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Acknowledgements

**Project Management Team of the East Corridor Task Force**

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- Emil King – City of Bellevue
- Doug Mathews – Bellevue Community Representative
- Lori Peckol – City of Redmond
- Tracy Reich – Impact Capital
- Kelly Rider – Housing Development Consortium Seattle-King County
- Arthur Sullivan – A Regional Coalition for Housing (ARCH)

Alternates:
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Transit Integration and Parking Management

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Preface

THE REGIONAL VISION

VISION 2040 is the central Puget Sound region’s long-range vision for maintaining a healthy region and is a guiding premise for all regional planning and implementation. VISION 2040’s cornerstone is its emphasis on development of vibrant, mixed-use centers where people can live, work, and play. Integrating affordable housing in mixed-use centers throughout the region contributes to achieving a jobs-housing balance that increases access to opportunity, lowers households’ combined cost of housing and transportation, and helps ensure that infrastructure investments enhance equity across the region.

SUMMARY OF THE GROWING TRANSIT COMMUNITIES PARTNERSHIP

In keeping with the regional vision described above, the central Puget Sound region is investing more than $25 billion dollars in high-capacity transit over the next twenty years, providing a once-in-a-lifetime opportunity to capitalize on these investments by growing and strengthening communities around stations. The Growing Transit Communities Partnership (Partnership), funded by a grant from the US Department of Housing and Urban Development’s Sustainable Communities Regional Planning Grant Program and administered by Puget Sound Regional Council (PSRC), has been designed to help make the most of this investment by locating housing, jobs, and services close enough to transit so that it is a viable option for many people. If done right, more people will have a faster and more convenient way to travel.

The Partnership was formed through a coalition of city and county governments, housing authorities and affordable housing interests, transit agencies, public health agencies and departments, real estate and development interests, social justice and community development groups, economic development and business interests, community based organizations, educational interests, environmental advocacy groups, and the public. This coalition of the Partnership has been supporting neighborhood planning for more connected, livable, and sustainable communities around more than 74 high capacity transit centers in the region—covering three counties in sixteen cities—including existing, new, and future station areas.

Through these efforts, the Partnership has been working to shape the region and station areas in ways that benefit current and future residents, local businesses, and the wider region. Working within the framework of existing plans, policies, and goals of local governments and guided by VISION 2040, the Partnership has been helping local communities bring their visions to reality and to make the most of new light rail service, bus rapid transit, and other transit investments, including identifying unique roles and opportunities for community development.
associated with high-capacity transit investments. For more information about the Growing Transit Communities Partnership and PSRC, visit: http://www.psrc.org.

THREE CORRIDORS/THREE TASK FORCES
Planning activities of the Partnership have focused along the three light rail corridors from Seattle north to the city of Everett, south to Tacoma, and east to the city of Redmond. Based on the premise that change can happen at the local level through tools and solutions that address similar challenges shared by communities in the region, the Partnership has provided a big-picture perspective so that people can see both local and regional benefits, and local entities can apply lessons learned in other places in the region. Corridor task forces for the North, East, and South corridors were charged with analyzing and reviewing existing conditions and identifying unique opportunities and challenges for development of existing and future transit station areas.

In development of its work plan and specific assignments for each task force, the Partnership felt that it was important to focus implementation activities in specific station areas of the region’s transit corridors to serve as models for other parts of the region. In the case of the East Corridor, the intention was to work with the East Corridor Task Force to identify what catalyst project, or projects, were most appropriate. This evolved into the defined scope of work for the East Corridor Implementation Support Project.

EAST CORRIDOR CONTEXT
In 2011, the Sound Transit Board of Directors made its final decision about the East Link light rail transit (LRT) corridor alignment and station locations. Also in 2011, King County Metro began operation of its Bus Rapid Transit service (BRT) RapidRide line B. In order to help areas around LRT and BRT stations transform into more transit-oriented communities, the four cities participating in the East Corridor Task Force (Seattle, Mercer Island, Bellevue, and Redmond) and other Task Force members were interested in developing focused implementation strategies and tools for specific East Corridor station areas. Seattle and Mercer Island had already completed extensive planning for the station areas in their jurisdictions, so the Task Force decided to focus on stations in Bellevue and Redmond. Staff from the cities of Bellevue and Redmond indicated that the station areas in the Bel-Red Corridor and Overlake were in most need of implementation support. Given these considerations, the Task Force determined that the East Corridor Implementation Support Project should focus on the following subset of East Corridor station areas in the cities of Bellevue and Redmond, along East Link and King County Metro’s RapidRide Route B stations.

East Link Light Rail Station Areas (Future) Selected for the East Corridor Implementation Support Project:
- Hospital Station Area in Bellevue
- 120th Avenue NE/Spring Creek Station Area in Bellevue
- 130th Avenue NE Station Area in Bellevue
- Overlake Village Station Area in Redmond
- Overlake Transit Center Station Area in Redmond

King County METRO RapidRide B Line Station areas (Existing) Selected for the East Corridor Implementation Support Project: Located in Bellevue’s Crossroads Neighborhood:
- NE 10th Street Station Area
- NE 15th Street Station Area

The Partnership funded and guided the East Corridor Implementation Support Project to examine opportunities for TOD along Sound Transit’s East Link Light Rail and King County Metro RapidRide Line B alignments through the Eastside cities of Bellevue and Redmond in these station areas initially as part of Phase 1 of the project, and then to provide more focused analysis and strategies for selected station areas as part of Phase 2. Portions of the project area are located within the areas known as the Bel-Red Corridor and Overlake.
FOUR FOCUS AREAS FOR EAST CORRIDOR IMPLEMENTATION ACTIVITIES

Through a series of meetings, the East Corridor Task Force examined key issues and identified barriers to transit-oriented development in the East Corridor, along with particular challenges to implementing equitable TOD in station areas. In its discussion of how to incent and accommodate equitable transit-oriented development in station areas, the Task Force determined four areas of focus for the East Corridor Implementation Support project. The Task Force identified the need for detailed strategies and action steps to implement existing local plans, particularly in the areas of:

- Affordable Housing
- Business Retention and Attraction
- Public and Private Partnerships
- Transportation Access and Connectivity

EAST CORRIDOR PROJECT PURPOSE AND OVERVIEW

The East Corridor Implementation Support project has identified pivotal opportunities to transform Eastside station areas into more vibrant, economically healthy neighborhoods that offer equitable housing choices, more convenient access to jobs and jobs-to-housing balance within the high-capacity transit corridors and region, and better connectivity to goods and services.

The project is supporting immediate advancement of the implementation of visions and plans that have already been developed by participating jurisdictions on the Eastside, and the project team has leveraged other products developed by PSRC and the Growing Transit Communities Partnership, including affordable housing and opportunity mapping, existing conditions reports, market analyses, station area typologies, Center for Transit-Oriented Development (CTOD) market strength index, and other information as a base of reference for the project.

IMPLEMENTATION SUPPORT PROJECT GUIDANCE AND TIMELINE

All phases of the East Corridor Implementation Support Project have been informed by representatives of the East Corridor Task Force. The Task Force identified a subset of members, called the Project Management Team (PMT), to advance the project and bring back matters to the Task Force for direction and decisions. PMT members were selected from the general membership of the Task Force (including representatives from the cities of Bellevue and Redmond) and confirmed by the Task Force co-chairs. See the Acknowledgements page for PMT members.

Growing Transit Communities staff and the PMT members of the Task Force retained a consultant team with expertise in affordable housing, urban design, transportation planning and policy, real estate and economic development, and other areas to assist in identifying actions and strategies to address these issues and help to catalyze TOD.

OVERVIEW OF PHASES 1 AND 2

The scope of work for the East Corridor Implementation Support Project was completed in two phases. Phase 1 included best practices research, a high level assessment of seven East Corridor station areas, screening and selection of station areas for further analysis in Phase 2, and development of the scope of work for Phase 2. See the Phase 1 Best Practices Research Report for a detailed description of initial tasks: http://www.psrc.org/about/pubs.

Phase 2 involved more intensive analysis and development of specific recommendations for TOD implementation for two station areas: 130th Avenue NE in Bellevue and Overlake Village in Redmond. Phase 2 explored innovative approaches to leverage opportunities and incent TOD implementation in the short- and long-term in these station areas. Phase 2 developed recommended actions, strategies, and products to address specific issues in each station area per the scope of work that was developed by the Task Force and overseen by the PMT.
PHASE 2 PRODUCTS

Products developed in Phase 2 supporting these four focus areas are listed in the chart below.

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<tr>
<th>Housing, Development, and Infrastructure Funding</th>
<th>Affordable Housing</th>
<th>Business Retention and Attraction</th>
<th>Partnerships</th>
<th>Transportation Access and Connectivity</th>
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<td>Summary of Project Outreach Activities and Recommendations for Ongoing Engagement</td>
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<td>Analysis and Recommendations</td>
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These products have been completed as stand-alone, complementary documents and reports. All reports are available for download at http://www.psrc.org/about/pubs (look for Growing Transit Communities Partnership, East Corridor information).
PARTNERSHIP FOR SUSTAINABLE COMMUNITIES LIVABILITY PRINCIPLES

The Growing Transit Communities Partnership supports the livability principles of the Partnership for Sustainable Communities. The US Department of Housing and Urban Development (HUD), US Department of Transportation (DOT), and the US Environmental Protection Agency (EPA) have joined together to help communities nationwide improve access to affordable housing, increase transportation options, and lower transportation costs while protecting the environment through the Partnership for Sustainable Communities. The Partnership for Sustainable Communities works to coordinate federal housing, transportation, water, and other infrastructure investments to make neighborhoods more prosperous, allow people to live closer to jobs, save households time and money, and reduce pollution. The Partnership agencies incorporate the following six principles of livability into federal funding programs, policies, and future legislative proposals.

Provide more transportation choices—Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation’s dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.

Promote equitable, affordable housing—Expand location- and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.

Enhance economic competitiveness—Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services, and other basic needs by workers, as well as expanded business access to markets.

Support existing communities—Target federal funding toward existing communities—through strategies like transit-oriented, mixed use development and land recycling—to increase community revitalization and the efficiency of public works investments and to safeguard rural landscapes.

Coordinate and leverage federal policies and investment—Align federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

Value communities and neighborhoods—Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods—rural, urban, or suburban.
The Focus of this Phase 2 Report:
Transit Integration and Parking Management
Analysis and Recommendations

This Phase 2 report of the East Corridor Implementation Support Project provides analysis and recommendations related to conceptual transit integration, parking management, and travel demand management including specific recommendations for the two selected station areas, Overlake Village in Redmond and 130th Avenue NE in Bellevue.

Given that the light rail station areas in the East Corridor will be operating in 2023 and King County Metro is already providing RapidRide bus rapid transit service in the corridor, the purpose of the conceptual transit integration work is to provide high-level recommendations for the integration of local transportation services with these existing and planned high capacity transit services. The potential for enhanced local public and private services such as shuttles and other alternatives to traditional fixed route bus service are explored. These conceptual recommendations are based on an assessment of the travelshed for East Link and Rapid Ride stations, review of existing transit services, local policies, and land uses, and review of best practices in transit access and rail/bus integration planning from other regions (also presented in the report).

This report provides an overview of selected best practices in the management of on-street and off-street parking and travel demand management in rapid transit station areas and urban mixed-use districts similar to those proposed in the East Corridor. Specific recommendations for parking management and travel demand management for both East Link station areas that are the subject of the East Corridor Implementation Project, Phase 2 (Overlake Village in Redmond and 130th Avenue NE in Bellevue) are provided.

Another Phase 2 report, Bicycle and Pedestrian Connectivity Analysis and Recommendations, assesses the non-motorized network within the two station areas and makes recommendations for enhancing access and connectivity for pedestrians and bicyclists. All East Corridor Implementation Support Project reports may be downloaded at: http://www.psrc.org/about/pubs (look for Growing Transit Communities Partnership, East Corridor information).

This report was developed and authored by Nelson\Nygaard Consulting Associates with review and input from members of the East Corridor Implementation Support Project Management Team, including representatives from the Cities of Redmond and Bellevue, King County Metro, Sound Transit, and others.

The information in this report, developed for the Growing Transit Communities Partnership, can serve as a reference and model for other transit-oriented development in station areas throughout the region.
1 TRANSIT: CONTEXT AND ANALYSIS

INTRODUCTION

Approved by Puget Sound-area voters in 2008, Sound Transit’s East Link Light Rail will run from International District Station in Seattle east along I-90, across Mercer Island, north up Bellevue Way and 112th Ave SE into Downtown Bellevue, and east through the Bel-Red Corridor with an initial terminus at the existing Overlake Transit Center. Service is planned to begin with six stations in Bellevue and two stations in Redmond by 2023. In addition to East Link, the broader “East Corridor,” as defined by the Puget Sound Regional Council’s Growing Transit Communities Program, also includes the stations and alignment of King County Metro’s RapidRide B-Line, which provides frequent bus service from Downtown Redmond to Downtown Bellevue, via NE 90th Street, 148th Avenue NE, Overlake, Crossroads, and NE 8th Street. The East Corridor definition also includes the future, but unfunded, stations along the extension of East Link (from Overlake Transit Center to downtown Redmond) at Southeast Redmond and in Downtown Redmond.

The Puget Sound Regional Council Growing Transit Communities East Corridor TOD Implementation Support Project is intended to support implementation of equitable Transit-Oriented Development (TOD) in the East Corridor and provision/expansion of facilities and services providing access to East Link and Rapid Ride. The first three chapters of this document on Access and Connectivity address transit strategies for access and TOD implementation support. Chapter (1) provides context for consideration of transit service and access improvements, with an overview of existing and planned transit infrastructure and services in the East Corridor, Chapter (2) summarizes selected best practices in rail/bus access and integration from other communities, and Chapter (3) concludes with conceptual recommendations for the integration of local transit services with RapidRide and East Link at stations between Overlake Transit Center Station in Redmond and Hospital Station in Bellevue, and supporting and providing access to new transit-oriented development in these station areas.

King County Metro and Sound Transit currently provide connecting transit service that is essential for successful station areas. In the future, providing convenient access between local residents, retail establishments, and employment centers, and nearby rail and bus transit centers will be essential to support vital and vibrant neighborhoods, including new TOD. Consideration of access to, from, and within transit centers should include all modes of transportation and serve people of all abilities. Connections to and from transit centers and stations should be seamless from the street, and connections within centers and stations should be fast and intuitive.

Topics and questions addressed at a conceptual level in chapters 1-3 include:

- What are best practices in planning for local transit service integration?
- Which stations are most likely to serve as multimodal transfer centers?
- Where will service most likely need to be added or increased with the opening of East Link?
- Where are there gaps in the emerging network of frequent transit lines intersecting the East Link and Rapid Ride B-Lines?
- What types of service are likely necessary to serve low density areas (e.g., north of the 130th Avenue NE Station in Bellevue, and the Bellevue and Redmond neighborhoods East and South of the Overlake Village Station) and how can such service be efficiently operated/managed?
- What are the key principles of planning for transit and shuttle (public and private) access to stations (including guidance on the flexible use of curb space)?

**LAND USE CONTEXT**

This section briefly describes the existing and planned land use context for transit access and integration planning in the East Corridor, from Hospital Station in Bellevue to Overlake Transit Center Station in Redmond (both of these future East Link station locations are currently served by Metro’s RapidRide B-Line). Additional detailed information on existing uses, planned land uses and zoning regulations governing future land uses, and projections of future population and employment in the East Corridor is provided later in this chapter (see “Origins and Destinations,” on page 1-28), and is illustrated in Figures 1-6 to 1-14. Current land uses and zoning designations in the corridor are characterized as follows:

- The vicinity of the Hospital Station includes a horizontal mix of uses, including commercial retail and single and multi-family residential uses, and institutional uses, including hospitals (Overlake Medical Center and Group Health Hospital) and medical offices. Zoning is largely consistent with existing uses in the immediate station area.

- Both the 120th and 130th Stations are in the Bel-Red Subarea of Bellevue, which is characterized mostly by low density commercial land uses, including warehousing and light industry. Recent zoning amendments according to the Bel-Red Subarea Plan are facilitating new high density mixed-use development near both future station sites, with commercial retail and office uses intermingled with high density residential, civic uses and public space/parks.

- Overlake Village in Redmond today is mostly home to low-density commercial retail and office uses, with a substantial share of land used for surface parking accessory to these uses. North of SR-520, the area within one half-mile of the future Link Station is mostly occupied by the Microsoft Campus. The Overlake Village Master Plan calls for the Overlake Village area, south of SR-520 to be redeveloped over time as a pedestrian friendly mixed-use urban center with a mix of residences and employment and retail establishments.

- Overlake Transit Center is surrounded by dense commercial office uses on the Microsoft Campus. Multifamily and single-family residential uses are located within reach of the station to the North and East. Redmond’s Overlake Neighborhood Plan and accompanying zoning provide for significant new employment growth on the Microsoft Campus over time.
• RapidRide B, operated by King County Metro, connects with future East Link Station sites at Downtown Bellevue, Hospital Station, Overlake Village, and Overlake Transit Center with Redmond and Bellevue via 156th Avenue NE and NE 8th Street. The RapidRide corridor is predominantly residential, including single and multi-family parcels, with major exceptions at the Crossroads Mall and associated commercial retail uses at the intersection of 156th Ave NE and NE 8th Street, Downtown Bellevue, Overlake Village, Downtown Redmond, and the Overlake Campus of Microsoft Corporation. Other than these exceptional nodes all of which are planned to increase in commercial and, in some cases, residential density, the predominantly residential portions of this corridor are not currently planned for significant changes in land use. This implies that access and connectivity improvements in these predominantly residential areas will be key to improving transit access, therefore ridership, along the RapidRide corridor.

EXISTING AND PLANNED TRANSIT SERVICE

This section describes existing service in the East Corridor and future-year service as discussed in the King County Metro Transit Strategic Plan for Public Transportation (MTSP), 2011, the Transit Element of the Redmond Transportation Master Plan, 2013 and the Bellevue Transit Master Plan, 2013.

Existing Service

A number of existing King County Metro and Sound Transit routes currently serve the East Corridor station areas—Hospital Station, 120th Station, 130th Station, Overlake Village Station, and Overlake Transit Center. Figure 1-1 illustrates existing services and the planned Link route in the East Corridor. King County Metro and Sound Transit jointly operate 21 different bus routes that intersect with the East Corridor stations that are the focus of this report.

Figure 1-2 describes existing service characteristics for all routes that will serve East Link stations. The majority of existing routes serve Overlake Transit Center, while 120th Avenue NE Station and 130th Avenue NE Station have the least amount of existing service. RapidRide B, which runs between the Bellevue Transit Center and the downtown Redmond Transit Center via Crossroads and Overlake, offers frequent, limited-stop service in the East Corridor and currently serves the proposed locations for Hospital Station, Overlake Village Station, and Overlake Transit Center.
Figure 1-1  East Corridor Existing and Planned Transit Services

Legend
- East Link Stations
- East Link Light Rail (Opens 2023)
- East Link Light Rail (Unfunded)
- Rapid Ride B Stops (as of 2013)
- Rapid Ride B (as of 2013)
- Local Bus Routes (as of 2013)
- Parks

Data Sources: PSRC, King County GIS Department
### Figure 1-2  Existing Routes Intersecting with Planned East Link Stations

<table>
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<tr>
<th>Route</th>
<th>Description</th>
<th>Service Type</th>
<th>Days of Service</th>
<th>Hours of Service</th>
<th>Frequency (Minutes)*</th>
<th>East Link Station (Within 1/4 Mile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>542</td>
<td>Redmond - University District</td>
<td>Peak Express</td>
<td>Mon-Fri</td>
<td>5:25 a.m. - 10:51 a.m. / 2:29 p.m. - 7:43 p.m.</td>
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</tr>
<tr>
<td>242</td>
<td>Ridgecrest to Overlake Park-and-Ride</td>
<td>Peak</td>
<td>Mon-Fri</td>
<td>5:51 a.m. - 9:48 a.m. / 3:34 p.m. - 7:11 p.m.</td>
<td>Weekday AM: 6</td>
<td>Overlake Village Station, Overlake Transit Center</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>Weekday PM: 6</td>
<td></td>
</tr>
<tr>
<td>244</td>
<td>Kenmore Park-and-Ride to Overlake TC</td>
<td>Peak</td>
<td>Mon-Fri</td>
<td>6:23 a.m. - 9:29 a.m. / 4:12 p.m. - 7:05 p.m.</td>
<td>Weekday AM: 5</td>
<td>Overlake Transit Center</td>
</tr>
<tr>
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<td></td>
<td>Weekday PM: 5</td>
<td></td>
</tr>
<tr>
<td>245</td>
<td>Kirkland TC to Crossroads to Factoria</td>
<td>Frequent All-Day</td>
<td>Mon-Sun</td>
<td>Weekday: 5:46 a.m. - 11:46 p.m. / Weekend: 6:51 a.m. - 11:37 p.m.</td>
<td>Weekday: 15</td>
<td>Overlake Transit Center</td>
</tr>
<tr>
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<td>/Weekend: 30</td>
<td></td>
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<tr>
<td>249</td>
<td>Overlake TC to South Bellevue Park-and-Ride</td>
<td>Local</td>
<td>Mon-Sun</td>
<td>Weekday: 6:01 a.m. - 8:31 p.m. / Weekend: 7:06 a.m. - 8:40 p.m.</td>
<td>Peak: 30 / Off-Peak: 45 / Weekend: 45</td>
<td>130th Street Station, Overlake Village Station, Overlake Transit Center</td>
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<tr>
<td>250</td>
<td>Overlake TC to Downtown Seattle</td>
<td>Peak</td>
<td>Mon-Fri</td>
<td>6:34 a.m. - 8:59 a.m. / 4:15 p.m. - 6:39 p.m.</td>
<td>Weekday AM: 4</td>
<td>Overlake Village Station, Overlake Transit Center</td>
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<td></td>
<td>Weekday PM: 4</td>
<td></td>
</tr>
<tr>
<td>265</td>
<td>Overlake TC to Downtown Seattle to First Hill</td>
<td>Peak</td>
<td>Mon-Fri</td>
<td>5:45 a.m. - 9:24 a.m. / 3:09 p.m. - 7:23 p.m.</td>
<td>Weekday AM: 9</td>
<td>Overlake Transit Center</td>
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<td></td>
<td>Weekday PM: 9</td>
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</tr>
<tr>
<td>268</td>
<td>Redmond to Downtown Seattle</td>
<td>Peak</td>
<td>Mon-Fri</td>
<td>5:49 a.m. - 8:23 a.m. / 3:39 p.m. - 6:42 p.m.</td>
<td>Weekday AM: 4</td>
<td>Overlake Transit Center</td>
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<td>Weekday PM: 5</td>
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</tr>
<tr>
<td>269</td>
<td>Issaquah TC to Overlake Park-and-Ride</td>
<td>Peak</td>
<td>Mon-Fri</td>
<td>6:02 a.m. - 10:16 a.m. / 3:32 p.m. - 8:31 p.m.</td>
<td>20-30</td>
<td>Overlake Village Station, Overlake Transit Center</td>
</tr>
<tr>
<td>672</td>
<td>RapidRide B</td>
<td>BRT</td>
<td>Mon-Sun</td>
<td>Weekday: 4:20 a.m. - 1 a.m. / Weekend: 5:43 a.m. - 1 a.m.</td>
<td></td>
<td>15 Hospital Station, Overlake Village Station, Overlake Transit Center</td>
</tr>
<tr>
<td>888</td>
<td>Eastgate Park-and-Ride to Interlake High School to International School</td>
<td>School Tripper</td>
<td>Mon-Fri</td>
<td>6:36 a.m. - 7:28 a.m. / 2:52 p.m. - 3:55 p.m.</td>
<td>Weekday AM: 1</td>
<td>120th Street Station, 130th Street Station</td>
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<td></td>
<td>Weekday PM: 1</td>
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</tr>
<tr>
<td>889</td>
<td>Cherry Crest to Sammamish High School to International School</td>
<td>School Tripper</td>
<td>Mon-Fri</td>
<td>6:36 a.m. - 7:19 a.m. / 2:43 p.m. - 3:41 p.m.</td>
<td>Weekday AM: 1</td>
<td>130th Street Station</td>
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<td></td>
<td>Weekday PM: 1</td>
<td></td>
</tr>
<tr>
<td>982</td>
<td>Bear Creek Park-and-Ride to Lakeside</td>
<td>Shuttle</td>
<td>Mon-Fri</td>
<td>7:12 a.m. - 7:58 a.m. / 3:09 p.m. - 4:08 p.m.</td>
<td>Weekday AM: 1</td>
<td>Overlake Transit Center</td>
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<td>Weekday PM: 1</td>
<td></td>
</tr>
</tbody>
</table>

* Frequencies are Approximate
Source: Sound Transit and King County Metro
POLICIES AND PROGRAMS

This section condenses applicable portions of the King County Metro Transit Strategic Plan for Public Transportation (MTSP) (2011), the Redmond Transportation Master Plan (TMP) (2013), and the Bellevue Transit Master Plan (TMP) (2013), that include guidance for implementation of East Link Light Rail, standards for Rapid Ride and connectivity principles and standards for transit in the area.

King County Metro Transit Strategic Plan for Public Transportation (2011-2021)

King County Metro Transit (Metro), King County’s public transportation provider, is committed to serving the region with the highest quality products and services possible as it works towards a vision of a sustainable public transportation that helps our region thrive.

Strategic planning is a process by which an organization assesses how it is doing, figures out where it wants to go, and charts a path to get there. Strategic plans define important goals, set specific directions, and establish the policy framework for the future. The Metro Transit Strategic Plan lays out a vision and mission for public transportation services in King County and describes the strategies that will move Metro towards that vision. It also defines desired outcomes and how progress will be measured. The mission, goals, objectives, and strategies in the plan reflect the priorities of King County residents, businesses, and leaders. Selected goals, objectives, and strategies that apply to the East Corridor are included in Figure 1-3, along with a high-level assessment of implications for transportation planning and TOD implementation in the East Corridor.
Figure 1-3  

**Metro Transit Strategic Plan and Implications for East Corridor**

<table>
<thead>
<tr>
<th>Goals, Objectives, and Strategies</th>
<th>Implications for the East Corridor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal 2: Human Potential.</strong> Provide equitable opportunities for people from all areas of King County to access the public transportation system.</td>
<td>The implementation of light rail in the East Corridor will enhance the level of transit investment, fill a missing link in the regional transit system, and compliment existing frequent, RapidRide transit services in a parallel corridor. Publicly-accessible shuttle services and other alternatives to traditional fixed route service may be appropriate for specific markets where frequent, multi-purpose services are infeasible or not likely to be productive.</td>
</tr>
<tr>
<td><strong>Objective 2.1: Provide public transportation products and services that add value throughout King County and that facilitate access to jobs, education, and other destinations.</strong></td>
<td></td>
</tr>
<tr>
<td>Strategy 2.1.1: Design and offer a variety of public transportation products and services appropriate to different markets and mobility needs.</td>
<td>Additional transit services and better transit station/stop access in the East Corridor will provide more options to historically disadvantaged populations. Adequate access to station locations will be essential.</td>
</tr>
<tr>
<td>The traditional fixed-route transit system is the largest of Metro’s services, but it cannot meet every public transportation travel need. Corridors that have the potential for high ridership give Metro opportunities to focus transit service and facility investments. Metro is pursuing these opportunities through the RapidRide program. Six RapidRide lines are currently planned, and additional lines could be developed in the future. Communities can leverage Metro’s transit investments with supportive development along each line.</td>
<td></td>
</tr>
<tr>
<td>Strategy 2.1.2: Provide travel opportunities for historically disadvantaged populations, such as low-income people, students, youth, seniors, people of color, people with disabilities, and others with limited transportation options.</td>
<td>Together, East Link and RapidRide will provide greater regional connections for those living in the East Corridor. Restructuring and reinvesting in connecting transit services to improve access to the East Link and RapidRide corridors will and will help to leverage the benefits from these regional investments.</td>
</tr>
<tr>
<td>Strategy 2.1.3: Provide products and services that are designed to provide geographic value in all parts of King County.</td>
<td></td>
</tr>
<tr>
<td>Metro makes public transportation investments that are appropriate to the land use, employment densities, housing densities, and transit demand in various communities.</td>
<td>Consistent with this strategy, transit agencies and Cities in the East Corridor may consider options for facilitating publicly accessible (but either publicly or privately-operated) shuttle services and other flexible service models and alternatives to fixed route service, in order to improve access to markets that may not warrant traditional fixed route service.</td>
</tr>
<tr>
<td>Strategy 2.1.4: Seek to provide to the general public an extensive range of transportation alternatives to regular fixed-route transit, such as ridesharing and other alternative of “right-sized” services.</td>
<td></td>
</tr>
</tbody>
</table>
### Goals, Objectives, and Strategies

<table>
<thead>
<tr>
<th>Goal 3: Economic Growth and Built Environment</th>
<th>Implications for the East Corridor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective 3.1:</strong> Support a strong, diverse, sustainable economy.</td>
<td>Coordination among stakeholders will be essential for the success of new transit services in the East Corridor.</td>
</tr>
<tr>
<td>Strategy 3.1.1: Through investments and partnerships with regional organizations, local jurisdictions, and the private sector, provide alternatives to driving alone that connect people to jobs, education, and other destinations essential to King County’s economic vitality.</td>
<td></td>
</tr>
<tr>
<td>Strategy 3.1.2: Partner with employers to make public transportation products and services more affordable and convenient for employees.</td>
<td></td>
</tr>
<tr>
<td><strong>Objective 3.2:</strong> Address the growing need for transportation services and facilities throughout the county.</td>
<td></td>
</tr>
<tr>
<td>Strategy 3.2.1: Expand services to accommodate the region’s growing population and serve new transit markets.</td>
<td>The implementation of new High Capacity Transit (HCT) services additional frequent transit services is essential to meeting the needs of the East Corridor’s growing population.</td>
</tr>
<tr>
<td>Strategy 3.2.2: Coordinate and develop services and facilities with other providers to create an integrated and efficient regional transportation system.</td>
<td>Again, coordination among a wide variety of local agencies, organizations, and transportation providers will be essential for new East Link Light Rail and frequent bus transit services to provide the best possible access and mobility for passengers. Coordination between King County Metro and Sound Transit, through improved local bus connections and the facilitation of easy transfers, will help the pieces of the overall transit system work together. It is important to note that King County Metro is exploring opportunities to expand alternative service options to a broader range of users, including effective and lower-cost alternatives to fixed-route bus service. This might include expanding current Community Access Transportation, Taxi Scrip, and potentially other new programs to the general public (beyond use by those with special needs), as well as increasing the flexibility and convenience of other programs such as Vanpool to serve wider range of customers.</td>
</tr>
</tbody>
</table>

*Metro collaborates with other agencies and organizations to build the best possible regional public transportation network, to make it easy for people to travel between transportation services, to maximize travel options, and to achieve efficiencies by providing services that are complementary rather than duplicative. For example, when Sound Transit introduces new services, Metro explores opportunities to restructure bus routes, improve service integration, enhance service, and increase efficiency. By reconfiguring, reducing, or eliminating poorly performing routes, Metro can free up resources to invest in routes with greater demand and unmet service needs. Where parallel services exist, Metro can restructure routes to create service that is more frequent, productive, and reliable.*

*Metro also coordinates with other agencies and jurisdictions to improve the efficiency of the system through transit speed and reliability improvements. Metro works independently and in coordination with local jurisdictions to implement improvements such as traffic signal coordination, transit queue-bypass lanes, transit signal queue jumps, transit signal priority, safety improvements, and stop consolidations.*

*Metro also coordinates with other regional and local public transportation entities on funding, design, construction and maintenance of capital projects. Metro and other agencies have collaborated on the development of facilities such as transit hubs, park-and-rides and stations.*
<table>
<thead>
<tr>
<th>Goals, Objectives, and Strategies</th>
<th>Implications for the East Corridor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy 3.2.3: Work with transit partners, WSDOT and others to manage park-and-ride capacity needs.</td>
<td></td>
</tr>
<tr>
<td>Objective 3.3: Support compact, healthy communities.</td>
<td></td>
</tr>
<tr>
<td>Strategy 3.3.1: Encourage land uses, policies, and development that lead to communities that transit can serve efficiently and effectively.</td>
<td>Leveraging local partnerships to ensure the implementation of complementary land uses will assist with providing adequate access to transit services and is essential for supporting compact, healthy communities.</td>
</tr>
<tr>
<td>Metro encourages the development of transit-supportive, pedestrian-friendly communities by consulting with jurisdictions and serving transit-oriented developments. Metro recommends strategies for jurisdictions and agencies to make communities more transit-friendly. Metro also partners with jurisdictions and the private sector to spur transit-oriented development through redevelopment opportunities at, or adjacent to, park-and-rides.</td>
<td></td>
</tr>
<tr>
<td>Strategy 3.3.2: Support bicycle and pedestrian access to jobs, services, and the transit system.</td>
<td></td>
</tr>
<tr>
<td>Objective 3.4: Support economic development by using existing transportation infrastructure efficiently and effectively.</td>
<td></td>
</tr>
<tr>
<td>Strategy 6.1.2: Establish and maintain a long-range transit service and capital plan developed in collaboration with local comprehensive and regional long-range transportation planning.</td>
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</tbody>
</table>
Metro works closely with other regional transit and transportation agencies to plan and provide efficient, integrated travel options that enhance public transportation services in King County. Metro coordinates most closely with Sound Transit, Pierce Transit, Community Transit, Washington State Ferries, and the King County Ferry District. Metro also works with the Washington State Department of Transportation (WSDOT), PSRC, various local and regional jurisdictions, and businesses such as Microsoft that provide direct transit service to their employees.

