

COMMUNITY TRANSIT

# Long Range Transit Plan

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**Thinking Transit First**

**Final Report**

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# Community Transit Long-Range Plan

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***Our Big, Hairy, Audacious Goal: THINK TRANSIT FIRST***

*A Big, Hairy, Audacious Goal is just that, a vision of where we could go, of what is possible. Henry Ford had a BHAG: to build a car everyone could afford. In the early 1900s, that must have seemed impossible. We know now, that with all of our efforts combined, a BHAG can become a reality.*

**What our goal means:**

We will give people such convenience at such an affordable price that they will use transportation alternatives as a matter of course. People will enjoy the ease and comfort of being transported rather than driving. They will relax in a comfortable, clean and safe environment while being whisked to their destination. Families will be able to enjoy stress-free travel, making this a fun part of the family outing rather than just a way to get to the destination. Bus travel, as well as sharing the ride, will be a social event where people are happy to share the experience. Automobiles will disappear as the main mode of transport. The environment will be greatly improved due to much less pollutants being spewed into the air. The roadways will not be congested so commercial vehicles will be able to deliver goods and services quicker thereby improving our economy. All people will have the same access to personal mobility without regard to income or physical/mental ability. Children will be able to travel safely to all events, freeing up family members who currently have to carpool these groups of children. Families will opt to have only one automobile or none as public transportation will be such a wonderful experience that it will become the mode of choice. We will all Think Transit First!

## Chapter 1: Introduction

### Why a Long Range Plan

Community Transit embraced Think Transit First in 2005 in order to focus transit system development on a compelling long-term vision of what our community could become. In 2008, we further articulated that vision through adoption of a six-year Transit Development Plan (TDP) describing a corridor-based transportation strategy requiring strong linkage to local land use and roadway planning. At its core, the TDP was about proposing an efficient service strategy to maximize effectiveness of transit investments and ultimately allow Community Transit to achieve Think Transit First. The 2008-2013 plan was only a first step toward achieving this goal. It called for completion of key infrastructure, technology and service initiatives to prepare the agency for its next phase of growth. An important action identified in the TDP was development of Community Transit's first Long Range Transit Plan (LRTP) setting strategic service, capital and policy direction for the agency. This longer range plan further defines the path to Think Transit First and will provide direction for future Transit Development Plans.

### Economic Challenges

Since 2008, the agency has achieved significant accomplishments called for in the TDP. Foremost among these are completion of major capital projects, including implementation of the ORCA smart card and launch of Washington State's first bus rapid transit (BRT) line, *Swift*, between Everett Station and Aurora Village. Unfortunately, Community Transit has also grappled with very painful challenges associated with the economy.

The recession that began in late 2007 lowered Community Transit's sales tax revenue by nearly 20 percent. Economic recovery has been very slow with no significant growth in 2010. In 2010, sales tax revenue was less than it had been in 2005. Overall estimates of the recession's impact on Community Transit indicate the agency will fail to realize up to \$207 million in revenue that had been forecast in the Transit Development Plan.

Whereas the TDP had called for new service investment to meet demand and begin working toward Think Transit First, reality has required service cuts. The 2008-2013 plan proposed a 17 percent increase in Community Transit service levels. While the agency did increase service in 2008 and 2009, it had to cut service by 15 percent in 2010. This reduction included suspension of all Sunday and holiday bus and DART paratransit service.

When service was cut in 2010 Community Transit hoped that further reductions would not be necessary. However, continued slow economic growth and depletion of the agency's capital reserves to avoid deeper service cuts have made it clear that even this reduced service level is not sustainable. The Board of Directors adopted a status-quo budget for 2011 with the understanding that Community Transit must resize the agency to fit within available resources. Development of this new agency size and service configuration will occur in 2011 for implementation in early 2012.

The Long Range Transit Plan was originally envisioned as an extension of the 2008-2013 plan, providing further definition to the Transit Emphasis Corridor network, outlining a framework for corridor planning, and forecasting future market demand, service level and cost. In light of the significant service cuts implemented in 2010 and anticipated further cuts, the Long Range Transit plan must now provide guidance in rebuilding service before Community Transit

resumes system expansion to meet demand. The need to reduce service is clearly a major setback – particularly during a period when demand for transit is increasing. Given the economic circumstances, some may ask if a long range plan calling for very significant service growth has any relevance. We believe there is still an important role for this plan.

The Long Range Transit Plan proposes a new transportation paradigm integrating land use, infrastructure and transit service in a multi-modal corridor vision. It is no coincidence that many agencies in the Puget Sound region are coming to similar conclusions regarding a viable future growth and transportation strategy. Economics dictate that growth must be accommodated in the most cost-effective way possible. Investment in efficient transit services consolidated on productive corridors with time-saving infrastructure and transit-oriented land use is this cost effective strategy. Many experts refer to this as “smart growth.” From Puget Sound Regional Council’s Transportation 2040 to Sound Transit’s Long Range Plan to Snohomish County’s Multimodal Transportation Vision and Community Transit’s Long Range Transit Plan, there is a common understanding that “smart growth” is how our region will accommodate increases in population and improve economic prosperity while maintaining mobility and preserving our spectacular environment.

Recognizing these facts, governments from throughout the county are asking Community Transit to assume a leadership role in providing convenient and cost-competitive alternatives to auto use. Think Transit First, Transit Emphasis Corridors, innovative services like *Swift* and this Long Range Transit Plan are all elements of this leadership in building the future multi-modal transportation system.

Reducing service levels is an unfortunate economic reality that also reinforces the need for this plan. The Long Range Transit plan documents the need for more service and the funding that will be required to operate it. It also charts a path for our current transit network to evolve toward the future system. Economic recovery and new transit investment will happen. When it does, the new system that is built will be different than the one that we cut. This plan will guide new investment and help us grow toward Think Transit First and the broad community goals that vision will enable.

This Long Range Transit Plan report summarizes the results of outreach and data analysis intended to provide guidance on how our Big, Hairy, Audacious Goal can become a reality. The prioritized transit emphasis corridors and discussion of improvements to the existing system are based on planned land uses, community values, environmental benefits, economic potential and deliverability.

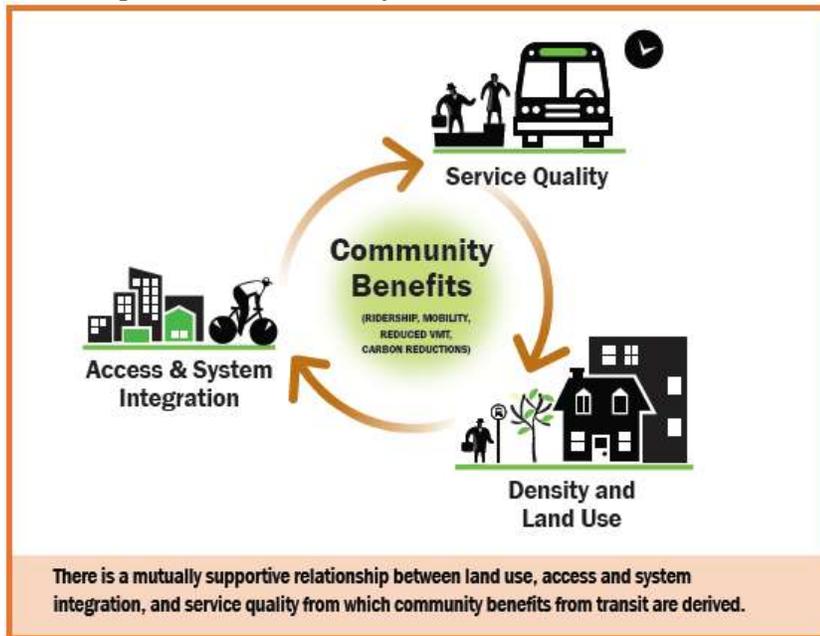
Further information about the technical evaluation of corridors and public outreach results are available in the technical documents that supplement this plan.

## **Transit – Land Use Relationship**

In any growing community, transportation and land use patterns interact, each shaping the other’s ability to function effectively. Across the country there is a strong correlation between land use density and transit demand. This relationship is not linear. Transit demand tends to increase most dramatically between about 6 and 12 households per acre. Below six households per acre, it is usually difficult to operate productive transit services. Above twelve, high capacity modes such as BRT or light rail, often become the dominant method of travel in a community.

Clearly, density alone does not determine a service level. The following graphic illustrates how land use types, intensity of use, built environment and service quality all interact to support environmental, community and economic goals. The level of service depends on several market factors: *density, size, regional location, community design and street design.*

Figure 1: The Relationship between Transit and Land Use



**Density**, for the purpose of this study, is described by the combination of population and employment per acre.

**Size** must be considered together with density to determine the overall market that has been organized in a transit-oriented way, which in turn will determine the level of service that can be supported. An isolated, 50 unit apartment building surrounded by surface parking and/or open space could have a very high density rating if analyzed within a fine enough zone, but this alone would not mean it deserves the same level of service as downtown Lynnwood, because that single apartment complex is a much smaller market. A particular level of service will require a *minimum density over a minimum area*. A major challenge in Snohomish County is that the auto-oriented form and location of many residential developments isolate them from other key travel demand generators, i.e., jobs, schools, shopping, making them less accessible through efficient transit.

**A mix of development types** reduces the need for longer-distance trips. When shopping, schools and community centers are located close to peoples' homes, cars become less necessary than when massive subdivisions are built in isolation from other local attractions. This isolation is a fact of life in many parts of Snohomish County and will take many years to fully overcome.

**Regional location** also affects travel demand as well as transit's efficiency and is closely related to mixed use development. Travel demand between two points tends to be inversely related to the distance between them. If there are other transit-oriented places

close by, it is more likely that transit will be attractive as a mode. In addition, regional location determines whether a proposed transit route will have strong anchors to sustain ridership at the ends of the route. Regional location is addressed by ensuring that future transit corridors have major activity centers at their endpoints.

**Access** is another crucial, but often unnoticed, element of transit demand. Even at high densities, people will not use transit if it is uncomfortable, difficult, or dangerous to access a bus stop. Many of today's auto-oriented suburban apartment complexes, while very dense, have extremely poor access to major arterials or viable transit streets. Throughout the nation there are abundant examples of communities that have configured density so that it is impossible to serve with transit.

**Street design** is also an important component of transit access and operational viability. Neighborhoods where all roads are designed to connect to arterials or collector streets allow transit customers to reach bus stops without walking out of direction and provide more efficient routing options that can support high frequency service.

This does not mean that transit can or should replace auto travel in the Puget Sound region. Private automobiles offer unparalleled flexibility and convenience for many trips. But these benefits come at an economic cost as well as a cost of congestion, greenhouse gas emissions, and environmental degradation. This project's goal is to identify a course towards a truly multimodal transportation system that combines auto, bus, vanpool, rideshare, bicycling, and walking in ways that allows each mode to work at its maximum potential.

To accomplish this, zoning and community design decisions are fundamental to future success. Local land use policies and communities' ability to attract infill development will ultimately drive the quality and quantity of transit service in Snohomish County.



*Three and four story mixed use buildings inserted in existing urban fabric can increase density to rates supportive of high quality bus service.*



*Even low rise multifamily homes or encouragement of single family homes on narrow lots can lead to modest density increases.*



*Much denser suburban apartments built in Greenfield areas, far from the urban core, can be very difficult to serve with transit and can strain local transit systems by spreading resources more thinly.*

## **Integrating Transit into Street Design: A Case for Balance**

The Complete Streets model has become a common approach to balancing the need for transit, bicycle, and pedestrian movement, thus moving the use of our urban streets away from auto-domination. The Complete Streets organization defines a complete street as one:

*Designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and bus riders of all ages and abilities are able to safely move along and across a complete street.*

Many cities around the nation have adopted Complete Streets ordinances and are incorporating practices into planning and street design. Complete Streets are important for transit because the pedestrian network serves as the 'connective tissue' of the transit systems. Most transit trips begin and end as a pedestrian trip, and poorly planned access to bus stops is a real barrier for disabled travelers as well as a psychological barrier for all travelers. A "Complete Street" is a design that encourages quality pedestrian environment that goes well beyond basic access and safety requirements.

Better street design also encourages new and more intensive land uses and encourages developers to build in a more pedestrian-oriented fashion. This, in turn, creates more demand for top-quality transit.

People walk most frequently and farthest in places where they rely on transit for mobility. Manhattan has the highest transit mode share of any place in the United States, not coincidentally it also has the highest rates of walking and greatest distance walked per capita of any place in

the United States. Snohomish County doesn't have the density of Manhattan, or even Seattle, nor does it aspire to. Nonetheless, land use policies focused on creating dense corridors and centers with a healthy mix of land uses will ultimately increase transit ridership and help to justify investment in the pedestrian environment. Land use patterns that encourage walking and are supported by transit allow people more choices. People who want to park their car and cycle to work may be more likely to do so if they know they also have convenient transit access as an alternative when the weather is poor or they have a large load to carry.

## Community Transit Tomorrow

Accomplishment of Community Transit's Think Transit First goal will entail many individual projects spread over many years. Each of these component parts will be directed toward eight priority areas which, together, form the basis for Community Transit's future services.

1. Preserve and Increase Access to and Usability of the Public Transportation System

As Snohomish County grows Community Transit will grow with it. Emerging residential neighborhoods and employment centers offer significant new challenges and opportunities. Transit supportive communities that feature compact mixed use development patterns and a pedestrian orientation provide opportunities to achieve our transit first vision. Conversely, new suburban and exurban developments will raise huge challenges. Equally important is preservation of existing access. Redesign and upgrade of roadways and interchanges sometimes lead to degradation or elimination of access for buses and/or pedestrians. Maintaining or improving previously existing access for transit is vital to the future multi-modal system.

