



Sunset Empire Transportation District

# Long-Range Comprehensive Transportation Plan Volume II

July 2016



## **Volume II Documents**

- A. Memo 2A: Community Overview**
- B. Memo 2B: System Overview**
- C. Route Profiles<sup>1</sup>**
- D. Memo 2C: Community Input**
- E. Memo 3: Land Use**
- F. Land Use and Development Code Policy Analysis**
- G. Land Use and Policy Code Recommendations for Warrenton**
- H. Memo 5A: Service Opportunities**
- I. Memo 5B: Service Opportunities Outreach**
- J. Memo 5C: Service Concepts**
- K. Memo 6: Goals**
- L. Memo 7: Future Service Opportunities Evaluation**
- M. Memo 8: Benchmarks**
- N. Route Phasing Graphics**

## Acknowledgements

This project was made possible by the energy and time dedicated by the project team, the project advisory committee, Oregon Department of Transportation representatives, and SETD’s Board of Commissioners.

This Project is partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. This TGM grant is financed, in part, by federal Moving Ahead for Progress in the 21st Century (MAP-21), local government, and State of Oregon funds. The contents of this document do not necessarily reflect views or policies of the State of Oregon.

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## VOLUME II DOCUMENTS

Throughout the Long-Range Comprehensive Transportation Plan, the project team conducted analysis and outreach that led into findings and recommendations. The full set of technical memos and analysis is provided in this document. Volume I provides highlights from these documents and recommendations.



## **SECTION A**

### Memo 2A: Community Overview





# MEMO #2A: EXISTING SYSTEMS – COMMUNITY OVERVIEW

**Memo #2A - Existing Systems: Community Overview** includes an analysis of Clatsop County’s demographics, market for transit, and a summary of previous planning efforts.

**Memo #2B – Existing Systems: Service Overview** includes analysis of existing transit services including origins and destinations, performance by route, financial data, organizational structure, fleet information, etc.

**Memo #2C – Community Input** provides the results of on-board passenger surveys and ridechecks, a community survey, and other stakeholder and public outreach that were conducted between May and September 2015.

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# 1 PLANNING CONTEXT

## INTRODUCTION

The Sunset Empire Transportation District (SETD) sits at a major opportunity point in its history. After a financial collapse in 2011, SETD has since stabilized with steadily rising ridership and new leadership. Having regained its footing, the agency can now embark on a strategic planning effort to understand transit’s role in the community and how it can meet needs over the next 20 years.

SETD currently provides solid basic access serving population centers in Clatsop County via the U.S. 101 and U.S. 30 corridors. The current ridership market primarily consists of “transit-dependent” people who do not have another form of transportation available. A goal of this study consists of understanding how SETD can increase its ridership base to include work trips and other trips by those who do have transportation options but choose to take transit. Stakeholders agree that the route alignment matches employment and population centers; however, bus service may not be convenient enough in terms of frequency or time of service to attract more riders. While SETD continues to rebuild and reintroduce transit routes that were cut in 2011, a recent partnership between five counties via the Northwest Oregon Transit Alliance (Northwest Connector) provided the opportunity to enhance regional connections south to Tillamook County and east to Columbia County (continuing to Lincoln, Multnomah, and Washington Counties). A commonly heard theme from previous planning efforts and stakeholders is that the system needs better visibility to potential riders (through information and signed transit stops) as well as increased frequency.

## PREVIOUS PLANNING EFFORTS

Previous planning efforts provide background information on trends and priorities for the state, county, and communities within SETD’s service area.

Sunset Empire Comprehensive Transportation Plan	
Date of Publication:	2001
Author(s):	Sunset Empire Transportation District
Document Purpose:	The SETD Comprehensive Transportation Plan acts as a 10-year planning document to guide the delivery of public transportation services in Clatsop County.

The goals for the transit plan include:

**Goal 1:** Provide cost-effective and safe public transportation throughout Clatsop County;

**Goal 2:** Ensure the full range of mobility needs of Clatsop County citizens are met within SETD budgetary constraints;

**Goal 3:** Promote and educate Clatsop County about SETD services and community benefits;

**Goal 4:** Strengthen access to public transportation, and;

**Goal 5:** Increase ridership.

### **Key Policies/ Recommendations**

The recommendations cover a 10-year planning period, but the authors note that most of the items could be accomplished in a shorter timeframe. Recommendations are summarized below.

#### **Dial-a-Ride**

- Reduce from five vehicles to three or four vehicles per day. Cutting back to 30 or 40 hours of service per day would allow SETD to increase service on its fixed routes without adding additional resources.
- Assign vehicles to specific areas.
- Increase the scheduling window from one half hour on either side of the desired time to one hour on each side.
- Work with patients and doctors' offices to coordinate trip times.
- Establish certain times of day for non-medical or work trips from Seaside to Astoria.
- Since dial-a-ride service is at capacity from 10 a.m. to 2 p.m., assign another vehicle to these hours if necessary.
- Determine if residents of remote areas in the county have a need for dial-a-ride service. If they do, establish a service that makes trips to remote areas only on specific days.
- Establish a clear policy about placing ADA-eligible trips on dial-a-ride service.<sup>1</sup>
- Coordinate dial-a-ride planning with fixed-route planning, to ensure that if fixed-route changes eliminate service to certain areas, the dial-a-ride system has the capacity to cover.
- Establish timed connections between the dial-a-ride and the fixed-route system, so that people do not need to take dial-a-ride all the way to their destination if fixed routes can complete the trip.

#### **Fixed-Route System**

- Increase frequency on Route 101.
- Combine Route 20 into Route 101, creating a continuous hourly service linking Cannon Beach, Seaside, Gearhart, Warrenton, and Astoria.
- Re-evaluate service to Manzanita.
- Streamline Astoria/Warrenton service and create pulsed transfers at the Intermodal Facility.

#### **Data Collection**

- Establish system to track operating and performance data.
- Collect ridership data on a regular basis to assist in service planning.

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<sup>1</sup> Americans with Disabilities Act

- Collect rider opinion survey data on a regular basis to ascertain and track rider attitudes.
- Collect employee travel pattern data from employers

Clatsop County Comprehensive Plan	
Date of Publication:	2012
Author(s):	Clatsop County
Document Purpose:	The Comprehensive Plan includes countywide comprehensive plan goals and Community Plans. The document is organized to address each of the 19 statewide planning goals.

The Clatsop County Comprehensive Plan must comply with Statewide Planning Goals, including Goal 19 (Transportation). The transportation chapter in the Clatsop County Comprehensive Plan addresses Goal 19. The Comprehensive Plan transportation goals are:

**Goal 1 - Mobility:** Develop a multimodal transportation system that serves the travel needs of Clatsop County residents, businesses, visitors, and freight transport.

**Goal 2 - Livability:** Provide a transportation system that balances transportation system needs with the desire to maintain pleasant, economically viable communities.

**Goal 3 - Coordination:** Maintain a transportation system plan that is consistent with the goals and objectives of local communities, the County, and the State.

**Goal 4 - Public Transportation:** Work to improve cost-effective and safe public transportation throughout Clatsop County.

**Goal 5 - Pedestrian and Bicycle Facilities:** Provide for an interconnected system of pedestrian and bicycle facilities throughout Clatsop County to serve commuter and recreational users.

**Goal 6 - Accessibility:** Provide a transportation system that serves the needs of all members of the community.

**Goal 7 - Environment:** Provide a transportation system that balances transportation services with the need to protect the environment and significant natural features.

**Goal 8 - System Preservation:** Work to ensure that development does not preclude the construction of identified future transportation improvements and that development mitigates the transportation impacts it generates.

**Goal 9 - Capacity:** Provide a transportation system that has sufficient capacity to serve the needs of all users.

**Goal 10 - Transportation Funding:** Provide reasonable and effective funding mechanisms for countywide transportation improvements identified in the TSP.

**Goal 11 - Safety:** Provide a transportation system that maintains adequate levels of safety for all users.

### Key Policies/ Recommendations

Goal 4 addresses public transportation throughout the county and includes four objectives:

1. Coordinate with the Sunset Empire Transportation District (SETD) to encourage commuter bus service to serve communities throughout Clatsop County.
2. Encourage a carpooling program for County employees and others to increase vehicle occupancy and minimize energy consumption.
3. Work with SETD to develop transit systems and stations and related facilities in convenient and appropriate locations that adequately and efficiently serve resident and employee needs.
4. Work to improve the signage and amenities at transit stops and stations.

Other objectives addressing public transportation, multimodal travel, and transit-supportive development are included within various goals, and include:

- **Goal 1 Mobility, Objective 6:** Encourage development patterns that offer connectivity and mobility options for members of the community.
- **Goal 1 Mobility, Objective 10.** Provide an interconnected system of roads, pedestrian and bicycle facilities, and other forms of transportation that will link communities.
- **Goal 1 Mobility, Objective 11.** Promote intercity connectivity between major population areas, including linkages to the Portland metropolitan area.
- **Goal 3 Coordination, Objective 4.** Coordinate land use and transportation decisions to efficiently use public infrastructure investments to: a. Maintain the mobility and safety of the roadway system; b. Foster compact development patterns in incorporated and rural communities; c. Encourage the availability and use of transportation alternatives; d. Enhance livability and economic competitiveness.
- **Goal 5 Pedestrian and Bicycle Facilities, Objective 7.** Promote development standards that support pedestrian and bicycle access to commercial and industrial development, including, but not limited to, direct pathway connections, bicycle racks and lockers, and signage where appropriate.
- **Goal 6 Accessibility, Objective 1.** Coordinate with SETD to encourage programs that serve the needs of the transportation disadvantaged.
- **Goal 6 Accessibility, Objective 3.** Upgrade existing transportation facilities and work with public transportation providers to provide services that improve access for all users.
- **Goal 7 Environment, Objective 2.** Encourage use of alternative modes of transportation and encourage development that minimizes reliance on the automobile.
- **Goal 8 System Preservation, Objective 2.** Consider transportation impacts when making land use decisions, and consider land use impacts (in terms of land use patterns, densities, and designated uses) when making transportation-related decisions.
- **Goal 9 Capacity, Objective 4.** Minimize direct access points onto arterial rights-of-way by encouraging common driveways or frontage roads.
- **Goal 11 Safety.** Work to improve the safety of rail, bicycle, and pedestrian routes and crossings.
- **Goal 13 Energy, Objective 2a.** Shopping, cultural, medical, educational and other public facilities shall be encouraged to cluster in urban growth boundaries so that one trip can serve several purposes and so that the possibility of public transportation will be enhanced.

Astoria Comprehensive Plan	
Date of Publication:	2010 (Last updated)
Author(s):	City of Astoria
Document Purpose:	The Comprehensive Plan dictates all city ordinances, polices and actions. The Comprehensive Plan is frequently updated via amendment to account for changing conditions and to ensure consistency with Clatsop County and special districts within the urban growth boundary.

The Comprehensive Plan is a living document that guides all planning and development within the City of Astoria. The plan includes a transportation chapter outlining nine transportation goals:

1. The maintenance of a safe and efficient transportation system;
2. The provision of several types of transportation, including public transit, bicycle and pedestrian systems;
3. The implementation of the 'Murase Plan' for waterfront revitalization;
4. The reduction of traffic congestion on Marine Drive and in the downtown area;
5. The conservation of energy in transportation by encouraging forms other than private vehicles;
6. The continued support of transportation for disadvantaged persons, such as wheelchair ramps in the downtown area and the senior citizen bus;
7. The coordination of transportation with land use designations, especially along the Columbia River shoreline;
8. The support of economic development activities through the improvement of the transportation system; and,
9. Cooperation with other agencies involved in transportation, including the Port of Astoria, the Oregon Department of Transportation, the State Highway Division, Clatsop County, and the Public Utility Commission.

**Key Policies/ Recommendations**

The Comprehensive Plan’s transportation chapter includes transportation-related policies that were added by ordinances. The primary policy relating to transit is Policy 1: “The City will continue to support public transportation for all segments of the community.” The “Energy Conservation” chapter also has a goal to “continue to support the public transportation system and the senior citizens bus.”

Seaside Transportation System Plan (TSP)	
Date of Publication:	October 2010
Author(s):	City of Seaside
Document Purpose:	The TSP catalogues the existing conditions of the City of Seaside's transportation system and recommends multimodal projects that address transportation-related deficiencies.

The Seaside Transportation System Plan (TSP) analyzes the multimodal transportation network and identifies current and future needs. The TSP is focused on ensuring adequate transportation facilities for current and planned land uses, predictability for siting transportation infrastructure (roadways, bicycle improvements, or new transit routes), and coordination of land use and transportation decisions.

The goals guiding the Seaside TSP include:

1. **Safety for all modes:** Provide a transportation system that maintains adequate levels of safety for all users.
2. **Access for all modes:** Provide a transportation system that allows all users to access destinations throughout Seaside.
3. **Mobility:** Provide a viable transportation system that meets the needs of local residents, visitors, and the freight industry. The transportation system should allow different users of the network with reliable means of getting from origins to destinations.
4. **Connectivity:** Provide an interconnected transportation system that provides route choices for users.
5. **Cost:** Provide a list of transportation improvements that are “reasonably likely” to be funded within the 20-year planning horizon.
6. **Livability:** Provide a transportation system that allows the city to maintain livability.
7. **Environmental Resources:** Provide a transportation system that balances transportation services with the need to protect environmental and natural features.

### Key Policies/ Recommendations

The Seaside TSP transit modal plan includes the following transit- related improvements:

**Reestablish a Trolley Bus circulatory route** to serve visitors as well as employees through the downtown core. This route would provide service to hotels and major destinations in Seaside. *(Note: This has been implemented on a seasonal basis via the Seaside Trolley.)*

**Restore 30-minute peak headways on weekdays** on Routes 20 and 101. Headways are the time between arrivals at a given stop on the same route, or the time a transit passenger would need to wait between buses at a particular stop. Surveys of current transit patrons pointed to increased service frequency as a major desired improvement. *(Note: SETD plans to add peak service to the 101 to achieve hourly headways.)*

**Extend service on Route 101 later in the day** to better match up with class schedules for Clatsop Community College. Currently, many classes are held in the evening and the last service leaving Seaside on Route 101 is at 7:15 p.m.



**Provide service on Sundays.** Currently, no transit service is provided on Sundays. However, regular patrons, as well as seasonal visitors, could use Sunday service to access work, the beach, shopping trips, religious institutions, and other services. Sunday service was noted as a desired improvement in a SETD survey shortly before the release of the 2010 TSP. *(Note: Route 21, Connector Pacific, and the Seaside Trolley now offer Sunday service).*

**Add bus pullouts at stops along U.S. 101** where space allows. Bus pullouts increase safety and reduce congestion by allowing a bus to pull out of the travel lane to serve a stop. Bus pullouts would be constructed at existing stops along US 101 where right-of-way allows. *(Note: Pull-outs also increase travel time for buses, who must wait for a gap to re-enter traffic.)*

**Add shelters at select bus stops** identified by SETD as priority locations. Priority locations are those with higher ridership and/or transfers to other local or regional transit service. These are generally in the downtown core or near a popular destination (such as outlet stores).

**Relocate existing southbound bus stop on U.S. 101 at Broadway** to avoid traffic backups into the intersection. The location of the current bus stop is immediately south of Broadway. When buses stop to serve passengers at the current location just south of Broadway, there is insufficient room for autos to pass. Vehicles are not able to progress through the intersection, causing safety and congestion concerns.

**Build satellite parking areas on the north and south ends of Seaside**, with connecting bus service into downtown. These facilities would serve passengers year-round, but could be especially beneficial during summer months, when employees and visitors would be encouraged to “park once” and then walk or ride transit into the City core. Shared parking facilities with compatible uses should be explored first.

**Construct a new transit center** to allow transit riders to better transfer between routes. The transit center would be centrally located to provide fast and convenient connections for transit patrons. *(SETD is considering potential sites and grant funding opportunities.)*

Transportation Planning Rule (TPR) (OAR 660-012)	
Date of Publication:	2012 (last updated)
Author(s):	Department of Land Conservation and Development, Transportation Planning Division
Document Purpose:	Implements Oregon Statewide Planning Goal 12. Requirements in TPR Section 0020 guide the elements of Long Range Transportation System Plans, and are also applied to transit-specific plans, such as SETD’s LRCTP.

The Transportation Planning Rule (TPR) implements Oregon Statewide Planning Goal 12, which supports safe, efficient, and cost-effective transportation facilities designed to reduce reliance on single-occupancy vehicles.

The objectives of the TPR encourage a variety of transportation choices, promote access for disadvantaged populations, and ensure coordination among affected local governments and transportation service providers. The TPR also promotes planning for alternative modes, street connectivity, and land use patterns and developments that encourage efficient travel via walking, bicycling, transit, or shared rides. The following key standards and policies will be considered in the development of SETD’s long-range transportation plan.

## Key Standards or Policies

- **660-012-005** – Definitions section provides clarification on terms, including transit - related terms such as “transit stop,” “major transit stops,” “pedestrian plaza,” and “transit-oriented development.”
- **660-012-0020** – Defines the typical elements of a public transportation plan, including, but not limited to, identifying service inadequacies, describing intercity transit services, identifying existing and planned transit routes, stations, stops, and existing and future stop locations.
- **660-012-0050** – The Transportation Project Development section identifies the process for implementing projects identified in transportation system plan and other guiding documents. The TPR provides guidance on bicycle and pedestrian access to transit, and transit-oriented development.
- **660-012-0060** – Plan and Land Use Regulation Amendments: Section-0060 specifies a category of facilities, improvements, and services that can be assumed to be “in-place” or committed and available to provide transportation capacity over a 20-year planning horizon. The TPR guides local jurisdictions in determining what transportation improvements are “reasonably likely to be provided by the end of the planning period” when considering amendments to local plans and land use regulations.

Sunset Empire Transportation District Coordinated Human Services Transportation Plan	
Date of Publication:	2011 (Update to 2007 Plan)
Author(s):	Oregon Department of Transportation (ODOT), Public Transit Division
Document Purpose:	The SETD Coordinated plan seeks to improve transportation services for older adults, individuals with disabilities, and individuals with lower incomes.

The Coordinated Plan seeks to improve services for older adults, low-income individuals, and persons with disabilities, who collectively represent about 44% of total residents within Clatsop County. The plan summarizes stakeholder research and priorities based on demographic and survey research and meetings with transportation providers, community agencies, and medical services providers.

Key findings from the plan include:

- The majority of older adults, low income, and people with disabilities responding to the survey live in Astoria (40%), Seaside (24%) or Warrenton (16%). Of the approximately 6,800 Clatsop County residents with potentially special needs for transportation, it is estimated that only about 30% actually use public transit.
- Nearly two-thirds (63%) of the special needs population respondents either still drive, or have access to transportation through family or friends. Over one-third (37%) of those surveyed indicate that they regularly take the bus or dial-a-ride, with dial-a-ride used more often than fixed route bus service.
- The primary trip purposes are for medical visits, shopping, and employment-related classes/ search/training.

- The most frequent bus stops used by riders with a disability include Astoria Transit Center (11.9%), Fred Meyer (11%), and the Warrenton Mini Mart (10.9%).

## Key Policies/ Recommendations

The plan includes strategies and activities to address the identified gaps and inefficiencies in service deliveries. The document was updated in 2008, 2009, and 2011 to reflect progress on identified strategies. Federal transit grants were identified and targeted to fund Clatsop County priorities (Figure 1-1, Figure 1-2).

The Coordinated Plan identifies five opportunities for future partnering and collaboration, taking advantage of overlapping transportation facilities and needs within Clatsop, Columbia, and Pacific Counties.

1. **Improve inter-city connections to Columbia County and Kelso/Portland.** This may include extending current service from Westport to Clatskanie, allowing SETD and Columbia County to share a stop in Clatskanie and provide riders with access to Amtrak and other bus services in Kelso. It could also consider the possibility of direct service to Longview/Kelso as a part of the Northwest CONNECTOR system. The route could supplement the service Tongue Point Job Corps currently offers to students transporting them to Kelso each Friday. *(In 2015, SETD extended service to Rainier, where riders can connect to Longview/Kelso or Portland using CC Rider. SETD and CC Rider did not receive grant funds to expand the number of trips.)*
2. **Coordinate volunteer programs.** Certain economies and efficiencies are added if the coordination, training, and dispatch activities are centralized.
3. **Coordinate transit planning.** One central public transportation planner for the three counties will allow greater coordination of transit routes, schedules, and facilities. Further transportation coordination opportunities are being explored with the Veterans Administration and possible vanpooling opportunities. *(Note: The Northwest Connector Program is coordinating transit service for five counties). (This position has been filled.)*
4. **Continue with implementation of RIDEPAL: Travel Training and Mobility Coordination program.** Include services such as extending the ADA boundary beyond the ¾-mile radius, expanding the “55-Alive” programs at area senior centers, taking buses out to senior centers, coast rehab homes and showing how the lift works, how to pay a fare or use a bus pass, and assigning “ride pals” to individual new riders. The program is also expanding the number of printed materials in Spanish. *(Implementation of this program has continued.)*
5. **Develop a Tri-County Coordinated Plan for Northwest Transportation Options.** The Tri-County program, Northwest Transportation Options, addresses the need for coordination and development of transportation options that explore other methods of transportation such as walking, biking, ride sharing, and transit.