Metro collaborates on some of the region’s most important transportation projects to ensure that public transportation continues to play a vital role in the region’s broader transportation system. These projects include Sound Transit’s Link light rail. The growth of the light rail system offers opportunities for Metro to provide better connections for riders to and from this high-capacity transit service, improving the overall efficiency of the region’s transportation system.

Social Equity in Transit Planning

Throughout the development and implementation of the Metro Transit Strategic Plan¹, King County Metro has maintained a focus on equity and social justice among other key planning principles. Specific objectives and strategies highlighted in the strategic plan include the following:

- Provide travel opportunities for historically disadvantaged populations and others with limited transportation options.
- Empower people to play an active role in shaping Metro’s products and services.
- Provide public transportation information that is understandable, accurate, and accessible by everyone.
- Clearly communicate service change concepts and decision-making processes to ensure transparency.

These strategies are consistent with the King County Equity and Social Justice Initiative, which seeks to incorporate equity and social justice into the fabric of the daily work of the County. Practical application of these equity planning strategies in King County Metro Transit planning, and service delivery includes:

- Formal assessment of routes based on boardings within designated census tracts with a high proportion of low-income and non-white households.
- Prioritization of services that connect centers that provide access to services and employment for households of all income levels, including “Transit Activity Centers,” such as Crossroads Mall in Bellevue, “Manufacturing Centers,” and “Regional Growth Centers,” such as Downtown Bellevue and Overlake.

Performance Management

The Metro Transit Strategic Plan identifies a number of strategies for performance management of the transit system, as follows:

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¹ To access King County Metro’s Strategic Plan for Public Transportation, visit: [http://metro.kingcounty.gov/planning/](http://metro.kingcounty.gov/planning/)
For more information on the King County Equity and Social Justice Initiative, see: [http://www.kingcounty.gov/exec/equity.aspx](http://www.kingcounty.gov/exec/equity.aspx)
“Service restructures are changes to multiple routes along a corridor or within an area, including serving new corridors, in a manner consistent with service design criteria found in this service guidelines document. Restructures may be prompted for a variety of reasons and in general are made to improve the efficiency and effectiveness of transit service or to reduce net operating costs.

- Under all circumstances, whether adding, reducing or maintaining service hours invested, service restructures shall have a goal to focus service frequency on the highest ridership/most productive segments of restructured services, to create convenient opportunities for transfer connections between services, and to match service capacity to ridership demand to improve productivity and cost-effectiveness of service.
- In managing the transit system, service restructures shall have a goal of increasing ridership.
- Under service reduction conditions, service restructures shall have an added goal of resulting in an overall net reduction of service hours invested.
- Under service addition conditions, service restructures shall have added goals of increasing service levels and ridership.
- When one or more key reasons trigger consideration of restructures, Metro specifically analyzes:
  - Impacts on current and future travel patterns served by similarly aligned transit services
  - Passenger capacity of the candidate primary route(s) relative to projected consolidated ridership
  - The cost of added service in the primary corridor to meet projected ridership demand relative to cost savings from reductions of other services

Restructures will be designed to reflect the following:

- Service levels should accommodate projected loads at no more than 80% of established loading guidelines.
- When transfers are required as a result of restructures, the resulting service will be designed for convenient transfers, and travel time penalties for transfers should be minimized.
- A maximum assumed station/stop access walking distance of 1/4 mile in corridors where service is not primarily oriented to limited-access roadways. Consideration for exceeding this goal may be given where the walking environment and pedestrian facilities network are pedestrian-supportive.

Key reasons that will trigger consideration of restructures include:

- Sound Transit or Metro service investments
  - Extension or service enhancements to Link light rail, Sounder commuter rail, and Regional Express bus services.
  - Expansion of Metro’s RapidRide network, investment of partner or grant resources, or other significant introductions of new Metro service.
- Services compete for the same riders
  - Locations where multiple transit services overlap or provide similar connections.
• Major transportation network changes
  – Major projects such as SR 520 construction and tolling and the Alaskan Way Viaduct replacement; the opening of new transit centers, park-and-rides, or transit priority pathways; or the closure of facilities like the South Park Bridge.

• Major development or land use changes
  – Construction of a large-scale development, new institutions such as colleges or medical centers, or significant changes in the overall development of an area.

When designing routes, the context of the entire transportation system—local and regional bus routes, RapidRide lines, Link light rail lines, Sounder commuter rail lines and other modes—should be taken into account. Transfers are also an important consideration.

“When Metro strives to make transfers easy as it develops a network of services. Network design should consider locations where transfer opportunities could be provided, and where provision of convenient transfers could improve the efficiency of the transit network. Where many transfers are expected to occur between services of different frequencies, timed transfers should be maintained to reduce customer wait times.”

Another important consideration is creating a network of complementary services.

“Routes should be designed to avoid competing for the same riders. Studies indicate that people are willing to walk one-quarter mile on average to access transit, so in general routes should be no closer than one-half mile. Services may overlap where urban and physical geography makes it necessary, where services in a common segment serve different destinations, or where routes converge to serve regional growth centers. Where services do overlap, they should be scheduled together, if possible, to provide effective service along the common routing.”

Redmond Transportation Master Plan (2013)

Redmond’s Transportation Master Plan (TMP) (2013) presents a vision for mobility in Redmond through the year 2030. The plan couples that vision with an incremental approach to achieve the vision in ever increasing intensity through the intervening years. The plan includes a full spectrum of mobility measures to monitor progress in achieving the vision for area mobility throughout the life of the plan. In many respects the Redmond TMP can serve as a template for success in terms of providing equitable access to high capacity transit throughout the Eastside.

Transit service impacts and is impacted by—every principle established for the Redmond TMP. It is at once a critical travel choice and an essential part of the community fabric. Without transit access to the high density employment centers in Redmond, auto traffic congestion would be more significant at peak times. Without transit access, Redmond residents who have chosen urban living with one, or no, private vehicle would soon find the community unattractive. Transit impacts the basic safety and maintenance of Redmond’s transportation system and is a very important asset in protecting and enhancing the natural environment. To fulfill the visionary principles of the plan, transit will need to play an ever-increasing role in meeting the mobility

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2 King County Metro Strategic Plan for Public Transportation (2011-2021), Service Guidelines
3 Ibid.
4 Ibid.
needs of Redmond residents, those who work (and play) in Redmond, and those for whom Redmond is a transportation portal to the rest of the region. According to the Redmond TMP:

“Realizing the City’s vision will require significant evolution of our transportation system. In Redmond, community values that support more human scale buildings, a green community and moderately sized roadways over wide streets pair with the economic market reality that increased urban vibrancy means more people, jobs and shopping coming together in a denser area. In Redmond those denser urban areas are Downtown and Overlake. Central to the Transportation Master Plan and critical to the success of Redmond’s two urban centers is the need to reduce per capita car travel to and within these areas. With continued growth the “level of service” experienced by drivers to and within the urban centers is expected to decrease somewhat from today’s levels while transportation options including light rail and other types of transit, bicycling and walking will become more competitive in terms of time and convenience.”

Of particular note in the Redmond TMP is the proclamation of a change in the downtown area for Redmond. The TMP recognizes that “Redmond’s Downtown is maturing into a local and regional destination rather than a district people just drive through.” This change is critical to understanding current and future demand for transit access in Redmond. More importantly for near term planning in the East Corridor, the growth and development of downtown Redmond and Redmond Town Center affect the demand for “interim” transit access to East Link at Overlake Village and Overlake Transit Center, to prepare for any future extension of the East Link line to Downtown Redmond and Southeast Redmond.

The Redmond TMP expands on the purposeful coordination of plans to concentrate growth and mixed-use development in Overlake and Downtown Redmond, the two neighborhoods destined to be served directly by high capacity transit in the near and long-term respectively:

“The City’s strategy of increasing the amount of housing in Downtown and Overlake will offer not only the opportunity to live in a vibrant, urban environment, but also the opportunity to own fewer cars per household and to drive less. Not everyone who lives in Downtown or Overlake will work there, and not everyone who works there will choose to live there, but many will make that choice. A vertical and horizontal mix of land uses, including shops, restaurants, entertainment and services in addition to housing and workplaces, will support an active, urban lifestyle for those who choose to take advantage of it. These districts also will become more important regional and local destinations, providing new opportunities for those living in Redmond’s surrounding neighborhoods [...] In addition, improving connections between surrounding neighborhoods and urban centers is also part of the transportation strategic approach.”

The quality of the overall transit experience and ridership levels greatly depends on whether accessing a transit line is comfortable, direct, and fast. Developing attractive options that support transit use will not only improve the transit experience but also extend the reach of the transit

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5 Condensed from Redmond Transportation Master Plan, 2013
6 Redmond Transportation Master Plan (August 2013), Introduction
7 Ibid.
8 Ibid.
network. A critical reason for enhancing connections to transit is that it encourages transit use for a variety of trip types. Providing world-class access to modes that support both inter-neighborhood and regional trips is a critical step in reinforcing the notion that transit is seamless.

The Transit Element of the Redmond TMP focuses on three key elements to support a shift from system focused mostly on commuter express transit services to “meet a broader range of travel needs throughout the day.” These include:

1. Support for the development of a core network of frequent transit service and a complementary network of supporting services;
2. Leveraging the mobility provided by transit investment by incorporating transit into the City’s planning processes to improve access to, and the speed and reliability of, transit; and
3. Identification of key priorities, strategies, and actions between now and 2030 that leverage new opportunities and the implementation and potential expansion of East Link.

The Transit System Development section of the Transit Element of the Redmond TMP specifies key transit connections and level of service standards to guide investments in transit service over time. Service standards for key local and regional connections are classified according to the service family standards established in the King County Metro service guidelines, including:

- **Very Frequent Service**: Every 15 minutes or better all day; 30 minutes or better at night (Link Light Rail and RapidRide fit this service standard).
- **Frequent service**: Every 15 minutes or better during peak periods (30 minutes or better during off-peak periods and at night)
- **Local service**: Every 30 minutes or better all day; every 30-60 minutes at night.

The suggested future transit network that depicts these concepts is presented in Figure 1-4. The Redmond TMP applies a phased approach to improving transit connectivity that is dividing into three time periods, pre-light rail, light rail to Overlake and light rail to downtown Redmond. Figure 1-4 shows the adopted plan goals for transit connectivity and levels of service at implementation in the middle phase, when light rail has reached Overlake.

Recognizing the City’s role in “facilitating bus transit speed and reliability, as well as improving access to bus and rail transit corridors and stops,” and the importance of access for pedestrians and bicyclists, the Transit Element of the Redmond TMP also establishes a set of “Transit Corridor Design Standards,” for key corridors, including:

- **High Demand Transit Modal Corridors**, such as SR-520 and major arterials: “These corridors are the highest priorities for service hour and infrastructure investments, creating service that is fast, frequent, reliable, and easy to get to, and are key candidates for higher cost investments, such as dedicated transit lanes. The transit service standard for these corridors is for one or more routes with a combined frequency of 15 minutes or better throughout the day operating in the corridor.”

- **Medium Demand Transit Modal Corridors**: “Investments should focus on improving access to adjacent housing and important services in order to maximize this function, and on lower cost speed and reliability improvements such as transit signal priority. The transit service standard for these corridors is for at least one current or future route with a service frequency of 30 minutes or better all day.”
Figure 1-4  Recommended Transit Network (Transit Level of Service Standards) to Light Rail at Overlake Village

Source: Redmond Transportation Master Plan
Bellevue Transit Master Plan (2013)

The Bellevue Transit Master Plan (TMP)(2013) is a 20-year look ahead at the system that will be required to meet Bellevue’s transit needs through 2030. The plan establishes short- and long-term policies, programs, and projects that help foster a high-quality transit system that is more effective at connecting residents, employees, and visitors in Bellevue with the places they want to go.

Transit Master Plan Project Principles

The plan envisions a fully integrated and user-friendly network of transit services for Bellevue that supports the city’s growth, economic vitality, and enhanced livability, and has developed the following set of project principles to direct future development.

1. Support planned growth and development in Bellevue with a bold transit vision that encourages long-term ridership growth.
2. Engage community stakeholders in setting the priorities for transit delivery.
3. Determine where and how transit investments can deliver the greatest degree of mobility and access possible for all populations.
4. Incorporate other transit-related efforts (both bus and light rail) underway in Bellevue and within the region.
5. Identify partnership opportunities to further extend transit service and infrastructure.
6. Develop measures of effectiveness to evaluate transit investments and to track plan progress.

Bus/Rail Integration

By providing the cross-lake market with high capacity transit services, implementation of East Link represents a transformational opportunity to rethink the current bus network in Bellevue.

The East Link Bus/Rail Integration Plan, created by Sound Transit and King County Metro staff in 2007, and then updated in 2010, serves as a “best guess” prediction of how the bus network will be operating in the future with East Link LRT. The primary emphasis of this future network will be to reduce/eliminate bus routes (e.g., Route 550) whose service will be replaced by East Link and to shift resources into routes that strengthen bus connectivity with the six LRT stations in Bellevue (South Bellevue, East Main, Bellevue Transit Center, Hospital Station, 120th Station, and 130th Station).

The bus network will continue to provide coverage for the broader reaches when East Link begins service. The travel demand model estimates that 136,000 average weekday boardings and alightings will take place on transit in Bellevue in 2030. Of these, an estimated 28,000 average weekday boardings and alightings will take place at the six light rail stations in Bellevue. Effective intermodal integration must be present at East Link stations to avoid unnecessary transfer wait times and ensure reliable connections.

Three funding scenarios were developed as part of the Bellevue Transit Master Plan—growing resources, stable funding, and reduced funding. According to the TMP, the 2030 scenarios all presume the opening of East Link light rail extending to its planned terminus at Overlake Transit Center (SR-520 at NE 40 St). East Link will operate frequencies of every 8 minutes during the
peak, every 10 minutes during the day, and every 15 minutes in the evening. The proposed long-
term networks are shown in Figure 1-5.

A detailed examination of every route proposed for various future transit networks is described in
the plan. Routes are grouped by time horizon, beginning with the long-term networks. Figure 1-6
provides an overview of the routes proposed as part of the long-term network. Route profiles
included in the TMP include the route’s purpose and description, turning movements and major
stops served, and estimated operating statistics, including service span, frequency, headways by
time of day, and daily and annualized platform and revenue hours allocated.
Figure 1-5  Bellevue Transit Master Plan: Long-Term Networks (2030)

Source: Bellevue Transit Master Plan
GROWING TRANSIT COMMUNITIES PARTNERSHIP
EAST CORRIDOR IMPLEMENTATION SUPPORT PROJECT—PHASE 2
TRANSIT INTEGRATION AND PARKING MANAGEMENT
Analysis and Recommendations

2030 | Stable Funding

Source: Bellevue Transit Master Plan
2030 | Reduced Funding

Source: Bellevue Transit Master Plan
### Figure 1-6  Bellevue Transit Master Plan Long-Term Network (2030)

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## Route Types and Descriptions

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*FX: Frequent Express; FR: Frequent Rapid; FL: Frequent Local; C: Coverage; PK: Peak-Only (Express & Local)

Source: Bellevue Transit Master Plan
TRAVELSHED ASSESSMENT

This section discusses the transit station access travel shed within the East Corridor. Transit patrons are typically willing to walk up to one quarter mile to reach local transit stops and up to one-half mile to reach frequent stops and stations, such as East Link or Rapid Ride. Outside of the area within one-half mile of each station, other types of connections are often necessary to provide equitable access to transit (patrons accessing light rail by bicycle often travel from up to two to three miles away if the right facilities are in place). This section provides maps showing the street network travel distance from each East Link and Rapid Ride Station in the East Corridor, as a basis for evaluating barriers and strategic opportunities for transit access (This analysis considers existing and planned street network elements. Note with the exception of two bicycle/pedestrian bridges over SR-520 that are planned for the vicinity of the Overlake Village and Overlake Transit Center Stations respectively, network distances shown in Figures 1-7 and 1-8 do not reflect connectivity by way of other facilities that are limited to non-motorized travelers).

These maps also help address the question of which service (Rapid Ride or East Link), and which particular station a resident of any given location on the maps would naturally be drawn to (if traveling by bus or by car) to access the regional transit system. For example, note that many of the Senior and affordable housing communities on the Eastside are located in close proximity to RapidRide, which provides a critical connection to Overlake, Downtown Redmond and Downtown Bellevue, with opportunities in the future to transfer from Rapid Ride to East Link at Hospital Station (or Downtown Bellevue/ Bellevue Transit Center), or the Overlake Transit Center.

Figure 1-7 displays the existing roadway network distance from each of the East Corridor stations. Figure 1-8 shows both the roadway network distance analysis and the location of affordable and Senior housing. From a transit and bicycle planning perspective, connections to the 120th and 130th Stations, in Bellevue and the Overlake Village Station in Redmond, will be especially important. Because few people currently reside in the immediate vicinity of either of these two East Link Stations, most boardings at each during the initial years of East Link operations will be made by people arriving by transit, car, or bicycle⁹. As the Link network expands and station area development accelerates, travel patterns and location decisions can be expected to shift and a larger share of boardings will originate in closer proximity to these stations, with walking becoming the primary mode of access for each. However, access for those who have trips origins or destinations beyond comfortable walking distance will continue to rely on transit, auto (multiple or single occupant), bicycle or shuttle-type services.

In planning for station access and development, Sound Transit and local jurisdictions must carefully consider the likely evolution of land uses and access demands at each station. Over the life of East Link, the predominant access modes will continue to shift, to varying degrees for each station. Experience from the San Francisco Bay Area, metropolitan Washington, DC, and the Vancouver, BC metro region reveals the flawed assumption that access patterns will remain constant for each station throughout its design life, leading to the need to revise station access programs and strategies and in some cases redesign and reconstruct stations well before the end of their design life.

⁹ Despite the fact that few people currently reside in the 120th, 130th, and Overlake Village Station areas, the areas are zoned to permit dense, mixed-use development that will attract new residents, businesses, employees and other visitors, in addition to Link commuters.
For example, the San Francisco Bay Area Rapid Transit District’s (BART) Daly City Station was originally conceived to primarily serve commuters accessing the station by park and ride and long-distance public transit. As the area has evolved, BART discovered that walk access and the addition of private shuttles have rendered the original station design and access strategy obsolete. While many customers continue to park and ride, or access the station via long distance public transit, nearly equal numbers now arrive on foot or on private shuttles. In fact, the highest volume private shuttle in the BART system (linking BART to California State University [CSU] San Francisco) serves this station location. BART is also faced with how to improve pedestrian access to the site, which is essentially an island surrounded by wide, high volume arterials.

These lessons underscore the importance of planning for adaptability in the design of stations, station area developments and circulation networks and station access programs.
Figure 1-7  Station Area Travelshed
Figure 1-8  Station Area Travel Shed (Zoom)
ORIGINS AND DESTINATIONS

It is important to understand likely origins and destinations for passengers in the East Corridor. Additional maps in this section provide insight into the projected operating conditions. Based on PSRC projections for 2025 population and employment density are shown in Figures 1-9 and 1-10. Figure 1-11 shows the projected combined population and employment densities for 2025. The highest population, employment, and dwelling unit densities are projected for areas near Overlake Village Station and Overlake Transit Center Station. Note that the PSRC population and employment projections shown on these maps may not fully account for potential growth and development in these areas. According to recently adopted changes to zoning and currently permitted plans for substantial commercial and residential growth and development in the Bel-Red Subarea of Bellevue in the vicinity of the 120th Ave NE and 130th Ave NE Stations and in Redmond’s Overlake Village area, the population and employment densities will likely be higher than those indicated on the maps.

Station area zoning districts are shown in Figures 1-12 and 1-13. Commercial land uses are most common near Hospital Station, Overlake Village Station, and Overlake Transit Center Station. The current land uses near 120th Station and 130th Station are mostly industrial. Senior and affordable housing locations are shown in Figure 1-14. As shown in the map, the current locations of many of these housing types are not within easy walking distance of East Corridor light rail stations, and providing access for these residents will be essential. Urban centers as defined by PSRC are depicted in Figure 1-15. Both the Overlake Village Station and Overlake Transit Center Station are located within the Redmond-Overlake Urban Center.
Figure 1-9 2025 Forecast Population Density

Note: PSRC population and employment projections shown on these maps may not fully account for potential growth and development in all areas. For example, as a result of implementation of the BelRed Subarea Plan, the City of Bellevue projects that census tracts in BelRed Subarea in the vicinity of the 120th Station and the 130th Station will be populated at a density of at least 5-10 residents per acre in 2025, although the area is shown with no residential population in the 2025 forecast.
PSRC population and employment projections shown on these maps may not fully account for potential growth and development in all areas. For example, the City of Bellevue estimates that employment density may be higher than shown here for the 120th and 130th Station Areas as a result of implementation of the BelRed Subarea Plan.
Figure 1-11  2025 Forecast Population and Employment Density

Note: Forecasts displayed in this map are derived from PSRC Land Use targets and represent a regional development pattern consistent with what local jurisdictions are planning for under the first set of VISION 2040 aligned local growth targets.

Data Sources: PSRC, King County GIS Department

PSRC population and employment projections shown on these maps may not fully account for potential growth and development in these areas.
Figure 1-12  Station Area Zoning

Legend:
- East Link Stations
- East Link Light Rail (Opens 2023)
- East Link Light Rail (Unfunded)
- Rapid Ride B Stops (as of 2013)
- Rapid Ride B (as of 2013)
- Local Bus Routes (as of 2013)

Land Use:
- Single-Family Residential
- Multi-Family Residential
- Commercial
- Office
- Mixed-Use Commercial/Residential
- Institutional
- Industrial
- Overlake Mixed-Use
- Special Area Residential
- Design District
- Park, Recreation, or Preserve

Data Sources: PSRC, King County GIS Department
Figure 1-13  Station Area Zoning (Zoom)

Legend
- East Link Stations
- East Link Light Rail (Opens 2023)
- East Link Light Rail (Unfunded)
- Rapid Ride B Stops (as of 2013)
- Rapid Ride B (as of 2013)
- Local Bus Routes (as of 2013)
- Planned Streets

Land Use
- Single-Family Residential
- Multi-Family Residential
- Commercial
- Office
- Mixed-Use Commercial/Residential
- Institutional
- Industrial
- Overlake Mixed-Use
- Special Area Residential
- Design District
- Park, Recreation, or Preserve

Data Sources: PSRC, King County GIS Department
Figure 1-14  East Corridor Senior and Affordable Housing

Legend
- Senior Housing
- Affordable Housing
- East Link Stations
- East Link Light Rail (Opens 2023)
- East Link Light Rail (Unfunded)
- Rapid Ride B Stops (as of 2013)
- Rapid Ride B (as of 2013)
- Local Bus Routes (as of 2013)

Note: “Affordable” housing is affordable to households earning no more than 70% of Area Median Income (AMI).

Data Sources: PSRC, King County GIS Department
LOCAL TRANSIT INTEGRATION

The Cities of Bellevue and Redmond completed in 2013 visioning exercises to address the future of transit services in the East Corridor. These documents provide guiding principles for the implementation of local transit to meet the future needs of East Link Light Rail and the RapidRide B-Line. The design and quality of bus/rail connections at East Link and RapidRide Stations provide the potential to have a significant influence on overall transit use in Bellevue and Redmond. The City of Bellevue identified providing transit connecting transit services as a best practice in the “Bellevue Light Rail Best Practices” report completed in 2008. Redmond’s TMP is a template for success in terms of providing equitable access to high capacity transit features throughout the East Corridor. The Redmond TMP identifies improving connections between surrounding neighborhoods and urban centers as a part of the strategic transportation approach. Reducing automobile travel in the Overlake area is central to this approach.

Transportation options, including light rail and other types of transit, should seek to be competitive in terms of time and convenience for passengers. To gain maximum efficiency, transfers must be seamless and coordinated particularly considering the relative brevity of many Eastside resident’s trips. If transfers consume too much time, in particular as a percentage of total travel time on short tips, transit becomes less competitive. Convenient transfers from Link and RapidRide Stations to the local bus network can effectively extend the reach of the regional transit system by providing the crucial first/last-mile connection to the trip origin or ultimate destination. At all stations—particularly at 130th Street Station and at Overlake Village—shuttle services and other alternatives to fixed route transit, public and private, may prove to be viable options to connect residents living in the low-density, residential environment to light rail stations.

Challenges

Providing first/last-mile solutions for East Link and RapidRide passengers will help to enhance overall mobility and solve barriers for travelers who could potentially take transit but whose starting point or final destination cannot be conveniently accessed from the nearest transit stop/station due to distance, terrain (hills, street patterns), or real or perceived safety issues (traffic, crime). Sound Transit projects high demand for parking at East Link Light Rail Stations, but a limited supply of parking will be available for commuters, with no dedicated parking at selected stations. Developing the market for non-auto access to East Link stations will be a key strategy for providing equitable access to Link and developing transit ridership in the corridor.

Bridging first/last-mile gaps and introducing alternative mobility strategies for transit passengers will help to provide safe, convenient, and affordable access to transit stations, and will encourage commuters who might otherwise drive to work to use transit and other alternative modes. Practical, user-friendly services are necessary to bridge the first mile/last mile gap to a) realize the full benefits from the ongoing investment in the transit network, b) meet goals for reductions in vehicle trips and greenhouse gas emissions, and c) develop a fully integrated multimodal transportation system. Generally, trips that are within \( \frac{1}{2} \) up to 3 miles from a high capacity transit station will fall to a mix of access modes including bicycling, local transit, intersecting high capacity transit, vanshare, passenger drop off and pick up, taxis, and shuttle type services that may be publically or privately funded.

There are a number of challenges that exist for providing local bus connections to East Link and RapidRide service. First, the current system has a number of gaps—most notably a lack of north-
south connections and local transit connections to the 120th Ave NE and to the 130th Avenue NE Station sites. These gaps are understandable today, because the street grid is disconnected and the Bel-Red area does not have a high concentration of residents or employees. With implementation of the Bel-Red Subarea Plan, including substantial residential and commercial growth and development of a new street grid in the area, it will be appropriate for transit service providers to shift from the current node-based service orientation to focus frequent service on primary transit corridors connecting to East Link and RapidRide. The Overlake Village area shares similar characteristics that will be resolved based on the implementation of adopted plans for enhancing the street systems and pedestrian access options. Although, comparatively, the Overlake Village area currently enjoys a much higher level of available transit service than the two station locations immediately to the west in Bellevue. While service overall is higher in Overlake Village, providing transit connections east and west, to Kirkland, and to the Idylwood neighborhood, will be important.

Even then the area flanking Bel-Red Road from about 140th to 152nd has a minimum of one mile access distance to high capacity transit. This underscores the importance of the transit network established in the Bellevue Transit Master Plan as it directly addresses this gap in coverage by calling for the addition of a frequent local route essentially bisecting the area. Similarly in the Redmond area, there is little incentive for more commuters to stop their single occupant commute east of Redmond and transition to public transportation. In the near-term, the next five years, and likely in the longer term, Metro and Sound Transit will be financially limited in their ability to add significant new transit services to integrate with the future Link and the present implementation of RapidRide.

There is also the chicken and egg conundrum of whether to lead development with transit service, which is typically non-productive, until density increases, or trail development once adequate density develops that can support quality and productive transit services. In both instances the financial considerations are significant factors. In the case of early implementation to defend higher cost per customer services based on a potential future and in the latter case a potentially productive transit service will have to compete for implementation dollars with other potentially productive services. The challenge is to find a balance point that today is all but missing from area transit policy. Although that absence is more a case of the financial plight of King County Metro over the past five years than a willful desire to not address integration with Link and RapidRide. The present Metro Strategic Plan leans toward integration on a lagging, incremental basis as areas develop and increase in density. Furthermore, integration with high capacity modes has no more priority than serving other emerging high density regional centers that are not served with high capacity transit. This issue within Metro’s plan will need to be addressed at some future time, but the challenges of first dealing with Metro’s financial issues, then addressing the difficult political problem of establishing priorities will continue to be detractors from fully addressing the importance of transit access and integration at high capacity transit stations.

In the interim shuttles and other alternatives to fixed route transit may prove to be a viable option for linking residents of selected low-density neighborhoods to East Link and RapidRide Stations and addressing any other missing links after Sound Transit and King County Metro restructure the Eastside transit network to incorporate East Link service. The existing fixed route transit network has a number of limitations. No existing routes directly serve the proposed locations at the 120th Station and 130th Station. These stations, in particular, as discussed above, also present challenges in terms of existing population, employment, and dwelling unit density. Viable shuttle and vanshare provision in these locations may be dependent on new markets, such as new employment and residential sites as well as retail areas. Low-density residential neighborhoods in
the surrounding areas also pose problems for connecting bus service, since high population density is necessary to support the reasonably high frequency bus service required to provide high quality access to East Link and RapidRide.

There are many challenges to establishing and maintaining successful shuttle services. Some of the challenges include:

- **Identifying and capturing new markets for shuttle services.** This could include locations where parking is in limited supply or highly priced, or other circumstances where driving is undesirable.

- **Coordinating with transit agencies where appropriate and where needed, finding a champion to take a lead role in organizing shuttle services and other alternatives to fixed route service.** Implementing a new shuttle system or other alternatives to enhance connectivity can be daunting, due to the need to identify customer needs and preferences, to develop a service by establishing an operating plan and negotiating funding arrangements, and to engage in ongoing communications with local agencies, transit providers and businesses and/or rider groups.

- **Forging partnerships between public agencies and private organizations.** This is especially critical when developing a funding strategy and ensuring longer term financial solvency.

- **Coordinating with and complementing fixed-route bus or rail connections.** Shuttles are most effective when transit operators are active partners in the provision of shuttle services.

- **Designing a shuttle service that incorporates new technology (such as Uber-like on-demand service), convenient connections, and customer amenities.**

- **Locating specific shuttle stops.** A distinctive shuttle stop sign will help customers know where to wait for the shuttle that is safe and convenient.