2. Provide a range of services tailored to the neighborhoods being served

We fully recognize that, just as communities are different, the public transportation services that serve them must be tailored to local conditions. Community Transit will provide a broad range of services including high capacity transit options like *Swift*, feeder routes to regional services, local services to communities outside the urban growth area, ADA paratransit, vanpooling, Transportation Demand Management (TDM) and ride-match services. Each satisfies different needs and has a role in the overall transportation mix.

3. Provide Efficient and Sustainable services

Community Transit recognizes our obligation to be good stewards of public resources by providing services that efficiently and cost-effectively serve our customers. Service design and operating guidelines provide a means of evaluating existing and proposed services.

4. Partner with Other Transportation Agencies

Many other public transportation providers including Sound Transit, King County Metro, Everett Transit, Amtrak, Washington State Ferry System, and Skagit Transit are also planning for improved or upgraded public transportation services that will benefit Snohomish County residents. Community Transit will work with them to feed these other services when appropriate, coordinate to avoid duplication, and present

the overall system of public transportation operating in Snohomish County as a comprehensive network for users. The need for fully integrated services will be most apparent when the extension of Link Light Rail service to Lynnwood is complete. Community Transit's bus services, oriented around transit emphasis corridors, will effectively integrate with and feed this new service.

5. Integrate Land Use and Transportation

The success of public transportation depends upon the land use actions and policies of local communities. Compact communities that feature moderate densities, a mix of housing and commercial development, and a pedestrian supportive infrastructure are essential prerequisites for successful transit services. Community Transit has pledged to work with local jurisdictions to integrate future transit services with transit supportive land use initiatives.

6. Support Corridor-Based Development Practices

This plan identifies thirteen transit emphasis corridors operating on the local street network that have the current or future potential to support high capacity transit services. Each features land use patterns with the potential to provide a substantial future transit market. Community Transit is working with local jurisdictions to encourage land use practices that will allow each of these corridors to reach their full potential to support high quality transit services in the future.

7. Maximize Use of Existing Services

A key component of meeting future demand with limited resources will be ensuring that existing services are used to the maximum possible extent. Part of this effort will fall to traditional marketing and outreach promoting transit services. A major component will consist of TDM and partnerships with local jurisdictions in congested corridors to shift demand from single occupant vehicles (SOVs) to alternate modes including transit. Technology will also play an increasing role as on-line systems provide customers with real-time information on available transit services.

8. Support Reductions in Greenhouse Gas Emissions

Public transportation that supports compact, transit-oriented, development patterns has the potential to meaningfully reduce the amount of greenhouse gases that are emitted into the atmosphere. Community Transit vehicles and services will be designed to minimize local contributions and to support alternative transportation that will assist in the attainment of the county's reduction goals.

## Chapter 2: Transit Emphasis Corridors

### The System's Backbone

In the future, Community Transit's service network will be constructed around transit emphasis corridors that provide convenient travel options along arterial streets. These corridors are principal arterials and/or state routes with a mixture of core commercial, high-density residential, suburban and rural development. Important attributes of these transit emphasis corridors include high-densities of housing and jobs in proximity with one another, pedestrian scale and design, connection to major growth centers and roadway features that facilitate transit service. This chapter focuses on their future design and operation.

In addition to these transit emphasis corridors, Community Transit has identified several highway facilities that are oriented towards commute and long distance travel. The next chapter focuses on their design and operation. Both the arterial transit emphasis corridors and commute corridors advance the system's long-term vision for integrated transportation planning and were developed through cooperative discussions with local cities and towns, as well as Snohomish County and Washington State Department of Transportation.

Figure 2 illustrates each of the thirteen arterial transit emphasis corridors, highlighting how they connect communities in Snohomish County as well as interact with regional transit such as Ferries, Sounder commuter rail service and future Link Light Rail and the potential East Side BNSF commuter rail line. It is important to understand the diverse nature of this network.

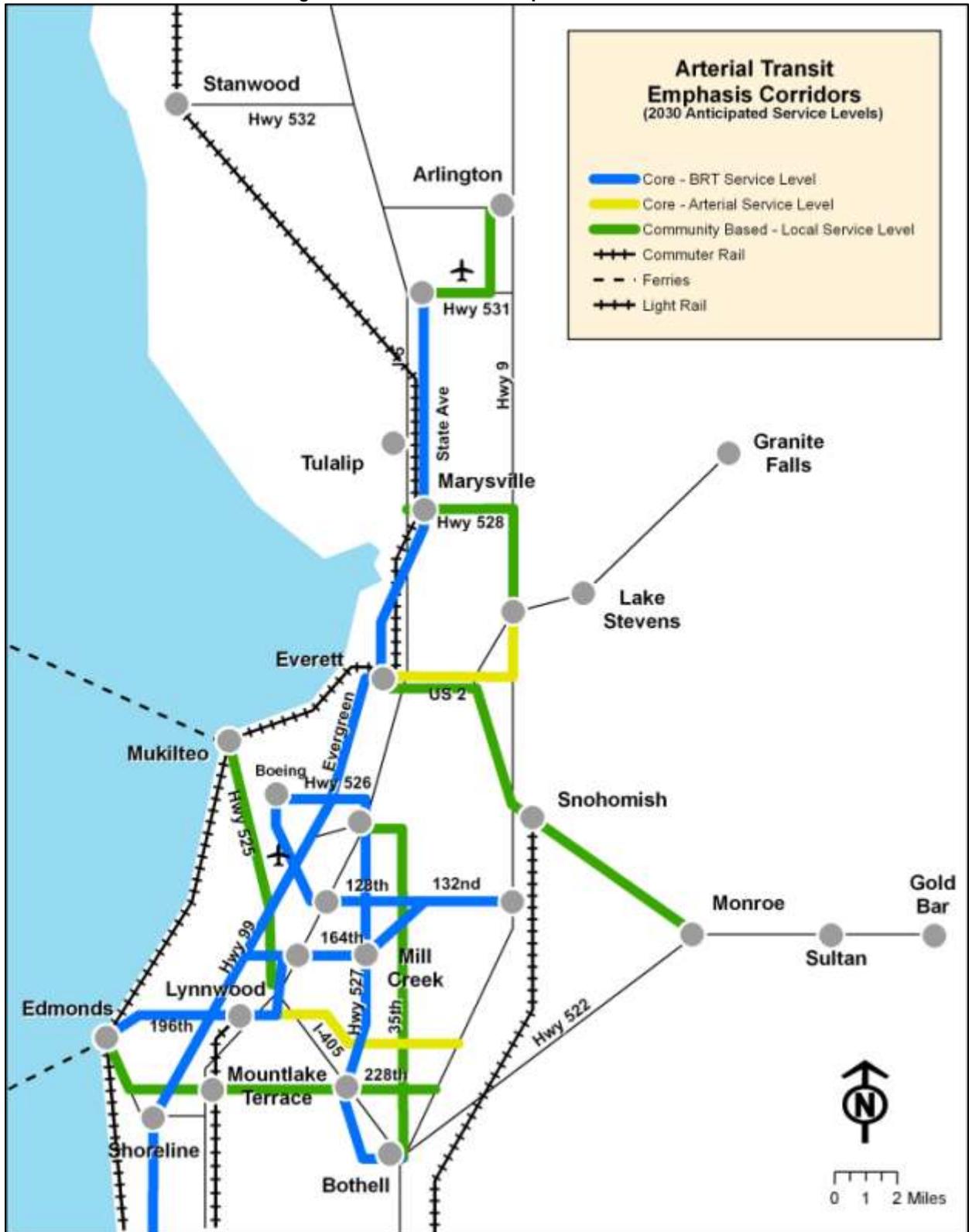
- Some corridors are already well-served by transit, with all-day, bi-directional service every 15 minutes.
- Others have less frequent, hourly service.
- Some have no bus service at all.
- Some are served by Community Transit while others are shared with Everett Transit and/or Sound Transit.

While their current state of development is varied, the thirteen arterial transit emphasis corridors make sense from a long-term transit market development perspective, connecting centers, providing network coverage throughout the urban growth area, and exhibiting current or future population and employment densities supportive of transit use.

Recognizing the strong linkage between land use, transit and the role counties and cities play in transit market development, these corridors are intended to focus higher densities, transit, pedestrian and bike-oriented development while providing appropriate parking fees and transit-priority/high occupancy vehicle (HOV) roadway improvements.

More than any other part of this long range plan, the transit emphasis corridors reflect the common efforts of both Community Transit and local jurisdictions. Throughout this long range planning process, local land use and transportation planners have worked with Community Transit to identify and refine a set of corridors that has the potential to support future transit-oriented developments.

Figure 2: Arterial Transit Emphasis Corridors



## What Makes for a Successful Transit Emphasis Corridor?

A successful transit emphasis corridor is much more than a road surface. Transit emphasis corridors need to be multi-modal with a priority on pedestrian access and speed and reliability for transit while connecting locations where people want to go. A successful transit emphasis corridor will likely include the following:

- Transit-oriented design features discussed in the previous chapter including compact mixed-use development
- Complete streets design that allows people to comfortably and safely walk to and from bus stops
- Direct travel paths so that people can use transit to move around the county quickly
- Anchors (urban centers, major employers, transit centers, etc.) at the ends of the corridor that give them an overall destination
- Transit priority treatments to give a competitive advantage to buses

The transit priority treatments mentioned above can take several forms. Bus stops that allow buses to remain in traffic flow when stopped for passengers are a low cost way of speeding transit. Dedicated transit lanes provide more savings, allowing buses to avoid congestion in general purpose lanes. An alternative strategy that has proven effective are queue jump lanes that allow buses to move to the front of a signal queue and then move across the intersection in front of general traffic. Finally, transit signal priority treatments, which may advance a green light, or hold it a bit longer, for buses can result in significant travel time savings for transit patrons. In each case, these strategies provide a competitive advantage to buses by reducing overall travel times.

## Types of Corridor Service

Recognizing that all transit corridors will probably not contain every one of the design features identified in the previous section, future transit services will need to be tailored to local needs and conditions. To do this, Community Transit envisions that three different types of service will be established along transit emphasis corridors. *Swift* will be the highest, serving fully developed corridors. Arterial services will serve corridors that have significant population density but where transit-oriented design practices or priority treatments are not present. Both *Swift* and Arterial services are considered “Core” service under Community Transit’s Service Design Guidelines and in Puget Sound Regional Council’s Transportation 2040 plan. Local services will operate along corridors that do not have the density or orientation to support more frequent services. Local services are considered “Community Based” service under the Design Guidelines and in Transportation 2040. Corridor development changes over time. Some of the corridors identified for “Arterial” service in this plan may evolve into *Swift* corridors over time. Likewise, “Local” corridors may develop to a point where “Arterial” service is warranted. This plan evaluated the projected level of service supported within the land use, infrastructure and travel demand framework of a 2030 horizon year. Figure 3 summarizes the community and service characteristics associated with each service type.

Figure 3: Corridor Service Assumptions

	Community Design Features	Transit Features
Swift Service	Mixed use development with at least 15 dwelling units per acre Complete streets Transit priority treatments along their entire length	Hours – 5:00 a.m. – 1:00 a.m. Includes weekend service Frequency of Service: 10 minute weekday 20 minute other times
Arterial Service	15 dwelling units per acre. Have many of the features of BRT. They may not yet be fully implemented along the length of the corridor.	Hours 5:00 a.m. – 12:00 a.m. Includes weekend service Frequency of Service 15 minute weekday 20-60 minute other times
Local Service	More than 7 dwelling units per acre No transit priority treatments	Hours 6:00 a.m. – 10:00 p.m. Weekend service usually, but not always provided Frequency of Service 30 minute weekday 30-60 minute other times

## Future Transit Emphasis Corridors

The thirteen arterial transit emphasis corridors were evaluated using a set of twelve measures that consider a variety of current and future factors that will contribute to the successful operation of transit services. They include:

1. Rank in Total Density – 2005
2. Rank in Total Density –2030  
The average combined residential and employee population per acre within one-half mile of each corridor was evaluated.
3. Total Trip Productions per Mile Rank – 2005
4. Total Trip Productions per Mile Rank –2030  
Using the region’s travel demand model, the number of people traveling by all modes between zones along each corridor was considered.
5. Fees for Parking – Pay parking tends to increase transit demand
6. HOV, Business Access and Transit (BAT) Lanes or Transit Priority Treatments – As noted in the previous section, features that give priority to transit are an essential element for *Swift* and highly desirable for arterial transit services.
7. Collector System – This is a complete network of intersecting streets
8. Park & Ride Lots
9. Sidewalks – Complete sidewalks with safe pedestrian street crossings are necessary for people to access bus stops.
10. Bike Access – Bike lanes and bike trails
11. Served by Transit – This considers whether the corridor already has transit service.
12. Transit Patronage –Patronage on transit services already operated in a corridor.

Recognizing the significant role they play in determining a corridor’s success, factors 1-4 and factor 11 were given additional weight when individual corridors were evaluated.

## Corridor Assessment

Figure 4 summarizes the results of the corridor scoring assessment. A more detailed description and assessment of each corridor follows later in this chapter. While some corridors clearly have greater near-term potential than others, all thirteen of the arterial transit emphasis corridors will play a major role in Community Transit’s long term service network. Two commuter and four arterial corridors appear to be ready for high capacity transit services today. In some cases, instead of providing high capacity transit along the full length of a corridor, a partial implementation of service may be more appropriate in the near term. The specific recommendations for each corridor are described in detail in the next section.