Figure 1-1 Recommended Service Enhancements

Service Enhancement	2008 Progress	2009-2011 Plans
Identify better/safer stops for fixed routes	Moving the Fred Meyer stop currently being discussed.	New plans are being explored for revision of the current Fred Meyer location.
Combine SETD maintenance service with school/coach carriers	Explore shared Bus Storage and Maintenance Facility.	Discussions continue to explore future options as growth continues.
Prioritize concentrations of employment population	Explore vanpools to employment, e.g., Knappa/Svensen/Westport to Wauna Mill.	Funding was previously turned down. Will continue to seek funding to support this need.
Further analyze transportation needs of the aging population	<p>Need may be greater than the statistics indicate, particularly for medical and other essential trips into Portland.</p> <p>Lack of medical specialists in the county means residents must travel outside of the area for these services. Also, as the population ages, the less mobile people become, placing additional demands on public transit.</p>	Continued improvements to the current transit routes and path of travel. Both will be more user-friendly and accessible with improvements such as additional bus stop signs featuring schedules, maps/schedules placed in shelters, additional shelters, flashing LED handheld lights, fold-out pocket schedules, enhanced website, and travel training program.
Partner with more agencies	Partnered with Columbia County Transit to improve connectivity at the east side of the county in Westport.	Began partnering with local Veterans Services in 2009. Will continue to help them improve transportation options for veterans.

Figure 1-2 Priority Projects for Targeting Grant Funding

Project	Goals	Funding Sources
Maximize use of technology for operations	Electronic Ticketing System, GPS Tracking/ ADA Announcements for buses, shelters, and the transit center, ADA Paratransit mapping software.	5311, Intercity, New Freedom
Initiate advertising policy	Integrated marketing for website, schedules, maps and other outreach, alternative ticket sales through creative partnerships (example Seaside Pool, Library, etc.).	5311
Set up maintenance plan for facilities/ security	Generator for facilities, increase or develop and implement plan for employees, riders, facilities, and equipment.	Planning grants
Expansion of service	Expand service to the interior of the county, create a hybrid route of #12 & #15, hourly service on Route 101, non medical rides restored, expand ADA Paratransit beyond ¼-mile, cycle out old buses that are beyond their useful life, and purchase new ones that accommodate route and rider needs.	5311, New Freedom, Transit in the Parks/National Park Funding
Environmentally friendly practices encouraged to reduce costs and minimize carbon footprint	Single call center or one-stop shop center for paratransit, veterans, medical in one place, review fare structure policy.	

Astoria Transportation System Plan	
Date of Publication:	2013
Author(s):	City of Astoria
Document Purpose:	The TSP catalogues the existing conditions of the City of Astoria's transportation system and recommends multimodal projects that address transportation-related deficiencies.

The Astoria TSP addresses challenges associated with the street and sidewalk network that makes up the downtown core, as well as Astoria's transition to a medical, arts, and recreational destination. The TSP is guided by the following goals:

- **Goal 1:** Be well-connected and offer travel choices, reduce travel distance, improve reliability, and manage congestion for all modes.
- **Goal 2:** Include solutions to suit the local context while providing a system that supports active transportation, promotes public health, facilitates access to daily needs and services, and enhances the livability of the Astoria neighborhoods and business community.
- **Goal 3:** Maintain and improve individual health and safety by maximizing active transportation options, public safety and service access, and safe and smooth connections for all modes.
- **Goal 4:** Support the development and revitalization efforts of the city, region, and state economies and create a climate that encourages growth of existing and new businesses.

- **Goal 5:** Protect and improve existing transportation assets while cost-effectively enhancing the total system and pursue additional transportation funding.
- **Goal 6:** Be sustainable and meet the needs of present and future generations in a way that is environmentally, fiscally, and socially sustainable.
- **Goal 7:** Be consistent with the City’s Comprehensive Plan, and coordinate with county, state, and regional plans.

**Key Policies/ Recommendations**

Transportation projects fall into the categories of “aspirational” or “likely funded.” “Aspirational” projects will improve Astoria’s transportation network but are less likely to be funded under a constrained budget. Astoria identified two transit projects that will cost an estimated \$170,000 to complete, with one categorized as “likely funded,” and one as “aspirational.”

The project classified as “likely funded” consists of bus stop enhancements across the city, such as bus shelters, ADA-compliant landing pads at bus stops, benches, trash receptacles, and lighting. This \$100,000 project is estimated to be funded in the medium-term. The “aspirational” project includes building a transit pullout at the west end of the OR 202/ U.S. 101 Business intersection at a cost of \$75,000.

The TSP also features street design standards, including guidance for multimodal street types and mixed-use street designs. These street types typically have higher amounts of pedestrian activity and are on transit routes.

The North by Northwest CONNECTOR Plan	
Date of Publication:	2013
Author(s):	David Evans and Associates
Document Purpose:	The North by Northwest CONNECTOR plan is a strategic document guiding a pilot program of regional strategies aimed at increasing transit use by commuters and visitors, and decreasing community dependence on fossil fuels.

In 2010, five transit agencies in northwestern Oregon established a partnership to foster collaboration, improve transit connections between communities, and share resources to improve cost-effectiveness. The agencies include the Columbia County Rider (CC Rider), Sunset Empire Transit District (SETD), Tillamook County Transportation District (TCTD), Lincoln County Transit (LCT), and Benton County Rural Transit (BCRT).

The partnership, branded the “North by Northwest CONNECTOR” (later the “Northwest Oregon Transit Alliance”), was awarded a federal grant by the U.S. Department of Energy (USDOE). The grant allowed the agencies to launch a pilot program focused on collaboration for improving service coordination.

The three primary elements of the CONNECTOR system include:

- **Partnerships:** In addition to the public partnership created between the five transit agencies, the CONNECTOR system also includes a public-private partnership with a new non-profit organization. The North by Northwest Transportation Foundation was governed by a community board and assists with fundraising for multimodal projects across the five counties. The non-profit partner has since ceased operations.

- **Physical Element:** The physical portion of the system includes transit buses and other capital equipment owned and managed by each of the five partners. Each of the five counties retains their current ownership, authority and responsibility for their own physical assets, but cooperates with the others to share assets (such as the shared use of transit stop facilities) when appropriate.
- **Operational Element:** Each transit agency is responsible for transit operations within their own service area, but cooperates with the others to improve the cost-effectiveness and convenience of regional transit travel. This includes coordinating schedules and transfer locations, and sharing staff resources to tap the collective expertise available in all five counties.

The goals guiding the work of North by Northwest CONNECTOR include:

- Improve transit connections between communities
- Brand and market transit service in all five counties as a single seamless service
- Improve inter-agency coordination
- Promote environmentally-conscious travel
- Develop transit as an asset for economic development
- Develop a solid base of local and regional support

Figure 1-3 Service Area of the CONNECTOR System



Source: North by Northwest CONNECTOR Plan, 2013

### Key Policies/ Recommendations

The two major service planning objectives of the CONNECTOR program are to (1) improve connections between the five partner agencies' transit systems and (2) improve connections between the Willamette Valley population centers and the five counties. To understand the travel needs, a detailed market analysis was performed analyzing travel sheds and patterns.

The CONNECTOR Alliance initially considered commuter passes designed to allow unlimited rides in multiple counties on a monthly basis. The pass would add convenience while saving



regular riders money compared to the cost of buying individual tickets. However, analysis found there was not enough inter-county commute travel to support significant investment in commuter-specific transit programs.

Travel patterns show that Clatsop, Tillamook, and Lincoln Counties have similar commute patterns, with the majority of workers traveling within their home county to employment and little inter-county travel. Columbia County acts as a bedroom community to Portland for work commutes, but there is little commute travel between Columbia County and the other four counties in the alliance.

The market analysis also identified service gaps and recommended further ridership analysis. Their findings identified a need for:

- **Better commuter access to Salem and Marion County** from Benton County, Lincoln County, and Tillamook County.
- **A connection from Lincoln City to Grande Ronde** to provide access to jobs in Polk County and a transfer to Salem. (*This has been implemented.*)
- **Better coordination with employers to conform transit schedules to employee shifts.** Transit routes in each county are serving large employers; however, some major employers have low-activity stops, indicating low employee ridership. This is likely due to work shifts not matching transit hours of operation. This reflects the findings of SETD transportation plans which have a goal of better coordinating transit service span with the work shifts at Wauna Mill in Westport and evening classes at Clatsop Community College.

The market analysis also included SETD- specific recommendations, which stated:

- SETD signs should be installed at all transit stops.
- SETD should continue to work with retailers, as it is working with Fred Meyer in the Warrenton retail cluster, to improve stop amenities.
- North by Northwest CONNECTOR signs, shelters, and kiosks should be considered for prominent locations throughout the system including:
  - All the transit centers (Astoria, Cannon Beach Visitor Center, Seaside);
  - Inter-agency connecting and transfer locations (Westport and Midtown in Cannon Beach);
  - Clatsop Community College, Job Corps, and major retail clusters along U.S. 30 and U.S. 101.
- New stop amenities should be provided near the Costco and Home Depot in Warrenton.
- When possible, amenities should be located in visible locations adjacent to safe pedestrian crossings and be spaced throughout the system.

Sunset Empire Public Involvement Plan, LEP, Title VI	
Date of Publication:	Updated 2014
Author(s):	Sunset Empire Transportation District (SETD)
Document Purpose:	The document outlines SETD's public involvement plan and addresses other federal requirements for non-discriminatory practices, including meeting the needs of minority, low-income, and limited English proficiency (LEP) populations.

SETD is committed to the public and ensures that no person shall, on the ground of race, color, national origin, religion, age, marital status, sexual orientation, or disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity provided by SETD. The plan outlines SETD's policies on discrimination, and provides information on filing Civil Rights Act Title VI complaints. The document provides a record of investigations, lawsuits, and complaints, and a summary of public participation efforts.

### Key Policies/ Recommendations

SETD actively solicits the involvement of citizens in the public involvement process through public notification, media exposure, public meetings with comment opportunities in person, over the phone, and in writing. The goals of the public involvement plan guiding this process are designed to:

1. Ensure responsiveness to the level of interest and concern expressed by the public.
2. Ensure visibility, transparency, and understanding by the agencies, groups, and individuals who may participate in our process.
3. Ensure that public involvement is carefully and systematically included as part of the decision-making process.

Clatsop County Transportation System Plan (TSP)	
Date of Publication:	2015
Author(s):	Clatsop County
Document Purpose:	The TSP catalogues the existing conditions of the Clatsop County transportation system and recommends multimodal projects that address transportation-related deficiencies.

The Clatsop County TSP is currently undergoing an update, with the draft text available for public comment. The TSP addresses the unique nature of the sprawling county, which covers the historic coastal city of Astoria, popular tourist destinations such as Seaside and Cannon Beach, and large swaths of rural and forestland that support timber and fishing industries. With limited funding for projects, the county must balance employment growth, tourist travel, safety, and (roadway) level of service across the large district.

The goals include:

- **Goal 1:** Provide for efficient motor vehicle travel to and through the county.
- **Goal 2:** Increase the convenience and availability of pedestrian and bicycle modes.
- **Goal 3:** Provide transit service and amenities that encourage a higher level of ridership.

- **Goal 4:** Provide an equitable, balanced, and connected multimodal transportation system.
- **Goal 5:** Enhance the health and safety of residents.
- **Goal 6:** Foster a sustainable transportation system.
- **Goal 7:** Ensure that the transportation system supports a prosperous and competitive economy.
- **Goal 8:** Coordinate with local and state agencies and transportation plans.

### Key Policies/ Recommendations

The TSP categorizes recommended projects into categories of “constrained” and “aspirational.” Constrained projects will likely to be funded during the 20-year planning horizon, while aspirational projects are less likely to be funded under a constrained budget. Clatsop County identified the following six aspirational transit projects that, in total, cost an estimated \$175,000 to complete (SETD was identified as the primary funding source):

1. New transit stop in Westport as detailed in the Westport Corridor and Community Plan. The estimated cost is \$20,000.
2. New transit stop at Arch Cape, including route and schedule information, seating, shelters with concrete landing pads, and trash cans. The estimated cost is \$20,000.
3. Improve transit stops throughout the county with amenities such as route and schedule information, seating, shelters with concrete ADA-compliant “landing pads,” and trash cans. Priority locations should be developed in consultation with SETD. Locations with relatively high demonstrated or potential ridership, near major destinations, and at transfer and Northwest CONNECTOR locations should be prioritized. The estimated cost is \$50,000.
4. Reduce transit headways on U.S. 101 and U.S. 30 and consider a frequent service line. The estimated cost is \$50,000.
5. Extend transit service hours and match transit hours with Clatsop Community College hours where possible. The estimated cost is \$10,000.
6. Implement an automatic vehicle location (AVL) system that provides real-time transit arrival time to riders at transit stops. The estimated cost is \$25,000.

Sunset Empire Strategic Prioritization Plan	
Date of Publication:	2012, Strategies Updated 2015
Author(s):	Sunset Empire Transportation District (SETD)
Document Purpose:	The SETD 2015-2017 Strategic Priorities document presents the priorities for the transit agency over the next biennium.

In 2012, SETD created a strategic prioritization plan to guide investments and growth of transit service. The document is regularly updated to reflect current conditions.

In the 2014-2017 biennium, the leadership team is focused on achieving the following outcomes:

- Increase the number of rides on SETD's fixed routes by 15% per year and reduce the need for more costly supplemental services.
- Resume dial-a-ride ridership to levels similar to its operations ending in 2010.
- Sustain RideCare as a cost-effective means to deliver quality Non-Emergency Medical Transportation brokerage services.

### **Key Policies/ Recommendations**

The agency will focus on the following actions to achieve the 2015-2017 targets:

1. Improve customer satisfaction
2. Increase and enhance services and outreach
3. Improve public awareness of SETD and how it is meeting its mission
4. Improve facilities
5. Improve communication/ technology systems
6. Provide stable and steady administrative support

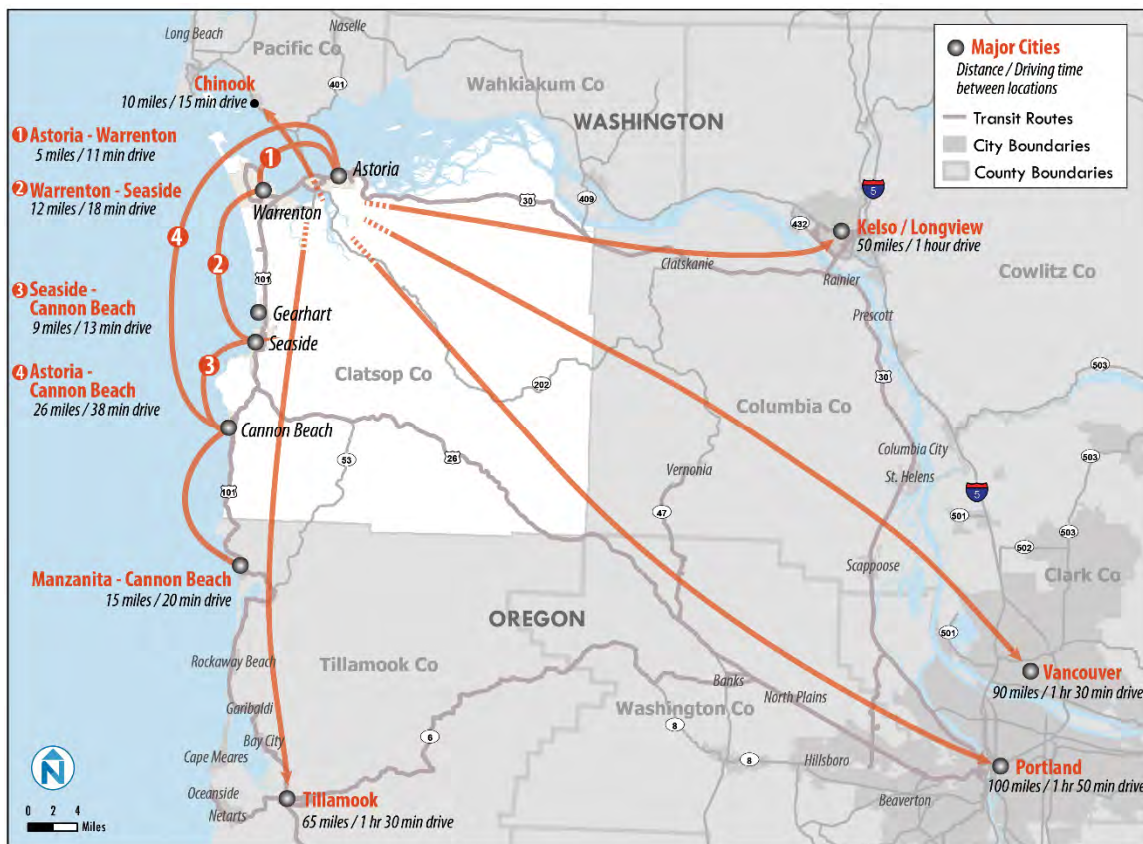
## 2 TRANSIT MARKET ANALYSIS

### COMMUNITY OVERVIEW

Clatsop County lies in the northwest corner of Oregon, covering 1,084 square miles. Much of the area is rural and heavily forested, with an overall average population density of 45 persons per square mile (less than a tenth of a person per acre). The relative proximity to Portland (approximately 100 miles from Astoria and 80 miles from Seaside) attracts many tourists and visitors to the popular coastal communities. The City of Astoria also provides the only crossing of the Columbia River for nearly 60 miles, creating an important connection to Washington State via the Astoria-Megler Bridge.

Clatsop County is home to the oldest city west of the Rocky Mountains (Astoria), Oregon's oldest ocean resort community (Seaside), and the only continental U.S. military installation that was attacked during World War II (Fort Stevens). Today, many of the coastal cities in Clatsop County are known for their tourism, arts, and outdoor recreation. As a result, during the summer months U.S. 30 and U.S. 101 experience spikes in traffic resulting in congestion and bus delays (for example, traffic analysis from the Clatsop County TSP showed about 60-70 seconds of delay southbound through the US 101/Harbor signal in 2013, which is a major bottleneck). Forestry and fishing also continue to play a large role in the local economy.

Figure 2-1 Clatsop County in Regional Context



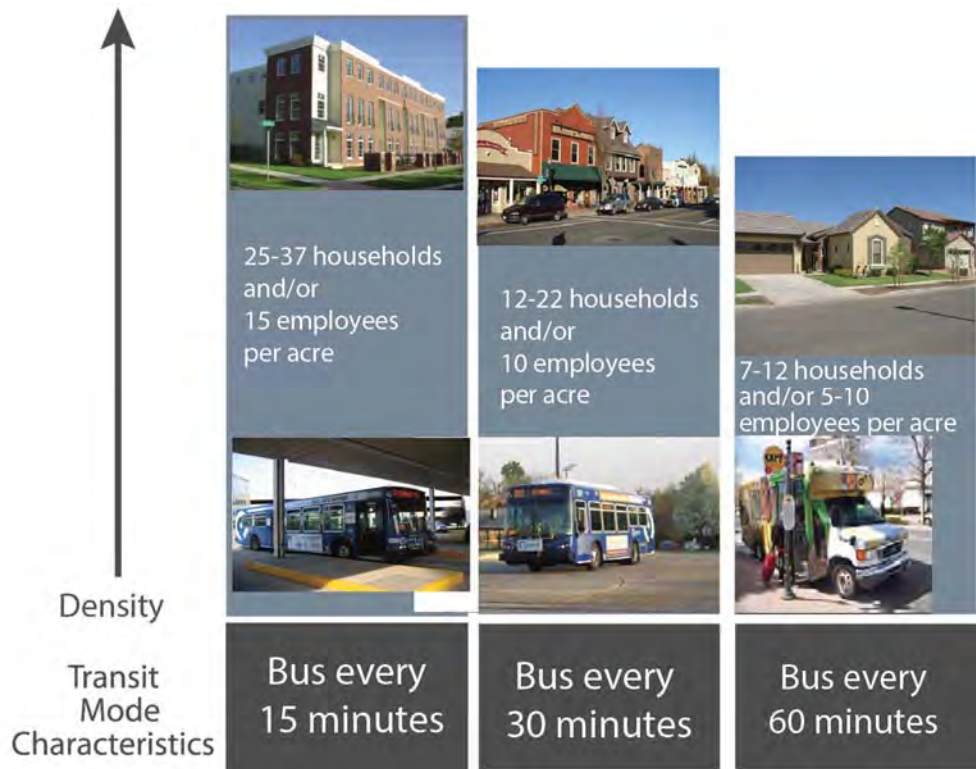
## MARKET ANALYSIS

Successful fixed-route public transportation (service running on a set path with time points) achieves highest efficiency levels in communities where clusters of people and destinations exist. The purpose of public transportation, however, is also to provide opportunities and mobility to disadvantaged populations. Therefore to gain an understanding of where potential transit needs exist, an analysis of both population and job density overall was conducted, with an additional assessment of disadvantaged populations specifically.

### Population & Employment

Population and employment densities are important factors because the clustering of people and jobs helps determine where transit routes can be operated cost-effectively given SETD’s limited resources. Serving dense population and employment centers makes transit more financially efficient. Most transit systems consist of a mix of “choice riders,” or people who own a car or have access to a car but choose to take transit, and “transit-dependent” riders, or those who do not have any other option. This first step of analyzing overall population and employment density provides insights into the overall market for transit in Clatsop County. Figure 2-2 illustrates the typical socioeconomic characteristics needed to support different levels of transit service. In urban areas where transit service is more closely spaced together, higher densities are needed, while in smaller communities where there are relatively few routes and potential transit corridors, lower densities can support a given level of service. A more detailed analysis of the relationship between land use and transit service will be conducted in a subsequent phase of this project.

Figure 2-2 Density and Level of Transit Service Supported



Source: Adapted from various sources, including TCRP Report 100: Transit Capacity and Quality of Service Manual.