- **Coordinate shuttles to cover more employers; provide public access.** While private business shuttles can offer expanded opportunities to connect employees to light rail transit and to and from Eastside destinations, it is important to note that such shuttles are focused on their own employees’ interests. Also there are a variety of regional employment centers that may not be served by private shuttles. It will be essential to coordinate shuttle services to be sure that major employment sites that remain disconnected from the fixed-route transit network are provided shuttle access if possible (Even where routes are duplicative, private employer shuttle services do not negate the need for local public transportation services along high demand corridors).

- **Public access.** Where some or all funding for a shuttle service is provided by a public sector agency, private operators should be encouraged or required to make shuttles publicly accessible, perhaps for a fee, or to ORCA card-holders.

In the appropriate environment where transportation demand management programs successfully reshape travel habits, shuttles can provide an important adjunct for high capacity transit access. The Bay Area provides some insight into this proposition as just ten years ago there were very few, if any, formal or informal shuttle services providing access to BART stations. Today, there are more than 70 different privately funded shuttle services that offer access into various BART stations.
2 TRANSIT: BEST PRACTICES

This chapter provides an overview of selected best practices in the design and implementation of transit services that are complementary to and supportive of new high capacity transit lines, including both shuttle transit and feeder bus service. These practices are drawn from communities with lessons to offer the communities to be served by East Link light rail, from Vancouver, BC and Portland, OR, to Pasadena and the San Francisco Bay Area in California. Note that two of these case studies, the TransLink Evergreen Line Bus Integration Concept Plan (Vancouver, BC), and the Metro Gold Line Foothills Extension Bus Interface Plan, highlight an important shift from a commuter/express oriented service model toward provision of frequent, reliable, all-day transit connections in primary corridors. The agencies sponsoring these best practices are enhancing social equity by expanding public access to transit and by shifting resources to frequent all day services that especially benefit low-income travelers, including the working poor, who often work outside of conventional 9-5 hours and have little time or money to spare.

BEST PRACTICES: BUS INTEGRATION

Evergreen Line Bus Integration Concept Plan (Vancouver, BC)

The purpose of the Evergreen Line Bus Integration Concept Plan is to describe impacts to the transit network associated with the introduction of the Evergreen Line in Metro Vancouver, British Columbia. The Evergreen Line is a grade-separated automated light rapid transit line that is planned to connect the Coquitlam Urban Centre to the existing SkyTrain network at Lougheed Station (planned opening in 2016).

The Evergreen Line Bus Integration Concept Plan describes changes to the existing transit network, new routes to currently unserved areas, discontinued services, and changes to the routing and capacity of existing services. These changes are designed to connect customers to Evergreen Line stations, minimize redundancy in the network, and provide an appropriate service level to accommodate future ridership. Also included is information to help determine capacity requirements at new and existing transit exchanges along the Evergreen Line as a result of increased frequencies and revised routings.

The changes proposed in this plan were developed according to the following principles:

- Connect Neighborhoods and Transit Services to the Evergreen Line. Local service will be designed to provide convenient connections to Evergreen Line stations. This will be achieved by creating new services and adjusting the routes of existing services.
Serve Local Trips. Local transit services must continue to provide convenient service for local trips (i.e., those trips not involving a transfer to or from the Evergreen Line).

Avoid Duplication. Where existing routes serve a similar market to the Evergreen Line, they will be discontinued.

Create a Legible System. Where the street network and distribution of land uses allow, the network will be designed so that routes make logical connections and are as linear as possible. Circuitous and overlapping routes will be avoided.

Match Service Levels with Customer Demand. Service frequencies on feeder bus routes will be established according to estimates of ridership demand based on Evergreen Line ridership modeling, and adjusted as required to accommodate actual ridership demand.

In addition to changes to the transit network, route capacities, and facility requirements designed to support the Evergreen Line, the Evergreen Line Bus Integration Plan outlines a number of other significant impacts or findings associated with this project. The main findings include the following:

Conversion of Community Shuttles to Conventional Bus. To accommodate projected ridership demand, most Community Shuttle routes in the Northeast Sector will likely require conversion to standard buses. This will require more detailed planning and consultation as Community Shuttle services in the Northeast Sector operate through neighborhoods and over a street network that may be challenging for a conventional bus. An Area Transit Plan will be required to address these issues in greater detail.

Impacts to Facility Requirements at Key Transit Centers. Based on increased service levels and passenger capacities required to meet projected ridership, two current facilities will need to be expanded and/or re-designed. Both Port Moody Station and Coquitlam Station will likely need new planning, design, and construction to accommodate increased requirements for passenger pick-up and drop-off positions as well as bus layover spaces. New construction at these facilities would present an opportunity to implement contemporary transfer center design, where passenger facilities (i.e., pick up and drop off areas) are separated from bus layover areas, and are better integrated with surrounding neighborhoods and pedestrian-oriented land uses.

Impacts of Millennium Line/Evergreen Line Operating Scenarios on Network and Facility Planning. There are two main operating scenarios proposed for the Millennium Line—truncation at Lougheed Station or operation through Lougheed to VCC-Clarke. If the Millennium Line is truncated at Lougheed Station, space requirements for transit vehicles will increase significantly at that station. Additionally, passengers who currently travel through Lougheed Station will be forced to transfer—an inconvenience for current customers, particularly those who access the Millennium Line at Braid Station since these customers would travel on the line for only a single stop before being required to transfer. To avoid forcing this additional transfer in a Millennium Line truncation scenario, routes that currently terminate at Braid Station would be rerouted to Lougheed. This would require more space at Lougheed than is currently available, and result in underutilization of available space at Braid Station.

Application for East Corridor

The principles of bus integration outlined as part of the Evergreen Line Bus Integration Concept Plan provide a useful precedent for bus/rail integration upon the opening of East Link and with potential enhancements to RapidRide service. Local service should provide convenient
connections through implementation of new services and adjusting existing routes. The number of transfers required to reach East Link and RapidRide stations should be minimized. Routes currently serving the East Link corridor should be considered for discontinuation, with resources reallocated to providing connections to light rail stations and serving the existing network. Finally, service frequencies on connecting bus routes can be established according to demand based on East Link and RapidRide ridership projections and adjusted as necessary to accommodate actual ridership demand.

**BART Daly City Station Area Improvement Plan (Daly City, CA)**

The Daly City Bay Area Rapid Transit (BART) Station Access Improvement Plan (SAIP) is a comprehensive analysis of the Daly City BART Station’s shortcomings and access challenges and opportunities for improvement. The SAIP aims to improve station layout, transit operations, bicycle and pedestrian access, safety, and the patron experience.

The Daly City BART Station is one of the most frequented intermodal centers due to its robust BART, Muni, SamTrans and shuttle service, including the San Francisco State Shuttle. In addition, it is the northernmost BART Station with large park-and-ride facilities on the San Francisco peninsula. The easy auto access provided by its proximity to I-280 and surrounding arterial streets and attractive transit service help create a popular station, buzzing with activity.

The SAIP recommends short-term, mid-term, and long-term alternatives to accommodate a substantial increase in transit service. These transit alternatives range in ambition, and an extensive analysis of the tradeoffs, benefits, and costs inherent in each approach is included. The potential for transit-oriented development on the site of the existing surface parking lot at the intersection of De Long Street and John Daly Boulevard is also discussed.

In 2020, transit service is predicted to increase by almost 50% to 88 peak hour buses from 60 peak hour buses in 2011. Short-term solutions center on easy to implement, stopgap measures, while mid-term solutions are designed to meet capacity needs in 2020. Long-term solutions look even further ahead. As transit service increases by almost 50% in the mid-term (2017-2020), implementing various alternatives to accommodate transit service increases and improve station access is essential.

Four short-term alternatives were analyzed. They all assign curb space needs based on the operating frequencies and dwell times of existing and short-term transit services. In the short term, these alternatives assume that layover—which can add about eight to ten minutes to the dwell time and reduce the capacity of bus bays—will continue to occur off-site on neighborhood streets for those lines that terminate at Daly City BART Station. The four alternatives are:

- **Alternative A:** Existing curb space within the terminal is utilized more efficiently by having more routes share the same bus bay.
- **Alternative B:** Relocates some bus service to John Daly Boulevard immediately east of the East Station Road.
Alternative C: Relocates some bus and shuttle service to Colma BART Station.
Alternative D: Dynamic bus bay sharing would direct buses to a bay upon arrival at the terminal, depending on how many and which other buses are currently at the station.

Of the many alternatives proposed, four mid-term alternatives were selected for further analysis. Three of the four mid-term alternatives require significant reconfiguration of the Daly City BART site and are intended to be implemented in the next five to ten years, depending on funding availability and implementation of the expanded bus service. The fourth mid-term alternative investigates a scenario in which no physical expansion is done and instead Transportation System Management (TSM) strategies are utilized.

The alternatives were developed to accommodate planned transit service, improve multimodal access, improve patron safety, and enhance the overall patron experience. To measure how effective the alternatives would be at meeting these project goals, alternatives were evaluated on the following metrics:

- Bus operations (ease of access and egress and layover locations)
- Transit patron convenience (circulation, convenience, and aesthetics)
- Engineering feasibility
- Costs (capital, bus operations, and facility maintenance costs)
- Neighborhood impacts
- Parking impacts
- Transit-oriented development opportunities
- Traffic impacts

**Application for East Corridor**

In station area design, consider the location and impacts of a large number of buses providing service to East Link and RapidRide Stations. Innovative bus bay design should be considered to accommodate the appropriate number of buses serving the station. Additionally, the number of buses serving the station in future years may increase as transit-oriented development becomes more prominent. Details related to bus operations including vehicle dwell time at stations, layover needs, transit patron convenience, and neighborhood impacts should also be evaluated.
Metro Gold Line Foothill Extension Bus Interface Plan (Pasadena, CA)

The Gold Line light rail is currently being expanded from Pasadena to Azusa in the Los Angeles metropolitan area. The Metro Gold Line Foothill Extension, scheduled to begin operation in 2015, adds six stations to the light rail corridor and will provide enhanced connections to downtown Los Angeles for residents of San Gabriel and Pomona Valley. A Bus Interface Plan was developed to identify ways to best integrate existing bus services with the Pasadena to Azusa Metro Gold Line Foothill Extension and to develop concept plans for bus, pedestrian, and bicycle interface facilities at the six new stations.

It is essential for the new extension to be successfully integrated with other modes to benefit current transit users and to attract new riders. The bus and rail systems must be well-coordinated and supportive of each other, including providing safe and convenient transfers for passengers transferring between light rail stations and nearby bus stop locations. The Bus Interface Plan also recognizes the need to reduce bus services that might otherwise be duplicative of the Gold Line to maximize benefits to transit users. The plan recognizes a need to consider bus routings and schedules in the Pasadena-to-Azusa corridor to identify ways of best serving both bus and rail transit users while potentially reducing bus operating costs. The Bus Interface Plan also develops combinations of bus operational and physical improvements that enhance station connectivity and pedestrian safety for Gold Line riders who access the stations by bus, bicycles, or on foot, while making the solutions cost effective and complementary to station area development plans. Intergovernmental coordination between the Metro Gold Line Foothill Extension Construction Authority, the corridor cities, and transit providers is also necessary.

The six new stations will be served by a combination of Metro, Foothill Transit, City of Duarte, and City of Glendora fixed-route bus services, as well as by paratransit services operated by each of the cities and the regional operators. The Bus Interface Plan assumes several operational changes to the existing transit system:

- Longer bus trips currently occurring in the San Gabriel Valley will be converted into shorter feeder trips to the most proximate Gold Line stations. These and other short distance trips will become the primary focus of the bus system.
- Duplicative express services to downtown Los Angeles and the Westlake District are proposed to be curtailed or discontinued.
- Bus routes currently serving cities between Glendora and Montclair are proposed to be selectively truncated or diverted to the Azusa-Citrus Station.

According to the Bus Interface Plan, the proposed service plan is shaped by several key design elements:
Establish new sub-regional transit hubs at the Arcadia and Azusa-Citrus Stations. Transit customers would benefit from physical enhancements such as covered passenger waiting areas, real-time schedule information and enhanced customer information. Transit operations would benefit from the availability of secure restrooms for bus operators at these locations. Ancillary transportation facilities such as taxi stands, auto pick up zones, and parking also should be considered within space constraints.

Provide pass-by service at the Monrovia, Duarte, Irwindale, and Alameda Stations with primarily on-street bus stops and minor restructuring of nearby routes to minimize walking distances and physical barriers between station platforms and bus stops. Ideally customers should have a line-of-sight visual connection between buses and the boarding platform. Transit operations would benefit from physical enhancements such as bus turnouts, wide sidewalks, and designated bus stops. Customers would benefit from shelters, street furniture, real-time schedule information, and passive route and timetable displays.

Restructure bus routes running parallel to the Gold Line Extension to operate one-way trips within a range of 38 to 52 minutes and on optimized schedule cycles of either 90 or 120 minutes. This will facilitate reliable operating schedules as well as coordinated bus-train arrival and departure times at a primary transfer point. Foothill Transit Routes 187, 494, and 690 are examples of existing parallel routes for which significant changes are proposed.

Adjust bus routes intersecting the Gold Line as necessary to minimize on board bus travel times required for transit riders to access the nearest rail station that is geographically consistent with prevailing travel directions. Provide direct linkages between the Gold Line, the Metrolink San Bernardino Line, and the El Monte Busway when feasible with these routes.

Improve service frequencies on top-performing routes within fiscal limitations. Ideally buses should meet every peak direction train contingent on funding availability. For cost estimation purposes, targeted bus service frequencies of 15 minutes on weekdays and 30 minutes on weeknights and weekends are assumed when the Gold Line Extension opens in 2014.

Coordinate peak direction bus and train arrivals and departures to minimize transfer wait times.

Application for East Corridor

Duplicative service along the East Link Light Rail corridor can be re-allocated to connecting bus lines that will maximize benefit to transit users accessing Link stations. Where possible, local bus routes serving East Link and RapidRide stations should have improved frequencies, and wait times for transferring passengers should be minimized. Additionally, all enhancements, modifications, and changes to the existing transportation network should be a joint effort among transit agencies, local jurisdictions, and regional planning entities.

Ideally, transferring passengers should have a line-of-sight visual connection between buses and the boarding platform for Link or RapidRide bus to which they are transferring. Transit operations could benefit from physical enhancements such as bus turnouts, wide sidewalks, and designated bus stops. Customers could benefit from shelters, street furniture, real-time schedule information, and passive route and timetable displays.
Utah Transit Authority FrontRunner Commuter Rail (Salt Lake City, UT)

The Utah Transit Authority (UTA) recently opened the FrontRunner commuter rail that provides service between Salt Lake City and Provo. Implementation of the rail service included a number of bus service modifications, including eliminating all express buses between Utah and Salt Lake counties and creating or altering local routes to take riders to FrontRunner instead. These modifications have facilitated a 17% increase in local service circulating around Utah County communities.

Application for East Corridor

Overlapping and redundant bus service should be minimized along the East Link corridor (note Metro already accomplished this when RapidRide B was implemented), and, in turn, bus service should be enhanced to provide improved local circulation and station access.

BEST PRACTICES: SHUTTLES

What is a shuttle? A shuttle is a smaller scale transit service that may be publically or privately operated. The shuttle is typically built for a special purpose. Most often the purpose is to connect a transit hub, a place with many transit connections available, to a location, or small group of locations, less than 3 to 5 miles from the transit hub. These locations may be employment sites, education sites, residential sites, industrial parks and other places where public transit may not provide fast, direct connections. The hubs are typically high capacity transit stations that also have a high level of bus service serving a number of regional destinations.

A successful shuttle may increase overall transit ridership, reduce reliance on the automobile, decrease traffic congestion, and reduce parking demands. Shuttle services can be used to “collect” passengers from lower density residential neighborhoods to a central transit stop, or provide direct transfers from regional transit stops to employment or retail centers that are not considered a reasonable distance or path to walk.

Shuttles are usually free of charge or have a nominal fare. Sometimes employers or other sponsors offer discounted monthly passes on public transit services and/or parking cash-out to employees or other constituents which also covers the shuttle fares. Free fares are a major incentive to encourage shuttle usage. Community input and support are necessary to form a successful shuttle service. This is important not only for promotional purposes and attracting riders (making the shuttle an integral part of the community), but also for potential funding prospects.

Private/institutional shuttle services have gained enormous popularity in recent years. They serve as connectors to and from the regional transit system with employers or institutions, and can also provide important neighborhood circulation. Shuttles provide a service that is finely tailored to local needs. Some of the most successful shuttles are privately funded, or funded through...
public/private partnerships. Shuttle operations usually fall under three main categories or combinations thereof: 1) city supported and operated; 2) transit agency operated; and 3) employer operated.

There are several types of shuttle services that can be used to help fill first/last mile gaps. Some examples include:

- **Circulating shuttles**—typically carry passengers for short trips along busy corridors, including business districts, employment and education centers, and recreation areas. Circulating shuttles may connect major activity centers, such as a transit station and a commercial or employment center.

- **Jitney services**—privately operated transit services or jitneys typically operate along busy corridors or major thoroughfares. Riders are usually charged a modest fare. In developing countries, these are often a primary transit service. In North America they can augment conventional public transit.

- **Mobility-to-Work**—Shuttle programs provide special reverse-commute services between low-income neighborhoods and suburban employment centers. These services may be operated by transit agencies, social service agencies, or private contractors funded through government grants.

### Emery Go-Round (Emeryville, CA)

The Emery Go-Round is a model shuttle service providing a connection between the MacArthur BART station in Oakland and major employment and retail centers in Emeryville, CA. The Emery Go-Round is free of charge and available to the general public. Service was initially administered by the City of Emeryville and was paid for through a public/private partnership. The shuttle evolved over the years and is now administered by the Emeryville Transportation Management Association (TMA), a non-profit organization whose purpose is to increase access and mobility to and from Emeryville businesses. The TMA and the shuttle service is currently funded through a property-based business improvement district (PBID), with all commercial and industrial property owners in the City paying a fee to support the TMA and shuttle services.

The Emery Go-Round provides service throughout Emeryville, with stops at the Emeryville Amtrak Station, Bay Street Center, and major employers such as Pixar and Novartis. The MacArthur BART Station in Oakland is a key transfer point for connections to regional transit. Approximately 80% of trips begin or end at the BART Station. The service schedule has expanded its hours of operation and frequency has increased in the past several years. Weekday service runs from 5:45 a.m. to 10 p.m., Saturday service is provided from 9:30 a.m. to 9:30 p.m., and Sunday service is available from 10:30 a.m. to 6 p.m. Headways range from 12 minutes during weekday peak hours to 45 minutes on weekends. Real-time arrival information for all routes is provided by NextBus. Riders can get
arrival times either online or by calling a phone number and entering a code for a particular bus stop.

During the peak hours, a majority of passengers are going to or from work. Mid-day travel still carries a significant percentage of commuters, but half of the passengers have other trip purposes including shopping and school. Most passengers who use the shuttle during the peak hours use it at least once a week, with many using it daily. Mid-day travelers do not use it quite as frequently, but most still are frequent passengers. The number of routes has increased and ridership has grown significantly in the 13 years of operation. In 2003, the service carried 775,392 passengers. In the 2009 calendar year, the service carried 1.3 million passengers.

Application for East Corridor
Shuttle implementation could start small, and may include a wide spectrum of potential participants in service planning and development process. Potential riders provide input about their needs, and shuttle services can be planned accordingly. A strong customer focus will increase the likelihood of providing a successful shuttle service. Additionally, rider trip purposes can be evaluated, and appropriate frequencies implemented to meet local demand.

Rancho CordoVan, Rancho Cordova, CA
The Rancho CordoVan shuttle service began operating on June 15, 2009 to serve residents of Rancho Cordova, CA (Sacramento Metro Area) and employees traveling along the Zinfandel Corridor to the Zinfandel Plaza Light Rail station. The City of Rancho Cordova has contracted with Sacramento Regional Transit District (Regional Transit) to operate the shuttle. The shuttle was originally funded through a combination of a 3-year Congestion Mitigation and Air Quality (CMAQ) demonstration grant, and through special benefit assessments (e.g., property tax) paid by residents and some businesses in the service area. The CMAQ grant expired and the City continues to fund the service through the special benefit assessment.

The service helps employees in Rancho Cordova’s business community and residents of two neighborhoods gain access to light rail service. Even though light rail stations can be as close as a 10-15 minute walk, most residents must cross a dangerous overpass (over Highway 50) to reach the station. The service complements and supplements light rail service and serves the city’s business district.

The Rancho CordoVan operates on weekdays throughout the city’s business district from 6 a.m. to 9:30 a.m., and from 4 p.m. to 7 p.m. Buses are scheduled to run every 15 minutes, leaving the light rail station close to the quarter hour. There are twelve stops located along Zinfandel Dr., White Rock Rd., Prospect Park Dr., Baroque Dr., and Quality Dr. in a large loop around the employment center of Rancho Cordova. Passengers can board by showing a valid Regional Transit transfer, daily or monthly pass. The basic fare is 50 cents, but seniors, students and people with disabilities can ride for 25 cents. All vans are equipped with wheelchair lifts and drivers are trained to help people with disabilities.

The target markets are employees and residents of two neighborhoods. Businesses along the route include Electronic Data Systems, Progressive Insurance, Bank of America, Pearson School Systems, Sprint and McKesson Health Solutions, among others. The shuttle has a set route and is open to the public. It carries on average 100 passengers per day, with 8.7 passengers per revenue hour.
Application for East Corridor

In times of transition awaiting the development of acceptable pedestrian access to stations, pedestrian access to East Link and RapidRide stations may be provided with shuttle service to serving local residents and large employers in the area. Providing shuttle services during peak hours only may prove appropriate for the demand level. Ideally, frequency and departure and arrival of shuttle services would correspond to East Link and RapidRide service frequencies to minimize wait times for passengers.

Oakland Broadway Shuttle (Oakland, CA)

The City of Oakland Broadway Shuttle is a free and green transit service linking Jack London Square, Old Oakland, Chinatown, City Center, Uptown and Lake Merritt along the Broadway corridor from Embarcadero to Grand Avenue. The Oakland Broadway Shuttle consists of one shuttle route designed to serve shoppers and workers and is free to all passengers. The primary goal of the service is to connect Jack London Square with downtown Oakland. Jack London Square is located about ten blocks south of the center of downtown. It is further separated from downtown by Interstate 880, midway between Jack London Square and downtown. The shuttle allows people working, staying in hotels or attending conferences downtown to access the restaurants and shops at Jack London Square. The vehicles also provide transportation from parking garages to destinations in the downtown area, helping to mitigate the effects of a limited supply of parking.

The Oakland Broadway Shuttle (aka, the “B” or the “Free B”) supplements existing AC Transit services and serves as a “last mile” link from 19th and 12th Street BART to Jack London Square. The Shuttle operates on a fixed route from 7 a.m. to 7 p.m. with headways ranging between 10-15 minutes. Since shuttle inception in August of 2010, ridership has been trending upwards. Daily ridership in August started around 1,300; by October, the shuttle had an average of 1,919 daily passengers, according to the most recent data.

The “B” is the result of a robust public-private partnership. The Broadway Shuttle is being funded through a two-year $1 million grant from the Bay Area Air Quality Management District and an alliance of public and private sector sponsors. These include the Oakland Redevelopment Agency, the developers of Jack London Square, Downtown Oakland Association, Lake Merritt-Uptown Association, The Uptown Apartments and the Water Emergency Transportation Authority (WETA). The buses themselves serve as a marketing tool because they are aesthetically pleasing and distinctive. The buses are wrapped in a bright kiwi-green color with a distinctive “B” logo. Advertising for the shuttles has been done mainly by word-of-mouth and the kiwi-green shuttles themselves.

Application for East Corridor

Consider the potential of shuttle service to be used as a tool for economic development. Business owners want a vibrant downtown for their customers and employees and appreciate convenient transit that links their offices to the area’s destinations and attractions. However, coordinating among private providers could be a potential hurdle. When implementing shuttle service, planners should act quickly to keep momentum high. Finally, logo design and branding are important considerations—buses should be distinctive and visually appealing.
**Caltrain Shuttle Program (San Francisco Bay, CA)**

Caltrain is a 75-mile rail service connecting San Francisco near the Giants’ Ballpark to Gilroy in Santa Clara County, with 32 stops in between including San Jose and Palo Alto. Caltrain offers an extensive shuttle program throughout San Mateo and Santa Clara Counties. The goal of the program is to connect employment locations to Caltrain, enabling access to jobs that are too distant from the station for a convenient walk. Employer shuttles are funded by the Bay Area Air Quality Management District Transportation Fund for Clean Air, the Peninsula Corridor Joint Powers Board, the Transportation Authority and participating employers. Most shuttles are free and open to the public.

The shuttle program has proven to be a major contributor to Caltrain’s commuter rail ridership growth over the past few years. One of the shuttle programs run by Caltrain is the Burlingame Shuttle. The Burlingame Shuttle bus program links the city’s major shopping and employment areas with the Millbrae Intermodal Station (Caltrain/BART). Three free shuttles serve the City of Burlingame, all managed by the Peninsula Traffic Congestion Relief Alliance, a local TDM agency.

1. **The Burlingame Bayside Area Shuttle** carries commuters from the Millbrae Intermodal Station to Burlingame businesses during the weekday morning and evening commute hours.
2. **The North Burlingame Shuttle** began July 1, 2003 and connects the Millbrae Intermodal Station with the Peninsula Medical Center and Sisters of Mercy educational facilities.
3. **The Burlingame Trolley** runs seven days a week from noon to 9:45 p.m. with a break during the 3 o’clock hour, and serves Burlingame shopping areas and Airport Hotels. On Friday, Saturday, and holidays, the service continues with extended evening hours until 11:15 p.m.

**Application for East Corridor**

Shuttle implementation should include an examination of trip purposes and commute times. Extended hours of operation on Friday, Saturday, and holidays might be appropriate.

**Forest Heights EcoShuttle (Portland, OR)**

Forest Heights is a community in northwestern Portland, OR. In its current state, Forest Heights occupies 601 acres and consists of 1126 single family home lots, 676 town home and condominium units, 160 apartments, and a small retail center. The Forest Heights Homeowners Association (FHHOA) manages 215 acres of common area, including six miles of trails, a park and a playground; provides extensive landscaping; and maintains 11 entrance monuments.

Forest Heights operates a private shuttle bus service from Monday to Friday during peak commuting hours. The shuttle transports Forest Heights residents to the Sunset Transit Station where they can then board Portland TriMet’s MAX Light Rail trains heading east to Portland or west to Hillsboro. Passengers can also board buses to reach destinations north or south of Sunset.

**Application East Corridor**

Shuttles implemented by local homeowners associations may prove to be a valuable tool for linking local residents to Link and RapidRide stations. Shuttle services could operate during the times that most benefit residents, such as peak commute hours.
Shuttle Service Costs and Financing

As seen from the case studies there are a wide variety of financing mechanisms and costs for Shuttle services depending on the objectives and the specific circumstances in which the shuttle is established. Most often shuttles are provided with smaller vehicles that one might experience in a hotel or airport shuttle. Often shuttles are operated by private transportation providers who recover the capital costs of the vehicle as well as the operating cost through a “unit of service” contract with some entity which may be a city, a TMA, a specific employer, a developer, a homeowners association, a transit agency, a county, or a retailer. Most often fares are not a significant portion of the financing plan and are most often used as a method of access control. Sometimes the vehicles are acquired as the result of a state or federal grant and the replacement cost is recovered as part of the operation.

Typical costs for a shuttle will range from $50 to $80 per revenue hour, depending on a number of factors including fuel costs and local labor rates. The total annual cost of a shuttle will be a combination of the per hour cost and the service provided. The Rancho Cordovan, for example operates two routes with two buses. One route operates every 15 minutes, the other route every 45 minutes. The annual cost to operate the service is about $270,000 per year or about $8.00 per passenger with the current ridership of about 34,000 boardings per year.

The Emery Go-Round is a much larger operation with three routes operating at a high level of service and ridership. Precise costs are difficult to determine as the costs for providing the service are a combination of materials and facilities provided by the TMA coupled with an operational contract with a private provider. But it appears the total annual costs are in the range of $1.2 to $1.5 million per year, or about $1.00 per ride at current ridership level of 1.3 million boardings per year.

The point of this section is not to establish a precise cost for a shuttle service, but to provide some indication of the costs involved relative to the service and the ridership.
3 TRANSIT: CONCEPTUAL RECOMMENDATIONS

This chapter provides high-level recommendations for the integration of local public transportation services with existing and planned high capacity transit services in the East Corridor, including East Link and Rapid Ride. These conceptual recommendations are based on the analysis in Chapters 1 and 2, including an assessment of the travelshed for East Link and Rapid Ride stations, review of existing transit services, local policies, and land uses, and review of best practices in transit access and rail/bus integration planning from other regions.

BEST PRACTICES

The review of best practices for local bus integration with high capacity transit revealed several overarching themes:

- Local and regional bus services should provide convenient connections with East Link and RapidRide. Regardless of whether the bus service is new, existing, or restructured; transit agencies and cities must collaborate to ensure safe, convenient walking connections between bus stops and Link platforms/RapidRide stops to facilitate transfers.
- The number of transfers required to reach East Link and RapidRide stations should be minimized.
- Duplicative transit service along the East Corridor can be reallocated to provide more frequent connections to East Link and RapidRide stations.
- Where possible, routes serving East Link and RapidRide stations should have improved frequencies, and wait times for passengers transferring from bus service to East Link or RapidRide should be minimized.
- The passenger and space impacts of a large number of buses providing service to a singular location should be considered for each station. Generally speaking premium curb space (space that is adjacent and convenient to the station) should be reserved for passenger operations. Dwell time at these locations should be minimized and layover, where necessary, should not occur in this premium space but be moved to nearby locations that are not immediately adjacent to the station.
- Service modifications and changes to the existing transportation network should be a joint effort among transit agencies, local jurisdictions, and regional planning entities.

This review of best practices also provides practical strategies for planning, funding, implementing, and marketing shuttle services. As opposed to conventional fixed-route transit service, shuttles are typically single-purpose, or limited-purpose services that are appropriate for implementation to serve areas/markets where conventional, multi-purpose bus service is not...
viable due to lack of density, inadequate roadways, or other reasons. Guidelines that could be beneficial when developing shuttle services to East Link Light Rail stations are listed below:

- Connect major transit centers with employment centers.
- Provide frequent service.
- Have a free or nominal fare.
- Shuttles should operate on established and published routes with a set schedule.
- Consider the importance of marketing for gaining public support and recognition.
- Gain “buy-in” from the community and private sector. A strong customer focus will increase the likelihood of providing a successful shuttle service.
- Examine the needs of passengers to determine shuttle hours of operation.
- Curb space should be provided for shuttle passenger loading/unloading near station platforms, so that customers have direct line of sight connections between shuttle stops and the LRT platforms (However, local shuttle loading and layover zones and circulation routes should be designed in a way that minimizes conflict with local bus transit operations).
- Shuttle services are frequently implemented with initial funding from one-time grants or budget allocations. If the service is clearly meeting a need, new sources of funding can be identified or developed to support on-going operations.

OVERARCHING PRINCIPLES

This section provides an overview of the planning principles employed in developing conceptual recommendations for integration of local transit services with high capacity transit in the East Corridor.

People will connect to high capacity transit services, like East Link and RapidRide, using a number of travel modes—on foot, on bicycle, in buses, in shuttles, in high-occupancy vehicles, and in single occupant vehicles. In most cases, this is the order of priority these modes should take in station and street design to give the largest number of people access to high capacity transit, to provide equity, safety and efficiency in station access and transfer activity.

Stations should cater to multi-modal passengers who will demand that transfers be effortless. Buses or shuttles that terminate or originate at an East Link or RapidRide Station should be scheduled to meet every light rail train or RapidRide bus, if possible. Schedules should provide overlapping arrival and departure times, and real-time vehicle arrival and departure information should be provided on East Link station platforms as they are at RapidRide stops and stations. Ideally, transit operators should provide a single-payment fare structure so that passengers are not required to purchase a second ticket at the transfer station.