**Figure 4: Appropriate 2030 Service Levels for Arterial Transit Emphasis Corridors**

<b>Swift Service Corridors</b>
SR 99 / Evergreen Way / Rucker Ave – Shoreline to Everett
SR 527 – Downtown Bothell to Paine Field
Airport Rd / 128 <sup>th</sup> Street /132 <sup>nd</sup> St / Cathcart Way - Paine Field to Cathcart
164 <sup>th</sup> Street/196 <sup>th</sup> Street – Mill Creek to Lynnwood to Edmonds
Broadway / SR 529 / State Ave / Smokey Pt Blvd - Everett to Smokey Point
<b>Arterial Service</b>
196 <sup>th</sup> Street – Lynnwood to SR 9
20 <sup>th</sup> Street Southeast / US Hwy 2 Trestle – Lake Stevens to Everett
<b>Local Service</b>
US Hwy 2 – Monroe to Everett
SR 525 – Mukilteo Ferry Terminal to I-405
SR 531 (172 <sup>nd</sup> Street) – Smokey Point / Arlington
SR 528– Marysville to Lake Stevens
228 <sup>th</sup> Street/236 <sup>th</sup> St – Edmonds to Mountlake Terrace to Bothell
35 <sup>th</sup> Avenue – Bothell to 100 <sup>th</sup> Street SE

To one degree or another, all thirteen arterial transit emphasis corridors today reflect the county’s traditional suburban auto-oriented development patterns. This reality will impact their service types and pace of expansion. To support higher levels of transit all will need to see an expansion of transit-oriented development practices, moving away from traditional suburban development practices.

It is impossible to tell how fast these changes will become apparent. That will depend upon a combination of economic conditions and regulatory practices within individual corridors. This reality limits the value of any service implementation timetable. As development does occur, higher demand will allow Community Transit to operate more frequent service, which in turn will encourage even more people to ride.

Following is a brief summary that describes each arterial transit emphasis corridor and the recommended service approach. Recognizing that development patterns will impact the appropriate level of future transit services, future Transit Development Plans will consider and update planned service levels within each corridor. Technical Memorandum #3 (Transit Emphasis Corridors) contains a more complete discussion of each facility.

### SR 99 / Evergreen Way / Rucker Ave – Shoreline to Everett

Current *Swift* corridor from Aurora Village Transit Center to Everett Station

**Findings and Recommendations** – The SR 99 Corridor is the most significant local travel corridor within the Community Transit System. The first *Swift* service began operation along the length of this corridor in November 2009. Future challenges will likely revolve around the integration of other local and regional services with this existing service.

- Work with Everett to expedite completion of signal priority within the city.
- Plan for convenient transfer facilities where other services intersect this corridor.
- Work with King County Metro to ensure transfer connections to/from Metro’s Rapid Ride are seamless.
- Work with local jurisdictions to encourage transit-oriented development patterns are pursued throughout the corridor.



### SR 527 – Downtown Bothell to Paine Field

Bothell to Paine Field via SR 527. From Downtown Bothell (Main St., operate on Bothell Way (SR 527) continuing on SR 526, ending at Airport Road

**Findings and Recommendations** – The SR 527 Corridor has the potential to support *Swift* service within the next ten years if transit supportive land uses and transit priority treatments are implemented.

- Carefully design and implement services that will feed future *Swift* services.
- Work with Bothell and Mill Creek to ensure that development and pedestrian connections focus on the SR 527 corridor.
- Work with Bothell to resolve routing/infrastructure issues along SR 527 between Canyon Park and downtown Bothell.
- Providing safe and convenient transfer connections at the intersections of Evergreen Way and SR 526 and SR 527 and I-405.
- Providing ‘last mile’ transportation services in the Paine Field area, allowing people to get from corridor to employment sites.



### Airport Rd / 128th Street / 132<sup>nd</sup> St / Cathcart Way - Paine Field to Cathcart

Paine Field to Cathcart starting at SR 526 and Airport Road, continuing on Airport Road to 128<sup>th</sup> Street, 132<sup>nd</sup> Street, 134<sup>th</sup> Place, and Cathcart Way, ending at SR 9



#### Findings and

**Recommendations** – While not served today, both census and travel demand data suggest that the 128th Street Corridor has the potential to support *Swift* service by 2030. This needs to be validated by initiating and operating local services along the length of the corridor.

- Construction of a park & ride lot/transit center and “super stop” at Cathcart and SR 9 will benefit this corridor.
- It will be important to provide ‘last mile’ transportation services in the Paine Field area, allowing people to get from corridor to employment sites.
- While HOV facilities exist between Paine Field and I-5, they are not present east of I-5.
- Future interchange with Sound Transit’s LINK light rail will be important for this corridor as a feeder for employment in the Paine Field area.

### 164<sup>th</sup> Street/196<sup>th</sup> Street – Mill Creek to Lynnwood to Edmonds

From Edmonds Ferry Dock, via 3<sup>rd</sup> and Caspers to 196<sup>th</sup>, then 28<sup>th</sup>, Alderwood Mall Parkway, 164<sup>th</sup> Mill Creek Road, Seattle Hill Road, 132<sup>nd</sup>, 134<sup>th</sup>, and Cathcart Way, ending at SR 9



#### Findings and

**Recommendations** – The 164<sup>th</sup> Street Corridor has the potential to support *Swift* service by 2030.

- Special attention will need to be given to transfer connections particularly at intersections with other *Swift* corridors.
- Work with Lynnwood to identify the best path for high capacity transit service (HCT) between 196<sup>th</sup> St and 164<sup>th</sup> St.
- The development of transit priority infrastructure is essential for this corridor’s success.
- Greatest demand for travel is along central portion of route between Mill Creek Town Center and Edmonds Community College.

### Broadway / SR 529 / State Ave/ Smokey Pt Blvd - Everett to Smokey Point

From Everett Station to Smokey Point, on Pacific, Broadway, SR 529, State Avenue and Smokey Point Blvd.

**Findings and Recommendations** – This is a complex corridor that combines areas with no transit potential (Snohomish River floodplain) with compact transit oriented developments. It has the potential to support *Swift* service by 2030 but operations should be carefully evaluated.

- Initiate high capacity transit in stages, initially focusing on the corridor’s southern end.
- Encourage transit-oriented developments around the intersection of Smokey Point Blvd. at 152<sup>nd</sup> Street and at the Lakewood Triangle.
- Encourage implementation of Marysville’s Downtown Redevelopment Plan and the increased density, pedestrian and transit-oriented development it calls for.
- Continue to support increased density and market growth in Everett’s Broadway Mixed Use zone.

### 196<sup>th</sup> Street – Lynnwood to SR 9

Lynnwood Transit Center to Maltby via 44<sup>th</sup> Avenue, 196<sup>th</sup> Street, Filbert, and Maltby Road to SR 9.

**Findings and Recommendations** – This corridor should be ready for arterial service by 2030.

- The corridor should be expanded gradually, first focusing on the section between Lynnwood and SR 527, continuing to expand services east at a later time.
- Connections to/from Alderwood Mall will be important for the route’s eventual success.



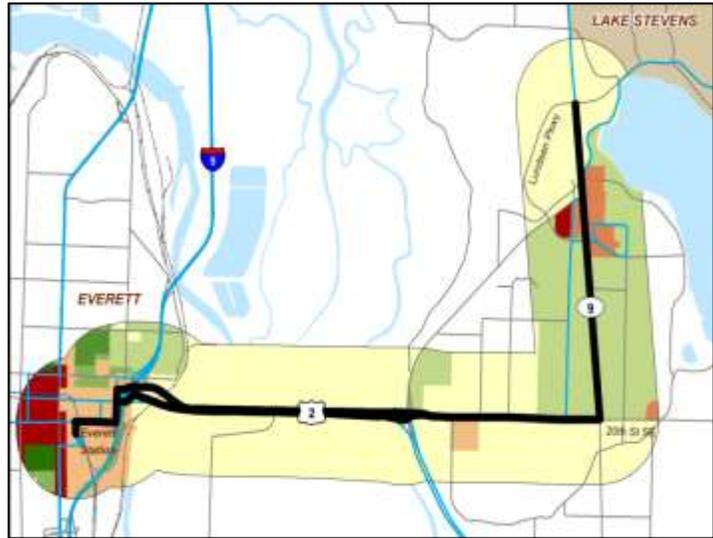
### 20<sup>th</sup> Street Southeast / US Hwy 2 Trestle – Lake Stevens to Everett

From Lundeen Parkway, south on SR 9, to 20<sup>th</sup> Street, US Hwy 2, onto Hewitt Ave, Wetmore, and Pacific, ending at Everett Station

#### Findings and Recommendations

– By integrating services along US Hwy 2 with park & ride oriented services from SR 9, begin Arterial service linking Lake Stevens with Everett.

- The success of this service will depend upon the operation of park & ride/transit center at its eastern terminus.
- Coordinate with other services at Everett Station.
- Ensure that final project design for improvement of 20<sup>th</sup> Street includes westbound HOV lane to US Hwy 2 Trestle.
- Community Transit should continue to advocate that any US Hwy 2 Trestle improvements include transit priority measures.



### SR 531 (172<sup>nd</sup> Street) – Smokey Point / Arlington

172<sup>nd</sup> Street from Smokey Point to 67<sup>th</sup> Avenue then 67<sup>th</sup> to Hazel Street, and Hazel to Division Street.

**Findings and Recommendations** – Local plans call for significant population growth along 172<sup>nd</sup> Street and 67<sup>th</sup> Ave NE. Over the next 20 years, this corridor will support local service.

- It may be appropriate to extend this corridor across Interstate 5 to the Lakewood Triangle area.
- WSDOT SR 531 Route Development Plan should ensure effective design for transit, particularly as it relates to pedestrian and transit access in the vicinity of roundabouts.
- Community Transit and local jurisdictions should continue to plan for transit oriented development patterns and transit priority treatments that will combine to support higher level transit services.



### SR 528– Marysville to Lake Stevens

SR 528 (4<sup>th</sup> Street/64<sup>th</sup> Street) starting at State Avenue, continuing on SR 9 to 20th St.

**Findings and Recommendations** – This corridor will continue to support local service during the coming 20 years.

- It has the potential to support transit-oriented development projects in both Marysville and Lake Stevens.
- Connections to regional commute services in Marysville will be important.



### US Hwy 2 – Monroe to Everett

US Hwy 2 through Monroe to Snohomish, 2<sup>nd</sup> Avenue and Avenue D/Bickford Avenue through Snohomish, US Hwy 2 and Trestle to downtown Everett/Everett Station.

**Findings and Recommendations** -- The US-2 Corridor provides an important link, permitting travel between Eastern Snohomish County and Everett. Given the landforms along the corridor achieving high productivity levels will be a challenge but it provides an important community function. Actions that will facilitate that role include:

- Continue 30-minute local service operating between Everett and Monroe, with hourly service to Sultan and Gold Bar
- As demand warrants, provide 15-minute commute hour service
- Coordinate with Monroe and Snohomish to gain transit priority treatments that improve the travel time competitiveness of transit services.
- Work with WSDOT and local communities to maintain/improve access to park & ride facilities in Monroe and Snohomish.



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### 228<sup>th</sup> Street/236<sup>th</sup> St – Edmonds to Mountlake Terrace to Bothell

Edmonds to Bothell, from Edmonds Ferry Terminal to Edmonds Way, 244th Street, 48th Ave, 228th Street, Brier Road, 216th/Vine Road, Locust, 228th Street, 35th Ave, continuing to downtown Bothell

**Findings and Recommendations** – The current street network is not consistent with the operation of *Swift* or Arterial services along the entire length of the route. Until a consistent travel way, constructed to arterial street standards, is complete the highest possible level of service is operation of a local route. Segments in Bothell/Canyon Park and along 236<sup>th</sup> St SW in Mountlake Terrace represent important local transit linkages for these communities. Future service investments will focus on feeding regional corridors connected to these segments. Given the significant travel demands projected for this corridor, it is important that future street improvements are designed to accommodate higher level transit service.



**SR 525 – Mukilteo Ferry Terminal to I-405**

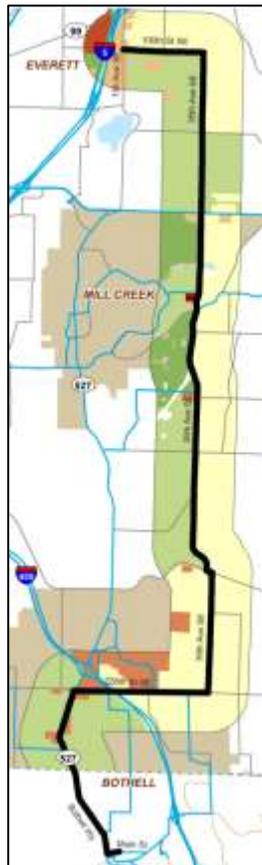
SR 525/Mukilteo Speedway from ferry terminal to I-405.

**Findings and Recommendations** – SR 525 is a hybrid corridor having characteristics of both core arterial and specialized commuter markets. Over the next 20 years, the corridor will continue to support local service with an overlay of peak commuter routes. While a productive transit corridor, land use density is relatively low. The corridor can become quite congested during peak travel periods. Configuration of the new multi-modal ferry terminal in a way that will effectively accommodate transit will be key to the long-term success of SR 525 as a transit emphasis corridor.

- Continue to work with Mukilteo to encourage higher densities and transit oriented development along Mukilteo Speedway. Given the challenging topography and local street network, it will be particularly important to focus on effective pedestrian connections from surrounding residential areas to the primary corridor.
- Work to improve park & ride capacity and access along the corridor. Relatively low density development access challenges and a strong commuter focus indicate this corridor would benefit from increased park & ride capacity.

This could be a facility sited within Mukilteo. Additionally, restoration of the freeway flyer stop access at Swamp Creek Park & Ride would directly benefit commuter services on SR 525.

- Work with WSDOT to ensure that the redesigned Mukilteo Multi-Modal Ferry Terminal provides for efficient and effective transit service.



