the need for personal vehicle use.

- **TRANSPORTATION FACILITIES AND STRATEGIES**
  - The County, and in each municipality in the County, shall address substandard LOS for existing facilities by:
    - using transportation demand management; and
    - promoting nonmotorized travel.
  - The County, and in each municipality in the County, shall address compatibility between land use and transportation facilities by:
    - using land use regulations to increase the modal split between automobiles and other forms of travel;
    - designating high densities in transit and transportation corridors and designated TOD sites;
    - requiring pedestrian-oriented design; and
    - encouraging or requiring mixed use development and TOD.

- **OVERALL POLICIES FOR NON-INDUSTRIAL CENTERS**:
  - **Design Features of Centers**: The County and each jurisdiction that designates a center within its comprehensive plan shall encourage density and development to achieve targeted growth:
    - [by] encouraging higher residential densities within centers
    - [by] allowing for greater intensity of use within centers
    - Designated centers are expected to receive a significant share of projected growth in conjunction with periodic disaggregation of countywide population allocations.
- **Transportation, Parking and Circulation:**
  - Locate higher densities/intensities of use close to transit stops within centers and seek opportunities to:
    - create a core area to support transit and HOV use;
    - establish incentives for developers to provide transit and transportation demand management supportive amenities.

- **Implementation Strategies:** Jurisdictions should consider incentives for development within centers such as:
  - streamlined permitting;
  - financial incentives;
  - density bonuses or TDR;
  - using SEPA Planned Action provisions to streamline environmental review by conducting environmental analysis during planning and providing permit applicants and public with more certainty of how impacts will be addressed;

- **REGIONAL GROWTH CENTER:** Regional Growth Centers are targeted for employment and residential growth, and provide excellent transportation service, including fast, convenient high capacity transit service, as well as investment in major public amenities. Regional Growth Centers shall plan to meet the following criteria:
  - a minimum of 25 employees per gross acre of non-residential lands; and
  - a minimum of 10 households per gross acre; and/or
  - a minimum of 15,000 employees;
  - planning recognizing the need to receive a significant share of the regional growth.

**Discussion:** The proposed **South Downtown Subarea Plan** is consistent with Pierce County’s Countywide Planning Policies.

**Tacoma Comprehensive Plan**

The **Comprehensive Plan** is Tacoma’s 20 year plan for physical growth, development and improvement. Its various Elements include a wide range of policies that are aligned with and support the objectives of the South Downtown Subarea Plan, the most relevant of which are summarized below:9

- **Growth Strategy and Development Concept Element:** This Element articulates several relevant policy goals, including:
  - “Growth will be directed toward compact mixed-use centers and in nodes along major transportation corridors including primary transit routes."
  - “Support of the high-capacity transit system, including light rail and commuter rail, will be a top priority of the City.”
  - “Concentrating growth within mixed-use centers will... strengthen the existing development pattern, protect neighborhoods and the environment and create attractive urban living and working environments which encourage walking, cycling and public transit.”

Also defined are minimum densities appropriate for “High Intensity in Mixed-Use Centers” such as South Downtown:

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- “Minimum site densities should range from 25 to 80 dwelling units per net acre... Higher minimum densities are envisioned in other parts of the mixed-use centers depending on the established height limit.”

**Discussion:** The proposed *South Downtown Subarea Plan* is consistent with this *Element of the City’s Comprehensive Plan.*

- **Generalized Land Use Element:** In the Generalized Land Use Element the Mixed-use Centers Goal is spelled out as follows:
  - “To achieve concentrated centers of development with appropriate multimodal transportation facilities, services and linkages that promote a balanced pattern of growth and development, reduce sprawl, foster economies in the provision of public utilities and services, and yield energy savings.”

Also provided is the following description of Transit-Oriented Development (TOD) that describes desired outcomes for South Downtown:

- “Multi-family housing and mixed-use projects that support the public investment in fixed route transit service... TODs increase the density of people near transit, including residents, employees, visitors, and customers in a built environment that is pedestrian-friendly and connected to transit. Mixed-use buildings, projects, or areas with a mix of uses are active from early in the morning to late in the evening, making the environment safer for pedestrians and providing peak- and off-peak customers for transit service.”

**Discussion:** The proposed *South Downtown Subarea Plan* is consistent with this *Element of the City’s Comprehensive Plan.*

- **Downtown Element:** In 2008, the City of Tacoma adopted an updated Downtown Element that applies to the entirety of the South Downtown. The Downtown Element has seven goals; the following three of which are most relevant to the vision and objectives of the South Downtown EIS/Subarea Plan:
  - Resolve the questions of how to responsibly increase density while laying the groundwork for a long-term, high quality city environment and maintaining Tacoma’s unique character.
  - Encourage links between economic vitality and environmental quality through an awareness of the regional effects of growth management, land use and transportation decisions.
  - Generate new partnerships to promote infill development and link land use policy with economic revitalization strategies.

The Downtown Element includes a range of policies that focus on several specific areas within South Downtown as noted below:

- **Brewery District:** Focus on economic development strategies and public realm enhancements within the Brewery District Area... The vision for this area seeks the complementary rehabilitation of historic properties with strategic infill uses... Strong pedestrian links to the Dome and Waterfront should be developed... The construction of businesses and developments that support or complement UWT as well as significant amounts of new residential housing will bring vibrancy to the district.
- **Dome District**: Complete transit-oriented design guidelines for the Dome District and other priority station areas to ensure transit-supportive land uses.
- **Union Station/UWT**: A fully integrated extension of the UWT footprint will bring new life through a blend of student, campus, residential and commercial uses. …the campus will be fundamentally linked to downtown revitalization through workforce development, real estate investment opportunities, and new student life.
- **Nob Hill**: With its close proximity to the City’s regional transportation hub at the Dome, Nob Hill should be considered as a good location to provide housing support for businesses as well as commercial uses.
- **Hillside**: Well served by transit and in close proximity to the UWT and major employment centers, Hillside is an ideal location for residential and mixed-use growth taking advantage of the views.

**Discussion**: The proposed **South Downtown Subarea Plan** is consistent with this Element of the City’s Comprehensive Plan.

- **Transportation Element**: Key policies in this Element that align with the transportation vision for South Downtown include:
  - **T-LUT-9 Transit Oriented Development**: Encourage and promote transit-oriented development (TOD) and provide incentives for development that includes specific TOD features.
  - **T-TSM-6 Level of Service Standards**: Establish level of service standards that are consistent with regional and state standards for roadways that reflect arterial functional classifications and the differing development patterns, growth objectives, accessibility for vehicles, transit, pedestrian and bicycle use.
  - **T-MS-12 Complete Streets**: Apply the Complete Streets guiding principle….
  - **T-ES-3 Congestion Management**: Encourage the use of alternative modes, and thereby slow the increase in the use of single occupant vehicles and the increase of environmental degradation associated with their use.

As part of the Transportation Element, in 2010 the City of Tacoma adopted the **Mobility Master Plan**, an implementation plan for improving “conditions for pedestrians and bicyclists citywide over the next fifteen years,” providing “recommendations for developing a nonmotorized network that reduces auto travel, increases the number of nonmotorized users of all ages and abilities….”¹⁰ The main goals of the plan are to:
  - “Complete a safe and comfortable bicycling system that connects all parts of the city (north to south/east to west) and accommodates all types of cyclists by 2025.
  - “Complete an accessible network of pedestrian supportive infrastructure, including sidewalks, curb ramps, accessible pedestrian signals and shared-use paths, in high-priority pedestrian areas.
  - “Increase the nonmotorized mode split to 5% by 2015 and continue gains thereafter
  - “Increase transit use by enhancing pedestrian access and bicycle support facilities through the development of bikeways and walkways that serve transit hubs.”

A particularly relevant policy of the Mobility Master Plan is to “Prioritize infrastructure improvements that connect residential areas to local retail, business, and community services, so residents can access more of the services they need close to home by walking, biking, and using assistive devices.” The corresponding Action is to “Prioritize funding and construction of non-motorized facilities in recognition of the livability, environmental and health benefits these forms of mobility provide,” with priority given to projects that:

- “Provide the greatest connectivity to the greatest number of people or neighborhoods;
- “Provide connections to transit;
- “Connect major employers or employment areas to residential areas in order to increase commute trips by bike or walking; and
- “Connect residential areas to local retail, business and community services so residents can access daily.”

Regarding Level of Service, the Plan states, “The focus of arterial corridors in this transportation plan is on moving people as opposed to moving vehicles. As such, we are suggesting that a lower level of service (LOS E) be provided to vehicular traffic within the identified arterial corridors.”

Discussion: The proposed South Downtown Subarea Plan is consistent with this Element of the City’s Comprehensive Plan.

- Thea Foss Waterway Design and Development Plan: The 2005 Thea Foss Waterway Design and Development Plan (Plan) is an element of the City's Comprehensive Plan and the Shoreline Master Program (SMP). One of the five major goals of the Plan is to: “Provide opportunities for mixed-use development, public/private investment and recreational opportunities, and public access to the shoreline for the citizens of Tacoma.” Regarding development, the Plan states: “Presently, the Waterway is not being used to its fullest potential. There are numerous vacant properties, especially along the west side of the Waterway, that have potential for redevelopment. Some are occupied by unused structures and others are vacant lots. There is potential for shifting this underdeveloped area into a mixed economic community connected to downtown.”

The policies of the Plan are implemented in Chapter 13.10.110 of the Tacoma Municipal Code: S-8 Shoreline District. The intent of the S-8 regulations is “to improve the environmental quality of Thea Foss Waterway; provide continuous public access to the Waterway; encourage the reuse and redevelopment of the area for mixed-use pedestrian-oriented development, cultural facilities, marinas and related facilities, water-oriented commercial uses, maritime activities, water-oriented public parks and public facilities, residential development, and waterborne transportation; and to encourage existing industrial and terminal uses to continue their current operations and leases to industrial tenants.”

The policies of the Plan are also implemented in Chapter 9.10 of the Shoreline Master Program (SMP). The City of Tacoma recently updated the SMP, and the updated version is currently being reviewed by the Department of Ecology.
Lastly, in 2011 the design guidelines from the Plan were expanded into a stand-alone set of Thea Foss Waterway Design Guidelines that support the overall goals of creating an economically vibrant, pedestrian-oriented environment on the Waterway.

**Discussion:** The proposed **South Downtown Subarea Plan** is consistent with this Element of the City’s Comprehensive Plan.

- **Transfer of Development Rights** -- The Downtown Element of the Tacoma Comprehensive Plan establishes the following policies on Transfer of Development Rights (TDR):
  - The City should explore the restoration and adaptive re-use of historically significant structures within the Brewery District through the creation of a ‘Historic District Transfer of Development Rights program.
  - The City should consider allowing ‘Density Transfers’ to raise the current existing maximum heights to provide redevelopment potential on non-historic infill sites.
  - The City should work with owners of selected assembled infill sites to promote participation in the TDR program.
  - The City should consider providing identified historic property owners grants and/or loans to complete seismic and other upgrades to their properties.

A TDR program was also a recommendation in the 2008 Tacoma **Climate Action Plan** (see below), because “TDR is a market-based way to conserve resource lands, control sprawl and encourage good development in our urban core where community infrastructure already exists.”

In 2012, the City of Tacoma published a report entitled **Transfer of Development Rights Market Study**. The purpose of the study was to assess “whether a TDR program for Tacoma can assist in achieving regional conservation priorities while, at the same time, providing local benefits in encouraging new development in some areas and conserving resources elsewhere in the City.” In Fall of 2012, the City of Tacoma initiated an effort to create new Land Use Code that implements a TDR program in downtown and in the City’s mixed-use centers.

A TDR program would help further the goals of the South Downtown Subarea Plan/EIS by providing a mechanism to preserve historic buildings or open space in habitat corridors. Under existing zoning and real estate market conditions in South Downtown, there is unlikely to be demand from developers to purchase additional development capacity through TDRs. However, establishing a TDR program in the near-term will ensure that when the real estate market improves, TDR will be in place and ready to be applied to projects.

**Discussion:** The proposed **South Downtown Subarea Plan** is consistent with the City’s TDR Program.

- **City of Tacoma Climate Action Plan** -- In 2006, the Tacoma City Council adopted a resolution\(^{11}\) called for reducing greenhouse gas emissions in city operations and pursuing reductions in community emissions through cooperative programs and policies, including reusing older buildings, pursuing regional transfer of development rights and

\(^{11}\) Resolution 36835
enhancing compact and walkable neighborhoods. In 2007, Council appointed the Green Ribbon Climate Action Task Force, which published Tacoma’s Climate Action Plan in 2008. One of the five recommended strategies in this plan is “Enhancing Compact/Livable Neighborhoods,” which is also essentially the primary goal of the South Downtown Subarea Plan. The Climate Action Plan states:

“City should implement smart growth principles – including compact, transit-oriented development within the City’s mixed-use centers – to promote mixed-use developments, affordable housing, green building, green site development, and bike- and pedestrian-friendly neighborhoods. Policies should increase mobility while decreasing dependence on private vehicles.”

This strategy to reduce Tacoma’s greenhouse gas emissions is completely aligned with the regional goals for smart growth that are fundamental to VISION 2040, as described above.

**Discussion:** The proposed South Downtown Subarea Plan is consistent with the City’s Climate Action Plan.

- **Washington State Policy on Greenhouse Gas Emissions** — In 2008, the Washington State Legislature passed House Bill 2815 mandating reductions in vehicle miles traveled (VMT).\(^{12}\) Intended as a strategy to reduce greenhouse gas emissions from automobiles, the legislation sets targets of 18 percent reduction in per capita VMT by 2020, 35 percent by 2035, and 50 percent by 2050. Numerous studies have shown that households in walkable, transit-rich neighborhoods tend to drive less than comparable households located in more car-dependent environments.\(^{13}\) Focusing new household and employment growth in South Downtown will help the State meet its VMT reduction goals.

**Discussion:** The proposed South Downtown Subarea Plan is consistent with Washington State policy on greenhouse gas emissions.

- **University of Washington Tacoma Campus Master Plan** — The University of Washington Tacoma produced a Campus Master Plan in 2003, followed by an update in 2008. The 2003 Plan addresses a range of issues including site planning, transportation, parking, and pedestrian circulation, phasing, building form, and design guidelines, with the goal of accommodating 6,000 - 10,000 full-time-equivalent (FTE) students. The 2008 Campus Master Plan Update builds upon the 2003 Plan, and includes a Needs Assessment, a Development Plan, a Phasing Plan, an Infrastructure Master Plan, and Design Guidelines. The 2008 Update considers a future student population of up to 12,000 FTEs.

The 2008 Update puts forth a Plan for the campus that is well-aligned with the vision and intent of this Subarea Plan, as demonstrated in the following excerpt:

> [the Plan] recognizes and enhances the urban character of the existing campus by aligning development predominantly with the street grid. The Plan provides


\(^{13}\) Transit-Oriented Communities: A Blueprint for Washington State...
opportunities to strengthen a sense of UW Tacoma’s community as a full, four-year institution by providing a central open space, various smaller green spaces throughout the campus, pedestrian connections up the hill, and an integration of uses between residential, student life, and academics.

The Sustainability Section of the 2008 Infrastructure Master Plan establishes the University of Washington’s strong commitment to sustainability. It articulates numerous goals and strategies that bolster the sustainability goals of South Downtown, including:

- A commitment to the National Sustainable Design Standards
- Reduction of campus carbon emissions, water use, and energy use
- Expansion of campus renewable energy opportunities
- A potential option for a carbon neutral campus

**Discussion:** The proposed South Downtown Subarea Plan is consistent with the UWT Campus Master Plan.

**Other Applicable Plans and Studies**

The South Downtown Subarea Plan draws from two key previous studies that were conducted by the City of Tacoma:

- The Brewery District Development Concept Study (2010) was grounded in the following six development objectives:
  1. Conduct proactive outreach to the private sector to foster public-private partnerships for redevelopment sites in accordance with the community vision.
  2. Advocate for and leverage an integrated approach between transportation access and land use development to spur the creation of a livable, walkable neighborhood and capitalize on the substantial transportation investments in the area.
  3. Use community-based partnerships to diversify risk and incubate local businesses within both renovated and new structures in the District. Encourage the location of companies that produce goods, artistic crafts and green technology.
  4. Apply a range of sustainability strategies for the long term health of the neighborhood.
  5. Invest in pedestrian and bicycle system improvements that will continue to realize connections between the Brewery District and surrounding residential and commercial areas particularly the University of Washington Campus.
  6. Build city capacity to optimize existing resources through creative, interim and long term land use strategies.

- Tacoma Dome District Development Strategy Update (2008) focused on the following four development strategies:
  1. Transit Rich Walkable Neighborhood: making the most of regional investments
  2. A Shoreline Neighborhood: Water Experience/Park Integration
  3. Making a Distinctive Place: Building Place - Distinctive Urban Form
  4. A Destination Neighborhood: Integrating the Dome
Discussion: The South Downtown Subarea Plan is also consistent with both of the above studies and strategies and it builds upon the following additional plans and studies:

- Tacoma Dome Area Plan Update, 2001;
- Tacoma Dome Area Plan, 1995;
- Tacoma Dome Transit Station Trail Linkage Study, 2009;
- Tideflats Area Transportation Study, 2011;
- Thea Foss Waterway Development Alternatives Plan Final EIS, 1995;
- Foss Waterway Master Redevelopment Strategy, 2011 Update;
- Downtown Tacoma Economic Development Strategy, 2008;
- Artist Survey of Live and Work Spaces, 2003;
- University of Washington Tacoma Campus Master Plan, 2003, and Update, 2008;
- Sound Transit Sounder Stations Access Study, 2012;
- Downtown Tacoma Economic Development Strategy, 2008;
- Artist Survey of Live and Work Spaces, 2003; and
3.8 POPULATION, HOUSING and EMPLOYMENT

Information presented in this section addresses the effects of the proposed alternatives relative to population, housing and employment within the South Downtown Subarea.

3.8.1 Affected Environment

Population

Selected demographic data for the South Downtown Subarea and other areas are shown in Table 3.8-1. A synopsis of that data -- relative to the City as a whole, Pierce County, and broader geographic areas -- indicates the following:

Demographics
- The population of the Subarea represents slightly more than 1% of the City’s total;
- The median age is on average 2 years younger than the other geographic areas;
- The Subarea has a lower percentage of children and elderly;
- From a race standpoint, the Subarea contains a higher percentage of Blacks and Hispanics;
- The male/female split is skewed toward a greater percentage of male residents; and
- Generally, the Subarea has a lower overall educational achievement.

Households
- The average household size within the Subarea is nearly one-half that of the City and the County;
- The Subarea has nearly double the percentage of 1-person households;
- The percentage of households with children is nearly one-half that of the other areas; and
- The percentage of households in group quarters is roughly 7-10 times greater than that of the City, the County or the State.

As of Autumn quarter 2011 the University of Washington Tacoma campus had an enrollment of 3,662 undergraduate and graduate students, of which 75 percent were full time and 25 percent were part time. Ninety-two percent of the students were Washington State residents. The data indicate that the students resided in Pierce County (61 percent), King County (24 percent), Thurston County (7 percent), and Kitsap County (4 percent), with the remaining 4 percent residing in counties further afield. The University of Washington Tacoma is planning to accommodate a student population of between 10,000 to 15,000 full time equivalent students over the coming decades.¹

¹ http://www.tacoma.uw.edu/undergraduate-education/news/all
### Table 3.8-1
Demographic Data for the South Downtown Subarea

<table>
<thead>
<tr>
<th>Parameter</th>
<th>South Downtown</th>
<th>Tacoma</th>
<th>Pierce County</th>
<th>King County</th>
<th>WA State</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DEMOGRAPHICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>2,462</td>
<td>198,397</td>
<td>795,225</td>
<td>1,931,249</td>
<td>6,724,540</td>
<td>308,745,538</td>
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<tr>
<td>Median Age</td>
<td>33.7</td>
<td>35.1</td>
<td>35.9</td>
<td>37.1</td>
<td>37.3</td>
<td>37.2</td>
</tr>
<tr>
<td>Percent Less than 18 yrs. of Age</td>
<td>14%</td>
<td>23%</td>
<td>24%</td>
<td>21%</td>
<td>24%</td>
<td>24%</td>
</tr>
<tr>
<td>Percentage Age 65 or Older</td>
<td>5%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>Percent Male</td>
<td>62%</td>
<td>49%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>49%</td>
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<tr>
<td>Percent Female</td>
<td>38%</td>
<td>51%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>51%</td>
</tr>
<tr>
<td><strong>Population by Race</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>58%</td>
<td>65%</td>
<td>74%</td>
<td>69%</td>
<td>77%</td>
<td>72%</td>
</tr>
<tr>
<td>Black</td>
<td>18%</td>
<td>11%</td>
<td>7%</td>
<td>6%</td>
<td>4%</td>
<td>13%</td>
</tr>
<tr>
<td>American Indian</td>
<td>2%</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Asian</td>
<td>9%</td>
<td>8%</td>
<td>6%</td>
<td>15%</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>14%</td>
<td>11%</td>
<td>9%</td>
<td>9%</td>
<td>11%</td>
<td>16%</td>
</tr>
<tr>
<td>other</td>
<td>4%</td>
<td>5%</td>
<td>4%</td>
<td>4%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Percent Foreign Born</td>
<td>13%</td>
<td>9%</td>
<td>20%</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Percent non-English Spoken at Home</td>
<td>18%</td>
<td>14%</td>
<td>26%</td>
<td>18%</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td><strong>Educational Attainment (age 25+)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School Graduate (or higher)</td>
<td>80%</td>
<td>87%</td>
<td>90%</td>
<td>90%</td>
<td>90%</td>
<td>86%</td>
</tr>
<tr>
<td>Bachelor's Degree (or higher)</td>
<td>17%</td>
<td>24%</td>
<td>23%</td>
<td>31%</td>
<td>31%</td>
<td>28%</td>
</tr>
<tr>
<td>Graduate/Professional Degree</td>
<td>5%</td>
<td>9%</td>
<td>8%</td>
<td>17%</td>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td><strong>HOUSEHOLDS</strong></td>
<td>1,238</td>
<td>78,541</td>
<td>295,554</td>
<td>787,809</td>
<td>2,606,863</td>
<td>114,567,419</td>
</tr>
<tr>
<td>Average Household Size</td>
<td>1.54</td>
<td>2.44</td>
<td>2.59</td>
<td>2.41</td>
<td>2.51</td>
<td>2.58</td>
</tr>
<tr>
<td>Percent Householder Living Alone</td>
<td>51%</td>
<td>33%</td>
<td>25%</td>
<td>31%</td>
<td>27%</td>
<td>25%</td>
</tr>
<tr>
<td>Percent Households with Children</td>
<td>18%</td>
<td>31%</td>
<td>35%</td>
<td>29%</td>
<td>32%</td>
<td>33%</td>
</tr>
<tr>
<td>Percent Households in Group Quarters</td>
<td>22.7%</td>
<td>3.4%</td>
<td>2.3%</td>
<td>1.9%</td>
<td>2.1%</td>
<td>2.6%</td>
</tr>
</tbody>
</table>
Table 3.8-1 (continued)
Demographic Data for the South Downtown Subarea

<table>
<thead>
<tr>
<th>Parameter</th>
<th>South Downtown</th>
<th>Tacoma</th>
<th>Pierce County</th>
<th>King County</th>
<th>WA State</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECONOMICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median Household Income</td>
<td>$23,405</td>
<td>$47,862</td>
<td>$57,869</td>
<td>$66,174</td>
<td>$57,244</td>
<td>$50,046</td>
</tr>
<tr>
<td>Per capita Income</td>
<td>$18,815</td>
<td>$25,377</td>
<td>$27,466</td>
<td>$36,410</td>
<td>$29,733</td>
<td>$26,059</td>
</tr>
<tr>
<td>Poverty Rate</td>
<td>16%</td>
<td>12%</td>
<td>12%</td>
<td>13%</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>EMPLOYMENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>16%</td>
<td>13%</td>
<td>12%</td>
<td>9%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>Not in Labor Force</td>
<td>44%</td>
<td>37%</td>
<td>34%</td>
<td>30%</td>
<td>35%</td>
<td>36%</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mgmt, business, science, and arts</td>
<td>25%</td>
<td>34%</td>
<td>32%</td>
<td>48%</td>
<td>39%</td>
<td>36%</td>
</tr>
<tr>
<td>Service</td>
<td>21%</td>
<td>22%</td>
<td>19%</td>
<td>15%</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>Sales and office</td>
<td>19%</td>
<td>25%</td>
<td>26%</td>
<td>22%</td>
<td>23%</td>
<td>25%</td>
</tr>
<tr>
<td>Natural resources, constr, maint.</td>
<td>11%</td>
<td>8%</td>
<td>10%</td>
<td>6%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Production, transp, material moving</td>
<td>24%</td>
<td>11%</td>
<td>12%</td>
<td>9%</td>
<td>11%</td>
<td>12%</td>
</tr>
<tr>
<td>HOUSING</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Units</td>
<td>1,594</td>
<td>85,786</td>
<td>325,375</td>
<td>851,261</td>
<td>2,885,677</td>
<td>131,704,730</td>
</tr>
<tr>
<td>Occupancy Rate</td>
<td>80%</td>
<td>92%</td>
<td>92%</td>
<td>93%</td>
<td>91%</td>
<td>89%</td>
</tr>
<tr>
<td>Renter Occupied</td>
<td>73%</td>
<td>46%</td>
<td>37%</td>
<td>41%</td>
<td>36%</td>
<td>35%</td>
</tr>
<tr>
<td>Owner Occupied</td>
<td>27%</td>
<td>54%</td>
<td>63%</td>
<td>59%</td>
<td>64%</td>
<td>65%</td>
</tr>
<tr>
<td>Median Home Value</td>
<td>$146,131</td>
<td>$230,400</td>
<td>$252,000</td>
<td>$385,600</td>
<td>$271,800</td>
<td>$179,900</td>
</tr>
<tr>
<td>Median Gross Rent</td>
<td>$856</td>
<td>$964</td>
<td>$1,036</td>
<td>$908</td>
<td>$855</td>
<td></td>
</tr>
<tr>
<td>Percent Single-family Detached</td>
<td>62%</td>
<td>66%</td>
<td>56%</td>
<td>64%</td>
<td>61%</td>
<td></td>
</tr>
</tbody>
</table>

**Housing**

A wide range of housing types are found in the Subarea, including single family, townhouses, small apartments, and large midrise buildings. Most of the single family and townhouses are located in the Hillside area. Selected housing data for the South Downtown Subarea and other areas are shown in Table 3.8-1. Characteristics of the Subarea that stand out from the City of Tacoma as a whole and from the greater region are summarized below:

- The occupancy rate within the Subarea is lower than that of the other areas;
- The percentage of renter occupied units is nearly double that of the other areas;
- The percentage of owner-occupied units is approximately one-half that of the other areas; and
- The median home value within the Subarea is approximately 60 percent that of the City and County.
According to the 2010 American Community Survey, the 2010 median monthly rent for the entire City of Tacoma was $856. In 2012, real estate consultants Dupres and Scott surveyed 518 market rate rental units in or directly adjacent to the South Downtown Subarea for the Puget Sound Regional Council’s Growing Transit Communities Program. Average rent was found to be $1,204 per month; 145 of the units fell into the range that would make them affordable to households earning 51 to 80 percent of area median income.

Significant new market rate housing projects that have been constructed in recent years include:

- **Alber’s Mill**: historic renovation, 36 apartments and retail;
- **Thea’s Landing**: seven stories, 188 apartments, 47 condos, 431 structured parking stalls ($35 million);
- **The Esplanade**: nine stories, 162 condos, 19,000 square feet of retail/commercial and 280 secure parking stalls ($75 million);
- **1501 Tacoma Ave.**: 93 condo units, six stories, structured parking built into hillside;
- **Court 17** (1717 Market St): UWT student housing, five stories, 128 apartments, 300 structured parking stalls; and
- **Several townhouse projects**, primarily located between Yakima Ave, Tacoma Ave, 21st St and 25 St.

Currently, most of UW Tacoma’s students come from the South Puget Sound Region, maintain ties to their home community, and commute to campus. Over time, more students are expected to reside on or near campus, and the University has an on-campus housing target of 12% of the undergraduate student population. On-campus housing is currently not planned for graduate-level students, although in coming years as the campus grows increasing numbers of graduate-level students can be expected to seek housing in the South Downtown Subarea.

Housing affordability is typically assessed relative to area median income (AMI). As of 2012 in Pierce County, the annual income limits to qualify for 80 percent of countywide median income is $40,150 for a single person and $57,350 for a family of four. Assuming a maximum of 30 percent of income can be spent on rent, that corresponds to maximum monthly rents of $1,004 (studio) and $1,434 (3-bedroom), respectively.

The South Downtown Subarea currently has 470 units of subsidized affordable housing, as listed below:

- **Catalina Apartments** (1616 S Yakima St): 25 units at 30% AMI, 13 units at 40% AMI, 12 units at 50% AMI; Catholic Community Services of Western Washington;
- **Eliza McCabe Townhomes** (2315 Yakima Ave S): 16 units at 30% AMI, 12 units at 40% AMI, 12 units at 60% AMI; Mercy Housing Northwest;
- **Hillside Gardens Townhomes** (1708 S G St): 10 units at 30% AMI, 10 units at 50% AMI, 5 units at 60% AMI; Mercy Housing Northwest;
- **Hillside Terrace** (2324 S G St): 62 units at 30% AMI; Tacoma Housing Authority;
- **Hillside Terrace** (2520 S G St): 104 units at 30% AMI; Tacoma Housing Authority;
- **Jefferson Square** (2336 S Jefferson Ave): 41 units at 30% AMI; Tacoma Rescue Mission;

---

2 Federal Department of Housing and Urban Development, 2012
• **MLK Housing** (814 S 15th St, 1947 S Yakima Ave, 2306 S G St): 3 units at 80% AMI; Martin Luther King Housing Development Association;
• **New Tacoma Senior Housing** (1709 S G St): 58 units at 30% AMI, 16 units at 80% AMI; Mercy Housing;
• **New Life Square** (425 S Tacoma Way): 13 units at 30% AMI; Tacoma Rescue Mission; and
• **Pine Tree Harbor Apartments** (2501 S G St): 58 units at 30% AMI; seniors age 62+ or disabled; Trieste Holdings.

These units correspond to approximately 29 percent of the total number of housing units in the Subarea, as recorded in the 2010 Census. Of these, 325 units are affordable to households earning 30 percent of AMI. As noted above, market rate apartments also add to the availability of affordable units in South Downtown: 145 of 518 market rate units surveyed are affordable to households earning 51 to 80 percent of AMI.

The Tacoma Housing Authority (THA) is developing plans to revitalize the 2520 S. G St. portion of Hillside Terrace. According to THA,

> The aging buildings are distressed and need to be replaced. Our goal is to transform Hillside Terrace into a community of high quality, healthy and environmentally friendly homes that will meet the needs of residents and make the neighborhood a safer, more enjoyable place to live.

Also, THA recently received a $1,881,652 HUD grant to construct an 8,500 square-foot, two-story facility at the corner of S. 27th St. and Yakima Ave. that will provide early childhood education, adult education and job training.

**Economics and Employment**

Data for the Subarea are noted in Table 3.8-1. Characteristics of the Subarea that stand out from the City of Tacoma as a whole and from the greater region include:

**Economics and Employment**
- The median household income and per capita income is substantially less than that of the other areas;
- The unemployment rate in the Subarea is higher than the City and County, as a whole;
- The Subarea has a greater percentage of residents that are not in the labor force; and
- While the Subarea has different percentages in each of the occupational groups, the percentage of employees in management/business/science/arts, and sales/office occupations is substantially less than that of the other areas, whereas the percentage of employees in production/transportation/material moving is nearly double that of the other areas.

One measure of employment is ‘covered employment.’ This refers to jobs “covered” under the state’s Unemployment Insurance program and constitutes approximately 85-90% of total employment. Data on covered employment in various sectors in the South Downtown Subarea...
are presented in Table 3.8-2.\(^3\) The jobs-housing ratio is approximately 3.6, which is very high compared to typical urban areas in which a ratio closer to 1 would be expected.

### Table 3.8-2
Covered Employment in the South Downtown Subarea

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Const/Res</td>
<td>558</td>
<td>20</td>
<td>219</td>
<td>14</td>
</tr>
<tr>
<td>FIRE</td>
<td>740</td>
<td>12</td>
<td>819</td>
<td>25</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1,162</td>
<td>37</td>
<td>421</td>
<td>21</td>
</tr>
<tr>
<td>Retail</td>
<td>411</td>
<td>50</td>
<td>157</td>
<td>29</td>
</tr>
<tr>
<td>Services</td>
<td>2,906</td>
<td>133</td>
<td>2,652</td>
<td>190</td>
</tr>
<tr>
<td>WTU</td>
<td>528</td>
<td>38</td>
<td>203</td>
<td>28</td>
</tr>
<tr>
<td>Government</td>
<td>277</td>
<td>9</td>
<td>244</td>
<td>11</td>
</tr>
<tr>
<td>Education</td>
<td>244</td>
<td>2</td>
<td>504</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,827</strong></td>
<td><strong>301</strong></td>
<td><strong>5,220</strong></td>
<td><strong>320</strong></td>
</tr>
</tbody>
</table>

Covered employment in the South Downtown Subarea dropped by 24 percent between 2000 and 2011. In comparison, covered employment in the entire City of Tacoma dropped from 99,810 in 2000 to 95,318 in 2011, corresponding to a much smaller decline of five percent. These declines can be largely attributed to the Great Recession, although apparently the South Downtown Subarea was more vulnerable than the City on average. The manufacturing sector was particularly hard hit, losing 741 jobs, a drop of 64 percent.

Job sector percentages in South Downtown compared to other cities are shown in Table 3.8-3.\(^4\) Compared to other cities, the South Downtown has a very low percentage of retail jobs, a relatively low percentage of service-sector jobs, and a relatively high percentage of Finance, Insurance, and Real Estate jobs.

### Table 3.8-3
2011 -- Covered Employment by Sector Percentage

<table>
<thead>
<tr>
<th>City (2011)</th>
<th>Const/Res</th>
<th>FIRE</th>
<th>Mfg</th>
<th>Retail</th>
<th>Svc</th>
<th>WTU</th>
<th>Gov't</th>
<th>Edu</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Downtown</td>
<td>3%</td>
<td>12%</td>
<td>6%</td>
<td>2%</td>
<td>39%</td>
<td>3%</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>Tacoma</td>
<td>3%</td>
<td>4%</td>
<td>6%</td>
<td>11%</td>
<td>51%</td>
<td>5%</td>
<td>13%</td>
<td>6%</td>
</tr>
<tr>
<td>Bremerton</td>
<td>3%</td>
<td>7%</td>
<td>6%</td>
<td>8%</td>
<td>52%</td>
<td>6%</td>
<td>10%</td>
<td>7%</td>
</tr>
<tr>
<td>Everett</td>
<td>2%</td>
<td>3%</td>
<td>42%</td>
<td>7%</td>
<td>29%</td>
<td>4%</td>
<td>9%</td>
<td>3%</td>
</tr>
<tr>
<td>Bellevue</td>
<td>3%</td>
<td>9%</td>
<td>4%</td>
<td>10%</td>
<td>59%</td>
<td>7%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Seattle</td>
<td>3%</td>
<td>7%</td>
<td>6%</td>
<td>8%</td>
<td>52%</td>
<td>6%</td>
<td>10%</td>
<td>7%</td>
</tr>
</tbody>
</table>

---

\(^3\) Puget Sound Regional Council, personal communication with Michael Hubner, September 2012.

\(^4\) Puget Sound Regional Council, personal communication with Michael Hubner, September 2012.
The University of Washington Tacoma (UWT) is by far the largest employer in the Subarea. As of autumn 2012, UWT had 714 employees, with job types including faculty (professors and lecturers), classified staff, professional staff, temporary/hourly employees and student employees.\(^5\) Assuming UWT employment scales roughly consistent with student population, the workforce at UWT can be expected to grow to over 2,000 in the coming two decades.

Another significant employer in the South Downtown Subarea is Brown & Haley, a candy production company famous for ALMOND ROCA\(^\circledR\) buttercrunch toffee. All of Brown & Haley’s candy is produced at the factory located at 110 E. 26th St., which the company has occupied since 1919. Brown & Haley is the nation’s third largest manufacturing wholesaler of boxed chocolates and employs about 300 people\(^6\) (some of these employees work outside of South Downtown in the distribution warehouses in Fife).

Important large employers adjacent to the South Downtown Subarea are the Port of Tacoma, and the hospitals along the “medical mile” on MLK Jr. Way in the Hilltop District.

3.8.2 Impacts

No Action Alternative

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Land use-related impacts would be evaluated on a site-specific basis in conjunction with each proposed project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

Development Alternatives

Each of the proposed development alternatives would continue the re-development trend of properties in the South Downtown Subarea, at varying intensities, for urban uses and activities. As such, the potential exists for population, housing and employment-related impacts associated with new development that is consistent with the South Downtown Subarea Plan.

Development under any of the three development alternatives would increase the population, housing and employment intensity in South Downtown, in accordance with the goals of the City’s Comprehensive Plan, which, in the Generalized Land Use Element, states:

“The Downtown Tacoma Center is to be the highest concentration of urban growth found anywhere in the City and within Pierce County. The center also is a designated regional growth center providing a focal point for new housing and employment for the Central Puget Sound region.”

Greater population, additional housing and increased employment in the South Downtown Subarea can be expected to have a wide range of positive impacts, including:

- greater local economic opportunity, as the market for businesses and services grows;

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\(^5\) Private communication with Iris Marx, UWT Department of Human Resources, September 2012.

\(^6\) http://www.fundinguniverse.com/company-histories/brown-haley-history/
• enriched educational, cultural, shopping, entertainment, and recreational opportunities for residents, local employees, and visitors;
• reduction of single occupant vehicle use, as nearby services would become more prevalent, and alternative transportation modes become more convenient for more people;
• reduced crime, as there would be more “eyes on the street;”
• reduced development pressure on lower density residential areas of the City; and
• potential reduction of urban sprawl on a region-wide basis.