Well-located bus stops will minimize walking distances to station platforms and avoid the need to cross roadways, particularly busy arterials. Where a highway needs to be crossed to facilitate transfers, bus stops should be located adjacent to marked crosswalks. Passengers should not have to cross more than one major roadway to transfer between modes. Minimizing distances between bus stops also facilitates bus-to-bus transfers and simplifies bus-to-light rail transfers. Transit stops should be immediately visible upon exiting the fare gates, to the extent possible. Wayfinding and clear signage can help direct people to stops; and to paths for other modes of travel. Bus stops should not be located where they will block crosswalks, obstruct traffic signals, or be obscured from motorists, bicyclists, and pedestrians.

Sound Transit should design East Link stations in close coordination with King County Metro to ensure adequate bus facilities that support convenient intermodal connections and bus operations. This includes planning and design for a sufficient number of bus bays and curb space
to meet peak demand and expected future growth. Where infrequent services mean pulse scheduling is required, with all buses present to load and unload simultaneously, this should be accommodated. However, bays can be shared between different routes and operators, including paratransit vehicles, in order to minimize the amount of space needed.

Bus stops should be located on-street, unless off-street facilities are necessary to accommodate layovers or transfers, or to avoid passengers having to walk through a parking lot or across multiple roadways. In addition, bus layovers at light rail stations should be discouraged. Where these are essential for operational reasons, however, sufficient layover space should be provided to meet peak demand, but not in curb space needed or intended for passenger operations. Layovers should occur in areas away from primary passenger boarding and alighting zones which include curb space at the station entrance.

Connecting transit service is the major alternative to driving to the station for riders living more than half a mile from the station. It can expand the catchment area of a station considerably—particularly for riders who are unable or unwilling to drive. Connecting transit is also important for the elderly and persons with disabilities, who may have difficulty walking even a few blocks to the station.

Public and private shuttles provide a useful complement to regular public transit service, particularly to sites such as hospitals, large employers, shopping districts, office parks and specialized residential facilities. Some offer timed transfers to a limited number of peak-period services, but many simply circulate. Most provide free service to eligible riders.

In general, it is preferable to serve employment destinations via regular fixed-route bus services, as these have the greatest potential to serve other riders. However, in many cases—particularly where regular transit is infeasible due to cul-de-sacs or inadequate roadway design, a discontinuous street grid, or lack of sidewalks—shuttles may be the most effective and efficient option.

**SPECIFIC TRANSIT INTEGRATION RECOMMENDATIONS**

The following conceptual recommendations for successful transit integration with East Link and RapidRide stations in Bellevue and Redmond is based on the analysis of existing and planned transit services and planned land uses in the East Corridor completed in this project and summarized in Chapters 1 and 2 of this report.

Redmond’s Transportation Master Plan (TMP) sets out a strategy to build the market for light rail through transit integration in three different phases. The first phase is focused on building market and integration plans before East Link begins operating service to Overlake Transit Center (planned for 2023), the second phase of integration would occur when light rail is operational at Overlake Transit Center, and the third phase (sometime after 2030) when light rail is planned, but not currently funded, to reach downtown Redmond. These are logical time periods to consider building transit market and integration throughout the East Corridor and have thus been used in this section to organize conceptual recommendations for transit integration.

**Phase 1 – Pre-Light Rail**

Readying the East corridor for the introduction of East Link over the next ten years (2014-2023) must be a priority for Sound Transit, King County Metro, Bellevue, and Redmond. Thinking ahead of the curve will greatly enhance the expected “bump” in transit ridership when East Link begins operation. Early implementation of integration strategies will also leverage the investment and improve ridership on King County Metro’s existing RapidRide B line. The early implementation plan should focus on leveraging existing and future high frequency bus service in the connected network of service around Redmond and Bellevue to facilitate access to currently developed transit hubs, such as Downtown Redmond, Overlake Transit Center, Overlake Village,
Bellevue Transit Center, Downtown Bellevue, Crossroads, and high ridership RapidRide B stations. Key details applicable to this strategy include the following:

- **Develop a Transit Implementation Plan.** The plan should identify transition strategies that support transit mobility before and during construction of East Link, and strategies for potential bus service redeployment after the start of East Link service to Overlake. This is an appropriate recommendation for all the jurisdictions. Bellevue and Redmond have already begun this effort with their recent planning efforts (Bellevue Transit Master Plan [2013], and the Transit Element of the Redmond Transportation Master Plan [2013]). However, additional focus must be given to integration of systems in the long term rather than only focusing on the travel markets as we know them today. Link Light Rail and RapidRide are major investments in the regional transit network that can be enhanced significantly through full integration with the local transit network.

- **Improve Local and “Last-mile” Transit Connections to Urban Centers and the Regional Transit Spine.** Options should include enhancements to traditional fixed route service as well as alternatives to fixed route service, where appropriate. These enhancements need to improve coverage and access to transit, overall throughout the Eastside. Focus areas for access should include Downtown Redmond, Downtown Bellevue, Overlake Transit Center, Overlake Village, Willows, Southeast Redmond, Bear Creek, Education Hill, Idylwood, Crossroads, and the Bellevue Hospital/Medical District. It should be noted that one of the key resources being leveraged in this strategy is Metro’s RapidRide B line. The route forms a very important part of the early high frequency transit network for the Eastside. Implementing this strategy will require development of new high frequency local connections to Rapid Ride that do not presently exist.

- **Improve Pedestrian Access.** The Cities of Redmond and Bellevue should examine each existing transit hub, as indicated above, and each RapidRide B station, in detail, for pedestrian and bicycle accessibility. Detailed travelsheds should be identified for each station/transit hub, including (a) the areas accessible on foot within one half mile walk of each station, and separately, (b) the areas accessible within a three mile bicycle ride of each station using designated bike routes/facilities. Gaps in existing pedestrian and bicycle facilities, including sidewalks, curb ramps, substandard sidewalks, missing pedestrian crossings, high conflict (with autos) pedestrian and bicycle locations, and missing bicycle facilities, should all be identified. These should then be prioritized for resolution or improvement, based on an assessment of the number of residents and employees that would have improved access to the transit facility as a result of resolving the deficiency. High priority projects can be carried forward into the six-year improvement plans or transportation facilities plan of each jurisdictions and constructed as funding allows.

Among the highest priority pedestrian/bicycle gap closure projects in the East Corridor include new bicycle/pedestrian connections over SR-520 from the Overlake Transit Center Station and the Overlake Village Station. These new connections, which are at varying stages of planning and development, will dramatically expand the area and employment sites accessible to each of the Overlake stations, providing more equitable and safe access for those who choose or need to walk or bicycle rather than drive.

- **Connect Senior and Low Income Housing.** Plans must be made to encourage the development of services that will connect senior and low income housing with RapidRide B and future East Link stations. This does not necessarily mean the services need to be publically operated or financed, but a suitable role for King County Metro,
Bellevue, and Redmond is to ensure these services are established. This may be accomplished through simple coordination with area developments or may require some form of financial incentive or a grant program to fund the planning and implementation of new transit or shuttle services. Implementation plans for these connecting services should be pointed toward serving current transit hubs over the next ten years, with opening day of Link service as the target date for initiation of new services providing access to stations in less developed areas such as the 120th Avenue NE and 130th Avenue NE Stations in Bellevue.

- **Develop and Implement Innovative “Access” Improvement Strategies.** This involves the cities of Bellevue and Redmond in creating and implementing strategies to improve access to transit corridors. It includes designating “loading and unloading” zones for transit patrons, managing on- and off-street parking to maximize customer and transit patron access, and improving wayfinding and bicycle parking facilities. For those stations most likely to be used for transfers to or from RapidRide and/or East Link, Bellevue and Redmond should consider prioritizing bus movements and future bus to rail connections in the allocation of right-of-way and curb space in the immediate vicinity of station locations. More broadly, in planning for circulation and the use of curb space in East Link and Rapid Ride station areas, the cities and transit agencies should prioritize access for local and regional public transit services (to facilitate transfers), after designing for safe and convenient desire-line access to the station for pedestrians. After allocating curb space to transit vehicles in accordance with scheduled volumes at peak hours, the cities can deploy dynamic management of curb space in other areas, prioritizing those modes of access that most cost-effectively deliver the highest volume of passengers to the station. At some stations, such as Overlake Transit Center, this will mean dedicating substantial space to private shuttles, while in others, such as the 130th Avenue NE Station – neighborhood shuttles and private vehicle loading/unloading zones may be prioritized. This strategy can be developed and refined over the next five years, then implemented and exercised through the next several decades.

- **Design Stations for Access by Transit and Alternative Modes.** Transit and alternative access modes (such as public and private shuttles, passenger pick-up and drop-off, taxis, vanshare, and bikeshare) should be accommodated explicitly in station design, street design, and station area curb management planning (It will be essential for cities and transit agencies to coordinate quickly to ensure such coordination, as station design is East Link station design is already well underway). Street design and curb management policies and regulations should be flexible so that the cities can accommodate changing needs in the future. Furthermore, bus and shuttle stops should be placed close to the station with clear, legible and highly desirable line of sight pedestrian pathways connecting the two. Sound Transit should design station locations along the entire East Link corridor to accommodate a broad spectrum of station access strategies to ensure seamless integration with all access modes as stations are designed and constructed. Note that an access hierarchy is suggested in the previous recommendation. This requires that shuttles and passenger pick-up and drop-off activities be included as basic design elements as station plans evolve. In addition to space allocated to local and regional transit needs, curb space should be preserved at each station location specifically to accommodate alternate access modes, such as shuttle services, whether public, semi-public, or private. Experience in other regions suggests that public and private shuttle loading/unloading activity will occur at each station regardless of whether the facility is designed to accommodate it, or not. These experiences suggest that opening day and years past opening day is too late to consider these needs. The integration of alternate access modes needs to be planned in advance to ensure seamless integration with and equitable access to high capacity transit investments. Giving pre-design consideration to where this type of activity will be accommodated at each station will greatly ease some of the operational issues that are bound to occur if these factors are not considered.
• **Create “Tail” Services.** In addition to Rapid Ride B, Sound Transit and King County Metro both operate extensive service in the SR 520 corridor and the I-90 corridor. Many of these services presently terminate in Downtown Redmond or Downtown Bellevue. For Redmond, consideration should be given to extending these routes east of downtown to the Southeast Redmond and Avondale areas as a way to extend the high frequency service network and provide new transit connections to downtown Redmond and Overlake. While such routes may not be as direct as express bus routes, such line extensions would make it possible to intercept part of the Redmond “flow-through” travel market further to the east and connect those with high capacity services that are now serving the Eastside, such as Rapid Ride B and eventually, East Link. For Bellevue, the same concept could be exploited by extending an I-90 corridor route such as Sound Transit’s 550 into the Medical Services/Hospital District (Such an extension would provide transfer free connectivity to this growing, high employment district, similar to the accessibility the area has from Seattle, Mercer Island, South Bellevue, and Downtown Bellevue).

• **Build Southeast Redmond Park and Ride Facility.** The Redmond Transportation Master Plan proposes early construction of a park and ride facility currently planned as an element of the future, but unfunded, East Link Station in Southeast Redmond (Note that this park and ride facility is planned as an integral element of Sound Transit’s East Link extension from Overlake Transit Center to Downtown Redmond). Planning and construction of this parking facility should be accelerated into Phase 1, pre-light rail, to begin building the market for high capacity transit in the corridor. As this would become a Sound Transit facility, Sound Transit would assume lead responsibility for planning, designing and constructing this facility in a way that ensures it would function as a stand-alone bus transit hub and as a light rail station in the future.

• **Provide Direct High Frequency Service from Southeast Redmond to Overlake and Downtown Redmond.** Once open, existing regional services, such as Sound Transit route 545 could be realigned to operate from the new Southeast Redmond Park and Ride Facility than the Bear Creek Park and Ride. Alternatively, an additional route segment could be added to Metro’s Rapid Ride B Line, providing express service from Downtown Redmond to the new Southeast Redmond Park and Ride and Overlake Transit Center, returning to Southeast Redmond as an express service. The route would then continue to Downtown Redmond where it would rejoin the current RapidRide B route. Such a revision would add strength to the SR 520 market, and enhance connectivity to the Eastside high capacity transit network, and mitigate potential access and parking problems at Overlake Transit Center, while simultaneously building the market for the extension of East Link to Southeast Redmond and Downtown Redmond Stations.

**Phase 2 – East Link Open and Operating**

The previous section lays out an aggressive set of recommendations crafted to leverage current transit investments, build the market for East Link and RapidRide B, and establish plans and policies for fully integrating East Link and RapidRide B into the greater Eastside transit network. A great deal of emphasis in both the Redmond Transportation Master Plan (2013) and the Bellevue Transit Master Plan (2013) is focused on provision of frequent transit service on primary transit corridors to serve East Link stations and planned Transit Oriented Developments (TOD’s) in the 120th, 130th and Overlake Village Station areas.

The availability of resources to fully fund the services recommended in this plan and in the respective plans of the Cities of Bellevue and Redmond is uncertain at this time. It is also uncertain exactly how King County Metro will proceed with planning, funding and implementation of service changes in the East Corridor. While Redmond and Bellevue have identified the needs and required resources for integration, those needs may not all be in line with Metro’s established priorities. It is beyond the scope of this study to suggest how Metro’s Strategic
Plan, Bellevue’s Transit “Vision” and Redmond’s Transportation Master Plan Transit Element will be integrated and funded. However, the adequacy of access to and integration with East Link and RapidRide B stations will remain uncertain until that process occurs. The recommendations below are all offered with this understanding.

- **Transit Linkages.** Most successful light rail and bus rapid transit projects have implemented an integrated service plan on the first day of operation, thus the phase 1 recommendation to complete this planning well ahead of East Link operations. Such services are often adjusted, including increases or decreases, based on demand as patronage patterns develop. Service patterns may be adjusted in accord with changes in the pace and precise location of area development, which is unknown today. For example, Overlake Village may develop well ahead of the 130th Avenue NE Station area, thus requiring an approach that treats each area independently.

Forecasting future transit utilization patterns, including which stations will have the greatest number of transfers, is difficult without more information on projected ridership for selected intra-regional corridors. Transit ridership and transfer patterns will be influenced by land development patterns in the areas within one-half mile to one mile of each station, and which station(s) are perceived to have the easiest path of travel from the bus or shuttle vehicle to the station and onto the Link or RapidRide vehicle. The most influential factor in determining the volume of transfer activity at each station is the frequency and volume of connecting transit services at each.

Each East Link Station covered by this plan is listed below with implementation issues that are particular to the location.

- **Overlake Transit Center.** During Phase 2, this station will become a transit hub rather than a terminal facility with a large park and ride lot. If the Phase 1 recommendations for improving connectivity from Southeast Redmond and Downtown Redmond to Overlake Transit Center have not yet been implemented by the time East Link opens for initial service to this station, their implementation must be an immediate priority. Given the high concentration of pedestrians and employment in this area, this station must not become or remain a terminal station park and ride focused station, but should instead be designed and operated with priority for transit, shuttle, pedestrian and bicycle access to East Link consistent with the strategies enumerated in the Redmond Transportation Master Plan Transit Element. Connectivity investments should be focused first on serving areas inside Redmond as outlined in the Redmond TMP. Access for people living east of Redmond must also be carefully planned and executed per strategies recommended in Phase 1.

- **Overlake Village.** Based on current permitting trends and construction activities it is very likely that full build-out of TOD in the Overlake Village, will be well underway per the Overlake Village Master Plan, by the time East Link begins operation (The Capstone Partners project is already under construction). Two factors will be crucial to successful integration of this areas with East Link and RapidRide B: (1) implementation of the interconnected street, pedestrian and bicycle circulation networks planned in the Overlake Village Master Plan and implementation of additional frequent transit service as envisioned by the Redmond Transportation Master Plan Transit Element. This station will also be attractive for private pick-up and drop-off activities (aka “kiss and ride”) and public and private shuttle operations (Overlake Village will likely become very attractive as an alternative to Overlake Transit Center for commuters and shuttle service providers traveling from more than one mile away, and seeking to avoid conflicts with the local and high capacity transit services that will need to have...
priority at the Overlake Transit Center Station). The immediate station area, street system, and curb management strategy must be designed with these access modes in mind.

- **130th Avenue NE Station.** The 130th Avenue NE Station in Bellevue is planned as a neighborhood-oriented station in an area with little current density of residents or employment. Implementation of the new street grid planned in the Bel-Red Subarea Plan is essential to support multimodal station access and TOD in this area, as necessary to meet Sound Transit ridership goals. Implementation of the transit services planned for Bel-Red Subarea in the Bellevue Transit Master Plan should be modified as this new street network is developed to ensure that high frequency service currently planned for Bel-Red Road serves the 130th Avenue NE Station directly. This station will also be attractive for private passenger pick-up and drop-off (aka “kiss and ride”), and public and private shuttle operations (This station has the most direct access to the large, but less densely populated residential areas immediately north of SR-520). The vehicle circulation path to the site along 130th Avenue NE is relatively un-congested and direct making the station an ideal location for connectivity through private passenger pick-up and drop-off, vanshare, and organized shuttle operations. It is very likely this station could develop in a similar manner to Portland Tri-Met’s Sunset Station with access from residential areas provided by shuttle services similar to the EcoShuttle initiated by the Forest Heights Homeowner Association, as described in Chapter 2. To prepare for these access modes, the street system and curb space in the vicinity of the station need to be carefully planned and managed to ensure that transit can be prioritized and that adequate space exists for shuttles, private passenger loading/unloading and other informal access modes. The location and the redevelopment potential of the 130th Avenue NE Station area also make this an ideal location to develop a strategy for provision of limited public parking shared between transit commuters and residents of/visitors to nearby TOD projects.

- **120th Avenue Station.** As with the 130th Avenue NE Station, the street grid in this area will need to be fully developed according to the Bel–Red Subarea Plan to ensure good transit access. Transit circulation proposed in the Bellevue Transit Master Plan (2013) may require minor adjustment in this station area to ensure the service is optimized for adjacency to the station. As is also the case with Overlake Village and the 130th Avenue Station, this station is likely to attract a substantial share of riders dropped off by private vehicles and by public and private shuttle operations. It will also be highly attractive for employees of and visitors to employment sites just north of SR 520, and as a primary gateway to East Link for residents of many neighborhoods in Kirkland. As the plans for TOD in this station area are further advanced than the 130th Avenue NE Station area, and employment density in 2025 is projected to be reasonably high, particular vigilance must be employed in station design and station area street design to ensure that transit and other access modes are not compromised in the early stages of development.

- **Hospital Station.** This station will be served by both RapidRide B (which currently operates on NE 8th Street at this location) and East Link. Given the low-density of development and discontinuity of the street grid in the vicinity of this station, it will be extremely important to conduct a pedestrian access gap/deficiency analysis, as recommended in Phase 1, and to fully implement high priority gap closure/deficiency resolution projects in advance of initial service on the East Link line. The Downtown Bellevue Transportation Plan Update (2013) and the Bellevue Transit Master Plan (2013) have designated this area for
significantly improved transit access from Downtown Bellevue. As these plans call for new or improved transit connections from the Hospital Station area to other Eastside neighborhoods that are not within the East Corridor, it is essential that other transit route facilities be planned for this location to allow the highest possible degree of transit access to the station and station area development. It is also likely that Hospital station will become a favorite connection point for residents of East Bellevue (vehicle access will be far more limited at Downtown Bellevue Station). Therefore, adequate provision for passenger pick up and drop off activity will need to be programmed into the design of this station area.

- **Pedestrian Accessibility.** If the recommendation in Phase 1 to improve pedestrian and bicycle access has not been fully implemented by the time Link begins operation, the implementation should continue until pedestrian access has been optimized for all RapidRide B and for East Link Stations (This is truly essential for maximizing access to these high capacity investments). Removing pedestrian access barriers is also essential to the provision of equitable access to transit. Recent studies by Community Transit have shown a direct correlation between walk access and household income (with lower household incomes correlated with increased rates of walking to access bus and rail transit facilities). Therefore, ensuring that stations have are accessible from nearby residential areas by safe and direct pedestrian ways is a matter of social equity.

- **Public and Private Shuttles.** Coordination with transit agencies and potentially the formation of private shuttles sponsored by employers, Transportation Management Associations (TMAs) and homeowners associations should be facilitated to provide shuttles and other alternatives to fixed route service and access to East Link and RapidRide stations. Funding and operation of shuttle service can vary, but several options are useful for providing future East Link and RapidRide connections and King County Metro could be a potential sponsor for these more flexible services. King County Metro is exploring opportunities to provide a broader range of service options and lower-cost alternatives to fixed route bus service, as indicated in the agency’s Strategic Plan (http://metro.kingcounty.gov/planning/pdf/KCMTStratPlan_2013_Update_LR.pdf) and five year implementation plan for alternatives services (http://metro.kingcounty.gov/have-a-say/projects/alternative-service/). Services that King County Metro is exploring potential alternative and “right-sized” services such as trip pool, coordinated vanshare, ridesharing, paratransit, dial-a-ride transit, and other specialize services to reach a broader customer base. King County Metro also is evaluating the potential to expand Community Access Transportation and Taxi Scrip programs beyond riders who meet certain age, income, and/or disability requirements, to the general public.

Transit access shuttle services are usually provided fare free with costs borne directly by sponsor(s), sometimes with the support of local jurisdictions or regional agencies (as in the San Francisco Bay Area, where employer shuttles to Caltrain Stations on the San Francisco Peninsula are funded, in part, by the Bay Area Air Quality Management District as an air quality control measure). In some instances, employer shuttles are set up by TMAs where the employers and developers have banded together to create the service. Since provision of transportation access is a common purpose for homeowners associations, they can provide shuttle services if it is determined to be in the best interest of members. Finally, some major employers fund their own private shuttles to get their employees to and from nearby transit stations as a commuter benefit. In most cases, shuttles are operated by specialty transportation providers under contract to the public or private sector sponsor. The following section provides more specific recommendations for shuttle operation, access, and formation.
Senior and Affordable Housing Sites. Many current sites are located some distance from the 120th, 130th and Overlake Village station locations. Providing equitable access will require extensive coordination and partnership with developers and housing operators. These efforts tend to be on-going but are likely to accelerate as Link operations start. Sound Transit, King County Metro, and the Cities of Bellevue and Redmond should collaborate to develop and implement a strategy to encourage development of these shuttles where needed. As the residents of these locations are likely to be the most in need of high quality transit service, ensuring access to the regional investments in high capacity transit is a matter of social equity. The strategy should include a funding element that ensures these important connective services are implemented.

Transportation Management Association Sponsored Shuttles. These can be encouraged by a partnership between the Cities of Bellevue and Redmond, Sound Transit, and King County Metro. The Emery Go-Round service described in Chapter 2, provides a good example of TMA sponsored implementation of shuttle services. Additional strategies to encourage the formation of private shuttles could include integration with ORCA, and a limited subsidy for shuttle services in lieu of provision and maintenance of expansive off-street commuter parking.

Neighborhood shuttles. Neighborhood shuttles would preferably be organized by local homeowners associations, but integrated with and welcomed in the station area. Neighborhoods that may be suitable for this type of shuttle operation include Bridle Trails, East Bellevue, and other areas currently inaccessible to the planned light rail and RapidRide stations. Establishing these services may require the assistance, organizational and knowledge base of King County Metro and/or Sound Transit. This may require that both agencies designate staff who are responsible for assisting in the development of these services and that both agencies have adopted policies with respect to start-up funding and the degree of assistance provided.

Financing Shuttles. If Bellevue, Redmond, King County Metro, and Sound Transit are interested in facilitating shuttle services, they could offer incentive funds to establish new services. It is doubtful that low profit margin businesses or non-profits would have the ability to start shuttle services on their own; yet in terms of access equity, these agencies will represent people with some of the greatest needs. Seed money and potentially an on-going subsidy may be necessary for some of the services to be financially viable and provide equitable access. Cities or other agencies may also be able to utilize the existing King County Partnership Program to share costs of a service needed by a specific jurisdiction or organization.

Fares. As is the case with Rancho Cordova’s “CordoVan” service (see Best Practices in Chapter 2) free transfers between East Link and connecting shuttles are an effective tool as an incentive to encourage non-auto access.

Phase 3 – Light Rail to Downtown Redmond

This is the final phase and is likely to occur after 2030. Implementation of Phase 1 recommendations for expanding frequent transit service from Southeast Redmond and Downtown Redmond to Overlake Transit Center will establish a “pre-built” market for extension of East Link (By 2030, RapidRide B will have already been in place for nearly two decades and will have served this function, as well).
In planning for the eventual extension of East Link to Southeast Redmond and Downtown Redmond, it will be essential to apply the same access principles applied to other stations in the East Corridor, such as repairing and/or completing the street grid in the vicinity of each station and providing accommodation for a range of access modes in station design and operations, including pedestrians and bicycles, kiss and ride, taxis, private shuttles, and neighborhood shuttles in addition to the more traditional transit modes. Ultimately, these design considerations will ensure that East Link is leveraged to the degree possible to achieve the goals of Sound Transit, King County Metro and the Cities of Redmond and Bellevue.

CONCLUSION

Regional investments in East Link and RapidRide have potential to greatly change “the landscape” of planning and development in both Bellevue and Redmond. Careful planning and execution of the details of how these investments are integrated into the current and future transportation network, neighborhoods, and future developments is crucial to success. Details matter.

The key challenge in the integration of high capacity transit with local public transit services, shuttles and all other access modes is to ensure easy and direct transitions between modes and between places. Doing this requires a human scale of design, planning and operations. In the final analysis, it is all about what the riders perceive, feel, and desire that will spell landslide success, or a less than desirable return on investment. The time is now to consider details and how they fit into the larger puzzle of station area design and development; to ensure that people who have been previously disadvantaged are given equitable access; and to ensure that the entire “system” (not just the high capacity modes) operates in seamless concert. Waiting until Link begins operation to consider these factors will slow its ridership development, provide less return on King County Metro’s investment in RapidRide, and risks failure to meet Redmond’s and Bellevue goals for creating more livable and sustainable communities.
4  PARKING AND TRAVEL DEMAND MANAGEMENT (TDM): BEST PRACTICES

INTRODUCTION

This chapter provides an overview of selected best practices in the management of on-street and off-street parking and travel demand management in rapid transit station areas and urban mixed-use districts similar to those envisioned for both the Overlake Village and 130th Avenue NE East Link Station Areas. Strategies are profiled from San Francisco, Santa Monica and Redwood City, California, as well as the Washington DC Metro Area.

BEST PRACTICES

Santa Monica, CA – Utilizing Parking In-lieu Fees for Shared Parking

The City of Santa Monica, 16 miles west of downtown Los Angeles, is home to approximately 88,000 residents and 16,000 businesses. Currently the city is only served by bus service, but construction of a light-rail line (Exposition Transit Corridor) is currently underway and will connect Santa Monica by rail to Downtown LA, Pasadena, San Fernando Valley, South Bay, Long Beach, and dozens of points in between. Three stations will be located in the City of Santa Monica; 26th Street/Bergamot, 17th Street/SMC, and Downtown Santa Monica.

The downtown area bounded by Second and Fourth Streets and Wilshire Boulevard and Broadway was identified in 1986 as both a special assessment district and a Developer Parking Fee (in-lieu fee) zone. While the assessment district designation provided funding for the revitalization of the downtown, the in-lieu fee zone was intended to both ensure funding for the existing municipal structures, as well as any necessary future expansion of public parking garages, and reduce the need for developers to provide on-site parking in this highly pedestrian-focused commercial district.

In-Lieu Fee

The purpose of the city’s public parking strategy is to provide adequate supply to allow existing and future land uses to rely on a public, shared, efficient supply. The program is based on a
“Park Once-Pedestrian First” concept, which encourages drivers to become and remain pedestrians while in downtown.

Santa Monica’s parking program is made up of different components, many of which are managed by different departments. The City of Santa Monica collects revenue from parking fees as well as Bayside Assessment and Developer Parking (In-Lieu) fees. All revenue goes into the City’s general fund. Funding for the Parking Office is provided via city budgets, with no direct source of revenue. The Developer Parking fees, however, are ear-marked exclusively for use in constructing or replacing public parking in the Downtown Santa Monica, Inc. (DTSM) District. The City’s Finance Department handles the collection and management of the in-lieu fees, while the DTSM—a quasi-public entity along the lines of a Business Improvement District—collects assessment fees.

Developers that choose not to provide all required parking on-site are assessed an annual fee of $1.50 per square foot of building area for which parking is not provided. For example, if a 100,000 square foot project is developed but the developer only provides parking to satisfy the demand for 80,000 square feet of space, then the project is assessed an annual fee of $30,000 ($1.50 per square foot times the 20,000 square feet for which parking is not provided). The ability to collect these annual fees is scheduled to expire at the same time as the Bayside Mall Assessment District, in 2016. The in-lieu fee has not been adjusted since its inception in 1986 and the City is currently in the process of increasing the fee. As part of this process, the City is also evaluating the feasibility of allowing in-lieu fee revenue to be spent on other cost-effective programs that can help reduce demand for parking or more effectively utilize existing parking resources, such as the leasing of private parking spaces.

To date, developers have been very receptive to this policy, as the in-lieu fee is much lower than the cost of constructing, operating and maintaining private parking (fees cover the equivalent of 10% of structured parking construction costs)\(^1\). The efficiencies gained through this approach have allowed the City to establish a parking supply target of 2.1 parking spaces per 1,000 square feet of commercial floor area, which is markedly lower when compared to standards for general office, retail, and small restaurants (2,500 square feet or less) in the City of Santa Monica\(^2\). That the downtown continues to thrive with this low level of supply attests to the potential benefits of the park-once shared parking management district model.

**Results**

In-lieu fees are especially suitable for adaptive reuse redevelopment projects such as vacant, underutilized, historic, or dilapidated building structures in downtown areas that would otherwise not be financially or architecturally feasible if all parking had to be provided on-site. The main limitation of in-lieu fees is that they rely on new development to occur in order to generate fee revenue, thus during times of recession when the level of new construction typically decreases, revenues for maintaining, operating or constructing new parking declines as well.

One of the main lessons from Santa Monica’s experience is that in-lieu fee ordinances have to be written such that they can be adjusted on an annual basis to reflect the inflation index. In the case of Santa Monica, the initial cost of $1.50 per square foot of building area in 1986 dollars is

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\(^1\) Walker Parking Consultants, Downtown Parking Program Update –City of Santa Monica. July 2009.

\(^2\) The general standards for the City of Santa Monica are 3.3 spaces per 1,000 square feet for general office, retail, and small restaurants. Fast food restaurants have higher standards of 13.33 spaces per 1,000 square feet.
now equivalent to just over $3 per square foot in current dollars. This means that the current annual revenue could be double the $600,000 that the program collects today. Determining the price elasticity – the point up to which developers are still willing to pay the fee for off-site parking over developing parking on-site themselves – is another challenge.

The in-lieu fee program has served the City’s needs in part because the shared supply was already in place and functional when the assessment and fee districts were initiated. For over 20 years, the income from these districts needed only to cover, along with parking fee income, the costs to maintain, repair, and replace a sufficient supply. Concluding that future supply increases are inevitable, however, the City is now assessing strategies for ensuring that the parking program is funded sufficiently to expand when necessary.

Parking is still being studied to meet projected demand and manage traffic in Downtown Santa Monica. The opportunity to re-address the supply has arisen as downtown parking areas are demolished and need to be rebuilt either at the same or higher capacity. There is also support from downtown merchants and the public to increase supply due to a perceived shortage of parking. The City is therefore studying alternatives to increase supply through measures such as shared parking, and is experimenting with concentrating parking in specific downtown lots and providing free shuttle services to city center locations.