**35<sup>th</sup> Avenue – Bothell to 100<sup>th</sup> Street SE**

35<sup>th</sup> Avenue – 19<sup>th</sup> Ave SE & 100<sup>th</sup> St (Providence Medical) to Bothell – From 19<sup>th</sup> Ave, operate 100<sup>th</sup>, 35<sup>th</sup> Ave to downtown Bothell via the Bothell Connector project.

**Findings and Recommendations** – Because significant portions of the corridor remain undeveloped, this corridor will likely only support local services throughout the next 20 years. 35<sup>th</sup> Ave will remain a lower priority for transit investment while service levels are building on SR-527.

- Community Transit should work with Bothell and King County Metro to identify a routing through Northern King County that links 35<sup>th</sup> Avenue with Downtown Bothell.
- At its northern end, the corridor needs to be integrated with activity generators and transit services.

## **Chapter 3: Supporting and Complementary Services**

While the planned network of transit emphasis corridors operating along the county's arterial street network will profoundly impact local transportation options, Community Transit's entire mix of services will evolve to meet changing needs and expectations. This chapter focuses on how commuter bus services, suburban/rural bus services, vanpooling, bicycling, rideshare and paratransit options will all change, and how Community Transit will coordinate its service with the region's other transportation providers.

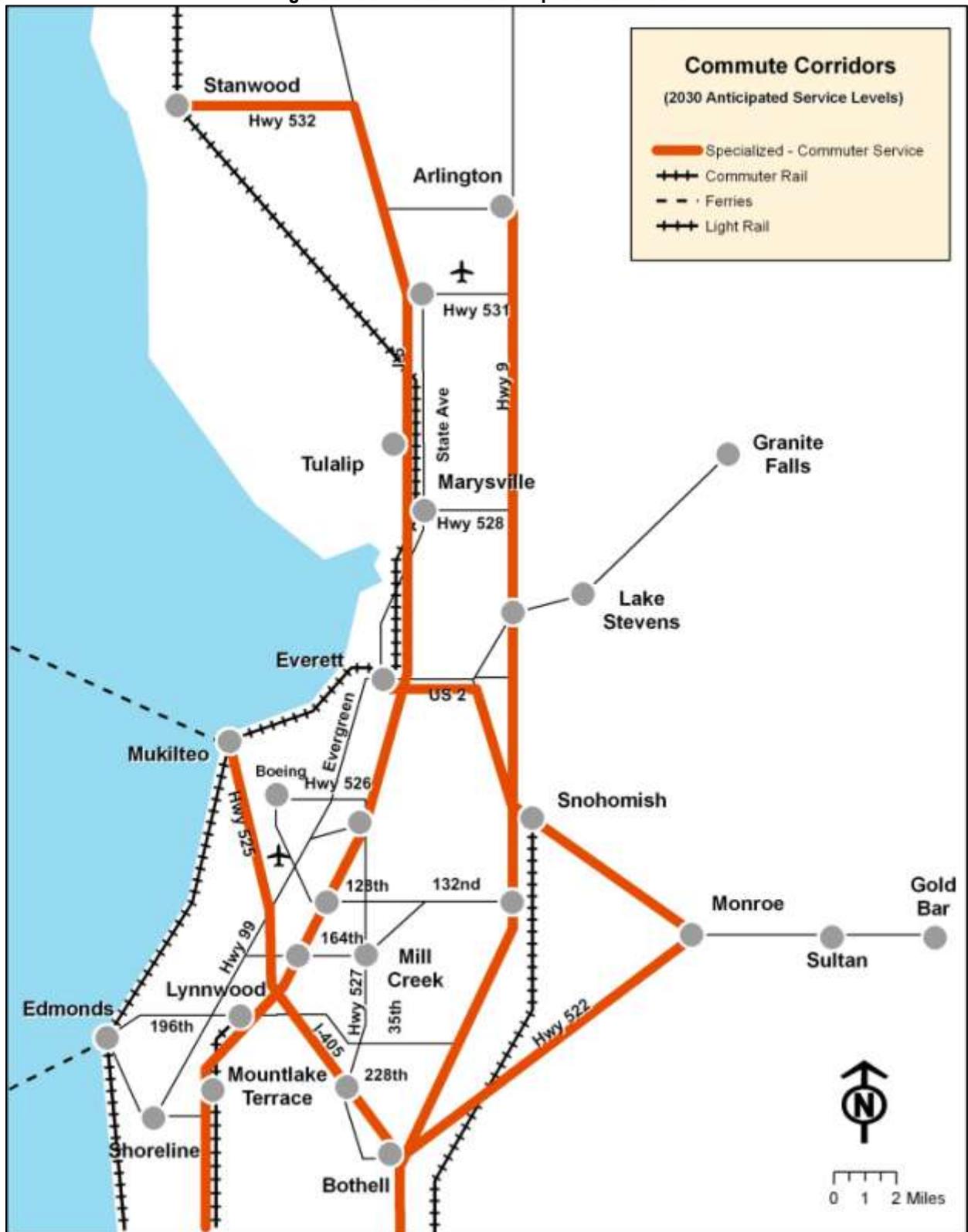
### **Linking to Regional and Commute Services**

Community Transit carefully coordinates its services along the I-5 and I-405 corridors with Sound Transit, supplementing Sound Transit's regional bus network with commute services to Downtown Seattle and the University of Washington. Since Sound Transit's founding in 1997, this partnership has greatly improved the commute options for county residents and is a national model that demonstrates how transit operators are able to combine their efforts for the public good.

The extension of Sound Transit's Link Light Rail to Lynnwood, which is now planned for completion in 2023, will fundamentally alter the nature of services operating along Interstate 5. To adapt, Community Transit services will be adjusted to feed Link services at the proposed Lynnwood and Mountlake Terrace stations, likely eliminating most express services into the Seattle area. These stations will become the destination for feeder routes transporting commuters from surrounding communities.

At the same time, services that originate in other parts of the county – Stanwood, Arlington, Everett, Snohomish, Lake Stevens, etc. – will be connected to Link via a network of in-county express routes. Figure 5 illustrates the network of commute services that will focus on six major commute corridors. While providing convenient connections to Link, they will also provide express service to major employment destinations within Snohomish County. Figure 6 summarizes the services that are planned for each.

Figure 5: Commute Transit Emphasis Corridors



**Figure 6: Summary of Commute Transit Emphasis Corridor Services**

Corridor	Summary of Planned Changes
<b>Interstate 5</b>	<p>Continue current services until Link Light Rail completed After Link operates north to Lynnwood</p> <ul style="list-style-type: none"> <li>○ Provide local feeders from southwest Snohomish County communities to Lynnwood and Mountlake Terrace Link stations</li> <li>○ Begin express feeders from north and east Snohomish County to Link stations</li> <li>○ Eliminate express bus service from southwest Snohomish County to Downtown Seattle and University of Washington</li> <li>○ Work with Sound Transit and WSDOT to determine how park-and-ride facilities along the I-5 corridor will be utilized and maintained.</li> </ul>
<b>Interstate 405</b>	<p>Feed and supplement Sound Transit’s primary network of express services operating in the I-405 Corridor</p>
<b>State Route 525</b>	<ul style="list-style-type: none"> <li>● Continue local/arterial service on Hwy 525 between ferry terminal and Hwy 99</li> <li>● Provide commuter services linked to I-5 and I-405</li> </ul>
<b>US Highway 2</b>	<ul style="list-style-type: none"> <li>● Continue local service operating between Everett and Monroe, with hourly service to Sultan and Gold Bar</li> <li>● As demand warrants, provide 15-minute commute hour service</li> <li>● Coordinate with Monroe and Snohomish to gain transit priority treatments that improve the travel time competitiveness of transit services</li> <li>● As necessary, expand the park-and-ride facilities in Monroe and Snohomish to meet growing demand</li> </ul>
<b>State Route 9</b>	<ul style="list-style-type: none"> <li>● Coordinate with local communities to assess the appropriate time to include the SR-9 Corridor in Community Transit’s taxing area</li> <li>● When demand warrants, provide commute hour express services linking Arlington and Bothell, with intermediate stops at nodes of development along corridor</li> <li>● Work with Snohomish County and local jurisdictions to secure future park-and-ride capacity at key locations along the corridor</li> </ul>
<b>State Route 522</b>	<p>As demand warrants, expand commute hour services operating along the SR-522 corridor</p>

## Local and Feeder Services

Not every community activity center is located on a transit emphasis corridor. Several small, dense, and productive route segments don’t rise to the level of a transit emphasis corridor but do provide critical local links. Examples include 44<sup>th</sup> Ave W in Lynnwood and 220<sup>th</sup> St SW in Mountlake Terrace. Community Transit will continue to serve these areas using a network of redesigned local routes that link urban neighborhoods with local activity centers, especially transit centers and Link Light Rail Stations.

These local routes will typically operate every thirty minutes and may operate seven days a week if demand warrants. They will be designed to coordinate with higher level services, especially regional commuter express routes, *Swift* corridors, commuter rail, or light rail routes.

Figure 7 illustrates an area in the southwest part of Snohomish County where local routes are likely to prove most appropriate as feeders to *Swift* routes and regional rail. It will be important to match schedules and hours of operation whenever possible. By using local services to feed regional services the cost of new park and ride facilities can be reduced and significant air quality improvements from reductions in the number of cold starts will result. Projected ridership and productivity are the most significant factors when evaluating proposed local routes. In addition, local routes may be created as a way of serving productive sections of current routes that lie outside a transit emphasis corridor when that route is converted to *Swift* or arterial services.

Until resources that fund *Swift* and arterial services become available, local routes will operate along many of the transit emphasis corridors. When funding allows, and warranted by demand and community development practices, they will gradually transition into arterial routes. This will entail route adjustments that eliminate indirect travel. Service frequencies and hours of operation will also be improved to match increasing patronage. At the same time, Community Transit will work with local jurisdictions to provide coordinated transit improvements, community development practices and transit priority treatments.

## **Suburban/Rural Services**

Transit services operating in suburban and rural neighborhoods are designed to provide mobility, especially for individuals without transportation options. Suburban and rural services emphasize coverage. Generally, the number of neighborhoods served receives greater emphasis than frequency. Four factors will be considered when evaluating proposed suburban/rural routes:

1. The overall efficiency and sustainability of Community Transit's network balanced against individual local market needs.
2. The funding capabilities of both Community Transit and its partner jurisdictions
3. The presence of significant concentrations of low income individuals, persons with disabilities, and elderly persons
4. Alternative transportation options including nearby transit emphasis corridors or other public transportation services, whether operated by Community Transit or another service provider

Figure 7 identifies the portion of Community Transit's district served by suburban/rural routes providing connectivity between communities. While a higher proportion of future service investment will take place in productive urban markets, Community Transit will continue to provide for basic transportation needs of outlying communities.

Rural communities often express a desire for transit to link activity centers within their jurisdiction. Economics, travel demand and overall network efficiency typically preclude extensive local circulation of transit in these markets. In order to maximize use of the connective services that are provided, communities can prioritize location of new public facilities, transit-dependent residential and commercial developments on primary transit corridors where service is already provided.

Figure 7: Local, Suburban, and Rural Service Areas



## **Vanpool**

Community Transit's vanpool program is one of the largest in the nation. Groups of 5 to 15 people can form a vanpool and enjoy the benefits of transit while controlling their own schedule. Community Transit's vanpool fares are based on van size and daily mileage. Gas, insurance and maintenance are provided by Community Transit.

Throughout the year, special promotion and outreach programs highlight the advantages of taking transit, joining a vanpool or sharing a ride. Some promotions offer incentives such as free ride tickets, money or prizes. Others call attention to the lifestyle advantages or environmental benefits of using an alternate commute mode.

Vanpool has traditionally provided an alternate commute option focused on major employment destinations in King and Snohomish Counties. This Long Range Transit Plan relies on vanpools to fulfill new roles within the larger transportation system. With fixed-route bus service increasingly focused on transit emphasis corridors, there will be a growing need for "last mile" linkages between corridors, employment sites and housing. Ideally, employers will be encouraged to locate on transit corridors, providing the best possible transit access for their employees. Likewise, workers will have an opportunity to select housing with easy access to transit. Recognizing that such alignment of location decisions and transit will not always be possible, new models may be considered for vanpool, serving as a localized bridge to fixed-route buses. Specific examples include a "vanshare" configuration in which vans are staged at park & rides to provide customers traveling on a variety of bus routes a coordinated connection to their common employment destination. Additionally, residential-based vans could serve as feeders between high-density housing developments and park & rides.

In general, the Long Range Transit Plan assumes a higher level of coordination and integration between vanpool and the fixed-route bus network. Fleet size is projected to grow by an average of one percent annually. The actual growth rate will depend upon the local employment market and Community Transit's fixed-route service to major job centers. Vanpool can provide greater flexibility in routing and schedule for some system users. Further, with its inherently high cost-recovery ratio, vanpool can provide this complementary flexibility and extension to the fixed-route system at relatively low cost to Community Transit.

## **DART ADA Paratransit Service**

Community Transit's DART service fulfills Federal Americans with Disabilities Act (ADA) requirements and satisfies a critical need for individuals who are unable to utilize regular fixed route services by reason of disability. Fixed route vehicles have long been accessible to wheelchairs and most bus stops have been upgraded so they are accessible. Supplementing these efforts, the DART system serves individuals who are unable to use these regular fixed routes. It provides transportation between locations that are within three-fourths of a mile of a local fixed route service and provides immense benefit to many people with disabilities.

Long range system planning must carefully consider DART service requirements and impacts. On a per-ride basis, DART is the most costly service Community Transit provides. Trips are often door-to-door and are highly customized for individual riders. As Community Transit

expands the geographic coverage and operating span of services, the number of individuals with disabilities who are eligible for ADA service grows. Further, as the population ages, demand for DART service will increase in the community. Community Transit will keep pace by expanding its DART services in order to meet demand. At the same time, the potential cost of these services will be carefully considered when making changes to the fixed-route network.