Currently in the South Downtown Subarea, the balance of housing-to-jobs is weighted heavily towards jobs. If proportionally more housing growth occurs (which is the expected outcome), a better jobs-to-housing balance would result, which may help reduce commuting to and from surrounding communities.

The existing population in the South Downtown Subarea has a relatively low median income, which is in part a consequence of the high concentration of subsidized low-income housing. If development of market rate housing occurs -- as a result of any one of the development alternatives -- in the Subarea, it will help create a more balanced spectrum of housing options and household incomes.

It is possible that existing residents and/or businesses could be displaced as existing buildings are redeveloped consistent with any one of the development alternatives. If existing low-rent housing or commercial space is replaced by new buildings with different land uses or higher rents, businesses and low income residents may be challenged to find suitable buildings or adequate, affordable housing options within the Subarea. As noted in Land Use (Section 3.7 of this Draft EIS), the South Downtown Subarea has a relatively high amount of undeveloped property, surface parking lots and vacant buildings that could be redeveloped without displacement impacts.

Overall, development itself is an engine for creating employment growth in the South Downtown Subarea. Initially there are those jobs associated with construction of new buildings and infrastructure. Over the long term, more residents and employees create added demand for more local businesses, which spurs job creation.

As indicated with regard to the University of Washington, UWT is planning expansion, which will create new, high-quality jobs at UWT over the next two decades. In addition, the growing population of employees and students, as well as increased economic activity associated with UWT operations create demand for local businesses and support jobs. It is anticipated that UWT would continue to serve as a catalyst for new technology transfer spinoff businesses in the local area.

From an area-wide change perspective, Alternative 1 would have the greatest potential for population, housing and employment-related impacts (beneficial, as well as displacement) in that build-out under this alternative could entail a net increase of 30 million sq.ft. of development, Alternative 2 would be somewhat less at 20 million sq.ft., and Alternative 3 would be the least with a potential net increase of 10 million sq.ft. However, considering the fact that this is an urbanized part of the City, that re-development is projected to occur over several decades and that population, housing and employment-related impact mitigation presently exists and will continue, it is anticipated that the increased amount of urban activity within the
South Downtown Subarea would not result in any significant population, housing and employment-related impacts.

At the regional scale, redevelopment in the South Downtown Subarea would result in population, housing, and employment outcomes completely in line with intent of the PSRC’s VISION 2040 regional plan. One of the primary goals of VISION 2040 is to focus the majority of regional population and employment growth in urban centers such as South Downtown Tacoma. As described in VISION 2040, this goal is based on a wide range of social, economic, and environmental benefits that would be shared in South Downtown and broadly across the region if the desired growth patterns can be achieved. Thus from the regional perspective, the overall impacts of each of the Alternatives would be positive, and the highest intensity alternative, Alternative 1, would be the preferred alternative.

3.8.3 Mitigation Measures

Growth in population, housing, and employment is the core goal and primary “action” of the proposed South Downtown Subarea Plan. Accordingly, several elements of this EIS – in addition to Population, Housing and Employment -- address potential impacts and mitigation associated with growth in population, housing, and employment, including: Environmental Health (Section 3.5), Land Use and Relationship to Plans/Policies/Regulations (Section 3.7), Transportation (Section 3.11), Public Services (Section 3.12), and Public Utilities (Section 3.13). As noted previously in this EIS, future population and employment increases in the South Downtown Subarea, as a result of any one of the proposed development alternatives, is expected to occur incrementally over a long period of time.

The following mitigation measures apply to all alternatives, and are based on existing City policies, regulations and other mitigation, as noted below.

City Policies -- Housing

The following policies, together with City codes and other more specific measures, can help mitigate impacts that are described in this section of the Draft EIS.

Tacoma Comprehensive Plan -- Generalized Land Use Element

This element of the Comprehensive Plan contains the following policy that can provide mitigation by supporting the land use changes necessary to achieve the growth goals of the proposed South Downtown Subarea Plan.

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>LU-MUDTC-1 Maximize Development</td>
<td>Encourage maximum development of the downtown with diverse types of uses and facilities such as major financial, professional, office, cultural, retail and high density residential developments, giving the City of Tacoma a recognizable focal point that has continuous, vigorous use and affords maximum safety and convenience.</td>
</tr>
</tbody>
</table>
Tacoma Comprehensive Plan -- Housing Element

This element of the Comprehensive Plan contains the following policies that can provide mitigation by supporting the creation of diverse and high quality housing in the South Downtown Subarea.

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H-HC-1 Innovative Development Techniques</strong></td>
<td>Promote innovative development techniques to better utilize land, promote design flexibility, preserve open space and natural features and conserve energy resources.</td>
</tr>
<tr>
<td><strong>H-HC-2 Jobs-Housing Balance</strong></td>
<td>Promote construction of housing units in the downtown, Tacoma Mall and other mixed-use centers to enable people to live near employment, shopping and other services.</td>
</tr>
<tr>
<td><strong>H-HC-4 Adaptive Reuse for Housing</strong></td>
<td>Support the conversion of nonresidential buildings (e.g. schools, hotels, storage buildings) to residential uses.</td>
</tr>
<tr>
<td><strong>H-HC-6 “Green” Housing Construction</strong></td>
<td>Promote “green” housing construction methods that support more sustainable, affordable and healthier home design and landscaping through use of low toxic materials and better ventilation, especially in mixed-use centers.</td>
</tr>
<tr>
<td><strong>H-HC-7 Land Use Incentives</strong></td>
<td>Consider land use incentives (e.g. density or development bonuses, transfer of development rights, height increases, and tax incentives) to facilitate the development of housing in designated areas, particularly within mixed-use centers.</td>
</tr>
<tr>
<td><strong>H-HC-8 Other Construction Factors</strong></td>
<td>Promote new housing that maximizes nuisance abatement techniques, is designed to provide safety and security from natural and manmade hazards, and encourages privacy from nearby units and public areas.</td>
</tr>
</tbody>
</table>

(The Housing Element also establishes a set of actions to implement the above policies, classified as legislative, regulatory, financial, administrative, and planning.)

Tacoma Comprehensive Plan -- Downtown Element

This element of the Comprehensive Plan contains the following policies that can provide mitigation by supporting the creation of diverse and high-quality housing in the South Downtown Subarea.

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.3B.A</strong></td>
<td>Stress mixed-income housing solutions where affordable units are integrated with market rate units to achieve a balanced neighborhood.</td>
</tr>
<tr>
<td><strong>2.3B.B</strong></td>
<td>Provide a range of housing types from low to high-rise and provides housing opportunities for various groups including youth, single adults, couples, families, seniors, people with special needs, artists and others</td>
</tr>
</tbody>
</table>

As noted in the Affected Environment portion of this section, the Subarea currently has a relatively high concentration of subsidized affordable housing, and much of the market-rate housing is also affordable to households on the lower end of the income spectrum. The
following Housing policies provide mitigation by supporting the creation of affordable, equitable housing in the South Downtown Subarea.

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>H-HA-1 Affordable Housing Supply</td>
<td>Support both public and private sector development and preservation of affordable housing (e.g. Section 8, LIHTC) especially for lower income and special need households.</td>
</tr>
<tr>
<td>H-HA-2 Home Ownership</td>
<td>Facilitate home ownership (both single-family homes and condominiums) for all segments of the community, including lower income households.</td>
</tr>
<tr>
<td>H-HA-3 Public-Private Partnership</td>
<td>Work in partnership with for-profit and non-profit housing developers to facilitate the provision of new permanent affordable rental and owner housing.</td>
</tr>
<tr>
<td>H-HA-4 Special Needs Housing/Support Services</td>
<td>Encourage and support emergency and transitional housing as well as needed support services for persons with special needs (e.g. frailty, family size and disability).</td>
</tr>
<tr>
<td>H-HF-1 Housing Discrimination</td>
<td>Ensure the local housing market provides adequate housing opportunities to renters or purchasers of housing regardless of race, religion, color, national origin or ancestry, sex, gender identity, sexual orientation, age, marital status, familial status or the presence of any sensory, mental or physical disability.</td>
</tr>
</tbody>
</table>

**City of Tacoma Affordable Housing Policies**

The City of Tacoma proposed 2013 Affordable Housing Policy and Code Amendment includes the following policies:

**Housing Preservation**

**Preservation of Existing Subsidized Housing**

Track private subsidized housing contracts with HUD and their expiration dates. Facilitate efforts to renew the contracts or the sale of the buildings to nonprofit or public owners who will preserve the subsidized housing.

**Housing Choice**

**Rooming House/Boarding House/Single Room Occupancy**

Encourage new development of these housing types, which are valuable for low-wage workers and persons living on fixed income.

**Housing Affordability**

**Voluntary Housing Incentive Program**

Offer incentives to for-profit developers of new construction and rehabilitation of pre-existing housing so they include units affordable to a range of incomes. The incentives could include, but would not be limited to, the following:

- density bonuses;
- reduction in lot sizes;
- height or bulk bonuses;
- fee waivers;
- permitting priority; and
• reduction in parking requirements.

**Regulatory Assistance to Developers of Affordable Housing**
Offer incentives to non-profit developers of housing dedicated to affordable housing. The incentives could include, but would not be limited to, those listed in Policy H-HA-5, above.

**Voluntary Housing Incentive Program for Rehabilitation Purposes**
Offer incentives to owners to rehabilitate their properties in need of repair. The incentives could include, but would not be limited to, those listed in Policy H-HA-5, above. In exchange for these incentives, the owner would agree to set aside units for affordable housing.

**Inclusionary Requirements for Voluntary Residential Upzones**
Condition rezone proposals that would permit a higher residential density upon a developer’s agreement to include at least 10% affordable units in the market rate mix.

**Limited Mandatory Affordable Housing Bonus Program for City Initiated Upzones**
Require developers of market rate residential developments to include at least 10% of the units as affordable to a range of incomes when the City upzones property other than at the formal request of the owner or developer and when the developer builds at the higher density allowed by the upzone. A change in the Comprehensive Plan’s allowed intensity would not be considered an upzoning for this purpose.

These proposed City of Tacoma policies are to be adopted in the Subarea Plan as guiding affordable housing policy for South Downtown.

**Pierce County Affordable Housing Policies**

The 2011 Pierce County Countywide Planning Policies establish the following policy that provides mitigation for any future shortage of affordable housing:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH-3.3</td>
<td>It shall be the goal of each jurisdiction in Pierce County that a minimum of 25% of the growth population allocation is satisfied through affordable housing.</td>
</tr>
</tbody>
</table>

This Pierce County policy is to be adopted in the Subarea Plan as guiding affordable housing policy for South Downtown.

Pierce County defines “affordable housing” as housing affordable to households earning up to 80 percent of the countywide median income. As documented above, 29 percent of the existing housing units in the South Downtown Subarea are subsidized units that are affordable by the Pierce County definition. According to the survey of 518 market-rate multifamily rentals noted above, 145 units fell into the range that would make them affordable to households earning 51 to 80 percent of area median income, also meeting the Pierce County definition of affordable housing. Overall, the data on existing housing indicate that the South Downtown Subarea is currently exceeding the Pierce County affordable housing goal.
Employment

Tacoma Comprehensive Plan -- Downtown Element

This element of the Comprehensive Plan contains the following policies that support robust, diverse, and high-quality employment growth in the South Downtown Subarea.

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1A.A</td>
<td>Implement economic development strategies to become a location of choice for the following identified target sectors: Business and Professional Services; Creative Arts and Design; Financial Services; IT and Software Design Trade and Logistics Services</td>
</tr>
<tr>
<td>2.1A.B</td>
<td>Generate a broad base of workforce development strategies that result in a downtown that is a ‘Talent Magnet’ for identified target sectors.</td>
</tr>
<tr>
<td>2.1A.C</td>
<td>Prioritize cross-disciplinary partnering to leverage assets such as the Center for Urban Waters, the Puget Sound Partnership, Institute of Technology and Port of Tacoma</td>
</tr>
<tr>
<td>2.1B.A</td>
<td>Develop and expand programs to recruit creative entrepreneurs associated with target sectors, both building an entrepreneurial culture internally, and encouraging relocation from higher cost locations</td>
</tr>
<tr>
<td>2.1B.B</td>
<td>Extend the community’s current business assistance programs and build a robust network of entrepreneurs and independent local businesses</td>
</tr>
<tr>
<td>2.4B.1</td>
<td>Continue to establish creative arts and design as a primary target sector for Downtown Tacoma</td>
</tr>
<tr>
<td>2.4C.A</td>
<td>Establish a public-private partnership for an arts accelerator or cultural arts center</td>
</tr>
<tr>
<td>2.4D.A</td>
<td>Consider the creation of a private arts development association, 501c3, or umbrella organization, to help advocate for artists</td>
</tr>
</tbody>
</table>

Additional support for retail employment is provided by the Downtown Element in its definition of “Pedestrian Retail Streets,” which are designed to support vibrant pedestrian street life. In the South Downtown Subarea, Pacific Ave and Tacoma Ave are identified as Pedestrian Retail Streets.

Other Mitigation

The South Downtown Subarea Plan will guide redevelopment of the South Downtown area over the long-term. This plan, along with standard individual project permitting by the City, would serve as mitigation to preclude potential significant population, housing and employment-related impacts from future redevelopment and ensure compatibility between uses. Mitigation measures for indirect population, housing and employment impacts (i.e., noise, aesthetics,
transportation/parking, etc) are addressed in their respective sections of this Draft EIS and through existing, applicable City codes.

The Affordable Housing Chapter of the Subarea Plan includes the following recommendations intended to ensure sufficient affordable housing in South Downtown:

- AH-1: Continue the Multifamily Property Tax Exemption Program as currently defined.
- AH-2: Consider geographically prioritizing Affordable Housing Loans to areas adjacent to high capacity transit stations, including Tacoma Dome Station and the LINK stations in South Downtown.
- AH-3: In the Subarea’s Downtown Districts, allow an FAR bonus up to the maximum bonus level in exchange for the provision of affordable housing equivalent to 20 percent of the bonus floor area, or for an in-lieu payment to the Tacoma Housing Trust Fund based on a pre-determined per square foot value.
- AH-4: Identify the most promising mechanisms to provide assistance to developers in exchange for the inclusion of affordable housing in developments, and pursue partnerships to implement these mechanisms.
- AH-5: Develop a mechanism for Transfer of Development Rights to be applied to the preservation of existing affordable housing.
- AH-6: Develop a system by which Transfer of Development Rights revenues can be used to help fund affordable housing developments.
- AH-7: Support new legislation that would establish a value capture tool based on the Community Revitalization Financing Act of 2011, including the necessary State Constitutional amendment.
- AH-8: Proactively support new legislation that allows governmental entities to sell surplus properties to nonprofit affordable housing developers for less than fair market value, and identify target properties in South Downtown.
- AH-9: Collaborate with the PSRC to support the creation of a Regional TOD Affordable Housing Fund and identify parcels in South Downtown that should be targeted for affordable housing development and application of the Fund.
- AH-10: Establish an affordable housing monitoring system for the South Downtown Subarea.
- AH-11: Explore the creation of a system that activates policies and regulations designed to promote the production of new affordable housing when affordability trends project a future shortfall.
- AH-12: Aggressively market the opportunities, unique advantages, and new ideas for affordable housing development in South Downtown.

**Live-Work and Work-Live Code Updates**

Development of the Subarea Plan led to the adoption of new Land Use Code language that applies to Live-Work and Work-Live uses in Downtown (including all of the South Downtown Subarea), and mixed-use centers. (Further details are provided in Land Use Section 3.7 of this Draft EIS). Live-Work uses provide residents the economical option to reduce small business rent expenses by operating a business out of their home. This helps promote entrepreneurship job creation and economic development throughout the neighborhood. Conversely, Work-Live uses provide an economical housing option for small business owners to live in the same commercial space in which they operate their business. This helps increase and maintain the supply of affordable housing options in the Subarea.
Growing Transit Communities’ Affordable Housing Recommendations

This project is funded by a grant from the Puget Sound Regional Council’s (PSRC) Growing Transit Communities Partnership (GTC). In accordance with the goals of the PSRC and GTC, the Subarea Plan will consider adopting the affordable housing recommendations that are developed by GTC. PSRC’s VISION 2040 provides the foundation for GTC’s affordable housing approach, and establishes the following policies:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MPP-H-1</strong></td>
<td>Provide a range of housing types and choices to meet the housing needs of all income levels and demographic groups within the region.</td>
</tr>
<tr>
<td><strong>MPP-H-2</strong></td>
<td>Achieve and sustain — through preservation, rehabilitation, and new development — a sufficient supply of housing to meet the needs of low-income, moderate-income, middle-income, and special needs individuals and households that is equitably and rationally distributed throughout the region.</td>
</tr>
<tr>
<td><strong>MPP-H-3</strong></td>
<td>Promote homeownership opportunities for low-income, moderate-income, and middle-income families and individuals.</td>
</tr>
</tbody>
</table>

GTC is developing a set of Implementation Strategy Recommendations for affordable housing based on input from a Steering Committee consisting of 42 members from municipalities, agencies, advocacy groups, developers, and planning and design professionals from throughout the central Puget Sound region. Once these recommendations are finalized by GTC they will be considered for inclusion in the final draft of the Subarea Plan.

**3.8.4 Unavoidable Adverse Impacts**

With application of the population, housing and employment-related mitigation noted above, no significant unavoidable impacts are anticipated in conjunction with any of the proposed alternatives. Proposed redevelopment within the South Downtown Subarea would result in an intensification of development, additional employment opportunities, and increased population in the South Downtown area. While the intensity of redevelopment in this area would be substantially greater than the amount of existing development, such redevelopment would be consistent with the South Downtown Subarea Plan (if adopted), the intent of the City’s Comprehensive Plan and zoning.
3.9  HISTORIC AND CULTURAL RESOURCES

Information in this section addresses the effects of the proposed alternatives on historic and archaeological resources located within or proximate to the South Downtown Subarea. This information is based on the following sources:

- Port Blair-Hylebos Terminal Redevelopment Environmental Impact Statement, 2009
- Draft Tacoma Brewery District Historic Places Nomination Form, 2001

3.9.1  Affected Environment

Regulatory Overview

Federal, Washington State, and City of Tacoma regulations and processes that govern the designation of historic resources are described in this section. Designated landmarks are those properties/structures/objects that have been recognized locally, regionally, or nationally as significant resources to the community, the city, state, or the nation.

National Register of Historic Places

The National Register of Historic Places (NRHP) is administered by the National Park Service and is the official federal listing of districts, sites, buildings, structures and objects significant in American history, architecture, archaeology, engineering and culture. Eligible properties must be at least 50 years old, possess integrity of physical characteristics, and meet at least one of four criteria of significance, including: 1) association with events that have made a significant contribution to the broad patterns of our history; 2) association with the lives of persons significant in our past; 3) embodies the distinctive characteristics of a type, period or method of construction or represents the work of a master, or possesses high artistic values, or presents a significant and distinguishable entity whose components lack individual distinction; and/or 4) has yielded, or is likely to yield, information important in prehistory or history.

Washington State Heritage Register

The Washington Heritage Register (WHR) is administered by the WA Department of Archaeology and Historic Preservation (DAHP) and is the official listing of historically significant sites, districts, buildings, structures and objects within the state. WHR-eligible properties must meet certain criteria to be designated as significant, including: 1) be at least 50 years old, 2) have a medium to high level of integrity, and 3) have a documented historical significance at the local, state or federal level. Properties that are listed in the NRHP are automatically added to the WHR.

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1 Properties less than 50 years old can be eligible if part of a district or meet special criteria in 36 CFR 60.4.
**Tacoma Landmarks Designation**

The City of Tacoma maintains a Tacoma Register of Historic Places, which presently has over 130 individual properties listed, in addition to Historic Districts. Properties are nominated to the Tacoma Register by the City’s Landmarks Commission and are designated by City Council resolution. The Landmarks Commission must approve changes to the exteriors of City Landmark properties. In order to be designated as a Landmark, properties/resources must be 50 years or older; and retain integrity of location, design, setting, materials, workmanship, feeling and association. As well, one of the following six criteria must be met:

A. Is associated with events that have made a significant contribution to the broad patterns of our history; or

B. Is associated with the lives of persons significant in our past; or

C. Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or

D. Has yielded or may be likely to yield, information important in prehistory or history; or

E. Is part of, adjacent to, or related to an existing or proposed historic district, square, park, or other distinctive area which should be redeveloped or preserved according to a plan based on a historic, cultural, or architectural motif; or

F. Owing to its unique location or singular physical characteristics, represents an established and familiar visual feature of the neighborhood or City.

**Historic Resources**

**South Downtown Historic Context**

Plentiful fishing grounds and tideflats on the Puyallup river delta and abundant natural resources led the Puyallup Tribe and other Coast Salish native peoples to call the South Downtown area home for millennia. But in 1852, sweeping and permanent change began with Nicolas Delin's sawmill, which was established near the south end of today’s Thea Foss Waterway.

The South Downtown area was originally known as “New Tacoma,” independent from the older settlement further north known as “Tacoma City.” Settlement in South Downtown was catalyzed by the 1873 decision to place the terminus of the Northern Pacific Railroad’s transcontinental line on the shores of Commencement Bay. In the following years a building boom took place, and the Tacoma Land Company, a subsidiary of the railroad, platted and sold properties in South Downtown. In late 1883, Tacoma City and New Tacoma merged to form the City of Tacoma.

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2 Fourteen years later, the terminus was extended to Seattle.
The Subarea’s eclectic collection of early twentieth and late nineteenth century brick and concrete commercial, manufacturing and retail buildings reflects the series of economic booms and busts that took place both locally and nationwide. The 1870’s and 1880’s were characterized by wood frame commercial buildings, false fronts, wooden sidewalks and dirt streets. Industrial, warehousing and commercial brick and stone buildings appeared by the 1890’s along a growing network of rail corridors. Rail in Tacoma consisted not only of freight and passenger rail, but also two streetcar lines that were constructed in 1888 connecting the length of Pacific Avenue and Tacoma Avenue. The 1890s boom produced many of the significant brick and stone buildings still found in the Brewery District and on the University of Washington Tacoma campus. These buildings were designed by several noted commercial architects, including C. August Darmer and Frederick Heath, Pickles and Sutton, Russell and Babcock and Proctor and Farrell.

As industry was dependent on access to the shoreline and the Port, the rail company continued to expand into the tideflats, damming one arm of Puyallup River, and eventually filling the area to establish the working shoreline of the Thea Foss and Wheeler Osgood Waterways. Dredging for the Thea Foss Waterway (known as the City Waterway) was completed by the Army Corps of Engineers in 1907. During this era, uses in South Downtown included mills, grain terminals, and a mile of warehouses and wharves that lined Foss Waterway.

The Murray Morgan Bridge, originally named the 11th Street Bridge, was constructed in 1913 to replace an earlier wooden structure. The 2,100 foot steel bridge improved waterfront access by connecting the Tideflats, which would later become the port-industrial area, to the downtown business district. The vertical lift bridge also allowed taller and larger ships to access the south end of the City Waterway. In 1997, the bridge was officially renamed the Murray Morgan Bridge in honor of the local author and historian who had worked as a tender on the bridge in the 1930s.

In 1911, the Northern Pacific Railroad erected a grand terminal called Union Station, designed by the architectural firm of Reed and Stem. Union Station replaced Northern Pacific’s prior stations and also served the Union Pacific and Milwaukee Road transcontinental rail lines. Ironically, this structure was completed just as the dominance of the railroad passenger services began to diminish; but even so, the station’s rotunda served as the stage for departures and arrivals for three-quarters of a century.

During the 1910’s and 1920’s cars and trucks became integral to City operations and settlement patterns expanded away from the core areas served by the railroad. The area’s economy grew and diversified beyond its initial focus on maritime trade and resource extraction. Major industrial development of the Port areas was authorized by the federal government in the 1940s, and local jobs and housing followed as the Port grew (see Figures 3.9-3 and 3.9-4).

By the 1960’s, with the construction of I-5 and the Tacoma Mall outside of downtown, commerce began to bypass the historic core commercial districts and the downtown went into decline. A 1965 earthquake in Tacoma rendered many of the older buildings in Tacoma’s downtown structurally unsound. By the 1970’s, disinvestment along with large scale federal “urban renewal” that removed “blighted” properties, resulted in the destruction of many historic structures in South Downtown.

3 A port district was established by public vote in 1918.
Taken approximately around 1888, this viewpoint of Tacoma shows a rapidly growing city. Fallen trees and stumps in the foreground indicate more development will be occurring. Pacific Avenue is at the far right with many buildings already constructed. There are a few buildings perched at the edge of the deep ravine known as Galliher’s Gulch. The structures near the photograph’s center would eventually make up the city’s brewery district. The Northern Pacific Railroad would aid in the growth of the brewery district by running a spur track from the waterfront to the area. Near left center is the multi-storied Pacific Brewing & Malting Co. Malt House. Within ten years of this photograph, Pacific Brewing & Malting was advertising itself as “one of the most complete brewing and malting plants on the Pacific Coast.”
A crowd estimated at 10,000 cheered on February 15, 1913 when Miss Enola McIntyre christened Tacoma’s new 11th Street bridge by smashing a quart bottle of champagne against one of its shiny, black steel girders. Speakers at the official opening for the $600,000 vertical lift bridge included Governor Ernest Lister and Mayor W.W. Seymour. A 20 piece band kept the crowd in high spirits, and souvenir postcards bearing pictures of both the new bridge and its predecessor were handed out to all.
Figure 3.9-3
Aerial View of South Downtown Tacoma, ca. 1935
April, 1958 view of the downtown and Tideflats area. The growth of Tacoma can be noted in the increase of commercial buildings and industrial facilities along the City Waterway (now Thea Foss Waterway). The 11th St. Bridge is to the far right of the photograph; the 15th & 21st St. Bridges are also included. There are platforms under the 15th & 21st St. Bridges. Union Pacific Railroad buildings and possibly the Martinac Shipbuilding are visible on the bottom portion of the picture.
In response, a historic preservation movement headed by Tacoma Architect Alan Liddle coalesced, eventually resulting in the creation of the Tacoma Landmark's Preservation Commission and five Historic Districts, including the Union-Deport Warehouse Historic District (National Register of Historic Places, 1980 and Tacoma Register, 1983). Properties and districts are placed on the Tacoma Register of Historic Places through a nomination process. Nominations received by the Landmarks Commission are reviewed and, if found to meet the criteria for designation, are recommended to City Council for designation.

Union Station, built in 1911 (see Figure 3.9-5), is the centerpiece of the Union-Deport Warehouse Historic District. The last passenger train left Union Station on June 14, 1984 and the abandoned building soon fell into disrepair. In 1987, Congress authorized the U.S. General Services Administration (GSA) to lease Union Station for thirty-five years to provide space for the United States District Court. After three years of work, the historic building was completely renovated and restored, and occupancy began in 1992. The project received a National Preservation Honor Award in 1994.

**Historic Resource Surveys**

The City of Tacoma conducted a series of Community Cultural Resources Surveys from 1977-2005. These surveys identify the key character defining features of an individual historic property and provide the foundation for a building’s nomination process. Once surveyed, the City of Tacoma tracks all information in a digital inventory that is maintained by Tacoma Culture. The inventory is accessible to the public and includes maps, aerial photos, historical descriptions and photographs. The most recent survey that covers the South Downtown Subarea was completed in 1981. The Port/Industrial Survey, which includes part of the Dome District, was updated in 2003; however, it has been noted that the data are uneven and of low quality.

**The Brewery District**

One of the key Districts within the South Downtown Subarea, is the Brewery District. This area consists of about 20 square blocks immediately south of the Union Station Conservation District and is bounded by S. 21st St. to the north, Tacoma Way to the south, A St. to the east, and Court F to the west. Part of the Northern Pacific 1874 Plat of New Tacoma and the District was largely industrial from its earliest times. Today the District is home to numerous buildings that are potentially eligible for historic designation and are at risk of being lost, a situation that has long been the subject of community concern.

Although never officially submitted to the Tacoma Landmarks Preservation Commission, a Draft Brewery District Federal Historic District Nomination Application was created in 2001 for the Brewery District Neighborhood Steering Committee. This document is the best consolidated available resource available on historic structures and context in the Brewery District and it is the source of much of the information presented in the following paragraphs.

The District’s moniker and much of its architectural character are a result of the area’s abundant springs and artesian wells. Attracted by the availability of high quality water, a wave of German immigration in the 1880s brought the first brewmeisters and by 1896, two major breweries were

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Draft is available from the City of Tacoma.
Standing just south of the corner of South 19th Street and Pacific Avenue on the west side of the street, this was the view looking north on January 22, 1941. Two sets of streetcar tracks set in brick and cobblestones run down the center of the street toward downtown Tacoma. The Goodyear Tire sign on the right marks what is now the main entry way of the University of Washington - Tacoma campus. The Union Station is at the right. For United Pacific Insurance Company.
in operation in this area. Rail access connected the breweries to the regional marketplace and the Port and provided them with direct access to agricultural supplies from the inland. Before long, beer from Tacoma was available throughout the Pacific Rim -- either by rail or by ship to Alaska and the orient.

The first recorded brewery in Tacoma was the Furst New Tacoma Brewery on C Street between S. 15th and S. 17th Streets. The Milwaukee Brewing Company (1891 – 1897) was located at 2320 Jefferson Ave. The Puget Sound Brewery (1891-1897) at Hood Street and S. 25th St. straddled the railroad with two dedicated side spurs. Further east the Donou Brewery at S. 26th and E. K St. began production in 1896 and had a spur line that provided direct rail service on the Cascade Branch of the Northern Pacific Railroad (NPRR). The Donou and Milwaukee breweries were eventually purchased by the Pacific Brewing and Malting Company in 1897 and 1899, respectively. The Columbia Brewing Company built its first brewery along the east side of the NPRR's Pacific Division in 1900 and officially adopted the name of Heidelberg Brewing Company in 1953. During their heyday, some of the breweries also built their own lodging establishments, including the 1913 Hotel Merkleat 2407 Pacific Avenue and the 1919 Carlton Hotel at 1552 Jefferson Ave (both designed by C.A. Darmer).

During the first few decades of the Century, a variety of retail, commercial and service industrial establishments were also built in the Brewery District. The constraints of the street grid, steep topography, and freight rail lines led to the establishment of smaller businesses and direct services. Many of the buildings on Commerce St. have two faces, designed to accept customers and goods arriving on Pacific Ave., and to organize products being shipped out by rail from loading docks at the rear of the buildings. Notable buildings include the Hunt Mottett Warehouse on Commerce St., the Bone Dry Show Company Factory (2113-15 Pacific Ave. designed by Hill, Mock and Griffin in 1919) and the Frank Sussman Steel Company Building (Chalmers, 1929) at 2154-56 Pacific Avenue (see Figure 3.6-6). Buildings serving the auto-industry began to appear around the 1920’s, including the Hickey Motor Car Company building (1928) at 812-14 A St., which features wooden bow trusses that span 120 ft. (once the longest in the Pacific Northwest) to allow for the unimpeded movement of cars. In 1928 Sears and Roebuck Company built a store in at the intersection of S. 24th and Pacific Ave. that closed in 1936 and relocated in Tacoma’s downtown shopping center on Broadway (see Figure 3.9-7). Additional Images of other buildings in the area are available at:

http://www.loc.gov/pictures/item/wa0170.photos.168795p/(image);
http://search.tpl.lib.wa.us/buildings/bldg1image.asp?j=2&o=2&n=22273&i=6227#text

Prohibition led to the dissolution of most of Tacoma’s original breweries. Between 1919 and 1933, the Breweries sought to continue operation by switching to products such as non-alcoholic beer, soda, and cider, as well as soap production that shared some of the same industrial processes as brewing. The Alt Heidelberg Brewery Complex (a part of the Columbia Brewing Company) managed to survive the period and lasted until 1979 when it did could not survive the industry’s corporate mergers. In 2011, the northern section of the Complex—its structure beyond repair due to fire and neglect—was torn down to make way for a hotel. A tire recapping business occupies the newer southern portion of the building.
South end of Pacific Ave. just south of the Union Station. Goodrich Silvertown, Inc. (1955 Pacific) and the Bone-Dry Shoe Co. (2113-15 Pacific) are neighbors as evidenced in this circa 1932 photograph. The tire store, Goodrich Silvertown, utilized Hollowstone concrete and tile in its construction. Throngs visited the store when it opened in June of 1931. The Bone-Dry Shoe factory was designed by architects Hill, Mock & Griffin and opened in 1919. It manufactured top quality boots for nearly 40 years mostly handcrafted by skilled workers.
This two-story building would be put up for public auction by the William C. Johnston Realtor firm on March 28, 1960. Richards Studio notes indicate that this is the former Pierce County Health Department location at 24th & Pacific. Built originally for the Sears, Roebuck & Co. in 1928, the building was bought in 1943 by Pierce County first as use for the welfare department.
The Pacific Brewing and Malting Company, located at the intersection of S. 25th and Hood St., is a complex of 12 brick buildings surrounding a courtyard and the BNSF rail lines. This complex comprises the last of the seven former brewery buildings in the District (see Figure 3.9-8).

Completed in 1911 as part of Tacoma City Light’s Nisqually River hydroelectric project, the Nisqually Power Substation building is located on the south end of the Municipal Complex. The brick and stone building was decommissioned in the late 1950s and has been privately-owned since 1960. It was listed in the NRHP in 2001.

Located on Holgate St. between S. 23rd and S. 25th Streets is a cluster of historic buildings, that are not related to the brewing industry; they are known as the Municipal Complex. Among these buildings are the City shops, stables and a street maintenance garage, constructed in 1910. These buildings occupy the narrow 2300 block of S. C St. that was previously home to a public market. This irregular wood framed structure also housed the stables for the city’s horses and blacksmith shop and is still in use today by the City Department of Public Works. Although the buildings that make up the Municipal Complex have not been officially listed on any historic register, they are identified as “pivotal” structures in the 2001 Brewery District Application (the first five buildings on the list that follows comprise the Municipal Complex).

The 2001 Historic District Nomination identifies the following buildings in the Brewery District as “pivotal”:

- City Shops, Stables and Street Maintenance Garage (1910) 2300-24 S. C Street;
- City of Tacoma Light and Water Warehouse (1921) 2324 S Holgate;
- City of Tacoma Storehouse and Shops (1926) 2338 S Holgate;
- City of Tacoma Storehouse (1938) 2348 S Holgate;
- City of Tacoma City Shops and Addition (1927) 2308 S Holgate;
- J. F. Hickey Motor Car Company Building (1928) 2202-A Street;
- Royal Ice Cream Company Building/Foremost Dairy (1927, 1937, 1961) 2413 Pacific Ave.;
- Sears, Roebuck and Company Department Store (1928) 24th and Puyallup Ave.;
- The Milwaukee Road Freight House (1910) 2501 E. D St.; and
- Brown and Haley Candy Building (1904) 108 E. 26th St.

Renovation of the Foremost Dairy Building, formerly the Royal Meadowsweet building was completed in 2011 and achieved LEED Gold green building certification. The original building was constructed in 1927. Like the Municipal Complex, this building is not listed on the National Register of Historic Places, but is identified as “pivotal” in the Brewery District application. The building now houses Social Security Administration offices and first-floor retail.
Pacific Brewing & Malting Co. operations circa 1900 with the Malt House, Bottling department and Main plant clearly visible. By 1900 Pacific Brewing & Malting Co. was considered the best brew house on the North Coast. The company was in continuous building mode from 1891 through 1916 with stockhouse, cooling plant, stable and warehouse as some of the additions. They manufactured Tacoma and Pacific beer brands and by 1909 was the second largest brewing company in the state with output of 200,000 barrels of beer per year. Prohibition caused the plant to shut down in 1916. Pacific Brewing & Malting Co. has been added to the City and National registers.
UWT/Tacoma Museum District

Most of the buildings on the UW Tacoma campus to-date were built between 1890 and 1920 and originally they housed a variety of commercial uses (e.g., warehouses, hotels, pubs, wholesale grocers, factories, and other businesses). Starting in the 1990s, the University of Washington, Tacoma began renovating and occupying what’s become more than two dozen historic warehouses and industrial buildings within its campus for modern academic use. Describing this change, the Tacoma News Tribune’s Peter Callaghan wrote in September 1997 that the UWT is “equal parts higher education, historic preservation and economic revitalization.” In recognition of this work, the UWT received the 1999 Honor Award for Regional and Urban Design from the American Institute of Architects and an award from the National Trust for Historic Preservation. As the campus continues to grow, the UWT expects to continue their efforts to renovate and re-purpose existing historic buildings. Although the historic UWT buildings are not individually listed on any historic register, historically significant areas of campus are protected by the Union Depot/Warehouse Historic District and the Union Station Conservation District.

The Dome District

The area now known as the Dome District developed in direct relationship to the adjacent Port and industrial activities. Located at the south end of the Puyallup’s western discharge, it was once a meandering plain and intertidal area with freshwater estuary. Wetlands drainage began in 1858. By 1917, several waterways including the Thea Foss, Puyallup, Middle, and Hylebos, had been created by dredging and filling in the mudflats. Construction of piers and wharves involved further dredging.

By the early 1900’s, the area near the South end of the Foss Waterway had become a dense residential area called the Hawthorne neighborhood (see Figures 3.9-9 and Figure 3.9-10). The neighborhood began as a development to house workers working on the east side of the waterway prior to the construction of the Murray Morgan Bridge. As the Century progressed, much of the area evolved from worker row housing to manufacturing and industrial uses. This evolution was driven by proximity to rail transportation, the construction of I-5, and in 1981 razing of the lower one-third of the neighborhood to make way for the Tacoma Dome. Very little remains of the character or buildings of the Hawthorne neighborhood, however, there is a high potential for historical period archeology. One building, Engine House #4 at 220-224 E. 26th St. is a reminder of the former neighborhood. While no longer in service as a fire station, this 1911 structure has been restored as office space and the building was listed in the NRHP in 1986.
This view of the Hawthorne area of southeast Tacoma was taken from a hillside circa 1889. Dirt roads have been carved out of the former timberlands and houses are beginning to appear. The Tideflats are in sight. Nearly 100 years later, the Tacoma Dome would appear in this general neighborhood.
This 1927 view of the East 26th Street Bridge shows the wooden structure looking east toward fire station tower with Hawthorne neighborhood businesses and an automobile in the foreground. For Lloyd and Croteau.
Today the Dome District area consists primarily of low-rise commercial buildings, manufacturing, and warehouses, along with large-scale public infrastructure including the Tacoma Dome, the new LeMay Museum, Sounder and Amtrak stations, two large parking structures, and the elevated I-705; specifically:

- The **Tacoma Dome** (1983) is one of the largest wood domed structures in the world. The 23,000-seat Tacoma Dome and 28,000-square-foot Tacoma Dome Exhibition Hall host more than one million guests annually for concerts, professional and amateur sports, trade shows, family shows, conventions, and more. Currently there are nearly 30 acres surrounding the Dome dedicated to surface parking.