## Population

Incorporated communities comprise about 65% of Clatsop County’s population, while 35% of residents live in unincorporated areas. Between 2010 and 2015, Clatsop County grew at an average annual rate of 0.4%, less than the statewide rate of growth of 1% annually. Growth within the county was uneven (Figure 2-3), with Warrenton and Seaside growing at slightly higher rates (0.7% and 0.4%, respectively) than Astoria, Cannon Beach, and Gearhart (0.2%). Nearly a quarter of the County’s growth occurred in Warrenton. Population in unincorporated communities grew at the same rate as incorporated communities overall.

Figure 2-3 Clatsop County Population Data and Recent Trends, 2010-2015

Geography	2010 [1]	2015 [2]	Change, 2010-2015	% of County Population, 2015	% of County Growth, 2010-2015	Average Annual % Change
Oregon	3,831,074	4,013,845	182,771	N/A	N/A	1.0%
Clatsop County	37,039	37,750	711	N/A	N/A	0.4%
<b>Incorporated Communities</b>	<b>24,075</b>	<b>24,525</b>	<b>450</b>	<b>65.0%</b>	<b>63%</b>	<b>0.4%</b>
Astoria	9,477	9,580	103	25.4%	14%	0.2%
Seaside	6,457	6,585	128	17.4%	18%	0.4%
Warrenton	4,989	5,175	186	13.7%	26%	0.7%
Cannon Beach	1,690	1,705	15	4.5%	2%	0.2%
Gearhart	1,462	1,480	18	3.9%	3%	0.2%
<b>Unincorporated Areas</b>	<b>12,964</b>	<b>13,225</b>	<b>261</b>	<b>35.0%</b>	<b>37%</b>	<b>0.4%</b>

Source: [1] U.S. Census Bureau, Decennial Census, 2010. [2] Portland State University, Population Research Center, Certified Population Estimates, 2015.

The population of Clatsop County is concentrated primarily along the coast (see Figure 2-6). An exception to this is Tongue Point Jobs Corps Center, which has one of highest population densities in the county, and is also one of the top employers. Tongue Point is located in unincorporated Clatsop County, east of the Astoria city limits, as illustrated in Figure 2-6 and Figure 2-20.

## Transit-Dependent Populations

In rural communities like Clatsop County, transit service often carries a large share of persons who are “transit-dependent.” Transit provides this population with a crucial lifeline to jobs, services, family and friends, and medical providers. Analyzing concentrations of the transit-dependent – older adults 65 and older, youth under 17, people with low incomes, people with disabilities, those with limited English proficiency, and households without a vehicle – reveals places where transit would likely find customers. In many cases, transit-dependent population density follows similar patterns as overall population density; for example, those with disabilities tend to cluster in general population centers. In some cases, however, transit-dependent people are disconnected from city centers, making the need for transit more acute. For example, Emerald Heights is a low-income housing area located far from downtown Astoria.

Clatsop County is, on average, both older and poorer than the statewide and national averages. The county also has a greater proportion of persons with disabilities, but fewer residents with limited English-speaking ability. More than a quarter of Cannon Beach residents are older adults – the highest percentage in the county. All of the communities within Clatsop County have higher levels of low-income individuals than the state and national averages, with the exception of Gearhart. Persons with disabilities are concentrated in the urban areas of Clatsop County, including Seaside, Cannon Beach, and Warrenton.

Figure 2-4 Demographic and Financial Information on Clatsop County Communities, 2013

Geography	Total Population	% of County	Senior Population (65+)	Youth (10-17)	Low-Income Population [1]	Zero-Vehicle Households	Population with Disabilities [2]	Population with Limited English [3]
United States	311,536,594	-	13%	11%	32%	9%	15%	4.5%
Oregon	3,868,721	-	14%	10%	33%	8%	16%	3.5%
Clatsop County	37,157	-	18%	9%	36%	9%	21%	1.7%
<b>Incorporated Communities</b>								
Astoria	9,518	26%	17%	9%	41%	9%	18%	2.8%
Seaside	6,455	17%	18%	8%	39%	18%	26%	1.3%
Warrenton	5,057	14%	12%	11%	42%	8%	23%	0.3%
Cannon Beach	1,553	4%	26%	4%	37%	12%	23%	4.4%
Gearhart	1,513	4%	22%	12%	22%	2%	17%	0.3%

Note: The table presents data from all cities within Clatsop County. Low-Income populations are defined by households making up to 185% of the poverty level. This definition is consistent with Oregon WIC Policy 612. [1] Percentage of population for which poverty status is determined. [2] Age 18 or older. [3] Age 5 or older who speak English "less than well".

Source: U.S. Census Bureau, 2009-13 American Community Survey 5-year Estimates

### Older Adults and Youth

Older adults (age 65 and older) and youth (age 10-17) typically use public transportation more frequently than the general population. Older adults often exhibit higher demand for transit as they become less capable or willing to drive themselves, or can no longer afford to own a car on a fixed income. Young people without driver's licenses or access to a car could use transit service for school and after-school activities, part-time jobs, and access to recreation and entertainment particularly during the summer months.

Clatsop County has a slightly older population than the state of Oregon, with 18% of residents age 65 and older, compared to 14% statewide. Population forecasts estimate that Clatsop County will continue to be home to a greater share of older adults than the state average, with the gap widening in coming decades (Figure 2-5). Currently, the population age 19 and under makes up a smaller than average proportion of the population in Clatsop County, at 24% versus 26% for Oregon generally. Growth trends suggest that this gap will persist over the next decade and beyond.



Figure 2-5 Projected Aging in Clatsop County Compared to Oregon Averages, 2010 to 2030

Age	Clatsop (2010)	Oregon (2010)	Clatsop (2020)	Oregon (2020)	Clatsop (2030)	Oregon (2030)
19 and under	24%	26%	23%	25%	22%	24%
20 – 64	60%	61%	55%	58%	52%	56%
65-75	9%	7%	14%	10%	13%	10%
75 and over	7%	6%	8%	7%	13%	10%

Source: Population Projections from Office of Economic Analysis ([http://www.oregon.gov/DAS/OEA/docs/demographic/pop\\_by\\_ageandsex.xls](http://www.oregon.gov/DAS/OEA/docs/demographic/pop_by_ageandsex.xls))

Older adults over the age of 65 are more heavily concentrated in cities, with many near an SETD transit route. In Astoria, high densities of older adults live in the downtown area, due in part to the location of older adult housing. The Route 10 bus circulates the downtown area in Astoria, but mobility or ambulatory issues may prevent some seniors from walking the short distance to the transit stop, due to hilly topography. In Seaside and Gearhart, older adult populations are more dispersed, with several higher density pockets of older adult populations located east and west of the Route 101 line (Figure 2-7). In Cannon Beach older adults are generally located near the Route 101 transit line, with the exception of a few dense blocks in the northern part of the city.

### Low-Income Populations

For the purposes of this analysis, households are classified as low-income if they earn up to 185% of the federal poverty threshold, which is the income eligibility criteria for various social service programs in Oregon, including the Oregon Health Plan. For a four-person household, this equates to annual income of just under \$45,000.<sup>2</sup> Within Clatsop County, the largest concentrations of low-income populations are clustered in Astoria, Seaside, and Cannon Beach (see map in Appendix A). In particular, downtown Astoria and southeast Seaside have the highest density of low-income households. Areas with the highest density of low-income households are located near SETD service, particularly along the portions of Route 101 and Route 10 circulating within Astoria.

### Persons with Disabilities

Persons with disabilities often are heavily dependent on public transit service. Some types of disabilities may prevent people from driving. Access to transportation is an important factor in allowing persons with disabilities access service and live independently. Public transit providers are required to provide ADA Paratransit for persons whose disability prevents them from utilizing fixed-route transit service.

Of residents over the age of 17 in Clatsop County, 20% have a disability, which is higher than the statewide average of 16% and the national average of 15%. Residents with disabilities tend to live close to population centers (see map in Appendix A). The highest concentrations are found in Seaside (24% of population) and Cannon Beach (22% of population).

### Persons with Limited English Proficiency

Limited English proficiency correlates closely to income and can be another indicator of a household's relative dependency on transit. In Clatsop County, 1.7% of Clatsop County residents

<sup>2</sup> <http://public.health.oregon.gov/HealthyPeopleFamilies/wic/Pages/income.aspx>

speak English “less than well.” This is relatively low compared to the Oregon statewide average of 3.5%, and the national average of 4.5%. Populations with limited English are concentrated in Astoria, Southeast Seaside, and Cannon Beach (see map in Appendix A).

### **No-Vehicle Households**

One of the most influential indicators of transit demand is whether a household has access to a car. This indicator may represent households without the economic means of owning a vehicle, households that choose not to own a car, or individuals who are unable to drive. In Clatsop County, 9% of households do not have a vehicle available, which is slightly more than the statewide average of 8%. The largest concentrations of zero-vehicle households are in Seaside (18%) and Cannon Beach (12%). (See map in Appendix A).

### **Transit Propensity Index**

A transit propensity index was developed to illustrate the combination of these factors (see Figure 2-8). The index aggregates, without weighting, the following demographic variables: households with income at/below 185% of the federal poverty level, persons with disabilities, older adults (age 65+), youth (ages 10-17), and zero-vehicle households. It is not weighted.

These segments of the population are most likely to depend on transit for their transportation needs, and the map in Figure 2-8 shows where the highest densities of these populations are located in Clatsop County. The concentrations of high overall transit propensity match closely with the concentrations of older adults, people living below 185% of the poverty level, households without access to a vehicle, and individuals who speak English “less than well.” Figure 2-8 illustrates that the locations with the highest propensity to use transit are found in northwest Astoria and southeast Seaside. These populations tend to be located near social services and multifamily housing. Moderate to high transit propensity exists in the rest of Seaside and the western and eastern portions of Astoria.

Figure 2-6 Population Density in Clatsop County, 2010



**Population Density (2010)**

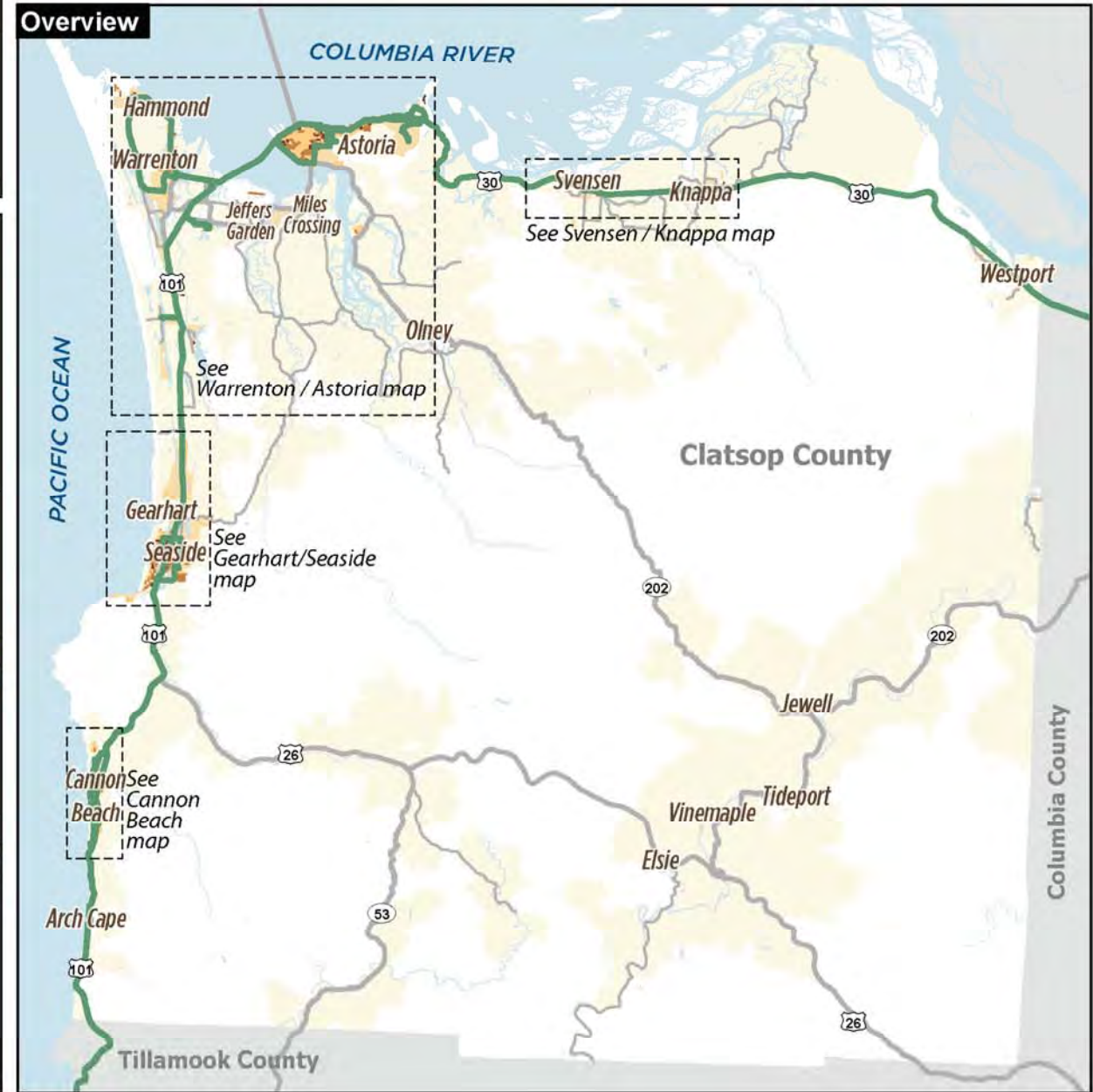
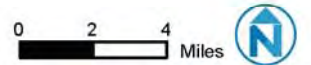
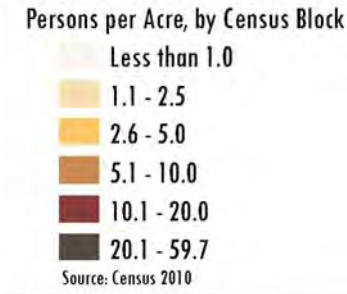
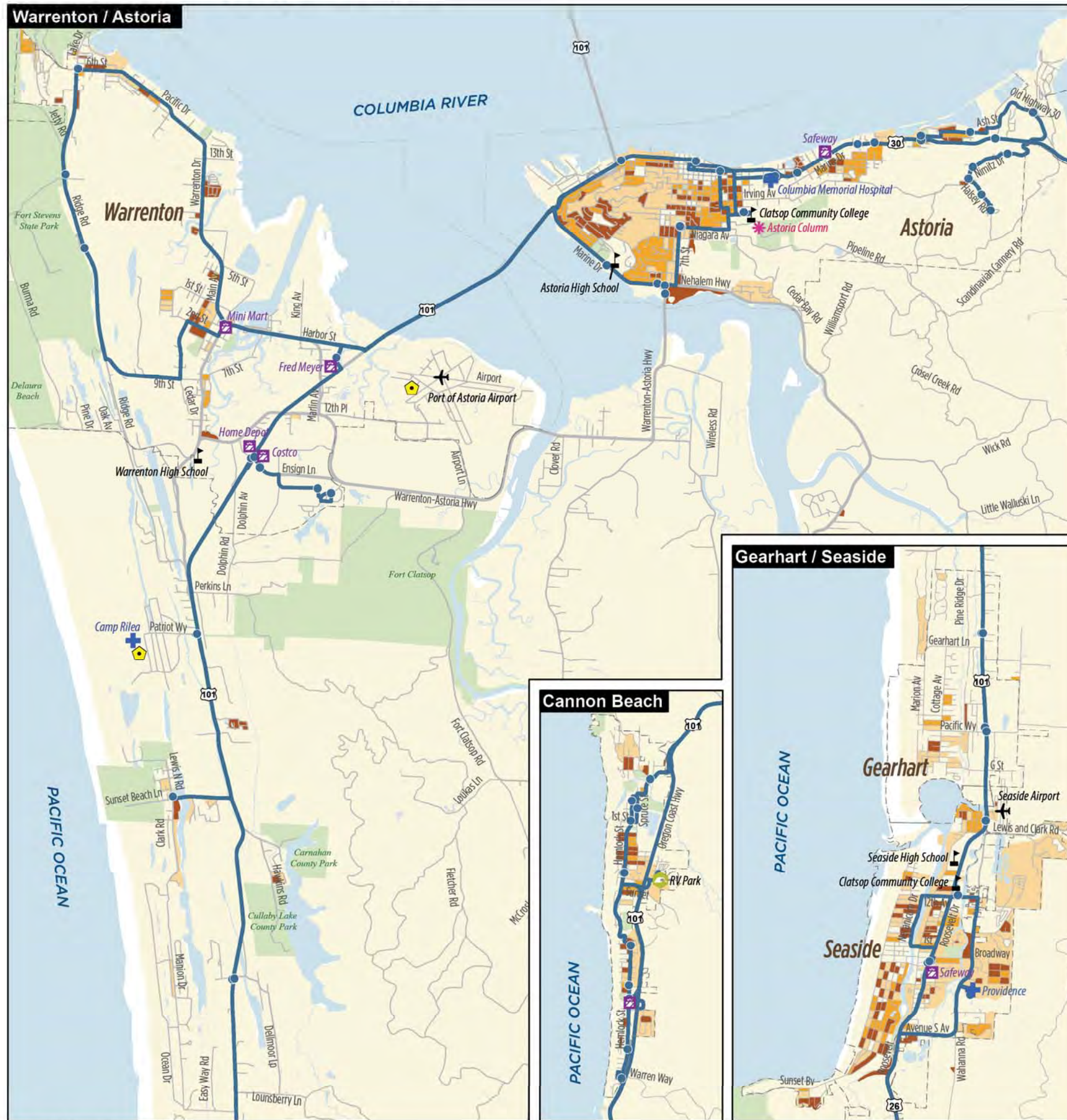


Figure 2-7 Density of Older Adults (Age 65 and Older), 2010



**Older Adults aged 65 or Older (2010)**

Persons per Acre by Census Block

- 0.01 - 0.50
- 0.51 - 1.00
- 1.01 - 1.50
- 1.51 - 17.50

Landmarks

- Attractions
- Education
- Airport
- Sunset Empire Transportation District Routes and Stops
- City Boundaries
- Medical
- Shopping
- Coast/National Guard

Source: Census 2010



Source: U.S. Census Bureau, 2010



## Employment in Clatsop County

Many of the county's largest employers are located in the northern part of the county and within city limits. Large employers listed in Figure 2-9 represent a range of industries, including logging, medical services, higher education, and government. Seven are located in Astoria, though the largest employer in the county, Georgia-Pacific (Wauna Mill), is located on U.S. 30 near Clatskanie. Providence and Columbia Hospitals are located in the cities of Astoria and Seaside. Although not represented among the largest employers, tourism is a major industry in the county, particularly in coastal areas. The retail and leisure/hospitality sectors are both the largest and the fastest growing employment categories.<sup>3</sup>

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<sup>3</sup> Oregon Employment Department, <https://www.qualityinfo.org/northwest-oregon>

Figure 2-10 and Figure 2-11 illustrate the employment density in Clatsop County communities. Businesses throughout the county are generally located along the U.S. 101 and U.S. 30 corridors or downtown streets such as Broadway Street in Seaside.

The major concentrations of employment in the county are generally located in proximity to transit. However, transit hours of operation and schedules may not be ideally matched to employee shift times. For example, the Georgia Pacific Wauna Mill in Clatskanie is served by the Columbia Connector, but the schedule does not accommodate employee shifts starting or ending in early morning or late at night and is not frequent enough, i.e., flexible. A cluster of large retailers in Warrenton (including Costco, Fred Meyer, Home Depot, and a future Walmart location) is both an employment and retail destination. However, existing transit service does not run late enough to accommodate evening employee shifts. In Gearhart and Seaside, pockets of employment west of U.S. 101, including tourist-oriented hotels and businesses, are not well served by a transit line. Serving jobs focused on tourism and resort industries is also more difficult due to irregular work shifts and relatively infrequent service on some routes.