## Summary

To meet the projected future demands, service hours will roughly double over the next twenty years, as illustrated in Figure 8 below. While the number of peak vehicles will grow, the pace of vehicle growth will be slower than the growth in revenue hours. This reflects the reorientation of Community Transit's fixed route structure from a system with a significant focus on the provision of commute hour services that link King and Snohomish counties to an all-day system that is focused on travel within Snohomish County. While the demand for intercounty travel will not disappear, it will be largely satisfied by Sound Transit's services – Sounder Commuter Rail, Link Light Rail, and Regional Express Bus services.

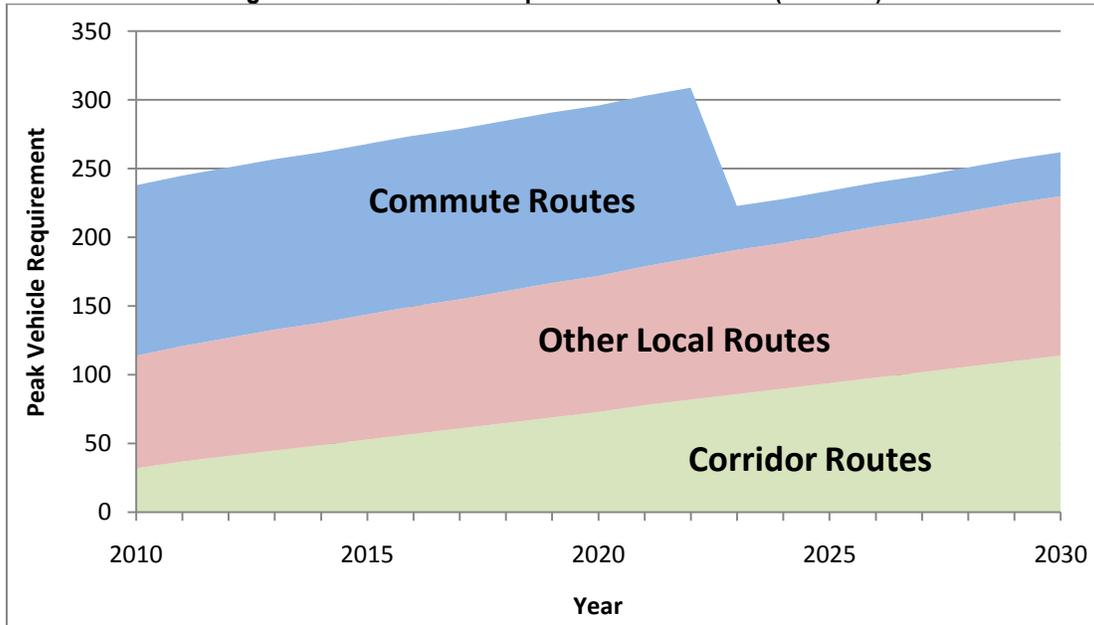
Figure 8: Projected Service Expansion 2009-2030

Type of Service	Peak Vehicles		Annual Revenue Hours	
	2008	2030	2008	2030
<b>Service in Transit Emphasis Corridors</b>				
<i>Swift</i> *	19	77	68,000	369,000
Arterial Services	8	22	27,000	114,000
Local Services	5	15	13,000	72,000
Other Local Services	74	106	252,000	360,000
Suburban/Rural Services	8	10	37,000	45,000
Commute Services	124	32	109,000	55,000
<b>Total Bus Services</b>	<b>238</b>	<b>262</b>	<b>507,000</b>	<b>1,014,000</b>
<b>Vanpool Services</b>	<b>419</b>	<b>520</b>	<b>89,000</b>	<b>108,000</b>
<b>DART Paratransit Services</b>	<b>55</b>	<b>67</b>	<b>104,000</b>	<b>151,000</b>

\*Includes the first *Swift* service, operating along the SR-99 Corridor, began operation in November 2009 AND underlying arterial service on SR-99 corridor.

A major challenge will be the different pace that the expansion services operating along transit emphasis corridors will take when compared to reductions in commute service. *Swift* service already operates along SR-99. Contingent on required funding, the next *Swift* route could begin operation in about 2017, with subsequent corridors coming on line every three to five years. Along with these new *Swift* routes, arterial and local routes will also grow, incrementally increasing the fleet size. In contrast, most existing commute services will serve an essential purpose until they are replaced by Link Light Rail in 2023. If this happens, there will be more buses operating in 2022 than any time before or after as illustrated in Figure 9 below.

Figure 9: Peak Vehicle Requirements 2010-2030 (Additive)



Depending on service implementation, the peak vehicle requirement could reach 309 buses in 2022, dropping to 223 buses by the end of the next year. This would create significant resource challenges, particularly for maintenance capacity and fleet replacement management. Future expansion plans, as well as vehicle replacement plans, will need to account for the impacts of the Link startup on Community Transit's services.

## **Chapter 4: Park & Rides, Transit Centers and Transit Oriented Development**

### **Historic Trends**

Park & rides typically provide an efficient means of access to transit in areas that lack density to support productive local feeder service. This was certainly the case in the 1980s and 1990s when many of the park & rides in Snohomish County were constructed to facilitate access to commuter routes serving downtown Seattle. In the early years of Community Transit's development, there was relatively little local service to provide a viable feed to these routes. Local buses that did connect to commute service operated at 30 or 60 minute headways, making convenient transfers difficult. Park & rides were very successful, helping to build the inter-county commute market and serving as anchors for Community Transit's network. By the mid 1990s Snohomish County had more than 4,000 park & ride spaces and utilization was consistently over 80%.

In the late 1990s and into the 2000s, Community Transit increased service levels such that most local service in the urbanized portion of the County operated at 30 minute or better frequency. Key corridors such as Highway 99, 164<sup>th</sup> St and the north-south trunk from Lynnwood through Everett to Smokey Point saw service increase to a bus every 15 minutes. At the same time, there were significant additions to the park & ride inventory. Nearly 4,000 new spaces were constructed between 1995 and 2009.

Two trends emerged over the same period:

1. Many more people were taking the bus to Seattle.
2. An increasing number of people were using feeder service (or collector legs of commuter routes) to access inter-county commuter routes.

In 1994 there were 10,000 boardings per day on Community Transit's King County commuter services. At that time, there were 4,000 parking spaces available at park & rides in Snohomish County. By 2008, combined Community Transit and Sound Transit ridership for this market had increased 130% to 23,000 boardings per day. For the same period, Snohomish County park & ride capacity increased 75% from 4,000 to 7,000 spaces.

While it is difficult to say exactly how many Seattle-bound commuters are using park & ride spaces, it is clear that a significant portion of this market's growth is associated with users who are accessing the service via modes other than car. This trend is undoubtedly related to the increased availability of local feeder service. The shift in emphasis at major park & rides was also evident in a 2006 survey of Lynnwood Transit Center users that indicated 57% of people traveling to the park & ride arrived by bus. Only 22% arrived by car.

Park & rides are often understood to be a transitional or temporary solution to transit system access. The ultimate goal is for riders to use non-auto-based modes (walk, bike, bus) to access

the system, rather than driving their car to a park & ride. In southwest Snohomish County, major park & rides such as Mountlake Terrace, Lynnwood, Ash Way, Mariner and Everett Station have developed into transit centers that serve a significantly greater volume of customers passing through the facility on buses than arrive by car. These facilities also serve an important operational function, providing valuable space for buses to turn around, layover between trips and gain direct access to and from freeway HOV lanes.

Transit system development in other areas of Puget Sound has matured to the point that some urban centers are redeveloping or evolving around a centralized transit facility that brings desired retail, commercial and employment markets directly into the heart of their communities. Rather than placing transit on less expensive real-estate at the periphery, cities like Bellevue have recognized the transportation and economic development advantages of centralizing transit and prioritizing pedestrian access. This allows the community to place less emphasis on costly auto parking and, instead, build for a more sustainable future with pedestrian and transit oriented development. Bellevue Transit Center was intentionally constructed with no automobile parking. Users of this facility must arrive by walking, biking, or riding a bus. The facility was designed as part of an intentional effort to build the community in downtown Bellevue in a way that does not require more roads or parking lots.



**Figure 10: Bellevue Transit Center**

### **Changing Focus**

As transit service levels in Snohomish County have increased, the geographic zone requiring the artificial density and feeder function of park & rides has moved outward from the center. In general, this zone falls along the boundary between higher frequency (15 to 30 minute headway) bus service and lower frequency (60 minute) bus service. In earlier decades, this zone included north King County and south Snohomish County. In 2010 this area encompasses Mukilteo, Marysville, Arlington, Lake Stevens, Snohomish and Monroe. As the transit emphasis corridor network is eventually built out,

high-frequency bus service will be extended to additional locations such as Maltby, Cathcart and 20<sup>th</sup> St NE in Lake Stevens. These areas will also require park & ride facilities both for the transitional function of focusing market demand as well as the long-term operational need for transfers, bus turn-around and layover space.

Recent park & ride system expansion in this zone includes three facilities, each having approximately 200 spaces, at Ash Avenue in Marysville, at Cedar and Grove Street in Marysville and at Highway 9 and Market Street in Lake Stevens.

Community Transit serves a group of smaller park & rides, typically having 25 to 100 spaces, located in smaller cities in north and east Snohomish County. Generally, these cities represent small transit markets that support hourly service along state highways. They might also support long-haul commuter service to destinations such as downtown Seattle and the Boeing aircraft manufacturing plant in Everett. Park & rides in these smaller cities provide a congregation point for local and commuter bus services as well as carpools and vanpools.

Transit oriented development or TOD is increasingly under consideration in discussions of new park & ride projects. In some cases, the context is redevelopment or enhancement of existing park & rides. In other cases, TOD is looked upon as a long-term goal for new park & ride projects in developing areas. A recent trend is the consideration of private-public partnerships between private commercial developers and public transit agencies. In such developments, transit agencies realize financial benefit from private investment in public facilities as well as the market benefit of potential bus riders attracted by retail and other commercial services. The private sector likewise benefits from the synergy of potential customers attracted by proximity of transit service as well as a development process expedited through local municipal and community support of the associated transit project.



Figure 11: Park & Ride Development Trend

The very real potential of future transit oriented development is changing the way agencies evaluate site selection criteria for park & rides.

Recognizing the ultimately transitional nature of these facilities, agencies no longer focus solely on inexpensive real estate that has general proximity to the intended transit market. Rather, the best location for a new park & ride might be land that is favorably situated in areas identified for more intensive economic and commercial development or redevelopment. While more expensive, such locations are more likely to contribute directly to transit market growth and likewise, to provide maximum transportation benefit to the surrounding developments.

Another take on park & rides and TOD is related to discussions of land use planning around *Swift* stations. Many local jurisdictions are starting to consider the economic stimulus and redevelopment potential provided by *Swift*. Small-scale park & rides at station locations could

provide an effective focus for the transit market while putting land in public ownership for a higher-and-better use as development intensifies around the station area.

Prioritizing location on established transit emphasis corridors is another recent shift in park & ride planning for Community Transit. Scarcity of operational funding has underscored the importance of operational efficiency and proximity of bus service to productive markets. These facilities work best when they are located on transit emphasis corridors at signalized intersections that allow safe and efficient movement of buses, cars and pedestrians on, off and across the corridor.

### **Why not increase parking?**

Despite the very real shift in use at major transit facilities to non-auto based modes, demand for parking remains high. The first question customer ask at many public outreach events is “When will you build more parking?” The answer has a lot to do with cost and how we want our communities to develop.

Many of our major transit facilities are located in areas that have undergone an urban transformation. Facilities like Lynnwood Transit Center, Ash Way Park & Ride, Mariner Park & Ride and others are becoming urban environments with high-density housing, a mix of land uses and diverse local and regional transportation connections. Long-term land use plans have formally designated these areas as urban centers with a vision for high-density development, pedestrian-oriented design and high transit mode share.

As these urban centers continue to evolve, land for new development or redevelopment will become increasingly valuable. Local jurisdictions are beginning to question the wisdom of significantly expanding parking capacity in urban centers. Expanded parking removes land from contention for a higher and better use in core urban areas. Communities hoping to attract a vibrant mix of residential, commercial and cultural activity are beginning to recognize the challenge of achieving these objectives while continuing to dedicate large tracts of land for parking and traffic circulation. Increased parking also places a greater traffic burden on the surrounding road network, drawing additional vehicles to the facility, adding to local and regional congestion.

Environmental and climate change concerns are also driving the conversation about future expansion of parking capacity. Limiting parking helps to incentivize other modes of access like walk, bike or riding local feeder service to major transit centers. This limits automobile use, reducing cold starts and helping to mitigate greenhouse gas emissions. Further, by preserving land for high-density development around transit centers, reduced emphasis on parking helps to create vibrant urban centers that enable a true “think transit first” lifestyle with greater long-term impact on emissions.

Where structured parking is proposed, the very high cost (in excess of \$30,000 per space) places a major constraint on transportation budgets and diverts funding from transit service to capital construction at a very high cost-per-rider. Ongoing operational and lifecycle costs are also a significant consideration. Agencies must plan for and fund re-paving of aging parking lots and maintenance of elevators, lighting and other amenities at parking garages – again, at a very high cost-per-rider.

As the recommendations in Section 5 describe, there is still a significant role for new park & ride capacity in this plan. The changing focus is that additional parking is no longer the default

answer for new facility investment in all areas. The most heavily used, urbanized areas of the transit network are moving beyond park & ride to a more integrated “think transit first” model for access to the system.