**San Francisco, CA – Requiring Unbundled Parking and Carsharing**

The City of San Francisco is home to more than 800,000 residents. As is the case with many major cities, San Francisco struggles with parking. However, policy makers and developers are increasingly realizing that simply building more parking is not the solution. In major urban areas, parking can add 20% or more to the cost of a residential unit and reduces the potential number of units on a parcel by 20%. Meanwhile, underpriced and/or bundled parking (reserved parking that is included with a residential or commercial lease or sale agreement) can exacerbate problems with traffic congestion and greenhouse gas emissions. This occurs when congestion of underpriced on-street parking causes excessive searching and circling (aka “cruising”) for a limited supply of available on-street parking spaces. At the same time, the conventional bundling of parking with the cost of renting or buying residential units or commercial space makes parking a fixed cost for buyers/renters, removing any incentive it might give to reduce vehicle ownership or vehicle use. In places where off-street vehicle parking is sold or leased as a separately, at the option of the buyer or leasee (“unbundled” parking), vehicle ownership rates are lower and driving can be reduced. In order to tackle parking related issues, the City of San Francisco became one of the first U.S. cities to require both unbundled parking and carsharing for new residential developments.

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4 Personal communication with Travis Page, Associate Planner, Santa Monica, Transportation Management Division, January 18, 2012.


6 Ibid
Parking Management Policy

In April 2008, Section 166 of the Planning Code was amended to stipulate that if parking is provided in newly constructed residential projects or existing buildings converted to residential uses, carshare parking spaces must be provided. The ratios were determined by approximation as San Francisco was the first city to enact such requirements. The decision to require carsharing was motivated by several objectives: to create more space for carshare vehicles, reduce auto ownership, and reduce the space devoted to parking.

Concurrently, the City of San Francisco adopted ordinance language requiring all residential developments in downtown and transit-oriented districts to unbundle their parking. Previously, unbundled parking was required on an ad-hoc basis. Under Section 167 of the Planning Code, all off-street parking spaces available for residential uses in new or converted structures of 10 dwelling units or more must be leased or sold separately from the rental or purchase fees for the life of the dwelling unit. In cases where there are fewer parking spaces than dwelling units, the parking spaces must be offered first to the potential owners or renters of three-bedroom or more units, second to the owners or renters of two bedroom units, and then to the owners or renters of other units. Renters or buyers of on-site inclusionary affordable units must be given an equal opportunity to rent or buy a parking space on the same terms and conditions as offered to renters or buyers of other dwelling units, and at a price determined by the Mayor’s Office of Housing, subject to procedures adopted by the Planning Commission. However, the Planning Commission may grant an exception from this requirement for projects which provide financing for affordable housing that requires that costs for parking and housing be bundled together.

It is important to note that carsharing and unbundling legislation was adopted at the same time as parking requirements were lowered or eliminated. Both strategies are viewed as part of a larger, complementary package of transportation initiatives.

Impacts/Results

The benefits of both carsharing and unbundling in reducing parking demand and car use are well documented in a number of studies. In 2012 a study of the impacts of carsharing and unbundled parking in downtown San Francisco found that households with both unbundled parking and carsharing available in the building have significantly lower vehicle ownership rates compared to households in buildings with neither (0.76 vehicles per household, and 1.03 vehicles per household, respectively).7 Households in buildings with both unbundled parking and carsharing are also more likely to be carshare members than those with neither.

Statistically significant differences were also found between carshare members and non-carshare members. The average vehicle ownership for households with carshare memberships is 0.47 vehicles per household compared to 1.22 vehicles per non-carshare member household. Carshare members are also more likely to take non-auto modes to work and use transit; 83% of survey respondents with carshare memberships use non-auto modes to commute to work compared to 70% of persons without carshare memberships, and 43% of carshare members take transit compared to 23% for respondents without carshare memberships.

Unbundling can increase flexibility, as pricing can be increased or decreased to reflect current demand and market conditions – at least, when parking is leased rather than sold. In particular, when less than one space per unit is provided, it is an effective way to manage demand and

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7 Cumulative Impacts of Carsharing and Unbundled Parking on Vehicle Ownership and Mode Choice.
allocate a limited number of spaces. It is also a source of revenue; unsurprisingly, however, paying for parking is not as popular among tenants.

It is important to note that bundled residential parking can significantly increase “per-unit housing costs” for individual renters or buyers. Two studies of San Francisco housing found that units with off-street parking bundled with the unit sell for 11% to 12% more than comparable units without included parking. One study of San Francisco housing found the increased affordability of units without off-street parking on-site can increase their absorption rate and make home ownership a reality for more people. In that study, units without off-street parking:

- Sold on average 41 days faster than comparable units with off-street parking
- Were affordable to 20% more households than comparable units with bundled off-street parking.

**Redwood City, CA – Demand-Based Parking Pricing**

Most places use some combination of meter rates and time limits to manage on-street parking where demand would otherwise exceed supply. Enforcing time limits, however, is labor-intensive and often ineffective. And metering efforts are often undermined by a common reluctance to price spaces sufficiently high to ensure availability at peak times.

Charging a flexible, market rate, however — one that rises whenever availability is lacking and falls whenever demand is slack — is the most effective and time-honored means for managing demand for any fixed-supply good. Successful application of this approach to curb parking can ensure that spaces are available when they are most needed, without chasing demand away during off-peak hours.

Redwood City, CA, a town with approximately 78,000 residents, located in the Bay Area peninsula along the Caltrain Corridor, has adopted formal policies to tackle the problem of congestion of on-street parking and spillover parking impacts directly by adopting a city ordinance that requires its parking managers to monitor and adjust parking regulations, including on-street parking prices and time limits, as necessary to ensure that at least 15% of spaces are always available for new users.

**Parking Management Policy**

In 2007, Redwood City adopted a parking ordinance which implemented a demand responsive parking pricing strategy to maintain an ideal utilization rate of 85% at their more desirable “front-door” curb spaces along Broadway, their primary commercial street through the adoption of a parking ordinance. Prior to 2007, Broadway had 1-hour time limits but no meters, which resulted in nearly 100-percent utilization all day, every day.

Redwood City’s parking ordinance requires its Parking Manager to measure parking occupancy in its Downtown Meter Zone at least annually, but not more frequently than quarterly. Based on the survey results, the Parking Manager is required to adjust rates up or down in twenty-five cent

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9 Ibid.
($0.25) intervals in an effort to attain the city’s 85% target occupancy rate (equivalent to a 15% vacancy rate). Rates vary by street, block, and direction; however, the ordinance establishes a maximum hourly rate of $1.50 without City Council approval. Initially the per-hour rate was set at $0.75/hour on the main commercial strip, and removed time limits completely. However, the price has since been adjusted to reflect current levels of demand.

Figure 4-1 below shows the three existing parking zones based on current rough demand levels, reflected in the different rates for each zone. The most popular on-street spaces are located in the orange zone, which has the highest hourly price at $0.50. Meters on yellow streets are enforced Monday through Friday from 10:00 a.m. to 6:00 p.m. On orange and purple streets and in garages, meters are enforced Monday through Saturday from 10:00 a.m. to 6:00 p.m. At the two green off-street parking facilities, free parking is available after 6:00 p.m. every evening and all day Saturday and Sunday. At the off-street facilities coded blue, parking pricing is enforced every day from 10:00 a.m. to 1:00 a.m. and payment is due upon exit.

Figure 4-1 Downtown Redwood City Parking Zones

Results

Prior to 2007 there were one-hour times and no meters with 100% on-street parking occupancy every day throughout the entire day. Following the implementation of a $0.75 hourly charge with no time limits, the occupancy rate has averaged roughly 82%, parking stays have averaged 72 minutes, and off-street parking lot permit sales have increased by 50%.

After the implementation of demand responsive pricing, Redwood City saw the development of a new 2,400 seat downtown movie theater, for which no dedicated parking was provided; despite this, on-street availabilities have remained consistent.

Washington DC Metropolitan Area Transit Authority (WMATA) – Sharing Off-street Private/Commuter Parking

The Washington DC Metropolitan Area Transit Authority (WMATA) is responsible for overseeing the operation of DC Metrorail, a 106 mile heavy rail transit network which carries more than 750,000 passengers on an average weekday; and MetroBus, which provides fixed-route transit services with 1,500 vehicles. The WMATA District incorporates the District of Columbia, Montgomery and Prince George’s County in Maryland, the northern Virginia counties of Arlington, Fairfax, and Loudon, and the Cities of Alexandria, Fairfax and Falls Church — a 1,500 square mile area with 3.5 million residents.

Parking Management Policy

To accommodate the limited share of park and ride commuters, WMATA owns and/or operates 58,317 commuter parking spaces at or near 42 of its 86 Metrorail Stations. All parking is paid parking, with commuters charged fees of $3.25 to $8.50 or more per day depending on the location of the station. Despite the parking fees, most park-and-ride lots in the region fill to capacity on weekdays.

All 42 Metrorail Stations with parking offer either hourly or daily paid parking on weekdays (parking is free at all stations on weekends and holidays). Thirty-five of these stations offer reserved parking until 10:00 AM for transit riders who purchase monthly reserved parking permits. These reserved parking permits must be purchased in advance online at a cost of $55 per month for all stations. Permit holders are still required to pay all applicable daily parking fees in addition to this monthly reserved permit fee.

WMATA charges variable prices for daily parking, ranging from $3.25 (Minnesota Avenue) to $4.75 (multiple stations), depending on the station’s location within the region and political considerations. In general, parking prices are set by the Board to ensure that the combined cost of daily parking and the appropriate transit fare does not exceed the cost of parking in Central DC.

One-way passenger fares range from $1.50 to $4.50, depending on the distance of the trip.

At selected stations WMATA uses a two tiered parking pricing structure. For example, at the east end of the Orange line, parkers at New Carrollton who use a SmarTrip card to pay for parking and their transit fare (validated at another station in the Metrorail System) are charged $4.75, provided they exit the parking lot within two hours of leaving the fare gates. Parkers who do not

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11 In June of 2008, Average daily ridership on Metrorail was 798,456 passengers.
12 WMATA Parking Manager Patrick Schmitt indicated that in some limited circumstances the Board has given agency staff flexibility to adjust parking fees administratively (within limits established by adopted Board policy).
use a SmarTrip card that was used for travel to another station on the same day, or who stay longer than two hours after they exit the fare gates, are charged the higher parking rate of $8.50 per day. This tiered pricing system allows WMATA to prioritize station parking for Metrorail commuters, while still permitting use of the facility by customers of nearby commercial establishments.

**Results of Systemwide Pricing**

The systemwide parking occupancy rate of 94% indicates that even at the stations with the highest daily parking prices, the rates currently charged are not high enough to discourage use of Metrorail by park and ride commuters. Agency staff noted that most of Metro’s 42 parking facilities fill every day regardless of changes to parking prices. In addition, fluctuations in parking prices, transit fares, and the cost of alternatives (including driving) do not appear to have impacted ridership.

Commuters are, however, very sensitive to the price of reserved parking permits. WMATA staff note that every time the agency has increased reserved parking permit prices, sales have dropped significantly. Most recently, in 2008, after WMATA added $10 to the price of a monthly reserved parking permit, reserved permit sales dropped by 50%.

**Shared Use of Private Parking at the Rhode Island Ave Metro Station**

Breaking ground in May 2010 and completed in 2012, the Rhode Island Row mixed-use development is located on 8.5 acres in the Northeast section of Washington, DC, adjacent to the Rhode Island Avenue Metro Station. It contains approximately 270 residential units, 70,000 square feet of retail, and a private main street through the site. The development also has three parking garages on site. The Metro Garage (completed in November 2011), funded by the city and owned and operated by WMATA contains 215-spaces dedicated to Metrorail and bus travelers. The other two parking garages are owned and operated by the developer; one is restricted to residential use only, while the other is shared between residents, retail users, and WMATA commuters.

Planning for privately owned, shared parking at the Rhode Island Avenue Metrorail station began in 2000 when WMATA issued a solicitation requesting proposals to develop the joint development site. After a developer was selected and the mixed-use project was approved, the office of the District of Columbia’s Deputy Mayor for Planning and Economic Development...
requested that WMATA reduce parking from the 387 spaces in surface lots previously located on site to 215 spaces. Subsequently, the Federal Transit Administration (FTA) responded saying that they would not allow the joint development project to move forward without the developer providing shared parking to make up for the lost WMATA parking spaces. WMATA and the developer then negotiated a Shared Parking Agreement, which enables both entities to comply with the FTA’s requirements.14

Through the Shared Parking Agreement, the developer was authorized to allow up to 140 parking spaces in the shared private parking garage to be used by Metro commuters. This parking garage is owned and operated by the developer and all revenues are collected and retained by the developer. Insurance for the shared lot is also paid for by the developer.15 The garage has five levels of parking; two of these levels were planned to be dedicated to Metro reserved parking and Metro daily parking; however, there is minimal signage indicating such restrictions. The garage is wrapped with residential buildings to reduce the visual impact at sidewalk level. It costs $1 per hour (up to $25 daily maximum) for residents and retail customers to park in the shared lot; there is also a $3.25 early bird daily rate, which is the same price as the daily rate for Metro commuters parking on the upper two levels. There are also 42 on-street parking spaces with meters along the main street though center of the site.16

**Results**

The WMATA-owned lot is regularly over its design capacity of 221 spaces17. It also has multiple “Metro Garage” signs indicating that commuter parking is provided. In contrast, the entrance to the privately-owned lot does not indicate to WMATA customers that they are able to park there, and consequently, the utilization rate of the levels set aside for WMATA customers in the private lot is very low. Currently the developer charges $3.25 per day for Metro commuters to park in this lot, which is $1.25 less than the WMATA-owned parking lot, in an attempt to increase the number of WMATA customers parking in the private lot.18

**San Francisco Bay Area Rapid Transit (BART) — Transition from Static to Dynamic Parking Pricing**

The Bay Area Rapid Transit District (BART) provides regional heavy rail transit services in the San Francisco Bay Area. BART was created by the California state legislature in 1957, and granted property tax authority, including the power to levy – with voter approval of a ballot measure within the District – certain local property taxes to support the issuance of general obligation bonds to fund construction of a rapid transit system for the Bay Area (BART is not a general purpose government or municipality as defined by state law). Since that time, BART has drawn funding from a variety of regional, state, and federal funding sources. Today, BART is governed by a Board of nine Directors, each elected by and representing one geographic district.

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15 Interview with WMATA Parking Manager Patrick Schmitt on October 22, 2013.


17 WMATA reports that parking utilization for this facility is 127%. Utilization rates over 100% typically indicate that the facility manager has shifted to active management of vehicle parking within the lot, allowing increased capacity by the use of valet parking, stacked parking and double parking within the lot.

18 Interview with WMATA Parking Manager Patrick Schmitt on October 22, 2013.
After opening for service on an initial segment in the East Bay in 1972, BART has grown into the most extensive rail transit system in the Western United States, with 104 miles of dedicated trackway and 44 stations serving 340,000 passengers on a typical weekday. The system was initially designed to facilitate park-and-ride commuting from suburban areas to major employment centers in San Francisco, Oakland, and Berkeley and now serves both urban and suburban communities in San Francisco, Alameda, Contra Costa and San Mateo counties. Accordingly, 33 of the 44 BART stations were built with commuter parking facilities. Today, BART owns and operates a total of 46,500 parking spaces systemwide.

**Variable Parking Pricing**

BART’s parking pricing program has evolved and grown over the past decade. Although station parking was initially provided free of charge to users on a first-come, first-served basis, BART now provides a variety of parking services, such as reserved parking, daily paid parking, and long-term parking. The agency has considered and conducted trials of parking fees for different purposes over the years (the cost of building, operating, and maintaining commuter parking facilities has long been paid for entirely, or largely subsidized by all riders through fares and taxes, rather than through user fees). Since 2005, BART has charged daily parking fees of $1-$5 and monthly reserved parking fees of $30 to $115 at a majority of its park-and-ride lots. As of 2013, these parking programs generate $15 million per year for BART (approximately one third of BART parking revenue comes from its monthly parking permit fees, and two thirds are from daily paid parking fees).

Paid parking was first implemented in the 1990’s at the urban Lake Merritt station, where a $0.25 daily parking fee was imposed as a means of reserving parking for BART patrons and preventing use of the lots by students and staff of nearby Laney College. Wider use of parking charges at BART facilities was not implemented until the opening of the extension through San Mateo County to San Francisco International Airport (SFO) and Millbrae in 2003. As planning for this extension progressed, the BART Board adopted a strategic plan that called for consideration of parking pricing for all new parking facilities. Charging for parking in the SFO/Millbrae corridor was thought to be less difficult politically because it would be implemented in concert with the benefit of a new line. As such there was not political opposition from commuters accustomed to free parking at the stations (as in the other BART corridors).

Prior to opening the new line in 2003, the BART Board approved a $2.00 fee at four of the new stations on the SFO/Millbrae extension in San Mateo County. With no prior history of charging for parking and recognizing (1) that the demand for parking would vary by station, (2) that fees would impact demand, and (3) the political difficulties of adjusting fee rates, the Board committed to survey parking occupancy at each lot every six months and approved the following criteria for demand-based adjustment of parking rates:

- if peak occupancy exceeds 90% of available capacity at least three out of five weekdays for four consecutive weeks, the fee is increased by $1.00,
- If peak occupancy is less than 50% of available capacity during at least three out of five weekdays for four consecutive weeks, the fee is reduced by $1.00.

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19 A $0.25 parking fee was proposed for Rockridge, Lafayette, and Orinda Stations in 1990 as a means of limiting station access to BART patrons – and preventing use of the lots by casual carpoolers.

20 San Mateo County Stations subject to the initial fee included Colma, San Bruno, South San Francisco, and Millbrae. The San Francisco International Airport (SFO) BART Station does not have BART commuter parking.
To address the concern that Peninsula commuters might eventually shift to and overwhelm the free parking facilities at the existing Daly City Station – the existing southern terminus of BART in the West Bay, prior to the extension to SFO/Millbrae – the BART Board imposed a parking fee at Daly City and committed to manage it using the same principles listed above.

The SFO/Millbrae extension opened in June 2003, with lower than expected ridership, which was confirmed by parking occupancy surveys conducted in December of that year. A reduction in parking fees to $1.00 per day at all extension stations did not result in a significant increase in parking occupancy or ridership in the corridor, so by April of 2004, the BART Board suspended parking fees altogether, making parking available free of charge at the San Bruno, Colma, South San Francisco and Millbrae Stations.

With slow, but steady ridership growth and increasing parking occupancy BART re-instituted a $1.00 per day fee at its San Mateo County stations in 2007. Since that time, BART has continued to monitor occupancy at BART Station parking facilities from Daly City to Millbrae and adjusted parking prices in $1.00 increments in accordance with the criteria established in 2003. More recently, the BART Board has authorized revisions to its dynamic parking pricing program, including allowing fee adjustment in smaller increments of $0.50. Currently, BART charges $2.50 per day to park at Daly City BART.

**Monthly Reserved Parking Program**

To provide a reliable station access option for commuters, address budget shortfalls, and better manage parking demand, the BART Board initiated a monthly reserved parking pilot program at the West Oakland Station – the last East Bay stop for trains bound for San Francisco. The agency paved a small parcel near the existing BART parking lot and reserved spaces in the new lot for monthly parking permit holders until 10:00 AM each day (after which the spaces were made available to non permit-holders).

With an initial price of $100 per month (just below market rates for parking in private lots adjacent to the station), permits quickly sold out and in June of 2002, the BART Board authorized expanding the program system-wide. Up to 25% of capacity at each park and ride lot was made available for monthly permit parking. As with the daily fees at lots on the SFO/Millbrae Extension, BART committed to adjust the price of monthly reserved parking permits at each station based on demand. Permits were made available for purchase online, with prices initially set at $63 per month (effectively $3.00 for each of 21 weekdays in typical month). Over time, permit sales have been monitored, and prices adjusted administratively every six months, as follows:

- At stations with 10-24% of available parking spaces reserved, BART continued to charge $63.00 per month for reserved parking permits.
- Where fewer than 10% of available parking spaces were reserved, monthly parking permit prices are reduced by an effective rate of $1.00 per weekday\(^{21}\) (e.g. to $42.00 per month from the initial price of $63.00).
- Where the maximum of 25% of available parking spaces are reserved, monthly parking permit prices are increased by an effective rate of $1.00 per weekday (e.g. to $84.00 per month from the initial price of $63.00).

\(^{21}\) Assumes 21 weekdays per month.
As of April 2010, monthly parking permits ranged in price from $30 to $115, based on demand. The maximum number of permits that can be sold for each station is still limited to 25% of all available spaces at East Bay Stations, but may be up to 40% of available spaces at stations in San Francisco and San Mateo Counties.

**Daily Parking Fees**

In May 2005, in light of the success of the Monthly Reserved Parking Permit program, the BART Board authorized weekday parking fees of $1 per day (fee payment required for all vehicles parked during the hours of 4:00 AM to 3:00 PM) for lots and structures at all East Bay Stations meeting the following criteria:

1. Parking at such station fills (occupancy = 100%) at three or more days a week, AND at least 15% of the parking spaces at such station are sold as monthly reserved parking, OR
2. The local government [with] jurisdiction requests that the District implement a daily fee.

The only East Bay station not subject to these criteria is the West Oakland Station, where a fee of $5 per day was implemented, consistent with the fee charged for parking in private lots adjacent to the station.

In 2009, the BART Board eliminated the requirement that 15% of spaces in a lot be reserved on a monthly basis, increasing the number of stations eligible for implementation of daily paid parking to 23. BART has implemented fees one station at a time (often once every two weeks) in order to carefully measure lot occupancy before and after implementation, and to assess site and neighborhood impacts of the shift to pricing. Currently, there are 18 East Bay stations with fees and two others – San Leandro and Bayfair – that meet the criteria, but where logistical issues remain to be resolved before paid parking can be implemented.

**Results**

BART has a Board-approved market-based pricing policy that calls for daily parking fees when certain demand metrics are met. The policy allows parking prices to fluctuate on a monthly basis depending on demand. For example, when average usage of parking spaces exceeds 50% of available supply, three days a week for four consecutive weeks, the fee is $2.00. For instance, in February 2009, BART increased daily parking fees at the Colma station from $1 to $2. BART staff then compared the station’s average daily ridership and parking utilization from two weeks before and two weeks after the price increase and found a decrease of only 22 passengers, a 0.6 percent decline in ridership (from 3,666 average weekday entries to 3,644). Daily parking fee payments at Colma Station, however, dropped by an average of 78 payments per weekday. BART therefore surmised that the increase in parking fees encouraged some riders to use access modes other than driving and parking at the station.
5 PARKING AND TDM: OVERLAKE VILLAGE CONTEXT AND RECOMMENDATIONS

INTRODUCTION

Overlake today is a vibrant neighborhood within the City of Redmond, and is the third largest employment center in the region with about 46,000 jobs. Situated along SR 520 and served by Sound Transit, Overlake is connected to Downtown Redmond, Downtown Bellevue, Seattle, and the region. Beginning in 2023, East Link light rail will provide residents, visitors, and employees with a quick and convenient transportation option with direct service to two stations in the Overlake Area (Overlake Village and Overlake Transit Center).

East Link is a voter-approved regional transportation project that is part of a comprehensive long-term expansion of mass transit in the region. Once completed, East Link will connect the Eastside’s biggest population and employment centers with stations serving Seattle, Mercer Island, Bellevue, Bel-Red and Overlake in Redmond. By 2030, East Link will serve about 50,000 daily riders on one of the region’s most congested travel corridors.

East Link is a key component of the adopted Sound Transit 2 plan that provides a foundation for future regional transit system expansion proposals. The project will build on the completed Central Link light rail system between Sea-Tac Airport and downtown Seattle, as well as the University Link connection that is currently under construction and scheduled to open in 2016. East Link will connect directly with Central Link for a one-seat ride between Redmond, Bellevue, Mercer Island, and the University of Washington via downtown Seattle and Capitol Hill.

The Overlake Village Station is part of Segment D, the Bel-Red/Overlake Corridor, which also includes the Overlake Transit Center and the 120th and 130th stations which are located in the City of Bellevue. The Overlake Village Station will be located adjacent to SR 520 just north of the Overlake Village Park-and-Ride on 152nd Avenue NE with an entrance along 152nd Avenue NE just south of SR 520. No parking will be provided at the train station, however the Overlake Transit Center station will have commuter parking.

In preparing for the arrival of East Link, the City and residents of Redmond have completed a comprehensive planning process that creates the foundation for increasing density and the mix of land uses to create an urban village that enables residents and employees to get around using a wide variety of modes. The City of Redmond Comprehensive Plan 2030 identifies Overlake and Downtown as the two locations for concentrating new development with three-quarters of new residences and two-thirds of new commercial floor area to be developed in Downtown and Overlake.
This document builds on the work that has been done to provide specific recommendations for managing commuter parking in the Overlake Village Station Area, developing a pool of shared parking, refining parking requirements to encourage transit-oriented and mixed-use development, and addressing conflicts between various user groups that may arise as the area grows. All of the recommendations proposed have been designed with the primary objective of managing parking resources so there are enough parking spaces to ensure the healthy functioning and increased density of development of the area while not providing more than necessary. Balance will help achieve a mix of uses, support the district’s mode split goals, encourage new development, and support the success of a pedestrian-friendly district.

The Chapter is structured as follows:

- **Section 1** - establishes the parking context including existing parking requirements, planning work that has been completed to date, completed and proposed transit-oriented development projects, and identifies existing constraints and opportunities.
- **Section 2** - details the proposed parking management strategy including changes to the existing zoning code, parking management tools, strategies for creating shared parking, and transportation demand management measures that will help reduce parking demand and achieve mode share goals. A discussion of the phasing of requirements and measures is presented as well as a monitoring plan.

### SECTION 1- PARKING CONTEXT

Overlake Village is beginning a transition from a suburban community to a mixed-use, urban neighborhood. Currently, the majority of parking is provided in off-street surface lots and is free of charge to visitors and employees, combined with little on-street parking on major thoroughfares such as 152nd Avenue NE, NE 24th Street, and Bel-Red Road. However, in preparation for this evolution, the City of Redmond has developed citywide parking standards as well as specific standards for Overlake Village that encourage mixed-use and transit-oriented development. The City has also invested in the creation of planning documents such as the Overlake Master Plan and Overlake Parking Management Plan which provide a foundation for future parking policies and programs.

Chapter 2 provides an overview of existing City of Redmond parking standards and requirements, parking recommendations that have been developed as part of previous planning processes that will support this transition, an overview of development projects that were designed under the vision of an urban center, and opportunities and constraints.

### Parking Requirements

The City of Redmond’s existing parking requirements as set forth in the Zoning Code are described below both for the city as a whole as well as for the Overlake Village district.

### Citywide Parking Requirements

At the citywide level, the City of Redmond has established a process for reducing minimum parking requirements, allowing off-site parking, creating shared parking or cooperative parking facilities, and enacting an in-lieu parking fee.
Reductions in Minimum Parking Requirements

A reduction in minimum parking requirements for specific uses on specific developments sites is allowed on a case-by-case basis at the discretion of the Administrator. The Administrator may approve alternative minimum parking requirements if the applicant submits a parking study that demonstrates that the alternative requirement will provide sufficient parking to serve the specific use without adversely impacting other uses and streets in the vicinity.

If a parking study does not demonstrate that available parking stalls will adequately serve the proposed use, reductions below the minimum requirement may be approved if a Transportation Management Program that effectively reduces parking demand.

Off-Site Parking

Required parking may be provided off site within 600 feet of the site, unless otherwise approved by the Administrator, when secured by an easement.

Shared Parking (Cooperative Parking Facilities)

Cooperative parking or shared parking facilities may be provided where two or more land uses can be joined or coordinated to achieve efficiency of vehicular and pedestrian circulation, economy of space, and a superior grouping of buildings or uses. When cooperative parking facilities can be provided, on-site parking requirements may be reduced based on any of the following criteria:

- Peak demand occurs at distinctly different times.
- The minimum required parking for a multi-tenant facility shall be based upon the minimum amount necessary to satisfy the highest average daily peak demand generated by the uses at a single time period. In no case shall the minimum required parking for a multi-tenant facility be less than 60% of the total required for all uses in the facility.
- The continuation of the cooperative facility shall be assured by a sufficient legal document, such as a covenant or reciprocal easement agreement, or by participation in a local improvement district or parking cooperative or association.
- Shared parking associated with multi-tenant retail and commercial facilities will be considered to be a cooperative parking facility. Lease agreements will satisfy the requirement for a sufficient legal document.

In-Lieu Fees

An in-lieu parking fee may be submitted to the City for each required parking space which is not provided on-site. The in-lieu parking fee shall be determined annually by the Technical Committee based on current land and construction costs. However, the City will not begin collecting in-lieu fees until a comprehensive parking plan and capital improvements program proposal for an off-street parking facility has been completed. This will be considered as part of the Parking Strategies Project to be completed in June 2014.

The City of Redmond has created a special City fund to collect in-lieu fees. These fees may currently only be used for the construction of public parking facilities. Priorities for construction of parking facilities shall be identified in a comprehensive parking plan and capital improvements program approved by the City Council.
Overlake Village Specific Parking Requirements

As a defined district, Overlake Village has specific zoning requirements that can differ from general City of Redmond zoning requirements. Overlake Village is divided into five subareas based on the land use development that is projected for each part of the district. Listed below are the parking requirements specific to the Overlake Village district.

Minimum and Maximum Parking Requirements

Figure 5-1 shows the minimum and maximum parking requirements by land use for each of the five zones within the Overlake Village district.

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Zones 1 through 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
</tr>
<tr>
<td>Multifamily</td>
<td>1.0 per unit plus 1 guest space per 4 units for projects of 6 units or more.</td>
</tr>
<tr>
<td>Mixed-Use Residential</td>
<td>1.0 per unit plus 1 guest space per 4 units for projects of 6 units or more</td>
</tr>
<tr>
<td>General Sales or Services</td>
<td>2.0 per 1,000 SF GFA</td>
</tr>
<tr>
<td>Hotel/Motel</td>
<td>1.0 per rental room</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>2.0 per 1,000 SF GFA</td>
</tr>
<tr>
<td>Road, Ground Passenger and Transit Transportation</td>
<td>2.0 per 1,000 SF GFA</td>
</tr>
<tr>
<td>Arts, Entertainment, and Recreation</td>
<td>2.0 per 1,000 SF GFA</td>
</tr>
<tr>
<td>Education, Public Administration, Health Care, and other Institutions,</td>
<td>The number of spaces must be adequate to accommodate the peak shift as determined by the Administrator after considering the probable number of employees, etc.</td>
</tr>
</tbody>
</table>

Additional Overlake Village Parking Requirements

In addition to establishing parking minimums and maximums, the zoning code for the Overlake Village district includes other parking requirements that affect how much parking a development may have to provide.

- **Excess Parking Allowed if Available for Public Use:** Developments may provide parking in excess of the maximum, provided the excess parking is also available at all times to the general public, and there is signage at the facility to inform users which parking stalls are available for public use.
- **Alternative Parking Standards:** The City may allow alternative parking standards to be specified in a City-approved Master Plan or site plan when a change is supported by the Overlake Parking Management Plan, a City review of parking in one or more Overlake zones, or a property owner-initiated parking analysis.
• **Utilizing Street Parking to Meet Parking Requirements**: Curbside parking on public streets within a development site may count toward up to 25% of the required off-street parking with the exception of curbside parking on 152nd Avenue NE or 156th Avenue NE. Curbside parking on private streets that are part of the development site shall be fully counted toward satisfaction of the required off-street parking requirement.

**Adopted Plans**

The City of Redmond has completed a comprehensive planning and visioning process for the Overlake area including Overlake Village. Relevant planning documents that have helped inform and have provided the foundation for this parking management strategy are described below including the Redmond Comprehensive Plan, Overlake Master Plan, and Overlake Village Parking Management Plan.

**Redmond Comprehensive Plan**

The City of Redmond Comprehensive Plan, adopted December 2011, establishes a long-term (2030) vision for the City. Within the larger City of Redmond, the plan identifies two locations for creating vibrant urban centers – Downtown and Overlake. By 2030 the City anticipates growing to a population of 78,000 residents and an employment base of 119,000 jobs, with three-quarters of new residences and two-thirds of new commercial floor area to be developed in Downtown and Overlake.