- The **LeMay American Car Museum** (2011) is a 9-acre campus designed to preserve history and celebrate the world’s automotive culture. The facility houses up to 350 cars, trucks and motorcycles, spanning a century of automotive history. This is largest auto museum and attraction in the world.

- The **Freighthouse Square** (1909), once the westernmost freight terminus for the Milwaukee Railroad, is a 110,000 sq. ft. indoor shopping area with about 50 tenants. The narrow, green wooden building spans three city blocks and has up to 5-levels. It houses the Sounder commuter rail station and also serves as a multimodal transit hub for Pierce Transit and LINK light rail. Current proposals have Amtrak moving to Freighthouse Square from its current location on Puyallup Ave by 2017.

The collection of early 20th Century automobile-culture uses and architectural characteristics on Puyallup Ave., S. A St., and the southern portion of Pacific Ave. have earned the unofficial moniker “Gasoline Alley.” Many of these character-defining buildings were constructed between 1890 and 1929 and are still in use today.

**The Thea Foss Waterway and Shoreline**

The railroads and then the U.S. Army Corps of Engineers excavated and dredged the Thea Foss Waterway, largely completing the work by 1905. The Waterway is named for the woman who founded Foss Tug and Barge on the Waterway in 1894. During this era, the Waterway developed into a thriving industrial center with sawmills, cedar shingle mills, boat yards, wharves, granaries and warehouses. Railroads served the flat foreshore where fish works and processing plants were established.

In the early 20th Century, a majority of Tacoma's western shoreline and shipping facilities were owned by the railroads. Access to the eastern shoreline was limited by the Puyallup Indian reservation. Congress passed the Dawes Act in 1887 that allowed the sale of the allotments granted to the reservation and opened up the area to port development. About one-third of the Reservation was sold at this time.

Today there are two remaining wooden warehouses originally built as a mile-long complex in 1900 located on the west side of the Waterway that represent the last historic period structures on the Waterway (in addition to Albers Mill, described below). These warehouses were built to accommodate cargo carrying square-rigged ships that frequented the port during the early years of Tacoma's history, and hosted steam- and diesel-powered cargo traders well into the 20th century. Located opposite S. 7th St., the Balfour Dock building is a former wheat transfer facility, last commercially active in the 1970s. It is now home to the Foss Waterway Seaport.
and is being redeveloped under a public/private partnership. To the north of Balfour Dock, the second remaining historic warehouse is known as the Dock Building, and is currently being used for offices.

In 1911, the City built the State’s first publicly-owned dock on the western shore of the Waterway near S. 15th St. Known as the Municipal Dock, it was a massive heavy timber, frame and truss structure with 200-foot continuous beams and an uninterrupted interior space of 300 ft. by 100 ft., with a total shoreline length of about one mile. The dock was razed in 2001. In 1913, the Murray Morgan Bridge was completed, replacing the original 11th St. bridge that was built in the 1890s. The bridge allowed workers to get back and forth between their homes in Tacoma and the port-industrial area. The bridge is currently undergoing renovation and is scheduled to re-open in spring 2013.

Over the first half of the 20th Century, the Waterway saw major industrial uses, including lumber, petroleum and chemical processing. But by mid-century, activity on the Waterway began to decline due to global economic trends that were shifting manufacturing and industrial uses offshore to take advantage of cheaper labor. By the 1980s, the eastern shores of the Foss Waterway were almost entirely abandoned. In 1983, EPA designated a Superfund site that included the Thea Foss Waterway; major clean up and dredging was conducted through 2006.

The Foss Waterway Development Authority (FWDA) was established in 1996 and is currently overseeing redevelopment of the Waterway. Completed projects include two mixed-use residential buildings, renovation/relocation of marinas, the Museum of Glass, the Museum of Modern Art of Tacoma, a pedestrian “Bridge of Glass” and a public esplanade. One notable historic project facilitated by the FWDA is the Alber’s Mill renovation, one of the last historic period structures remaining on the Waterway. Built in 1904, the cereal mill operated until 1944, and subsequently was used primarily as a warehouse, eventually falling into disrepair. In the early 2000s the building was renovated and converted to residential lofts and retail space, concurrent with the development of the Tacoma Museum of Glass. Alber’s Mill was listed in the NRHP in 2002.

**Historic Trails**

**Prairie Line Trail**

The Prairie Line Trail is a former railroad spur of the Burlington Northern Santa Fe (BNSF) Railroad that extends along the west edge of Hood St. through the heart of the Brewery District, continuing through the UWT campus and under I-705 to the Foss Waterway at S. 15th St. The South Downtown Subarea encompasses both the Terminal Station section of the Prairie Line that is located on the UWT campus and the Brewery District Spur which extends south along Hood St. Opened in 1873, the Prairie Line once served industrial and shipping facilities and carried both freight and passengers. The diagonal orientation and industrial uses of the Prairie Line had a major influence on the development patterns and architecture of adjacent warehouses, garages, and commercial buildings. BNSF took the Prairie Line out of service in 2003.

The City and UWT are currently planning the transformation of the Prairie Line into a distinctive urban pedestrian and bicycle trail that will connect the Thea Foss Waterway to the Museum District, the UWT, and the Brewery District. Preservation and celebration of the Prairie Line’s history have been established as key design factors. In 2011, the University of Washington
produced a Catalogue of Character Defining Features, which provides the basis for its sensitive restoration for the Terminal Section portion of the Prairie Line. This catalog is intended to facilitate compliance with two core goals of the Secretary of the Interior’s Standards for the Treatment of Historic Properties, which are intended to promote responsible preservation practices and offer guidance when alterations are made to historical or cultural resources: 1) Preserve the property’s historic materials, and 2) Preserve the property’s distinguishing visual and physical character. The report follows guidelines established in the National Park Service Preservation Brief 17 Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character. The Brewery District Spur line, from S. 21st St. to Puyallup Ave., does not currently have the same level of historic analysis.

**Water Ditch Trail**

Originally part of a 110-year-old trail system that crossed Tacoma and extended to Mt. Rainier, remnants of the historic 1896 Water Ditch Trail, 6.5 mile "spine" are still used today. As funding becomes available, the City of Tacoma is restoring the entire 6.5-mile spine. Within the South Downtown Subarea, the trail consists of the historic “Flume Line” property generally located along the S. Tacoma Way. The Water Ditch trail extends from S. Tacoma Way to S. 47th St. to Pacific Ave.

**Designated Historic Districts**

**Figure 3.9-11** depicts designated historic districts and buildings within the Subarea. As shown, there is one designated historic district and one designated conservation district that are located in the South Downtown Subarea. Each is described below. A summary table of historic buildings and districts is provided in the Appendix of the Subarea Plan.

**Union Depot-Warehouse District**

Listed in the NRHP in 1980 and the Tacoma Register in 1983, the Union Depot-Warehouse District is a designated National Historic District. A historic special review district creates guidelines for design of new construction and modifications to existing buildings. A process for reviewing these changes and properties within a historic district may be eligible for certain tax benefits. The Union Depot-Warehouse District is characterized by brick warehouses and factory buildings, examples of commercial high style and industrial vernacular architecture that were developed in the U.S. in the early 1900s. This District also consists of buildings on the University of Washington Tacoma campus, many of which have been renovated for adaptive reuse. A full building inventory is available on-line.5

**Union Station Conservation District**

A conservation district provides a buffer between a historic district and adjacent development through design guidelines for new projects and protections for historic structures. Conservation districts are subject to design review standards that are less restrictive than those governing historic districts. The Union Station Conservation District, which was locally-designated, buffers the Union Depot-Warehouse District and is aimed at maintaining neighborhood character and providing a “buffer zone” between the adjacent historic district and surrounding areas.

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5 [http://www.tacomaculture.org/historic/resource/HP_Pub%20UDW%20Inventory%202006.pdf](http://www.tacomaculture.org/historic/resource/HP_Pub%20UDW%20Inventory%202006.pdf)
Within this District, all new construction and additions to existing buildings are subject to design review by the Tacoma Landmarks Preservation Commission.

**Designated Buildings**

Numerous buildings in the South Downtown Subarea have gone through an individual nomination process and are tracked by the City’s Historic Preservation Program. The most important examples are summarized below; several have already been noted in this section of the EIS. Further information regarding these structures is available in the digital building inventory that is maintained by Tacoma Culture.6

*Pacific Brewing and Malting Company/ Puget Sound Brewing Company (1901-1919)*

The Pacific Brewing and Malting Company is a complex of 12 brick buildings surrounding a courtyard and the BNSF rail lines and is the last remaining brewery in the District. The brewery buildings fell into disuse in 1959, but the smokestacks still mark an iconic gateway to those traveling to and from the area. Designed by Carl August Darmer, the complex’s brick buildings vary in height from one to six stories. In recent years, portions of the building have been renovated to accommodate new uses, including small offices and the M-Space Hot Shop. The smokestack from the boiler and the tops of several buildings have been lost to earthquakes, but all of the remaining buildings are recognizable, with high levels of integrity of setting, materials, design and workmanship. The complex is listed in the Tacoma Register, WHR and NRHP.

*Nisqually Power Plant Sub Station (1911)*

Located just to the north of the Pacific Brewing and Malting Company, the Nisqually Power Station was listed in the NRHP in 2001. This structure was built by the Tacoma Municipal Electric Company in conjunction with the City’s Nisqually river hydroelectric project.

**Other Designated Historic Buildings**

Other notable individually registered historic buildings include *Albers Mill* (1904), *Fire-Station Engine House #4* (1911), and *the Tacoma Cold Storage Building* (1926).

**Cultural Resources**

Cultural Resources within the shoreline area of the South Downtown Subarea were inventoried for the update to the *Tacoma Shoreline Master Program*. The following studies were completed:

- **ESA Adolfson. 2007 Tacoma Shoreline Inventory and Characterization. Prepared for the City of Tacoma, July 2007.**

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6  http://www.tacomaculture.org/.
The area of South Downtown Tacoma has served as an economic and cultural location for thousands of years. The first people in the area, the Puyallup Indians, had settlements in what is now Tacoma and the surrounding region and consider the area to be an important part of their culture's history and heritage. The Puyallup peoples made their villages on the shores Commencement Bay, along the Puyallup River, and in other nearby places. Commencement Bay and the Puyallup River delta served as prime food sources and as the economic basis for the Puyallup peoples who were coastal fishermen, gatherers, and hunters. Access to these bodies of water and nearby lands were vital to their survival as salmon served as their main food source and the Western red cedar tree, which grew in the forests where the City of Tacoma is now developed, was used for shelter, clothing, and basketry.

Many of the Puyallup peoples' settlements were located within the boundaries of the Subarea. It is believed that there were two areas of historic Puyallup settlement within the Subarea, one near the intersection of Pacific Ave. and S. 15th Street, and one near the intersection of Pacific Ave. and S. 24st Street where a creek once flowed into Commencement Bay, but other settlements are known to have existed nearby and throughout the City. European settlers arrived in the area in the 1830s and the Puyallup Tribe established relations with the United States Government soon after. In 1854, the Treaty of Medicine Creek was signed and the Puyallup Tribe was moved from their historic fishing and hunting settlements onto reservation lands to the north and east of the Subarea.7

In early planning in conjunction with the proposed Tacoma Convention Center, an archaeological resources survey was conducted, which noted that six of 34 known Puyallup village sites were located within Tacoma's city limits.8 As noted above, one of the sites was believed to have been located in the vicinity of S. 15th St. and Pacific Ave. The following is derived from that resource survey:

A village [was] located at the mouth9 of the Puyallup River, subsequently known as Galligers Gulch.10 The house sites were at the intersection of S. 15th St., A St. and Pacific Ave. in downtown Tacoma. The sites included a large pool extending to Pacific Ave., which is today covered by Schoenfield Furniture warehouse. A small stream fed by springs and surface drainage emptied into the pool from the north. A long sandspit extended between the pool and the river mouth with a water entrance provided from the south. The people of this village were referred to by the earliest Euro-American settlers as the “real” Puyallup. After the establishment of the Puyallup Indian Reservation at Commencement Bay in 1854, the name of this village site was extended to include all those people who took up residence on the Reservation. Puyallup headsmen Shillawilton and Squatahan returned to this site with their families after the Puyallup Reservation was established in a show of refusal of the government relocation.

As a result of the Puyallup peoples’ use of the land near the Puyallup River and Commencement bay, evidence of camp sites, burial sites, tools, implements, or other artifacts may still exist today. As noted previously, there have been extensive dredging and fill activities on the Foss Waterway and its shoreline that can be expected to have caused major disturbances and loss of archaeological resources that may have been left behind by the

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7 presently situated in Thurston County near the Nisqually River delta
8 Palmer et al, 1996
9 Before the tideflats were filled, the mouth of the Puyallup River was at the foot of S. 15th St.
10 also spelled as Gallagher Gulch
Puyallup Tribe. However, there is still high potential for the discovery of as-yet unrecorded archaeological resources when redevelopment occurs in areas.

A historical and archaeological study was completed for the *Sounder East, D Street Grade Separation Project Environmental Assessment*,¹¹ which documented the following:

- The Thea Foss Waterway and the mouth of the Puyallup River vicinities has been the scene of human occupation for hundreds and perhaps thousands of years. Important former village sites, burial grounds, and fishing sites are located within the area according to Puyallup Tribe representatives.

- Cultural resources and potential archaeological resources include Native American shell middens (reported in 1907) located west of the Thea Foss Waterway.

- The DeLin Sawmill (abandoned in 1855), extending from the northwest corner of the area, and Galliher’s Millcreek and Millpond near the Interstate 705/East 26th Street area.

### 3.9.2 Impacts

**Historic Resources**

**No Action Alternative**

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to historic resources would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

**Development Alternatives**

Each of the proposed development alternatives would continue the re-development trend of properties in the South Downtown Subarea, at varying intensities, for urban uses and activities. Development could result in the loss of historic structures or degradation of historic character in certain areas of South Downtown, particularly in the Brewery District. The majority of properties within the Subarea are not required to coordinate with the City Design Review program or Landmark’s Preservation Commission, a situation that could result in aesthetically incompatible structures that could detract from the historic character of the neighborhood. Dissolution of cohesive historic character could result in a loss of Tacoma’s history and unique identity.

There are many buildings in the Subarea that may be appropriate for historic preservation, but have not undergone a nomination process … or are located outside of an existing Conservation District. The risk of loss of such buildings is exacerbated by several complicating factors, including:

- high cost to renovate deteriorated buildings and bring them into compliance with code;

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small lot sizes and unconsolidated properties that make it difficult to consolidate funding for building upgrades; and

lack of code and regulations that provide a clear path forward on how best to redevelop and revitalize historic buildings to achieve sustainable outcomes—for example, replacement of windows and doors that meet energy code can pose a challenge to preserving historic integrity.

Archeological Resources

No Action Alternative

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to cultural resources would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

Development Alternatives

The proposal analyzed in this EIS consists of several related decisions by the Tacoma City Council regarding the proposed South Downtown Subarea Plan. By itself, this proposal would not directly result in impacts to cultural resources. However, future site-specific development proposals under any of the development alternatives could result in impacts to cultural resources.

There is the potential for the study area to contain historic period and/or pre-contact archaeological resources, particularly in shoreline areas. Construction of new buildings within the South Downtown Subarea would require excavation, which has the potential to encounter archaeological deposits.

3.9.3 Mitigation Measures

The following mitigation measures apply to all alternatives, and are based on existing City policies, regulations, and other mitigation, as noted below.

City Policies

The City of Tacoma has established policies, regulations, and programs that provide mitigation for potential adverse impacts on historic and cultural resources. The City’s goal is to be a national leader in historic preservation and adaptive re-use. City policy is grounded in the belief that preservation and renovation of historic properties are critical components of sustainable development in Tacoma and can provide a range of community benefits, including:

- creation of catalysts and anchors for the redevelopment of a district, block or street;
- enhancement of sense of place, which helps to maximize prior investments in infrastructure and development, and encourages ongoing infill development; and the
- promotion of energy efficiency by preserving the embodied energy already represented by existing buildings.
The City of Tacoma Comprehensive Plan contains multiple policies in its Historic Element, Downtown Element and Generalized Land Use Element that provide mitigation by encouraging adaptive-re-use and preservation. Relevant polices are summarized in the tables below.

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP-1</td>
<td>Preserve archaeological resources as part of Tacoma’s rich history.</td>
</tr>
<tr>
<td>HP-2</td>
<td>Integrate historic resource into community planning efforts. Encourage neighborhood-level preservation and conservation programs.</td>
</tr>
<tr>
<td>HP-3</td>
<td>Promote preservation’s role in community sustainability efforts and provide tools to encourage cooperation between advocates for historic preservation and sustainability.</td>
</tr>
<tr>
<td>HP-6</td>
<td>Encourage active use of historic resources</td>
</tr>
<tr>
<td>HP-6A</td>
<td>Promote adaptive re-use of historic properties</td>
</tr>
<tr>
<td>HP-23A</td>
<td>Consider establishing a TDR program for historic properties</td>
</tr>
<tr>
<td>HP-26B</td>
<td>Explore context-sensitive zoning</td>
</tr>
<tr>
<td>HP-33C</td>
<td>Extend the range of zoning incentives for historic resources and conservation areas</td>
</tr>
<tr>
<td>HP-7A</td>
<td>Market Tacoma for Heritage tourism,</td>
</tr>
<tr>
<td>HP-7B</td>
<td>Coordinate preservation efforts with local business and</td>
</tr>
<tr>
<td>HP-7C</td>
<td>Use Historic and Conservation districts as ways to increase property values.</td>
</tr>
<tr>
<td>HP-8</td>
<td>Incorporate new trends and issues in preservation and neighborhood conservation in creative ways that establish Tacoma as a leader.</td>
</tr>
<tr>
<td>HP-26B</td>
<td>Use Zoning tools to promote historic preservation goals, and support an overall heritage conservation system.</td>
</tr>
<tr>
<td>HP-29A</td>
<td>Schedule designation of historic resources according to clearly defined priorities.</td>
</tr>
<tr>
<td>HP-11</td>
<td>Capitalize on and promote historic resources in community planning efforts, and promote urban development strategies that are compatible with historic preservation.</td>
</tr>
<tr>
<td>HP-33</td>
<td>Enhance regulatory incentives to encourage preservation and conservation</td>
</tr>
<tr>
<td>HP-33B</td>
<td>Promote the use of Mixed-Use Center and Downtown zoning incentives for preservation projects.</td>
</tr>
</tbody>
</table>
Comprehensive Plan – Downtown Element

The Historic Preservation Section (2.2F) of the Downtown Element articulates the following intent:

“The collection of remaining historic buildings downtown should be championed as one of Tacoma’s key strategic assets. The preservation of historic buildings should be supported through a range of City-led initiatives and public/private projects as catalysts for downtown revitalization.”

The Downtown Element establishes the following policies and actions:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2F.A</td>
<td>The City should continue to enrich and expand programs to encourage adaptive re-use and preservation of, and design compatibility with, downtown historic buildings, with the intent of creating environments of distinctive character and quality.</td>
</tr>
<tr>
<td>2.2F.B</td>
<td>Incentives for historic preservation should continue to be expanded to: (a) Motivate land owners; (b) Reduce the overall financial burden of downtown development; and (c) Provide building code flexibility and special designations for identified structures.</td>
</tr>
<tr>
<td>2.2F.C</td>
<td>Pro-actively list historically eligible buildings on historic registers with the understanding that progress will be dependent on funding.</td>
</tr>
<tr>
<td>2.2F.D</td>
<td>Safeguard historic structures through code enforcement and inspection to adequately protect historic buildings from demolition by neglect.</td>
</tr>
<tr>
<td>2.2F.1</td>
<td>Develop a collaborative plan to discourage tearing down the remaining significant historic structures.</td>
</tr>
<tr>
<td>2.2F.2</td>
<td>Revise Pierce County’s public use rating system for current use tax assessment for historic properties to encourage adaptive re-use.</td>
</tr>
<tr>
<td>2.2F.3</td>
<td>Evaluate city-owned properties and develop preservation guidelines for their rehabilitation or alternate reuse.</td>
</tr>
<tr>
<td>2.2F.4</td>
<td>Expand the existing Historic Preservation Program to provide recommendations for Transfer of Development Rights (TDR) for historic structures. Identify designated sending (identified eligible properties) and receiving properties (infill) as a tool to fund the renovation and adaptive re-use of signature buildings. Revise the historic “special features” bonus provision for additional height to make the TDR program for historic structures viable.</td>
</tr>
<tr>
<td>2.2F.5</td>
<td>Collaborate with non-profit and government agencies such as Washington Trust, Historic Tacoma, DAHP and CTED to develop a cultural tourism plan that focuses on Tacoma’s heritage properties.</td>
</tr>
</tbody>
</table>
Comprehensive Plan – Land Use Element

The Land Use Element includes the following general policy: LU-MUDTC-2 - Preservation of Historical, Cultural and Scenic Resources: Recognize the abundance and prominence of historical, cultural, and scenic resources within downtown and preserve these unique assets.

Shoreline Master Program

Tacoma’s Shoreline Master Program (SMP) regulates development of sites on the Foss Waterway within the South Downtown Subarea. The City is in the process of updating the SMP, and it is currently being reviewed by the State Department of Ecology. The 2012 review draft includes the following relevant goals and objectives:

SMP 3.7.1 Archaeological, Historic and Cultural Resources Goal:
Protect and enhance shoreline features of archaeological, historic, and cultural value or significance and to preserve these features for the public benefit through coordination and consultation with the appropriate local, state and federal authorities, including affected Indian Tribes.

SMP 3.7.2 Archaeological, Historic and Cultural Resources Objectives:
1. Recognize the importance of the waterfront to Tacoma’s history and character.
2. Recognize the high probability that development may encounter archaeological, historic and cultural resources, and ensure that appropriate measures are taken to protect, preserve, and enhance sites and features of archaeological, historic, and cultural value or significance.
3. Collaborate on cultural resource management issues with the appropriate tribal, state, federal and local governments and entities.
4. Encourage cooperation between public and private entities in the identification, protection and management of cultural resources.
5. Where appropriate, make access to such sites available to parties of interest, provided that access to such sites must be designed and managed in a manner that gives maximum protection to the resource.
6. Provide opportunities for education related to archaeological, historical and cultural features where appropriate and incorporated into public and private programs and development.

State Regulations

Archaeological sites located in South Downtown are subject to chapter 27.44 RCW (Indian graves and records) and chapter 27.53 RCW (Archaeological sites and records). Development or uses that could impact these sites must comply with the State’s guidelines on archaeological excavation and removal (WAC 25-48).
City Regulations

Historic Preservation Program

Tacoma's Historic Preservation Office administers the Historic Preservation Program. Historic Preservation staff review nominations to Tacoma's Landmarks Register, process applications for changes to historic landmarks, support the Landmarks Preservation Commission, and assist the public and other government agencies with historic preservation issues. The City's preservation staff consists of one full-time preservation planner. As designated in the Comprehensive Plan Historic Preservation Element, the preservation program components include:

- **Administration**: The framework for operating the preservation program;
- **Identification**: The survey and recognition of properties with cultural or historic significance;
- **Management Tools**: The specific mechanisms for protecting historic resources;
- **Incentives and Benefits**: Programs that assist property owners and support preservation;
- **Education**: The tools to build awareness and strengthen skills to support preservation; and
- **Advocacy**: The promotion of policies and partnerships that support preservation.

Historic Design Review

In Tacoma, buildings on the City's historic register and buildings within Historic Districts must complete a design review approval process prior to issuance of permits and the start of construction. The same design review process and guidelines are used to evaluate projects in the City's Historic Special Review Districts and Conservation Districts. Tacoma's Landmarks Preservation Commission reviews projects at regular public meetings and projects that are deemed to meet their standards are issued a certificate of approval, which is a precursor to a construction permit.

The design review process is based on the City’s zoning standards, which regulate the character of buildings and neighborhoods in terms of form, massing and scale, height limits and lot coverage. Evaluation standards and guidelines include:

- the Secretary of the Interior's Standards for the Treatment of Historic Properties;
- the National Park Service's Preservation Briefs; and
- Historic District Design Guidelines for the Union Depot/Warehouse Historic District.

Landmarks Preservation Commission

Tacoma's Historic Preservation Program is governed by two ordinances: The Landmarks Preservation Commission (TMC 1.42) and the Landmarks and Historic Special Review Districts (TMC 13.07). The Landmarks Preservation Commission is an 11-member volunteer commission.
made up of Tacoma residents and professionals that are appointed by the Tacoma City Council. The Commission reviews and approves applications for changes to registered landmarks and buildings within local historic districts, reviews nominations, advises City Council regarding additions to the Landmarks Register, and participates in the planning process.

**Shoreline Master Program**

Section 2.4.6 of Tacoma’s 2012 Shoreline Master Program Update stipulates the following requirements for development proposals in shoreline areas:

A. Known Archaeological, Cultural and Historic Resources
   1. Applications for a shoreline permit shall identify whether the property is within 500 feet of a site known to contain an historic, cultural or archaeological resource(s). Records of known sites are restricted. Consultation with Washington Department of Archaeology and Historic Preservation or a certified archaeologist will be required. If the property is determined to be within 500 feet of a site known to contain an historic, cultural, or archaeological resources, the City shall require a cultural resource site assessment; provided that, the provisions of this section may be waived if the Land Use Administrator determines that the proposed development activities do not include any ground disturbing activities and will not impact a known historic, cultural or archaeological site. The site assessment shall be conducted in accordance with Washington State Department of Archaeology and Historic Preservation guidelines for survey and site reporting to determine the presence of significant historic or archaeological resources. The fee for the services of the professional archaeologist or historic preservation professional shall be paid by the landowner or responsible party.
   2. If the cultural resource site assessment identifies the presence of significant historic or archaeological resources, a Cultural Resource Management Plan (CRMP) shall be prepared by a professional archaeologist or historic preservation professional paid by the landowner or responsible party. In the preparation of such plans, the professional archaeologist or historic preservation professional shall solicit comments from the Washington State Department of Archaeology and Historic Preservation, and the Puyallup Tribe. Comments received shall be incorporated into the conclusions and recommended conditions of the CRMP to the maximum extent practicable.
   3. A CRMP shall contain the following minimum elements:
      a. The CRMP shall be prepared by a qualified cultural resources consultant, as defined by the Washington State Department of Archaeology and Historic Preservation.
      b. The CRMP shall include the following information: (see Shoreline Master Program for details)
   4. Upon receipt of a complete development permit application in an area of known historic/archaeological resources, the City shall notify and request a recommendation from appropriate agencies such as the Washington State Department of Archaeology and Historic Preservation, and the Puyallup Tribe. Recommendations of such agencies and other affected persons shall be duly considered and adhered to whenever possible and reasonable.
   5. The recommendations and conclusions of the CRMP shall be used to assist the Administrator in making final administrative decisions concerning the presence and extent of historic/archaeological resources and appropriate mitigating measures. The
The Administrator shall consult with the Washington State Department of Archaeology and Historic Preservation, and the Puyallup Tribe prior to approval of the CRMP.

6. The Administrator may reject or request revision of the conclusions reached in a CRMP when the Administrator can demonstrate that the assessment is inaccurate or does not fully address the historic/archaeological resource management concerns involved.

B. Unanticipated Discovery of Archaeological, Cultural and Historic Resources

1. All applications for a shoreline permit shall prepare a plan for the possible unanticipated discovery of historic, cultural or archaeological resource(s), including a point of contact, procedure for stop-work notification, and for notification of appropriate agencies.

Section 6.3.2 of Tacoma’s 2012 Shoreline Master Program Update establishes the following regulations for development projects in shoreline areas:

A. General

1. Archaeological sites located in shoreline jurisdiction are subject to RCW 27.44 (Indian Graves and Records) and RCW 27.53 (Archaeological Sites and Records).

2. Development or uses that may impact such sites shall comply with WAC 25-48 as well as the requirements within this Program, where applicable.

3. Development that is proposed in areas documented to contain archaeological resources shall have a site inspection or evaluation by a professional archaeologist in coordination with affected Indian Tribes.

B. Unanticipated Discovery of Historic, Cultural or Archaeological Resource

1. Consistent with TSMP 2.4, all applications for a shoreline permit shall prepare a plan for the possible unanticipated discovery of historic, cultural or archaeological resource(s), including a point of contact, procedure for stop-work notification, and for notification of appropriate agencies.

2. Whenever historic, cultural or archaeological sites or artifacts are discovered in the process of development on shorelines, work on that portion of the development site shall be stopped immediately, the site secured and the find reported as soon as possible to the Administrator. Upon notification of such find, the property owner shall notify the Washington State Department of Archaeology and Historic Preservation and the Puyallup Tribe, and the Administrator shall conduct a site investigation to determine the significance of the discovery. Based upon the findings of the site investigation and consultation with the Washington State Department of Archaeology and Historic Preservation, the Puyallup Tribe, and the proponents unanticipated discovery plan prepared consistent with TSMP 2.4, the Administrator may require that an immediate site assessment be conducted or may allow stopped work to resume.

3. If a site assessment is required, the area of inadvertent discovery shall be stabilized, contained or otherwise protected until the site assessment and/or CRMP is completed. The site assessment shall be prepared to determine the significance of the discovery and the extent of damage to the resource and shall be distributed to the Washington State Department of Archaeology and Historic Preservation, and the Puyallup Tribe.

4. Upon receipt of a positive determination of a site’s significance, the Administrator may invoke the provisions of TSMP 2.4.6 for a Cultural Resource Management Plan (CRMP), if such action is reasonable and necessary to implement.
**Other Mitigation**

In addition to the mitigation listed above, each of the development alternatives would involve adoption of a Subarea Plan with multiple policies and actions that are aimed at mitigating adverse impacts to historic and cultural resources, including the following.

**Cultural Resource Protections**

The Historic Resources chapter of the Subarea Plan recommends that the cultural resource protections provided by Tacoma 2012 Shoreline Master Program Update listed above be extended to cover the entire Subarea. If the Subarea Plan is adopted by the City, the following regulations would apply to all development projects in the South Downtown Subarea:

**A. General**
4. Archaeological sites located in Washington State are subject to RCW 27.44 (Indian Graves and Records) and RCW 27.53 (Archaeological Sites and Records).
5. Development or uses that may impact such sites shall comply with WAC 25-48 as well as the requirements within this Program, where applicable.
6. Development that is proposed in areas documented to contain archaeological resources shall have a site inspection or evaluation by a professional archaeologist in coordination with affected Indian tribes.

**B. Known Archaeological, Cultural and Historic Resources**
7. Applications for a development permit shall identify whether the property is within 500 feet of a site known to contain an historic, cultural or archaeological resource(s). Records of known sites are restricted. Consultation with Washington Department of Archaeology and Historic Preservation or a certified archaeologist will be required. If the property is determined to be within 500 feet of a site known to contain an historic, cultural, or archaeological resources, the City shall require a cultural resource site assessment; provided that, the provisions of this section may be waived if the Land Use Administrator determines that the proposed development activities do not include any ground disturbing activities and will not impact a known historic, cultural or archaeological site. The site assessment shall be conducted in accordance with Washington State Department of Archaeology and Historic Preservation guidelines for survey and site reporting to determine the presence of significant historic or archaeological resources. The fee for the services of the professional archaeologist or historic preservation professional shall be paid by the landowner or responsible party.
8. If the cultural resource site assessment identifies the presence of significant historic or archaeological resources, a Cultural Resource Management Plan (CRMP) shall be prepared by a professional archaeologist or historic preservation professional paid by the landowner or responsible party. In the preparation of such plans, the professional archaeologist or historic preservation professional shall solicit comments from the Washington State Department of Archaeology and Historic Preservation, and the Puyallup Tribe. Comments received shall be incorporated into the conclusions and recommended conditions of the CRMP to the maximum extent practicable.
9. A CRMP shall contain the following minimum elements:
a. The CRMP shall be prepared by a qualified cultural resources consultant, as defined by the Washington State Department of Archaeology and Historic Preservation.
b. The CRMP shall include the information required by Section 2.4.6 of Tacoma's 2012 Shoreline Master Program Update

10. Upon receipt of a complete development permit application in an area of known historic/archaeological resources, the City shall notify and request a recommendation from appropriate agencies such as the Washington State Department of Archaeology and Historic Preservation, and the Puyallup Tribe. Recommendations of such agencies and other affected persons shall be duly considered and adhered to whenever possible and reasonable.

11. The recommendations and conclusions of the CRMP shall be used to assist the Administrator in making final administrative decisions concerning the presence and extent of historic/archaeological resources and appropriate mitigating measures. The Administrator shall consult with the Washington State Department of Archaeology and Historic Preservation, and the Puyallup Tribe prior to approval of the CRMP.

12. The Administrator may reject or request revision of the conclusions reached in a CRMP when the Administrator can demonstrate that the assessment is inaccurate or does not fully address the historic/archaeological resource management concerns involved.

C. Unanticipated Discovery of Historic, Cultural or Archaeological Resource

5. All applications for a development permit in the South Downtown Subarea shall prepare a plan for the possible unanticipated discovery of historic, cultural or archaeological resource(s), including a point of contact, procedure for stop-work notification, and for notification of appropriate agencies.

6. Whenever historic, cultural or archaeological sites or artifacts are discovered in the process of development on shorelines, work on that portion of the development site shall be stopped immediately, the site secured and the find reported as soon as possible to the Administrator. Upon notification of such find, the property owner shall notify the Washington State Department of Archaeology and Historic Preservation and the Puyallup Tribe, and the Administrator shall conduct a site investigation to determine the significance of the discovery. Based upon the findings of the site investigation and consultation with the Washington State Department of Archaeology and Historic Preservation, the Puyallup Tribe, and the proponents unanticipated discovery plan, the Administrator may require that an immediate site assessment be conducted or may allow stopped work to resume.

7. If a site assessment is required, the area of inadvertent discovery shall be stabilized, contained or otherwise protected until the site assessment and/or CRMP is completed. The site assessment shall be prepared to determine the significance of the discovery and the extent of damage to the resource and shall be distributed to the Washington State Department of Archaeology and Historic Preservation, and the Puyallup Tribe.

8. Upon receipt of a positive determination of a site's significance, the Administrator may invoke the provisions of Section B.3 for a Cultural Resource Management Plan (CRMP), if such action is reasonable and necessary to implement.

The Subarea Plan also recommends that the City develop and implement a Memorandum of Understanding (MOU) with the Puyallup Tribe to establish supplemental protections for archaeological resources in South Downtown. In early 2013 the City initiated discussions with
the Puyallup Tribe concerning the establishment of this MOU to fill gaps in the review process that the Subarea Plan’s proposed regulations may not cover. Elements that may be considered for the MOU include:

- City commitment to the use of a predictive GIS model to identify projects where mitigation is needed
- City commitment to site monitoring during construction for certain projects
- City commitment to conducting an archaeological survey of the area

Transfer of Development Rights

The South Downtown Subarea Plan proposes new Land Use Code language that would expand on the City’s Transfer of Development Rights (TDR) program in the Downtown Districts within the South Downtown Subarea. TDR is intended to advance the City’s conservation, historic preservation, and built environment goals by encouraging the voluntary redirection of development away from areas where the City wants less or no development, called sending areas, toward areas that the City has designated as suitable for bonus development, called receiving areas. Currently, structures designated as a landmark as identified in the Tacoma Register of Historic Places qualify as sending areas. Under TDR, funds collected from developers in exchange for increased development capacity in receiving area are made available through various mechanisms to preserve historic structures in sending areas.

The Subarea Plan includes the following recommendations that would support TDR for historic preservation:

RECOMMENDATION LU-3: Update the Downtown District FAR Bonus System to integrate Transfer of Development Rights (TDR) and a streamlined set of design features, as described above.

RECOMMENDATION HR-2 (LU-4): Identify historic properties in South Downtown that are well-suited to be TDR sending sites.

Other Subarea Plan Recommendations and Policies

The Subarea Plan includes the following recommendations that would help mitigate impacts to historic and cultural resources in the Subarea:

RECOMMENDATION HR-1: Complete and formally submit a new Historic Brewery District Federal Historic District Nomination Application.

RECOMMENDATION HR-3: Proactively support renovation and adaptive reuse projects on key historic properties.

RECOMMENDATION HR-4: Establish a demonstration project program for renovation and adaptive reuse projects on historic properties.

RECOMMENDATION LU-9: Monitor the application of the new Live-Work and Work-Live codes and proactively modify the codes as appropriate based on project outcomes and user input.
RECOMMENDATION LU-10: Establish a program to promote Live-Work and Work-Live pilot projects; consider permitting assistance, design competitions, and other incentives.


The Policy Framework of the Subarea Plan includes the following policies and proposed actions:

**Policy 1.1:** Promote the creation of complete communities in close proximity to Tacoma Dome Station and the LINK streetcar stations

**Proposed Actions:**

1.1.1 Proactively initiate public-private partnerships, development agreements, and RFPs to catalyze redevelopment of city-owned land, including… the historic municipal buildings on Holgate St between 23rd and 24th St.

1.1.3 Implement a strategy to revitalize historic Freighthouse Square and transform it into an economically viable, iconic heart of the Tacoma Dome Station area.

1.1.6 Modify the FAR bonus system to better incentivize private investment in South Downtown by focusing on bonus options that create local improvements such as open space or historic preservation.

**Policy 2.1:** Preserve, renovate, repurpose, and reuse existing structures

**Proposed Actions:**

2.1.1 Pursue multiple mechanisms to facilitate multiple preservation strategies, including renovation, upper story additions, and façade preservation (e.g. a grant program that reimburses a property owner a percent of the total cost of a façade renovation).

2.1.2 Identify historic structures in the Subarea for designation as sending sites in the City’s updated transfer of development rights (TDR) program.