## Classification of Facilities

The following is a proposed classification for the facilities this document describes. Two references used in this section are *A Comprehensive Planning and Design Manual for Park & ride Facilities*, Robert Spillar, 1995 and the *AASHTO Guide for Park & ride Facilities*, 2004:

- Auto-Oriented Facilities:
  - Large Urban/Suburban Park & Ride – Major park & ride lots, typically 400 or more spaces in developed urban and suburban communities. Parking may be surface or structured. Usually located adjacent to interstate or major state highways. Typically incorporates a transit center function. Served by local and commuter bus services. Almost always incorporates on-site bus circulation.
  - Smaller Suburban/Rural Park & Ride – Smaller scale park & ride lots, typically 200 or fewer spaces in suburban or rural communities. Often adjacent to highways but may be located on or near arterial streets. May incorporate transit center function but often serves as anchor for long-haul commuter service. May include on-site bus circulation but sometimes does not.
  - Leased Park & Pool Lot -- Typically small facilities that serve as staging locations for carpools and vanpools. These facilities are generally combined with another use, are relatively low cost and are developed quickly where opportunities exist. Bus circulation is almost always off-site (on-street).

- Pedestrian-Oriented Facilities:
  - Transit center – a place where interchange between local and express transit service occurs. Spillar notes that in reality many of these facilities also include a park & ride function, and offer a higher degree of services, route choices, and destination alternatives. These facilities are typically located in higher demand locations than suburban park & ride facilities. Transit centers are almost always located off-street, requiring sufficient space for bus circulation within the site.

In addition to Spillar’s definition, the local experience for this region indicates that transit centers are also becoming multi-modal facilities that can include a transfer between local bus, commuter bus, bus rapid transit, ferry, heavy rail (Sounder, Amtrak), light rail (Link), pedestrians/bicycles, and/or private vehicles.

- Freeway Flyer Stop – Fast, efficient, direct access for pedestrians to board freeway-based bus service without requiring the bus to leave the freeway corridor. Good examples include the South Everett Freeway Station at 112<sup>th</sup> St and I-5 (median station) and the freeway station at 145<sup>th</sup> and I-5 in north Seattle (right lanes).

- Super Stop / Swift BRT Station – Located on-street, smaller than a transit center but more infrastructure than a standard stop/shelter. Designed to minimize bus dwell time and serve as an anchor for transit-oriented development. Bus service at a super stop or BRT station should be of such frequency that a printed schedule is not required.
  - Pedestrian Interchange/Corridor Junction – This is a new facility classification that does not yet exist in Community Transit’s service area. As service levels increase, there will be a need for infrastructure and features at intersection of major transit emphasis corridors designed to facilitate safe, pleasant and efficient transfer of pedestrians between intersecting bus lines. Includes traffic signals, pedestrian signals, marked crosswalks and ADA ramp/access. Ideally, may incorporate grade-separated pedestrian walkways, weather protection, lighting, wayfinding/information signs and special branding to identify the location as a major transfer point.
- Bus Layover/Staging:
    - Transit Centers and Park & Rides typically incorporate some measure of space set aside for short-term parking of buses not in revenue service. For very active transit hubs and terminal locations, space requirements for this layover function can be significant. Over time, layover space and bus circulation needs may become a higher priority than automobile parking at major transit facilities in urbanized areas.

Most of the larger transit facilities in Snohomish County fit into two or more classifications. For example, Mountlake Terrace Transit Center is a Large Urban Park & Ride that also serves as a Transit Center and incorporates an adjacent Freeway Flyer Stop.

It is also important to note that bus layover is shown as an accessory function provided by many of these facilities.

## Subarea Strategies

The corridor-based service development strategy described in this plan requires investment in transit facilities that will improve access to the system and complement local land use goals and objectives. As discussed above, the role of park & rides has evolved as the level of transit service has increased in the core of Community Transit’s system. This evolution will continue as the transit emphasis corridor network is implemented. Market demand, regional growth strategies and this long range plan imply a facility plan with characteristics that vary by three general geographies – Southwest, North and East.

### Southwest – Urban Integration with Bus, Rail and Pedestrians

The Southwest area, from Everett to Edmonds and Puget Sound to Mill Creek contains the highest concentration of population jobs, infrastructure and services in the County. Future land use plans call for this trend to continue and intensify. As a market-driven agency, Community Transit’s plan likewise calls for the highest level of future service to be focused in this area. Many of the transit emphasis corridors in Southwest County will see either Swift BRT or regular 15 minute corridor bus service in the horizon of this plan. Local services will be implemented to feed these corridors. Most neighborhoods in Southwest County will be within walking distance of frequent bus service connecting to both transit emphasis corridors serving Snohomish County destinations and regional services traveling to King County. The most significant transportation development over the life of this plan will be construction of Link Light Rail with stations in Mountlake Terrace, Lynnwood and ultimately Everett. Integration of bus, rail, non-motorized and auto traffic will be a major objective of transportation planning in Southwest County.



**Figure 12: Transit Facility Subareas**

Given this plan for service development, the emphasis for new facility investment should be on transit centers, super stops, direct freeway access ramps, freeway stations and other infrastructure that improves integration, access, efficiency and operation of bus and rail services. Renovation and improvement of existing facilities should prioritize enhancement of the transit center function and integration of modes (bus, rail, walk, and bike) rather than expanded parking capacity.

In some cases, parking facilities will be warranted to resolve localized access issues such as lack of local feeder service and/or inadequate pedestrian infrastructure. In these instances, the facilities should be sited with safe and efficient access to transit emphasis corridors for buses, pedestrians, bicycles and cars. This requires a signalized intersection with ability for

pedestrians to cross the corridor. The park & ride does not need to front directly on the corridor, but should have visibility to vehicles using the corridor.

As service levels on corridors in Southwest County continue to increase, there may be opportunities for integration of transit and/or transit centers with Transit Oriented Development or TOD. These developments should emphasize integration of transit into the site with the highest priority placed on pedestrian access and efficient transit operation. Automobile parking/access should be disincentivised in TODs drawing a clear distinction between such developments and park & rides. The transit agency should be consulted in TOD proposals from the earliest planning phase including site selection.

Smaller, leased park & pool lots should continue to be used as a lower-cost option to new park & ride construction. Leased lots may be located to serve carpool and vanpool users away from fixed route bus service. In some parts of Southwest County, leased lots may enhance access to transit emphasis corridors in segments without adequate local feeder service or pedestrian network connections.

**Figure 13: Southwest County Transit Facility Needs**

 <p>Higher Priority</p> <p>Lower Priority</p>	<p>Transit centers at established system hubs, providing for transfers between bus routes and inter-modal connections between bus and rail – Esp. integration of Link Light Rail and bus in Mountlake Terrace and Lynnwood.</p>
	<p>Bus layover/circulation within existing facilities.</p>
	<p>Super stops or BRT stations at urban centers, urban villages, transit oriented developments and other activity centers along transit emphasis corridors.</p>
	<p>Pedestrian interchanges where transit emphasis corridors supporting frequent service cross one another, allowing safe and efficient movement between corridors.</p>
	<p>Park &amp; ride lots (transit-owned or leased) in areas with lower-density development, incomplete pedestrian networks and limited access to frequent local transit. There will be few opportunities for additional parking facilities in southwest County. Remaining need will be for smaller (typically 200-300 space) lots along transit emphasis corridors that lack immediately adjacent development density and/or do not have well-developed local bus feeder service.</p>
	<p>Leased park &amp; pool lots in areas not served by fixed-route transit as gathering places for carpool and vanpool users.</p>

**North – Park & Rides and I-5 Freeway Stations**

North Snohomish County is characterized by lower-density suburban and rural development. Interstate 5 and Smokey Point Boulevard/State Ave are the primary transit corridors through Arlington and Marysville, connecting North County communities to the core transit network. Lower frequency local services and peak period commuter routes extend from this central trunk line to Tulalip, Stanwood, Warm Beach, Arlington and Darrington. Island Transit and Skagit Transit operate long-haul commuter services along Interstate 5 to Everett Station.

Smokey Point Blvd./State Ave has been identified as a future candidate for Swift BRT service. Collecting riders and focusing the dispersed market for this transit emphasis corridor will be an important ongoing facility need in the North County area. Moderately sized park & rides located immediately adjacent to the primary corridor will provide access to frequent transit service and allow buses on the corridor to collect passengers without inefficient and expensive deviation onto side streets.

North County commuter services on Interstate 5 are also projected to grow in importance as downtown Everett, Boeing, Lynnwood City Center and Sound Transit rail attract riders from North Snohomish County as well as Skagit and Island Counties. Efficient, direct movement of transit commuters from surrounding communities to this bus service will require thoughtful design of direct access/freeway station facilities along Interstate 5. These facilities, likely incorporating parking, should allow buses to pick up and drop off passengers in an operationally efficient freeway station or flyer stop configuration.

**Figure 14: North County Transit Facility Needs**

<p>Higher Priority</p> <p>Lower Priority</p>	<p>Park &amp; rides in areas with lower-density development, incomplete pedestrian network and limited access to frequent local transit. Additional park &amp; ride capacity will be needed in North County to focus the market for frequent bus service along Smokey Point Blvd/State Avenue and Interstate 5.</p>
	<p>Freeway flyer stops along I-5, providing rapid, efficient access to transit services at freeway interchanges.</p>
	<p>Super stops or BRT stations at urban centers, urban villages, transit oriented developments and other activity centers along transit emphasis corridors.</p>
	<p>Bus layover/circulation within existing facilities.</p>
	<p>Transit centers at established system hubs, providing for transfers between bus routes and inter-modal connections between bus and rail.</p>
	<p>Leased park &amp; pool lots in areas not served by fixed-route transit as gathering places for carpool and vanpool users.</p>

## East – Transit Oriented Development Nodes and Linkages to Everett and East King County

Like the north County area, east Snohomish County's low density rural character calls for transit facilities along key transit corridors to concentrate the market for local and commuter bus services. US Highway 2 is the currently the most important corridor in east County. State Route 9 has been identified as a critical north-south alternative to I-5 in east County. The Burlington Northern-Santa Fe (BNSF) east side rail corridor is also a potentially important transportation corridor paralleling State Route 9 from Snohomish south to east King County cities. There are choices to be made in the east subarea regarding land use strategy and complementary transit facilities. Some communities may elect to maintain a rural character with lower densities and an auto-focused transportation strategy. These communities would likely chose to construct park & rides to provide a centralized access point for transit service connecting to urban centers and employment destinations in west Snohomish County and King County. Other communities may pursue a more urbanized built environment with higher density nodes, urban centers and mixed use. While park & rides may provide an interim strategy for these communities, the ultimate goal would be a transit center or super stop integrated into transit oriented development.

Community Transit serves park & rides in Gold Bar, Sultan, Monroe and Snohomish along US Highway 2. These facilities provide important focal points for both peak-period commuter service and all-day local service connecting communities along the corridor. A priority for the future will be careful consideration of maintaining access to these existing facilities. There may also be opportunities to improve pedestrian connectivity to the surrounding neighborhoods for walk access to transit. Safety and the ability for both cars and buses to consistently and efficiently access park & rides on this congested corridor should also be a priority in any future consideration of improvements to these facilities.

Over the life of this plan, State Route 9 will continue to grow as an important commute corridor in east County. As the facility is improved and resources become available, transit will be implemented, providing new connections to communities in east King County and enhancing existing service to Everett and other cities to the west. Lake Stevens park & ride and Snohomish park & ride are two facilities already located on or adjacent to State Route 9. As with the US 2 corridor, maintaining and improving access to these facilities will be a high priority as State Route 9 develops. Further, as discussed above, future facilities at locations such as Cathcart or the intersection with 20<sup>th</sup> St in Lake Stevens could eventually be implemented in the form of transit centers and/or super stops as a focus for transit oriented development in urban centers rather than traditional park & rides.

The future of the BNSF rail line in this subarea is an unknown potential over the horizon of this plan. If the line develops with commuter rail service there will be a significant need for transit facilities providing a bus-rail interface to feed the new line. Some of these facilities may include parking. Where sufficient frequency of bus service is provided there may be opportunities for transit centers, super stops and TOD.

**Figure 15: East County Transit Facility Needs**

<p>Higher Priority</p>  <p>Lower Priority</p>	<p>Park &amp; ride lots in areas with lower-density development, incomplete pedestrian network and poor access to frequent local transit. Preservation and enhancement of existing facilities on US Highway 2 and State Route 9. Additional capacity at nodes along SR-9 to provide the artificial density needed for transit service in this corridor.</p>
	<p>Transit centers at nodes with sufficient demand and service levels, providing for transfers between bus routes and inter-modal connections between bus and rail.</p>
	<p>Super stops or BRT stations at urban centers, urban villages, transit oriented developments and other activity centers along transit emphasis corridors.</p>
	<p>Bus layover/circulation within existing facilities.</p>
	<p>Leased park &amp; pool lots in areas not served by fixed-route transit as gathering places for carpool and vanpool users.</p>

## Chapter 5: Measuring Success

As Community Transit grows, it will be important that limited resources address the most pressing needs, and that the performance of existing services is routinely monitored, and adjusted when appropriate. A series of service guidelines have been developed to assist in this process. They provide a valuable tool for allocating scarce transit resources and enforce consistency in the service planning process by providing direction on how to allocate, prioritize or deploy services that meet the goals of the community and the agency. Their use also helps avoid potentially inequitable, and possibly inefficient, allocations of service. As decision makers reach conclusions about various aspects of growth in their community, service design guidelines will provide them with a frame of reference about how transit will respond to those changes. Guidelines can also provide insights on where to focus transit service reductions, or reallocations when those subjects inevitably arise over the life of the long range plan.

### Community Transit’s System Performance Measures

This plan builds on the measures being used as system performance indicators, which are outlined in the **2008-13 Transit Development Plan**. These measures allow policy makers and the public to assess the system’s progress towards reaching its long-term goals.