Figure 2-9 Large Employers in Clatsop County

Employer	Location	Transit Routes
Georgia Pacific/ Wauna Mill	Clatskanie	Route 30
Columbia Memorial Hospital	Astoria	Route 30, Route 10
Providence Seaside Hospital	Seaside	Route 101
Clatsop County	Astoria	Route 101
Fred Meyer	Warrenton	Route 101, Route 30, Route 10
Tongue Point Job Corps Center	Astoria	Route 10
Clatsop Community College	Astoria	Route 101 and Route 10
City of Astoria	Astoria	Route 101, Route 30, Route 10
Clatsop Care Center	Astoria	Route 101, Route 30, Route 10
Bornstein Seafoods	Astoria	Route 101, Route 30, Route 10

Source: NW Oregon Transit Alliance Regional Transit Program, Market Analysis Report, May 2012

Figure 2-10 Employment Density in Clatsop County, 2011



**Employment Density (2011)**

**Jobs per Acre, by Census Block**

- Less than 1.0
- 1.1 - 2.0
- 2.1 - 4.0
- 4.1 - 10.0
- 10.1 - 60
- 60.1 - 183.5

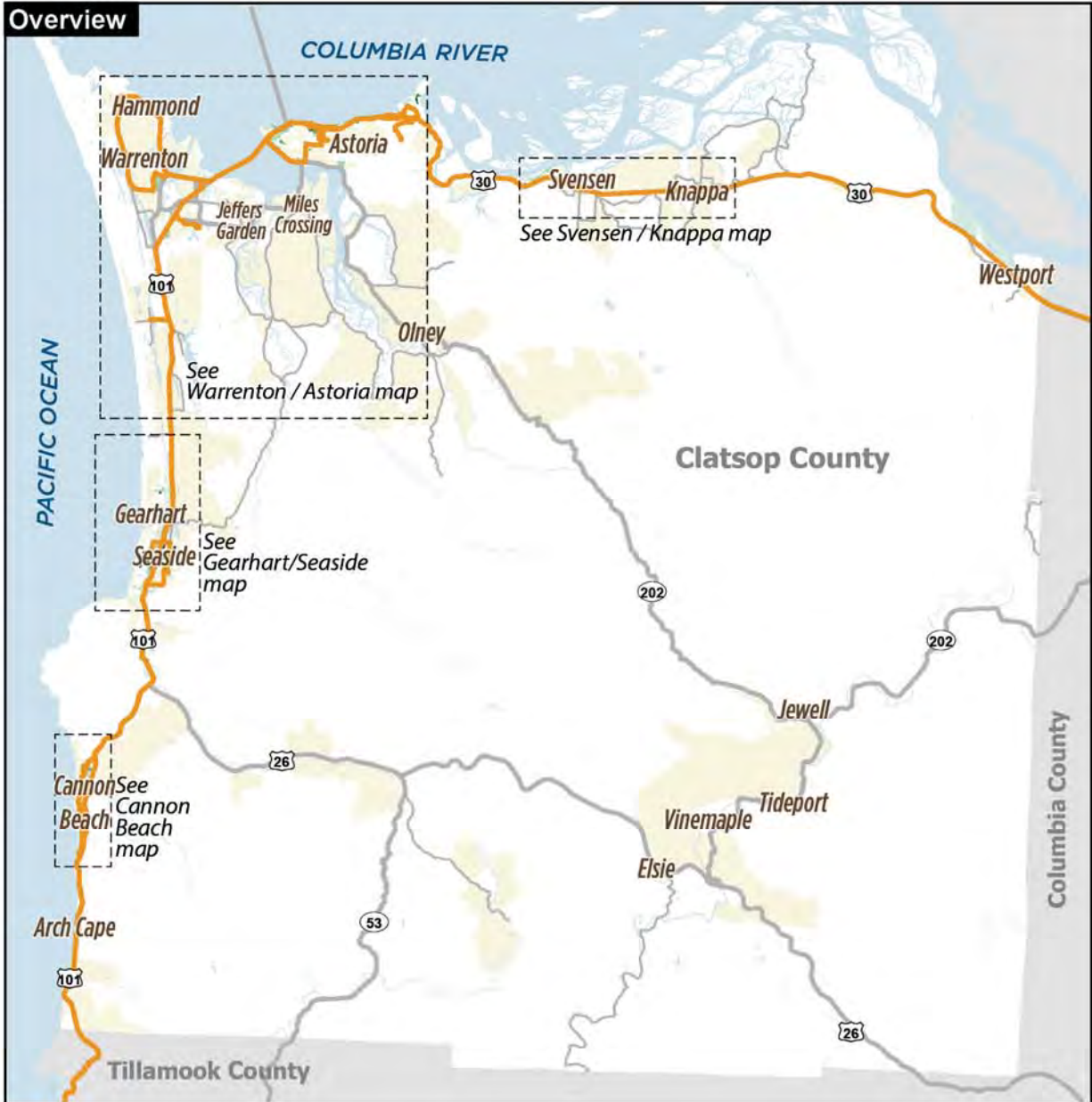
**Landmarks**

- Major Employer
- Education
- Coast/National Guard
- Medical
- Shopping
- Airport

Sunset Empire Transportation District Routes and Stops

City Boundaries

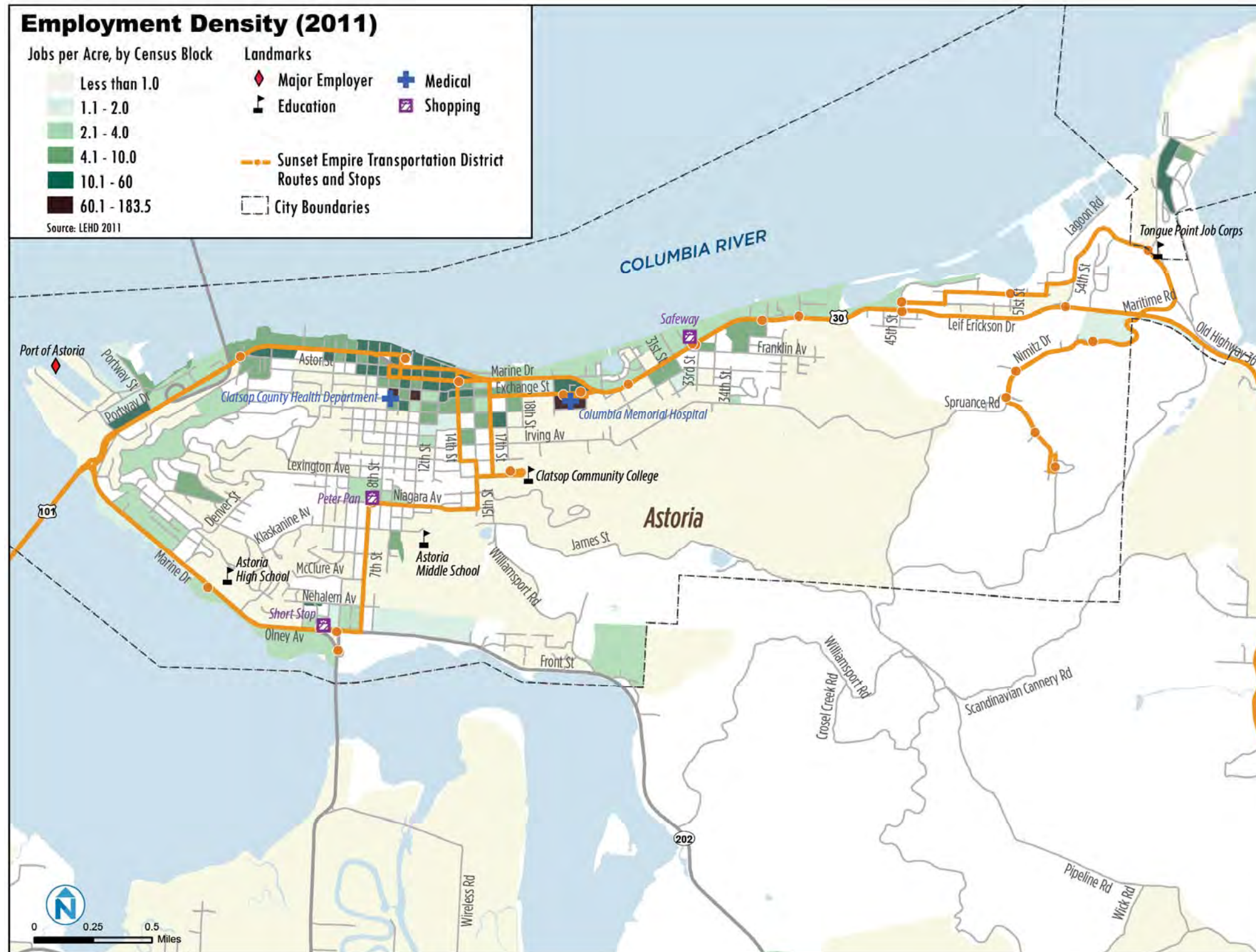
Source: LEHD 2011



Source: U.S. Census Bureau, Longitudinal Household-Employer Dynamics (LEHD), 2011



Figure 2-11 Employment Density within Astoria, 2011



Source: U.S. Census Bureau, Longitudinal Household-Employer Dynamics (LEHD), 2011

## TRAVEL PATTERNS

### All Travel

Travel demand model data provides information about the overall size of travel markets. Figure 2-12 provides trip origin-destination data from the Astoria-Warrenton Travel Demand model for the average weekday in a future year of 2035. It indicates that:

- Most of the travel in the Astoria-Warrenton area is either within or between Astoria and Warrenton.
- The US 101 corridor, serving south Clatsop County, is a significantly larger travel market than the US 30 corridor east of Astoria. There are nearly 5,000 trips between Astoria/Warrenton and the US 101 corridor in southern Clatsop County, compared to nearly 1,900 trips between Astoria/Warrenton and the US 30 corridor in eastern Clatsop County. In addition, there are over 1,300 through round trips between the US 101 and US 30 corridors, south and east of Astoria/Warrenton, respectively.
- There are nearly 3,900 round trips between Pacific County and the Astoria/Warrenton area, and

In addition, the model indicates that there are 2,150 projected round trips between the Miles Crossing area along US 101 Business and Astoria/Warrenton in the peak summer season, with the Astoria end of the corridor carrying approximately 1.5 times as many trips as the Warrenton end.

Figure 2-12 Trip Origin-Destination Pairs, Average Weekday, 2035

From   To	Astoria	Warrenton	U.S. 101 South	Astoria-Megler (WA) Bridge	U.S. 30 East
Astoria	30,812	7,171	1,645	3,150	1,608
Warrenton	7,175	11,744	3,278	737	278
U.S. 101 South	1,645	3,278	-	1,299	1,333
Astoria-Megler (WA) Bridge	3,150	737	1,299	-	272
Hwy30East	1,608	278	1,341	268	-

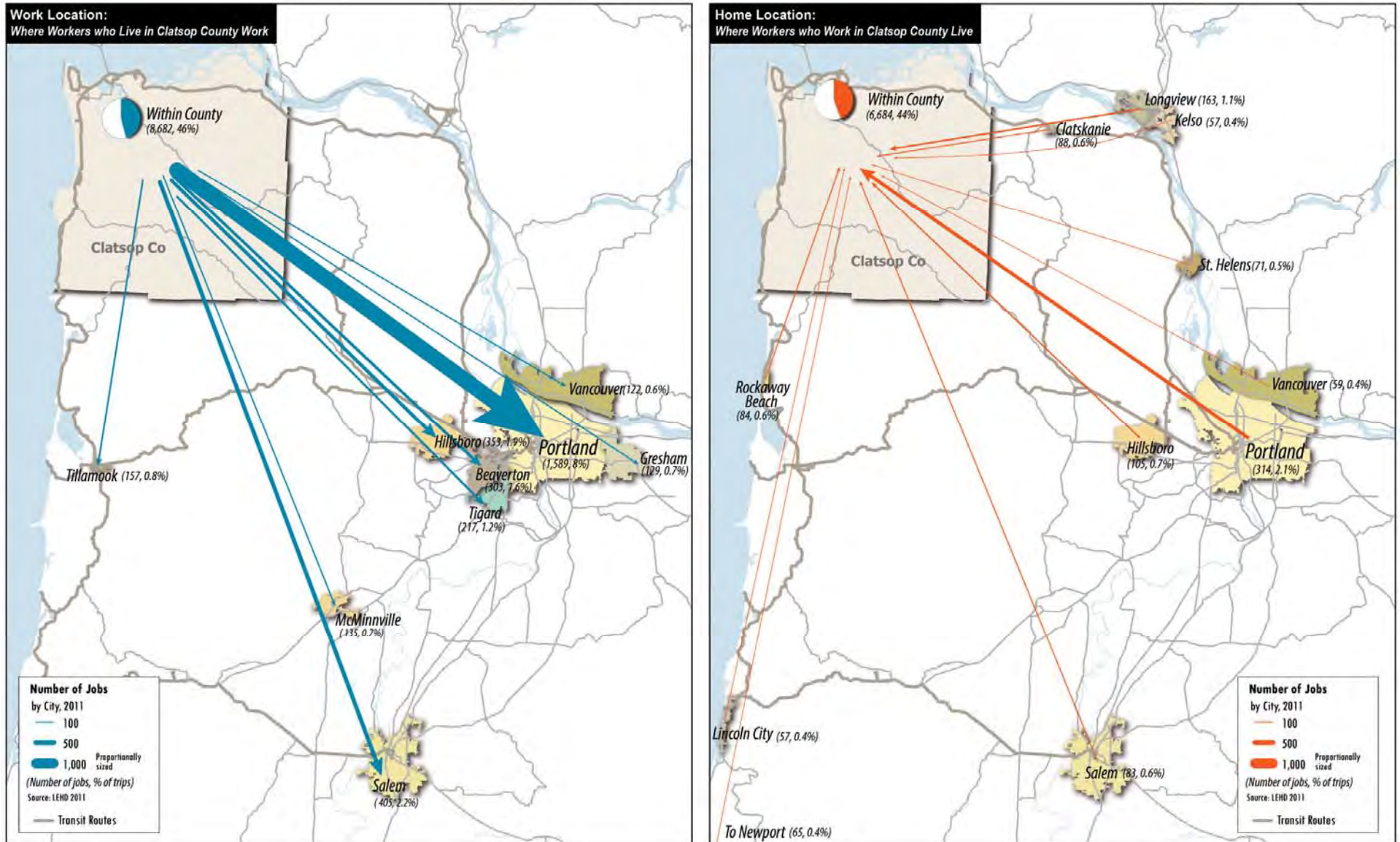
Source: Astoria-Warrenton Travel Demand Model

### Work Travel

Figure 2-13 illustrates regional commute patterns to and from Clatsop County. According to U.S. Census Bureau Longitudinal Employer-Household Dynamics (LEHD) data, nearly half of Clatsop County residents work within the county (46%), and relatively few travel to adjacent coastal counties for work. Approximately 8% of county residents work in Portland, 2.2% work in Salem, and almost 2% work in Hillsboro (Figure 2-13). Approximately 56% of Clatsop County workers live outside the county. The largest concentrations of commuters from outside the county travel from Portland (2.1%) and Longview (1.1%).

Figure 2-14 (work locations) and Figure 2-15 (home locations) summarize this data in tables.

Figure 2-13 Top Ten Regional Home to Work Travel Patterns, 2011



Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics Data (2011)

## Work Locations in Clatsop County

Figure 2-16 illustrates the distribution of work locations throughout Clatsop County. County residents are traveling to jobs located primarily in the communities along Hwy 30, Hwy 101, and in Warrenton. Major employment centers and work locations are generally served by transit routes, although there are exceptions such as Miles Crossing, Warrenton High School, and west of Hwy 101 beyond convenient walking distance to transit, such as in Gearhart or Seaside. Figure 2-14 categorizes the work locations of Clatsop County residents by geography or travel corridor. The largest share work in the Astoria/Warrenton area (28%), while over 20% work along the U.S. 101 corridor, including nearly 18% within the Clatsop County communities of Gearhart, Seaside, and Cannon Beach. About 2.6% work in Tillamook or Lincoln Counties. Slightly more than 2% work along the U.S. 30 corridor, including about 1.2% in Washington State. Nearly 14% work in the Portland Metro area, which is accessible by both the U.S. 30 and U.S. 26 corridors. An additional nearly 5% work in the Beaverton-Hillsboro area, which may be most conveniently accessed via U.S. 26.

Figure 2-14 Work Locations of Clatsop County Residents by Location/Corridor, 2011

Geography	# Work Locations	% of Work Locations
<b>Astoria-Warrenton Area</b>	<b>5,296</b>	<b>28.2%</b>
Astoria	3,702	19.7%
Warrenton	1,555	8.3%
Jeffers Gardens	39	0.2%
<b>US 101 Corridor</b>	<b>3,840</b>	<b>20.4%</b>
Clatsop County	3,353	17.8%
Tillamook County	267	1.4%
Lincoln County	220	1.2%
<b>US 30 Corridor</b>	<b>414</b>	<b>2.2%</b>
Clatsop County	33	0.2%
Columbia County	161	0.9%
Longview-Kelso	123	0.7%
Pacific/Wahkiakum Counties	97	0.5%
<b>Portland Metro Area</b>	<b>2,532</b>	<b>13.5%</b>
Portland	1,589	8.4%
West - Tigard-Wilsonville-Lake Oswego	470	2.5%
North - Vancouver/Clark County	167	0.9%
Southeast - Milwaukie/Clackamas/Oregon City	160	0.9%
Northeast - Gresham/Sandy	146	0.8%
<b>US 26 Corridor</b>	<b>894</b>	<b>4.8%</b>
Hillsboro/Beaverton Area	872	4.6%
Vernonia/North Plains	22	0.1%
Willamette Valley	1,117	5.9%
Other/Not Classified	4,717	25.1%
<b>Overall Total</b>	<b>18,810</b>	<b>100.0%</b>

Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics Data (2011)

## Where Clatsop County Workers Live

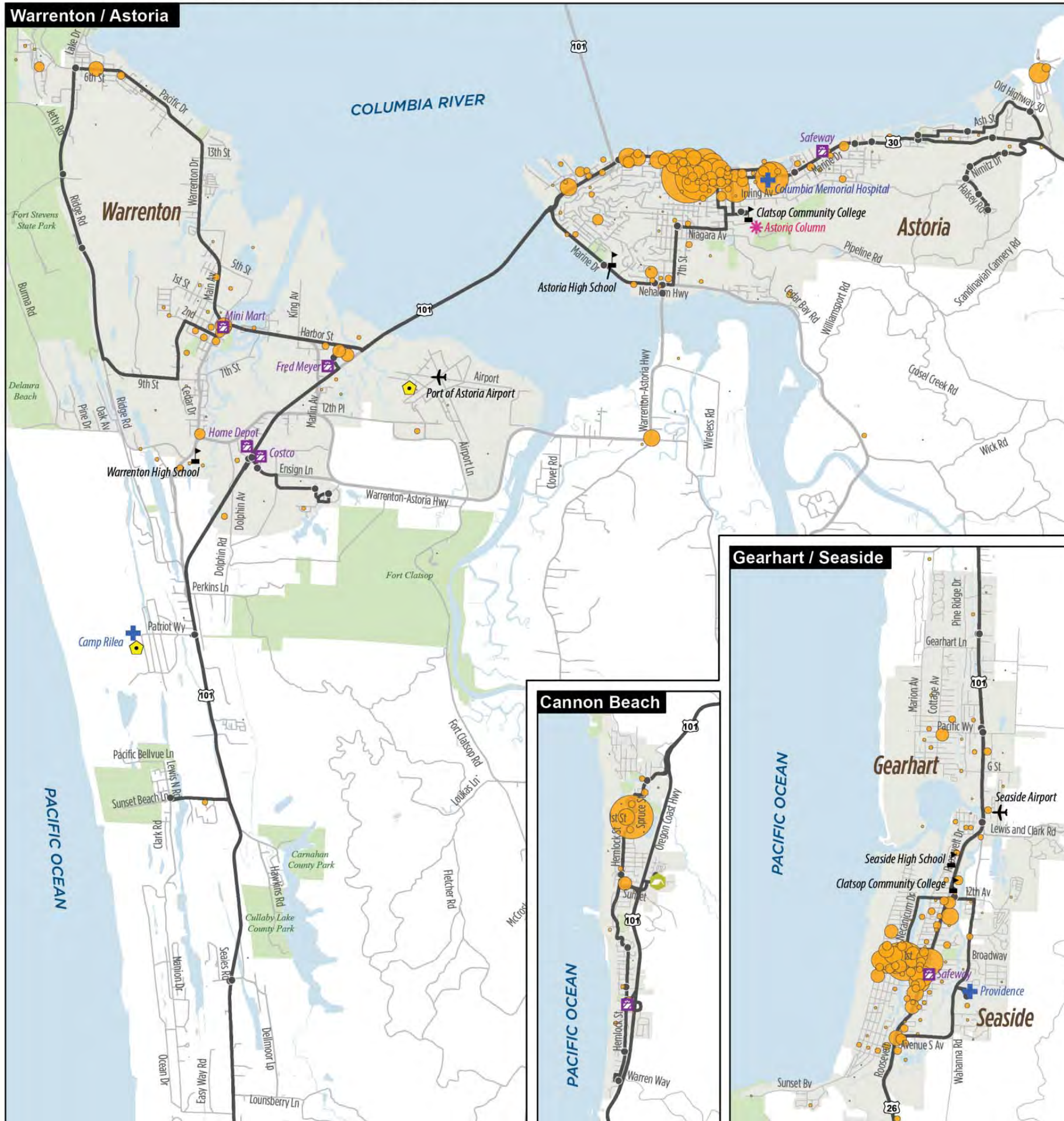
The home locations of Clatsop County workers are generally clustered within communities and often near a transit line (Figure 2-17). The exception is along OR 202 (Nehalem Highway), where clusters of residents live, but currently lack transit service. In Seaside, many workers live several blocks west of the U.S. 101, beyond a convenient walking distance. Figure 2-15 categorizes the home locations of Clatsop County workers by geography or travel corridor. The largest share of workers live in the Astoria/Warrenton area (27%), while nearly 21% live along the U.S. 101 corridor, including 17% within the Clatsop County communities of Gearhart, Seaside, and Cannon Beach. About 3.7% live in Tillamook or Lincoln Counties. Slightly fewer than 5% of workers live along the U.S. 30 corridor, including 2.6% in Washington State. Slightly more than 4% of workers live in the Portland Metro area, which is accessible by both the U.S. 30 and U.S. 26 corridors. An additional nearly 2% of workers live in the Beaverton-Hillsboro area, which may be most conveniently accessed via U.S. 26.