2.1.3 Incorporate TDR into the FAR bonus systems of the Downtown Districts and the UCX-TD District.

2.1.4 Initiate a catalyst project that demonstrates TDR and historic preservation within the Subarea.

2.1.5 Promote the City’s recently adopted work-live and live-work codes by initiating a demonstration project, and with education and outreach efforts such as a design competition.
2.1.6 Nominate key landmark properties in the Subarea.

2.1.7 Update the 2001 Draft Brewery District Federal Historic District Nomination Application.

2.1.8 Consider expansion of the Union Station Conservation District.

2.1.9 Encourage the co-mingling of new development with historic buildings as a preservation strategy.

Policy 2.4: Continue to encourage the expansion of South Downtown’s concentration of creative arts and design, urban recreation, business incubators, and other dynamic, small-scale businesses

Proposed Actions:

2.4.9 Aggressively market South Downtown’s historic building assets and their contribution to creating a unique, vibrant location for creative businesses.

Policy 4.1: Facilitate UWT’s role as an economic development engine for South Downtown

Proposed Actions:

4.1.4 Facilitate public-private partnerships with UWT for adaptive reuse of underutilized Brewery District buildings

3.9.4 Unavoidable Adverse Impacts

With application of appropriate mitigation measures, no significant unavoidable adverse impacts are anticipated relative to historic or cultural resources.
3.10 AESTHETICS

Information presented in this section addresses the effects of the proposed alternatives relative to views on and from sites that are located within or proximate to the South Downtown Subarea.

3.10.1 Affected Environment

The South Downtown Subarea consists of approximately 600 acres of industrial and commercial properties that are located within a largely historic south half of Tacoma’s downtown. Five distinct districts are part of the South Downtown Subarea: the University of Washington Tacoma/Museum District, the south portion of the Foss Waterway, the south portion of the Hillside Neighborhood, the Old Brewery District, and Tacoma’s Dome District. (for reference see Figure X in the Land Use Element).

Views

The topography of the South Downtown Subarea affords numerous opportunities for spectacular territorial views, including views of Mount Rainier and Commencement Bay. Elevation in the South Downtown Subarea ranges from sea level at the Foss Waterway to approximately 300 feet on Yakima Ave., along the west edge of the Subarea. The hillside increases gradually from the Foss Waterway to Pacific Ave., and then rises more steeply up to Yakima Ave. Many areas on the upper portions of the hillside command 180-degree territorial views to the east.

In the Dome District, the land rises toward the south from the Foss Waterway reaching an elevations of about 150 ft. at the boundary of the Subarea on D St., creating opportunities for views toward the Foss Waterway and the Port. The southwest corner of Subarea is defined by very steep grades with an elevation 120 ft. or more overlooking South Tacoma Way and I-5.

I-5 and I-705 provide motorists with commanding views of the Subarea. The east side of the Foss Waterway and the Waterway itself provides excellent views of the UWT/Museum District, the Brewery District, and the Hillside neighborhood. The two most important iconic structures that contribute to the unique character of territorial views of the Subarea are the Tacoma Dome and the SR-509 suspension bridge.

The City does not have specifically-designated view corridors; however, there are three key considerations with regard to viewsheds within the South Downtown Subarea:

- **Thea Foss Waterway Design Guidelines** – These design guidelines pertain to the S-8 Shoreline District within the South Downtown Subarea. One of the guidelines pertains to Vie/Access Corridors within the Shoreline District.

- **University of Washington Tacoma (UWT) Master Plan** – The UWT Master Plan and the Update identify three important view corridors to the east and southeast: the South 19th Street axis, the Mt. Rainier Vista, and the Power House Vista.

- **LeMay Museum View Protection** – As part of the Development Agreement with the City, the LeMay Museum the City agreed to “not construct on City-owned property
directly adjacent to the Museum any structure or structures that will significantly obstruct the sightlines between downtown Tacoma and the Museum …”

**Urban Design**

The aesthetic character of the South Downtown Subarea is highly diverse. The existing built environment includes:

- over 100 historic properties, many of which are located in two National Register Historic Districts;
- older single-family and newer townhouses primarily in the Hillside neighborhood and on Nob Hill in the southwest corner of the Subarea;
- large warehouse and industrial buildings in the Dome District;
- newly renovated/constructed buildings on the UWT campus;
- newly constructed midrise mixed-use residential projects, primarily on the Foss Waterway;
- numerous cultural and civic buildings, including the Greater Tacoma Convention & Trade Center, Union Station, the Museum of Glass, Tacoma Art Museum, the Washington State History Museum, the LeMay Car Museum, and the Tacoma Dome;
- old and new low-rise, auto-oriented commercial buildings scattered throughout the Subarea;
- large parking structures in the Dome District and adjacent to the Convention Center;
- surface parking lots scattered throughout the Subarea; and
- numerous vacant parcels, some with large trees.

Most buildings are from one to four stories in height, with a few exceptions; building footprints vary widely. The tallest building in the Subarea is the Tacoma Dome -- at 143 feet; the tallest non-civic building is the 8-story Harmon building on Pacific Ave. The Greater Tacoma Convention and Trade Center stands out in terms of its large scale and bulk.

The existing public realm is also diverse. Some streetscapes have recently undergone high-quality renovation -- such as Pacific Ave, while others appear neglected, lacking marked crosswalks, for example. Sidewalks exist on most streets, but vary widely in size and condition. Street trees are sparse on most streets, the most notable exceptions being several blocks on Yakima Ave, and a few partial blocks on Pacific Ave. Electric power lines are above ground in most areas, except for Pacific, Tacoma, and Yakima Avenues where in some sections utilities have been undergrounded. The 19th St hillclimb through UWT, the Bridge of Glass, the Foss Esplanade, Tollefson Plaza, and Pugnetti Park are notable public spaces with a high-quality aesthetic character.

**Shadows, Light, and Glare**

Existing conditions for shadows, light, and glare are typical for an urban environment that is developed to the level of intensity found in South Downtown.
3.10.2 **Impacts**

**No Action Alternative**

**Views, Shadows, Light and Glare, and Urban Design**

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Aesthetics-related impacts would be evaluated on a site-specific basis in conjunction with each proposed project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

**Development Alternatives**

Each of the proposed development alternatives would continue the re-development trend of properties in the South Downtown Subarea, at varying intensities, for urban uses and activities. From an area-wide change perspective, **Alternative 1** would have the greatest potential for aesthetics-related impacts in that build-out could entail a net increase of 30 million sq. ft. of development, **Alternative 2** would be somewhat less at 20 million sq. ft., and **Alternative 3** would be the least with a potential net increase of 10 million sq. ft.

**Views**

As projects in the South Downtown Subarea develop according to existing zoning, views of, and within the Subarea are expected to change significantly. Greater impacts will be seen with the higher-intensity buildout alternatives, which more fully utilize bonuses to achieve higher floor area ratios (FAR). Views of existing lowrise structures would be affected as neighboring buildings are demolished and redeveloped with taller structures. Lowrise buildings that were constructed recently will be the last to redevelop and will be impacted the most. Structures with northeast-facing views of Commencement Bay, and southeast views of Mt. Rainier could be affected the most as a result of increased height and density within this Subarea and corresponding viewshed-related impacts. As noted previously, while there are no regulated view corridors within the Subarea, there are view/access considerations associated with the S-8 Shoreline District, the UWT’s three key view corridors, and the viewshed easement associated with the LeMay Car Museum.

**Urban Design**

Development in the Subarea will result in a higher preponderance of buildings with greater height, bulk, and scale, as compared to existing buildings. It is possible that, urban design within the Subarea could be favorably affected by any one of the three development alternatives. All of the zoning districts within the Subarea include development standards that would ensure relatively high standards for urban design for new development and for renovations.

Older, neglected buildings that contribute to the character of parts of the Subarea that are not historically-designated may be demolished or remodeled in favor of newer structures that meet the City’s current design and streetscape standards. The potential exists for inconsistency between older and newer buildings -- but this is not necessarily an impact.
surface parking lots adjacent to city streets to buildings is expected to result in an improved pedestrian environment.

Potential impacts to the aesthetics of historic buildings and districts are addressed in the Historic and Cultural Resources Element.

**Shadows, Light, and Glare**

Development of taller buildings in the South Downtown Subarea would result increased shading throughout the area, which could periodically affect smaller buildings and open spaces -- particularly if such buildings and open spaces are located north of the redevelopment. Shadow impacts are for the most part temporary and are influenced by the height/bulk and scale of new construction, climatic conditions (e.g., number of clear days vs. partly cloudy or cloudy days), and the seasonal rate of change of the sun’s angle relative to the earth. While all the alternatives have the potential for increased shadow impacts, no significant impacts are anticipated.

New and renovated structures would provide additional light sources within the Subarea, including interior and exterior building lighting and security lighting. Such would be noticeable from adjacent neighborhoods and the freeways. With Alternative 1, additional vehicular traffic is anticipated within the area. Such would result in additional light from vehicles entering and leaving the area. Additional light resulting from any one of the development alternatives, however, is not anticipated to result in any significant impacts.

The primary sources of glare from development would be direct glare from lighting sources, (e.g., building and security lighting, vehicle headlights) and reflective solar glare from specular surfaces (e.g., glazing, luminaire housing, reflective surfaces on building facades and vehicles). New sources of light and glare would be similar to those that current exist in the Subarea and could be perceived as a continuation of existing light and glare in the area. As with shadows, reflected solar glare impacts are also influenced by climatic conditions. No significant glare-related impacts are anticipated.

**3.10.3 Mitigation Measures**

The following mitigation measures apply to all alternatives, and are based on existing City policies, regulations, and other mitigation, as noted below.

**City Policies**

The following policies, together with City codes and other more specific measures, can help mitigate impacts that are described in this section of the Draft EIS.

**Tacoma Comprehensive Plan Environmental Policy Element**

The Environmental Policy Element of Tacoma’s Comprehensive Plan includes the following policies intended to preserve the aesthetics of “scenic” areas:
<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E-SA-1 Scenic Sites and Vistas</strong></td>
<td>Develop and maintain a system of scenic view sites and vistas in order to take advantage of the natural beauty of Tacoma and its siting in the Puget Sound Region.</td>
</tr>
<tr>
<td><strong>E-SA-2 Tree Trimming</strong></td>
<td>Permit the trimming or removal of trees or vegetation from natural open space areas only if it can be accomplished in accordance with the Critical Areas Preservation Ordinance or established regulations for view preservation or if it can be proven that the trees or vegetation are a detriment to the ecology or aesthetic appearance of the area or that they present an unsafe condition.</td>
</tr>
<tr>
<td><strong>E-SA-3 View Corridors</strong></td>
<td>View corridors which can link the City and the water should be preserved or created.</td>
</tr>
<tr>
<td><strong>E-SA-4 Promote Steep Slope Views</strong></td>
<td>Recognize, protect and promote the visual qualities and the view potential offered by steep slope areas.</td>
</tr>
<tr>
<td><strong>E-SA-5 Preservation Large Trees/Existing Views</strong></td>
<td>Preserve, wherever and whenever feasible, large existing trees within residential neighborhoods and select and locate new trees to preserve existing views.</td>
</tr>
<tr>
<td><strong>E-SA-6 Design and Aesthetics</strong></td>
<td>Emphasize good design and aesthetics with respect to scale, proportion and the use of compatible materials in new development and redevelopment within the City.</td>
</tr>
<tr>
<td><strong>E-SA-7 Encourage Private Covenants</strong></td>
<td>Encourage the establishment of private covenants to control height and vegetation in new plats to promote view preservation.</td>
</tr>
<tr>
<td><strong>E-SA-8 Coordination of Efforts</strong></td>
<td>Encourage the agencies responsible for utility lines to work together to achieve the long-range goal of undergrounding all utility lines.</td>
</tr>
<tr>
<td><strong>E-SA-9 Neighbor Cooperation</strong></td>
<td>Encourage neighboring property owners to work together to preserve individual property views.</td>
</tr>
</tbody>
</table>

The above Comprehensive Plan policies are implemented in the following regulations and programs:

**Tacoma Municipal Code Design Standards and Regulations**

Chapter 13.06A.070 establishes Design Standards for the downtown districts in the South Downtown Subarea, including DCC, DR, and WR. Standards address rooftop mechanical systems, street trees, surface parking lots, building facades, driveways, pedestrian lighting, public seating, roof forms (DR District only), setbacks/sidewalks (in certain DCC District locations only).

Chapter 13.06A.080 establishes Design Standards for increasing allowable FAR for the downtown districts in the South Downtown Subarea, including DCC, DR, and WR. These Standards are designed to grant additional development capacity in exchange for the provision of features that enhance aesthetics. At least four of eleven possible design standards must be incorporated into a development to increase allowable FAR (see FAR Table in the Land Use Element), and for each standard that is additionally met, the maximum allowable FAR may be
increased by 0.5. Chapter 13.06A.090 establishes additional design features for increasing FAR by two for each feature incorporated in a development.

Chapter 13.06.501 establishes Design Regulations for the UCX-TD, M1, and M2 zones in the South Downtown Subarea. Standards address Mass Reduction, Roofline, Windows and Openings, Façade Surface Standards, Pedestrian Standards, Fencing, Retaining Wall, and Utility Standards, Single, Two, and Three Family Dwellings, and Townhouses. Chapter 13.06.502.D addresses Landscaping Standards, and 13.06.503 addresses Residential Transition Standards. Chapter 13.06.300 requires a 10 foot setback for the portion of a building above 50 feet in the UCX-TD zone. Note that the South Downtown Subarea Plan recommends the elimination of the UCX-TD District, in which case the above design regulations would not apply as mitigation.

Chapter 13.06.400 establishes regulations for Industrial Districts, including M1 and M2 zones in the South Downtown Subarea. In the M2 zone, increased heights are allowed with additional setbacks: a building or structure must be set back on all sides one foot for each four ft. such building or structure exceeds 100 feet in height.

Chapter 13.06.100 addresses the R4 Residential Districts in the South Downtown Subarea. To preserve the residential aesthetic character of these areas, the R4 zone requires a 15-foot front setback, a 5-foot side setback, and a 25-foot rear setback, along with minimum lot sizes that depend on use.

Chapter 13.10.110 establishes regulations for the S-8 Shoreline District, which includes properties on the Thea Foss Waterway in the South Downtown Subarea. Standards that address the aesthetics include the following: view analysis (more details in the Shoreline Master Program discussion below), view corridors, pedestrian-friendly uses and frontages, blank walls, height/bulk/scale, and structured parking. Fourteen specific view corridors are defined and protected. For the west side of the Foss, a highly detailed set of regulations defines what is allowed for towers, including podium height and setbacks, modulation and roofs; and tower height, spacing, floorplate, and setbacks. On the east side of the Foss Waterway, regulations also govern yard size, front, side, and rear setbacks.

**City of Tacoma Shoreline Master Program**

The City of Tacoma’s 2012 Shoreline Master Program (SMP) (Ord. 28034, Exhibit A) establishes policies and regulations that are intended to preserve views and aesthetics in Shoreline areas, including the portion of the South Downtown Subarea that is located on the Thea Foss Waterway:

6.7.4 Regulations

A. View Regulations

1. New development shall be located and designed to mitigate adverse impacts to views from public vistas, viewpoints, parks and scenic drives.

2. View corridors (as specified in Table 9.2 of the SMP) shall be provided concurrent with any new use or development.
3. Structures are not permitted in any required view corridor, except that weather protection features, public art, and areas provided primarily for public access, such as viewing towers and pedestrian bridges, may be located in or over these areas.

4. As mandated by the Act (RCW 90.58.320), no permit may be issued for any new or expanded building or structure of more than 35 feet above average grade level on shorelines that will obstruct the view of a substantial number of residences on areas adjoining such shorelines, except where this Program does not prohibit such development and only when overriding considerations of the public interest will be served. Private views of the shoreline, although considered during the review process, are not expressly protected.

5. Property owners concerned with the protection of views from private property are encouraged to obtain view easements, purchase the intervening property, and/or seek other similar private means of minimizing view obstruction.

6. Protection and/or enhancement of critical areas and their associated buffers shall be preferred over provisions for visual access, when there is an irreconcilable conflict between the two.

7. Water-dependent uses and/or public access uses shall be preferred over provisions for visual access, when there is an irreconcilable conflict between the two.

8. View protection does not justify the excessive removal of vegetation to create views or enhance partial existing views. Retaining vegetation and “windowing” or other pruning techniques shall always be preferred options over vegetation removal.

B. Aesthetic Regulations

1. Buildings shall incorporate architectural features that reduce scale such as setbacks, pitched roofs, offsets, angled facets, and recesses.

2. The first floor of structures adjacent to pedestrian public access-ways or street ROW shall be designed to maximize transparency, where appropriate given the type of use and its location in the shoreline.

3. Building surfaces on or adjacent to the water shall employ materials that minimize reflected light.

4. Building mechanical equipment shall be incorporated into building architectural features, such as pitched roofs, to the maximum extent possible. Where mechanical equipment cannot be incorporated into architectural features, a visual screen shall be provided consistent with building exterior materials that obstructs views of such equipment.

5. Fences, walls, hedges and other similar appurtenances and accessory structures shall be designed in a manner that does not preclude

The SMP also establishes the following regulations specific to the S-8 zone in the South Downtown Subarea:
D. S-8 Thea Foss Waterway

All new development in the “S-8” Thea Foss Waterway Shoreline District shall also be designed in accordance with the Thea Foss Waterway Design Guidelines.

1. For all new development that exceeds 35 feet in height, the project proponents shall conduct a view impact analysis.

2. The view analysis required under TSMP 6.7.4(D)(2) shall include the following:
   a. The view analysis shall identify potential impacts to public access to the shorelines of the state and the view obstruction of a substantial number of residences on areas adjoining the west side of the Waterway.
   b. The view analysis shall also identify potential impacts to the locally significant public view of Mount Rainier, behind the Murray Morgan Bridge, as seen from the northern end of the southernmost viewpoint projection in Fireman’s Park.
   c. In addition to the requirements found in the Shoreline Management Act, including RCW 90.58.320, shoreline permits shall not be approved for any new or expanded building or structure of more than 50 feet in height that will obstruct the locally significant public view of Mount Rainier, as described above.

Thea Foss Waterway Design Guidelines

The 2011 Thea Foss Waterway Design Guidelines were developed through an extensive public process. The guidelines apply to the S-8” Shoreline District areas within the South Downtown Subarea, and address three main areas: (1) Public Spaces, (2) Building Sites, and (3) Site Details. Guidelines most relevant to aesthetics include: View/Access Corridors, Streetscapes, View Considerations, Shading Considerations, Site Layout, Exterior Appearance, Transition Areas, Fences, Landscaping, Lighting, Signage, Surfacing Materials, and miscellaneous street furniture.

University of Washington Tacoma (UWT) Master Plan

The 2003 UWT Master Plan and 2008 Update identify three important view corridors to the east and southeast: the South 19th Street axis, the Mt. Rainier Vista, and the Power House Vista. The stated intention of the Master Plan is that development and refinements of the plan for the central open space on campus will contribute to framing all three vistas. The Master Plan also establishes a set of streetscape types that include specifications for aesthetic elements such as street trees and sidewalk widths.

Undergrounding Utilities

Undergrounding overhead utility lines is relatively expensive, typically costing between $800,000 to $1,000,000 per block in Tacoma, according to Tacoma Power. Pursuant to RCW 35, conversion to underground power lines can be financed by an LID, in which case it is Tacoma Power’s policy to cover 30 percent of the total cost. The Subarea Plan recommends that the City pursue undergrounding utility lines in South Downtown. In addition, new development can be expected to help build financial momentum for undergrounding along frontage proximate to the development sites.
**LeMay Museum View Protection**

The Second Amended Harold E. LeMay Museum Development Agreement with the City (11/14/2007) establishes the following view protection:

“The City agrees that for so long as the Museum is in operation, the City will not construct on City-owned property directly adjacent to the Museum any structure or structures that will significantly obstruct the sightlines between downtown Tacoma and the Museum absent prior written consent by the Museum, which consent will not be unreasonably withheld. The City will consult and coordinate with the Museum regarding any such plans in an effort to minimize the impact of planned structures on the sightlines between the Museum and downtown Tacoma.”

**Other Mitigation**

Under all alternatives, the Environmental Policy Element of the Tacoma Comprehensive Plan (Amended Ordinance Number 27769), taken together with implementing regulations, is expected to protect scenic areas within the Subarea. Therefore, no additional mitigation measures are necessary or proposed to address potential impacts associated with the proposed alternatives.

Depending on the nature of future site-specific development, mitigation may be necessary to address site-specific impacts that could occur with development under any of the alternatives. Site specific measures may include reducing the size, bulk and scale of the project, changing the location of the project on a particular lot, and/or placing limits on proposed building materials.

**3.10.4 Unavoidable Adverse Impacts**

No significant unavoidable adverse impacts are anticipated relative to aesthetic resources.
3.11 TRANSPORTATION

Information presented in this section addresses the effects of the proposed alternatives on transportation located within or proximate to the South Downtown Subarea and at a regional-scale (i.e. within the jurisdiction of the Puget Sound Regional Council [PSRC], including all of Pierce, King, Kitsap, and Snohomish Counties). Transportation impacts are generally summarized utilizing available data and projections of all day travel patterns, for all trip purposes (including both work and non-work trips). This section is divided into five parts including: vehicular traffic, waterborne/rail traffic, public transit, non-motorized systems and parking.

3.11.1 VEHICULAR TRAFFIC

3.11.1.1 Affected Environment

Street Classifications

The street network through the South Downtown Subarea is highly irregular. The eastern portion (south of the port and Foss Waterway) is characterized by short, disconnected north-south streets, and long east-west streets. Puyallup Ave. is the only arterial street that extends east from I-705 through the subarea. E 25th St. is also a through street, and shares right of way with LINK light rail tracks, which continue on to Pacific Avenue. West of I-705, the streets in the subarea are erratically connected east-west, due to the steep topography and multiple grids intersecting in this area. Primary streets are north-south, including Pacific Ave., Jefferson Ave., and Yakima along the western border. S. 15th Street is a priority linkage between the Foss Waterway and neighborhoods to the west. Connections to the east and west have traditionally been difficult due to the steep nature of downtown.

Street classifications vary in the subarea and include Freight Loading Local Routes, Arterials (Tacoma Ave., Pacific Ave., S Tacoma Way, and S. 21st St.), Warehouse Residential (Holgate, South C, Commerce, and S. 23rd St.), Transit Priority (Commerce, Market, Jefferson, and Tacoma Ave.), Pedestrian Retail (Pacific Ave. and Broadway), Cycling (Fawcett Ave), and Connectors (15th St., 17th St., and 21st St.). S Tacoma Way provides access to the industrial centers to the south with S. 21st St. as a corridor from I-705 and I-5 to the hospitals and employment centers.

Per guidelines in the Downtown Plan, Tacoma Ave. and Market/Jefferson are identified as Transit Priority Streets. With 80 ft. Right-of-Way (ROW), the Transit Priority typography applies to streets that currently have or are planned for frequent bus service/streetcar. Pacific Ave. is an exception, as this downtown “Main Street” is designated as a Primary Pedestrian Street. Particular to the Brewery District, Warehouse Streets provide for a highly urban industrial streetscape in response to the existing warehouses and typical heavy uses by loading trucks and/or industry. Commerce and South C Streets both have elevated loading dock elements, while providing minimal traffic and local access. Holgate Ave. is used primarily for business and loading access and is not a through street.¹

¹ Information from the Dome District Development Strategy Update (2008) and the Brewery District Development Concept Study (2010).
Limited Access Highways

The South Downtown Subarea is situated at the intersection of several major interstates and state routes. Interstate 5 (I-5) traverses east-west along the southern border of the Subarea and Interstate 705 (I-705) bisects the subarea west of the Tacoma Dome, traveling north-south and terminating in downtown Tacoma. State Route 509 reaches east from I-705 along the port and extending along the edge of the Dome District.

According to the 2011 Tideflats Area Transportation Study, high traffic volumes on southbound I-5 between I-705 and SR 16 cause congestion and queuing along I-5 and the ramps to I-705 in the subarea.\(^2\) There is congestion around the 9th St. onramp just north of the study area. Portland Ave., just east of the study area boundary, provides access to the Port of Tacoma from I-5 and is chronically congested. It is an important point of access for freight to the Port.

At-Grade Rail Crossings

The D-to-M Street connector that extends Sounder Commuter Rail from Tacoma to Lakewood was recently completed (October 2012) and modified the street network along E 26th St. between East D St. and Pacific Ave. All affected intersections have been constructed with rail overcrossings with the exception of East C St. and East D St. at E 26th St., and South C St. near S Tacoma Way, where there are at-grade crossings. The crossings will be signaled with gates to stop traffic when a train passes. A St. is permanently closed to vehicular traffic between S 25th St. and E 26th St. and is open to bicycles and pedestrians only.

Traffic Volume

The average daily traffic volume for selected South Downtown Subarea streets is shown in Figure 3.11-1. Pacific and Puyallup Avenues are the most heavily traveled arterial streets in the subarea, with over 13,000 vehicles per day. S 25th St., where the LINK rail travels through the Dome District, has fewer than 5,000 vehicles per day. As can also be seen, volumes on I-5 through this area are 160,000-210,000 vehicles per day.

Speed Limits

Speed limits on streets in the study area range from 25 MPH to 35 MPH, with the exception of the Interstates and State Routes, which permit up to 60 MPH travel on certain segments. See Figure 3.11-2 for reference.

3.11.2 Impacts

To estimate potential impacts to vehicular traffic and other modes of transportation within the South Downtown Subarea and at the regional level (i.e. within the jurisdiction of the Puget Sound Regional Council [PSRC], including all of Pierce, King, Kitsap, and Snohomish Counties), each alternative was evaluated based on the results of a scenario specific forecast using the Puget Sound Regional Council’s (PSRC’s) Regional Travel Demand Model. Key assumptions and details of this analysis are provided in Appendix B.

\(^2\) Fehr and Peers, 2011.
Source for this data is the 2011 Tideflats Area Transportation Study and the City of Tacoma govME traffic volume tool (www.govme.org). Data is primarily from 2008, although varies by street segment, and ranges from 1987-2008. Traffic volumes are averaged over a 24 hour weekday count period.
Figure 3.11-2
Speed Limits for Arterial Streets in the South Downtown Subarea
To accurately account for the influence of planned and potential changes to land uses and travel patterns in the surrounding neighborhoods, each of the alternatives for the South Downtown Subarea was paired for analysis with an alternative for the parallel Martin Luther King District Subarea Plan, that is of comparable scale and intensity relative to the full range of alternatives under consideration for that plan. Table 3.11-1 below shows the pairings of alternatives for the two adjacent Subareas.

In general, implementation of all of the action alternatives for the South Downtown Subarea Plan, is expected to result in reduced rates of driving and increased rates of walking, cycling and utilization of public transportation for travel to, from, and within the Study Area. This may be explained largely by (1) planned improvements to bicycle, pedestrian and transit facilities and services in the Study Area (described in the ‘Mitigations,’ section), and (2) the fact that development of new, higher density buildings, with a greater mix of uses and activities will put more people, destinations and essential services within easy walking, or cycling distance of each other, and in areas accessible to local and regional public transit services, allowing residents and employees of, and visitors to the District to accomplish a significantly higher share of their daily travel without driving. While this trend is expected to result in lower per capita rates of driving and increased use of non-auto modes of transportation and a reduction of vehicle miles traveled (VMT) at the regional-level, the substantial growth planned for the Study Area – particularly the extent of development associated with the Large-Scale Buildout Alternative for the South Downtown Subarea and the associated High Growth Alternative for the MLK District Subarea – is still projected to increase vehicle travel on streets and roadways within Study Area. These area-wide impacts are expected to be fully mitigated by planned improvements to multimodal transportation facilities and services and other mitigation measures identified in this section, including transportation demand management programs.

| Table 3.11-1 |
| South Downtown Subarea and MLK District Subarea Alternatives Evaluated by Modeling Scenario |

<table>
<thead>
<tr>
<th></th>
<th>Modeling Scenario 2030</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>South Downtown</strong></td>
<td></td>
</tr>
<tr>
<td>Subarea Plan</td>
<td>No Action</td>
</tr>
<tr>
<td>Alternative</td>
<td></td>
</tr>
<tr>
<td><strong>MLK District</strong></td>
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<tr>
<td>Subarea Plan</td>
<td>No Action</td>
</tr>
<tr>
<td>Alternative</td>
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</tbody>
</table>

*Source: Nelson\Nygaard Consulting Associates.*

This section provides a summary of potential impacts of each of these modeling scenarios (identified hereafter by the associated alternative for the South Downtown Subarea), first to vehicular mobility at the regional level, and then to vehicular mobility within the Study Area, which includes the entire area within the boundaries of both the South Downtown Subarea and the adjacent Martin Luther King District Subarea.
Note that the more detailed identification and definition of localized (e.g. intersections) and transportation network link level (e.g. street/path segments) impacts of site specific development applications will be conducted in the future according to requirements set forth by the City in forthcoming amendments to the engineering section of the Tacoma Municipal Code, specifying requirements for (a) the conduct of transportation impact analysis for specific projects and (b) mitigation of any such impacts (per Subarea Plan Recommendation M-1).

**Level of Service Standards**

As one of several measures of performance relative to the goals and objectives of the Subarea Plan, the city as a whole, and the State Growth Management Act (RCW 36.70.A), the Subarea Plan establishes context-sensitive level-of-service (LOS) standards that are specific to and appropriate for the Subarea. Vehicle LOS will be measured for selected intersections and streets/roadways in the Subarea based on one of the following methodologies, selected at the discretion of the City:

A. A modified version of the methodology used by the Puget Sound Regional Council (PSRC) to determine the severity of congestion at specific locations over a 24-hour period (Annual Average Daily Traffic to one-hour capacity ratio, or AADT/C), or,

B. The methodology contained in the most recently published version of the Highway Capacity Manual (HCM) published by the Transportation Research Board.

Standards for the Subarea and citywide (as established in the Transportation Element of the Tacoma Comprehensive Plan [T-44]) have been defined to optimize the efficient utilization of the existing transportation network, while minimizing potential impacts on walking, bicycling, transit use, community development potential, and the environment. As such, the City will balance these objectives by operating streets and intersections within the Subarea at LOS E or better, with the following exceptions, where LOS F is acceptable:

- Pedestrian and bicycle priority: The City shall maintain operations on all streets and intersections at LOS A-E, unless maintaining this would, in the City’s judgment, be infeasible, conflict with applicable facilities and standards in the Pedestrian and Bicycle Elements of the Mobility Master Plan, and/or conflict with the achievement of other Subarea Plan goals. LOS F conditions may be accepted in such cases, provided that provisions are made to facilitate and encourage non-single occupant vehicle transportation as part of a development project,

- Local streets and roadways: For all arterial roadways, collector streets, and other streets and roadways within the Subarea, but not under the jurisdiction of the Washington State Department of Transportation (WSDOT), the City of Tacoma will accept operations at LOS F. Applicants for new development projects in the Subarea will not be required to analyze the impact of their projects on the vehicle LOS of streets and intersections in the Subarea, provided that their application is consistent with all other Subarea Plan and Tacoma Comprehensive Plan requirements.
Regional

Between 2010 (the base year for transportation analysis) and 2030, vehicle travel and delay at the regional level are projected to increase substantially under all alternatives for the South Downtown Subarea (see Table 3.11-2). Between 2010 and 2030 under the No Action Alternative:

- total regional Vehicle Miles Traveled (VMT) is projected to increase by 28%
- total regional Vehicle Hours of Delay are projected to increase by 51%

Consistent with theory and research evidence on the travel demand impacts of compact, mixed-use development in accessible locations, model results suggest that all of the action alternatives for the South Downtown Subarea will result in the following relative impacts to vehicular travel at the regional level:

- a lower share of trips made by driving single occupant vehicles (SOV),
- reduced Vehicle Hours of Delay
- essentially no change to VMT, and
- increased use of non-auto modes of transportation, relative to the No-Action Alternative (2030).

<table>
<thead>
<tr>
<th>Impact (Average Daily)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>90,832,993</td>
<td>116,765,431</td>
<td>116,583,576</td>
<td>116,344,553</td>
</tr>
<tr>
<td>Delay (Vehicle Hours)</td>
<td>423,070</td>
<td>639,884</td>
<td>667,284</td>
<td>654,214</td>
</tr>
<tr>
<td>Speed (MPH)</td>
<td>31.8</td>
<td>31.0</td>
<td>30.7</td>
<td>30.8</td>
</tr>
<tr>
<td>SOV Trips (Person Trips)</td>
<td>NA</td>
<td>9,281,401</td>
<td>9,249,670</td>
<td>9,206,897</td>
</tr>
<tr>
<td>Carpool Trips (Person Trips)</td>
<td>NA</td>
<td>7,130,460</td>
<td>7,104,815</td>
<td>7,065,230</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.

Table 3.11-3 shows the travel mode shares (all trips) associated with each alternative for the South Downtown Subarea. As noted previously, the share of all regional trips made by driving is expected to be slightly lower under each of the Action Alternatives than under the No Action Alternative (2030). Consistent with theory, the share of regional person trips made by private vehicle (SOV + carpool) declines slightly with increasing intensity of planned development in the Subarea, dropping from 84.7 percent under the No Action Alternative (2030) to 84.0 percent under Large-scale Buildout Alternative (2030), the scenario with the most intense development in the Study Area.
Table 3.11-3
Travel Mode Share, Regional Impacts

<table>
<thead>
<tr>
<th>Mode Share Summary for Region</th>
<th>No-Action Alt (2030)</th>
<th>Modest Buildout (2030)</th>
<th>Medium Buildout (2030)</th>
<th>Large-scale Buildout (2030)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>47.9%</td>
<td>47.8%</td>
<td>47.6%</td>
<td>47.5%</td>
</tr>
<tr>
<td>Carpool</td>
<td>36.8%</td>
<td>36.7%</td>
<td>36.5%</td>
<td>36.5%</td>
</tr>
<tr>
<td>Transit</td>
<td>4.0%</td>
<td>4.0%</td>
<td>4.0%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Bike</td>
<td>1.6%</td>
<td>1.6%</td>
<td>1.6%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Walk</td>
<td>9.7%</td>
<td>9.8%</td>
<td>10.2%</td>
<td>10.3%</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.

Table 3.11-4 shows the relative difference in several of the key measures of impacts to vehicular traffic at the regional level between each of the Action Alternatives and the No-Action Alternative for 2030. Model results suggest only minor differences between each of the alternatives and the No-Action Alternative for most of the key indicators, including VMT, Average Travel Speeds (Miles Per Hour), and person trips by SOV and carpool. The only notable difference in between the alternatives is with regard to Vehicle Delay, which is projected to be slightly higher (+4.2%) under the Modest Buildout Alternative than the No Action Alternative for 2030.

Table 3.11-4
Vehicular Traffic, Regional Impacts, Alternatives Comparison

<table>
<thead>
<tr>
<th>Regional Summary</th>
<th>Impact (Average Daily)</th>
<th>Percent Difference in Impact of Each 2030 Action Alternative, Relative to the No-Action Alternative (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Modest Buildout (2)</td>
</tr>
<tr>
<td>Vehicle Miles Traveled (VMT)</td>
<td>-0.16%</td>
<td>-0.36%</td>
</tr>
<tr>
<td>Delay (Vehicle Hours)</td>
<td>4.28%</td>
<td>2.24%</td>
</tr>
<tr>
<td>Speed (MPH)</td>
<td>-0.74%</td>
<td>-0.35%</td>
</tr>
<tr>
<td>SOV Trips (Person Trips)</td>
<td>-0.34%</td>
<td>-0.80%</td>
</tr>
<tr>
<td>Carpool Trips (Person Trips)</td>
<td>-0.36%</td>
<td>-0.91%</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.

Study Area Impacts

Tables 3.11-5 and 3.11-6 show projected differences between alternatives in VMT, vehicle delay, average speeds (MPH), and person trips by SOV and carpool. With substantial new development and activity in the South Downtown Subarea and in the larger Study Area as a whole, VMT and vehicle delay within the Study area are projected to increase under all action alternatives. Both VMT and vehicle delay within the Study area.
Area are projected to be highest with the most intense development alternatives. The Large-scale Buildout alternative is projected to result in 17% more VMT and 28% more average daily vehicle hours of delay than the No Action Alternative for 2030.

These projections are consistent with expectations that vehicle traffic volumes will increase with substantial new development in the area, but their impact on a local and regional level is mediated by expectations that per capita VMT and exposure to vehicle delay will be lowest for the most intense development alternatives. This is consistent with the projections of the previous section that vehicular traffic impacts at the regional level will minimal, with lower VMT and delay for the action alternatives with the highest development intensity (Medium Buildout and Large-scale Buildout).

Table 3.11-5
Vehicular Traffic, Summary of Study Area Impacts

<table>
<thead>
<tr>
<th>Study Area Summary</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact (Average Daily)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle Miles Traveled (VMT)</td>
<td>851,562</td>
<td>896,918</td>
<td>956,492</td>
<td>1,004,531</td>
</tr>
<tr>
<td>Delay (Vehicle Hours)</td>
<td>2,792</td>
<td>2,860</td>
<td>3,182</td>
<td>3,584</td>
</tr>
<tr>
<td>Speed (MPH)</td>
<td>37.7</td>
<td>36.2</td>
<td>34.3</td>
<td>33.3</td>
</tr>
<tr>
<td>SOV Trips (Person Trips)</td>
<td>138,689</td>
<td>186,500</td>
<td>263,574</td>
<td>301,553</td>
</tr>
<tr>
<td>Carpool Trips (Person Trips)</td>
<td>85,550</td>
<td>123,862</td>
<td>172,813</td>
<td>198,495</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.