As part of the Comprehensive Plan, the Redmond Transportation Master Plan (TMP) was updated in 2013. The TMP is an element of the City's Comprehensive Plan, and is the document that guides Redmond's transportation investment and activities. It was first adopted in 2005. The TMP identifies a number of parking strategies for supporting the creation of urban centers.

• **Establish a Shared Parking Resource in the Overlake Urban Center through a Public-Private Partnership**
  – In order to provide a shared parking resource and facilitate the “right sizing” of private segregated parking in the Overlake urban center, work with local property developers to establish a shared parking resource in the vicinity of the North Village Park in the Overlake Village to serve nearby land uses and the 152 Avenue NE retail corridor.

• **Develop and Implement a Parking Management Strategy in the Overlake Neighborhood**
  – With consultant assistance, monitor and evaluate parking demand in the Overlake Village.
  – Create a parking management program for Overlake that focuses on reducing or, in the long term, eliminating minimum parking requirements, and creating a residential parking permit program as needed.
  – Refine parking credits for mixed-use developments.

• **Establish Additional Shared Use Parking through Public-Private Partnerships**
  – Establish and support additional shared use parking facilities in Redmond’s urban centers and employment areas where appropriate through:
    o The negotiation of shared use and/or lease agreements with owners of strategically placed existing private lots to provide for an interim supply of parking where needed.
The lease or acquisition of strategically located land parcels for use as future public off-street parking locations.

Partnerships to implement coordinated public parking, with a focus on pay per use pricing, utilizing existing facilities. Elements should include standardized signage and wayfinding to help make the overall parking system easy to use.

**Overlake Village Master Plan**

To further develop the vision for Overlake, the City completed the Overlake Village Master Plan (2007), which includes the sub area of Overlake Village. Overlake Village is envisioned to be an urban residential mixed-use neighborhood; thus a large portion of growth will be concentrated within this sub area. The Master Plan describes a wide range of strategies and goals related to land use, open space, development, and transportation, as well as parking. It is important to note that the parking strategies in the Master Plan (listed below) are proposed steps to take over time and were not intended to all be implemented simultaneously.

- **Residential Parking Program**: Establish a residential parking permit program in residential areas adjacent to employment and commercial areas, in conjunction with implementation of efforts to limit the parking supply or charge for parking.

- **Parking Standards by Use**: Add further definition to existing system of defining parking standards by use.

- **Eliminate Minimum Parking Standards**: Work with developers to eliminate minimum parking standards while better accommodating access for delivery and moving trucks.

- **Eliminate Allowances above 3 spaces per 1,000 sq. ft.**: Maintain 3 spaces per 1,000 sq. ft. office space maximum. Eliminate allowance for 3.5 spaces per 1,000 sq. ft.

- **Develop Off-street Parking Requirements that Relate to Transit Availability**: Reduce minimum off-street parking requirements for developments near transit facilities such as the park and ride lot and transit center. Reduce further as transit service improves.

- **Mixed-Use Parking Credit**: Develop parking credits for mixed-use developments.

- **Paid Parking**: Provide parking-specific incentives to reduce parking demand.

- **Parking Time Limits**: On-street parking in commercial zoned areas would be designated for commercial use with time limits during business hours.

- **Separate Parking and Office Space Costs**: Require commercial leases to separate out parking costs from office rental space costs.

- **On-Street Paid Parking**: Reduce parking subsidies and better manage on-street parking supply by implementing paid parking for on-street parking spaces.

- **Parking Development and Management Plan**: Create and implement a parking development and management program for Overlake that:
  - Minimizes on-site surface parking
  - Encourages shared, clustered parking to reduce the total number of stalls needed, and to increase the economic and aesthetic potential of the area
  - Encourages structured parking
  - Maximizes on-street parking, particularly for use by those shopping or visiting Overlake
Following the completion of the Overlake Master Plan in 2007, a Parking Management Plan for the area was developed which evaluated some of the measures proposed in the Master Plan in greater detail.

**Overlake Village Parking Management Plan**

The Overlake Village Parking Management Plan was completed in June 2009. The plan outlines a number of policies and programs that will support the densification of Overlake and help address the most significant parking issues that will likely arise over time.

Key issues that may arise include how the cost of providing parking may hinder development, particularly since parking will need to be provided in garages rather than lots due to densification; balancing parking supply and demand, and conflicts that arise from different user groups; and parking demand generated by light rail riders, since a park-and-ride lot will not be provided at the Overlake Village East Link station.

For this plan three alternatives were studied:

1. Private parking facilities at reduced requirements – all parking is provided by private market. Lower parking requirements
2. Public/private parking facilities – half funded by City, half funded by private market. Lower parking requirements
3. Public parking facilities with fee-in-lieu – City or Overlake Parking District provides 50% of required parking and private development provides 50%. Lower parking requirements

A number of short-term action items were identified:

1. Monitor parking demand
2. Develop standard shared parking agreement template
3. Require the use of shared parking reduction in new development
4. Refine bicycle parking standards
5. Establish in-lieu parking fees
6. Evaluate inclusion of parking triggers in Overlake Neighborhood Plan policies
7. Evaluate citywide parking policies and regulation

**Development Projects**

The Redmond Overlake Master Plan identified three cornerstone sites for development within the Overlake Village district: the Capstone Partners (former site of the Group Health Overlake Hospital), Sears/Regency Center and PS Business Park properties. In total, these three sites occupy 69 acres or 47% of the district. As such the Master Plan requires these three sites to develop master plans prior to any proposed development as these proprieties will have a large impact on the look and feel of the neighborhood. To date, only a master plan for the Group Health site has been created; it is described in more detail below. While not a cornerstone site, the Village at Overlake Station development is also profiled as it is one of the initial sites within Overlake Village that has been developed as a transit-oriented site.
Group Health Master Plan

In December 2011, the Redmond City Council adopted the Group Health Master Plan for development on the former site of the Group Health Overlake Hospital. The Master Plan calls for development of a mix of commercial and residential buildings on the site, in addition to a centrally-located 2.6 acre park.

In March of 2013, Group Health sold the entire 28-acre site to Capstone Partners of Seattle, which has initiated development on a project consistent with the Group Health Master Plan and the Overlake Village Master plan. At full build-out, the Capstone Project will include 1.1 million square feet of office and commercial retail space, more than 1,400 residential units and nearly 300 hotel rooms.

Capstone and the City of Redmond are conducting public outreach on conceptual designs for the urban park planned for the center of this major development project.

Village at Overlake Station

The Village at Overlake Station is an affordable housing development project located on the 152nd Avenue NE corridor near NE 24th Street at the Overlake park-and-ride lot. The project is a multistory development comprised of studios, one-bedroom, two-bedroom, and three-bedroom low income units. The development also includes daycare facilities, conference/meeting space, resident community center, and a children’s play area, and is within walking distance of Microsoft, Safeway, Fred Meyer, and other retail shops and services.

Constraints and Opportunities

The comprehensive planning effort to establish a vision for Overlake Village and the current zoning code have taken steps to address the potential parking conflicts that may arise as Overlake Village transitions to an urban center. This parking management strategy builds on this work to further develop strategies that will help address the following issues and areas of opportunity:

- While parking will be provided at Overlake Transit Center station, no additional commuter parking will be provided at the Overlake Village East Link Station (Note: Space for East Link commuter parking may be available in the existing Overlake Park and Ride lot, which has a capacity of 203 spaces, and is served by King County Metro Routes 242, 249, 250, and 269, and RapidRide Line B). Nevertheless, some transit riders will still want to access the Overlake Village station by private vehicle. Initially, the existing supply of publicly-available parking (including the Overlake Park and Ride, limited on-street parking, and any underutilized private off-street parking facilities made available to commuters) may be sufficient to accommodate the competing demands of commuters and access to adjacent land uses. However, as the area develops there is a potential for spillover commuter parking impacts to nearby residential communities and businesses.

- A mode share goal of 40% non-single occupancy mode has been set for Overlake Village. Providing an oversupply of parking and not pricing parking will encourage residents, visitors, and employees to drive. Thus parking policies that encourage the use of non-drive alone modes will need to be implemented to meet this mode share goal.

- As new retail and commercial businesses come to the area there will be an influx of employees and customers, increasing the potential for parking conflicts between employees and customer user groups.
Parking management tools can be used to encourage employees not to drive to work or to park further away from their worksite, reserving parking spaces closest to the business for customers.

In order to achieve the land use objectives for Overlake Village, much of the existing surface lots will be removed for development, and parking will need to be provided in garages. This in turn will increase the cost of development, and could potentially delay redevelopment if it means that the development does not “pencil-out”.

Given the high cost of providing parking, tools such as shared parking can help increase the efficiency of the parking supply, helping to reduce the amount of parking provided and in turn the cost of development.

The City of Redmond currently has a successful TDM program; parking policies can help increase the use of these programs.

SECTION 2 - PARKING MANAGEMENT STRATEGY

Sufficient automobile parking is a key component to creating a vibrant urban village. However finding the right balance needed to support the district’s goals is critical, particularly given that parking is an expensive resource. At estimated construction costs of up to $25,000 per space for structured or subterranean parking, the provision of parking affects the cost of housing, commercial lease rates and ultimately all consumer goods as prices are passed through to patrons. Parking that is constructed and reserved for a single use is guaranteed to sit vacant much of the time. So it is necessary to identify the right amount of parking and to ensure that it is managed well to maximize its use.

A key goal of the parking management strategy is to manage parking resources so there are enough parking spaces to ensure the healthy functioning and increased density of development of the area while not providing more than necessary. Balance will help to achieve a mix of uses, support the district’s mode split goals, encourage new development, and support the success of a pedestrian-friendly district. The parking management strategy proposes a combined approach of shared parking, unbundling, parking pricing, flexible standards, and management strategies to optimize the use and value of existing and future parking. It is important to actively monitor the parking implementation and to pursue the strategies in unison to ensure a coherent and successful approach.

In addition, the Overlake Village district will evolve over time with the introduction of new residential and commercial development, during which time parking needs will shift. In early stages of development, prior to the arrival of light rail service, it is assumed that parking demand will be higher than in later years. Also, it is assumed that early projects will provide more parking to allow for sharing with adjacent uses. Over time, with an increase in transportation services and the implementation of additional transportation demand management programs, it is assumed that parking demand will decline and early phases of development will have helped create a pool of parking that can provide opportunities for sharing. Parking requirements have been designed to take these shifts into account and to encourage the creation of shared parking.

Chapter 3 presents a wide range of parking and transportation demand management (TDM) strategies designed to address the various constraints and opportunities present in Overlake Village and help the district achieve its long-term vision. A process for developing the appropriate trigger points for adjusting parking requirements is discussed, as well as a monitoring and management plan.
Parking Recommendations

The following section describes changes to the existing zoning code as well as new policies that will help address the parking constraints and opportunities identified in Chapter 2.

Shared Parking

A successful approach for parking in Overlake Village starts with sharing. Shared parking facilities within easy walking distance (1,000 feet or 4 minutes) of each other and various destinations can be very effective in optimizing the use of parking supplied, and limiting the number of vehicle trips and local congestion, while improving the built environment.

As a mixed-use district, Overlake Village will have a complementary set of land uses that are suitable for sharing. For example, the peak period of parking demand for light rail commuters and employees occurs during the day while residents are away. Demand for parking at office buildings is virtually non-existent in the evening hours when residents are returning.

There is no public funding currently available to build parking and it will take time to generate the necessary in-lieu fee funds to construct a shared public parking garage. For example, at an average of $25,000 per space for structured parking, a 500 space parking garage would cost $12.5 million which would need to be paid for up front or be subject to additional borrowing costs. Thus, even with an in-lieu fee it will take a number of years to generate the necessary funds for a public parking garage. Therefore, in the near and mid-term, private development must provide its fair share of the parking supply that is efficiently shared between adjacent projects and the public.

The following recommendations will help increase sharing opportunities for newly constructed private parking.

- Allow applicants to meet minimum parking requirements through the provision or leasing of nearby off-site facilities.
- Increase the allowable distance for off-site parking from 600 feet to 1,000 feet (a 4-minute walk).
- The City could create a standard shared parking agreement that can be utilized by property owners.
- A formal agreement should be submitted by the applicant if shared parking (i.e. spaces used by both the applicant and another land use) is to be utilized. The agreement should stipulate provisions regarding access to, use of, and management of the designated spaces. In order to ensure that the applicant is adhering to the agreement, a monitoring and enforcement process would need to be established. There are several different options for this including the City conducting audits or requiring property owners to submit annually to the City a signed affidavit affirming compliance. Submission of such affidavit could be a condition for receipt and/or renewal of a business license in the City of Redmond.
- No individual spaces or parking areas will be reserved for any individual, tenant or class of individuals, except for persons with disabled placards or users of special vehicles such as low-emission or carshare vehicles.
- Commercial property owners may exclude daytime parking by residents who do not live on-site, but must offer overnight parking for nearby offsite residents. Commercial property owners may exclude anyone other than onsite residents from parking for more than 24 hours.
• Public, visitor, and shopper parking may be separated from employee or resident parking, but all are subject to the same parking rates and privileges, regardless of whether they are doing business at the site or elsewhere in the vicinity.

In-Lieu Parking Fee

A parking in-lieu fee is a common parking management strategy utilized by cities throughout the U.S. that gives proposed projects or uses the option to pay a designated fee rather than provide some or all on-site parking spaces required by the zoning code. The City of Redmond has adopted zoning code language establishing a city fund where funds will be placed to be used for the construction of parking facilities. However, the City will not begin collecting in-lieu fees until a comprehensive parking plan and capital improvements program proposal for an off-street parking facility have been completed. This will be considered as part of the Parking Strategies Project to be completed in June 2014.

An in-lieu fee for Overlake Village would provide developers with an alternative to constructing all required parking on-site and would create a funding source for constructing a shared public parking garage. However, many cities have faced difficulties in building parking using in-lieu fees, both because most programs have been little used, and because fee revenue from development is unpredictable and difficult to use as a revenue source for bond financing. It is recommended that the City consider allowing fee revenues to be used not just for parking construction but also for leasing or purchase of spaces, TDM measures, or local transit or right-of-way improvements. These measures would result in greater potential for use of alternative transportation modes, such as walking, biking, light rail and bus, reducing the need for parking in the same area in which the project was built. Decisions regarding the use of fee revenues for either type of improvement could be related to assessment of the existing supply of parking in a given area, as well as broader transportation demand management goals.

This report does not establish what fee should be charged; however, there are several key elements that should be considered when developing the in-lieu fee price structure. The fee must serve the goals of the City, but it must also be flexible enough to encourage economic growth while providing an adequate pool of revenue for future parking facilities and alternative mode programs.

Prior to establishing the in-lieu fee, the City should clarify the exact mechanism regarding the types of projects that qualify to receive funds and in what areas those funds would be spent. An effective in-lieu fee program should seek to:

• **Avoid large up-front costs to developers that would deter investment.** Many cities make the mistake of creating a “simple” in-lieu fee structure based on large initial lump sum payments. These in-lieu fees can prove excessively costly to developers who ultimately forgo construction or build parking on-site that is not efficient in terms of parking or land resources.

• **Guarantee a revenue stream for the City.** The structure of any fee in lieu of providing off-street parking can be designed to achieve different objectives based on the City’s priorities. Many cities opt to assess “in-lieu” parking fees as a single one-time fee at the initiation of a project that can help create a pool of funding that could be used to help finance parking construction. However, this type of fee structure does not assure a steady and consistent source of funding. As an alternative, the City can instead assess an annual fee in lieu of off-street parking provision at a much lower rate. Such an annual fee can be established to help create a continuous long-term revenue stream to fund public parking
and potentially TDM programs and other non-auto access improvements and services. This type of funding stream is particularly helpful for covering on-going costs such as maintenance and operations.

- **Fully utilize existing parking capacity.** The actual fee amount should be based on a City’s individual circumstances and needs. In the case of the City of Redmond, there is already a large pool of underutilized off-street parking in private off-street parking lots that were constructed according to City code requirements. As discussed further in this chapter, this existing supply of underutilized spaces may be incorporated in the supply of publicly available parking spaces through code reform and negotiation with private property owners, reducing the need to build additional off-street parking incrementally. Fees collected in lieu of provision of additional off-street parking by private developers (whether collected on a one-time/lump sum basis, or an annual basis) may be used to fund public leasing, management and operation of private facilities to be incorporated in the shared public supply.

- **Justify costs for both the City and developer.** Ideally, neither the City nor private property-owners or developers should pay more than their fair share to provide publicly accessible parking accessory to land uses and transit facilities in the station area. The established fee should provide the City with some basis of subsidy for meeting the gap between the cost of building public parking or introducing alternative mode improvements and the revenues it can produce.

**Parking Requirements**

There are a number of ways that existing parking standards can be restructured to help facilitate implementing shared parking and finding the appropriate balance between parking supply and demand.

**Combine Land Use Categories**

The Overlake Village district currently has 23 land use categories of which five are residential land uses and 18 are commercial land uses. It is recommended that the definition of commercial uses for purposes of calculating parking standards in Overlake Village include all permitted uses that are non-residential. Grouping retail, office, and supporting services under the broad definition of a commercial use simplifies the parking standards, facilitating the opportunity for district-wide shared parking among land uses of different sizes that reach their peak use at different times of days or different days of the week. It is also recommended that the definition of residential uses for purposes of calculating parking standards in Overlake Village include all permitted uses that are residential, with the exception of Senior housing and Single Room Occupancy (SRO) residential projects (Both Senior and SRO housing can be expected to have negligible parking demand, so no off-street parking need be required for these uses).

**Minimum and Maximum Parking Requirements**

Over the life of the Village District’s development into an urban village, the City can adjust parking requirements as needed. It is assumed that parking demand will be higher in the early

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1 A similar phased approach to reduction and eventual elimination of off-street parking requirements has been adopted and is being pursued through implementation of the Bergamot Station Area Plan in the City of Santa Monica, CA. This plan and associated changes to parking requirements and in-lieu fees are profiled in a case study of parking management in Santa Monica included in Chapter 4.
years of district development than in later years due to the arrival of light rail service and additional bus service. Also, it is assumed that early projects will provide more parking to allow for sharing with adjacent uses. Over the long run, it is recommended that the total commercial parking ratio not be more than 2.0 spaces per 1,000 square feet in the entire Overlake Village district. This is seen as a “District Parking Target” that strikes the optimal balance between the demand for new parking supply and the city’s desire to achieve a non-drive alone mode split of 40%.

It is assumed that more of this parking will be built and provided in the early phases of development, with development in later phases buying into the already built parking supply through leasing or in-lieu fee participation. In order to achieve this vision, parking minimums and maximums will decrease over time. This plan defines initial parking minimum and maximum recommendations that are designed to create a shared pool of parking. After the opening of light rail service and as infill development passes the 50% mark, the minimum required parking would stay constant but the maximum would decline. In the long term, minimum required parking requirements would be removed but new projects could provide parking based on their own market studies. Maximums are maintained at the desired 2.0 spaces per 1,000 square feet with higher allowances for shared than reserved parking.

This report does not establish exact trigger points for adjusting parking requirements, however potential phasing structures are discussed later in this chapter. Regardless of the phasing structure, monitoring of the area’s total parking supply and demand will be key in informing the City on the district’s progress towards this overall target, and on when parking requirements may need to be adjusted.

**Commercial Parking**

In the near-term, prior to the arrival of light rail, the existing minimum and maximum parking requirements can remain the same as recommended above. However, projects wishing to provide the maximum parking requirement must share a minimum of one parking space per 1,000 square feet (with no maximum on shared spaces).

After light rail service begins operation, providing improved transit accessibility, the maximum off-street parking requirement for commercial land uses can remain the same but a greater portion of the parking supply should be shared. In the long-term, parking minimums can be eliminated and parking maximums reduced to 2.0 spaces per 1,000 square feet with a maximum of 1 reserved space.

**Figure 5-2 Commercial Parking Standards per 1,000 square feet**

<table>
<thead>
<tr>
<th>Timeline</th>
<th>Required</th>
<th>Maximum with Voluntary Shared Parking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Near-term: prior to the arrival of light rail</td>
<td>2.0</td>
<td>3.0 of which no more than 2 spaces may be reserved</td>
</tr>
<tr>
<td>Mid-term: after the arrival of light rail</td>
<td>2.0</td>
<td>3.0 of which no more than 1.5 spaces may be reserved</td>
</tr>
<tr>
<td>Long-term</td>
<td>0.0</td>
<td>2.0 of which no more than 1 space may be reserved</td>
</tr>
</tbody>
</table>
Residential Parking

All residential uses are assumed to consist of multi-family units of various sizes and number of bedrooms. By having both a base parking requirement and a maximum, developers can build the right amount of parking to serve each development.

In the near-term a minimum of one space per unit should be provided regardless of size or number of bedrooms (with the exception of designated Senior housing projects, including assisted-living facilities, and Single Room Occupancy [SRO] units). No more than two spaces should be built, of which only 1.5 spaces may be reserved. In the mid-term the minimum and maximum parking requirements remain unchanged, however, no more than one space may be reserved. In the long-term, parking minimums are eliminated and parking maximums are reduced to 1.5 spaces per unit with a maximum of 0.5 space being reserved.

Figure 5-3 Residential Parking Standards per Unit

<table>
<thead>
<tr>
<th>Timeline</th>
<th>Required</th>
<th>Maximum with Voluntary Shared Parking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Near-term: prior to the arrival of light rail</td>
<td>1.0</td>
<td>2.0 of which no more than 1.5 spaces may be reserved</td>
</tr>
<tr>
<td>Mid-term: after the arrival of light rail</td>
<td>1.0</td>
<td>2.0 of which no more than 1 space may be reserved</td>
</tr>
<tr>
<td>Long-term</td>
<td>0.0</td>
<td>1.5 of which no more than 0.5 space may be reserved</td>
</tr>
</tbody>
</table>

Reduced Parking Requirements

The City of Redmond currently allows reductions in required parking for developments that implement a transportation management program or provide cooperative parking facilities, as well as on a case-by-case basis. In order to further encourage transit-oriented and mixed-use developments, additional criteria for allowing reduced parking requirements could be added the City of Redmond zoning code.

Developments within One Half Mile of Light Rail Stations

In order to promote development near the future light rail station and to acknowledge that development in close proximity to high quality transit service has lower parking demand, it is recommended that minimum parking requirements are eliminated for new development located within a half mile of the future East Link light rail stations. Maximum parking requirements will still apply.

Mixed-Use Developments

In order to promote mixed-use development and encourage the placement of residential in very close proximity to shopping (which in turn reduces traffic, parking demand, and vehicle ownership), it is recommended that minimum parking requirements are eliminated for smaller retail, restaurant, and service uses within mixed-use developments. Maximum parking requirements will still apply.

Specifically it is recommended that there are no minimum parking requirements for retail, restaurant, and other service uses in vertical mixed-use buildings in which at least 50% of its square footage is devoted to residential uses. To clarify, there is no limit on the total size of the
development, but only individual retail, restaurant, and service uses are exempt from minimum parking requirements.

**Flexible Parking Requirements**

While there will be larger groups of parcels that will be redeveloped at higher densities, the parking management strategy also supports small businesses and property owners and provides standards and incentives for adaptive reuse and maintenance. The following strategies provide flexibility for smaller developments in regards to parking provisions.

*Facilitating Change of Use for Existing Sites/Buildings*

For small commercial establishments (those with existing tenant spaces with gross floor areas of 5,000 square feet or less) in existing buildings, additional parking requirements that are triggered by changes of use are particularly burdensome, since such establishments typically do not have space to add auto parking. The singular commercial parking requirement eliminates many issues like this. Existing commercial tenant spaces of 5,000 square feet or less are allowed a change of use in existing space without providing additional parking spaces. This is expected to encourage reuse of smaller commercial establishments.

*Minor Additions of New Floor Area*

Minor additions up to 1,000 square feet of gross floor area have minimal parking impacts. Exempting these types of small additions from providing additional parking promotes economic development by enabling businesses to make minor changes or additions without the potentially prohibitive burden of adding more parking.

*Unbundle Parking*

Parking costs are frequently subsumed into the sale or rental price of offices and housing for the sake of simplicity and because that is the traditional practice in real estate. Although the cost of parking is often “hidden” in this way, parking is never free. Unbundling these parking costs from the cost of other goods and services is a critical step for reducing parking demand and vehicle trips, since providing anything for free or at highly subsidized rates encourages use. In addition, separating the lease of parking from a building lease helps enable the sharing of parking, as parking spaces can more easily be shared when they are not permanently linked to a specific building through deed restrictions.

It is recommended that the full cost of parking in Overlake Village is required to be unbundled from the cost of the housing or commercial space itself by creating a separate parking charge. This practice makes the cost of providing parking clear to residential and commercial tenants and buyers, and allows them to make more informed decisions about their transportation needs. Typically, unbundled parking leads to reduced parking demand, which in turn enables developers to build less parking and more functional building space. Unbundled parking also makes housing more affordable for tenants or buyers who do not have a vehicle, without affecting the price for others.

If a residential parking permit program is implemented, it may be necessary to prohibit residents of new buildings from obtaining a permit. This prevents residents from avoiding the costs of off-street parking by simply obtaining a lower-cost residential parking permit and potentially contributing to an excess demand (and overuse of supply) for on-street parking.
Carsharing

Convenient access to shared vehicles has been demonstrated to lower average vehicle ownership, particularly in combination with unbundled parking. A review of over 25 studies found that in North America, on average, 20% of respondents gave up a privately owned vehicle and 40% avoided purchasing one, which results in an average of five privately owned vehicles replaced per every carsharing vehicle. Zipcar currently operates in the Puget Sound area and has a pod in the City of Redmond near NE 60th Street and 156th Ave NE. Within the Central Puget Sound, Car2Go, a point-to-point carsharing company currently operates exclusively in Seattle, but may expand in the future to serve Overlake Village and other Urban Centers.

Given the potential for carsharing to help Overlake achieve its mode split goals and reduce vehicle ownership, it is recommended that one carsharing space be required for the first 50 to 200 residential units plus one additional space for every additional 200 units. For non-residential uses, it is recommended that one carsharing space be required for every 50 required parking spaces. Carsharing spaces may be redesignated as shared parking if there is no provider who wishes to utilize these spaces.

Parking Management

Parking Pricing

Currently, many of the major streets in Overlake Village do not have on-street parking since parking for businesses are typically located in off-street parking lots. Where there is on-street parking, it is free of charge and unregulated. The vision for Overlake Village includes developing lively, walkable streets that support a mix of residential and commercial uses. This vision includes redesigning street such as 152nd Avenue NE to include on-street parking to serve nearby businesses. The shift from providing parking primarily in off-street lots to providing parking in garages and on-street will evolve over time. As this shift occurs, greater management of on and off-street parking will be needed.

While parking supply in Overlake Village is not currently constrained, as development intensifies (particularly along the 152nd Avenue NE corridor) and the light rail station is completed, parking availability will become an issue. Initially, time limits on streets affected by spillover from employees and transit riders may be sufficient to ensure that there is available parking for visitors. However, as infill development increases, parking pricing will likely be needed to manage parking demand.

On-street metered parking ensures that residents, employees, shoppers, and visitors can find a parking space near their destination at all times of day and night, provided they are willing to pay for it. Therefore, meters support personal convenience and reduce traffic congestion. Metered parking could be implemented in phases. In the near/mid-term, meters could be implemented in high demand areas, such as streets neighboring the light rail station or the Capstone Partners development project, while in lower demand areas, time limits may still be sufficient. Initially, metered parking fees could be set at a low hourly rate (e.g., $0.50 per hour) so as not to discourage people from visiting the area but to set the expectation of paying for parking. Over time, parking demand should be monitored and metered areas expanded as needed.

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It is likely that in the near term all off-street parking facilities will be privately managed and owned. If one or more public parking facilities are constructed, the City could charge an hourly rate slightly below the cost of hourly parking at metered on-street parking spaces. This approach offers longer-term visitors a place to park at a lower rate, while shorter term visitors, who are more willing to pay for convenient parking, would use slightly higher priced metered on-street parking. Additionally, offering monthly parking passes for employees reduces their tendency to use on-street parking if employee spillover is an issue. Lastly, commuters can be charged a daily or hourly rate rather than offered a monthly pass in order to discourage commuters from driving. At the same time, all new development can be required to share and unbundle parking, encouraging the private market to set and adjust parking prices based on demand.

In later phases, fees should be adjusted to properly manage demand. One metric for setting fees is to adjust the rates to achieve an on-street occupancy rate of 85%, which translates to roughly one available parking space per block. In off-street parking facilities, an occupancy rate of 85% to 90% for retail uses and 95% for employee parking should be targeted.

Residential Parking Permit (RPP) District

To prevent spillover parking in residential neighborhoods, many communities implement Residential Permit Parking (RPP) districts by issuing a certain number of parking permits to residents for free or at a nominal fee. The permits restrict non-resident parking and allow residents to park, on a first-come, first-served basis, within the district at all hours. In Overlake Village, RPP districts may make sense in residential neighborhoods adjacent to commercial districts or the light rail station where there is more potential for spillover parking from employees and transit riders. In areas with residential parking permit programs, it may be necessary to prohibit residents of new buildings from obtaining a permit. This prevents residents from avoiding the costs of off-street parking by simply obtaining a lower-cost residential parking permit and potentially contributing to an excess demand (and overuse of supply) for on-street parking.

On-going monitoring of parking demand, particularly after the opening of the Overlake Village light rail station, will enable the City of Redmond to determine if and when an RPP program may be needed.

East Link Light Rail Riders and Parking Fees

The initiation of service on the East Link light rail line in 2023 will represent a great step forward in making the City of Redmond more accessible and sustainable. However, it will also come with challenges. While initially parking near the station may be free, over time parking pricing at off-street lots may be implemented. With changes to City parking requirements and shared parking provisions discussed in this chapter, portions of the public and private off-street parking supply in the station area could be made available to commuters on a pay by the hour or pay by the day basis (for example, shopping center owners could charge a fee for use of a limited number of spaces in their parking facilities by commuters or other users). Parking fees encourage the use of alternatives for both transit access trips, shopping trips and employee commute trips and need not restrict the use of publicly available spaces to one use or another. If implemented with progressive rates (higher hour fees for each additional hour stayed), parking fees can provide an incentive for short-term use of spaces, favoring shoppers and visitors – including Redmond residents – seeking access to services and retail establishments at this site).
To maintain a limited supply of parking for employees commuting to the Village from transit inaccessible areas, the City could encourage implementation of a preferred daily parking rate for employees in the area. Any preferred daily rate for district employees should continue to be set high enough to ensure that non-auto modes are competitive travel options.

**Transportation Demand Management (TDM) Recommendations**

Transportation Demand Management (TDM) strategies have proven effective in reducing single-driver automobile trips, especially during congested commute periods. TDM strategies carefully manage transportation resources through incentives, employer regulation, communication, marketing and other techniques.

The City of Redmond has experienced success using TDM measures to encourage employees and residents to use modes other than driving alone through its R-Trip program, a public-private partnership between the City, local employers, King County Metro, and the Greater Redmond Transportation Management Association. This unique program is actively used by local businesses to manage their own transportation programs, and offers nearly 24,000 employees and residents a one-stop place for resources, travel information, “starter” incentives for transit, vanpool, carpool, bicycling, and walking, and enables users to track and view the impact and benefits of their travel activities. These elements are instrumental in providing improved information, resources, and incentives that make travel choices, such as walking, biking, transit, carpooling, and vanpooling, more accessible and easier to use.

In the Overlake Village district the Redmond Zoning Code requires development applications that meet the criteria listed below to complete a Transportation Management Program (TMP):

- When a nonresidential development generates demand for more than 25 mobility units, provided that under this requirement in mixed-use developments a TMP is required only for the nonresidential portion of the development;
- In order for a development to achieve concurrency as required in RZC 21.52.10, Transportation Concurrency; or
- Based on the amount of parking provided by the development, as required in RZC 21.40, Parking Standards.