Figure 2-15 Home Locations of Clatsop County Workers by Location/Corridor, 2011

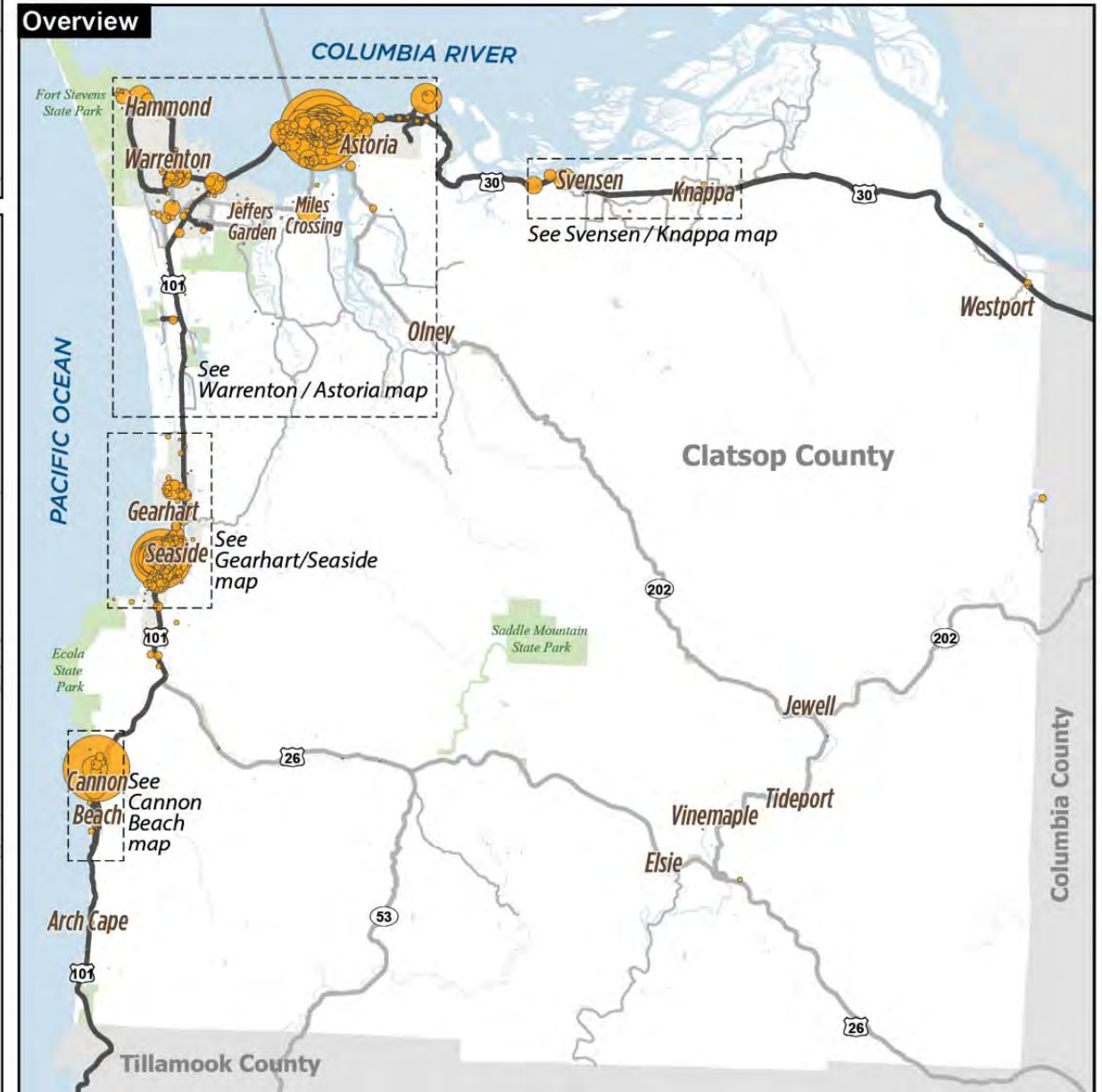
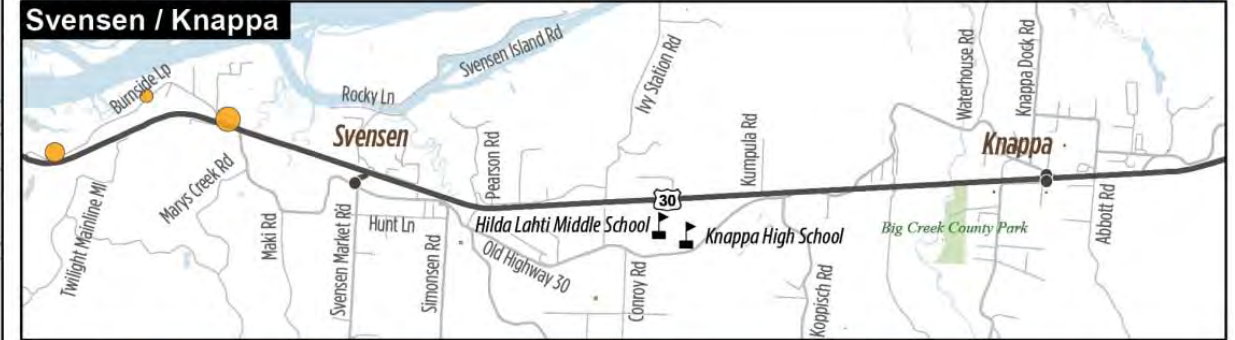
Geography	# Home Locations	% of Home Locations
<b>Astoria-Warrenton Area</b>	<b>4,052</b>	<b>27.0%</b>
Astoria	2,617	17.4%
Warrenton	1,345	9.0%
Jeffers Gardens	90	0.6%
<b>US 101 Corridor</b>	<b>3,123</b>	<b>20.8%</b>
Clatsop County	2,564	17.1%
Tillamook County	404	2.7%
Lincoln County	155	1.0%
<b>US 30 Corridor</b>	<b>706</b>	<b>4.7%</b>
Columbia County	241	1.6%
Longview-Kelso	270	1.8%
Pacific/Wahkiakum Counties	127	0.8%
Clatsop County	68	0.5%
<b>Portland Metro Area</b>	<b>648</b>	<b>4.3%</b>
Portland	314	2.1%
North - Vancouver/Clark County	102	0.7%
Southeast - Milwaukie/Clackamas/Oregon City	92	0.6%
Northeast - Gresham/Sandy	71	0.5%
West - Tigard-Wilsonville-Lake Oswego	69	0.5%
<b>US 26 Corridor</b>	<b>272</b>	<b>1.8%</b>
Hillsboro/Beaverton Area	237	1.6%
Vernonia/North Plains	35	0.2%
Willamette Valley	398	2.6%
Other/Not Classified	5,825	38.8%
<b>Overall Total</b>	<b>15,024</b>	<b>100.0%</b>

Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics Data (2011)

Figure 2-15 Work Locations of Clatsop County Residents, 2011

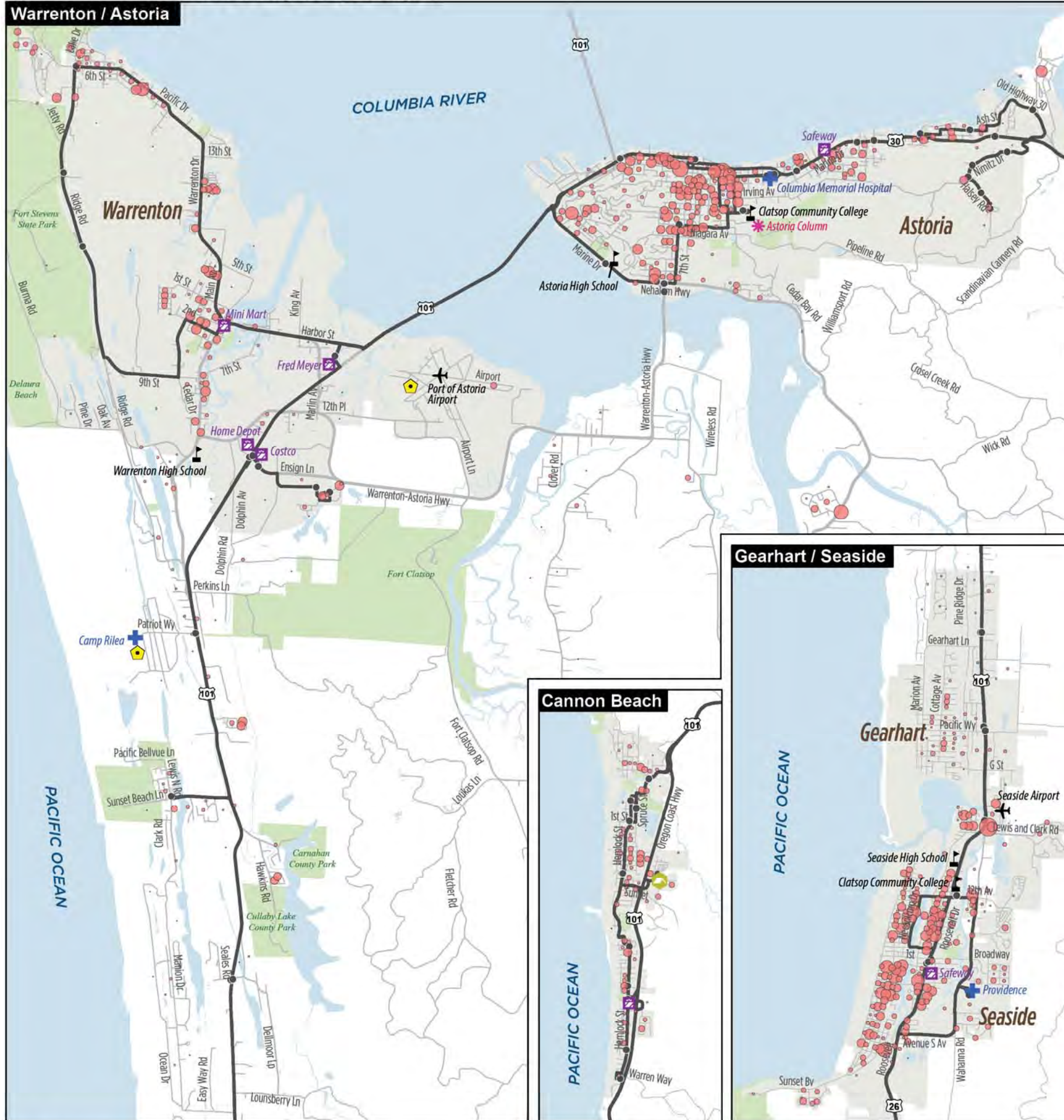


**Where Workers who Live in Clatsop County Work (2011)**

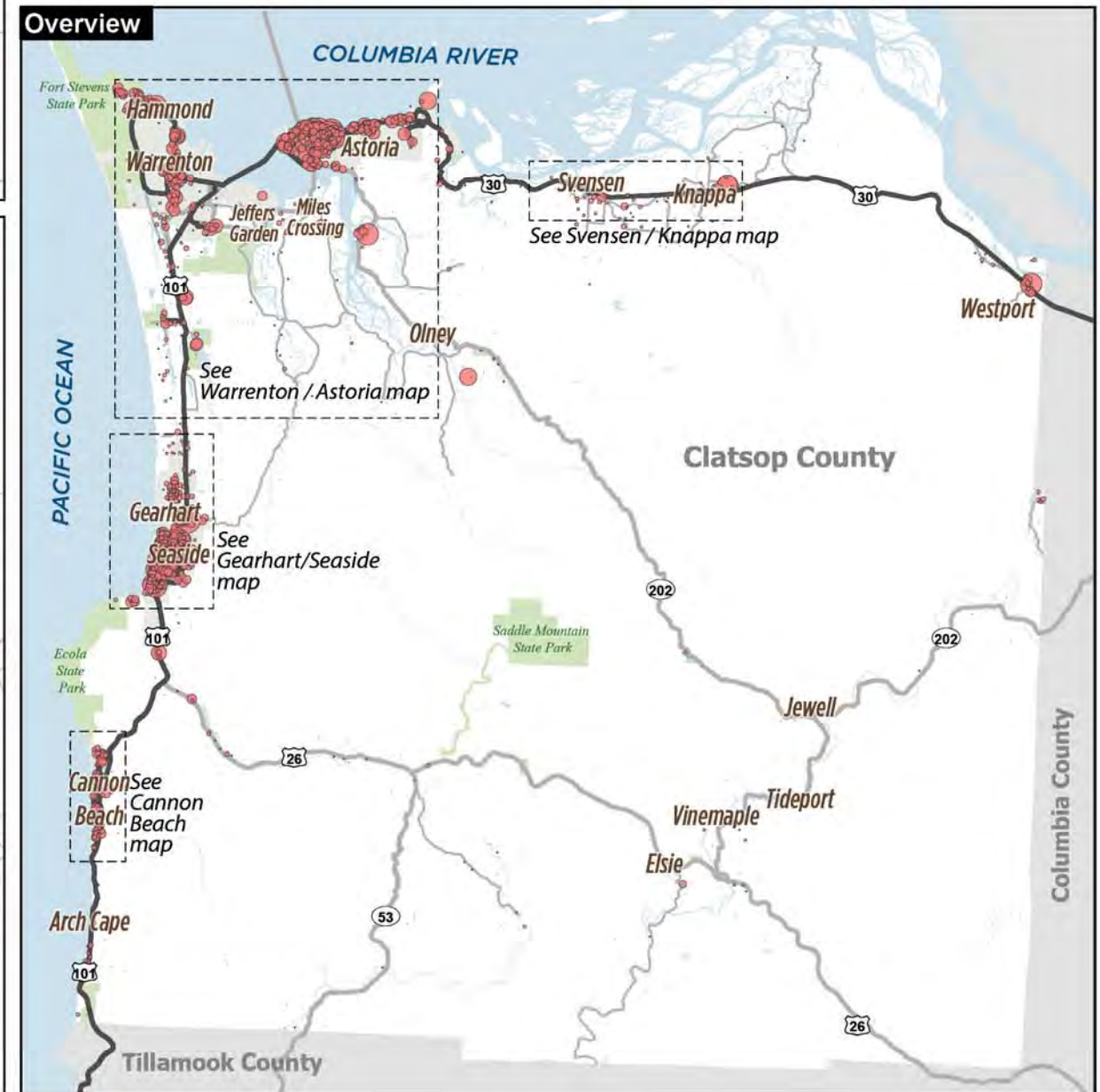


Source: U.S. Census Bureau, Longitudinal Household-Employer Dynamics (LEHD), 2011

Figure 2-16 Home Locations of Clatsop County Workers, 2011



**Where Workers who Work in Clatsop County Live (2011)**



Source: U.S. Census Bureau, Longitudinal Household-Employer Dynamics (LHED), 2011

## Means of Transportation to Work: Commute Mode

Despite the strong overlap of job locations and transit routes, only 1.6% of Clatsop County workers take public transit to work (Figure 2-18). This is about a quarter of the statewide average, but compared to other counties in the Northwest Connector alliance, Clatsop Counties transit mode share is higher than Columbia and Tillamook Counties (0.9%), about the same as Lincoln County (1.7%), and slightly lower than more urban Benton County (2.4%). About 2-3% of Astoria and Seaside workers commute by public transit.

A slightly smaller share of Clatsop County residents drive alone to work than the statewide average, but higher than average shares of workers carpool and walk to work. This may indicate that workers would be willing to consider and use transit for commuting if it served workers at the times and locations they need. Clatsop County also has a slightly larger than average percent of the population who works from home, particularly in Cannon Beach – 14% versus the statewide average of 6%. The bicycle commute share is lower than the statewide average, except in Cannon Beach. This could indicate longer-distance commutes and/or lack of safe facilities for bicycling.

Figure 2-18 Commute Mode to Work by Workers over Age 16

Geography	Drove Alone	Carpool or vanpool	Public Transit	Walked	Bicycled	Worked from Home
United States	76%	10%	5%	3%	1%	4%
Oregon	72%	10%	4%	4%	2%	6%
Clatsop County	71%	13%	1%	7%	1%	7%
<b>Incorporated Communities</b>						
Astoria	66%	17%	3%	7%	1%	4%
Seaside	66%	4%	2%	17%	1%	8%
Warrenton	78%	10%	0%	4%	0%	8%
Cannon Beach	56%	11%	0%	18%	2%	14%
Gearhart	74%	17%	1%	2%	0%	6%

Source: U.S. Census Bureau, 2009-13 American Community Survey 5-year Estimates

## Community Destinations

Major destinations in Clatsop County include educational institutions (e.g., Clatsop Community College, Tongue Point Job Corps, MERTS), recreational parks and historic landmarks, medical services, jobs, shopping, and housing.<sup>4</sup> Figure 2-19 illustrates key destinations in Clatsop County communities that are important to serve by transit. Figure 2-20 provides a separate map for Astoria.

## Travel Survey Data

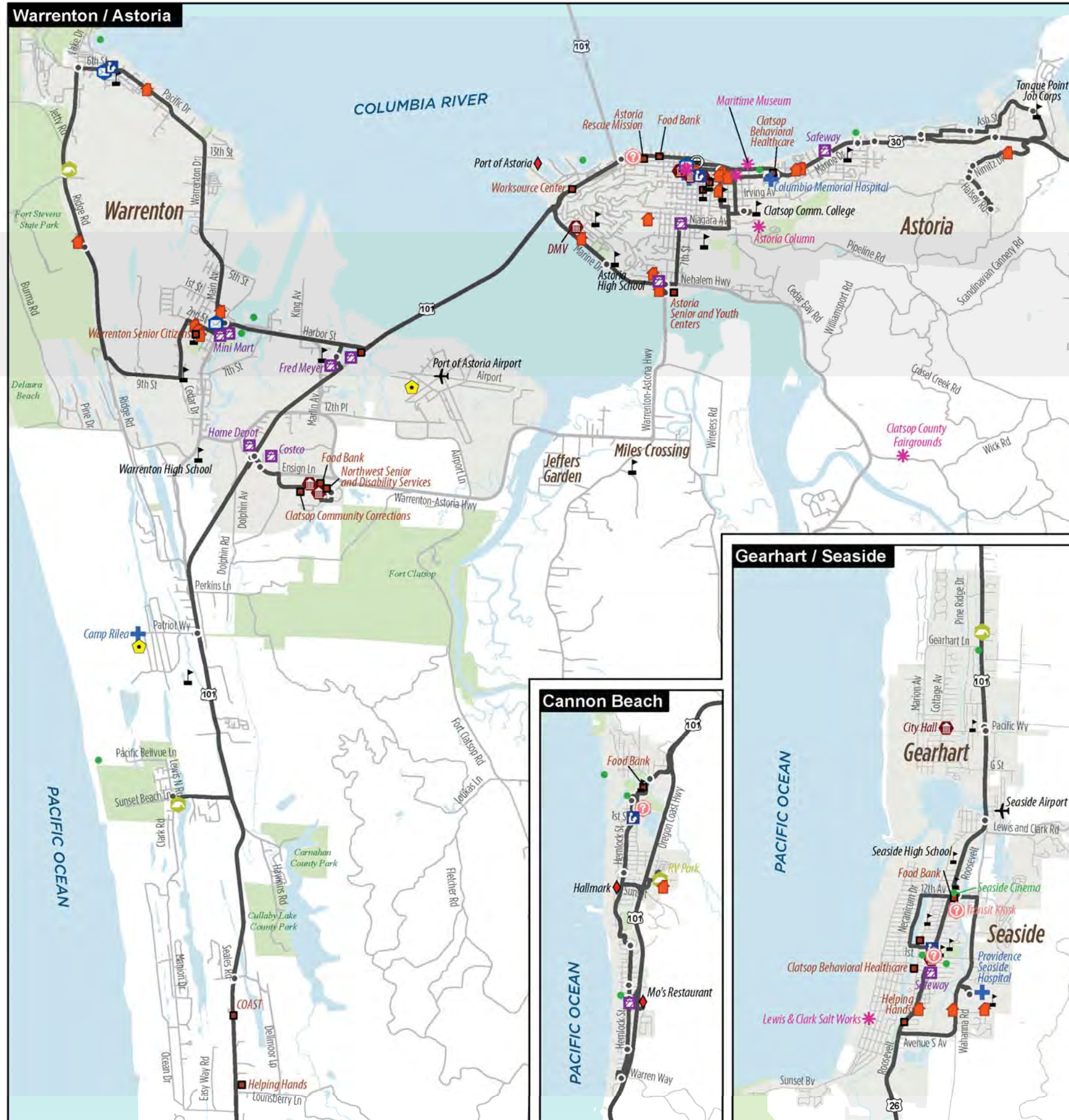
An on-board passenger survey collecting origins and destinations and a ridecheck counting boarding and alighting activity at each stop were conducted in May and September (for routes with high seasonal

<sup>4</sup> Data sources include ESRI, Clatsop County, an inventory compiled for the Clatsop County TSP, and additional activity centers compiled by the project team from websites and other sources.



demand) as well as a community survey in May 2015. Results are provided in Memo #2C: Community Input.