*Study Area includes the South Downtown Subarea and the adjacent MLK District Subarea. Note: Summary statistics include all vehicle travel within the study area, including pass-through trips.
### Table 3.11-6

**Vehicular Traffic, Study Area Impacts, Alternatives Comparison**

<table>
<thead>
<tr>
<th>Study Area Summary*</th>
<th>Percent Difference in Impact of Each 2030 Action Alternative, Relative to the No-Action Alternative (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact (Average Daily)</td>
<td>Modest Buildout (2)</td>
</tr>
<tr>
<td>Vehicle Miles Traveled (VMT)</td>
<td>5.33%</td>
</tr>
<tr>
<td>Delay (Vehicle Hours)</td>
<td>2.45%</td>
</tr>
<tr>
<td>Speed (MPH)</td>
<td>-4.13%</td>
</tr>
<tr>
<td>SOV Trips (Person Trips)</td>
<td>34.47%</td>
</tr>
<tr>
<td>Carpool Trips (Person Trips)</td>
<td>44.78%</td>
</tr>
</tbody>
</table>

*Source: Nelson\Nygaard Consulting Associates.*

*Study Area includes the South Downtown Subarea and the adjacent MLK District Subarea. Note: Summary statistics include all vehicle travel within the study area, including pass-through trips.

### Tables 3.11-7 and 3.11-8

Table 3.11-7 and 3.11-8 show the projected mode share for trips with destinations and origins in the Study Area respectively, under each alternative. For all alternatives, walk, bike and transit mode shares are substantially higher, and auto mode shares (SOV+ carpool) are significantly lower, for trips with either an origin or destination in the Study Area, than for all trips region wide. This likely reflects the well connected street grids, proximity to downtown Tacoma, and the strong regional accessibility of the Study Area (the multimodal Tacoma Dome Station, located within the South Downtown Subarea, is currently among the busiest transit stations in the region, and provides direct connections to destinations throughout the Central Puget Sound Region and – via Amtrak and Greyhound – to points beyond).

### Table 3.11-7

**Study Area Impacts, Mode Share, Trips with Destinations in Study Area**

<table>
<thead>
<tr>
<th>Travel Mode</th>
<th>No-Action Alt (2030)</th>
<th>Modest Buildout (2030)</th>
<th>Medium Buildout (2030)</th>
<th>Large-scale Buildout (2030)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>36.0%</td>
<td>33.0%</td>
<td>29.1%</td>
<td>28.6%</td>
</tr>
<tr>
<td>Carpool</td>
<td>22.2%</td>
<td>21.9%</td>
<td>19.1%</td>
<td>18.8%</td>
</tr>
<tr>
<td>Transit</td>
<td>10.7%</td>
<td>6.7%</td>
<td>7.8%</td>
<td>8.1%</td>
</tr>
<tr>
<td>Bike</td>
<td>1.9%</td>
<td>2.0%</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Walk</td>
<td>29.2%</td>
<td>36.4%</td>
<td>42.0%</td>
<td>42.4%</td>
</tr>
</tbody>
</table>

*Source: Nelson\Nygaard Consulting Associates.*
### Study Area Impacts, Mode Share, Trips with Origins in the Study Area

<table>
<thead>
<tr>
<th>Travel Mode</th>
<th>No-Action Alt (2030)</th>
<th>Modest Buildout (2030)</th>
<th>Medium Buildout (2030)</th>
<th>Large-scale Buildout (2030)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>37.3%</td>
<td>32.5%</td>
<td>29.2%</td>
<td>28.9%</td>
</tr>
<tr>
<td>Carpool</td>
<td>23.0%</td>
<td>21.6%</td>
<td>19.2%</td>
<td>19.0%</td>
</tr>
<tr>
<td>Transit</td>
<td>6.1%</td>
<td>8.8%</td>
<td>6.5%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Bike</td>
<td>2.0%</td>
<td>1.9%</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Walk</td>
<td>31.6%</td>
<td>35.1%</td>
<td>43.0%</td>
<td>43.4%</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.

### Vehicular Traffic on Limited Access Highways

This section summarizes projected changes to vehicular travel patterns on limited access highways within the Study Area and in the wider Central Puget Sound Region under each of the alternatives for the South Downtown Subarea and associated alternatives for the larger Study Area.

#### Region

Tables 3.11-9 and 3.11-10 show selected indicators of vehicle mobility on limited access highways region wide under each alternative for the South Downtown Subarea and the larger Study Area. Between the base year (2010) and 2030, under the No Action Alternative, the following changes to travel on limited access highways throughout the region are projected by the model:

- VMT is projected to increase by 30% to a daily average of 51,660,465.
- Vehicle hours of delay are projected to rise by 47% to a daily average of 383,342 hours, and
- Average travel speeds are projected to decline by 3.4% to 41.1 MPH.

Minimal differences between Subarea action alternatives are projected for VMT, vehicle hours of delay and travel speeds on limited access highways at the regional level. The greatest difference between alternatives among these key indicators of mobility on limited access highways at the regional level is for vehicle hours of delay, which are projected to be 3.1% higher under the Modest Buildout Alternative than under the No Action Alternative for 2030.
Table 3.11-9
Vehicular Traffic, Impacts to Limited Access Highways, Regionwide

<table>
<thead>
<tr>
<th>Limited Access Highways, Regional</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Miles Traveled (VMT)</td>
<td>39,717,480</td>
<td>51,660,465</td>
<td>51,571,237</td>
<td>51,582,182</td>
</tr>
<tr>
<td>Daily Delay (Vehicle Hours)</td>
<td>260,266</td>
<td>383,342</td>
<td>395,230</td>
<td>390,456</td>
</tr>
<tr>
<td>Daily Speed (MPH)</td>
<td>42.6</td>
<td>41.1</td>
<td>40.7</td>
<td>40.8</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.

Table 3.11-10
Vehicular Traffic, Impacts to Limited Access Highways, Regionwide

<table>
<thead>
<tr>
<th>Limited Access Highways, Regional</th>
<th>Percent Difference in Impact of Each 2030 Action Alternative, Relative to the No-Action Alternative (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impacts (Average Daily)</td>
<td>Modest Buildout (2)</td>
</tr>
<tr>
<td>Vehicle Miles Traveled (VMT)</td>
<td>-0.17%</td>
</tr>
<tr>
<td>Delay (Vehicle Hours)</td>
<td>3.10%</td>
</tr>
<tr>
<td>Speed (MPH)</td>
<td>-0.99%</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.

Study Area

Minimal differences between alternatives are projected for VMT and daily average travel speeds (MPH) on limited access highways within the Study Area. The most notable difference in impacts of the Subarea alternatives with the highest development intensities are with respect to vehicle hours of delay on limited access highways within the Study Area. The Medium Buildout and Large-scale Buildout Alternatives are projected to result in 4.8% and 11.0%, respectively more vehicle hours of delay on highways within the Study Area than the No Action Alternative for 2030.

Figures 3.11-3 through 3.11-6 illustrate the projected traffic volumes on streets and roadways, including key segments of the limited access highway network, while Figures 3.11-7 through 3.11-9 highlight segments with a substantial (25% or more) difference in projected average daily traffic volumes between one of the three action alternatives and the No-Action Alternative for 2030. The only limited access highway segment projected to see substantially higher daily average traffic volumes in one of the action alternatives is the southernmost segment of I-705 between E. 26th Street and I-5, which is projected to see 12,777 more vehicle trips (directional volume) per day in 2030 under the Large-scale Buildout Alternative than under the No Action Alternative (see Figure 3.11-9).
Note that daily vehicle delay (hours) on limited access highways in the Study Area is projected to be slightly higher for the Medium Buildout Alternative than for the No-Action Alternative despite the projection that average daily VMT on limited access highways will be slightly lower under the Medium Buildout Alternative. This may be explained by a shift in travel patterns with increased traffic on local arterials and connectors in the study area, increased congestion on limited access highway entrance and exit ramps, and consequent minor increases to delay on the limited access highway system, despite lower average VMT.

### Table 3.11-11

**Vehicular Traffic, Impacts to Limited Access Highways, Study Area**

<table>
<thead>
<tr>
<th>Limited Access Highways, Study Area</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impacts (Average Daily)</td>
<td>No-Action Alt (2030)</td>
<td>Modest Buildout (2030)</td>
<td>Medium Buildout (2030)</td>
<td>Large-scale Buildout (2030)</td>
</tr>
<tr>
<td>Vehicle Miles Traveled (VMT)</td>
<td>483,337</td>
<td>481,774</td>
<td>480,372</td>
<td>485,926</td>
</tr>
<tr>
<td>Daily Delay (Vehicle Hours)</td>
<td>1,317</td>
<td>1,319</td>
<td>1,374</td>
<td>1,462</td>
</tr>
<tr>
<td>Daily Speed (MPH)</td>
<td>51.6</td>
<td>51.5</td>
<td>51.2</td>
<td>50.8</td>
</tr>
</tbody>
</table>

*Source: Nelson\Nygaard Consulting Associates.*

*Study Area includes the South Downtown Subarea and the adjacent MLK District Subarea. Note: Summary statistics include all vehicle travel within the study area, including pass-through trips.*

### Table 3.11-12

**Vehicular Traffic, Impacts to Limited Access Highways, Study Area, Alternatives Comparison**

<table>
<thead>
<tr>
<th>Limited Access Highways, Study Area</th>
<th>Percent Difference in Impact of Each 2030 Action Alternative, Relative to the No-Action Alternative (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impacts (Average Daily)</td>
<td>Modest Buildout (2)</td>
</tr>
<tr>
<td>Vehicle Miles Traveled (VMT)</td>
<td>-0.32%</td>
</tr>
<tr>
<td>Delay (Vehicle Hours)</td>
<td>0.14%</td>
</tr>
<tr>
<td>Speed (MPH)</td>
<td>-0.06%</td>
</tr>
</tbody>
</table>

*Source: Nelson\Nygaard Consulting Associates.*

*Study Area includes the South Downtown Subarea and the adjacent MLK District Subarea. Note: Summary statistics include all vehicle travel within the study area, including pass-through trips.*
Vehicular Traffic Impacts, Link Level Vehicle Volumes, 2030 No-Action
The 2030 Modest Build-out is based on 10 million square feet of development in the South Downtown Subarea and moderate growth in the MLK Subarea.

Source: Nelson\Nygaard Consulting Associates, 2013

Figure 3.11-4
Vehicular Traffic Impacts, Link Level Vehicle Volumes, 2030 Modest Buildout
Tacoma South Downtown Subarea Plan
Draft EIS

Figure 3.11-5
Vehicular Traffic Impacts, Link Level Vehicle Volumes,
2030 Medium Buildout

The 2030 Medium Build-out is based on 20 million square feet of
development in the South Downtown Subarea and high growth in the
MLK Subarea.

Source: Nelson\Nygaard Consulting Associates, 2013
The 2030 Large-Scale Build-out is based on 30 million square feet of development in the South Downtown Subarea and high growth in the MLK Subarea.
Figure 3.11-7
Vehicular Traffic Impacts, Difference in Traffic Volumes, 2030 Modest Buildout Relative to 2030 No-Action Alternative
Figure 3.11-8
Vehicular Traffic Impacts, Difference in Traffic Volumes, 2030 Medium Buildout Relative to 2030 No-Action Alternative
Figure 3.11-9

Vehicular Traffic Impacts, Difference in Traffic Volumes, 2030 Large-scale Buildout Relative to 2030 No-Action Alternative
Vehicular Traffic on the Arterial Roadway Network

This section summarizes projected changes in key vehicular travel patterns on the arterial roadway network within the Study Area and in wider Central Puget Sound Region under each of the alternatives under consideration for the South Downtown Subarea and associated alternatives for the larger Study Area.

Region

Tables 3.11-13 and 3.11-14 show differences between alternatives for key indicators of vehicular mobility on arterials at the regional level. Between the base year (2010) and 2030, under the No Action Alternative, the following changes are projected by the model for arterial roadways regionwide:

- VMT is projected to increase by 26.2%
- Vehicle hours of delay are projected to increase by 57.5%, and
- Average travel speeds are projected to decline by 1 MPH to 31.2

Note that Tables 3.11-13 and 3.11-14 show that vehicle hours of delay on the regional arterial roadway network are projected to be slightly higher under each of the three action alternatives for the South Downtown Subarea, than for the No-Action Alternative, despite the fact that VMT on arterial roadways across the region is projected to be slightly lower under each of the action alternatives. This may occur if increases in vehicle traffic volumes, VMT on arterial roadways within the Study Area that lead to increased congestion and vehicle delay within the Study Area (summarized in Tables 3.11-15 and 3.11-16) are more than off-set by projected reductions in vehicle traffic and VMT on less congested and lengthy segments of arterial roadways across the region, resulting from projected changes to travel patterns associated with the type and intensity of development planned for the Study Area under each Action Alternative, including significant reductions in driving and increased walking, cycling and use of public transportation.

Table 3.11-13
Vehicular Traffic, Impacts to Arterial Roadways, Regionwide

<table>
<thead>
<tr>
<th>Arterials, Regional Impacts (Average Daily)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Miles Traveled (VMT)</td>
<td>39,499,373</td>
<td>49,885,395</td>
<td>49,822,784</td>
<td>49,639,351</td>
</tr>
<tr>
<td>Delay (Vehicle Hours)</td>
<td>162,806</td>
<td>256,547</td>
<td>272,058</td>
<td>263,763</td>
</tr>
<tr>
<td>Speed (MPH)</td>
<td>32.3</td>
<td>31.2</td>
<td>30.9</td>
<td>31.0</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.
Table 3.11-14
Vehicular Traffic, Impacts to Arterial Roadways, Regionwide, Alternatives Comparison

<table>
<thead>
<tr>
<th>Arterials, Regional</th>
<th>Percent Difference in Impact of Each 2030 Action Alternative, Relative to the No-Action Alternative (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Modest Buildout (2)</td>
</tr>
<tr>
<td>Vehicle Miles Traveled (VMT)</td>
<td>-0.13%</td>
</tr>
<tr>
<td>Delay (Vehicle Hours)</td>
<td>6.05%</td>
</tr>
<tr>
<td>Speed (MPH)</td>
<td>-0.98%</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.

Study Area

Substantial differences between Subarea alternatives are evident with respect to arterial VMT and vehicle hours of delay on arterial roadways within the Study Area. VMT and vehicle hours of delay are projected to be higher on arterial roads in the Study Area under the alternatives with the greatest associated increase in development. Under the Large-scale Buildout Alternative, arterial VMT and vehicle hours of delay on arterials within the Study Area are projected to be 29.9% higher and 57.5% higher, respectively, than under the No Action Alternative for 2030. Nevertheless, even with model-based projections of substantial increases in daily traffic volumes, VMT and vehicle hours of delay, most of the affected arterials in the Subarea are likely to remain below capacity and operate efficiently most of the time – even under the Large-scale Buildout Alternative.

Figures 3.11-3 through 3.11-6 illustrate the projected traffic volumes on streets and roadways, including key segments of the arterial roadway network, while Figures 3.11-7 through 9 highlight segments with a substantial (25% or more) difference in projected average daily traffic volumes between one of the three action alternatives and the No Action Alternative for 2030. Substantial (25% or greater) differences between alternatives with respect to link/segment level traffic volumes on the arterial roadway network, include the following:

- Traffic volumes are projected to be substantially higher under the Modest Buildout Alternative than the No Action Alternative for 2030 on key segments of the following arterial roadways in the Study Area (see Figure 3.11-7):
  - Puyallup Ave.
  - S. 25th St.

- Traffic volumes are projected to be substantially higher under both the Medium Buildout Alternative and the Large-scale Buildout than the No Action Alternative for 2030 on key segments of the following arterial roadways in the Subarea (see Figures 3.11-8 and 3.11-9):
- Puyallup Ave.
- S. 25th St.
- S. 19th St.
- Pacific Ave.
- East D St.

Table 3.11-15
Vehicular Traffic, Impacts to Arterial Roadways, Study Area

<table>
<thead>
<tr>
<th>Arterials, Study Area*</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impacts (Average Daily)</td>
<td>No-Action Alt (2030)</td>
<td>Modest Buildout (2030)</td>
<td>Medium Buildout (2030)</td>
<td>Large-scale Buildout (2030)</td>
</tr>
<tr>
<td>Vehicle Miles Traveled (VMT)</td>
<td>334,674</td>
<td>364,779</td>
<td>404,325</td>
<td>434,859</td>
</tr>
<tr>
<td>Daily Delay (Vehicle Hours)</td>
<td>1,475</td>
<td>1,542</td>
<td>1,807</td>
<td>2,122</td>
</tr>
<tr>
<td>Daily Speed (MPH)</td>
<td>30.5</td>
<td>30.2</td>
<td>29.5</td>
<td>29.0</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.

*Study Area includes the South Downtown Subarea and the adjacent MLK District Subarea. Note: Summary statistics include all vehicle travel within the study area, including pass-through trips.

Table 3.11-16
Vehicular Traffic, Impacts to Arterial Roadways, Study Area, Alternatives Comparison

<table>
<thead>
<tr>
<th>Arterials, Study Area*</th>
<th>Percent Difference in Impact of Each 2030 Action Alternative, Relative to the No-Action Alternative (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impacts (Average Daily)</td>
<td>Modest Buildout (2)</td>
</tr>
<tr>
<td>Vehicle Miles Traveled (VMT)</td>
<td>9.00%</td>
</tr>
<tr>
<td>Delay (Vehicle Hours)</td>
<td>4.51%</td>
</tr>
<tr>
<td>Speed (MPH)</td>
<td>-1.18%</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.

*Study Area includes the South Downtown Subarea and the adjacent MLK District Subarea. Note: Summary statistics include all vehicle travel within the study area, including pass-through trips.

Note that WSDOT is responsible for setting the level-of-service (LOS) thresholds for state highways within and adjacent to this area. The current WSDOT standard for state highways in the vicinity of the South Downtown Subarea is LOS D.

**Vehicular Traffic on Connector Streets**

Traffic volumes on local connector streets within the Subarea and the larger Study Area are projected to increase significantly with the intensity of development associated with
each of the action alternatives. However, most connector streets are likely to operate efficiently and below capacity, most of the time, even in 2030 under the most intense Large-Scale Buildout Alternative.

Tables 3.11-17 and 3.11-18 show VMT within the Study Area under each Subarea alternative, and the percentage difference in VMT under each 2030 action alternative relative to the No Action Alternative for 2030.

Table 3.11-17
Vehicular Traffic, Impacts to Connector Streets, Study Area

<table>
<thead>
<tr>
<th>Connector Streets, Study Area*</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impacts (Average Daily)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No-Action Alt (2030)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modest Buildout (2030)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium Buildout (2030)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large-scale Buildout (2030)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle Miles Traveled (VMT)</td>
<td>33,550</td>
<td>50,365</td>
<td>71,795</td>
<td>83,746</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.
*Study Area includes the South Downtown Subarea and the adjacent MLK District Subarea. Note: Summary statistics include all vehicle travel within the study area, including pass-through trips.

Table 3.11-18
Vehicular Traffic, Impacts to Connector Streets, Study Area, Alternatives Comparison

<table>
<thead>
<tr>
<th>Connector Streets, Study Area*</th>
<th>Percent Difference in Impact of Each 2030 Action Alternative, Relative to the No-Action Alternative (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impacts (Average Daily)</td>
<td>Modest Buildout (2)</td>
</tr>
<tr>
<td>Vehicle Miles Traveled (VMT)</td>
<td>50.12%</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.
*Study Area includes the South Downtown Subarea and the adjacent MLK District Subarea. Note: Summary statistics include all vehicle travel within the study area, including pass-through trips.

Impacts to Specific Streets and Roadway Segments

Average daily vehicle traffic volumes for specific street and highway segments in the Study Area under each of the action alternatives are shown in Figures 3.11-3 to 3.11-9. Note that these figures are intended to show relative differences in impact in different parts of the Subarea and on different types of facilities. However, given the limitations of the regional travel demand model to project change at the link and intersection level, and the nature of the street grid in the area, it should be noted that traffic volumes may be over-assigned for key street links shown with highest traffic volumes. Also note that these maps show projected change in traffic volumes and differences between
alternatives with respect to the same, but make no statement with respect to the relationship of volumes to peak-hour capacity.

3.11.1.3 Mitigation Measures

Potential localized impacts of the action alternatives for the South Downtown Subarea will be mitigated primarily by projects, programs and policies contained in existing City, County and regional plans. Mitigation of any unforeseen impacts, and/or additional local and regional vehicular traffic reduction may be achieved by implementation of a combination of several or all of the transportation demand management programs and services described at the conclusion of this sub-section, including incremental implementation of programs required of and/or associated with new development in the Subarea. (Note that the Subarea Plan includes recommendations for (1) the development of a multimodal transportation impact fee on new development to fund site and/or intersection specific mitigation measures, and/or larger, area, or district-wide mitigation projects and programs (Recommendation M-2: Develop and implement a phased-in developer impact fee system to fund multimodal transportation investments..."), (2) requirements for property owners to "develop and implement regulations that require Transportation Management Programs (TMP)" to reduce the share of tenants and employees access sites in the district by driving alone, “triggered when new development exceeds predetermined threshold levels" (Recommendation M-3), and (3) the adoption of amendments to the engineering section of the Municipal Code to "set forth a framework for the City Engineer to secure traffic analyses for specific projects and to require any mitigation." (M-1).

Current projects, programs and policies

The City of Tacoma Comprehensive Plan and the Washington State Policy on Greenhouse Gas Emissions both emphasize the importance of managing vehicular traffic by minimizing its impact on other modes of travel. Single-occupancy vehicle travel is hierarchically lower than all other modes, and should continue to be carefully managed as residential and commercial activity increases in the subarea.

Tacoma Comprehensive Plan Transportation Element

The following system management policy of the Tacoma Comprehensive Plan Transportation Element supports mitigation of potential impacts to vehicular transportation to and within the Subarea:

- T-TSM-6 Level of Service Standards: Establish level of service standards that are consistent with regional and state standards for roadways that reflect arterial functional classifications and the differing development patterns, growth objectives, accessibility for vehicles, transit, pedestrian and bicycle use.
- T-ES-3 Congestion Management: Encourage the use of alternative modes, and thereby slow the increase in the use of single occupant vehicles and the increase of environmental degradation associated with their use.
The City’s Comprehensive Plan also specifies target auto level of service (LOS) for arterial roadways, consistent with the requirements of the State Growth Management Act, while identifying selected “Arterial Corridors” where lower auto LOS is acceptable, given the plan’s focus on the movement of people, rather than vehicles:

“Level of Service Standards for City Arterials”:

For the purposes of the system-wide level of service (LOS) determination, the City’s arterials are divided into three categories: (a) arterial connecting corridors, and primarily associated with designated centers; (b) Port Industrial area arterials, aggregated because of the regional economic importance and the preponderance of heavy truck traffic; and (c) all other arterials and collectors on the transportation network not included in the first two categories.

- **Arterial Corridors**: 85% of the arterial lane-miles within the designated arterial corridors must exhibit a LOS "E" or better (volume-to-capacity ratio of 0.99 or below). The focus of arterial corridors in this transportation plan is on moving people as opposed to moving vehicles. As such, we are suggesting that a lower level of service (LOS E) be provided to vehicular traffic within the identified arterial corridors. In addition, priority treatment for transit and High Occupancy Vehicles (HOVs) will be provided within the arterial corridors.

The above-noted proposed policy change to reduce LOS requirements on arterials is a key enabling strategy for achieving South Downtown’s goals to accommodate new residents and jobs and create walkable, transit-oriented communities. As South Downtown grows, an increasing share of trips will be accommodated by modes other than private auto, and as such, a lower priority on LOS for vehicular traffic is appropriate.

**Washington State Policy on Greenhouse Gas Emissions**

Washington State law (RCW 70.235.020 Greenhouse gas emissions reductions) requires that “The state shall limit emissions of greenhouse gases” to achieve the following:

- Reduce overall statewide emissions to 1990 levels by 2020
- Reduce overall statewide emissions to 25% below 1990 levels by 2035
- “By 2050, the state will do its part to reach global climate stabilization levels by reducing overall emissions to fifty percent below 1990 levels, or seventy percent below the state’s expected emissions that year.

In 2008, as a key strategy for reducing greenhouse gases in the transportation sector, the Washington State Legislature passed House Bill 2815 mandating reductions in vehicle miles traveled (VMT). The legislation sets targets of 18 percent reduction in per capita VMT by 2020, 35 percent by 2035, and 50 percent by 2050.

Numerous studies have shown that households in walkable, transit-rich neighborhoods tend to drive less than comparable households located in more car-dependent

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3  Tacoma Comprehensive Plan, p. T-44 (Adopted 11/16/04, Ordinance 27295, Last Amended 6/15/10, Amended Ordinance No 27892)

environments.\(^5\) By enabling a greater share of the new residents and employees of and visitors to the Subarea to travel mostly by walking, cycling, or utilizing public transit, each of the action alternatives for the Subarea can contribute to achievement of these state VMT and greenhouse gas emissions reduction goals.

**Traffic Dispersion through the Existing Street Grid**

With the exception the limited highway and railroad crossings, the vicinity of the Tacoma Dome, and selected Port and industrial lands, the majority of the street network in the Subarea and the larger Study area is characterized by a conventional urban grid pattern. By providing multiple route options for travel between two points within a district, the urban street grid can alleviate traffic congestion at specific locations and specific times to a degree by dispersing traffic through the network. Impact analysis confirms that there is currently and will continue to be substantial available capacity on many street and roadway segments in the Subarea and the larger Study Area. This means that maintenance of and improvements to the existing grid, such as filling gaps or ‘missing links’ in the network, modifying intersection operations, or adding new network links, where appropriate, will tend to mitigate some of the location specific (link level) traffic impacts highlighted in this Chapter. All of the Action Alternatives for the Subarea include selected enhancements to the street grid, in the form of new street links and connections that can serve to further mitigate potential link level traffic impacts.

**Planned Projects**

The SR 509/East D Street Slip Ramp Project will provide an on and off ramp on SR 509 at East D Street, just east of the Foss Waterway. This will increase road capacity for commercial traffic to access the Port of Tacoma, and will connect SR 509 with the Foss Waterway area, the Tacoma Dome District, the Tideflats area, and the BNSF Intermodal yard. The project was a recommendation of the Port of Tacoma’s Tideflats Area Transportation Study (2010). This project is still under review, as of October 2012, in the SR 509/East D Street Slip Ramps Project, which presented three alternative designs to the City Council in July 2012. Figure 3.11-10 provides a map of the three alternative slip ramp designs. The top design in this map, with an eastbound undercrossing, has been identified as the top alternative.

In addition to the measures defined in this section, the identified impacts of plan implementation on vehicular traffic circulation may be mitigated by many of the City’s current parking supply and demand management programs and policies, described in Section 5.3.1, all of which tend to reduce demand for vehicle travel to, from and within the South Downtown Subarea.

**Mitigation Mechanisms of the Subarea Plan**

The Subarea Plan includes recommendations the following recommendations related to the requirements of and funding for mitigation of identified site-specific and Subarea-wide impacts:

\(^5\) Transit-Oriented Communities: A Blueprint for Washington State…
the development of a multimodal transportation impact fee on new development to fund site and/or intersection specific mitigation measures, and/or larger, area, or district-wide mitigation projects and programs (Recommendation M-2: Develop and implement a phased-in developer impact fee system to fund multimodal transportation investments…”),

• requirements for property owners to “develop and implement regulations that require Transportation Management Programs (TMP)” to reduce the share of tenants and employees access sites in the district by driving alone, “triggered when new development exceeds predetermined threshold levels” (Recommendation M-3), and

• the adoption of amendments to the engineering section of the Municipal Code to “set forth a framework for the City Engineer to secure traffic analyses for specific projects and to require any mitigation.” (Recommendation M-1).

Additional Vehicular Traffic Reduction Strategies

To address any potential unforeseen impacts to vehicular traffic circulation, and the impacts of additional local vehicle traffic on the safety, accessibility, and mobility of travel by other modes of transportation, the City of Tacoma may opt to develop and implement one or more of the following Transportation Demand Management (TDM) strategies to reduce the vehicle trip generation of new and existing buildings in the sub-area (Note that among the most impactful TDM and traffic reduction strategies are the additional parking supply management and pricing strategies detailed in Section 5.3.2). Potential TDM-related mitigation strategies are identified in the following categories:

1. Improved Transportation Options: This includes enhanced facilities & services for bicycling, walking, and public transit, and facilitation of carpooling and informal ridesharing. Programs and strategies to improve access to and within the South Downtown Sub-Area by walking, cycling and public transit are described in section 3.3, mitigation of impacts to public transportation, and Section 4.3, mitigation of impacts to non-motorized transportation.

2. Universal Transit Passes: In recent years, a growing number of transit agencies have teamed with developers, employers and universities, and even residential neighborhood associations to provide universal transit passes. These passes typically allow the holder to take unlimited rides on local and regional transit services for a low monthly fee, or often at no charge, where the cost is born entirely by the University, employer, property manager or developer. By removing cost-barriers to taking transit, universal transit passes – sometimes called flex-passes or eco-passes – can be extremely effective in reducing vehicle traffic. Implementation of universal transit passes was found to reduce auto mode share for work commute trips by an average of eleven percentage points in the studies summarized in Table 3.11-19. Students and permanent employees of UW Tacoma are currently eligible to participate in the U-Pass program, the University of Washington’s innovative universal transit pass program, which provides full fare coverage for unlimited rides on Pierce Transit, King County
Figure 3.11-10
D Street Slip Ramp Map
Metro Transit, Community Transit, Everett Transit, and Sound Transit buses, Sounder commuter rail trains, and paratransit services provided by any of these transit agencies (UW students are automatically enrolled in the program and assessed a $45 quarterly fee for the service). U-Pass holders are also eligible for subsidized vanpool fares and have access to Pierce Transit’s Emergency Ride Home program.

With the cooperation of District property managers and employers, a similar Universal Transit Pass program could be developed and implemented to increase transit ridership and reduce driving by residents and employees of the sub-area. Using parking revenues, or other transportation related fees on developers, property owners and/or employers, free, unlimited ride transit passes could be provided to all full-time employees and residents of the Sub-Area.

The City may consider incentivizing or requiring property managers and employers of newly developed properties in the Subarea to participate in a Universal Transit Pass Program, and may assist property owners, employers, developers and transit agencies with program design and administration, or with the formation of a Transportation Management Association (TMA) to manage these and other TDM programs and services within the Subarea. The effect of such a requirement or incentive for new property owners and tenants would be to incrementally mitigate or off-set the vehicle trip generation impacts of each new project developed in the District. Using parking revenues, or other transportation related fees on developers, property owners and/or employers, free, unlimited ride transit passes could be provided to all full-time employees and residents of the Sub-Area.

A review of existing universal transit pass programs found that the annual per employee fees are between 1% and 17% of the retail price for an equivalent annual transit pass. The principle of employee or residential transit passes is similar to that of group insurance plans – transit agencies can offer deep bulk discounts when selling passes to a large group, with universal enrollment, on the basis that not all those offered the pass will actually use them regularly.

In addition to reducing impacts to vehicular traffic, implementation of a Universal Transit Pass program will significantly reduce parking demand in the district. The Eco-Pass program in Santa Clara County, California resulted in a 19% reduction in parking demand.6

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Table 3.11-19
Mode Shifts Achieved with Universal Transit Passes

<table>
<thead>
<tr>
<th>Location</th>
<th>Drive to work</th>
<th>Transit to work</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Municipalities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Clara (VTA)(^7)</td>
<td>76%</td>
<td>11%</td>
</tr>
<tr>
<td>Bellevue, Washington(^8)</td>
<td>81%</td>
<td>13%</td>
</tr>
<tr>
<td>Ann Arbor, Michigan(^9)</td>
<td>N/A</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Universities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UCLA(^10) (faculty and staff)</td>
<td>46%</td>
<td>8%</td>
</tr>
<tr>
<td>Univ. of Washington, Seattle(^11)</td>
<td>33%</td>
<td>21%</td>
</tr>
<tr>
<td>Univ. of British Colombia(^12)</td>
<td>68%</td>
<td>26%</td>
</tr>
<tr>
<td>Univ. of Wisconsin, Milwaukee(^13)</td>
<td>54%</td>
<td>12%</td>
</tr>
<tr>
<td>Colorado Univ. Boulder (students)(^14)</td>
<td>43%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.

3. **Parking Management:** Among the most impactful TDM and traffic reduction strategies are the parking management and pricing strategies that the City has recently implemented for Downtown and a portion of the South Downtown Sub-Area (detailed in Section 5.3.1), located within the City’s designated Reduced Parking Area (RPA), such as:

- Exemption from minimum off-street parking requirements, and
- Initiation of paid on-street parking pricing

Further vehicular traffic reduction and mitigation of impacts to vehicular transportation can be achieved through the additional parking supply management and pricing strategies detailed in Section 5.3.2, such as:

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7 Santa Clara Valley Transportation Authority, 1997.
8 1990 to 2000: [http://www.commuterchallenge.org/cc/newsmar01_flexpass.html](http://www.commuterchallenge.org/cc/newsmar01_flexpass.html).
12 2002 to 2003, the effect one year after U-Pass implementation; From Wu et. al. “Transportation Demand Management: UBC’s U-P ass – a Case Study”, April 2004.
• Parking cashout programs
• Priority parking for carpools, vanpools and short-term parking
• Requirements that the lease or sale of off-street parking be unbundled from the lease or sale of commercial and/or residential space within the Subarea, and
  Maximum off-street parking requirements, or an area-wide cap on off-street parking supply

4. Policy and Institutional Reforms

a. Commute trip reduction (CTR) requirements for small employers:
The state currently requires employers with employment sites where 100 or more employees are scheduled to arrive for work during the morning peak period to implement a comprehensive CTR program to encourage these employees to walk, cycle, share rides (by vanpooling or carpooling), and/or take public transportation to the work site, and/or to tele-work (also known as telecommute), or to work a flexible or irregular schedule that allows them to avoid commuting during off-peak hours (RCW.70.94.531). Subject employers are required to monitor the impact of their own CTR programs by conducting annual travel surveys of employees. Widespread and coordinated implementation of such CTR programs have been shown to reduce vehicular traffic to and parking demand at major employment centers. One example is in downtown Bellevue, where the drive-alone commute rate at CTR affected worksites declined by nearly 20% between 1993 and 2001 (The overall drive-alone rate in downtown Bellevue fell from 81% in 1990 to 57% in 2000, a nearly 30% decline over 10-years)\(^\text{15}\). The City of Tacoma maintains a robust Commute Trip Reduction Program, with specific requirements for “affected employers,” (i.e. employers subject to State CTR requirements per RCW70.94.531) detailed in the Tacoma Municipal Code (Title 13 – Land Use Regulatory Code, Chapter 12.15 – Commute Trip Reduction).

Although the largest employers in the City of Tacoma are already subject to the state CTR law, the City may leverage further reduction of traffic and parking demand by extending similar requirements to employment sites in the district with 10-99 employees (i.e. by amending TMC Chapter 13.15.020 (B) to define an “affected employer” as “an employer that employs 10 or more affected employees,” rather than “100 or more employees.”). To minimize small employers’ administrative costs for development and implementation of CTR programs and other TDM measures, the City and major property owners in the District can facilitate the formation of a Transportation Management Association (TMA), similar to Commute Seattle, the TMA for Downtown Seattle, or the Greater Redmond TMA, which organizes CTR and TDM programs for

employers\textsuperscript{16} in Downtown Redmond and the Overlake neighborhood, where Microsoft is headquartered.

The transportation impact mitigation effect of such requirements would be incremental and in proportion to the scale and pace of the development of new buildings in the Subarea and the occupation of existing and new structures by new businesses and organizations and the expanded operations of existing businesses and organizations.

\textbf{b. Transportation Management Programs:} Consistent with its authority under the State Environmental Policy Act (SEPA), the City of Tacoma may require property owners to develop and implement a Transportation Management Program (TMP) intended to reduce the share of tenants and employees who access the site by driving alone. Such programs may be required as a condition of approval for large construction and development projects in order to reduce potential parking and traffic impacts of the project on other stakeholders in the district and surrounding neighborhoods and the citywide transportation system. The City may require the development and implementation of a TMP by developers of each and every large project in the District, with recognition of the fact that the TDM benefits and transportation impact mitigation effects of such an approach would be incremental and in proportion to the scale and pace of the development of new buildings and the redevelopment of existing buildings in the Subarea.

As an alternative, the City of Tacoma may opt to address the increasing need for TMPs as the Subarea grows by establishing new development thresholds to trigger requirements for TMPs. The proposed threshold for the South Downtown Subarea Plan is 5 million square feet of new development after which TMPs as described below would be required as conditions of approval for all future development projects. Final determination of the optimum threshold and specific requirements for TMPs would require further analysis.

An effective TMP should include specific goals for the percentage of trips made to the site by single-occupant vehicles (SOV), and carpools, and a set of program elements designed to achieve those goals. While employer-based CTR plans frequently include programmatic elements, such as incentives and services for employees, property manager TMP’s can help ensure that projects are designed and developed physically in ways that support the use of non-auto modes of transportation. Typical TMP program elements may include the provision of on-site secure and covered bicycle parking, and shower facilities, installation of on-site commuter information centers in publicly accessible areas, to display real-time transit arrival and departure information and other information about alternatives to driving alone to work, and charging market-based daily or

\textsuperscript{16} Note: The definition of the size, and of the land uses and activities of development projects subject to any such requirement to develop and implement a TMP should be determined by the City, based on further analysis, with recognition of the potential cumulative impacts of multiple smaller development projects in close proximity.
hourly prices for the use of dedicated off-street parking facilities. Once occupied, residents of each building can be required to conduct surveys of tenants’ travel behavior and to provide regular reports to the City evaluating program implementation and achievement of TMP goals.

Several cities in the region, including Seattle, Bellevue, Kirkland and Redmond, currently require selected property owners to implement TMP’s as a condition of development approval17.

3.11.1.4 Unavoidable Adverse Impacts

With application of appropriate mitigation measures, no significant unavoidable adverse impacts are anticipated relative to vehicular traffic.

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17 In the City of Seattle, selected building project applicants and property managers are required to develop and implement Transportation Management Programs (TMP’s) as a condition of development, according to provisions of the City’s Land Use Code (Title 23), and its SEPA Policies and Procedures (Ch. 25.05). The Seattle Department of Planning and Development’s Directors Rules on Transportation Management Programs (TMP’s) are available at: web1.seattle.gov/dpd/dirrulesviewer/Rule.aspx?id=10-2012. An overview of Seattle’s Transportation Options program for large buildings can be viewed at: www.seattle.gov/waytogo/TMP.htm
3.11.2 WATERBORNE/RAIL TRAFFIC

3.11.2.1 Affected Environment

Waterborne Transportation

The Thea Foss Waterway provides access to Commencement Bay and the Puget Sound from the South Downtown Subarea. The Foss Waterway is a north-south waterway adjacent to downtown Tacoma. The west edge of the Foss Waterway (bordering downtown) is largely disconnected from the street grid due to shoreline railroad tracks and the I-705 corridor. Access from the Subarea is limited to a ramp at E 15th St. to Dock St., and at East ‘D’ St. where an overcrossing provides access to the Dock St. Extension, and connects to public moorings and waterfront access.