The R-Trip program and TMP requirements will help the City of Redmond work towards the mode share goals identified in the Overlake Master Plan and the Overlake Parking Management Plan, which set a non-single occupancy vehicle mode share goal of 40% by 2030.

However there are still additional areas of opportunity that will help the City of Redmond in working towards its mode share goals and its vision of Overlake Village as a transit-oriented neighborhood. Additional measures that would support this vision are described further in this section.

**Unbundling**

As discussed in the parking requirements section above, unbundled parking is a key tool for helping reduce vehicle ownership and increasing the opportunity for shared parking. However, there are additional benefits that can be realized from unbundling the cost of parking from leases or purchase prices including reduced VMT and increased housing affordability. In major urban areas, parking can add 20% or more to the cost of a residential unit and reduces the potential
number of units on a parcel by 20%. At the same time, underpriced or bundled parking can exacerbate problems with traffic congestion and greenhouse gas emissions due to cruising for on-street spaces, and increased VMT relative to households with unbundled parking.

A 2011 report published by the Victoria Transport Policy Institute states that unbundling parking typically reduces vehicle ownership and parking demand by 10 to 20% which translates to a reduction in VMT. For example, a two-driver household that eliminates a second car that was driven 6,000 annual miles usually adds about 1,000 annual miles to the primary vehicle, rental vehicles, or “chauffeured trips” by friends. The result is a net reduction of 5,000 vehicle miles for the household, a significant impact.

Unbundling parking also creates a more equitable formula for renters and home owners, since they only pay for the parking they need. Among households with below-average vehicle ownership rates (e.g. lower income residents, singles and single parents, seniors on fixed incomes, and college students), the choice to forego paying for parking can provide a substantial financial benefit. Low income groups, especially, can benefit from unbundling because a greater portion of their household budgets are dedicated to parking costs than is true for wealthier households.

Parking Pricing

One of the most significant factors affecting motorists’ choice of whether to drive or travel by another mode is the price of parking at the destination. In addition, studies have shown that an average of 28% of traffic congestion in urban mixed-use districts is attributable to cruising for parking by motorists who have already arrived at their destination but are searching and circling to find a free or below market-rate curb parking space.

In these circumstances, managing on- and off-street parking prices as part of an integrated district-wide parking system is an important strategy for reducing peak-hour trip generation and localized traffic congestion, especially for trips to areas with high employment densities. Demand-responsive, market-based prices for parking also have secondary benefits including:

1. Distributing highly variable parking demand to match available supply to ensure that there are available curb parking spaces at all times of day.
2. Promoting parking turnover to prevent commuters parking all day in on-street parking spaces intended for short-term parking.

Switching from free, unrestricted parking to hourly or daily parking pricing will be a gradual process as the district develops, but parking pricing will be key to encouraging the use of alternatives modes and helping create a balance between parking supply and parking demand.

Carsharing

As discussed in the parking requirements section above, including shared vehicles in parking plans is a key tool for helping reduce vehicle ownership. To further increase the use of carsharing it is recommended that the City of Redmond consider requiring new residential and commercial

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4 Ibid.
5 Litman, T. Parking Management; Strategies, Evaluation and Planning. Victoria Transport Policy Institute, February 2011
6 Litman, T. Safe Travels; Evaluating Mobility Management Traffic Safety Impacts. Victoria Transport Policy Institute, November 2004
developments to partially or fully cover the cost of a carshare membership for their employees and residents. Carsharing companies often have a corporate rate structure that can provide discounted membership rates compared to cost to purchase individual memberships.

**Eco-Passes**

In recent years, growing numbers of transit agencies have teamed with universities, employers, building developers, or entire districts or neighborhoods to provide universal or subsidized transit passes to certain riders (students, employees, etc). These passes typically provide unlimited transit rides on local or regional transit providers for a low monthly fee, often absorbed entirely by the employer, school, or developers.

This type of program is effective in helping reduce the drive-alone mode share. Studies show reductions in drive-alone mode share of 4% to 42%, with an average reduction of 19%. In addition, these case studies show a wide range of increased transit mode share of between 25% and 145% with an average rise of 95%.

In the Puget Sound Region the ORCA Passport program provides participating employees with unlimited rides on regular bus services on Community Transit, Everett Transit, Kitsap Transit, Metro Transit, Pierce Transit, and Sound Transit, Sound Transit Link light rail, Sound Transit Sounder commuter rail (including Rail Plus partnership with Amtrak Cascades), Seattle Lake Union Streetcar, King County Water Taxi (Vashon and West Seattle routes), and Kitsap Transit Foot Ferry (Port Orchard and Annapolis routes) in addition to other services.

The City of Redmond can consider requiring new employers to participate in the ORCA Passport program or provide subsidized transit passes.

**Parking Cash-Out**

In the Overlake District some employers may choose to provide free or reduced-price parking for their employees as a fringe benefit. Under a parking cash-out requirement, employers are allowed to continue this practice on the condition that they offer the cash value of the parking subsidy to any employee who does not drive to work. Offering employees the option of “cashing out” their subsidized parking space can incentivize employees to ride transit, bike, walk, or carpool to work, thereby reducing vehicle commute trips and emissions.

Research performed by Donald Shoup at the University of California–Los Angeles found that single occupancy vehicle trips declined by 17% and other modes increased significantly (carpooling by 64%, transit by 50%, and walking/biking by 33%) after a parking cash-out program was introduced at various urban and suburban worksites with varying levels of transit service.8

**Phasing and Monitoring**

The parking management strategy has been designed to take into account shifting parking needs as the district develops. Prior to the arrival of light rail service, it is assumed that parking demand will be higher than in later years as transportation options and TDM programs become more robust. The creation of a parking supply in early stages of development will also help create a pool

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of parking that can provide opportunities for sharing. Parking requirements have been broken out into three time periods: near-term or prior to the opening of the light rail station, mid-term or after the opening of the light rail station, and long-term.

The exact time frame for mid and long-term time periods has not been set as it is dependent on a number of additional trigger points that will affect parking supply and demand. As noted above, the first key trigger point is the arrival of light rail service. Once light rail service is in operation, the two additional trigger points will need to be monitored to determine when parking requirements should be adjusted.

The first additional trigger is parking utilization. An optimal utilization rate for on-street parking is 85%, and 90% to 95% for off-street parking, depending on the type of user group. When parking utilization rates are below these optimal rates, supply is sufficient to meet demand. When parking utilization rates are nearing 100%, parking demand must be reduced or additional supply is needed.

The second additional trigger is the percentage of development completed or the completion of one or more cornerstone sites. When the percentage of completed development nears 50% or one or more cornerstone sites has been redeveloped, an evaluation of the existing parking supply should be conducted to determine parking utilization rates, total number of spaces constructed, and the number of spaces that are being shared. The evaluation could find that additional supply is still needed to meet demand, or that a sufficient shared parking supply is being created.

What is considered a sufficient parking supply is also dependent on how much parking the district will need as a whole to serve all projected uses. A base case analysis of the necessary future parking supply was conducted in the Overlake Parking Management Plan. This analysis used existing parking ratios to estimate the total future supply based on the proposed land uses for the district. However, this does not reflect the assumption that parking demand will decrease over time due to the introduction of new transit service and TDM measures, and may not accurately reflect the efficiencies gained by shared parking under the new minimum and maximum parking requirement structure. Nor does it take into account the mode share goals for the district. While monitoring parking utilization provides a proxy for determining if there is sufficient supply to meet demand, a refined future parking supply analysis would provide the City with an additional metric for monitoring parking and trigger points.

In order to proactively adjust parking requirements to reflect these various factors, a monitoring program is necessary to determine when trigger points have been reached and long-term parking requirements should be enacted. Monitoring should occur on an annual basis within two years of the opening of light rail service. Parking utilization and turnover data for on-street and off-street (selected lots) parking should be collected as well the percentage of completed development.

In addition, employee and resident mode split should be tracked to determine progress towards the Comprehensive Plan’s goal of 40% non-auto share. It should be noted that the monitoring program will also enable the City to track issues such as spillover parking, and can inform the appropriate timing for implementation of other programs such as time limits, parking pricing, and residential parking permits.

The proposed monitoring program will require oversight and management. As recommended in the Overlake Parking Management Plan, the City could create a Parking Manager Coordinator position and establish a parking advisory committee. The City could also work with the existing Redmond TMA to see if they could oversee portions of the monitoring program such as the employee or resident survey.
6 PARKING AND TDM: 130TH AVE NE CONTEXT AND RECOMMENDATIONS

INTRODUCTION

This chapter recommends a set of policies and practices to support implementation of transit-oriented development (TOD) in the vicinity of the East Link Station at 130th Avenue NE in Bellevue, and to effectively manage demand for access and parking to serve the station and nearby TOD sites. The intent of these recommendations and the associated analysis and summary of existing conditions is to support the City and Sound Transit in evaluating near and long-term tradeoffs in use of land and the supply and management of parking in the Station Area.

OVERVIEW

Sound Transit is currently planning to offer off-street parking (300 surface spaces) for use by commuters adjacent to the 130th Avenue NE Station in Bellevue. Both Sound Transit and the City of Bellevue maintain an interest in planning for the management of parking at the station and in the surrounding area to enable and support TOD in the wider station area. These partners also support the eventual transition of the area in the immediate vicinity of the station from a place primarily for parking to a TOD site with a mix of land uses that have direct pedestrian access to the station.

To support the City of Bellevue, Growing Transit Communities, and Sound Transit in evaluating near- and long-term tradeoffs in the use of land and the supply and management of parking in the station area, this chapter provides:

- A review current Sound Transit and City of Bellevue plans and policies for land in the immediate vicinity of the station, including selected parcels currently owned by Sound Transit, and the larger station area.
- A summary of key issues and opportunities related to station access and parking management in the 130th Avenue NE Station Area, including considerations related to the phasing of implementation of East Link light rail (pre-construction, during construction, after opening, and long-term) and phased planning and implementation of transit oriented development in the station vicinity and the larger station area.
- A high-level analysis of potential future effects on East Link ridership of alternative TOD and commuter parking supply scenarios developed by the Otak Project Team, in

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1 This vision is supported along with a commitment to provide some near-term parking at the station to serve commuter park and ride demand.
collaboration with the City of Bellevue and Sound Transit, based on a comprehensive review of the literature and evidence of local transit ridership patterns

- Identification of opportunities for shared parking, with allowance for commuter parking in existing or new off-street parking facilities within the station area.
- High level recommendations for station area transportation demand management (TDM) based on best practices for transit oriented communities.

**LOCAL CONTEXT**

**Existing Conditions**

The area within one half mile of the 130th Street NE station area is currently defined largely by warehouses, commercial, and light industrial uses, with residential uses limited to the southern half of the station area. The station area is bisected by Bel-Red Road, a principal east-west arterial roadway linking the Overlake area of Redmond with Downtown Bellevue. North of Bel-Red Road, a variety of commercial uses, including light industrial and warehousing, are surrounded by parking lots, producing large swaths of impervious surfaces and inactive spaces. South of Bel-Red Road, a variety of single family and multi-family residences are found alongside the riparian buffer of Kelsey Creek. Green space is interspersed throughout the southern portion of the station area. There are a total 20 centerline miles of roads and less than four miles of marked bike lanes. Approximately 70% of roads have sidewalks on at least one side.

A disconnected street grid pattern predominates, limiting multimodal access and connectivity to and circulation within the station area. In the light industrial areas north of Bel-Red Road surface parking lots, vegetated barriers, and a lack of sidewalks limits pedestrian permeability. To the south of Bel-Red Road, the curvilinear street pattern offers no east west connections and the streets all lack sidewalks.

The principal arterials within one half mile of the station are Bel-Red Road and Northup Way. Both are four-lane roads with center turn lanes, no bike lanes, sidewalks that are directly adjacent to travel lanes (with no buffer zone), and few crosswalks or safe crossing opportunities.

The north-south connectors north of Bel-Red Road, 130th Avenue NE and 132nd Avenue NE, are two lane roads with on-street parking on both sides, no bicycle facilities and discontinuous sidewalks. The north-south connectors south of Bel-Red Road, 132nd Ave NE and 134th Avenue NE, are two lane roads with a suburban, vegetated streetscape. Along these connectors there are no sidewalks or designated bicycle facilities. Both roads feature traffic calming elements of signed and painted speed bumps and lanes narrowed by fog lines.

Generally, land uses are set back from the roadways, most often contained by surface parking. Surface parking is a major land use, more than 100-acres of the 502-acre station area are currently utilized as surface parking areas.

Other major land uses within one half mile of the 130th Avenue NE station include King County’s Bellevue Metro Transit Base and Pacific Top Soil’s 10-acre landscape material yard in the northwest section of the station area. Northeast of the station location are several commercial shopping centers and an automobile dealership.

Because of the existing commercial uses in the area there are few people living in close proximity to the station. Within one quarter-mile there are no residents. Within the half-mile station area,
population density is approximately 10 persons/per acre. Despite the many commercial land uses, employment density within the station area is approximately 15 jobs per acre².

**Sound Transit Design for 130th Ave NE Station**

Sound Transit’s plans for the 130th Avenue NE station site include designs for a 300-stall surface park-and-ride lot. Sound Transit has produced a number of planning documents related to the Bel-Red/Overlake segment of the East Link Extension. These documents support the Environment Impact Statement and help coordinate Bellevue’s transportation and land use plans for the area. The Sound Transit Neighborhood Context Plan illustrates designs including improved access through street connections, continuous sidewalks, and bicycle access through a network of lanes.

![Figure 6-1 Sound Transit Design for East Link Station at 130th Avenue NE](http://www.soundtransit.org/Documents/pdf/projects/eastlink/201309_BelRed60_Presentation.pdf)

Sound Transit Design for 130th Avenue NE Station, showing potential Transit –Oriented Development in the background.

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² Estimated for the 130th Avenue NE Station Area, based on information provided in the Transit Community Typology Data Work Session, May 30, 2012, a presentation of the PSRC Growing Transit Communities Partnership.
Sound Transit is in the process of designing a 300-space surface parking lot on three parcels it owns north of 130th Ave NE Station.

**Bel-Red Subarea Plan**

Most recent transportation and land use planning for the 130th Avenue NE station area has been conducted by the City of Bellevue. The Bel-Red Subarea Plan (2010) was completed to guide the area’s transition from a largely industrial 900-acre corridor in Bellevue located between Downtown Bellevue and the Overlake neighborhood of Redmond. The Subarea is bordered by Interstate 405 to the west, 148th Avenue Northeast to the east, State Route 520 to the north, and Bel-Red Road to the south.

The Bel-Red Subarea Plan provides guidance toward the 2030 vision for Bel-Red as an “area that is unique within the city, where thriving businesses will be adjacent to, and sometimes mixed with, livable neighborhoods, all served by a multi-modal transportation system that connects the area to the greater city and region.” The primary objectives of the Bel-Red Subarea Plan are to encourage sustainable urban development patterns, support transportation improvements, and maintain existing businesses as the area transitions.

The plan focuses growth in several nodes, including one centered on the 130th Avenue NE station area. The goals of land use changes in the subarea are to develop a land use pattern that is “environmentally sustainable and economically vibrant,” and that “creates distinctive new commercial and residential neighborhoods.” Noting that the area has a thin and discontinuous...
transportation network, the transportation goal of the subarea plan is to “create a more complete, connected, and well balanced transportation system, while protecting neighborhoods from spillover traffic impacts.” These changes to the transportation system are intended to “contribute to the area’s sense of place and sustainability.”

### Figure 6-3 Relevant policies of the Bel-Red Subarea Plan

<table>
<thead>
<tr>
<th>Policy</th>
<th>Policy Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Transportation Policies: S-BR-53</td>
<td>“Identify and preserve necessary rights of way for the transportation projects identified in this Plan by ensuring that proposed site and building development plans are compatible with the planned transportation system.”</td>
</tr>
<tr>
<td>Roadways: S-BR-55 and S-BR-60</td>
<td>“Extend and expand NE 16th Street as a multi-modal corridor that includes vehicular, high capacity transit, and non-motorized travel modes to serve east-west trip demand across the Bel-Red Area.” “Include on-street parking where it contributes to the pedestrian environment and other elements of the desired neighborhood character.”</td>
</tr>
<tr>
<td>Pedestrian and Bicycle System: S-BR-62 through S-BR-66</td>
<td>“Include pedestrian and bicycle facilities in the design of arterials and local streets.” “Improve pedestrian connectivity and the quality of the pedestrian environment with a comprehensive sidewalk and trail system...” “Develop a multi-use trail system through the Subarea...”</td>
</tr>
<tr>
<td>Transit: S-BR-67, S-BR-68</td>
<td>Work with King County Metro and other transit providers to serve emerging new land uses in the Bel-Red Subarea...” “Work with Sound Transit to realize the City’s preferred light rail route, alignment and station locations... Support the development of light rail stations in the vicinity of... 130th Avenue NE/NE 16th Street.”</td>
</tr>
<tr>
<td>Transportation Demand Management: S-BR-71, S-BR-72, S-BR-73, S-BR-74</td>
<td>Implement a transportation demand management program to reduce Bel-Red single-occupancy trip demands...” “Manage the parking supply and consider establishing maximum parking requirements to encourage the use of transit, ca/van pool, and non-motorized commute options.” “Promote the development and management of parking supply to encourage the use of transit, ca/van pool and non-motorized commute options...”</td>
</tr>
</tbody>
</table>

Bellevue Ordinance Number 5874 amended the Bellevue Land Use Code, rezoning the 900-acre Bel-Red area and applying a new set of development regulations; both of which are necessary for Subarea Plan implementation. These changes allow for higher density development to be clustered around the 130th Avenue NE station and support the Bel-Red Subarea Plan’s transition the area from light industrial uses to a mix of retail, office, and residential uses. Included in these adopted changes are new off-street parking requirements for various land uses. (Figure 6-4).

Of note, development near the 130th Avenue NE station is in a designated development node where special requirements and changes to the parking standards have been made. Inside nodes, “no parking is required for retail and restaurant and/or bar uses under 2,000 nsf when the use is: directly adjacent to a public on-street parking supply of at least 20 spaces within 500 feet, within 1,000 feet of a public parking garage, or within 500 feet of a light rail or bus rapid transit station.” Adjustments have also been made for affordable housing units. “The minimum requirement for up to and including one bedroom apartment units available to person earning 60 percent or less than the median incomes... is 0.25 stalls per unit. An agreement to restrict the rental or sale of...
any such units to an individual earning 60 percent of less of the median income shall be recorded with King County.” Additional adjustments are made to allow off-site parking to meet minimums and phased parking strategies than may demonstrate a reduced need for off-street parking supply.

### Figure 6-4  Off-Street Parking Requirements for the Bel-Red Subarea

<table>
<thead>
<tr>
<th>Use</th>
<th>Unit of Measure</th>
<th>MO-1, OR-1, OR-2, RC-1, RC-2, RC-3</th>
<th>MO, OR, RC, CR, GC, R, ORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Financial Institution</td>
<td>Per 1,000 nsf</td>
<td>2.0</td>
<td>3.0/3.5 (1)</td>
</tr>
<tr>
<td>b. Manufacturing/Assembly</td>
<td>Per 1,000 nsf</td>
<td>1.0</td>
<td>2.0</td>
</tr>
<tr>
<td>c. Home furnishings-retail and major appliances-retail</td>
<td>Per 1,000 nsf</td>
<td>1.5</td>
<td>3.0</td>
</tr>
<tr>
<td>d. Manufacturing/assembly (other than high technology/ light industry)</td>
<td>Per 1,000 nsf</td>
<td>1.0</td>
<td>1.5</td>
</tr>
<tr>
<td>e. Office: Business services/professional services/general office</td>
<td>Per 1,000 nsf</td>
<td>2.0</td>
<td>3.0/3.5 (1)</td>
</tr>
<tr>
<td>f. Office: Medical/dental/health related services</td>
<td>Per 1,000 nsf</td>
<td>3.5</td>
<td>4.0/4.5 (1)</td>
</tr>
<tr>
<td>g. Residential (5)</td>
<td>Per unit</td>
<td>0.75</td>
<td>2.0</td>
</tr>
<tr>
<td>h. Restaurant and bar (3)</td>
<td>Per 1,000 nsf</td>
<td>5.0 (4)</td>
<td>15.0</td>
</tr>
<tr>
<td>i. Retail, person service, shopping center</td>
<td>Per 1,000 nsf</td>
<td>2.5 (4)</td>
<td>4.5</td>
</tr>
<tr>
<td>j. Retail and personal service in mixed-use development (2,3)</td>
<td>Per 1,000 nsf</td>
<td>2.0</td>
<td>3.5</td>
</tr>
<tr>
<td>k. Senior housing: Nursing home</td>
<td>Per patient bed</td>
<td>0.25</td>
<td>0.75</td>
</tr>
<tr>
<td>l. Senior housing: Senior citizen dwelling or congregate care</td>
<td>Per living unit</td>
<td>0.25</td>
<td>1.0</td>
</tr>
<tr>
<td>m. Wholesale, warehouse</td>
<td>Per 1,000 nsf</td>
<td>1.5</td>
<td>2.0</td>
</tr>
</tbody>
</table>

130th Avenue NE Station Area Plan

The City of Bellevue’s 130th Avenue NE Station Area Plan articulates the City’s vision for transportation changes and coordinated development in the adjacent area. The Plan builds on the Bel-Red Subarea Plan and proposes measures to leverage the opening of light rail service in 2023 as a catalyst for redevelopment in the area. The Plan prepares the area within one quarter mile radius around the 130th Avenue NE station for land use, transportation, parks, and natural environment changes.

While the plan does not include formal goals, it supports and reinforces the Bel-Red Subarea Plan’s vision and goals. In the 130th Avenue NE Station Area Plan, these goals are articulated visually with a number of streetscape cross section designs and conceptual renderings of station area development. These renderings include planned cycle tracks/buffered bike lanes, bicycle boulevards, transit streets, trails, and pedestrian facilities. Street connectivity is shown to make improvements for all modes, especially for pedestrian permeability and access.

The 130th Ave NE Station Area Plan also identifies certain locations within the larger half mile station area as potential catalyst redevelopment opportunity areas. One such area, is referred to as the “Evans Properties,” is located southwest of the station, across 130th Avenue NE. This area has an “enhanced propensity for redevelopment,” due to the size of the land parcels, ability to control amenities, strategic location near the station and planned parks/open space, and a relatively low ratio of building value to land value. The plan identifies the Evans Properties as a potential location for a “commuter/shared parking garage lined with other uses.”

Figure 6-5: 130th Ave NE Station Area Plan: Pedestrian Network Analysis

The 130th Avenue Station Area Plan demonstrates the importance of a grid street patterns for pedestrian accessibility in the station area. The map at left shows areas within a five and ten minute walking distance of the planned 130th Ave NE Station, via the current network of streets and paths, while that at right shows the more expansive area that will be accessible within easy walking distance of the station after planned street projects are completed forming a grid pattern within the Bel-Red Subarea.
TRANSIT RIDERSHIP EVALUATION

This memo provides an initial assessment of the potential impact on East Link ridership (average weekday boardings) of several alternative scenarios for the use of four parcels of land located immediately north of the 130th Avenue NE Station in Bellevue. Current Sound Transit plans call for the development of a 300 stall surface parking lot for transit commuters on three of the four parcels that are owned by the agency. Consistent with the focus of the Puget Sound Regional Council’s (PSRC) Growing Transit Communities Program on equitable transit oriented development (TOD), the Otak Project Team for the East Corridor TOD Implementation Support project is using a charrette planning process to evaluate the viability and potential impacts of alternative uses for these parcels of these accessible parcels of land and alternative means of managing parking and station access. This section is intended to inform planning and evaluation of alternative parking and development scenarios for the 130th Ave NE Station Area by comparing the transit ridership likely to be generated by using the land for TOD (both with and without dedicated commuter parking facilities) as opposed to development of a surface park and ride lot.

After a brief overview of the scenarios to be evaluated, findings for each step of the analysis are presented, followed by a summary and comparison of the estimated weekday average daily volume of Link trips generated by each of the scenarios.

Scenarios Evaluated

Nelson\Nygaard evaluated the transit ridership impacts of variants of three primary development scenarios for three Sound Transit-owned parcels of land immediately north of the 130th Avenue NE Station. These scenarios were developed by the Otak Project Team, in consultation with PSRC, the City of Bellevue, and members of the East Corridor Task Force (these scenarios are referred to as ‘A’, ‘B’ and ‘C’ respectively in Otak Charrette planning materials). This section describes these primary Otak Team scenarios, along with a few optional alternatives developed in concept by Nelson\Nygaard (Additional details of each scenario, including the total number of market-rate and below market-rate housing units and the total square footage of commercial development associated with each, are provided in the detailed ridership assessment tables provided in Figure 6-6, and Figure 6-7, below).

- **A1** (Scenario A from Otak’s September 27 TOD Opportunity Study Package) assumes the following development outcomes:
  - **Parcel 1**: Park and ride with ground floor active uses
  - **Parcel 2**: Mixed-use residential in 5+1 wood over concrete with structured parking above and below grade.
  - **Parcel 3**: Mixed-use residential in 5+1 wood over concrete with structured parking above and below grade.

- **A2** is a variant of Scenario A from the July Charrette materials, evaluated pro-forma by BAE. This alternative is similar to A1, but includes residential development with 40% of units restricted to rates affordable to low-income households. This scenario assumes that any commuter parking garage is constructed in addition to the parking serving the TOD, and that such parking is funded/financed separately from the TOD.

- **B1** (Scenario B from September 27 TOD Opportunity Study Package) assumes the following development outcomes:
  - **Parcel 1**: Mixed-use residential in 5+1 wood over concrete with structured...
parking above and below grade.
  o Parcel 2: Mixed-use residential tower maximum height 150’, steel and concrete with structured parking above and below grade.
  o Parcel 3: Park and ride with ground floor active uses.

- **B2** is a variant of Scenario B from September 27 Charrette Program. This scenario assumes that the transit parking garage located on the southeast parcel in Scenario B1 is replaced with a six-story residential/mixed-use building, equivalent to that planned for the same quadrant in Scenario C (as defined in the charrette planning summary documents prepared by Otak on July 3, 2013. This includes a six-level structure with 130 residential dwelling units, 16,000 square feet of commercial development on the ground floor and 143 parking spaces, including one level of underground parking (Note: the total assumed floor-plate of this structure is approximately 198,000 square feet).

- **C** (Scenario B from September 27 TOD Opportunity Study Package) assumes the following development outcomes:
  o Parcel 1: Transit garage with ground floor retail, combined with residential “wrap” and additional parking, 5+1 wood over concrete with structured parking above and below grade.
  o Parcel 2: Townhomes, 3 stories, wood with at-grade parking
  o Parcel 3: Mixed-use residential in 5+1 wood over concrete with structured parking above and below grade.

**Scenario D – NE quadrant**

In addition to variants of options A, B and C for the three Sound Transit-owned parcels, the Otak team evaluated options for and potential impacts of development on a fourth parcel north of the station, which is privately owned. This was conceptualized by the project team as a site appropriate for an independent project (Scenario D) that could be implemented with or without any of the options (A, B or C) for development on the three Sound Transit owned parcels. Note that the development evaluated in D represents an optional project on the northeast quadrant of the charrette study area on a parcel of land that is privately owned, but bordered to the south and west by Sound Transit owned parcels. The consultant team’s planning assumption for this parcel is that it is an optional development site and any project developed there could be combined with any of the other Scenarios (A, B, or C) for development of the Sound Transit owned parcels.
Figure 6-6  Ridership Evaluation of Alternative Scenarios for Parking and TOD, 130th Ave NE Station, Assumptions

<table>
<thead>
<tr>
<th>DEVELOPMENT SCENARIO</th>
<th>No TOD</th>
<th>A1</th>
<th>A2</th>
<th>B1</th>
<th>B2</th>
<th>C</th>
<th>D (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Units</td>
<td>0</td>
<td>224</td>
<td>220</td>
<td>310</td>
<td>479</td>
<td>218</td>
<td>126</td>
</tr>
<tr>
<td>Trip Generation Rate¹</td>
<td>n/a</td>
<td>6.23</td>
<td>6.23</td>
<td>6.23</td>
<td>6.23</td>
<td>6.23</td>
<td>6.23</td>
</tr>
<tr>
<td>Total Residential Trips Generated</td>
<td>0</td>
<td>1396</td>
<td>1371</td>
<td>1931</td>
<td>2984</td>
<td>1358</td>
<td>785</td>
</tr>
<tr>
<td>Est. Share of Travel by HH living in MR Units</td>
<td>n/a</td>
<td>80.0%</td>
<td>60.0%</td>
<td>80.0%</td>
<td>80.0%</td>
<td>88%</td>
<td>80.0%</td>
</tr>
<tr>
<td>Est. Share of Travel by HH living in BMR units, with Vehicles</td>
<td>n/a</td>
<td>10.0%</td>
<td>20.0%</td>
<td>10.0%</td>
<td>10.0%</td>
<td>6%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Est. Share of Travel by HH with No Vehicle Available²</td>
<td>n/a</td>
<td>10.0%</td>
<td>20.0%</td>
<td>10.0%</td>
<td>10.0%</td>
<td>6%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Est. Total Trips by HH w/ No Vehicle Avail.</td>
<td>0</td>
<td>140</td>
<td>274</td>
<td>193</td>
<td>298</td>
<td>81</td>
<td>78</td>
</tr>
<tr>
<td>Est. Total Trips Gen. by HH w/ Vehicle</td>
<td>0</td>
<td>1256</td>
<td>1096</td>
<td>1738</td>
<td>2686</td>
<td>1277</td>
<td>706</td>
</tr>
</tbody>
</table>

**Residence-Work/School Trips (HH with Vehicles)**

| Trips Generated: All HH | 0 | 314| 274| 435| 671| 319| 177         |
| Pct. of Trips Captured by Link³ | n/a | 41%| 41%| 41%| 41%| 41%| 41%       |
| Link Trips Generated | 0 | 127| 111| 176| 272| 129| 72          |

**Residence-Other Trips (HH with Vehicles)**

| Trips Generated | 0 | 942| 822| 1304| 2014| 957| 530         |
| Pct. of Trips Captured by Link³ | n/a | 9%| 9%| 9%| 9%| 9%| 9%       |
| Link Trips Generated | 0 | 81| 70| 111| 172| 82| 45          |

**Residence- All Trips (HH w No Vehicle)**

| Trips Generated | 0 | 140| 274| 193| 298| 81| 78          |
| Pct. of Trips Captured by Link³ | n/a | 52.1%| 52.1%| 52.1%| 52.1%| 52.1%| 52.1%       |
| Link Trips Generated | 0 | 73| 143| 101| 155| 42| 41          |
| Residence: Subtotal: Link Trips | 0 | 280| 324| 388| 600| 254| + 158       |
## Ridership Impacts of Alternative Scenarios for Parking and TOD, 130th Ave NE Station

<table>
<thead>
<tr>
<th>DEVELOPMENT SCENARIO</th>
<th>No TOD</th>
<th>A1</th>
<th>A2</th>
<th>B1</th>
<th>B2</th>
<th>C</th>
<th>D (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>0</td>
<td>43,000</td>
<td>35,600</td>
<td>62,400</td>
<td>78,400</td>
<td>22,800</td>
<td>0</td>
</tr>
<tr>
<td>Commercial Retail Space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trip Generation Rate&lt;sup&gt;7&lt;/sup&gt;</td>
<td>n/a</td>
<td>60.89</td>
<td>60.89</td>
<td>60.89</td>
<td>60.89</td>
<td>60.89</td>
<td>n/a</td>
</tr>
<tr>
<td>Trips Generated</td>
<td>0</td>
<td>2618</td>
<td>2168</td>
<td>3800</td>
<td>4774</td>
<td>1388</td>
<td>0</td>
</tr>
<tr>
<td>Pct. of Trips Captured by Link&lt;sup&gt;8&lt;/sup&gt;</td>
<td>n/a</td>
<td>11.7%</td>
<td>11.7%</td>
<td>11.7%</td>
<td>11.7%</td>
<td>11.7%</td>
<td>n/a</td>
</tr>
<tr>
<td>Commercial Subtotal: Link Trips</td>
<td>0</td>
<td>306</td>
<td>254</td>
<td>445</td>
<td>559</td>
<td>162</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parking</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Commuter Parking Spaces</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>325</td>
<td>10</td>
<td>295</td>
<td>0</td>
</tr>
<tr>
<td>Daily Turnover (vehicles/space/day)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>Persons per vehicle</td>
<td>1.23</td>
<td>1.23</td>
<td>1.23</td>
<td>1.23</td>
<td>1.23</td>
<td>1.23</td>
<td>n/a</td>
</tr>
<tr>
<td>Subtotal: Link Trips Generated by Station Parking</td>
<td>369</td>
<td>369</td>
<td>369</td>
<td>400</td>
<td>12</td>
<td>363</td>
<td>0</td>
</tr>
</tbody>
</table>

| Total: Link Trips Generated (Avg. Weekday) | 369 | 956 | 947 | 1232 | 1170 | 779 | + 158 |

(1) Average of ITE average daily (weekday) trip generation rates for Land Uses 220 (Apartment) and 230 (Residential condo/townhouse)(Trip Generation [2009], 9th Edition, Institute for Transportation Engineers)

(2) Estimated to be 50% of hh living in BMR units, based on evidence from the San Diego Affordable Housing Parking Study (20)

(3) 25% work trip share from Willson (2004), *BART Replacement Parking Methodology*.