Figure 2-18 Major Destinations in Clatsop County



**Major Destinations**

- Airport
- Major Employer
- Campground
- Transit Routes and Stops
- Ferry
- Coast/National Guard
- Recreation
- City Boundaries
- Education
- Library
- Attraction
- Government
- Medical
- Information
- Social Services
- Post Office
- Grocery/Shopping
- Multifamily/Senior Housing

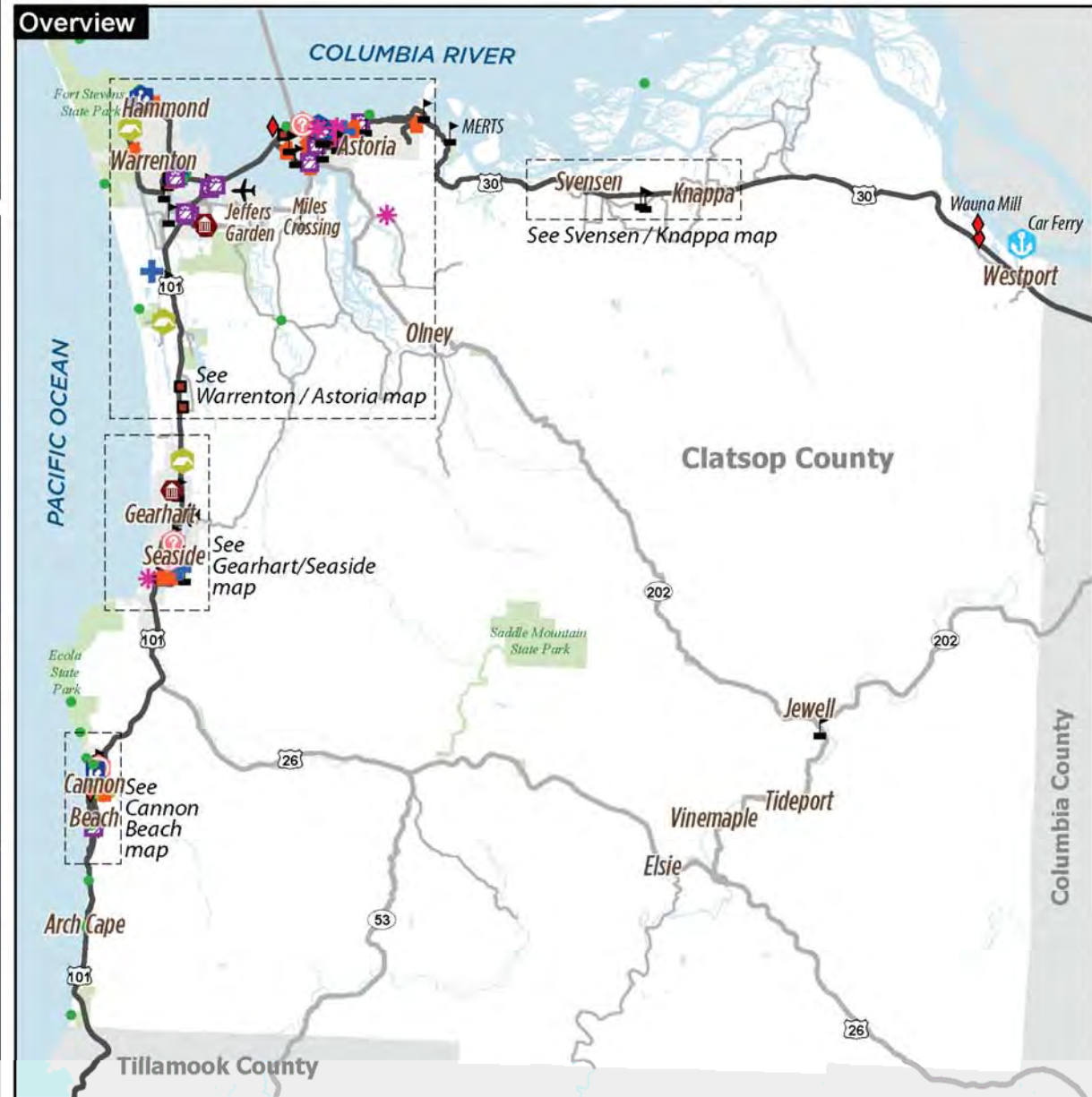
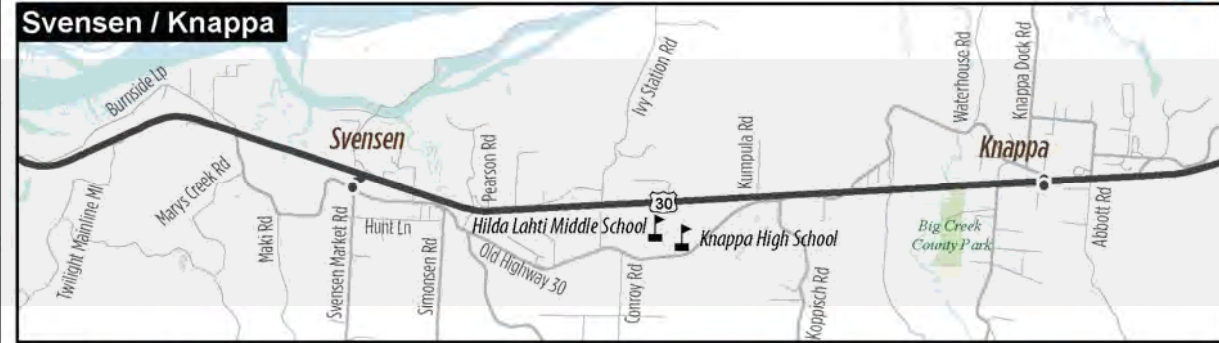
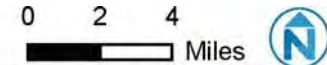
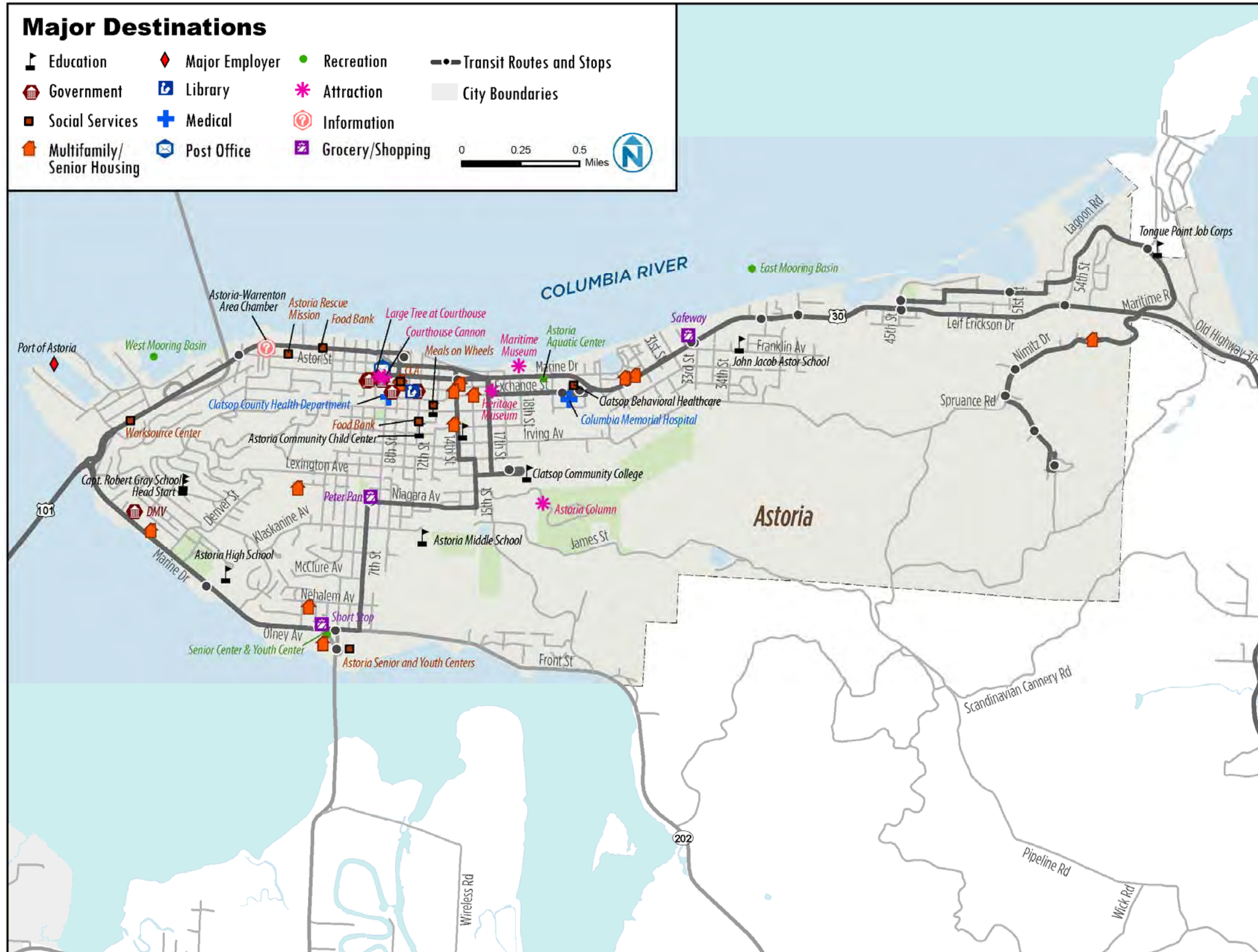


Figure 2-20 Major Destinations in Astoria



## **APPENDICES**

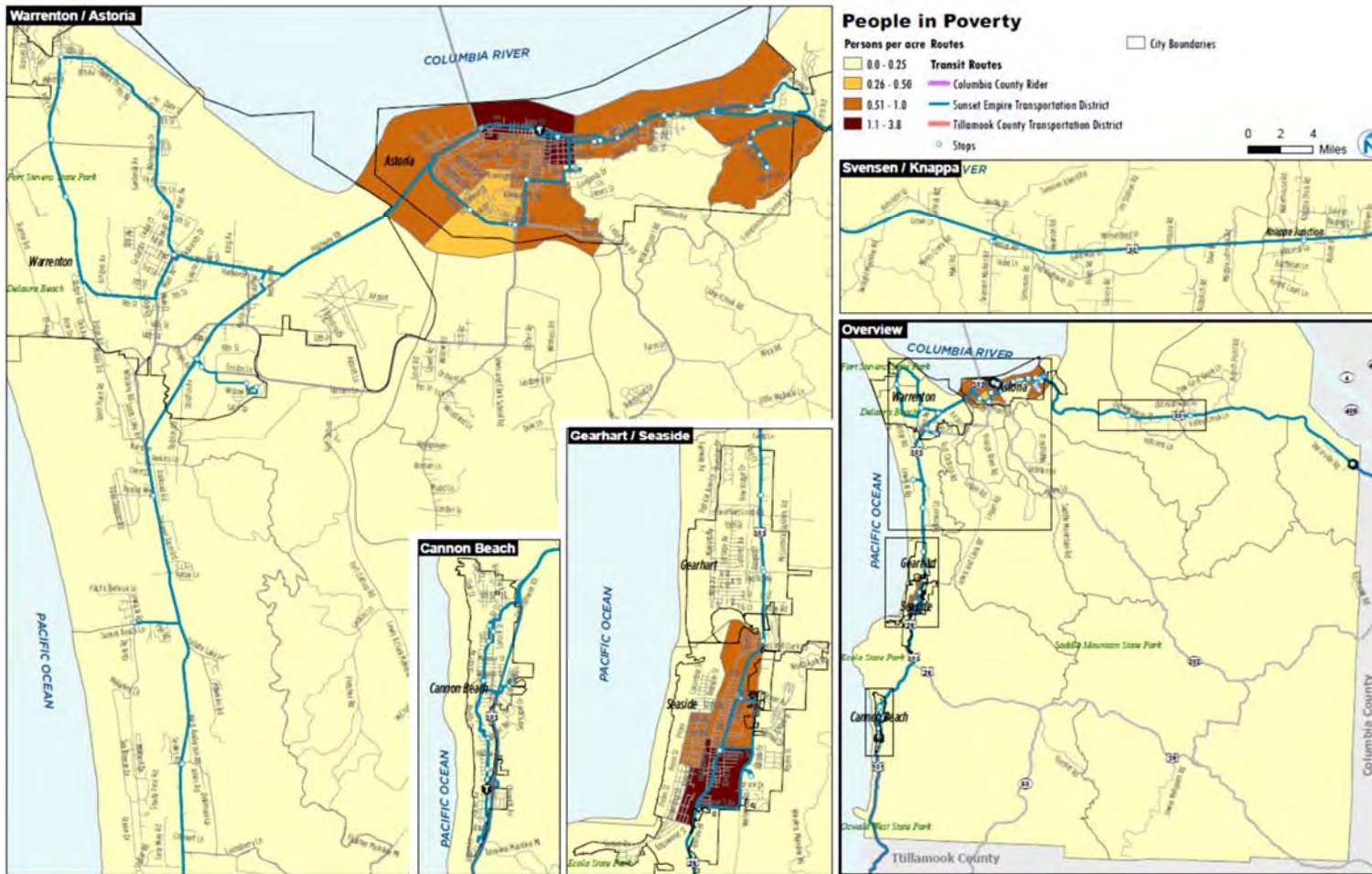
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## Appendix A – Transit Dependent Population Maps

Additional maps providing detailed inputs to the transit propensity index are shown below.

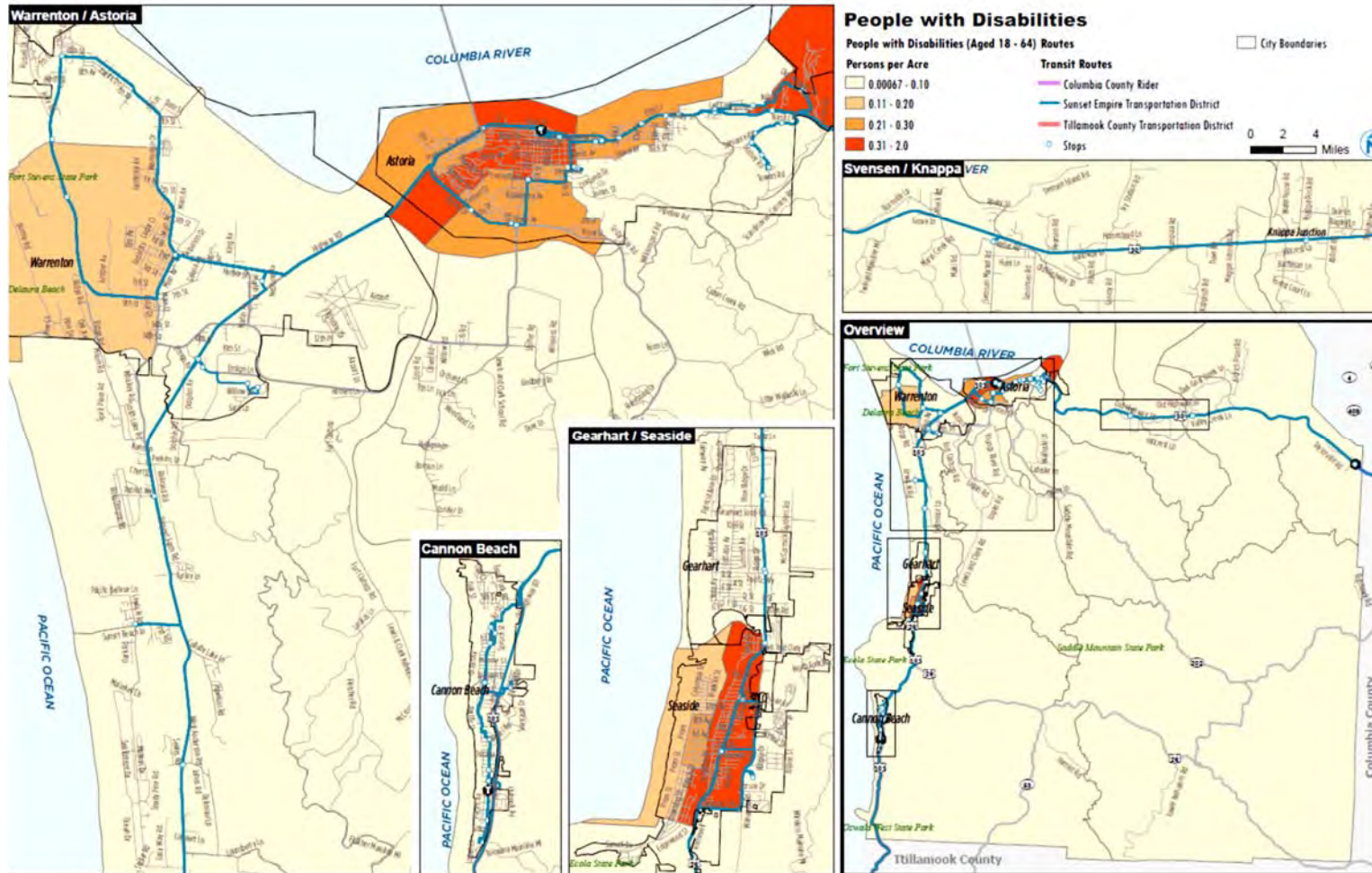
Long-Range Comprehensive Transportation Plan | Memo #2A Existing Systems - Community Overview  
 Sunset Empire Transportation District

Figure A-1 Density of People in Poverty, 2013



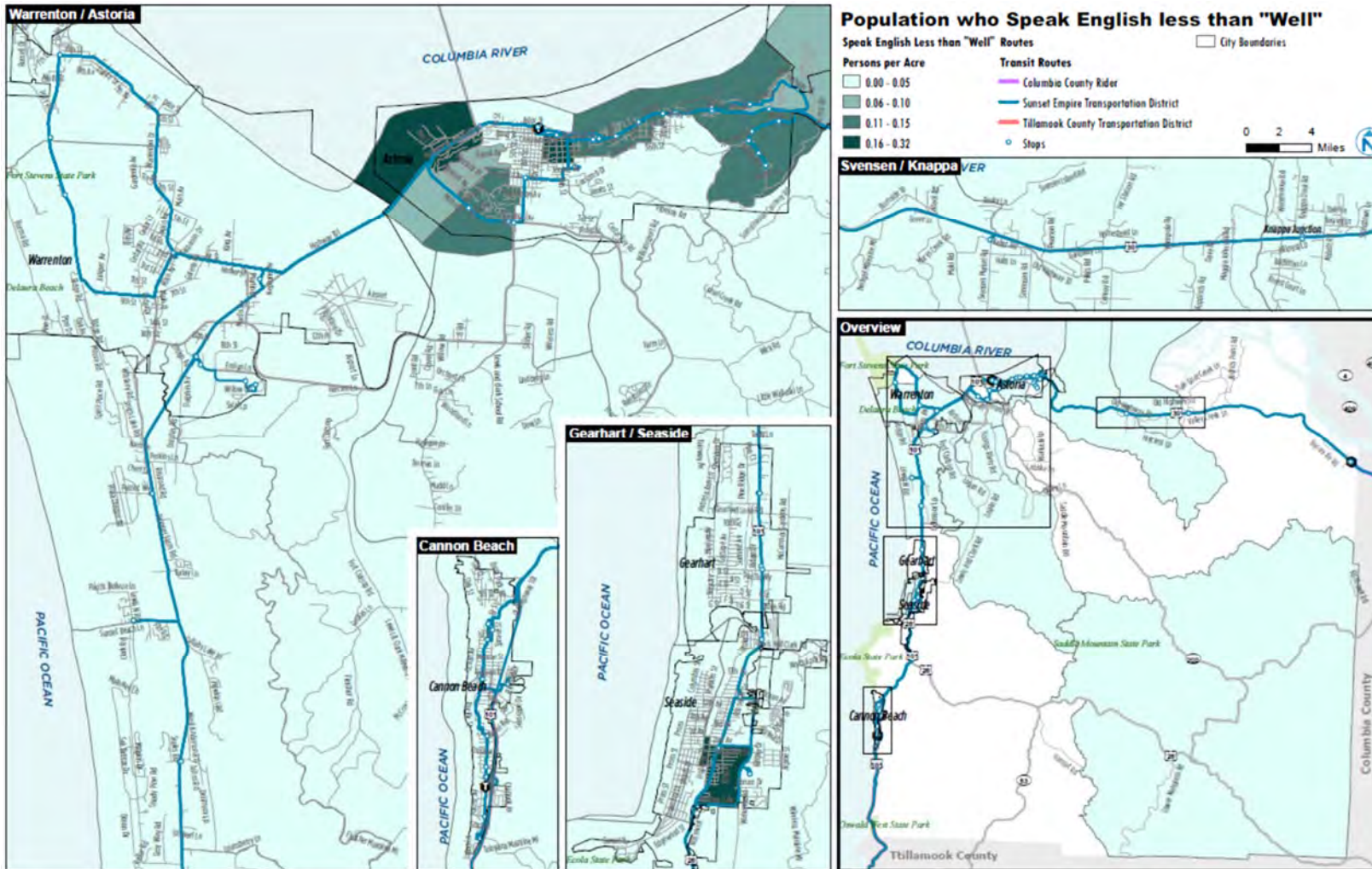
Long-Range Comprehensive Transportation Plan | Memo #2A Existing Systems - Community Overview  
 Sunset Empire Transportation District

Figure A-2 Density of People with Disabilities, 2013



Long-Range Comprehensive Transportation Plan | Memo #2A Existing Systems - Community Overview  
Sunset Empire Transportation District

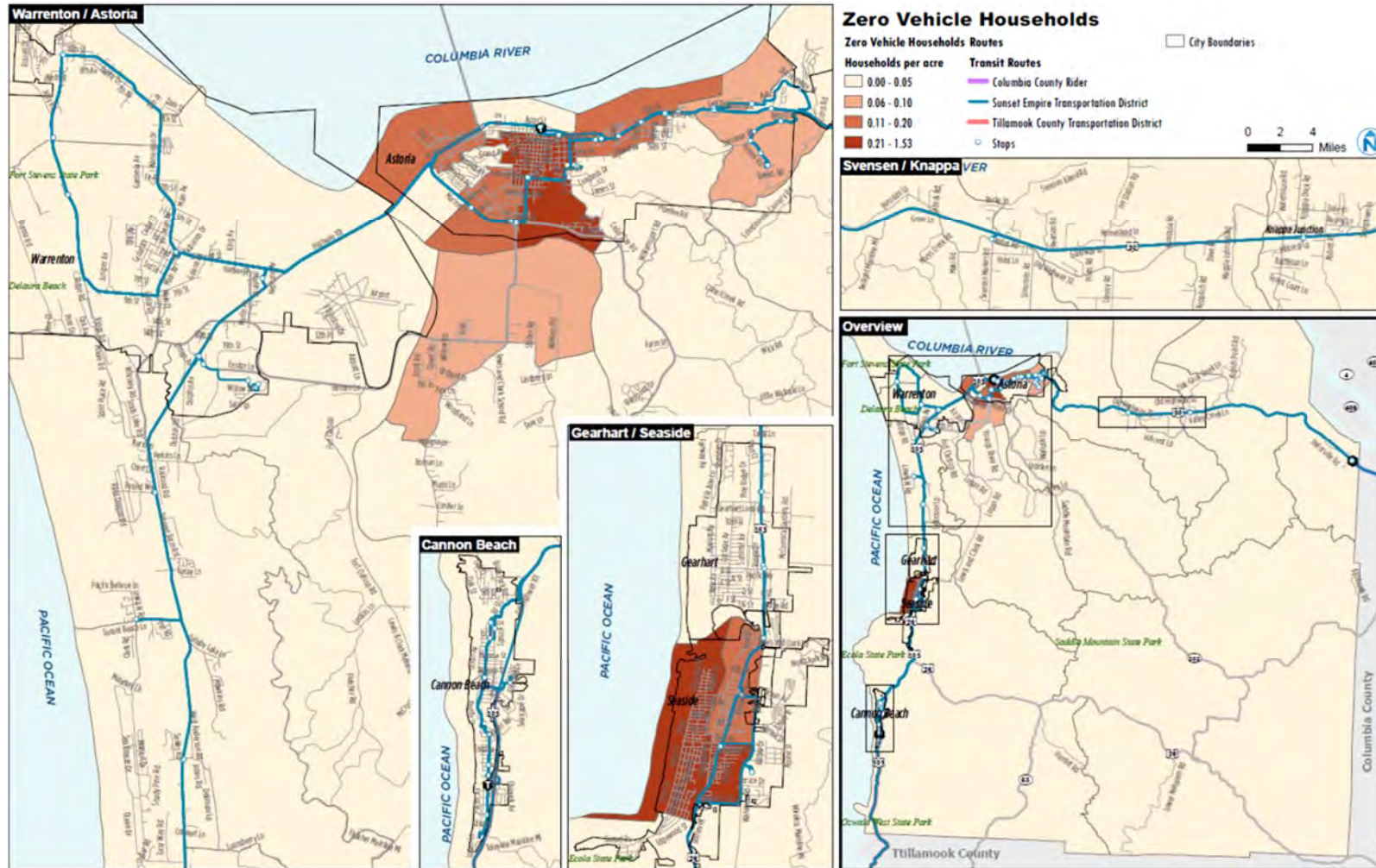
Figure A-3 Population Density of Limited English-Speaking Persons, 2013





Long-Range Comprehensive Transportation Plan | Memo #2A Existing Systems - Community Overview  
Sunset Empire Transportation District

Figure A-4 Density of Zero Vehicle Households, 2013





## **SECTION B**

### Memo 2B: System Overview



# MEMO #2B: EXISTING SYSTEMS – SYSTEM OVERVIEW

**Memo #2A - Existing Systems: Community Overview** includes an analysis of Clatsop County’s demographics, market for transit, and a summary of previous planning efforts.