The southern part of the Waterway has recently been the focus of redevelopment, with the recent construction of the Museum of Glass and mixed use residential development at Thea’s Landing and The Esplanade. This area can be accessed via a pedestrian bridge (the Chihuly Bridge of Glass) from downtown, or along Dock Street. The Thea Foss Development Authority manages redevelopment of this area, including a marina and the esplanade. The Dock Street Marina and Delin Docks provide public moorings to access the South Downtown Subarea. There is no ferry or cruise ship service in the Foss Waterway at this time.

Railroads

The South Downtown Subarea is in close proximity to the Port of Tacoma, one of the largest container ports in North America. There is significant freight traffic, both rail and truck, that passes through or near the Subarea. At-grade crossings and the limited crossing opportunities of numerous rail corridors are the two most significant impacts the Port has on transportation in the Subarea.

Southbound Sounder and Amtrak passenger rail service currently enters the city from the east and serves the city of Tacoma in two rail stations in the South Downtown Subarea (the stations are ½ mile apart). The Sounder Station is at Tacoma Dome Station on E 25th Street and E ‘D’ Street, which is also a terminus of LINK light rail service (also operated by Sound Transit). The Amtrak station is several blocks northeast of the Tacoma Dome Station at Puyallup Ave and E ‘J’ Street.

As part of ST1 (Sound Move), Sounder commuter rail service has been extended (as of October 2012) south to South Tacoma and Lakewood. The new extension tracks for Sounder service to Lakewood includes rail at-grade and undercrossings (discussed in the vehicular traffic section). Sounder commuter rail service is discussed further in the public transportation section of this element.

Amtrak service currently follows the BNSF and UPRR corridors, sharing that passage with freight service through dockside north to Point Defiance. With the Sounder Extension, Amtrak trains may also begin using the Point Defiance bypass route.
approaching and departing Tacoma from the south.\textsuperscript{18} WSDOT recently completed the Point Defiance Bypass Environmental Assessment to evaluate the rerouting of passenger trains from the Point Defiance route to the rail line traveling through south Tacoma, Lakewood, and DuPont. The existing BNSF route, WSDOT found, is near capacity, with physical and operational constrains adversely affecting passenger and freight train service.\textsuperscript{19}

A key recommendation of this assessment is relocation of the Amtrak Station from its current location to Freight House Square station (served by Sounder and LINK), approximately one half mile from the current Amtrak station. This project is still under review and would require new track extensions and other improvements to the station and platforms at Freight House Square to accommodate Amtrak’s Cascades and Coast Starlight train services. WSDOT estimates an additional 14 trains per day with this modification, 12 Cascade trains and two Coast Starlight trains. Relocation of the Amtrak passenger rail corridor would reduce travel time of the Amtrak Cascades by 10 minutes and reduce the potential for passenger-freight service conflicts. Relocation of station services to a consolidated building would have a positive effect on wayfinding and mobility for pedestrians and other users.\textsuperscript{20}

### 3.11.2.2 Impacts

None of the action alternatives for the South Downtown Subarea, nor the \textbf{No Action Alternative} for 2030 would impact passenger rail transportation or waterborne transportation to, from or within the Subarea:

- No public or private operation currently provides direct waterborne transportation service to the Subarea and no need for such service is projected as a result of implementation of any alternative.

- None of the alternatives are projected to constrain the capacity of current or future planned passenger rail transportation services to the Subarea.

- All freight rail lines that currently enter or pass through the Subarea are completely grade separated and thus should not be impacted by any alternative for the Subarea.

### 3.11.2.3 Mitigation Measures

This section highlights current relevant plans, policies and projects that affect the future capacity and operation of rail transportation and prospects for future waterborne transportation to the Subarea. These plans, policies and projects will influence the City’s options for and approach to mitigating any potential unforeseen impacts to rail and waterborne transportation.

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\textsuperscript{18} Amtrak routing south of Tacoma Station has not yet been determined as of October 2012.

\textsuperscript{19} WSDOT (2012). Point Defiance Bypass Project Environmental Assessment. Pp4-12

\textsuperscript{20} Project is funded by an American Recovery and Reinvestment Act (ARRA) High Speed Rail award received by Washington State in 2010.
Waterborne Transportation

Action Alternatives for the South Downtown Subarea are consistent with and supportive of the goals of the 2005 Thea Foss Waterway Design and Development Plan (Plan) – an element of the City’s Comprehensive Plan and the Shoreline Master Program (SMP).

One of the five major goals of the Plan is to: “Provide opportunities for mixed-use development, public/private investment and recreational opportunities, and public access to the shoreline for the citizens of Tacoma.” Regarding development, the Plan states that “Presently, the Waterway is not being used to its fullest potential. There are numerous vacant properties, especially along the west side of the Waterway, that have potential for redevelopment. Some are occupied by unused structures and others are vacant lots. There is potential for shifting this underdeveloped area into a mixed economic community connected to downtown.”

The policies of the Plan are implemented in Chapter 13.10.110 of the Tacoma Municipal Code: S-8 Shoreline District. The intent of the S-8 regulations is “to improve the environmental quality of Thea Foss Waterway; provide continuous public access to the Waterway; encourage the reuse and redevelopment of the area for mixed-use pedestrian-oriented development, cultural facilities, marinas and related facilities, water-oriented commercial uses, maritime activities, water-oriented public parks and public facilities, residential development, and waterborne transportation; and to encourage existing industrial and terminal uses to continue their current operations and leases to industrial tenants.”

Railroads

The potential impacts of the Action Alternatives on passenger rail service will primarily be mitigated by service improvements that allow for increased capacity as well as decreased travel times on the Amtrak Cascades Corridor. The 2006 Washington State Long-Range Plan for Amtrak Cascades states that by 2023 service will grow from its current four daily round trips to 13 daily round trips between Portland and Seattle. Additionally, planned improvements to the rail line on the west side of I-5 through Fort Lewis will allow trains to bypass Point Defiance. Along with associated track improvements, the Point Defiance bypass will help reduce rail passenger travel times between Tacoma Dome Station and Portland by 10 minutes.

3.11.2.4 Unavoidable Adverse Impacts

With application of appropriate mitigation measures, no significant unavoidable adverse impacts are anticipated relative to waterborne/rail traffic.

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3.11.3 PUBLIC TRANSPORTATION

3.11.3.1 Affected Environment

The South Downtown Subarea has a very high concentration of transit service, serving as a major transfer location for the region and connecting downtown Tacoma and points south with Pierce County and north throughout the Puget Sound. Public transit service in Tacoma, including the South Downtown Subarea, is provided primarily by Pierce Transit. Sound Transit serves Tacoma with regional bus and rail service, a majority of which is commute trip oriented. Intercity Transit operates several bus routes between Tacoma and Thurston County.

The Subarea has several passenger rail services. LINK light rail is a fare-free 1.6 mile light rail line that began operations in 2003, and connects passengers arriving and departing on transit at Tacoma Dome Station with the downtown Tacoma area at 12 minute headways for weekday peak and midday periods. The Sounder is a commuter rail service operated by BNSF on behalf of Sound Transit. The service operates in peak commute times between Tacoma and Everett, 82 miles north of Tacoma, serving nine stations including downtown Seattle. As of October 2011, as part of Sound Move, Sounder service has been extended south to South Tacoma and Lakewood. Amtrak’s Coast Starlight and Cascades routes pass through the Tacoma Amtrak Station, and it is likely that some commuters use this service for daily regional transportation. Bus and rail routing in the subarea is shown in the conceptual (not to scale) diagram in Figure 3.11-11. Puyallup Avenue, S 25th Ave., and Pacific Ave. are the primary public transportation streets in the Subarea.

The Tacoma Dome Station/Freight House Square/Sounder Station acts as the nexus for transit service in the Subarea, as does the nearby Amtrak station on Puyallup Ave. (possible relocation to Freight House Square in 2017). Regional commuter and express bus service utilizes Tacoma Dome Station, in part due to its easy freeway access and large Park and Ride lot (2,283 free parking spaces, 24 hour maximum). LINK light rail connects passengers into the downtown area along Pacific Street, serving the University of Washington Tacoma campus and a number of residential, employment, and retail areas. Figure 3.11-12 provides a general overview of the number of daily one way trips available to and from the subarea to major destinations in the Puget Sound Region. The Subarea is well-connected to a number of areas, most notably Downtown Tacoma, West Tacoma, North Tacoma, University Place, Lakewood, and East Tacoma. There are 178 one-way trips to and from Downtown Seattle and the University of Washington Seattle from the subarea.

3.11.3.2 Impacts

Development under all three action alternatives is projected to result in significant increases in demand for transit service within the Subarea, and connecting to other parts of the City, County and larger Puget Sound Region.

Tables 3.11-20 and 3.11-21 show key indicators of projected demand for travel by transit to destinations in the Study Area and from trip origins in the Study Area, respectively. The key indicators highlighted in these tables include:
Bus and Rail Service Corridors in the South Downtown Subarea
Number of Total Weekday One-way Trips to/from the South Downtown Subarea, 2012
• projected daily average volumes of transit person trips;
• transit mode share; and,
• AM peak period transit person trips from areas of parts of Pierce County (outside of the Study Area) and from King County.

These Tables show that the total volume of transit person trips originating in or destined for the Study Area, as well as the transit person trips to/from (a) King County and (b) elsewhere in Pierce County, is expected to rise substantially with increased intensity of development in the Subarea. Total volume of daily transit person trips to and from the Study Area is projected to be highest – 77,296 – under the Large-scale Buildout Alternative; more than twice the projected volume of 31,919 transit trips into and out of the Study Area under the **No Action Alternative** for 2030.

Sound Transit’s Sounder Commuter Rail and ST Express bus services have more than enough capacity to accommodate the projected growth in AM peak-hour transit trips between the Study Area and King County projected for all Subarea alternatives, including the Large-scale Buildout Alternative (1,356 trips projected).

### Table 3.11-20
Transit Person Trips and Mode Share, Trips to Study Area

<table>
<thead>
<tr>
<th>Transit, Trips To Study Area*</th>
<th>2010</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Volume of Daily Transit Person Trips, Trips to Study Area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Person Trips, Transit, Daily Avg.</td>
<td>n/a</td>
<td>10.7%</td>
<td>6.7%</td>
<td>7.8%</td>
<td>8.1%</td>
</tr>
<tr>
<td>Person Trips, Transit, AM From Pierce County (Outside Study Area)</td>
<td>9,411</td>
<td>20,790</td>
<td>18,717</td>
<td>35,663</td>
<td>42,905</td>
</tr>
<tr>
<td>Person Trips, Transit, AM From King County</td>
<td>2,586</td>
<td>5,131</td>
<td>5,012</td>
<td>5,389</td>
<td>6,166</td>
</tr>
</tbody>
</table>

*Study Area includes the South Downtown Subarea and the adjacent MLK District Subarea.

Source: Nelson\Nygaard Consulting Associates.
Table 3.11-21
Transit Person Trips and Mode Share, Trips Originating in Study Area

<table>
<thead>
<tr>
<th>Transit, Trips Originating in Study Area*</th>
<th>2010</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit Mode Share, Daily Avg.</td>
<td>n/a</td>
<td>6.1%</td>
<td>8.8%</td>
<td>6.5%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Person Trips, Transit, Daily</td>
<td>4,715</td>
<td>11,129</td>
<td>25,518</td>
<td>29,202</td>
<td>34,391</td>
</tr>
<tr>
<td>Person Trips, Transit, AM, to Pierce County (Outside Study Area)</td>
<td>519</td>
<td>948</td>
<td>1,600</td>
<td>1,919</td>
<td>2,041</td>
</tr>
<tr>
<td>Person Trips, Transit, AM, to King County</td>
<td>205</td>
<td>279</td>
<td>716</td>
<td>1,048</td>
<td>1,075</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.
*Study Area includes the South Downtown Subarea and the adjacent MLK District Subarea.

Table 3.11-22 highlights for all Subarea alternatives, projected 2030 demand for AM peak period travel by public transit within the Study Area, and more specifically within the immediate corridor served by Tacoma Link.

At current and potential future service levels, Tacoma Link has more than enough capacity to accommodate projected demand for local transit trips within the Study Area, even under the Large Scale Buildout Alternative, for which 4,303 peak period transit trips are projected within the Study Area (with 1,261 trips projected in the immediate vicinity of the Link alignment).

Table 3.11-22
Transit Person Trips, AM Peak Period: (1) Within Study Area, and (2) Within TAZ’s Served by Tacoma Link

<table>
<thead>
<tr>
<th>Transit Person Trips, AM Peak Period</th>
<th>2010</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within Study Area*</td>
<td>149</td>
<td>1,108</td>
<td>2,025</td>
<td>3,462</td>
<td>4,303</td>
</tr>
<tr>
<td>Within TAZ’s Served by Tacoma Link</td>
<td>42</td>
<td>217</td>
<td>461</td>
<td>784</td>
<td>1,261</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.
*Study Area includes the South Downtown Subarea and the adjacent MLK District Subarea.

Nevertheless, new or redeployed local public transit services may be necessary to accommodate a share of these trips within the Study Area for which the trip origin or
destination is not easily accessible to an Tacoma Link Station (for example, trips between the Hospital District in the MLK District Subarea and the University of Washington Tacoma in the South Downtown Subarea).

Given the substantially increased demand for transit service within the Study Area and between the Study Area and other parts of Pierce County projected for 2030 under each of the action alternatives, the capacity of the local public transit system may be significantly constrained. Current Pierce transit service levels and the reduced service levels likely to be forthcoming in 2013 (and maintained indefinitely) are incompatible with addressing the local transportation needs associated with scale and type of dense, mixed-use, transit-oriented development envisioned for the Subarea under each of the action alternatives. Nevertheless, the current financial situation of Pierce Transit and its long-term financial outlook with current levels of state funding and state authorized revenue options, do not necessarily limit the collective capacity of Pierce Transit, the City, County, region and/or State’s to fund and operate local public transit service to and within the Study Area at levels necessary to support the access and mobility needs of existing and future residents, employees and visitors, given the scale and type of development planned in each of action alternative.

Another significant factor in consideration of potential future transit capacity constraints and demand for enhancements to service within the Subarea is the expected growth in transit trips passing through key transfer points in the Subarea with origins and destinations elsewhere. One focal point for these regional and pass through trips is the Tacoma Dome Station at Freighthouse Square, where many travelers making connections between trip origins/destinations in parts of Pierce County located outside of the South Downtown Subarea, and origins/destinations in King, Pierce, and Thurston Counties and elsewhere in Western Washington, accessible by Sounder Commuter Rail, ST Express buses, InterCity Transit and the Amtrak Cascades service.

3.11.3.3 Mitigation Measures

The potential impacts of Subarea action alternatives on public transportation service will be mitigated in part by service improvements in existing plans that increase transit capacity and connectivity within the Subarea and to other destinations in the City of Tacoma and the greater Puget Sound. Specific improvements are listed below.

- **High Capacity Transit (HCT) from South King County to Tacoma Dome Station.** This corridor is identified as an electric light rail corridor in Transportation 2040, the Puget Sound Regional Council’s (PSRC) Regional Transportation Plan, as well as in the Sound Transit Long Range Plan. Sound Transit ST2 funds the extension of the Central LINK Light Rail Line from SeaTac Airport to the Federal Way Transit Center as well as right of way preservation, initial engineering, and environmental analysis of HCT Alternatives from Kent-Des Moines Road to Tacoma Dome Station.

- **Tacoma LINK Extension.** The extension of Tacoma LINK is included in the Sound Transit Long Range Plan (See Figure 3.11-13). Initial Scoping has been completed and the project will now move into an ST2 funded alternatives analysis. The project is currently finishing the early scoping phase and moving into an alternatives analysis. Sound Transit will analyze the alternatives and
collect public comments before producing an alternatives evaluation in early 2013. It is expected that the preferred corridor will be identified by spring 2013. **Figure 3.11-14** provides a map of the potential corridors identified in the scoping phase. As can be seen, alternatives under consideration vary greatly in location within the City of Tacoma.

As mitigation for any unforeseen impacts to the capacity and reliability of local public transit services for the Study Area, the City of Tacoma, Pierce Transit, Sound Transit, and/or other public agencies may consider other innovative means for funding and providing necessary local public transit services, such as dedicating a share of multimodal transportation impact fee revenue to local public transit facilities and services providing access to and within the Study Area.
• **SR7 BRT.** Transportation 2040 identifies the SR7 corridor as a potential alignment for Pierce Transit State Route 7 BRT corridor between the Roy Y and Pacific Avenue in downtown Tacoma.

• **Market Street Transit Corridor.** The UW Tacoma Transportation Plan calls for the development of Market Street as a transit corridor in order to support the growth of the student body. Transit amenities and improvements such as shelters and traffic calming features are planned to provide safe and reliable transit access to the campus.

• **Tacoma Land Use Regulatory Code Provisions (13.06.511).** New development and redevelopment that exceeds 50% of the value of existing structures and is located within 500 feet of a street where transit service is operated is required to provide transit facilities in the form of foundation pads and benches or shelters. While small developments are exempt, the requirement varies depending on size. For example, a shopping center of 4,000 to 8,000 square feet is required to provide two benches and foundation pads for future transit shelters. Shopping centers over 8,000 square feet are required to provide two foundation pads and two shelters.

### Additional Mitigation

Additional measures to consider for mitigation of potential impacts to public transportation service to and within the Subarea include:

• Near-term restoration and eventual expansion of seven-day per week, long-span, high frequency local transit service within the Study Area and between the Study area and other parts of Tacoma and Pierce County can support and encourage development and Subarea plan implementation, and simultaneously address projected growth in local transit travel demand under each of action alternative for the Subarea.

• The Sounder Commuter rail extension from Tacoma Dome Station to Lakewood, via the new D-M Street Connector, passes through several at grade crossings within the Subarea. As pedestrian and bicycle traffic volumes increase with development in the Subarea, appropriate safety measures should be taken to reduce intermodal conflicts with non-motorized transportation. These measures include all programs intended to reduce vehicular traffic and travel demand to and within the Subarea.

### 3.11.3.4 Unavoidable Adverse Impacts

With application of appropriate mitigation measures, no significant unavoidable adverse impacts are anticipated relative to public transit.
3.11.4 NON-MOTORIZED SYSTEMS

3.11.4.1 Affected Environment

Non-motorized systems in the South Downtown Subarea include the pedestrian and bicycle network (sidewalks, on-street bicycle lanes, and shared road markings), as well as shared-use recreational paths around the Foss Waterway. Enabling safe and comfortable bicycle and pedestrian mobility is critical in ensuring a healthy, sustainable, and economically viable place to live, work and recreate for existing and future residents and employees of and visitors to the Subarea.

The journey to work mode split for the South Downtown Subarea is available from the 5-year estimates of the American Community Survey (2006-2010) by Census Tract. The South Downtown Subarea, east of I-705 is one Census Tract, and the Tacoma Dome is included in a tract with the Port of Tacoma (see Figure 3.11-15). The mode split for these two tracts is shown below in Table 3.11-23. It should be noted that current population for the Dome/Port tract is very low, and that the margin of error for this data and this size geography is very high. As can be seen in Table 3.11-23, the drive alone mode share for the South Downtown Area (excluding the Dome District) is 63%. Public transportation is the second most common mode in that tract, whereas carpooling comprises a larger share of trips in the Dome/Port area.

Table 3.11-23
Journey to Work by Census Tract (2010)

<table>
<thead>
<tr>
<th>Mode</th>
<th>South Downtown Tract (061601)</th>
<th>Tacoma Dome and Port Tract (060200)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive Alone</td>
<td>63%</td>
<td>78%</td>
</tr>
<tr>
<td>Carpool</td>
<td>10%</td>
<td>16%</td>
</tr>
<tr>
<td>Public Transportation</td>
<td>17%</td>
<td>0%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Walk</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Work from Home</td>
<td>4%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: US Census American Community Survey, 2006-2010 Table B08301.

Sidewalk Coverage

Sidewalk coverage varies within the Subarea. Figure 3.11-16 shows sidewalks and paths in the subarea as of the 2010 Mobility Master Plan. Many streets in the downtown core, Brewery District, the Dome District, the eastern edge of downtown near I-705, and the waterfront have very limited sidewalk coverage, which likely acts as a disincentive to pedestrian and bicycle travel in the area. It was noted in the WSDOT Point Defiance
Existing Sidewalk and Path Network in the Subarea
Bypass EA that pedestrians illegally use the rail ROW in this area when sidewalks are unavailable, which is a potentially dangerous condition for pedestrians in the subarea.

The Brewery District Development Concept Study (2010) surveyed pedestrian crossings around UW Tacoma and within the Brewery District and noted numerous locations where crossings are limited, impossible, or potentially hazardous. The I-705, I-5, SR-509, and BNSF/UPRR rail corridors present obstacles to pedestrian mobility throughout the subarea. In areas where access is limited, there are often informal crossings and locations where pedestrians have been observed to cross major roadways mid-block or at unprotected crossings. Streets around the Tacoma Dome and in the Brewery District have narrow sidewalks (typically five feet in width), with limited buffers, benches, and street trees. Recent upgrades have been made to S 25th St. and Pacific Ave., where LINK operates, to improve pedestrian amenities. Topography also presents a significant challenge for east-west pedestrian mobility in the subarea, with steep grades dropping off east of Yakima from the hilltop plateau. Within the Dome District, grades are less of an obstacle.

Sidewalks around the Tacoma Dome station and the LINK stations within the subarea (South 25th Street, Union Station, Convention Station) were inventoried in the Growing Transit Communities Workshops (PSRC, 2012) and a range of sidewalk coverage for the station areas are shown in Table 3.11-24. Sidewalk coverage is a measure of transit accessibility, as increased ease of access to transit stations will have a positive impact on transit ridership.

<table>
<thead>
<tr>
<th>Station Area</th>
<th>Sidewalk Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tacoma Dome Station</td>
<td>20-30%</td>
</tr>
<tr>
<td>South 25th Street Station</td>
<td>30-40%</td>
</tr>
<tr>
<td>Union Station</td>
<td>50-60%</td>
</tr>
<tr>
<td>Convention Station</td>
<td>60-70%</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.

The Sound Transit Station Access Study (Sept, 2012) included an inventory of bicycle and vehicle parking around the Tacoma Dome Sounder Station as well as station access mode. The mode used by passengers to access this station contributes to the physical environment of the station area. At the time of the survey (November 2010), around 80% of passengers arrive and depart by private automobile. This is due in part to the large amount of available parking at Tacoma Dome, and the fact that Tacoma station was the southern terminus of the Sounder line at the time of the survey. Issues identified in this study relating to station access included:

- Topography and at-grade crossings limit pedestrian access to the station from the south, as do the barriers created by I-5, I-705, and the BNSF line

---

22 Growing Transit Communities Workshops, Connectivity Data Measures, May 2012 (Puget Sound Regional Council)
Currently, there are no pedestrian trips and very few bicycle trips originating from within the 15-minute travel shed of this station, which is due in part to the almost complete nonexistence of residential uses around the station.

Only 130 employed residents are located within a 15-minute walk, while over 18,000 employed residents are located within a 15-minute bicycle ride to the station.

The study included a detailed list of recommended road and sidewalk improvements to enhance the pedestrian and bicycling environment around the station and thereby increase the mode share of non-motorized travel modes. The highest ranked project is the E K St/E Wright Ave Bike Boulevard project to connect McKinley Park to the Pipeline Trail.

**Bicycle Facilities**

Currently, bicycle facilities in the South Downtown Subarea are limited (See Figures 3.11-17 and 3.11-18. On-street bike lanes are provided on East D Street, between East 21st Street and Wiley Avenue. An off-street shared use path along the Thea Foss Waterway, adjacent to Dock Street, permits bicycle and pedestrian travel from 11th Street in downtown to the base of the Foss Waterway (at East D Street). East-west connections to this waterfront path require shared use of roadways that have been primarily designed for vehicular traffic, and experience high automobile volumes. As of 2012, planned improvements to bicycle facilities in the Subarea include the provision of on-street bicycle lanes on Yakima Ave, and the reconfiguration and signage of Fawcett Avenue and Market Streets as Bicycle Boulevards.

**3.11.4.2 Impacts**

All of the alternatives for the South Downtown Subarea are projected to result in very significant and substantial increases in trips to/from and within the Study Area made by walking and bicycling. Tables 3.11-25 and 3.11-26 show both the volume of person trips to/from the Study Area and the projected share of total trips to/from the Study Area made by walking and bicycling respectively.

Both total walking trips and walk mode share in the Study Area are projected to increase in relation to the intensity of development associated with each of the action alternatives for the Subarea. The Large-Scale Buildout Alternative is projected to result in a total of 224,346 average daily pedestrian person trips (walk mode share of 42%), nearly 400% of the pedestrian person trips projected for the Study Area under the No Action Alternative for 2030.

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24 According to the Tacoma Mobility Master Plan, “Bike Boulevards are streets where motorists and cyclists share the road. Pavement markings & signage indicate bicycle route. Bike Boulevards are used on lower volume, residential streets. They are designed to be comfortable for cyclists of all ages and abilities. Bike Boulevards often include traffic calming measures such as traffic circles, rain gardens, or street trees as well as wayfinding signage.”
Figure 3.11-17

Existing Bicycle Facilities Map for City of Tacoma

Source: Nelson\Nygaard Consulting Associates, 2013
Top 4 Bikeways 2011-2012

These 4 projects represent 10% of the build-out for Mobility Master Plan bicycle facilities.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Street</th>
<th>Begin-To-End</th>
<th>Length (mi)</th>
<th>Priority Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>S Park Ave</td>
<td>S 6th St - S 40th St</td>
<td>3.25</td>
<td>Bike Lane</td>
</tr>
<tr>
<td>2</td>
<td>5th Ave</td>
<td>S 40th St - S 5th St</td>
<td>0.30</td>
<td>Bike Lane</td>
</tr>
<tr>
<td>3</td>
<td>S 25th</td>
<td>Roosevelt - Puyallup</td>
<td>0.87</td>
<td>Bike Lane</td>
</tr>
<tr>
<td>4</td>
<td>6th Ave</td>
<td>S 25th - 6th Ave</td>
<td>1.42</td>
<td>Bike Lane</td>
</tr>
</tbody>
</table>

Legend:
- Existing Bike Lane
- Top 4 Project Priorities
- Railroads
- Unpaved Pedestrian Path
- Existing Trail
- Schools
- Parks
- Waters
- Tacoma City Boundary

Total Length: 13.33 miles

Source: Nelson\Nygaard Consulting Associates, 2013

Figure 3.11-18
Bicycle Projects Constructed in 2011-2012
This substantial increase in pedestrian activity within the Subarea increases the importance of planned and potential future improvements to pedestrian facilities in the area, including filling gaps in the street and sidewalk networks, enhancing crossings, and providing new facilities where appropriate.

Table 3.11-25
Pedestrian Person Trips and Mode Share, Trips to, from, or within Study Area

<table>
<thead>
<tr>
<th>Pedestrian Person Trips and Mode Share (Daily Average)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>No-Action Alt (2030)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedestrian Person Trips, to Study Area*</td>
<td>56,754</td>
<td>102,174</td>
<td>191,346</td>
<td>224,346</td>
</tr>
<tr>
<td>Walk Mode Share, Trips to Study Area*</td>
<td>29.2%</td>
<td>36.4%</td>
<td>42.0%</td>
<td>42.4%</td>
</tr>
<tr>
<td>Pedestrian Person Trips, Originating in Study Area*</td>
<td>58,072</td>
<td>101,244</td>
<td>192,663</td>
<td>225,372</td>
</tr>
<tr>
<td>Walk Mode Share, Trips Originating in Study Area*</td>
<td>31.6%</td>
<td>35.1%</td>
<td>43.0%</td>
<td>43.4%</td>
</tr>
</tbody>
</table>

*Study Area includes the South Downtown Subarea and the adjacent MLK District Subarea.

Both total cycling trips and bike mode share in the Study Area are projected to increase in relation to the intensity of development associated with each of the action alternatives for the Subarea. The Large-Scale Buildout Alternative is projected to result in a total of 10,543 average daily cycling trips to/from the Study Area, nearly 300% of the bicycle trips projected under the No Action Alternative for 2030.

This substantial increase in bicycle trips to/from and within the Subarea increases the importance of planned and potential future improvements to bicycle facilities in the area, including filling gaps in the bikeway network, and providing new facilities where appropriate.
Table 3.11-26
Bicycle Person Trips and Mode Share, Trips to, from, or within Study Area

<table>
<thead>
<tr>
<th>Bicycle Person Trips and Mode Share (Daily Average)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>No-Action Alt (2030)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modest Buildout (2030)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium Buildout (2030)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large-scale Buildout (2030)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicycle Person Trips, to Study Area*</td>
<td>3,641</td>
<td>5,647</td>
<td>9,037</td>
<td>10,543</td>
</tr>
<tr>
<td>Bicycle Mode Share, Trips to Study Area*</td>
<td>1.9%</td>
<td>2.0%</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Bicycle Person Trips, Originating in Study Area*</td>
<td>3,694</td>
<td>5,625</td>
<td>9,098</td>
<td>10,537</td>
</tr>
<tr>
<td>Bicycle Mode Share, Trips Originating in Study Area*</td>
<td>2.0%</td>
<td>1.9%</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>


*Study Area includes the South Downtown Subarea and the adjacent MLK District Subarea.

3.11.4.3 Mitigation Measures

The impacts of the action alternatives for the South Downtown Subarea on non-motorized transportation systems will primarily be addressed by projects, programs and policies contained in existing City, County and regional plans.

The Pierce County Countywide Planning Policies and the City of Tacoma Mobility Plan, which are concurrent with GMA requirements, set the following goals and objectives to plan for considerable growth in walking and biking in the subarea.

**Pierce County Countywide Planning Policies**

- Encourage walking, bicycling, and transit use.
- Design communities to provide an improved environment for walking and bicycling.
- Reduce vehicle miles traveled and auto dependence.
- Increase alternatives to driving alone.
- Use land use regulations to increase the modal split between automobiles and other forms of travel.

**Tacoma Comprehensive Plan**

As part of the City of Tacoma Comprehensive Plan Transportation Element, in 2010 the City of Tacoma adopted the Mobility Master Plan, an implementation plan for improving “conditions for pedestrians and bicyclists citywide over the next fifteen years,” providing
“recommendations for developing a non-motorized network that reduces auto travel, increases the number of non-motorized users of all ages and abilities…”

The main goals of the plan are to:

- “Complete a safe and comfortable bicycling system that connects all parts of the city (north to south/east to west) and accommodates all types of cyclists by 2025.
- “Complete an accessible network of pedestrian supportive infrastructure, including sidewalks, curb ramps, accessible pedestrian signals and shared-use paths, in high-priority pedestrian areas.
- “Increase the non-motorized mode split to 5% by 2015 and continue gains thereafter.
- “Increase transit use by enhancing pedestrian access and bicycle support facilities through the development of bikeways and walkways that serve transit hubs.”

A particularly relevant policy of the Mobility Master Plan is to “Prioritize infrastructure improvements that connect residential areas to local retail, business, and community services, so residents can access more of the services they need close to home by walking, biking, and using assistive devices.” The corresponding Action is to “Prioritize funding and construction of non-motorized facilities in recognition of the livability, environmental and health benefits these forms of mobility provide,” with priority given to projects that:

- “Provide the greatest connectivity to the greatest number of people or neighborhoods;
- “Provide connections to transit;
- “Connect major employers or employment areas to residential areas in order to increase commute trips by bike or walking;
- “Connect residential areas to local retail, business and community services so residents can access daily.”

A map of the long term (11-15 years) bicycle network recommendations is shown in Figure 3.11-19. This map shows a much higher coverage of paths and on-street bicycle lanes and other facilities than currently exists in the Subarea. Figure 3.11-20 provides a map of pedestrian network improvements planned for the City of Tacoma, including the provision of new sidewalk facilities in the South Downtown Subarea.

Thea Foss Waterway Design and Development Plan

The 2005 Thea Foss Waterway Design and Development Plan (Plan) is an element of the City’s Comprehensive Plan and the Shoreline Master Program (SMP). The policies of the Plan are implemented in Chapter 13.10.110 of the Tacoma Municipal Code: S-8 Shoreline District. One of the major goals of the Plan is to: “Provide opportunities for […] public access to the shoreline for the citizens of Tacoma.” Providing a safe and comfortable route for public access to the waterfront will be critical in managing new residential and employment growth in the subarea.

Pedestrian Network Improvements
The 2012 Strategic Plan for the Foss Waterway anticipates the development of the Foss Esplanade along the waterfront. Connectivity to the north part of the Foss Waterway is currently provided by the 11th Street bridge and elevator.

**Prairie Line Trail**

Prairie Line Trail is a one mile long trail (shared use path corridor) connecting key destinations in downtown Tacoma, traversing the University of Washington Tacoma campus. The project is funded through a grant from the Puget Sound Regional Council. One third of the trail is currently under construction by UW Tacoma.

Once completed, the trail will connect the waterfront and downtown with the Chambers Bay Recreation Area and the Foothills Trail. The trail is planned to include high-quality pedestrian amenities, including lighting, wayfinding, enhanced street crossings, public open space, and green features. The trail will provide access to the waterfront, which meets the city’s goals of increasing access to and use of the Foss Waterway and the Foss Esplanade. The crossing of South 21st Street and the trail is being studied in a separate analysis, due to the high traffic volumes of South 21st Street at the crossing site.

**Brewery District Development Concept Study**

The Brewery District Development Concept Study (2010) included an objective for non-motorized improvements in the area:

> Invest in pedestrian and bicycle system improvements that will continue to realize connections between the Brewery District and surrounding residential and commercial areas particularly the University of Washington Campus.

**Tacoma Dome District Development Strategy**

Tacoma Dome District Development Strategy Update (2008) includes the following development strategy related to non-motorized travel:

> Transit Rich Walkable Neighborhood: making the most of regional investments

**Development Thresholds for Impact Fees**

The South Downtown Subarea Plan proposes a unique strategy to address the increasing need for multimodal transportation investments to mitigate impacts as the Subarea grows. This strategy entails establishing growth thresholds that trigger the requirement for future private development projects to pay impact fees that fund multimodal projects in the Subarea. These impact fees will be designed to be consistent with the Growth Management Act. The Subarea Plan’s recommendation is for two tiers of development thresholds that would trigger increasing impact fees. The optimum threshold levels would require further analysis to determine, but as a starting point the Subarea Plan suggests considering 10 million and 20 million square feet of new

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26 [http://psrc.org/assets/4268/84_Tacoma_-_Prairie_Line_Trail.pdf](http://psrc.org/assets/4268/84_Tacoma_-_Prairie_Line_Trail.pdf)
development. Determination of the impact fee amounts and the types of projects that would be funded would also require further planning and analysis.

3.11.4.4 **Unavoidable Adverse Impacts**

With application of appropriate mitigation measures, no significant unavoidable adverse impacts are anticipated relative to non-motorized systems.
3.11.5 PARKING

3.11.5.1 Affected Environment

Currently, on-street and off-street parking facilities within the South Downtown Subarea and adjacent districts are used for short-term vehicle access and long-term vehicle storage for a variety of different users, including:

- residents;
- students, faculty and staff commuters to the University of Washington, Tacoma Campus;
- staff of and visitors to Museums and event centers, including the Tacoma Dome,
- commuters to Downtown Tacoma;
- employees, customers and vendors of business establishments in the district; and,
- commuters and others traveling to other destinations in the region and beyond that are accessible from the Tacoma Dome Station via Sounder, ST Express buses, Amtrak, and Greyhound Coach Service.

Parking supply

Motor vehicle access to destinations and services within the South Downtown Subarea is facilitated by a supply of on-street and off-street parking spaces available for short-term (a few hours) and long-term (all day, or multiple day) vehicle storage. The supply of off-street parking spaces on individual parcels within the district varies, based on current and former land uses on each site, the availability of on-street parking during times of peak demand, market demand for parking to provide access to uses and activities on nearby parcels, and historical zoning code requirements for the provision of a fixed supply of off-street parking spaces for each land use or activity on a site at the time it was developed.

According to a comprehensive parking survey conducted by the Puget Sound Regional Council (PSRC) in 2010, the three survey zones that most closely align with the boundaries of the Tacoma Dome Brewery District Subarea had a total supply of 10,646 off-street parking spaces in 187 off-street parking lots or structures (Note: that these three survey areas do not include the portion of Tacoma Transportation Analysis Zone [TAZ] 680 located to the east of East J-Street, a partially vacant area which is also inside the South Downtown Subarea. This area is largely industrial and has ample on-street and off-street parking)\(^\text{27}\). Twenty-one of these facilities were classified as “Free short-term customer parking,” associated with land uses such as convenience stores and restaurants. Twenty one (21) were designated as “Employee parking” areas. The

\[\text{Puget Sound Regional Council (2010). Summary of Biennial Parking Survey Data Collected September 13-Dec. 2, 2010 (Data Source: PSRC, Last Updated March 2, 2011). External location: http://psrc.org/data/transportation/parking-inventory/). Note: Parking Survey data are collected every two years typically during the months of March thru June (Spring). However, the 2010 Parking Inventory was collected from September to December. The data collection teams are assigned selected cities and parking zones within the region. The survey hours are Monday thru Thursday from 8:30 AM - 11:30 AM and 1 PM - 3:30 PM.}\]
majority (145) of these parking facilities were classified as “Other,” primarily public pay
lots and those facilities serving a mix of users.

The largest off-street parking facilities in the Subarea are associated with the Tacoma
Dome Station, which has a total supply of 2,283 parking spaces in two parking
structures, located next to the Sounder platform and the Tacoma Link Station. Three
blocks South of Freighthouse Square lies the Tacoma Dome, which is surrounded by
surface parking lots with capacity for 1600 motor vehicles. Curb-side or other on-street
parking within the public right-of-way is available on most local and arterial roadways
within the Subarea. The supply of and regulations for parking on streets in the
immediate vicinity of the UW Tacoma Campus are shown in Figure 3.11-21.