**Figure 16: Summary of TDP Goals & Measures**

Measure	Baseline (2006)	Definition of Success
<b>Goal: Customer Satisfaction and Ridership Growth</b>		
<b>Boardings per Capita</b>	21.1	Increase over Baseline
<b>Boardings per Revenue Hour</b>	15.2	Increase over Baseline
<b>Customer Commendations per 100,000 Boardings</b>	2.6	Increase over Baseline
<b>Customer Complaints per 100,000 Boardings</b>	31.0	Decrease over Baseline
<b>Voluntary Employee Turnover</b>	0.06	Decrease over Baseline
<b>Goal: Good Stewards of Public Funds</b>		
<b>Cost per Passenger Mile</b>	\$0.75	Decrease over Baseline
<b>Cost per Revenue Hour (adjusted for inflation)</b>	\$142	Decrease over Baseline
<b>Farebox Recovery</b>	17%	Movement towards 20% goal
<b>Revenue Hour per Employee</b>	1.069	Increase over Baseline

All these goals exclude Sound Transit services operated by Community Transit

### Coordination with Transit Supportive Development

Previous chapters outlined four different types of local service – *Swift*, Arterial, Local, and Suburban/Rural. Each addresses different densities and community design characteristics.

As noted previously, density is the most important determinant of transit ridership. Accordingly, Community Transit will look very carefully at population densities when designing its transit routes. In doing this, Community Transit has combined residential and employment densities.

Using this measure, the number of residents and employees within one-half mile on each side of a corridor’s travel-way is divided by the area incorporated in the corridor. Generally, the following densities are needed to support different types of local transit services.

**Figure 17: Transit Supportive Densities**

Service Type	Design Headway/ Buses per Day	Dwelling Units per Acre	Comparable Pop + Employment / Acre
<b>Swift</b>	10 min / 200 per day	15	30
<b>Arterial</b>	15 min / 150 per day	15	30
<b>Local</b>	30 min / 75 per day	7	15
<b>Suburban/Rural</b>	60 minute / 25 per day	4	8

Other factors, outlined in the first chapter, that contribute to transit ridership will be also considered. These include the preponderance of paid parking, pedestrian improvements, convenient and safe crosswalks, streetscape improvements, and transit priority facilities.

Recognizing that most of these community design features are the responsibility of local jurisdictions, Community Transit has initiated an ongoing program to coordinate planned transit improvements with jurisdictions’ comprehensive planning processes. The long term goal is to ensure that, as communities foster and regulate growth, it will occur along corridors that Community Transit is able to serve, and that growth taking place in these corridors supports transit ridership to the maximum extent possible.

## Performance Guidelines for Individual Routes

Community Transit focuses on three measures.

**Is the service productive?**

**Do buses run on time?**

**Does everybody have a seat?**

**Service Productivity** - The most common performance measure is the number of passengers boarding in an hour of service. Separate guidelines have been established for each route classification. These are based upon realistic performance expectations for this type of service. For example, *Swift* services should ultimately carry more than 35 passengers per revenue hour.

**On-time Performance** - The second building block of quality transit service is on-time performance. Accurate monitoring of on-time performance will become much easier once Community Transit’s Advanced Public Transportation System (APTS) with Automated Vehicle Locating (AVL) is operational. This will accurately track the location of every Community Transit bus throughout its workday.

As Community Transit moves towards headway based service on its *Swift* routes the proper interval between buses becomes more important than their actual arrival time. Because service is frequent, every 10 minutes or less, customers will be able to walk out to a bus stop, knowing

that a bus will arrive within a few minutes. Thus, it will become important that time intervals between buses are maintained, and that bus ‘bunching’ is avoided.

**Passenger Load** - Load factor of a trip represents the maximum number of people who are on a bus at one time during a trip divided by the number of seats. Thus, when the load factor exceeds 1.0, people are standing. Standing loads are acceptable for short distances, so long as individuals are not crushed together. Thus, both *Swift* and Corridor Based Routes will accept some standing passengers. This is less desirable if the standing load lasts for prolonged periods of time.

**Figure 18: Operating Parameters**

Type of Service	Boardings/Revenue Hour	Reliability (on-time performance)	Seated Load
<b>Swift Bus Rapid Transit</b>	35+	Headway Management – Exceed published headway by no more than 20% at least 95% of the time*	Standees up to 1.5 load factor are expected. Should not exceed 2.0 on any trip
<b>Arterial Routes</b>	Group = 25 to 35, no route below 20	Meets schedule 90%+	Load factor should not exceed 1.25 on any trip
<b>Local Routes</b>	Group = 15 to 20, no route below 10	Meets schedule 90%+	Load factor should not exceed 1.15 on any trip
<b>Suburban/Rural Routes</b>	Goal = 10+	Meets schedule 90%+	Load factor should not exceed 1.00 on any trip
<b>Commute Routes</b>	No specific guideline established. Commuter services attempt to have seated loads within the appropriate headway range.	95% Scheduled <u>departure</u> time	Load factor should not exceed 1.00 on any trip

\*This means that on a route where service is scheduled to operate every ten minutes buses would be between eight and twelve minutes apart 95% of the time.

## Implementation

The service design guidelines identify the types of community design landforms that are needed to support each category of transit service, but they are beyond Community Transit’s statutory ability to regulate. Land use regulation is the responsibility of local cities, towns, and the county, however, most transit corridors serve more than one jurisdiction. As with the underlying street facilities they operate on, the successful implementation of transit emphasis corridors will require careful coordination of land use and street development between each of the communities being served along a singular corridor.

## Chapter 6: Paying for the System

Throughout, this process has focused on providing a level of service that will meet future demand that will occur if transit-supportive development practices are employed along transit emphasis corridors. Until this point, it has not considered the cost of these services, or whether existing revenues will be sufficient. As described in Chapter 3, the plan could entail investment in more than half a million new service hours by 2030. This is about double the service level Community Transit operated in 2008. A similar increase in transit service is assumed in PSRCs Transportation 2040 plan. In 2008 dollars, this additional service would require approximately **\$100 million in new transit funding annually**. Capital costs associated with fleet replacement would require additional funding. Assuming a phased implementation, combined operating and capital costs of new services over the 20 year plan would require a total of \$1 billion in new funding. These figures do not include transit-priority infrastructure required for implementation of corridor services. Preliminary estimates indicate this infrastructure (BAT/HOV lanes, queue-jumps, signals, etc.) could require between \$500 million and \$1 billion. The total new investment (in 2008 dollars) to build and operate this system could reach \$2 billion by 2030.

How can we afford this new system? As described in Chapter 1, the 2007-2009 recession represents an unprecedented challenge for transit agencies in Washington. Community Transit cut 15% of all service in 2010. Subsequent analysis shows that even the reduced service level is not sustainable and further cuts may be required in 2012. Clearly, a new revenue source is needed to sustain current service, let alone the need for growth identified in this plan.

The role of the Long Range Transit Plan is not to propose a service plan that is affordable with current funding. Rather, this plan is oriented around the future needs of the communities we serve. From a financial perspective, the plan identifies the magnitude of future needs and suggests a number of broad principles and intersections of service benefit and funding responsibility:

- Retail sales tax, the major component of current transit funding, is an unacceptably volatile source sometimes resulting in the need to reduce service levels during periods of high demand. New transit funding strategies should prioritize stability and diversification to compensate for this variability.
- Preservation of the baseline service level is paramount. Preservation includes funding of transit operations as well as ongoing contribution to capital reserves for vehicle replacement, transit technology system maintenance/upgrades and operating base and on-street transit facility lifecycle costs.
- Funding of service expansion must account for startup capital costs, ongoing operating costs as well as a commensurate increase in long-term lifecycle expenses.
- Transit priority infrastructure, park & rides and transit centers are a shared responsibility among all transportation stakeholders that benefit from multi-modal mobility in a corridor. Funding for these improvements will require city, county, state and federal participation.
- There is a strong local role in transit funding. The communities of Snohomish County provide support for transit service through Public Transportation Benefit Area (PTBA) retail sales tax at the statutory limit of 9/10ths of one cent.
- There is a significant customer role in transit funding. Community Transit regularly increases fares to substantially maintain its goal that 20% of operating cost is paid by the customer.

- The state should play a significant role in funding of transit operations. Fully 50% of Community Transit's bus service is allocated to state highways, maintaining mobility on congested corridors and helping to reduce the need to expand facilities at great expense. These benefits clearly represent savings for all taxpayers in the state. Funding for this service should include a significant and ongoing state (beyond local) contribution.
- Federal funding of both transit operating and capital needs has been and will remain a vital element of transportation funding in our community.
- Local partnerships may allow for an expanded menu of transportation options. Community Transit must balance system-wide market demands, network performance and efficiencies when designing services. Local communities desiring a higher level of service with greater access should take the initiative to pursue alternative funding that may help subsidize additional service provided by Community Transit.
- Employers can play a key role connecting their employees to the transit network. Ideally, a business desiring transit access will locate in proximity to transit corridors. In cases where this is not possible, employers can take the initiative to provide "last-mile" linkages via privately funded shuttles, vans or similar strategies.

## Chapter 7: Next Steps

This section provides a brief summary of implementation steps for each of the major plan elements and summarizes future actions that will advance the implementation of this long range plan. Throughout, the goal is to achieve a better policy linkage between land use and transit services, which will allow Community Transit to operate more effectively.

### Implementing Measures

#### Corridor Development

Following are actions that local jurisdictions can take to facilitate the development of successful transit markets.

	<u>Timeframe</u>
Community Transit and local jurisdictions should develop and employ mechanisms to facilitate coordination of local projects. This should include both formal review processes and informal communications.	1-2 Years
Zoning and land use policies should ensure that future transit-dependent developments or transit intensive uses, such as major institutions are required to locate where there are existing frequent transit lines.	1-5 Years
Local jurisdictions should take an active role, partnering or working with developers, in delivering a model transit-oriented development.	1-5 Years
Jurisdictions should mandate that pedestrian-oriented design is considered along transit emphasis corridors, to be enforced during the development review process.	1-5 Years
Zoned maximum densities along key transit corridors should be reviewed to determine whether they are adequate to support frequent service that operates seven days per week.	5-10 Years
Parking minimums perpetuate auto-oriented land uses and the area required for surface parking makes it difficult to create walkable, transit-oriented neighborhoods. They should be eliminated along transit emphasis corridors.	5-10 Years
Jurisdictions can create better transit markets and encourage growth inside the adopted Urban Growth Area rather than at the edges of the region. This will allow Community Transit to focus more of its resources on high-productivity services.	5-10 Years
Jurisdictions should consider developing a overlay zone $\frac{1}{4}$ to $\frac{1}{2}$ mile on either side of the transit emphasis corridors that includes incentives or exceptions designed to encourage developers to deliver denser, mixed use buildings and high quality pedestrian and bicycle facilities in exchange for incentives to develop	5-10 Years

#### Traffic and Street Operations

Following are actions that local jurisdictions can take to facilitate the operation of improved and sustainable transit service.

	<u>Timeframe</u>
Community Transit should work closely with local jurisdictions, coordinating a large number of local projects. These efforts provide an opportunity to ensure transit stops/stations are developed at a higher level of design quality.	Ongoing

Any time a road improvement project is undertaken along a transit emphasis corridor the local jurisdiction should work with Community Transit to provide appropriate transit priority measures in the design.	Ongoing
There needs to be an active regional partnership that optimizes traffic operations along transit emphasis corridors. The common goal should be to provide high occupancy modes an advantage over SOVs. This includes the adoption of traffic evaluation standards that consider person delay over the design life of the facility, as opposed to vehicle delay.	1-5 Years
Local jurisdictions should partner with Community Transit to implement Transportation Demand Management (TDM) programs on congested corridors to maximize the effectiveness of existing transit services and mitigate the need to expand roadways.	1-5 Years
Sidewalk enhancements, such as bulb-outs and in-lane transit stops, are needed in many existing transit routes to increase ease of boarding and speed operations.	1-5 Years
Throughout the county, there are a number of gaps in the sidewalk network along and leading to transit routes, particularly in lower density residential neighborhoods. These gaps can impair basic access to the system. Programs should be developed in each jurisdiction to prioritize and eliminate missing sidewalk links.	5-10 Years
The network of bicycle routes/paths within the county, while progressing, is incomplete. Finishing missing links and completing the bicycle network will complement and feed the transit system.	5-10 Years

### Transit Operations

**Recognizing that much of the existing route structure will be completely redesigned during the next twenty years, Community Transit needs to take a measured approach that will allow this process to be implemented over time.**

	<u>Timeframe</u>
Community Transit needs to gain the knowledge, approval, and support of its Board of Directors and employees for the policies contained within this plan.	1 Year
Riders and the general public need to be informed about Community Transit's long range planning process. They need to be given the opportunity to comment on and shape these policies and be kept informed about the progress towards implementing this plan.	1-2 Years
Community Transit needs to incorporate these long range policy recommendations into its adopted Transit Development Plan (TDP).	1-2 Years
While implementation of individual projects will be extended over the next twenty years, Community Transit should carefully consider both the near term and long term impacts of each change. Whenever possible, service adjustments should be implemented in packages that preserve mobility even before follow-on stages are implemented. This planning needs to begin immediately and continue through final implementation.	1-20 Years
As resources permit, Community Transit should improve the frequency of services operating along transit emphasis corridors and, when possible, reroute services to more closely conform to their long term alignment.	1-10 Years
Transit facility investments in urbanized Snohomish County should focus on maximizing the efficiency of existing park & rides for bus operations, prioritizing the role of these facilities as transit centers.	5-10 Years
New park and ride facilities should serve the network of future commute routes with facilities in north and east county assuming increased importance.	5-10 Years

Next Steps

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Community Transit should work to implement the next <i>Swift</i> corridor in about 2017, with subsequent corridors coming on line every three to five years.	5-20 Years
Upon completion of Link Light Rail service to Lynnwood, Community Transit should re-invest direct commute service to Seattle and the University of Washington, replacing it with a network of route services that feed Link Light Rail and Snohomish County employment centers.	10-15 Years
Community Transit should continue to partner with local public transportation providers including Sound Transit, Everett Transit, King County Metro, Washington State Ferry System, Skagit Transit, Island Transit and Amtrak to expand and improve intersystem coordination.	Ongoing

### Transit Funding

<b>Following are actions that Community Transit and partner agencies can take to facilitate implementation of this plan.</b>	<b><u>Timeframe</u></b>
Recognizing that this plan implements a shared regional vision for transit and that current projections suggest full funding of the plan will prove impossible without additional revenue sources, Community Transit should actively coordinate with local, regional and state partners to identify a new transit funding strategy.	1-5 Years
In light of the benefit of transit service to the performance of state highways, Community Transit should advocate strongly for significant state participation in the funding of transit operations.	1-5 Years
Because local jurisdictions will greatly benefit from the reductions in vehicle traffic, infrastructure costs, and greenhouse gasses that are associated with transit emphasis corridors, Community Transit should actively seek funding partnerships with local jurisdictions that cover the cost of transit facilities along transit emphasis corridors. Bus stop facilities, arterial high occupancy vehicle lanes, business access and transit lanes, queue jumps, and transit signal priority treatments are properly a jurisdictional responsibility. This will allow Community Transit to fulfill its much more expensive commitment to operate high capacity transit services along these corridors.	1-20 Years

Figure 19 summarizes these strategies in a one-page format that is designed to frame conversation with jurisdictions and members of the public.