**Memo #2B – Existing Systems: Service Overview** includes analysis of existing transit services including origins and destinations, performance by route, financial data, organizational structure, fleet information, etc.

**Memo #2C – Community Input** provides the results of on-board passenger surveys and ridechecks, a community survey, and other stakeholder and public outreach that were conducted between May and September 2015.

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**Long-Range Comprehensive Transportation Plan | Memo #2B Existing Systems - System Overview**  
Sunset Empire Transportation District

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## 3 TRANSPORTATION SYSTEM OVERVIEW

### SETD TRANSIT SERVICE

The Sunset Empire Transportation District (SETD) provides public transportation throughout Clatsop County with a combination of fixed-route, ADA Paratransit, and demand-response services. SETD also houses a three-county Medicaid brokerage called RideCare and supports the Oregon Department of Transportation's (ODOT) multimodal goals by promoting transportation options such as carpooling.

#### Fixed-Route

SETD's fixed bus routes operate on a set schedule and alignment. Transit corridors encompass the Astoria to Warrenton/Hammond Area, U.S. 30 east to Rainier, and U.S. 101 south to Cannon Beach. These areas of the county contain the bulk of Clatsop County's population, as discussed in Memo #2A. SETD's fixed-route service family includes five weekday year-round routes and four weekend routes. During the summer, community transportation needs change drastically, with an influx of tourists along the U.S. 101 corridor and employees staffing area stores and restaurants. SETD provides seasonal routes catering toward the visitor market.

Figure 3-1 provides an overview of all SETD fixed-route services.

Figure 3-2, Figure 3-3, Figure 3-4, and Figure 3-5 illustrate SETD's routes, categorized by year-round and summer weekday and weekend service.

#### Service Changes Effective August 1, 2015

SETD implemented several service changes effective August 1, 2015. The table below reflects these changes, which include added frequency on Route 101, a newly-branded Route 15, and the extension of the former Columbia Connector (now the Lower Columbia Connector) to Rainier for transfers to CC Rider.

Routes 11 and 12 are run during select times and are geared toward circulating cruise ship passengers through town.

#### Service Changes Effective February 1, 2016

SETD implemented additional service changes effective February 1, 2016, identified in the right column of Figure 3-1. These include instituting lunch breaks for drivers and adding later evening trips on Routes 10, 20, and 101.

**Long-Range Comprehensive Transportation Plan | Memo #2B Existing Systems - System Overview**  
Sunset Empire Transportation District

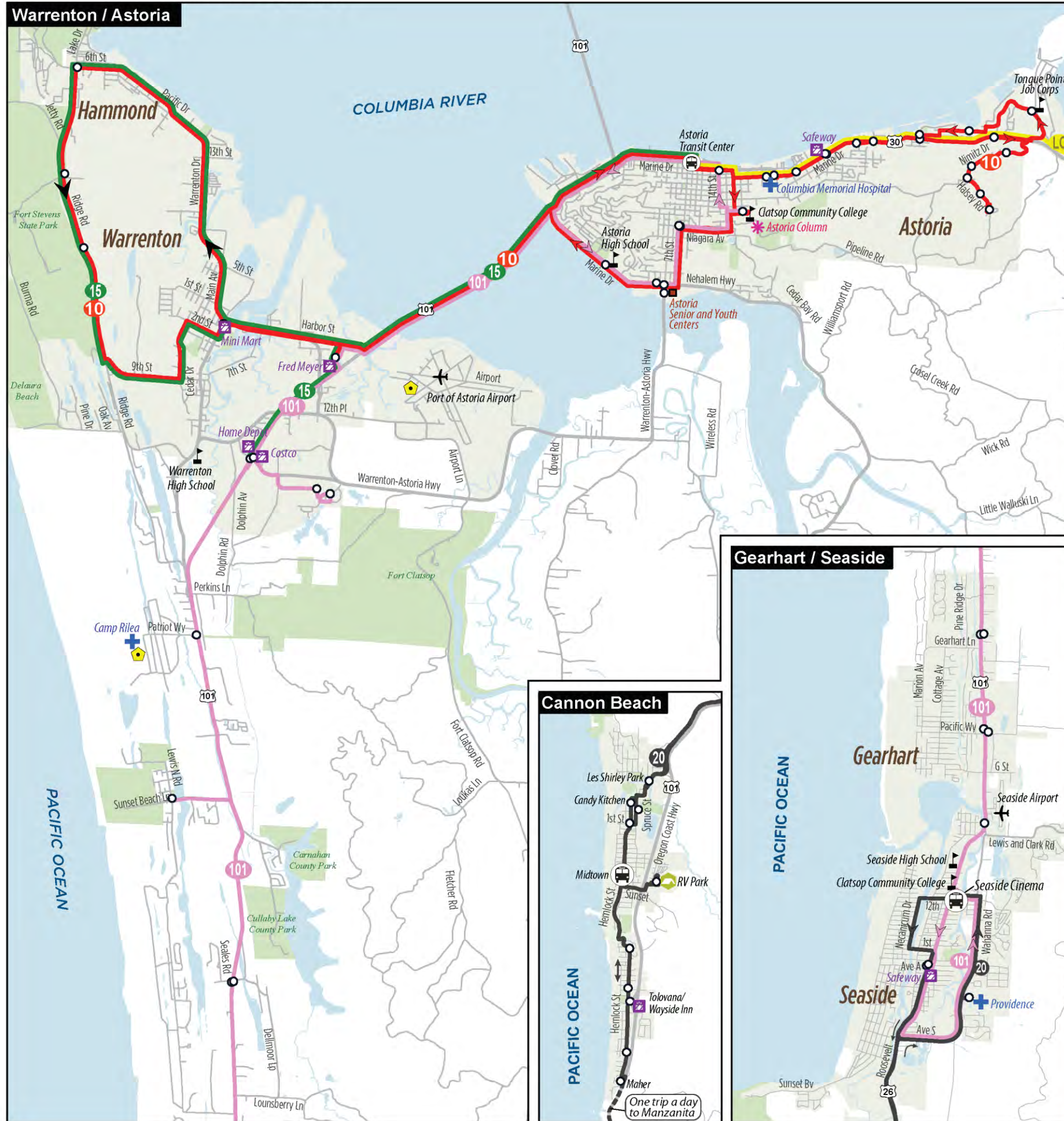
Figure 3-1 Fixed Route Service Overview (As of August 1, 2015)

Route Number or Name	Days of Operation	Span of Service	Frequency or Number of Daily Trips	Communities Served	Changes Effective February 1, 2016
<b>Year-round Service</b>					
10	Monday-Friday	5:45 a.m. – 7:20 p.m.	60 minutes	Astoria, Hammond, Warrenton	Additional trip extending service until 9:20 PM (last trip leaves Astoria at 7:51 PM)
15	Monday-Sunday	6:00 a.m. – 6:00 p.m.	6 times per day	Warrenton, Hammond, Astoria	
20	Monday-Friday	6:00 a.m. – 8:55 p.m.	60 minutes	Seaside, Cannon Beach, Manzanita [1]	Additional trip extending service until 9:55 PM (last trip leaves Seaside at 8:00 PM)
21	Saturday-Sunday	9:00 a.m. – 12:30 p.m.; 3:00 p.m. – 6:20 p.m.	30-60 minutes	Cannon Beach, Seaside	
101	Monday-Friday	6:00 a.m. – 8:00 p.m.	60 minutes (except 10 am-12 pm and 12-2 pm)	Astoria, Warrenton, Gearhart, Seaside, Cannon Beach	Additional trip extending service until 9:50 PM (last trip leaves Astoria at 8:00 PM)
Lower Columbia Connector	Monday-Sunday	6:45 a.m. – 5:40 p.m.	2 trips	Astoria, Svensen, Knappa, Westport, Clatskanie, Rainier (Transfer to CC Rider)	
Connector Pacific	Saturday-Sunday	8:30 a.m. – 5:30 p.m.	3 trips	Astoria, Warrenton, Gearhart, Seaside, Cannon Beach, Manzanita [1]	
<b>Seasonal Service</b> ( <i>summer only</i> )					
11	Select dates			Astoria	
21	Monday-Friday	11:00 a.m. – 6:00 p.m.	30 minutes	Cannon Beach, Seaside	
12	Select dates			Astoria, Warrenton; Serves cruise ships but open to general public	
Seaside Streetcar Trolley	Saturday-Sunday	11:00 a.m. – 8:00 p.m.	60 minutes	Seaside	

Notes: [1] One trip per day on Route 20 serves Manzanita. Two trips per day are possible with a transfer to Tillamook County Transportation District (TCTD) service.



Figure 3-2 Weekday Year-Round System Map



**Transit Service (Weekday)**

<b>Sunset Empire Transportation District</b>	<b>Landmarks</b>
Route 10	Attractions
Route 15	Education
Lower Columbia Connector	Airport
Route 20	Medical
Route 101	Shopping
Bus Stops	Coast/National Guard
Transfer Locations	City Boundaries

0 2 4 Miles

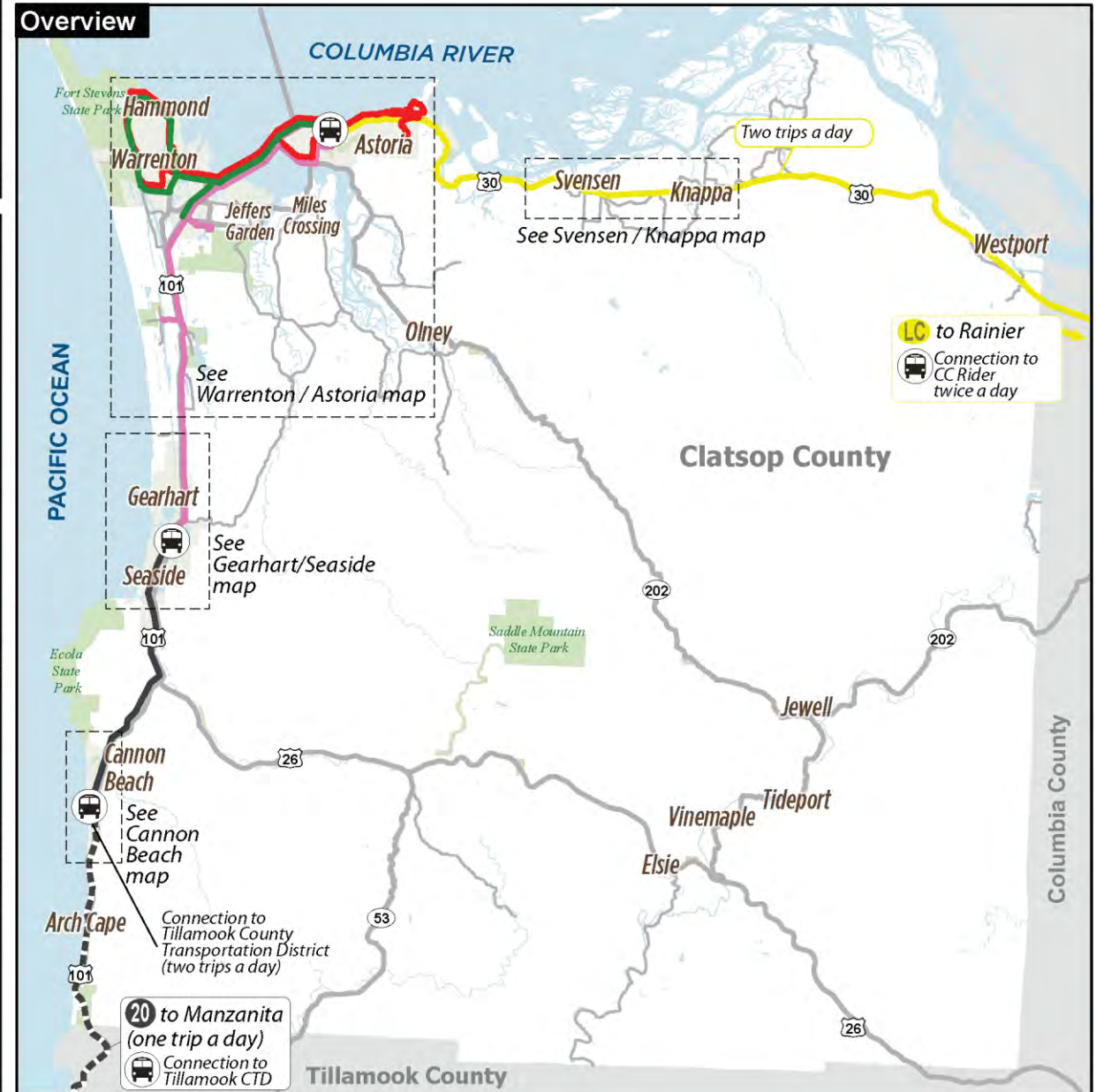
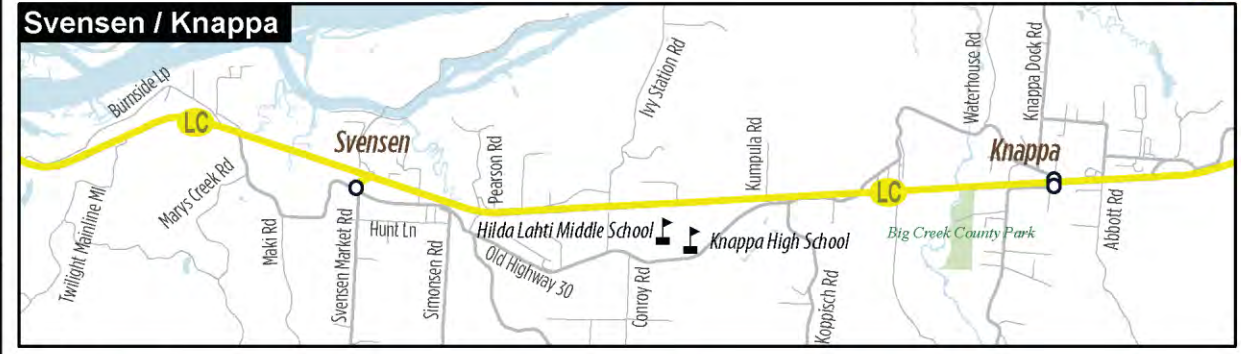
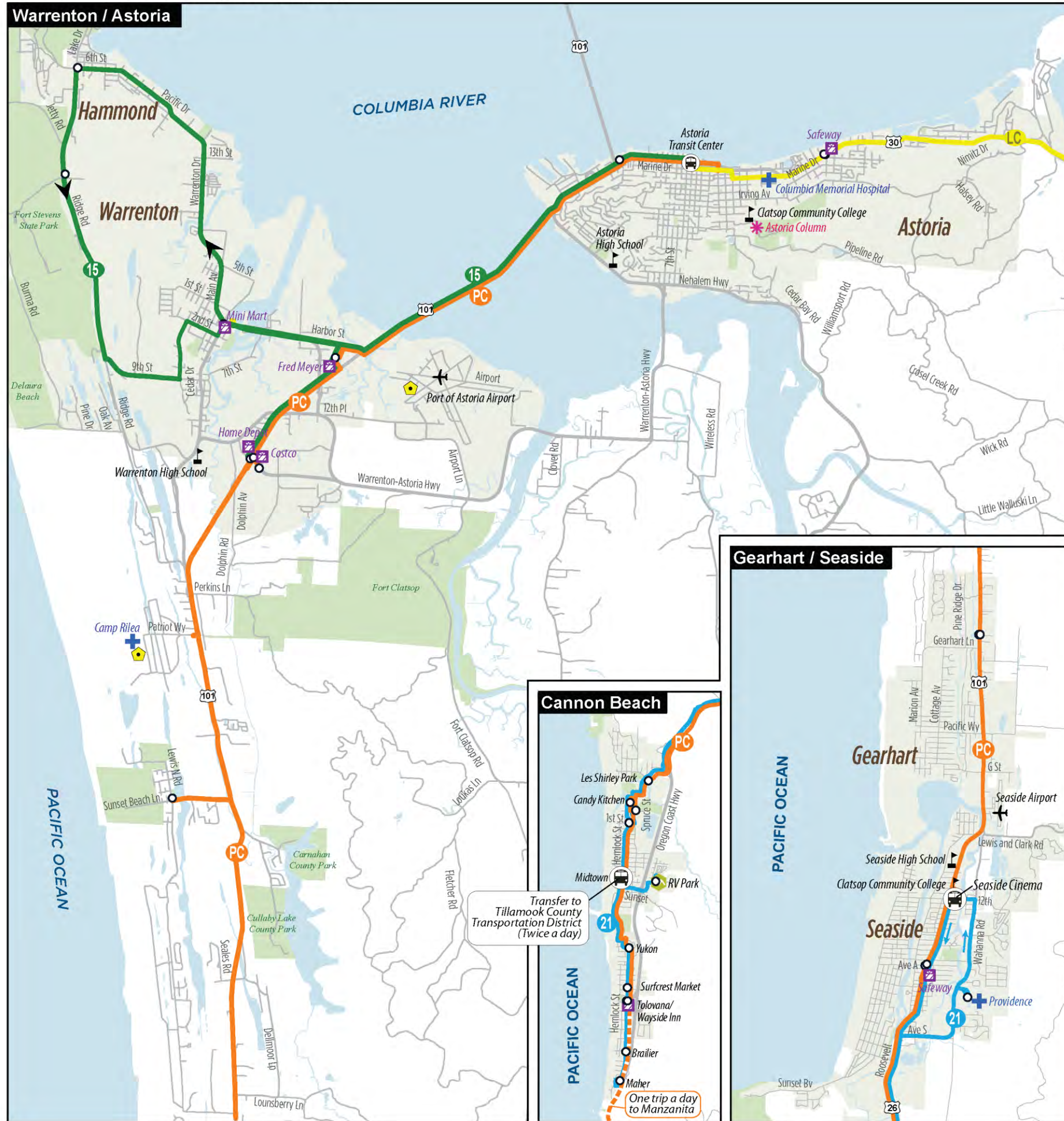


Figure 3-3 Weekend Year-Round System Map



**Transit Service (Weekend)**

<p>Sunset Empire Transportation District</p> <ul style="list-style-type: none"> <li><span style="color: orange;">—</span> Pacific Connector (PC)</li> <li><span style="color: green;">—</span> Route 15</li> <li><span style="color: yellow;">—</span> Lower Columbia Connector (LC)</li> <li><span style="color: blue;">—</span> Route 21</li> <li>○ Bus Stops</li> <li>🚏 Transfer Locations</li> </ul>	<p>Landmarks</p> <ul style="list-style-type: none"> <li>✳ Attractions</li> <li>🎓 Education</li> <li>✈ Airport</li> <li>🏥 Medical</li> <li>🛒 Shopping</li> <li>🚒 Coast/National Guard</li> </ul>
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0 2 4 Miles