Bicycle Parking Supply

No data are available on the total supply or utilization of publicly available short-term
bicycle parking spaces, within the district. However, curbside bicycle parking racks are
available in selected areas – particularly near and on the University of Washington (UW)
Tacoma Campus. Short-term bicycle parking racks are provided at all Tacoma Link
Stations in the District, except for the Stadium Station, and secure bicycle lockers are
provided for use by commuters at the Tacoma Dome Station. Secure, indoor, or
enclosed long-term bicycle parking for residents, employees and/or customers is
provided at selected employment sites and selected multi-unit residential buildings in the
District, but no comprehensive data on supply, utilization or pricing are available.

Parking Prices

Demand for parking and resulting rates of occupancy and availability of on-street and
off-street parking in particular areas is partly a function of the price charged to the user.
In many parts of the Subarea, on-street and off-street parking are available to residents,
visitors and employees free of charge. Where the costs of operating and maintaining
parking facilities is not charged to users, but instead covered by general funds, or
wrapped into other costs such as the cost of housing, or the costs of commercial goods
and services, auto access is effectively subsidized and encouraged, resulting in more
driving and higher parking utilization than optimum for transportation or parking system
efficiency.

Access to some on-street and off-street parking in the Subarea is available only by
payment of an hourly, daily, or monthly fee. Fees and meter charges in some areas are
employed both to cover the capital and operating costs of parking, and to encourage
turnover in the use of parking spaces in order to maintain the constant availability of
parking for new users in specific areas. The City of Tacoma currently manages the
supply of public on-street parking in portions of the Subarea with time limits and in some
areas by requiring payment of a fee for use at a pay station. The metered area shown in
Figure 3.11-22, includes the UW Tacoma Campus and portions of the Brewery District
located north of S. 21st St., west of Dock St. (including both sides of Dock St.), east of
Market St. (including both sides of Market), and south of South 7th St. (the northern
boundary of the Subarea is S. 15th St.). Within this metered area, a total of 1,500 on-
street parking spaces are priced using multi-space electronic parking pay stations on
each block face (Nearly half of these metered spaces are located south of S. 15th St.,
Supply and regulation of on-street parking in vicinity of UW Tacoma Campus
Figure 3.11-22
Tacoma Metered and Time Limited Parking Area

Source: Nelson\Nygaard Consulting Associates, 2013
within the Subarea). Meters are enforced from 8:00 AM-6:00 PM Monday-Friday at a rate of $0.75 per hour with a two-hour time limit, and from 8:00 AM-6:00 PM on Saturday at $0.75 per hour up to two hours, or $2.50 for the entire day.

Outside of the metered area shown in Figure 3.11-22, where the on-street parking supply is managed through pricing, the City of Tacoma has established a “parking buffer zone,” including all city streets west of Market St. to Tacoma Avenue (within the Subarea). Parking within this buffer zone is free but limited in some areas to 90 minutes. These parking meter rates, time limits and other parking management policies of the City of Tacoma are intended to facilitate the turnover of parking spaces, improving the availability of on-street parking for visitors and short stay customers and are subject to change by ordinance.

Twenty-three of the 187 off-street parking facilities surveyed in the Subarea charged by the day for parking at an average daily rate of $6.50 (The minimum daily rate charged was $1.00, and the maximum daily rate was $12.50). The largest supply of paid parking in the Subarea is located in the surface parking lots surrounding the Tacoma Dome, which are available for event parking at rates of $10-$25 per day. Notably, the largest and most heavily utilized (97% average weekday occupancy) parking facilities in the Subarea, the Tacoma Dome Station parking structures, are available for use by transit patrons free of charge.

**Parking Availability**

The *availability* of parking spaces – rather than their total supply – is a key indicator of accessibility of the area to motor vehicle users, against which the impacts of development or changes to supply, prices, or regulations can best be measured. Parking availability can be measured by the total number, or share of parking spaces in the vicinity of a destination that are open, available and legal for use by incoming travelers. The share of on-street and/or off-street parking spaces available during periods of peak demand for access to a site determines the ease of and time required for finding an open and available parking space within comfortable walking distance of one’s destination.

Figure 3.11-23 shows the average occupancy rate observed in off-street parking facilities surveyed by PSRC between 8:30-11:30 AM and 1:30-3:30 PM on selected weekdays in 2010. Occupancy of 85-95% of spaces in off-street parking facilities during periods of peak daily demand is considered to represent the efficient utilization of parking facilities while maintaining the availability of auto access and parking for additional users. None of the zones surveyed within the Subarea had a weekday average occupancy of 62% or more, meaning that off-street parking is widely available.

No data are available on the occupancy or availability of on-street parking throughout the District, however, the current availability off-street vehicle parking, highlighted in Figure 3.11-24, can support additional growth and development of new land uses and activities in the area.
Average occupancy of off-street vehicle parking, Weekdays 8:30-11:30 AM, and 1:30-3:30 PM (2010)
Average number of available off-street parking spaces by zone, Weekdays 8:30-11:30 AM, and 1:30-3:30 PM (2010)
Off-Street Parking Requirements

As an indirect way to maintain the availability of parking, the City’s Land Use Regulatory Code (Title 13) specifies requirements for the provision of off-street parking spaces for development of new land uses and changes of use in selected areas. Although compliance can reduce the immediate impact of specific development projects on parking availability in the vicinity of a project, they do not directly address the congestion of on-street parking, and can worsen parking and traffic conditions on an area-wide basis by encouraging and facilitating auto access (as opposed to travel by non-auto modes of transportation).

For Downtown Tacoma and portions of the South Downtown Subarea including the UW Tacoma Campus area, the City of Tacoma enforces time limits and recently started charging for on-street parking – in part as a more direct means of maintaining parking availability. With these parking management policies in place, the City has recently established a Reduced Parking Area (RPA) downtown (see Figure 3.11-25 for a map of RPA boundaries), wherein:

- There is no required minimum number of off-street parking spaces required for any type of new development (13.06A.065B Reduced Parking Area (RPA) – Parking Quality Standards) Tacoma Municipal Code Title 13.06A.065 establishes requirements for the provision of off-street parking for parcels in zones and districts located within the South Downtown Subarea and within the Downtown Mixed Use Center. Per 13.06A.065B Reduced Parking Area (RPA) – Parking Quality Standards, minimum and maximum off-street parking requirements for residential and non-residential parking are “not applicable,” within the entirety of the Reduced Parking Area for downtown Tacoma, as shown in Figure 3.11-25.

- Requirements for the provision of some accessible off-street parking spaces have been maintained.

- The construction of new stand-alone surface parking lots and expansion of existing surface parking lots along Primary Pedestrian Streets within the RPA has been prohibited.

The boundaries of the RPA (shown in Figure 3.11-25) include a substantial portion of the South Downtown Subarea, including the entire area bounded by South 23rd St. to the south, South 15th St. (the northern boundary of the District), Market St. to the west and I-705 to the east. Minimum off-street parking requirements remain in effect for selected zoning districts in the portions of the South Downtown Subarea located outside of the RPA (See Figure 3.7-3 in the Land Use Chapter for a map of the Zoning Districts in and around the South Downtown Subarea).

Areas located within the South Downtown Subarea, but outside of the Downtown Reduced Parking Area, are shown in Table 3.11-27 below, along with the associated minimum quantity of off-street parking stalls required and, if applicable, the maximum quantity of off-street parking stalls allowed.
Figure 3.11-25
Downtown Tacoma Reduced Parking Area
Tacoma Municipal Code Title 13.06.510 establishes requirements for off-street parking in zones and districts within the South Downtown Subarea (See Figure 3.7-3 in Section 3.7 -- Land Use, for a map of the Zoning Districts in and around the South Downtown Subarea), but located outside of the downtown Reduced Parking Area, as shown in Figure 3.11-25.

Table 3.11-27
Off-Street Parking Requirements by Land Use (District), Within South Downtown Subarea, but Outside of Reduced Parking Area (TMC 13.06A.065, and TMC 13.06.510)

<table>
<thead>
<tr>
<th>Land Use/District</th>
<th>Unit</th>
<th>Required Minimum Quantity of Off-Street Parking Spaces per Unit*</th>
<th>Maximum Quantity of Off-Street Parking Spaces Allowed Per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>R4-Multiple Family Dwelling</td>
<td>Unit</td>
<td>1.25</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Warehouse/Residential (WR): Residential</td>
<td>Unit</td>
<td>1.0</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Downtown Residential (DR): Residential</td>
<td>Unit</td>
<td>1.0</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Warehouse/Residential (WR): Non-Residential Uses</td>
<td>1,000 sf</td>
<td>1.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Downtown Residential (DR): Non-Residential Uses</td>
<td>1,000 sf</td>
<td>1.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Industrial/Manufacturing (Heavy Industry [M1], Light Industry [M2], Commercial/Industrial Mixed Use [CIX], Port Maritime Industrial [PMI])</td>
<td>1,000 sf</td>
<td>1.0</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Warehousing (M1,M2, CIX)</td>
<td>1,000 sf</td>
<td>1.0</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Residential Uses - Urban Center Mixed-Use (UCX) and Urban Center Mixed-Use-TD (UCX-TD)</td>
<td>Unit</td>
<td>1.0</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Commercial or Office Uses (UCX)</td>
<td>1,000 sf</td>
<td>2.5</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Commercial or Office Uses (UCX-TD)</td>
<td>1,000 sf</td>
<td>0.0</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>All other uses (UCX, UCX-TD)</td>
<td>-</td>
<td>70% of the number of spaces required for the use in other areas, Table 1 (13-171)</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Source: Nelson\Nygaard Consulting Associates.
*Per 13.06A.065C(2), the first 3,000 square feet of each street level establishment is exempt from parking requirements. Per 13.06A.065C(3) Special needs housing, including, but not limited to, seniors, assisted living, congregate care, licensed care, or group care homes may provide less than one stall per residence.
upon a showing that a lesser parking requirement will reasonably provide adequate parking for residents, staff, and visitors, subject to the approval of the City Engineer.

No requirements are in effect for buildings in existence prior to the adoption of the Tacoma Municipal Code on May 18, 1953, and any parking above and beyond the current requirements may be removed.

Parking constructed in accordance with the off-street parking requirements in place at the time of permit application and development (including much of the off-street parking supply in portions of the South Downtown Subarea north of South 23rd St., within the RPA, is both an element of the affected environment and an opportunity for mitigation of the potential impacts of growth on area-wide parking availability through shared parking and other parking pricing and management strategies.

### 3.11.5.2 Impacts

The purpose of parking facilities is to provide for automobile access and short or long-term storage of vehicles while not in use. In the near-term and long-term, no impact to the availability of parking or the auto accessibility of the Subarea is projected to directly result from implementation of any of the alternatives for the South Downtown Subarea.

Projected increases in demand for vehicle travel to, from and within the Subarea, highlighted in the Vehicular Traffic Impacts analysis (Section 1 of this Transportation Element), may be associated with increased demand for short-term and long-term parking, but will not necessarily affect the availability of parking for residents and others traveling to and from the Subarea by car.

Even as the Subarea continues to develop, the availability of parking in areas currently subject to pricing and regulation of use (time limits), can be expected to be maintained as drivers are encouraged to shift modes, access sites by car at different times of day when parking is less congested, or unpriced, and/or to park in off-street facilities or on-street in surrounding areas where parking is more widely available.

Experience from other urban areas with compact, transit-oriented development patterns similar to that envisioned in each of the action alternatives for the South Downtown Subarea confirms that even without minimum off-street parking requirements, project developers can be expected to provide more than enough parking to serve the specific market driven demands of their contracted and/or prospective future tenants/occupants for auto access and vehicle storage.\(^\text{28}\) This is especially true in the parts of the Subarea where on-street parking pricing and/or time limits are in place, providing a strong marketing incentive for developers to include the option of dedicated off-street parking for new commercial residential tenants.

### 3.11.5.3 Mitigation Measures

Any potential unforeseen impacts of alternatives for the South Downtown Subarea on the availability of motor vehicle parking in the area will be mitigated primarily by a combination of existing plans, policies and infrastructure established to accommodate

growth – particularly the development of walkable, bicycle and transit accessible mixed-use districts with reduced demand for auto access and parking. Mitigation and avoidance of potential impacts to parking availability will be supported by:

- implementation of the City of Tacoma’s plans, policies and principles for the management of public parking;
- investments in bicycle, pedestrian and transit facilities and services, and Transportation Demand Management (TDM) policies and programs included in existing city, county and regional plans (see planned mitigations for impacts to vehicular traffic, public transportation and non-motorized transportation systems); and,
- additional such measures intended to shift travel demand from automobiles to non-motorized modes of transportation and public transit, thereby reducing demand for auto access and parking.

Many of these same plans, policies, projects and programs will also mitigate identified impacts of the action alternatives to other transportation systems, such as vehicular traffic.

**Parking management**

The existing plan and policy framework in the City of Tacoma is clearly supportive of a market-oriented approach to the supply and management of vehicular parking. Current plans, policies and projects that will contribute to mitigation of identified impacts to parking availability include:

- **On-Street Parking Pricing and Regulation:** The establishment of a paid parking area, with metered and time limited on-street parking in selected areas (see Figure 3.1-22) directly contributes to the maintenance of auto accessibility and parking availability in the Subarea. These rates and regulations may be adjusted in the future as necessary to maintain auto accessibility and parking availability in the District.

- **Reduced Parking Area:** In 2012, the City established a Downtown Reduced Parking Area, including parts of the South Downtown Study Area (see Figure 3.11-25) with no minimum off-street parking requirements. Allowance for development with a reduced parking supply in portions of the district will reduce incentives for auto access, and facilitate the development of low-traffic, pedestrian and transit oriented development, allowing a greater share of future residents, employees and visitors to reach destinations in the district with no need to drive and park a private vehicle, at the same time reducing parking demand and supply constraints for those who must drive.

- **Commute Trip Reduction:** Provisions of the Tacoma Municipal Code requiring the adoption and implementation of a Commute Trip Reduction (CTR) program by certain qualifying employers (13.15.070 Requirements for Employers), including but not limited to one or more of the following elements related to the supply and management of parking (all of which may be expected to contribute to the maintenance of parking availability in the Subarea):
  - “Provide preferential parking for high-occupancy vehicles”
“Reduce parking charges for high-occupancy vehicles”
“Institute or increase parking charges for drive alone commuters”
“Eliminate free parking”
“Provide a parking incentives program such as a rebate for employees who do not use the parking facilities”

- **Off-Street Parking Reductions**: Per the Tacoma Municipal Code (Table 2,13-174), off-street parking requirements for multifamily, commercial, institutional, and industrial uses in mixed use districts may be reduced for properties with one or more of the following:
  - Proximity to transit (within 500 feet of a transit line with frequent all-day service)
  - Adoption of an employer Commute Trip Reduction plan.
  - Car sharing stalls on-site.
  - Mixed-use/shared parking credit

- **Transportation Element of the Tacoma Comprehensive Plan**: The following Comprehensive Plan policies and implementation actions are supportive of low-traffic development with reduced parking demand and active management of existing on-street and off-street parking resources.
  - Transportation System Management Policy 5, Downtown Parking System, provides the following guidance related to market-based management of on-street and off-street parking facilities as necessary to maintain availability:
    - Develop…a downtown parking system that seeks balance among competing uses…and meets the needs of both private and public users.
    - Implement the elements of the Business Plan for the Downtown Parking System [Including] increased level of parking enforcement, centralization of municipal parking assets, establishment of a fee based parking system, the creation of more off-street parking when warranted…;
    - Develop and maintain criteria for the purpose of identifying and prioritizing parking facilities in need of repair or expansion. For example, use nationally recognized parking facility criteria to determine if expansion of the municipal parking system is warranted.
    - Encourage the redevelopment of large standalone downtown parking facilities into commercial building space with parking to accommodate a diversity of uses…
  - **Action 1.8: End of Trip Facilities**, calls for the City to “Install bike racks, accessible parking and other support infrastructure at destinations citywide, including transit stations, retail areas, parks, public facilities, and other high-traffic areas.”
  - **Action 3.2: Parking Strategies to Reduce Driving**, calls for the City to “Support changing parking policies to discourage single occupancy vehicle driving, while recognizing the need to provide accessible parking.
  - **Action 3.3: End of Trip Facilities for Active Commuting**, calls for the City to, “Give incentives for bicycle storage, locker rooms and shower
facilities for all major office building construction and remodeling projects in the downtown core.

- **Provisions of the Land Use Element Tacoma Comprehensive Plan:** The Land Use Element of the Tacoma Comprehensive Plan includes the following policies and guidance related to parking as a land use (both as a condition for and barrier to development and redevelopment) and the maintenance of parking availability as a means of providing access, supporting economic development and encouraging use of non-auto modes of transportation:

  - LU-MUP-1 Parking: Minimize the amount of land dedicated to parking and encourage alternative transportation by reduced off-street parking requirements…
  - LU-MUP-2 Minimize Parking Impacts: Discourage surface parking lots and locate parking areas to the rear or side of buildings or within structures.
  - LU-MUP-9 Flexible Off-Street Parking Requirements for New Development: Allow for more flexibility in the amount of off-street parking provided by new development by eventually eliminating off-street parking requirements…
  - Downtown Element, Policy: 2.1E.C: Downtown should move towards the implementation of a shared satellite parking system, and consider steps towards a market based parking approach within certain areas of downtown.
  - Downtown Element, Action 2.1E.6: Consider creating parking maximums in downtown’s most walkable neighborhoods to encourage full participation in above programs.

**Expansion of Reduced Parking Area**

A key element of the South Downtown Subarea Plan is the expansion of the current Reduced Parking Area (see Figure X) to include all of the Downtown Mixed-Use (DMU), Warehouse/Residential (WR), and Urban Center Mixed-Use TD (UCX-TD) Zones in the Subarea. This provision can encourage transit and pedestrian oriented development and use of non-auto modes of transportation by eliminating an unnecessary policy requirement (minimum off-street parking requirements) that can lead to an oversupply of parking, which in turn encourages driving by artificially reducing parking prices and increasing development costs.

Provided that adequate on-street parking management programs and policies are in effect to prevent spillover parking impacts to the accessibility of existing establishments in the Subarea and adjacent neighborhoods (see “Additional Measures”), this market-based approach to the supply of parking for individual development parcels can be expected to reduce parking utilization and traffic generation as the area grows.

**Additional measures**

In addition to the City’s current parking management programs and measures incorporated in existing plans and policies, the following measures can further mitigate any future impacts to parking availability within the District. Given their demonstrated
benefits in other communities – ranging from vehicle traffic reduction, and increased parking availability, to improved retail vitality, , the City may elect to actively pursue the development and implementation of the following policies and programs, even where current on-street parking conditions do not indicate a high probability of significant impacts of new development in the Subarea.

- **Adopt Parking Availability Targets and Associated Management Policies:** To maintain the availability of on-street parking in the Subarea and to prevent spillover parking impacts in surrounding areas, the City can adopt a policy target and management principles as follows:

  - **Adopt a 15% Availability Target:** The most direct way to ensure the availability of on-street parking in the Subarea is to set a policy goal of maintaining approximately 15% vacancy of on-street parking spaces on any given block face ((Meaning at least one to two spaces per block face would be available at any time). This means that new arrivals can always find an on-street parking space within a block or two of their destination, reducing the traffic tie-ups that can occur when people continuously search and circle to find on-street parking29.

  - **Monitor Occupancy and Availability:** To ensure that parking availability is maintained over time, the occupancy of on-street and off-street parking facilities, should be monitored on an annual basis, both within the Subarea and in immediately adjacent neighborhoods.

  - **Manage Parking to Achieve Goals:** On block faces within the Subarea where monitoring confirms that occupancy consistently exceeds 85%, the City may consider pricing or regulating parking to maintain availability, consistent with the adopted parking space vacancy goals. Management options include:
    - Installing and operating adjustable rate parking meters.
    - Issuing permits for the use of on-street parking during selected hours to residents and businesses in the District
    - Establishing or adjusting existing time limits.

  - **Rate adjustment:** In order to achieve vacancy goals, parking meter and/or permit rates should be adjusted regularly for the primary purpose of managing demand, rather than for revenue generation (This means parking rates may go down significantly in areas where occupancy is consistently low).

  - **Establish Parking Benefit District:** The City may consider establishing a Parking Benefit District (PBD) for the Subarea, with a commitment to return all permit and/or meter revenue to the District to fund streetscape and other access improvements and programs in the same area in which the revenue was collected.

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29 UCLA Professor Donald Shoup, argues that with 15% of on-street spaces vacant, cities make the most efficient use of their on-street parking supply (Shoup, Donald (2004). *The High Cost of Free Parking*, Washington, DC: APA Planners Press).
- **Require Unbundled Parking Costs**: Requiring that parking spaces be leased or sold separately ("unbundled") from the rent or sale price of commercial space or residential units can provide a financial incentive inducing individuals to own fewer cars and drive less, and encouraging private companies to support and incentivize the use of non-auto modes of commuting to/from the workplace...

- **Establish Maximum Parking Requirements**: Through its land use code, the City may impose limits on the number of off-street parking spaces that can be provided in association with or accessory to specific new land uses in the Subarea. Limits on the supply of off-street parking can prevent over-supply, eliminating a hidden incentive to drive and encouraging use of transit use and other non-auto access alternatives (as an alternative, incentives could be offered to developers who build less parking than the maximum allowed by code).

  **Establish a Cap on the Supply of Off-Street Parking in the Subarea**: As an alternative to establishing maximum parking requirements for specific land uses, the City may – once large scale redevelopment in the Subarea is underway – establish a Subarea-wide maximum, or cap on the total number of off-street parking spaces permitted in the District (including existing spaces). This policy should include an allowance for individual property owners to sell or trade rights to use existing but underutilized off-street parking spaces, and for the design and brokerage of a system of exchangeable allowances to supply new parking stalls under the area-wide cap.

- **Consider Non-residential Off-street Parking Tax**: To generate revenue for new transportation facilities and services in the Study Area and to reduce demand for parking, the City may advocate for state legislative authority to levy an annual per-stall tax on all off-street parking in the Subarea that is accessory to non-residential land uses. Such a tax might be graduated, with lower rates for property owners who unbundle parking or otherwise charge for parking at market rates.

- **Ensure Flexible Parking Design**: Most new off-street parking in the Subarea should be built to allow flexible management and use, including shared parking, and maximum adaptability to new conditions. The City may facilitate shared parking and the creation of a private market for the use of parking spaces in the Subarea by adopting conditions for the design and operation of new off-street parking facilities in the area, such as:
  
  a. requiring all off-street parking facilities to be publicly accessible or easily convertible to allow public access (e.g. requiring direct pedestrian access to the street or other public space from any and all off street parking facilities).
  
  b. designing surface parking lots in a way that permits future conversion of lot corners to new TOD.
c. designing all off-street parking areas initially intended for restricted use (e.g. dedicated residential parking spaces) should be designed so that some or all restricted spaces may be converted to publicly available spaces in the future (e.g. installing moveable gate arms that can be shifted within the facility to restrict access to smaller or larger share of spaces, as needed by future tenants), and

d. designing lot circulation patterns to permit flow through the entire facility in a future shared parking scenario).

All of these existing and proposed City policies and programs will tend to have an incremental mitigation effect on the identified and potential unforeseen transportation impacts of new development in the South Downtown Subarea.

### 3.11.5.4 Unavoidable Adverse Impacts

With application of appropriate mitigation measures, no significant unavoidable adverse impacts are anticipated relative to parking.
3.12 PUBLIC SERVICES

Information presented in this section addresses public services including: fire and EMS, law enforcement, public schools, and parks and open space. This information is based on readily available data, the primary source being the City of Tacoma 2011-2016 Capital Facilities Program (CFP).

The City of Tacoma has adopted the following level of service standards for public services:

<table>
<thead>
<tr>
<th>CAPITAL FACILITY TYPE</th>
<th>LEVEL OF SERVICE STANDARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Medical Services (EMS)</td>
<td>0.000016 units per capita</td>
</tr>
<tr>
<td>Fire</td>
<td>0.000109 apparatus per capita</td>
</tr>
<tr>
<td>Law Enforcement</td>
<td>.288580 sq. ft. per capita</td>
</tr>
<tr>
<td>Local Parks</td>
<td>.003 acres per capita</td>
</tr>
<tr>
<td>Regional Parks</td>
<td>.007 acres per capita</td>
</tr>
<tr>
<td>Open Space/Wildlife Habitat</td>
<td>.002 acres per capita</td>
</tr>
</tbody>
</table>

Source: City of Tacoma 2011-2016 Capital Facilities Program

3.12.1 FIRE AND EMERGENCY MEDICAL SERVICES (EMS)

3.12.1.1 Affected Environment

As indicated in the City's CFP, the Tacoma Fire Department (TFD) is responsible for delivering fire protection and EMS to residents of a 71.6 square-mile service area including Tacoma, Fife, Fircrest, and the unincorporated area of Pierce County protected by Pierce County Fire District 10. The population TFD serves is 222,120; the vast majority of which are within the city limits. The Department operates out of and maintains 16 regular staffed stations, has 16 engines, 4 ladder companies, 5 medic companies, and 2 battalion command vehicles.

The majority of the South Downtown Subarea is served by TFD Station #2, which is located at 2701 Tacoma Ave South. Nearby stations located outside the Subarea that could be called upon to provide service include: TFD Station #1 (901 Fawcett Ave.), TFD Station #4 (1453 Earnest S Brazill St.), TFD Station #6 (1015 East F St.), Station #18, which is located on the east side of the Foss Waterway near 11th St, is used for fireboat moorage and maintenance.

The TFD developed a City-wide 2010 Master Facilities Plan for their Fire Stations, Maintenance Facilities, and Fire Training Campus. Along with analyzing over one hundred potential new Fire Station/Facility sites throughout the City, the Plan provides analysis of current and future needs of each existing Fire Station, as well as needs for future Fire Stations. There are two proposed projects within the Subarea:

- Commencement Boathouse: 302 E. 11th
- Replace Fire Station #2: 2140 South Fawcett, Tacoma, WA 98402
3.12.1.2 Impacts

Development consistent with the proposed South Downtown Subarea Plan would generate new demands for fire and EMS service within the Subarea based on an increased number of residential, office, commercial and neighborhood service uses, as well as the associated employment and population increases.

No Action Alternative

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to fire and EMS service would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

Development Alternatives

According to the City’s adopted LOS standards, Table 3.12-1 notes the number of EMS units and fire apparatus that would be necessary to serve the projected Subarea population under each alternative.

<table>
<thead>
<tr>
<th>Table 3.12-1</th>
<th>Alternatives 1-3 - Increased EMS and Fire Apparatus Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Projected Site Population</td>
</tr>
<tr>
<td>Alternative 1</td>
<td>30,000</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>20,000</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>10,000</td>
</tr>
</tbody>
</table>

3.12.1.3 Mitigation Measures

No additional mitigation necessary. The City of Tacoma is committed to expanding Fire and EMS services to meet the needs of its future growth.

3.12.1.4 Unavoidable Adverse Impacts

No unavoidable adverse impacts are anticipated.
3.12.2 LAW ENFORCEMENT

3.12.2.1 Affected Environment

The Tacoma Police Department (TPD) employs 372 commissioned officers and 42 civilian employees. TPD’s services include Operations, Investigations, and Administrative Services Bureaus, as well a K-9 Unit, Traffic, Marine Services, Animal Control and Compliance and other specialized police operations. The Operations Bureau is responsible for emergency 911 response and patrolling the City’s streets, which are divided into four sectors. The Investigations Bureau conducts follow-up investigations on reports generated by the Patrol Division, as well as information provided by citizens.

The South Downtown Subarea is located in Sector One, which has two substations: the Central Substation (1524 Martin Luther King Way); and the Northeast Substation (4731 Norpoint Way NE). According to the TPD:

“Sector One is currently undergoing a ‘renaissance’ as a result of the efforts of many individuals, businesses, and organizations- public and private. Because of a vast array of new building projects that have been completed or are currently underway, the central district of Tacoma has once again become a more vibrant, exciting, pleasant, and safe place to live and work.”

Additional law enforcement services are provided Pierce County and the University of Washington Tacoma Campus Safety and Security department.

3.12.2.2 Impacts

No Action Alternative

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to law enforcement would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

Development Alternatives

Increases in the South Downtown Subarea population and employment under Alternatives 1-3 would be incremental and would be accompanied by increases in demand for police service. Call volumes could increase under all of the proposed alternatives; however, the exact number of incremental new calls cannot be quantified.

According to the City’s adopted LOS standards, Table 3.12-1 notes the number of additional law enforcement facilities that would be necessary to handle the projected Subarea population under each alternative.
As stated by the Tacoma Police Department in the quote above, continued development in the South Downtown Subarea can be expected to help create a safer environment, which will to some extent offset demand for increased law enforcement services. The increased residential density provided under all of the development alternatives and the introduction of retail and office uses would increase lighting levels and establish a more constant level of activity in the area. Such changes could contribute to overall increases in safety.

### 3.12.2.3 Mitigation Measures

No additional mitigation is necessary. The City of Tacoma is committed to expanding law enforcement services to meet the needs of future growth.

### 3.12.2.4 Unavoidable Adverse Impacts

No unavoidable adverse impacts are anticipated.

### 3.12.3 PUBLIC SCHOOLS

#### 3.12.3.1 Affected Environment

Tacoma Public Schools (TPS) is the third largest school district in Washington State, serving more than 28,000 children in kindergarten through grade 12. The district has 35 elementary schools, nine middle schools, five comprehensive high schools and 14 alternative learning sites. TPS has more than 3,500 employees and is one of the largest employers in Tacoma.

The only public school currently within the South Downtown Subarea is the Tacoma School of The Arts (SOTA), which is headquartered at 1950 Pacific Ave (classes are housed in multiple venues across downtown Tacoma). SOTA's student capacity is approximately 500 students in grades 9 – 12, and it draws students from across the entire City. SOTA was established in autumn 2001, with help from the Bill & Melinda Gates Foundation.

The elementary school that serves the South Downtown Subarea is the McCarver School (2111 S J St, enrollment of 393, grades PK – 5). The two middle schools nearest the Subarea are the Jason Lee School (602 N Sprague Ave, enrollment of 500), and the Gault School (1115 E...
Division Ln, enrollment of 359). The two high schools nearest the Subarea are the Tree Farm School (601 S 8th St, alternative school), and Lincoln School (701 S 37th St, enrollment of 1440).

<table>
<thead>
<tr>
<th>2010-11 Tacoma Public School funding sources:</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
</tr>
<tr>
<td>Local taxes</td>
</tr>
<tr>
<td>Federal</td>
</tr>
<tr>
<td>Local non-taxes</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

The 2010-2011 total annual operating budget for Tacoma Public Schools was approximately $340 million. Reductions in state funding may result in budget cuts estimated at more than $20 million over the next three years.

3.12.3.2 Impacts

No Action Alternative

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to public schools would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

Development Alternatives

All alternatives will continue development of the lands within the South Downtown subarea for urban uses and activities at various intensities. Development will increase the residential population, requiring additional public school capacity. High-quality public schools are essential to the creation of a complete community in the South Downtown Subarea.

3.12.3.3 Mitigation Measures

No additional mitigations necessary. The Tacoma Public School District is committed to expanding public school services to meet the needs of its future growth. State funding for public schools is allocated on a per student basis (average $5,032 per student in the 2011-12 school year), so funding will increase as enrollment increases. Local taxes are primarily property taxes, and revenue will rise as property is developed and increases in value in the South Downtown Subarea.

3.12.3.4 Unavoidable Adverse Impacts

No unavoidable adverse impacts are anticipated.
3.12.4 PARKS and OPEN SPACE

3.12.4.1 Affected Environment

Metro Parks Tacoma

In Tacoma, most open space lands and facilities intended for high-impact access and/or recreation are managed by Metro Parks Tacoma (MPT). MPT has a biennial budget of close to $85 million and operates close to 2,800 acres of open space. MPT’s jurisdiction includes the entire City of Tacoma and part of unincorporated Pierce County to the north and the west of Browns Point (known as Dash Point), covering an area of over 50 square miles.

In 2012, MPT published a Strategic Plan Interim Update. MPT recognizes that the majority of new growth is anticipated to occur across the City in 17 mixed-use centers, and that the two largest regional growth center areas are Downtown Tacoma and the Tacoma Mall area. The South Downtown Subarea is located in MPT’s Northwest Planning Area, which has a total of 33 parks of various types. However, none of the MPT parks is located within the Subarea boundary. There are two important nearby MPT “community” parks that serve South Downtown residents: McKinley Park, located across I-5 from the Dome District, and Wright Park in North Downtown. Nearby MPT “neighborhood” parks include McCarver and Lots for Tots just beyond the west edge of the Subarea.

City of Tacoma

The City of Tacoma Open Space Program provides and manages open space lands and facilities. The City of Tacoma’s Open Space Program is primarily responsible for managing open space habitat areas intended for habitat conservation and restoration and, when appropriate, low-impact access and recreation. In addition, the City of Tacoma Streets and Grounds Division develops and maintains a number of small urban parks which provide amenities and recreation opportunities.

City-owned parks in the South Downtown Subarea include:

- Jefferson Ave Mini Park (0.04 acres; 17th St & Jefferson Ave);
- Pugnetti Park (0.5 acres; S. 21st & Pacific Ave); and
- Tollefson Plaza (0.6 acres; S 17th St & Pacific Ave).

Other important open spaces in the South Downtown Subarea include:

- Foss Esplanade and parks;
- Bridge of Glass;
- Tacoma Art Museum Plaza;
- LeMay Museum showfield;
- Tacoma Dome Plaza;
- 19th St hillclimb on the University of Washington campus; and the
- Prairie Line Trail on the University of Washington campus.
Community gardens in the South Downtown Subarea include:

- UWT Tacoma Giving Garden;
- Hilltop House; and
- La Grande Garden.

While not necessarily accessible open space for humans, the following Habitat Corridors in the South Downtown Subarea contribute to the overall open space within the Subarea (for details see Section 3.4 - Plants and Animals in this EIS):

- Center Street;
- I-5 corridor;
- B Street Gulch;
- Steeply sloped area east of the Tacoma Dome

### 3.12.4.2 Impacts

#### No Action Alternative

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to parks and open space would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

#### Development Alternatives

Increases in the South Downtown Subarea population and employment under Alternatives 1-3 would be incremental and would be accompanied by increases in demand for public parks and open spaces. However, it must be recognized that the LOS standards noted above pertain to the City as a whole, and cannot be applied in isolation to a relatively small Subarea, such as South Downtown. In particular, the population and employment densities that would occur under Alternatives 1-3 are much higher than the City average, and therefore it is not valid to apply the city-wide LOS locally to the Subarea.

### 3.12.4.3 Mitigation Measures

The following mitigation measures apply to all alternatives, and are based on existing City policies, regulations, and other mitigation, as noted below.

#### City Policies

**Comprehensive Plan -- Open Space Habitat and Recreation Element**

The 2008 Open Space Habitat and Recreation Element of Tacoma’s Comprehensive Plan establishes policies designed to ensure sufficient parks and open space for a growing City. In particular, the Element addresses Urban Parks in Downtown and Mixed-use Centers, stating:
"As the areas planned for the most intense and dense development within the City, downtown and the other mixed-use centers are home to many of Tacoma’s residents as well as where Tacoma residents work, shop, dine and recreate. Attractive, well-designed public parks and open spaces are essential assets to the community and economic vitality of these areas."

To help realize the above goals, the Element includes the following policies:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OS-MUC-1 Open Space within Centers</strong></td>
<td>Ensure open space is provided in the Mixed-use Centers as the population in the center increases.</td>
</tr>
<tr>
<td><strong>OS-MUC-2 Siting and Design</strong></td>
<td>Recognize the primary importance of urban parks and open spaces, and invest in well-chosen designs and locations.</td>
</tr>
<tr>
<td><strong>OS-MUC-3 Identify Open Space Needs within Centers</strong></td>
<td>Work with the Green Tacoma Partnership, Metro Parks Tacoma, Neighborhood Councils, business district associations, property owners, and residents to identify open space, park, and recreation needs within Mixed-use Centers.</td>
</tr>
<tr>
<td><strong>OS-MUC-4 Partner with Public Institutions and Private Landowners</strong></td>
<td>Explore options for public-private partnerships and other innovative approaches to providing open spaces within centers.</td>
</tr>
<tr>
<td><strong>OS-MUC-5 Mechanisms to Create Urban Parks</strong></td>
<td>Develop zoning incentives, controls and/or funding mechanisms, such as Transfer of Development Rights, to create highly functional urban parks and amenities within Mixed-use Centers, downtown and Planned Residential Developments.</td>
</tr>
<tr>
<td><strong>OS-MUC-6 Fee In Lieu Program</strong></td>
<td>Consider adopting a fee-in-lieu program that would allow development to contribute toward open space, park, community garden, or recreation space within a Mixed-use Center rather than providing on-site open space.</td>
</tr>
<tr>
<td><strong>OS-MUC-7 Streets and Sidewalks as Temporary Open Space</strong></td>
<td>Support and encourage the use of streets and sidewalks within centers as open space on a temporary or intermittent basis for a range of activities such as markets, festivals, shopping, dining and recreation, while ensuring safety and balancing street and sidewalk use for transportation.</td>
</tr>
<tr>
<td><strong>OS-MUC-8 Public Streets as Linear Urban Parks</strong></td>
<td>Seek opportunities, including joint ventures with public or private partners, to create a park-like environment within public rights-of-way, incorporating features such as widened sidewalks, street amenities and furniture, and landscape planting.</td>
</tr>
<tr>
<td><strong>OS-MUC-9 Reconnect the Waterfront</strong></td>
<td>Seek opportunities to re-connect the waterfront to abutting neighborhoods, in particular downtown and the Thea Foss Waterway, through developing multi-functional open spaces, trails and/or recreational facilities that provide or enhance pedestrian connectivity between downtown or other centers and the waterfront.</td>
</tr>
<tr>
<td><strong>OS-CG-1 Community Gardens</strong></td>
<td>Support and develop existing and new community gardens within parks and on appropriate park and private lands. Consider creative approaches to managing community gardens, such as support by education institutions or volunteer management by community organizations.</td>
</tr>
</tbody>
</table>
University of Washington Tacoma (UWT) Campus Master Plan

The University of Washington 2003 Campus Master Plan and the 2008 Update establish the UWT’s intentions for creating new public open spaces as the campus grows. Plans include a large central University Green, a memorial garden for the Japanese Language School, a playfield, the Prairie Line multi-use trail, and multiple plazas and hillclimbs. Most of these open spaces will be accessible to the general public.