(6) Estimated transit trip capture for travel generated by HH in BMR units is derived from evidence in Lund, et. al (2004) (Assumes 2/3 of transit trips generated by hh living in BMR units will be on East Link).

(7) Source: Referenced in Willson (2004), *BART Replacement Parking Methodology*

Ridership Impacts of Alternatives

Figure 6-8 shows the daily East Link ridership projected for each alternative scenario for parking supply and TOD on the Sound Transit owned parcels north of the 130th Avenue NE Station. For illustrative purposes, the chart shows a total for each alternative including 158 daily trips associated with private development on the NE quadrant (assuming implementation of Option D). Key findings are as follows:

- For comparison, Nelson\Nygaard estimates that the current plan for a 300-space parking lot on the ST owned parcels would generate an average of 369 transit trips per weekday.
- Among the scenarios defined for the charrette, the highest ridership estimate for the three Sound Transit owned parcels is generated by Scenario B1, which is projected to generate 1,232 daily trips on East Link, including 833 trips associated with TOD and 400 trips generated by commuter parking. With the addition of Option D on the NE parcel, total ridership associated with parking and development north of the station would rise to 1390 daily trips.
- Alternative B2, with additional TOD on the SE parcel, in lieu of structured parking is projected to result in 1,170 daily trips on East Link, with all but 12 daily trips associated with TOD (This alternative envisions a small supply of 10 shared parking spaces that are not necessary to meet TOD demand and therefore available for shared use by commuters.
- The lowest ridership of the TOD options is Scenario C with 779 daily trips, including 416 generated by TOD and 363 associated with commuter parking.

Figure 6-8  East Link Transit Ridership Projected for each Alternative
RECOMMENDATIONS

This section provides conceptual recommendations for how the 130th Avenue NE Station site and the surrounding station area can transition from a commuter parking lot and surrounded predominantly by low-density commercial/industrial land uses, to a vibrant urban center with a complementary mix of land uses and activities that generates and attracts travel by light rail and other non-auto modes of transportation. This includes high-level recommendations for (1) on-street and off-street parking management and (2) station area transportation demand management (TDM) strategies based on best practices for transit oriented communities.

Phasing

As with the Overlake Village Station in Redmond, this Chapter includes a recommendation that the strategies, policies, practices and programs related to the supply, regulation and management of off-street and on-street parking and the provision of TDM services be implemented in phases, and adjusted as development proceeds, as necessary, in concert with changes in transit service, and observed travel and parking patterns in the area.

Given uncertainty about the pace and scale of potential TOD, the timing and requirements for use of land near the station for Light Rail construction staging, and the ultimate demand for commuter parking after East Link opens, it is impossible to specify an exact date for the start and end of each phase of implementation at this time. Nevertheless, appropriate parking and TDM programs and policies are likely to differ in correspondence with each of the phases and associated milestones shown in Figure 6-9. In order to plan effectively in the face of uncertainty about the timing of some of these factors – particularly the pace of development, the City of Bellevue and its partners at Sound Transit may opt to formally establish triggers for policy / program changes associated with specific milestones and/or with changes to parking and travel patterns revealed during the recommended monitoring.
Figure 6-9  Milestones Affecting Appropriate Parking/TDM Phasing and Implementation

<table>
<thead>
<tr>
<th>#</th>
<th>Phase</th>
<th>Potential Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Pre-Construction: 2013 until major construction begins on East Link and/or the new Bel-Red street grid (including 15th and 16th)</td>
<td>Concurrent construction on new street segments in station area per Bel-Red Subarea Plan</td>
</tr>
<tr>
<td>II</td>
<td>Construction: East Link and Bel-Red street network under construction</td>
<td>Part of Sound Transit owned parcel(s) in vicinity of station used for light rail construction staging. Potential completion of initial TOD project(s) on ST parcel(s) or other “opportunity areas” identified in 130th Ave NE SAP. Opening of the first transit-oriented project in the station area will be a significant milestone. Initial adjustments to local transit network to provide service to new TOD site.</td>
</tr>
<tr>
<td>III</td>
<td>East Link Initial Service (2023-2030): The first years after East Link begins service will likely be an adjustment period for travelers, planners and the real-estate market.</td>
<td>Local transit network re-oriented to avoid duplication with/ enhance connections to East Link Continued TOD implementation per BelRed Subarea Plan</td>
</tr>
<tr>
<td>IV</td>
<td>Post-2030: Beyond 2030, both the station area and transit network reach maturity</td>
<td>Complete buildout of first generation of TOD in near station parcels. East Link extension to Downtown Redmond complete; other Link extensions enhance accessibility and demand for space near 130th Station.</td>
</tr>
</tbody>
</table>

Phased, Adaptive Management of Parking Supply and Management Strategies

During the first two phases of station area development (Phase I: Pre-Construction, and Phase II: Construction), a significant amount of land will remain available for surface parking on vacant parcels, and located behind or in some cases to the side of new buildings. Completion of the new streets and streetscape improvements planned for the 130th Avenue NE Station Area in the Bel-Red Subarea Plan will allow for the supply of new on-street parking and loading zones (on curb space that is not prioritized for buses, shuttles, or taxis). In subsequent phases of development (Phases II, III, and IV): the supply of parking may be more constrained, as redevelopment occurs and new buildings are developed on vacant land and on selected surface parking lots. During this second phase, the number of parking spaces (both on street and off-street) provided for every 1000 square feet (Gross Floor Area) and for every residential unit developed can be lower than in the first phase. Factors reducing demand for parking in Phase II include the following:

1. With improved transit service, and an increase in the development of new uses and activities on each site, more residents and visitors will be able to access more goods and services locally, without driving.

2. At the same time, the high capital cost of structured parking will encourage property owners and tenants to economize on parking, sharing existing parking facilities where possible, and
adopting pricing, policies and regulations that encourage shared use and high turnover to ensure parking availability.

The key to getting the supply right and ensuring the availability of parking during later phases is to collect comprehensive data on parking patterns on-site, on-street, and in the surrounding neighborhoods during each phase. Survey data on observed peak period utilization rates on-street and in off-street lots can help inform the City and property-owners’ decisions about the appropriate supply of parking for each new phase of development, and the appropriate pricing and regulatory measures to take to maintain parking availability near the station and prevent spillover parking impacts to surrounding neighborhoods.

**Off-Street Parking Supply and Management**

This section provides recommendations for off-street parking supply and management for parcels in the immediate vicinity of the 130th Ave NE Station, including those parcels currently owned by Sound Transit, and in the wider station area.

**Evaluate Costs and Ridership Impacts of Alternative Access Investments**

Sound Transit and/or the City of Bellevue should take the opportunity to expand upon the ridership assessment conducted for this project, by evaluating the relative ridership and financial impacts of dedicating a share of limited station access/ridership development funding into infrastructure, services, and incentives for the use of non-auto modes of transportation. The ridership, and financial impacts of alternative parking pricing structures (i.e. Full production cost pricing vs. market-based pricing) can also be examined. Moreover, this multimodal perspective and concomitant focus on pricing should be key considerations during each phase of implementation.

**Fund Parking Costs with Parking Revenues**

As noted, Sound Transit has completed design work necessary to build a 300-space surface parking facility located immediately north of the planned rail line, for the exclusive use of transit riders. To facilitate TOD near the station where it offers the greatest ridership return on investment, Sound Transit has agreed to consider permitting TOD on one or more of the

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**Factors Affecting Ultimate Parking Supply**

Four factors typically affect how much parking is built in association with private development:

- **Zoning Requirements:** The parking requirements identified in the applicable zoning/land use development code;
- **Market Requirements:** The minimum amount of parking needed to finance, gain approvals for, and lease or sell the space;
- **Market Opportunities:** How many spaces can be built before their costs exceed the value added to the property; and
- **Projected Peak-Period Demand:** The maximum number of cars that will actually occupy a set of available parking spaces during a typical week, with given prices and regulations.

Historically, the first two have shown a tendency to require more parking than is necessary, particularly in urban, mixed-use environments such as that planned for the BelRed Subarea. By contrast, both market factors and observed peak demand at similar projects, tend to support the viability of projects with reduced parking supply. Together with enhanced accessibility by non-auto modes of transportation, projects with significantly reduced parking can reduce development costs, enhance project profitability, and reduce vehicle travel demand associated with the project. Where the first two factors require developers to build significantly more than is indicated by observed demand, or market factors, development interest declines and/or projects can be developed inefficiently, with expensive parking that is often unused.

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parcels currently planned for surface parking, so long as an equivalent amount of commuter parking is provided on surface and/or in structures within the development. To facilitate this move, the consultant team has considered one option under which Sound Transit would be asked to contribute to the cost of providing structured parking an amount equivalent to the cost it would otherwise incur to develop the surface parking lot. Although this offers a potential solution to bridge the gap in funding for structured commuter parking, it leaves a major funding gap and raises potential equity concerns. Because the cost per space of building structured parking (~$30,000 per space) is an order of magnitude higher than the cost per space of developing surface parking (~$3,000 per space), such a cost sharing agreement would leave the majority of the cost of building and maintaining these structured parking spaces on the shoulders of the private developers of the TOD (or the City). By extension, the cost of such parking would ultimately be born by consumers of housing (through higher rental /sale prices) or by funders of affordable housing through higher up-front costs.

To avoid burdening TOD and particularly affordable housing funders and developers with the cost of funding/financing the construction cost premium for structured commuter parking (an effective subsidy for auto access), all parties can work together to pursue a planning process to achieve a parking solution that (a) achieves the same level of access to East Link as the planned surface parking lot (i.e. generates similar or higher transit ridership), (b) does not substantially increase Sound Transit’s cost to provide station access, including parking, and (c) does not require diversion of limited transit service funding or affordable housing funding to construction of commuter parking.

Options worthy of consideration include:

- Reducing the supply of commuter parking (thereby reducing capital construction costs)
- Pricing commuter parking at/or near development cost (thereby raising revenue to cover capital and operating expenses for parking, while at the same time reducing demand for parking)
- Shared commuter use of private off street parking (new or existing), including a limited share of the parking constructed in association with residential uses.

These options are discussed further in the following section, which provides conceptual recommendations for station area parking supply, management, pricing and demand management.

**Reduce Commuter Parking Supply**

Consider reducing the supply of commuter parking in initial TOD projects on the Sound Transit owned parcels, after factoring in (a) the high cost of building structured parking and the potential need for investment in other access modes, (b) the effect of parking pricing (eliminating the effective subsidy for the construction, operation and maintenance of parking provided when transit agencies fund or develop commuter park and ride facilities), and (c) the cost and ridership/financial impacts of investment in alternative modes of access, such as secure bike parking, bike sharing, employer/neighborhood shuttles, ridesharing programs, etc. A reduced supply of dedicated commuter parking need not result in reduced transit ridership or loss of revenue for Sound Transit. As demonstrated in the ridership impact evaluation of Scenario B2, which replaces a commuter parking garage with additional mixed-use TOD in the vicinity of 130th Ave NE Station, a reduction in parking can result in increased ridership, if the land and financial resources for initially allocated for parking are re-purposed for trip generating TOD. Re-purposing funding for parking to other non-auto access strategies may also help mitigate any potential loss of ridership due to a reduction in station parking.
Enable Shared Use of Off-street Parking

All new non-residential off-street parking in the 130th Avenue NE Station Area should be planned as shared parking — spaces that are available for public use, rather than reserved exclusively for commuters or for the tenants and visitors associated with any particular property or set of properties. This greatly increases the capacity of the proposed supply in two ways:

- Internal Capture: by eliminating the need to "re-park", drivers can walk between local destinations, the total number of spaces required per trip; and
- Off-Setting Peaks: shared supplies make use of the fact that parking demand tends to peak at different times among different land uses to reduce the total supply needed to support all area destinations.

Sharing these spaces, while providing reserved parking for residents, will reduce the amount of parking necessary to:

- Accommodate demand generated by land uses on these key opportunity sites;
- Satisfy financial backers; and
- Maintain optimal market appeal.

Pursue Shared Use of Underutilized Spaces in Existing Lots

Before constructing new parking facilities, especially any parking facility that might be contemplated to accommodate demand for commuter parking (park and ride), the City and Sound Transit should investigate and pursue opportunities for the shared use of underutilized parking spaces in existing lots nearby. Figure 6-10 shows that a substantial amount of the land area within one quarter mile walking distance of the station is currently used for surface parking accessory to adjacent land uses. Much of it is likely underutilized during periods of peak demand for commuter parking. Although none of the existing surface lots in the vicinity of the station appear to have sufficient underutilized capacity to provide 300 spaces for use by commuters, this approach may be a key part of the puzzle necessary to make the 130th Avenue NE Station accessible. For example Sound Transit and the City of Bellevue could work with local property owners to identify and negotiate a lease agreement for shared commuter use of one or more small (20-100 parking spaces) underutilized surface parking lots during specified hours. City participation would be necessary to ensure that any participating private land-owner(s) could legally share dedicated off-street parking without violating existing City code requirements for active on-site land uses and activities.
One or more sites in the 130th Ave NE Station Area may contain a supply of underutilized parking available for commuter parking, or to support additional TOD.

**Consider Alternative Sites for a Shared Private/Commuter Parking Structure**

One of the key challenges of planning for access and TOD in the 130th Avenue NE is balancing Sound Transit’s interest in facilitating the provision of commuter parking for East Link riders with appropriate siting for TOD (the transit ridership generating impacts of TOD are higher the closer for development located within one-quarter mile of transit stations than for projects located farther away (one-quarter to one-half-mile away). One option to satisfy multiple interests in the station area would be for the City, Sound Transit and private developers (perhaps including not-for-profit affordable housing developers) to seek an alternative location for a commuter parking facility within the larger station area, leaving the Sound Transit owned-parcels that are currently slated for surface parking available for use in the near-term for light rail construction staging, and in the long-term for TOD, unencumbered by the full cost of commuter parking development (this assumes that commuter parking could be more easily financed on an alternate site if shared with market rate development). Off-site commuter parking would be especially appropriate to be shared with land uses, such as theaters, restaurants and other entertainment venues that have periods of peak demand that differ from the conventional midday peak for park-and-ride lots. The 130th Avenue NE Station Area Plan suggested several “opportunity areas,” outside of the Sound Transit owned parcels, with market conditions indicative of development readiness. In particular, the plan identifies an opportunity for a shared commuter parking facility on the Evans Properties located to the Southwest of the station (SW of 16th and 130th Avenue NE).

Source: City of Bellevue, Goff Creek/130th Avenue NE Station Area Planning, Presentation Display Boards (http://www.ci.bellevue.wa.us/pdf/PCD/130th_SAP_Disp_Bds.pdf).
Design Parking For Flexible Use

To support the shared use of new off-street parking resources and maximum adaptability to new conditions, parking facilities should be designed for flexible management and use. This means designing surface parking lots built during Phase I in a way that permits future conversion of lot corners to new TOD. This includes requiring that off-street facilities be constructed with vehicular and pedestrian entrances from the public right-of-way or other public space, rather than exclusively through private property. Additionally, both surface parking and structured parking that is initially intended for restricted use (most likely for dedicated use by residents) should be designed so that some or all restricted spaces may be converted to publicly available spaces in the future. This means 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 designing lot circulation patterns to permit flow through the entire facility in a future shared parking scenario.

Analyze Options for and Impacts of Parking Pricing

Again, the City and Sound Transit can expand upon the ridership impacts analysis included in this chapter by evaluating alternative pricing structures for off-street parking and the impact of each option on East Link ridership and project and agency revenues. Parking pricing can have a strong affect on travel mode choice and parking demand. In fact, research published by the US Environmental Protection Agency suggests that the influence of parking prices on travel behavior (i.e. The decision about whether or not to drive to a destination or what mode of transportation to use) is 1.5 to 2.0 times as strong as the influence of other transportation-related prices, such as fuel costs3. The elasticity of demand for parking with respect to price varies substantially based on the purpose of one’s trip, the expected duration of stay, and the cost and availability of alternative means of transportation and access to the destination (Elasticity of demand for parking with respect to price ranges from -0.1 to -0.4, meaning that every 10% increase in the price of parking would be expected to result in a one to four percent reduction in demand for parking, with many travelers opting to park in different places, use alternative modes of transportation, or to travel at different times4).

In the case of the 130th Avenue NE Station area, the impact of parking pricing on parking demand and mode choice may be higher for parking accessory to commercial retail land uses than for daily commuter parking, which is less sensitive to changes in price, given the high cost of a primary alternative to station parking: driving all the way in to Downtown Seattle or Downtown Bellevue where parking fees can range from $10-$30 per day. This suggests parking pricing may be employed to cover a substantial share of the capital and operating costs of commuter parking facilities without substantially reducing transit ridership (a detailed parking pricing study would be necessary to determine appropriate market rates for commuter parking in private or Sound Transit owned facilities).

Different pricing structures also influence parking demand and mode share differently. To inform planning for parking supply and management, the project team or the City should evaluate the different ridership and financial impacts of the following approaches to parking pricing.

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Pricing Rate Options

- **Full cost pricing**: Pricing that covers the cost to build, operate and maintain parking facilities. In some cases, full cost pricing may also include incorporate the purchase price or opportunity cost of property dedicated to parking use.

- **Market-rate pricing**: Price is established consistent with the prevailing rate in the market for parking in the vicinity, or for parking or other services for which priced off-street parking is a substitute (an example is commuter park and ride pricing, tolerance for which is clearly affected by the high fees charged for parking in Downtown Seattle, where most park and ride trips in East King County are bound).

- **Nominal fees**: A small fee or charge for parking that does not cover facility costs may be charged to take advantage of the significant travel behavior change associated with a shift from free to priced parking. In some cases, nominal charges for parking can be structured to cover the costs associated with operations and maintenance of facilities.

**Appropriate Time Periods for Pricing**

Parking fees may be assessed for any time period (with payment by the minute, hour, or day, or with monthly or annual parking passes), with different impacts on parking utilization, transit ridership and turnover.

For parking facilities where commuter parking is expected or desired, parking fees are commonly charged by the day and occasionally by the hour, where daytime and evening parking demand is high. Where parking primarily serves commercial retail uses, pricing by the minute or the hour is appropriate and can encourage high rates of turnover. In all cases, pricing by shorter increments of time, including those most closely associated with the duration of stay for one trip (i.e. Hourly or daily pricing) can encourage use of non-auto modes of access, by making price a factor in each traveler’s decision about mode of travel for each trip (Conversely, monthly and annual parking fees can encourage driving by making motorists realize the cost of parking as a fixed, or “sunk” cost, which – once paid – can offer an incentive to drive every day of the month/year).

**Progressive Pricing**

For both on-street and off-street parking, where a high rate of turnover is desired, one option is progressive pricing, charging a higher rate per minute or per hour the longer a vehicle is parked in a space/facility.

**On-Street Parking Management**

A phased approach is also recommended for the supply and management of on-street parking in the 130th Avenue NE Station Area. Although most of the limited on-street parking in the vicinity is currently unregulated, pressure to regulate and actively manage the use of on-street parking in the area will increase in response to the opening of the light rail station and to the construction and occupancy of new commercial and residential development in the area.
Adopt an on-street parking availability target

To maintain the availability of on-street parking in the station area and to prevent spillover parking impacts in surrounding areas, the City can start by adopting a policy target for the availability of parking spaces by block face and manage as follows to meet the target:

**Adopt a 15% Availability Target**

The most direct way to ensure the availability of on-street parking for people seeking to access the station and existing and new land uses in the area is to set a policy goal of maintaining approximately 15% vacancy of on-street parking spaces on any given block face. Achieving the 15% vacancy goal will mean that there will always be at least one to two spaces per block face available for incoming cars and trucks to use. This means that new arrivals to the Station area can always find a 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 free, but limited on-street parking. 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.

**Monitor Occupancy**

To ensure that parking availability is maintained over time the City, and/or a local Transportation Management Association (discussed below) can annually monitor the occupancy of on-street and off-street parking facilities, both within the immediate station area and in surrounding neighborhoods. The City can employ License Plate Recognition (LPR) technology to cost-effectively monitor compliance with on-street parking time limits and/or meter compliance, and to collect data on parking occupancy and turnover in and around the station area (as well as other congested districts of the City, such as Downtown Bellevue).

**Manage to Achieve Target Using Pricing or Time Limits**

**Pricing On-street Parking to Manage Demand**

As with any good or service, demand for on-street parking varies with the price charged. On block faces within the District where occupancy consistently exceeds 85%, and where vehicle turnover rates (the number of different vehicles parking in a given space during the course of a day) are highest, the City may consider installing and operating adjustable rate parking meters as a means of managing parking demand to maintain the availability of parking, consistent with adopted vacancy goals. It is important to note that in order to achieve vacancy goals under this option, parking meters should be installed and operated for the primary purpose of managing demand, rather than for revenue generation. Managing for the purpose of revenue generation might result in higher parking rates during non-peak hours, and higher or lower parking occupancy and turnover than are acceptable to District stakeholders. One key to ensuring that parking meters do not become utilized by the City as primarily a revenue mechanism is to establish a Parking Benefit District (PBD), as described in this report, with a commitment to return all revenue to the District to fund streetscape and other access improvements and programs on the same blocks on which the revenue was raised.

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Regulate On-street Parking to Manage Demand

As an alternative to pricing parking, the City may opt to manage parking using time limits or permits. In the highest turnover areas – particularly in the immediate vicinity of each station – the preferred approach to regulating on-street parking may be to establish 1-hour or 2-hour time-limited parking zones. Given that parking meters are not currently employed in this part of the region, time limits may be a preferred choice for managing on-street demand during phases I and II, prior to the opening of the light rail station.

Prevent Spillover Impacts in Adjacent Neighborhoods with Permit Parking

If – during later phases of implementation (likely not an issue until Phase III and/or Phase IV), parking occupancy surveys identify areas in surrounding neighborhoods where occupancy regularly exceeds 85% on neighborhood streets, and it is clear that many on-street parkers are Link commuters or visitors, the City can establish a permit parking program to prioritize curb space for local residents/businesses. To make paid permit parking politically feasible, the City may elect to “grandfather in” certain existing residents and businesses, charging them lower permit fees or no fees at all. A permit parking program can also provide a flexible tool for residents or small businesses in the district that worry about loss of currently available on-street parking resources. Any permit program should be designed and managed in a way that ensures that the total number of parking permits issued and sold does not result in parking occupancy that exceeds 85% on any single block face in the District. As with the management of meter rates, described in the previous section, the City should periodically monitor parking occupancy and turnover throughout the permit district and adjust the supply and price of permits, as necessary to maintain 15% vacancy on all blocks.

Establish Parking Benefit Districts

Net revenues from paid on-street parking can fund public improvements that benefit the blocks where the money is collected. If parking revenues seem to disappear into the General Fund, where they may appear to produce no direct benefit for the area where they are collected, there may be little support for installing parking meters, or for raising rates when needed to maintain decent vacancy rates and prevent cruising traffic. But when Station Area merchants and property owners can clearly see that the monies collected are being spent for the benefit of their blocks, on projects that they have chosen, they are often more willing to support market rate pricing.

Flexible Design of On-street Parking in Station Vicinity

To enable an adaptive approach to the management of curb space for station access – balancing the changing demand for and needs of local transit buses, public and private shuttles, taxis, kiss-and-ride commuters and short-term parkers – on-street parking lanes in the vicinity of the station should be designed with flexibility in mind.

As new streets are constructed and others rehabilitated prior to the opening of light rail service, curb lanes should be designed in a way that permits flexible future use for private vehicle parking, loading/unloading, bus and shuttle boarding/alighting, and easy conversion to accessible public space. This may include design treatments, such as:

- Design for wider than conventional curb/parking lanes (10’-11’) in selected locations, with curb extensions to prevent an increase in curb to curb pedestrian crossing distance.
- Installation of removable bollards that can block vehicle access to the curb lane as necessary to expand the pedestrian realm.
• Use of different unique paving materials/colors for the parking/curb lane
• Design for temporary installation of planters in curb lanes that are not needed for parking or transit/shuttle access.
• Design with low or mountable curbs or, or potentially use of tactile detectable warning for sight impaired travelers in lieu of curbs on streets planned for low volumes of motor vehicle traffic.

Parking and Transportation Demand Management

The shared parking approach proposed for off-street parking in the 130th Ave NE Station area should allow later-phase facilities to be built at lower ratios than the initial TOD projects. Early investment in demand-management strategies can, by demonstrating cost-effective parking-reduction benefits, bring down the ratios at which later-developed land uses are parked. Some best-practice strategies that should be considered for early adoption include the following. (Note: many of these practices, policies and strategies also apply to the Overlake Village Station Area and are discussed in further detail in Chapter 5).

Unbundling Parking Costs

Property owners can encourage reduced parking consumption by selling and/or leasing parking access separately from the sale and/or lease of building space/dwelling units. Not only can this help reduce the cost of housing and commercial-use space, it provides direct economic incentives to drive less and own fewer cars. The City may adopt an ordinance requiring unbundling of parking costs for the lease or sale of new residential and/or commercial developments in station areas, or Citywide.

Parking Cashout

The majority employers in the central Puget Sound region provide free or reduced price parking for their employees as a fringe benefit. The City may consider adopting a requirement or offering incentives for employers to offer parking “Cash-out.” With parking cash-out, employers are allowed to continue offering free/reduced price parking as a benefit on the condition that they offer the cash value of the parking subsidy to any employee who does not drive to work. The primary benefit of parking cash-out programs is their proven effect on reducing auto congestion and parking demand.

Other benefits of parking cash out are numerous, and include:

• Provides an equal transportation subsidy to employees who ride transit, carpool, vanpool, walk or bicycle to work.
• Provides a low-cost fringe benefit that can help individual businesses recruit and retain employees.
• Employers report that parking cash-out requirements are simple to administer and enforce, typically requiring just one to two minutes per employee per month to administer.

The City may adopt a local ordinance requiring compliance requiring employers with 10-50 employees to certify by affidavit that they offer employees cash or other transportation benefits, such as free transit passes in-lieu of parking benefits.
Form a Transportation Management Association (TMA)

The City of Bellevue and local property owners and employers in the 130th Avenue station area can facilitate many of the other parking and travel demand management strategies recommended in this report by forming a transportation management association (TMA) focused on the unique needs of this district. Such a TMA could be modeled on the successful TMA’s in Redmond (Greater Redmond TMA), and downtown Bellevue (TransManage), which facilitate TDM program planning, administration and implementation for multiple employers in their respective districts. A TMA for the Goff Creek/130th Ave NE Station Area, or the larger Bel-Red Subarea would:

- Enable local property owners an employers to share costs of TDM program development and administration.
- Enable participation in TDM and trip reduction programs by small employers that might otherwise not be willing or able to participate.
- Potentially organize, fund and operate employer and/or neighborhood shuttle services such as those recommended in Chapter 3.

Require/facilitate On-site Carsharing

Access to car-share vehicles on-site has been shown to reduce vehicle-ownership rates among residents of multi-unit buildings, and can reduce common barriers to transit use among on-site residents. The City can enable reduced vehicle ownership by the residents of new TOD projects in the 130th Ave NE Station area, consequently reducing off-street parking demand and supporting the use of non-auto modes of transportation by requiring or otherwise facilitating the provision of off-street parking for carshare vehicles in new development projects and supporting or requiring – in lieu of provision of a share of the code required private off-street parking – the provision by building management of free carshare club membership for building tenants/occupants. For projects located within walking distance of the station, on-site carsharing can also support project objectives by providing a new transit access option for transit riders alighting at the 130th Avenue NE Station (allowing riders to take a shared car for the first or last mile(s) of their journey to destinations outside of the immediate vicinity of the station).

Bundle Transit: Require Provision of ORCA Passports to Tenants

One strategy to increase transit ridership and reduce parking demand associated with TOD near the 130th Avenue NE Station is to begin or encouraging property owners and/or employers to offer building occupants (Commercial and residential) universal transit passes, which are sometimes called “eco-passes,” or “Flex Passes.” In the Puget Sound region, such universal ride passes can be loaded onto ORCA cards. This strategy would essentially involve negotiating with transit agencies to secure ORCA Passports, good for unlimited rides on local and regional transit services for use by residents and employees. Transit passes are purchased in bulk at a fixed price negotiated by a local jurisdiction or TMA, based on a set of assumptions about the likely transit ridership patterns of pass holders (as a result, the financial impact to the transit agency can be minimal). Bundling transit fares into the cost of space as a condition of development can increase transit ridership by removing the cost of transit fares from each consumer’s marginal decisions about which mode of transportation to use for each trip taken.

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Cervero, R., and Tsai (2003) found that when people joined City CarShare, a San Francisco-based carsharing club, nearly 30% reduced their household vehicle ownership, and two-thirds avoided purchasing another motor vehicle. This research suggests that each carshare vehicle in the program substitutes for approximately 5-10 private autos.
Conclusion

This review of local plans and policies, and analysis of the impacts of alternative uses of land in the vicinity of the 130th Avenue NE Station, should encourage the City of Bellevue, Sound Transit and private property owners to collaborate in the development and implementation of station area development and access strategies consistent with the following principles:

- **High intensity development**: Achieving a higher density of commercial and/or residential development on available parcels in the vicinity of the station will increase regular transit ridership. At high densities, replacement of commuter parking with transit-oriented development (TOD) can further increase daily ridership.

- **Shared, publicly accessible parking**: To the extent feasible, parking provided at the station and in association with any nearby private development should be shared and publicly-accessible.

- **Market-based parking supply and management**: To encourage efficient utilization and increase transit ridership and use of non-auto transportation options, the supply and management of parking should be market-based, with pricing of on-street and off-street parking where necessary to maintain parking availability (this includes separation or “unbundling” of the cost of parking in lease agreements).

- **Transportation Demand Management (TDM)**: To promote transit use and reduce off-street parking demand, TDM programs and services, such as bulk discounted transit passes (i.e. ORCA Passports) can be offered to the residents and commercial occupants of new buildings in the vicinity of the station.

- **Adaptability and Phased Implementation**: Demand for access to the station (and to associated TOD), and tradeoffs in the use of land in the vicinity of the station can be expected to change substantially over time – particularly after East Link service begins operation in 2023. Station area development and access strategies must be designed to be adaptable to changing conditions and changing demands. In particular, planners and developers should aim to avoid requiring or building excess off-street parking that may not be needed in the long-term.