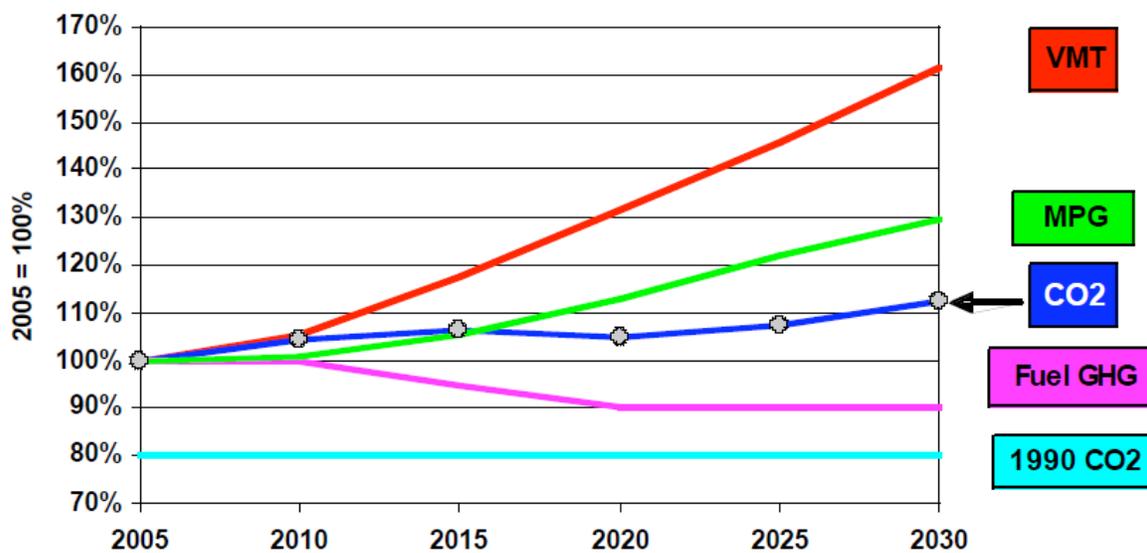


## Looking Ahead: The Greenhouse Gas Implications of Transit

It is generally recognized that public transportation has the potential to significantly reduce greenhouse gas emissions. The measurement of these benefits is not an easy task and requires a thorough documentation and review of all emission sources. This difficulty is the result of the fact that buses tend to be “dirty” from a CO<sub>2</sub> perspective, while transit’s most significant benefits come when land-use and congestion management strategies are combined with improved transit.

**The Role of VMT Reductions:** Most national efforts to curb greenhouse gas emissions are aimed at improving vehicle mileage and reducing the carbon content of fuels being used. This will probably not produce enough reductions to meet local or state reduction goals. Figure 21 illustrates recent projections about the impacts of VMT growth, fuel economy, and the use of low carbon fuels on total emissions. It suggests that, while fuel economy and carbon content are both expected to improve, the projected increases in vehicle miles traveled will overwhelm those saving, resulting in more greenhouse gas emissions in 2030 than occurred in 2005.

Figure 20: Projected Growth in CO<sub>2</sub> Emissions from Cars and Light Trucks<sup>1\*</sup>



Sources: VMT: EIA with 10% rebound MPG: US Senate, Fuels:

\* The study concludes that, by 2030, total VMT will increase by more than 60%. The greenhouse gas impacts of this increase will be partially offset by increased fuel economy and lower carbon contents in the fuels being utilized. Even with these improvements, the increased number of miles driven will mean that CO<sub>2</sub> emissions from transportation will actually be greater in 2030 than they were in 2005.

<sup>1</sup> “Growing Cooler: The Evidence on Urban Development and Climate Change Reid Ewing”, Keith Bartholomew, Steve Winkelman, Jerry Walters, and Don Chen. ULI 2008

**Integrating Transit with Land Use:** This is where land use plays a critical role. Recent studies suggest that a 30 percent reduction in VMT can be achieved by utilizing a combination of several transit oriented development practices<sup>2</sup>. The following strategies, most of which have been discussed in previous sections are included.

- **Pricing and taxes:** taxing the cost of vehicle miles traveled and fuel consumption, and pricing local and regional facilities (congestion pricing) and economy-wide pricing strategies (carbon pricing)
- **Land use and smart growth:** strategies that create more transportation-efficient land use patterns, and by doing so reduce the need to make motor vehicle trips and reduce the average length of motor vehicle trips that are made
- **Non-motorized transportation:** strategies that encourage greater levels of walking and bicycling as alternatives to driving
- **Public transportation improvements:** expanding public transportation by subsidizing fares, increasing service and/or building new transit infrastructure (BRT, light rail, streetcars)
- **Ride-sharing, car-sharing and other commuting strategies:** strategies that expand services and provide incentives to travelers to choose transportation options other than driving alone
- **Regulatory strategies:** implement regulations that moderate vehicle travel or reduce speeds to achieve higher fuel efficiency
- **Operational and intelligent transportation system (ITS) strategies:** strategies to improve the operation of the transportation system to make better use of the existing capacity; strategies to also encourage more efficient driving
- **Capacity expansion and bottleneck relief:** expand highway capacity to reduce congestion and to improve the efficiency of travel
- **Multimodal freight movement strategies:** strategies to promote more efficient freight movement within and across modes

The strategies that contribute the most to greenhouse gas reductions are: 1) local and regional pricing and regulatory strategies that increase the costs of single occupancy vehicle travel, 2) land use and smart growth strategies that reduce travel distances, and 3) multimodal strategies that expand travel options. While pricing is beyond the scope of this plan, smart growth combined with multimodal travel options are at its core.

Multiple studies have quantified the relationship between public transportation, land use, and reduction in travel. They show that for every additional passenger mile traveled on public transportation, auto travel declines by 1.4 to 9 miles. In other words, in areas served by public transportation, even non-transit users drive less because destinations are closer together.

Public transportation reduces emissions by facilitating higher density development, which conserves land and decreases the distances people need to travel to reach destinations. In many cases, higher density development would be more difficult without the existence of public transportation because more land would need to be devoted to parking and travel lanes. By

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<sup>2</sup> These studies are fully documented in Technical Memorandum #4: Greenhouse Gas Emissions Analysis.

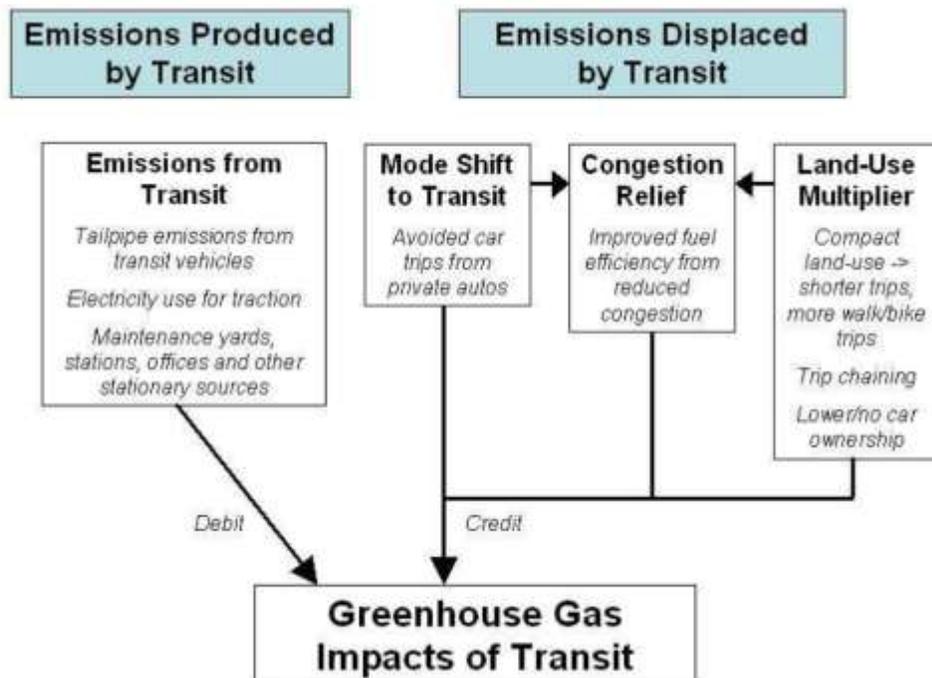
facilitating higher density development, public transportation can shrink the footprint of an urban area and reduce overall trip lengths. In addition, public transportation supports increased foot traffic, street-level retail, and mixed land uses that enable a shift from driving to walking and biking.

A key lesson that emerges from the literature is that transit's greenhouse gas savings depend upon ridership. For example, a 40-passenger diesel bus carrying a full seated load is nearly six times as greenhouse gas efficient as a single occupant automobile. If only seven passengers are on board, that same bus has about the same greenhouse gas impacts as a car. Buses need to displace cars for them to reach greenhouse gas savings and that is where transit-friendly land use patterns become important.

**Quantification:** In the future, Community Transit may want to comprehensively quantify its greenhouse gas emissions. Such an analysis may help communicate the benefits of public transportation to the local community, provide eligibility for new funding, provide required carbon accounting reports, or support local and regional climate action plans. If such an accounting becomes necessary, the study **Recommended Practice for Quantifying Greenhouse Gas Emissions from Transit** (American Public Transportation Association, 2009) provides a standard methodology for transit agencies to report their greenhouse gas emissions in a transparent, consistent and cost-effective manner.

Figure 22 illustrates a methodology suggested by APTA for calculating greenhouse gas impacts. It divides greenhouse gas impacts into two categories - emissions produced by transit and emissions displaced by transit: This second category includes avoided car trips through mode shift from private automobiles to transit, congestion relief benefits through improved operating efficiency of private automobiles, and a land-use multiplier, through transit enabling

Figure 21: Typology of Greenhouse Gas Impacts



denser land-use patterns that promotes reduced car use and ownership. These can be difficult to quantify and require careful research. However, APTA strongly encourages the inclusion of displaced emissions in order to provide the fullest picture of transit's benefits.

Emissions reporting is rapidly evolving from a local option to a mandate. In response, the APTA Sustainability Commitment, which is currently in a pilot phase through 2009, includes a set of performance metrics. The following metrics are included in this approach:

- **Emissions per Vehicle Mile** (revenue service plus deadhead segments): This primarily measures vehicle efficiency and will be sensitive to efforts to purchase lower-emission vehicles or to switch to lower-carbon fuels.
- **Emissions per Revenue Vehicle Hour**: This takes into account efforts to reduce deadheading. It also takes into account congestion, which will depress performance on emissions per vehicle mile.
- **Emissions per Passenger Mile**: This takes into account service productivity and will reward increases in ridership and load factors.

The suggested methodology for calculating these factors is included in Technical Memorandum #4. It also discusses methodologies for calculating the impacts of land use changes.

## What it All Means

This Long Range Transit Plan incorporates a range of policy initiatives – transit emphasis corridors, performance guidelines, coordinated planning, feeder services to rail, evolving transit facilities and locally based routes – that will be implemented over the course of many years. Its value will not come from any precise timeline about when a particular service will begin operation or how much it will cost. Those things will evolve in response to community pressures. The plan's real value comes from the vision of Think Transit First achieved through implementation of a multi-modal transportation network supported by integrated planning and partnership at all levels.

The plan directly states what many of our local, regional and state partners have likewise concluded – in order to overcome challenges associated with future growth, traffic congestion, deteriorating infrastructure and falling revenue we must work together for smarter growth and more strategic transportation investments. We need to focus future increases in travel demand onto existing infrastructure. This also requires that we maximize the efficiency and capacity of existing infrastructure to accommodate higher demand while minimizing cost. All of this leads to the multi-modal corridor vision.

Another objective of this plan is to emphasize that the future vision is a shared responsibility. Cities, the County and Washington State all have a huge stake in the success of public transit on primary corridors. Each will have a critical role to play in implementing the vision from the perspective of supportive land use policies, infrastructure investments and direct funding of service.

Community Transit has the opportunity to provide leadership in realizing a solution to future transportation challenges in our community. This plan will help guide us in that role.

Figure 22: The 2030 Multi-Modal Network