Other Mitigation

In addition to the measures described above, Alternatives 1-3 would result in the adoption of a Subarea Plan that provides further mitigation measures. The Subarea Plan establishes multiple policies and actions that mitigate for parks and open space, including:

Policy 3.1: Provide ample open space for projected future growth

Proposed Actions:

3.1.1 Phase in a park impact fee system that will generate the funding necessary for the park and open space elements of the Subarea Plan.
3.1.2 Ensure an equitable distribution of a diversity of open space types, including pocket parks, dog parks, passive parks, recreation areas, and gardens
3.1.3 Secure land for future parks strategically located to serve multiple purposes and maximize public value
3.1.4 Establish a near-term park or open space in a strategic location that will help catalyze nearby redevelopment
3.1.5 Coordinate the site design of private open space with the City’s overarching public open space plan
3.1.6 Revisit the development FAR bonus system and fine tune to encourage the creation of open space as needed
3.1.7 Identify sites for urban farming and community gardens
3.1.8 Partner with Sound Transit to facilitate the creation of high-quality, usable open space on the surplus parcels from the D-to-M project
3.1.9 Explore S Holgate St between S 23rd St and S 25th St as a location for a multiple use, shared street “woonerf” open space
3.1.10 Explore the Prairie Line corridor south of S. 25th Street as future extension of the Prairie Line Trail, and also as a location for a multiple use, shared street “woonerf” open space

Policy 3.2: Build a legible system of public walkways, trail corridors, and active street linkages that connect south downtown’s neighborhoods, waterfronts and key destinations

Proposed Actions:

3.2.1 Implement the planned/proposed trails in Tacoma’s Open Space System map, including the Prairie Line, South C St to the Water Ditch Trail, South A St under the freeway and across the railroad track to the Foss Waterway,
the east side of the Foss, East B St “Gulch”, East D St, E 25th St, and the trail alongside the railroad tracks to the east

3.2.2 Complete the 1.5-mile Foss Esplanade on the west side of the Waterway (see Strategy 5)

3.2.3 Create a safe and convenient pedestrian and bike crossing for the Prairie Line at all street crossings, with focused efforts at the more challenging crossings such as S. 21st St and Pacific Ave.

3.2.4 If the intervening property is redeveloped, integrate a public, midblock crossing to connect the Prairie Line Trail and S Holgate St at S 24th St

3.2.5 Identify funding sources to build a pedestrian bridge across the railroad tracks at the southwest corner of the Foss Waterway

3.2.6 Integrate public pedestrian hill climbs into new development on the hillside; consider additional developer incentives

3.2.7 Create an east-west open space connector and pedestrian corridor between the Hilltop and the Foss Waterway (S 23rd St is one option)

3.2.8 Create well-marked trail loops utilizing both sides of the Foss Waterway, the Prairie Line, East D St, Puyallup Ave, the overpass at 15th St, and the 11th Street Bridge

3.2.9 Implement street reconfiguration of Puyallup Ave/S. 24th St. to improve walkability from the Dome District to the Brewery District and integrate transit

3.2.10 Prioritize the development of street-oriented uses along D Street to create a vibrant walkable connection from the transit stations to the Tacoma Dome and McKinley Park

The South Downtown Subarea Plan includes an open space plan that recommends the following specific park, open space, and trail projects:

- Foss Esplanade
- Central Park (Foss Waterway)
- Waterway Park (Foss Waterway)
- Bridge to the Foss (over the railroad tracks)
- UWT Central Open Space and Hill Climb
- Holgate Shared-use Street
- Hillside to Brewery District Pedestrian Corridor
- B Street “Gulch”
- C Street Green Street
- Water Ditch Trail
- Pedestrian/bicycle trail on the east side of the Foss
- Community Gardens
- Dome District Pocket Parks

3.12.4.4 Unavoidable Adverse Impacts

With implementation of appropriate mitigation measures, no significant unavoidable adverse impacts would be anticipated relative to parks and open space.
3.13 PUBLIC UTILITIES

Information presented in this section addresses the effects of the proposed alternatives on the existing public utilities located within or proximate to the South Downtown Subarea including wastewater, stormwater, potable water, power, communications/data and solid waste.

Regulatory Background

Local Improvement Districts

Local Improvement Districts (LIDs) are a key component of the South Subarea Plan strategy to coordinate infrastructure and complete street upgrades. An LID is a financial instrument that provides a long-term payment plan with relatively low interest rates, enabling property owners to pool their resources for upgrades to various infrastructure in their neighborhood. Such improvements may include: permanent street and alley paving; streetlight installation; sanitary sewer extensions; and the undergrounding of overhead utility wires. An LID may only be created if the benefits of added value to the individual properties outweigh the cost of the improvement. Each property owner is assessed according to the benefit to their respective property and the amount each property owner pays must be proportional.

Complete Streets

Rebuilding existing city streets to “complete street” standards after sub-surface infrastructure upgrades is central to this Subarea planning effort. The City defines a complete street as a “street that safely and comfortably accommodates all users and travel modes, fosters livability, neighborhood identity and character, and incorporates features that reduce environmental impacts.” In the Transportation Element of the Tacoma Comprehensive Plan, Policy #T-MS-12 states:

Apply the Complete Streets guiding principle, where appropriate, in the planning and design for new construction, reconstruction and major transportation improvement projects to appropriately accommodate all users, moving by car, truck, transit, bicycle, wheelchair, or foot to move along and across streets.

3.13.1 WASTEWATER

3.13.1.1 Affected Environment

Wastewater treatment in the South Downtown Subarea is provided by the Central Treatment Plant (CTP), operated by the City of Tacoma. The CTP is located approximately 1.5 miles up the Puyallup River. It is the City’s largest plant with a permitted maximum month treatment capacity of 60 million gallons per day (MGD). (Note: Maximum monthly flow is based on an average of the total daily plant flow throughout an entire month). The plant has a permitted peak hydraulic capacity of 150 MGD, and a secondary treatment capacity of 60 MGD. It services the majority of wastewater flows from the Tacoma area, including the industrialized tide flats, northeast, central and south Tacoma, plus Fircrest, Fife, Milton and some bordering areas in Pierce County and Federal Way.
Tacoma was founded in 1868 and construction of the first community collection pipes occurred in 1880. The collection pipes were installed to follow the shortest path to the tidewaters of Commencement Bay. From that time until 1928, collection systems for wastewater and surface water were separately constructed and were interconnected only at the head of ravines or near the point of final disposal. Between 1928 and 1946, most local collection system construction was of the combined type where wastewater and storm water from surface runoff were conveyed to the Bay in the same pipe. Collection systems constructed since 1946 have been separate, and currently there are no combined pipes serving the South Downtown Subarea. There is a network of approximately 700 miles of wastewater collection pipes and 46 pump stations that convey wastewater to the treatment facilities.

In 1952, completion of the CTP provided Tacoma with primary wastewater treatment. However, because of excessive hydraulic loading, Tacoma began a surface water and wastewater separation project in the late 1950’s, which allowed Tacoma to defer enlargement of the plant until 1963. An additional improvement to the primary plant occurred between 1979 and 1982. Construction of a high purity oxygen secondary treatment facility was completed in 1989. A third major upgrade to the facility was completed in 2009 and primarily consisted of construction of a new peak wet weather treatment facility, new influent and effluent pumping stations, new grit removal process, and various upgrades to existing facility components.

**Level of Service Standard**

The level of service standard for wastewater is 200 gallons per capita per day (GPCD) Maximum Month Flow and 400 GPCD Peak Hydraulic or Peak Instantaneous Flow. This standard is subject to State and City concurrency standards. Capacity in the City's system for collecting and treating wastewater is a function of both the quantity of flow generated by the City's customers and the amount of inflow and infiltration of surface water runoff and groundwater that enters the wastewater collection system through cracks in pipes or other similar defects.

**3.13.1.2 Impacts**

**No Action Alternative**

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to wastewater would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

**Development Alternatives**

The increased density and intensity of development that would be permitted by the development alternatives would result in greater demands on the wastewater collection and treatment system.

The City of Tacoma is committed to delivering the Level of Service Standard noted above that is also a requirement of concurrency regulations. For new capital improvements, the City is striving to design the capacity of the system (collection and treatment) to have the hydraulic
capacity to convey and treat the inflow and infiltration associated with a statistical one in 20 year rainfall event for this region. During wet weather events larger than this, it is possible that hydraulic capacities may be exceeded and sanitary sewer overflows may occur. Natural drainage strategies such as green roofs, rain gardens, and pervious pavement that are implemented with new development will help reduce the occurrence of sanitary sewer overflows.

The City of Tacoma Public Works Department has an ongoing Rehabilitation/Replacement program to repair and upgrade wastewater pipes. Projects are typically tied to aging pipes that are either failing or about to fail, as well as eliminating the sources of clean groundwater and surface water from inflow and infiltration. Whenever possible, these projects would be coordinated with other utility upgrades that require street excavation and work towards replacement of existing streets with streets that meet City ‘complete street’ standards.

With planned downtown sewer line replacement and inflow and infiltration programs, all the development alternatives can be achieved without new initiatives being developed. However, the collection system capacity is not uniformly distributed throughout the system and no guarantee can be made that there is capacity in every line for every new development that could occur. Nevertheless, the City is willing to adjust, within certain parameters, the timing of ongoing sewer programs in order to stimulate private investment and to partner with property owners through the use of local improvement district financing and construction mechanisms.

### 3.13.1.3 Mitigation Measures

The following mitigation measures apply to all alternatives.

For new development projects, it is City policy to make capacity determinations on a case-by-case basis for the following situations, to ensure capacity is either available in the existing system or required to be provided by the developer applicant:

- Residential developments or subdivisions that will result in the potential for construction of more than 20 dwelling units.
- Commercial or industrial developments that will result in a peak daily flow of more than 5,000 gallons per day.

### 3.13.1.4 Unavoidable Adverse Impacts

With implementation of mitigation measures stated above, no unavoidable adverse impacts are anticipated.

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1 Project Number: ENV-NEW-778.
3.13.2   STORMWATER

3.13.2.1  Affected Environment

In the South Downtown Subarea, all sewer and stormwater lines are separated. In the Dome District, east of East D Street, stormwater flows to an outfall on the Puyallup River near Eells St. Elsewhere in the South Downtown Subarea, storm water flows to several outfalls on the Foss Waterway, then into Commencement Bay and Puget Sound. Stormwater management in Tacoma is managed by the City Public Works Department’s Surface Water and Environmental Compliance Sections of the Environmental Services, Science and Engineering Division.

Tacoma was founded in 1868 and construction of the first community sewers occurred in 1880. From that time until 1928, collection systems for sanitary sewage and storm water were separately constructed and were interconnected only at the head of ravines or near the points of final disposal. Between 1928 and 1946, most collection system construction was of the combined type where sanitary sewage and storm water from surface water runoff were conveyed to the Bay in the same pipe. Collection systems constructed since 1946 have been separate. During the late 1950’s and throughout the 1960’s, the City sold bonds to finance both the construction of new storm drainage systems (both large diameter pipes and holding basins) and the separation of the combined systems from the 1930’s and 1940’s. Today, construction of new storm lines continues as well as operation and maintenance of the existing ones. A storm drainage utility was formed in 1979 to provide funding for these activities.

Level of Service Standard

Conveyance Systems Capacity: The level of service standard for private systems is to convey:

- 10-year, 24-hour design storm for pipes less than 24 inches in diameter without surcharging; and
- 25-year, 24-hour design storm for pipes equal to or greater than 24 inches in diameter without surcharging.

The level of service for all public systems is to convey:

- 25-year, 24-hour design storm for drains equal to or greater than 24 inches in diameter without surcharging.

If the capacity level of service cannot be met or if detention is required, the level of service standard for new detention systems will be according to the updated 2012 Stormwater Management Manual.

Detention Facilities

Projects that meet or exceed the thresholds outlined in the 2008 Surface Water Management Manual, Volume 1, Chapter 3, shall be required to construct flow control facilities and/or land use management BMPs. Using an approved continuous simulation runoff model such as the Western Washington Hydrology Model (WWHM), storm water discharges shall match developed discharge durations to pre-developed discharge durations for the range of pre-
developed discharge rates from 50% of the 2-year peak flow up to 100% of the 50-year peak flow. The pre-developed condition to be matched shall be a forested land cover.

**Treatment Facilities**

All new treatment facilities shall be designed for the volume of runoff predicted from one of the two following methods:

- Single event model – 6-month, 24-hour design storm of 1.44 inches, or
- Continuous simulation runoff model – 91st percentile of 24-hour runoff volume

**3.13.2.2 Impacts**

**No Action Alternative**

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to stormwater would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

**Development Alternatives**

Because the majority of the South Downtown Subarea has been previously developed, new development is not expected to significantly change the amount of impervious surface and the associated volume of runoff to the stormwater system. Furthermore, because new development must comply with increasingly stringent best management practices (BMPs), new development has the potential to reduce capacity demand on the stormwater system. Accordingly, all of the alternatives can be achieved without new initiatives being developed. However, the collection system capacity is not uniformly distributed throughout the City and no guarantee can be made that there is capacity in every line for every new development that could occur. Nevertheless, the City is willing to adjust, within certain parameters, the timing of ongoing surface water programs in order to stimulate private investment and to partner with property owners through the use of LID financing and construction mechanisms.

**3.13.2.3 Mitigation Measures**

The following mitigation measures apply to all alternatives.

City regulations associated with new development are documented in Volume 1, Chapter 3 of the City’s 2012 Stormwater Management Manual. When new storm water regulations require added facilities in order to comply with the new requirements, the current strategy is to employ the use of Best Management Practices to comply. New development within the City will require storm water practices/facilities, generally on-site, to comply with the new storm water regulations. Also, as development occurs, additional storm water pipes in city streets may need to be constructed, upgraded or replaced due to age and condition. An NPDES permit was issued by the WA Department of Ecology to the City of Tacoma in February 2007 and was modified in June 2009. The new permit is focused on the quality and quantity of water
discharged to receiving waters. Increasingly the permit will require projects to improve water quality and reduce the volume of water discharged into receiving waters.

As the storm water system ages, focus is shifting from capacity improvements to rehabilitation or replacement of pipe. The City has completed an analysis of the storm sewer network based on criticality factors and is beginning an asset management program including the physical investigation and repair of the most critical pipes in the storm system. Within this program it may be possible to adjust, within certain parameters, the timing of ongoing surface water programs in order to stimulate private investment and to partner with property owners through the use of LID financing and construction mechanisms.

### 3.13.2.1 Unavoidable Adverse Impacts

With implementation of mitigation measures stated above, no unavoidable adverse impacts are anticipated.

### 3.13.3 POTABLE WATER

#### 3.13.3.1 Affected Environment

The South Downtown Subarea is supplied with potable water by Tacoma Water, a division of Tacoma Public Utilities, which is governed by a five-member Tacoma Public Utility Board. Tacoma Water provides water service to residences, businesses, and industries located in the cities of Tacoma, University Place and Ruston; in portions of the cities of Puyallup, Orting, Bonney Lake, Fircrest, Lakewood and Federal Way; and, in portions of Pierce and southern King county.

The Green River, located in King County, is Tacoma Water's primary source of water. Tacoma Water's Green River First Diversion Water Right can supply up to 73 million gallons of water each day, but is subject to minimum river flows as established in an agreement reached with the Muckleshoot Indian Tribe. The supply under this water right can be replaced with water from seven wells when water in the Green River is turbid, or cloudy. Tacoma Water's Green River Second Diversion Water Right can provide up to 65 million gallons of water each day. In addition to surface and groundwater sources in the Green River Watershed, Tacoma Water owns 24 wells located in and around the city with a short-term combined pumping capacity of approximately 60 million gallons a day.

Tacoma Water's Draft 2011-2020 Business Plan identifies key planning, customer and operation and maintenance (O&M) and capital programs which the utility must address in order to meet customer expectations for high quality water service, to address new regulations and to respond to growth in system demands. The business plan also addresses financing and rate requirements necessary to support the implementation of the projected operations and capital program needs. The Tacoma Water Business Plan's Strategic Initiatives address the following areas:

- Water Supply, Transmission and Storage Improvements;
- Water Quality Improvements;
• Water Distribution Improvements; and
• General Improvements.

**Level of Service Standard**

The adopted level of service (LOS) standard for Water is 562 gallons per day per Equivalent Residential Unit (ERU). This standard is subject to concurrency. An ERU is a unit of measure used to express the amount of water consumed by a typical residential customer of the Water Division during the 4-day peak period. The LOS is determined by multiplying the Water Division’s actual residential customer 4-day peak factor of 2.01 times the actual average daily residential water consumption. The 4-day peak water demands drive the new water system facility requirements for meeting new customer growth. The 4-day peak (maximum) is defined as: The average use per day of the four highest consecutive days of water use in the summer months.

**3.13.3.2 Impacts**

**No Action Alternative**

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to potable water would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

**Development Alternatives**

All of the development alternatives would increase water demand relative to existing conditions. **Alternative 1** would have the greatest water demand and **Alternative 3** the least water demand of the development alternatives. According to the existing LOS standard of 562 gallons per day per EDU, the additional residential units in the South Downtown Subarea could result the additional demand detailed in **Table 3.13-1** below.

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Residential Sq.Ft. (# of units)</th>
<th>Total Daily Residential Water Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative 1</td>
<td>15,000,000 (15,000 units)</td>
<td>8.43 million gallons per day</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>10,000,000 (10,000 units)</td>
<td>5.62 million gallons per day</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>5,000,000 (5,000 units)</td>
<td>2.81 million gallons per day</td>
</tr>
</tbody>
</table>

*assumes 1,000 sq.ft. per residential unit.
The additional water demand shown in the table above would only serve the projected additional dwelling units, not total equivalent residential units, which would also include hospital beds, school students, business employees, and other water generating requirements. The projected requirements, therefore, are likely higher than estimated above.

Tacoma Water has evaluated the existing water distribution system within the bounds of the Subarea. Research indicates that the existing system will provide satisfactory water pressure and flow to support the development within the Subarea for the foreseeable future. Accordingly, all of the alternatives can be achieved without new initiatives being developed.

3.13.3.3 Mitigation Measures

The following mitigation measures apply to all alternatives.

Tacoma Water is committed to meeting the Level of Service Standard noted above that is also a requirement of concurrency regulations. At present there are no active or planned water main replacement projects within the Subarea that are driven solely by the need to support projected development. Current or planned water main replacement work will be the result of project partnering opportunities where aging infrastructure can be replaced with shared restoration costs.

In 2012, replacement of water mains will be implemented in conjunction with the following Sanitary Sewer replacement projects:

- **Market Street** – South 17th St. to South 21st St.; and
- **S. C St.** – South 21st St. to South 25th St.

In 2013-2014, replacement of water mains will be implemented in conjunction with the following Sanitary Sewer replacement projects:

- **S. 21st St.** – South C St. to Jefferson Ave.; and
- **Jefferson Ave.** – South 21st St. to South 23rd St.

It is anticipated that this strategy of coordinating water main upgrades with sewer replacement projects will continue to be pursued in the future at locations throughout the South Downtown Subarea.

3.13.3.4 Unavoidable Adverse Impacts

With implementation of mitigation measures stated above, no unavoidable adverse impacts are anticipated.
3.13.4 POWER

3.13.4.1 Affected Environment

The South Downtown Subarea is served with electrical power by Tacoma Power. Tacoma Power provides electrical power with a common rate structure to residential, commercial and industrial customers in the cities of Tacoma, Fircrest, Fife, and University Place, and area also parts of Lakewood, Midland, Summit, Waller, Spanaway, Frederickson, Graham, and South Hill Puyallup. Tacoma Power has been publicly owned since 1893, and is a division of Tacoma Public Utilities, which is governed by a five-member Tacoma Public Utility Board. According to Tacoma Power’s Mission Statement:

We will continue to serve our customers in Tacoma and neighboring communities and serve new markets to benefit both existing and new customers.

Level of Service Standard

- Voltage level + or – 5 percent;
- Average annual system outage duration 75 minutes or less; and
- Average annual system outage frequency .95 or less.

In several locations throughout the City, Tacoma Power has converted overhead power lines to underground with funding provided by property owners and/or developers. Conversion may offer one or more of the following listed benefits:

- greater reliability due to their reduced exposure to outages caused by storm and vehicular related accidents;
- creating a more aesthetically pleasing urban environment;
- promotion of economic development consistent with current zoning allowances and the Plan’s policies for dense, mixed-use growth, and would also help support historic building upgrades; and
- avoidance of conflicts due to building construction and maintenance for those structures 3 stories and taller.

Converting the current overhead 12,470 Volt electrical facilities to underground is relatively expensive, typically costing between $600,000 to $1,400,000 per block within the urban core of Tacoma. Pursuant to RCW 35, conversion to underground power lines can be financed by forming a Local Improvement District (LID). Tacoma Power’s current Customer Service Policy commits Tacoma Power to fund 30 percent of the LID conversion cost.

The conversion to underground of the current overhead system pose unique challenges within dense urban areas that include zero lot-line set-back zoning. These challenges include:

- the installation of 2 underground systems in place of 1 overhead system;
  - multi-conductor high-ampacity feeder system requiring multiple large conduits & large vaults
lower ampacity distribution system that feeds individual properties requiring multiple conduits and moderately sized vaults

- location of large electrical switching and sectionalizing equipment within very large subsurface vaults, or with pad-mounted equipment taking up landscape or parking space;
- the location of transformers either within specially designed rooms located in buildings, or within landscaping or parking areas; and
- the need to include multiple ducts, in addition to those needed at the time of conversion, to accommodate future load growth and operational needs within and beyond the affected area.

Removal of the overhead system would include the conversion of the commonly attached multiple communication utilities to underground. Often the communication utilities and Tacoma Power share the same trench and vault excavations. The resulting volume of conduit and vault systems create additional challenges when designing to avoid conflicts with existing underground utilities such as sanitary and storm sewers, water, street light & traffic signal systems, and natural gas.

3.13.4.2 Impacts

No Action Alternative

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to power would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

Development Alternatives

The increased density and intensity of development that would be permitted by the development alternatives could result in greater demands on electrical energy; higher intensity development alternatives will create correspondingly higher demand. Tacoma Power has evaluated their existing distribution system within the bounds of the South Downtown Subarea. Resources exist to support development within the Subarea for the near future. However, as development advances, additional resources will be required to support the additional electrical load. The electrical delivery infrastructure does not exist within each block to support full build out to the development capacities allowed by existing land use code.
3.13.4.3 Mitigation Measures

The following mitigation measures apply to all alternatives.

Tacoma Power is committed to delivering power at the level of service standard noted above. In general, Tacoma Power’s policy is to add service as required by new demand, with the rate structure covering the cost of adding new service.

At present there are no active or planned electrical infrastructure addition and/or replacement projects within the Subarea that are driven by solely by the need to support the projected development. Any electrical infrastructure additions and/or replacement work that may be required to support new development will be the result of:

- development of a Downtown master electrical infrastructure plan;
- partnership with developers concerning their future utilization of properties within the Subarea; this may include the use of LIDs together with Tacoma Power’s participation in the cost of undergrounding (currently set at 30%);
- project partnering opportunities where aging infrastructure can be replaced with shared restoration costs; and
- Investigating grant application opportunities for funding of power system conversion in advance of development.

The City of Tacoma Comprehensive Plan Land Use Element includes the following policy to promote the undergrounding of utility lines:

- LU-UAD-29 Utility Lines: Encourage the agencies responsible for utility lines to work together to achieving the long-range goal of undergrounding all utility lines.

3.13.4.4 Unavoidable Adverse Impacts

With implementation of appropriate mitigation measures, no significant unavoidable adverse impacts relative to power are anticipated.
3.13.5 COMMUNICATIONS/DATA

3.13.5.1 Affected Environment

The South Downtown Subarea is provided with cable television and Internet connectivity services by Click! Network, a broadband cable system owned by Tacoma Power, which is a division of Tacoma Public Utilities.

3.13.5.2 Impacts

No Action Alternative

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to communications/data would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

Development Alternatives

All alternatives would continue redevelopment of properties within the South Downtown subarea for urban uses and activities at various intensities. Higher intensity development would increase demand for telecommunications services. The Click! Network is committed to expanding its telecommunications services to meet the additional needs of future growth.

3.13.5.3 Mitigation Measure

No mitigation measures are proposed.

3.13.5.4 Unavoidable Adverse Impacts

No significant unavoidable adverse impacts relative to communications/data are anticipated.

3.13.6 SOLID WASTE

3.13.6.1 Affected Environment

Solid Waste collection services are provided to the South Downtown Subarea by the City of Tacoma. The Environmental Services Solid Waste Management (SWM) Division of the Public Works Department is an "enterprise" utility solely funded by rate revenues. The SWM Division has provided mandatory solid waste collection and disposal services within the City since 1929.

Solid waste collection service is provided for single and multi-family housing units, commercial and industrial customers and all other solid waste customers within the City limits. The City owns and operates its own fleet of automated collection vehicles its own landfill. Weekly
garbage collection service is mandatory for all residents. Recycling and yard waste collection is an optional biweekly service that is available at no additional cost to residential customers.

The City has owned and operated the Tacoma Landfill at 3510 South Mullen Street within the City limits since 1960. The landfill was declared a federal superfund site by the U.S. Environmental Protection Agency in 1983 and has been operating under a Federal Consent Decree since 1988. It is required to be closed by December 2014 per the Landfill Consent Decree signed by the City and EPA. The City, under a 20-year contract with Pierce County Recycling, Composting, and Disposal, LLC, established in 2000, delivers all non-processible and non-recyclable materials and waste not placed in the Tacoma Landfill to the 304th Street Landfill located in Pierce County.

**Level of Service Standard**

The level of service is 1.13 tons per capita per year.

### 3.13.6.2 Impacts

**No Action Alternative**

Development within the South Downtown Subarea would occur on a project-by-project basis consistent with development regulations in-effect at the time development is proposed. Impacts to solid waste would be evaluated based on each site-specific project. Broad area-wide cumulative impact analysis would not occur and the advantages of upfront SEPA compliance would not be possible.

**Development Alternatives**

All alternatives will continue development of the lands within the South Downtown Subarea for urban uses and activities at various intensities. Development will increase demand for solid waste services; higher intensity development alternatives will create correspondingly higher demand. Additional solid waste production, if not properly handled, may result in increased vectors and public nuisance.

**Table 3.13-2** provides estimates of the amounts of solid waste that are projected to be generated under each of the three development alternatives.

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Projected Residents</th>
<th>Annual Solid Waste Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative 1</td>
<td>30,000</td>
<td>33,900 tons</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>20,000</td>
<td>22,600 tons</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>10,000</td>
<td>11,300 tons</td>
</tr>
</tbody>
</table>

*based on LOS of 1.13 tons per capita per year.*
3.13.6.3 Mitigation Measures

The following mitigation measures apply to all alternatives.

The City of Tacoma Public Works Department is committed to expanding its solid waste services to meet the additional needs of future growth at the level of service standard noted above.

The City of Tacoma Comprehensive Plan Environmental Element includes the following policy on solid waste and recycling that can help mitigate adverse impacts of increase solid waste production:

- E-SWR-1 Waste Recycling: Support programs designed to seek solutions for disposal problems, to develop means of recycling waste material in order to relieve the problems of waste disposal and to lessen the drain on our natural resources.

The City of Tacoma’s Climate Action Plan includes recommendations for reuse and recycling that can help mitigate adverse impacts of increase solid waste production. The Plan’s strategies seek to maximize commercial and residential recycling, ramping up to 100% recycling. Recommendations include exploring home composting programs and diverting more organic waste from landfill disposal. Other strategies emphasize reuse of materials and reducing waste generation through reusing older buildings and encouraging the deconstruction and recycling of structures being demolished in the city.

3.13.6.4 Unavoidable Adverse Impacts

With application of appropriate mitigation measures, no significant unavoidable adverse impacts relative to communications/data are anticipated.
The following State and Federal Agencies received notification:

City of Federal Way  
Planning Director  
33325 8th Avenue South  
Federal Way, WA 98003

City of Fife  
Planning Director  
5411 23rd Street East,  
Fife, WA 98424

City of Fircrest  
Planning Director  
115 Ramsdell Street  
Fircrest, WA 98466

City of Gig Harbor  
Planning Director  
3510 Grandview Street  
Gig Harbor, WA 98335

City of Lakewood  
Planning Director  
6000 Main Street  
Lakewood, WA 98499

City of Milton  
Planning Director  
1000 Laurel Street  
Milton, WA 98354

City of Puyallup  
Planning Director  
333 South Meridian, 2nd Floor  
Puyallup, WA 98371

City of University Place  
Planning Director  
3715 Bridgeport Way West, #B2  
University Place, WA 98466
Environmental Protection Agency
Howard Orlean
1200 6th Avenue
Mail Stop ECL-11
Seattle, WA 98101

Environmental Protection Agency
Kris Flint
1200 6th Avenue
Mail Stop ECL-11
Seattle, WA 98101

Joint Base Lewis/McChord
Lang Tran, 62 CES/CECP
555 Barnes Boulevard
McChord AFB, WA 98438

Metro Parks Tacoma
Lois Stark
4702 South 19th Street
Tacoma, WA 98405

National Marine Fisheries Service
Kathe Howe
7600 Sand Point Way NE
Seattle, WA 98115

Pierce County
Planning Director
2401 South 35th Street
Tacoma, WA 98409

Pierce County Executive
930 Tacoma Avenue South
Tacoma, WA 98402

Pierce Transit
Pierce Transit Headquarters
P.O. Box 99070
3701 96th St SW
Lakewood, WA 98496-0070

Port of Tacoma
Jason Jordan
P.O. Box 1837
Tacoma, WA 98401
Port of Tacoma
John Wolfe
One Sitcum Plaza
Tacoma, WA 98421

Port of Tacoma
SEPA Official
P. O. Box 1837
Tacoma, WA 98401

Puget Sound Clean Air Agency
Paul Carr
1904 3rd Avenue, Suite 105
Seattle, WA 98101

Puget Sound Partnership
Chris Townsend
P.O. Box 40900
Olympia, WA 98504

Puget Sound Regional Council
Rocky Piro
1011 Western Avenue
Seattle, WA 98104

The Puyallup Tribe of Indians
Andrea George
3009 Portland Avenue
Tacoma, WA 98404

The Puyallup Tribe of Indians
Bill Sullivan
3009 East Portland Avenue,
Tacoma, WA 98404

The Puyallup Tribe of Indians
David Duenos
3009 East Portland Avenue,
Tacoma, WA 98404

The Puyallup Tribe of Indians
Jeffrey P. Thomas
6824 Pioneer Way West
Puyallup, WA 98424

The Puyallup Tribe of Indians
Raul Ramos, Tribal Council
3009 East Portland Avenue,
Tacoma, WA 98404
The Puyallup Tribe of Indians
Teddy Wallace
3009 East Portland Avenue
Tacoma, WA 98404

Sound Transit
Kate Johnson
401 South Jackson Street
Seattle, WA 98104

Sound Transit
Mike Merrick
401 South Jackson
Seattle, WA 98104

Tacoma Pierce County Health Department
Brad Harp, EH-3129
3629 South ‘D’ Street
Tacoma, WA 98418

Tacoma Pierce County Health Department
Sherrilyn Reed, EH-3129
3629 South ‘D’ Street
Tacoma, WA 98418

U.S. Army Corps of Engineers
Ron Wilcox
P.O. Box C-3755
Seattle, WA 98124

U.S. Coast Guard
District Planning Office
915 Second Avenue
Seattle, WA 98101

U.S. Department of the Army – Directorate of Public Works
Environment Division (B Vanhoesen)
Building 2012 Ligget Ave
Box 339500 MS 17
JBLM, WA 98433

U.S. Department of Housing and Urban Development
Seattle Regional Office, Mary McBride
909 First Avenue, Suite 200
Seattle, WA 98104

U.S. Department of Fish and Wildlife
Dave Molenaar
48 Devonshire Road
Montesano, WA 98563
Tacoma South Downtown Subarea Plan EIS

Distribution List

U.S. Department of Fish and Wildlife
Katie Knight
600 Capitol Way North
Olympia, WA 98501

U.S. Department of Fish and Wildlife
Judy Lantor
510 Desmond Drive SE, #102
Lacey, WA 98503

U.S. Department of Fish and Wildlife
Lindie Schmidt
950 Farman Avenue North
Enumclaw, WA 98022

U.S. Department of Fish and Wildlife
Travis Nelson
P.O. Box 73249
Puyallup, WA 98373

Washington State Dept of Ecology
SEPA Unit
PO Box 47703
Olympia WA 98504-7703

Washington State Department of Health
Kelly Cooper
P.O. Box 47820
Olympia WA 98504

Washington State Department of Natural Resources
Hugo Flores
P.O. Box 47027
Olympia, WA 98504

Washington State Department of Transportation
Katherine Klockenteger
P.O. Box 47325
Olympia, WA 98504

Washington State Department of Transportation
Dale Severson
P.O. Box 47440
Olympia, WA 98504

Washington State Department of Transportation
David Smelser
P.O. Box 47407
Olympia, WA 98504
Additional notices were sent to the following agencies and groups as appropriate:

The South Downtown Subarea Plan & EIS Station Working Group members
The South Downtown Subarea Plan & EIS Steering Committee members
The Puget Sound Regional Council South Corridor Task Force members
The Cross Cultural Collaborative of Pierce County
The Affordable Housing Consortium of Pierce County
Other identified interested parties
# Development Assumptions

## Tacoma South Downtown Subarea Plan

## Draft EIS

### Alternative 1: 30 Million SF

<table>
<thead>
<tr>
<th>Zone</th>
<th>Use</th>
<th>Allowed Height</th>
<th>FAR (Resid.</th>
<th>Comm.</th>
<th>Total)</th>
<th>Assumptions for Floors and Lot Coverage (Podium Coverage = 100%)</th>
</tr>
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<tbody>
<tr>
<td>WR and DMU</td>
<td>mixed-use</td>
<td>100'</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>10 floors: 70% tower on 1-floor podium</td>
</tr>
<tr>
<td></td>
<td>residential</td>
<td></td>
<td>7</td>
<td>0</td>
<td>7</td>
<td>10 floors: 70% tower on 1-floor podium</td>
</tr>
<tr>
<td></td>
<td>office</td>
<td></td>
<td>0</td>
<td>6</td>
<td>6</td>
<td>7 floors: 85% average</td>
</tr>
<tr>
<td>DR</td>
<td>mixed-use</td>
<td>90'</td>
<td>5</td>
<td>1</td>
<td>6</td>
<td>9 floors: 70% tower on 1-floor podium</td>
</tr>
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<td></td>
<td>residential</td>
<td></td>
<td>6</td>
<td>0</td>
<td>6</td>
<td>9 floors: 70% tower on 1-floor podium</td>
</tr>
<tr>
<td></td>
<td>office</td>
<td></td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>5 floors: 85% average</td>
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<tr>
<td>UCX-TD-75/120</td>
<td>mixed-use</td>
<td>75'/120'</td>
<td>7</td>
<td>1</td>
<td>8</td>
<td>12 floors: 70% tower on 4-floor podium</td>
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<td></td>
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<td></td>
<td>8</td>
<td>0</td>
<td>8</td>
<td>12 floors: 70% tower on 4-floor podium</td>
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<td>office</td>
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<td>4</td>
<td>5 floors: 85% average</td>
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<tr>
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<td>9</td>
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<td>10</td>
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<td>22 floors: 12,500 sf tower on 4-floor podium</td>
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<td>5 floors: 85% average</td>
</tr>
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<td>mixed-use</td>
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<td>0.5</td>
<td>5</td>
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<td>M2</td>
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<td>5</td>
<td>6 floors: 85% average</td>
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<tr>
<td>UWT</td>
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<td>0</td>
<td>7</td>
<td>Max FAR allowed</td>
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<td></td>
<td>office</td>
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<td>Max FAR allowed</td>
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<tr>
<td>S8</td>
<td>mixed-use</td>
<td>varies</td>
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<td>FAR based on site-specific estimates</td>
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<td>0</td>
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<td>FAR based on site-specific estimates</td>
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### ALTERNATIVE 2: 20 MILLION SF

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<th>(podium coverage = 100%)</th>
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<td>comm.</td>
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<tr>
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<td>0.5</td>
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<tr>
<td></td>
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<td>0</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>office</td>
<td>0</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>DR</td>
<td>mixed-use</td>
<td>4.5</td>
<td>0.5</td>
<td>5</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td>UCX-TD-75/120</td>
<td>mixed-use</td>
<td>4.5</td>
<td>0.5</td>
<td>5</td>
</tr>
<tr>
<td></td>
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<td>0</td>
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<tr>
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<tr>
<td>UCX-TD-225</td>
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<td>9</td>
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<td></td>
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<td>0</td>
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<td></td>
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</tr>
<tr>
<td>DCC</td>
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<tr>
<td></td>
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</tr>
<tr>
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<td>0</td>
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<td>industrial</td>
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<td></td>
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<tr>
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<tr>
<td>S8</td>
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</tr>
<tr>
<td></td>
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## ALTERNATIVE 3: 10 MILLION SF

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<td>0.5</td>
</tr>
<tr>
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<tr>
<td></td>
<td>office</td>
<td>0</td>
<td>5</td>
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<tr>
<td>DR</td>
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<td>4.5</td>
<td>0.5</td>
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<tr>
<td></td>
<td>residential</td>
<td>5</td>
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<td>office</td>
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<td>mixed-use</td>
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<tr>
<td></td>
<td>office</td>
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<tr>
<td></td>
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<tr>
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<tr>
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<td>Site #</td>
<td>use</td>
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<td>resid. sf</td>
</tr>
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</tr>
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<td>office</td>
<td>307,661</td>
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REFERENCES


City of Tacoma, Department of Community and Economic Development. Brewery District Development Concept Study. April 2010.


Environmental Health Code, Chapter 4, Underground Storage Tanks, Board of Health Resolution 2010-4225


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