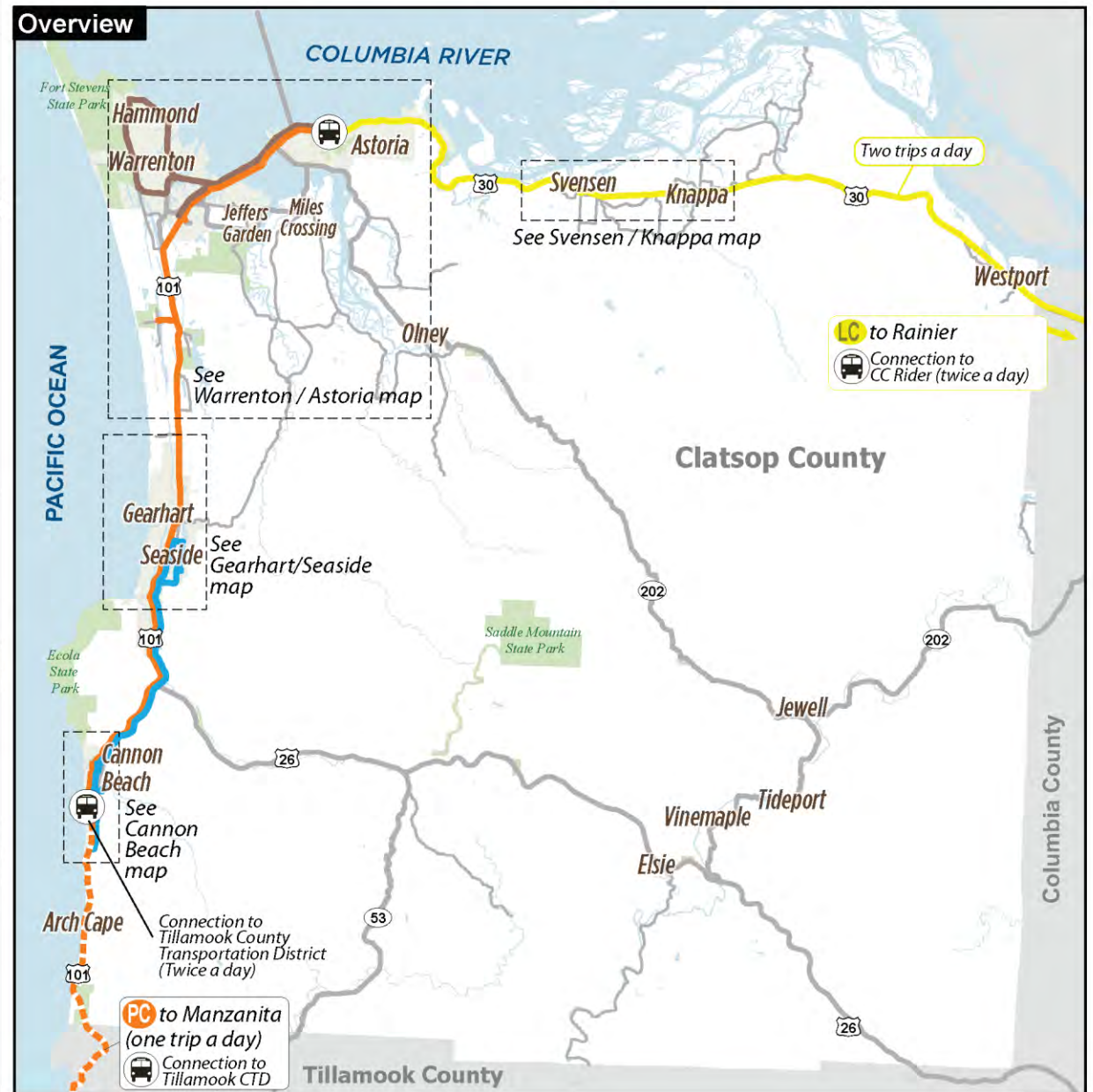
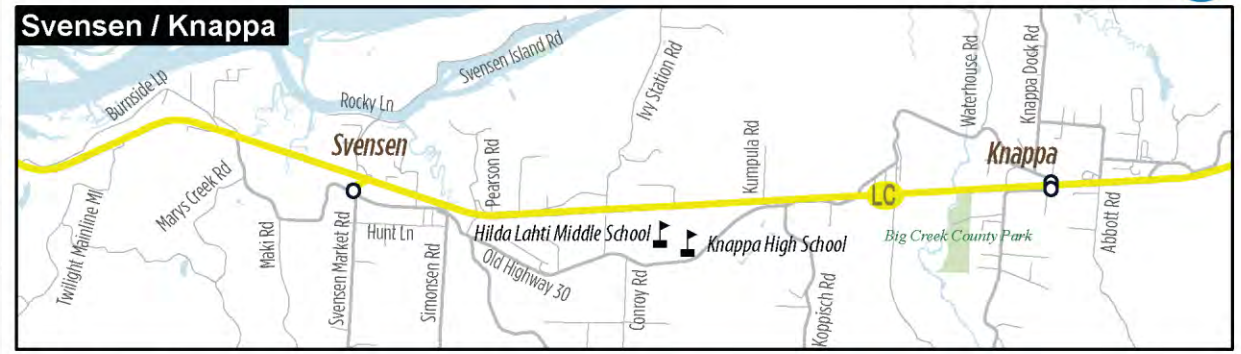
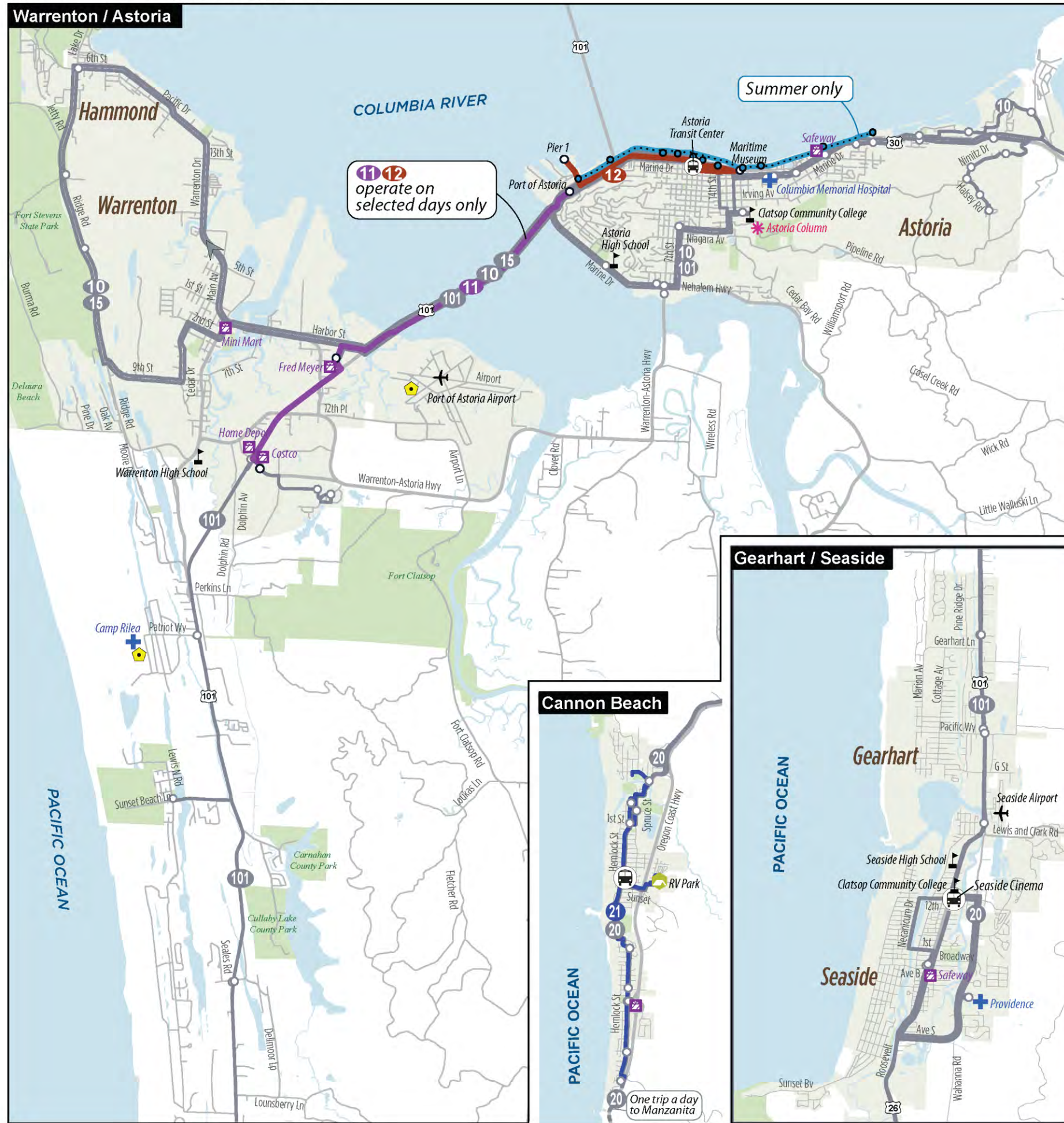


Figure 3-4 Weekday Seasonal System Map



**Transit Service - Seasonal (Weekday)**

**Seasonal Routes**

- Route 11
- Route 12
- Route 21
- Astoria Trolley\*
- All-year Routes (10, 15, 20, 101, Lower Columbia Connector)

**Transfer Locations**

**Landmarks**

- Attractions
- Education
- Airport
- Medical
- Shopping
- Coast/National Guard

\*Not operated by SETD

0 2 4 Miles

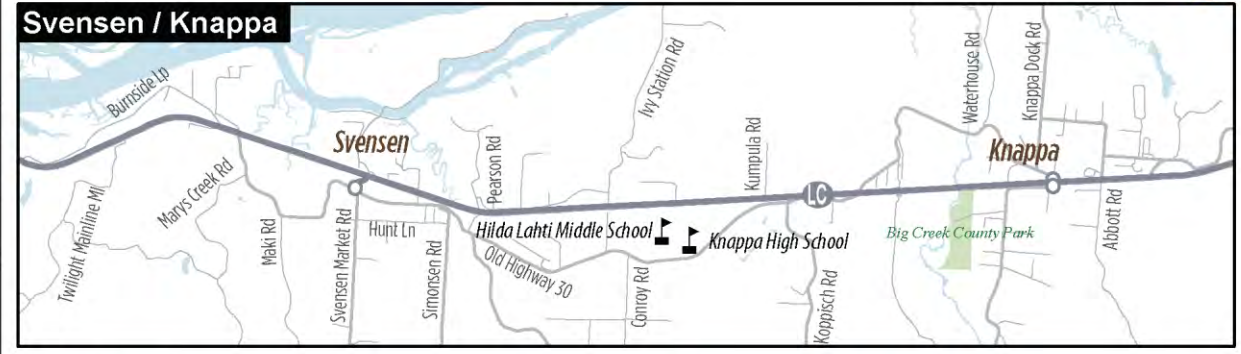
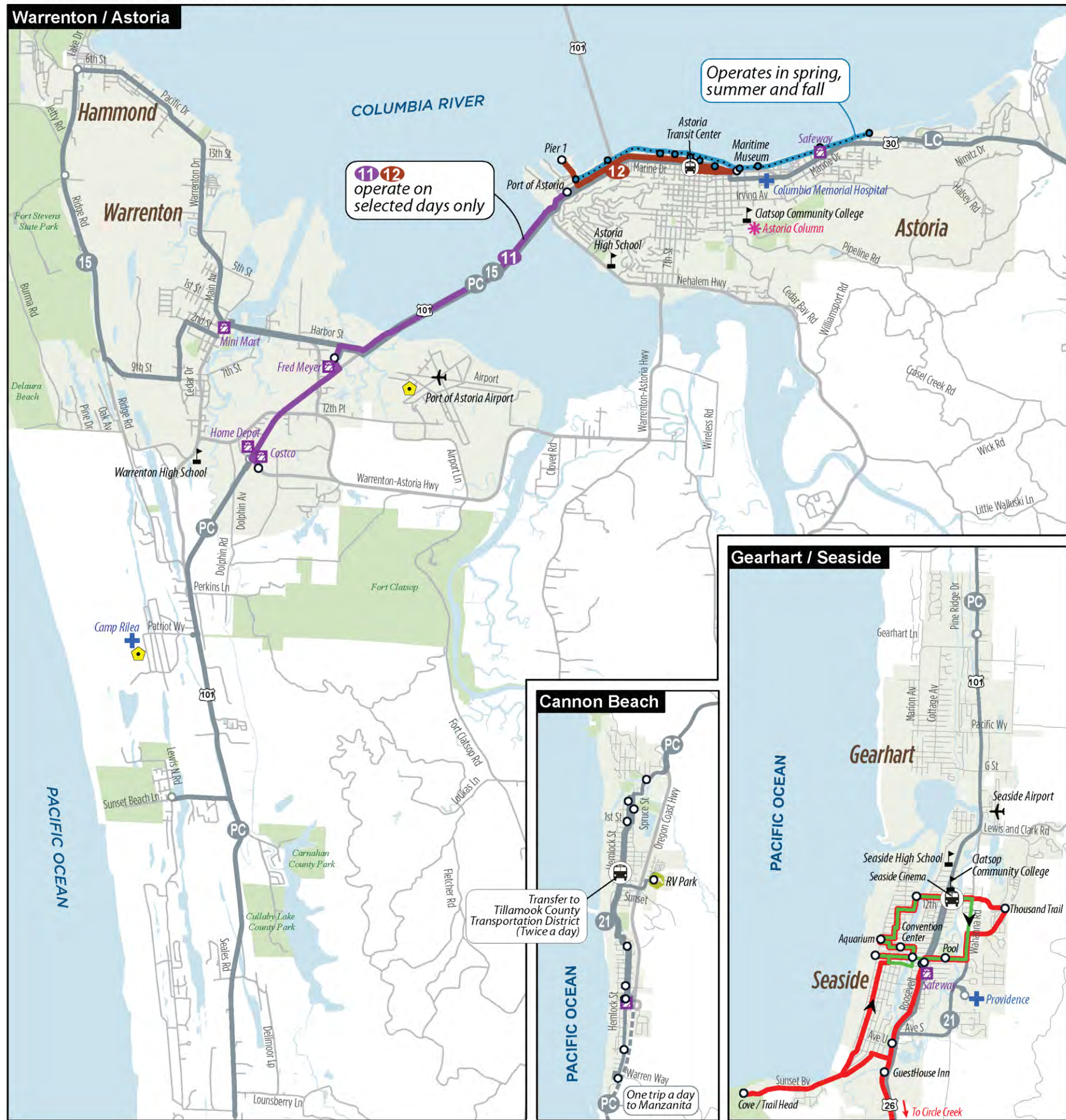


Figure 3-5 Weekend Seasonal System Map



**Transit Service - Seasonal (Weekend)**

**Seasonal Routes**

- Route 11 Purple Seal
- Route 12 Brown Deer
- Seaside Streetcar Trolley
- Astoria Trolley\*
- All-year Routes (Route 15, 21, Lower Columbia Connector, Pacific Connector)

**Landmarks**

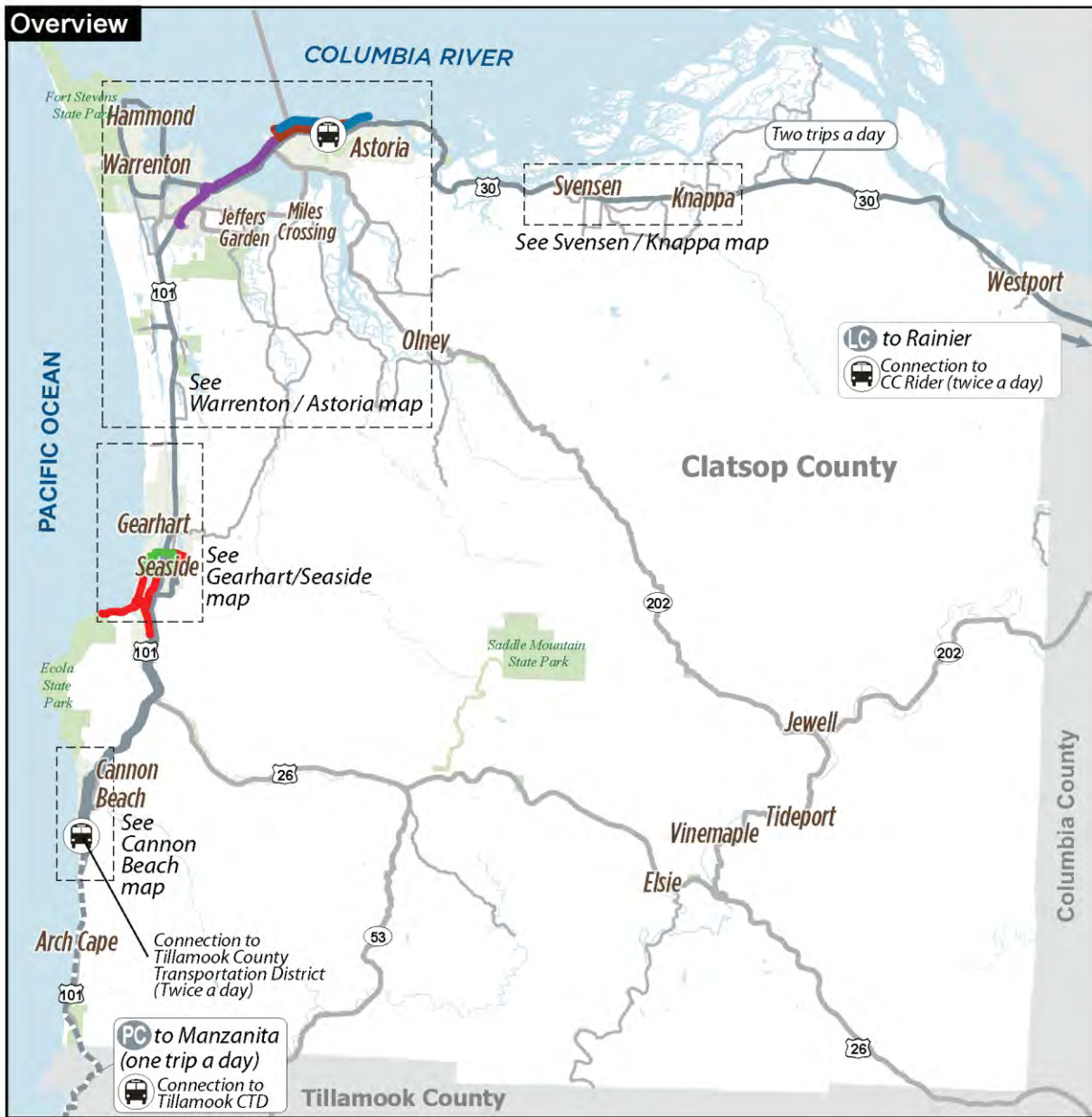
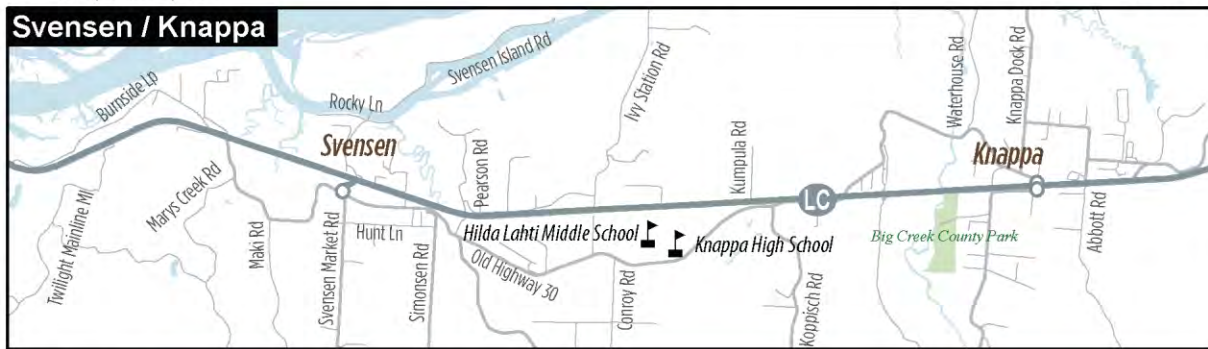
- Attractions
- Education
- Airport
- Medical
- Shopping
- Coast/National Guard

**Transfer Locations**

- Transfer Locations
- City Boundaries

0 2 4 Miles

\*Not operated by SETD



## Route Descriptions

Route 10 has the highest ridership of SETD services (in 2014), carrying 62,800 passengers or 34% of all fixed-route ridership. Route 10 has a fare of \$1.00 per one-way trip and runs hourly. The route follows two different patterns:

1. Loops around Warrenton-Hammond then travels to Astoria, east on Marine Drive to Emerald Heights/Tongue Point, and west back into Astoria and turns south to serve Clatsop Community College (CCC), traveling along the south side of the city past Astoria High School and back to the Astoria Transit Center
2. Serves only Astoria in the pattern above, but does not serve Warrenton-Hammond

**Route 10's operator starts the day from** the Warrenton garage and completes their shift at the garage when the afternoon driver starts their shift, which is why Route 10 serves Warrenton-Hammond at the beginning, middle, and end of the day (six times per day). Route 10 runs on weekdays only.

Route 15 serves Warrenton/Hammond area, including Fred Meyer, the Warrenton Mini Mart, and Costco. This route runs six times per day at irregular intervals. The Route 15 vehicle also operates as the Lower Columbia Connector. Twice per day, the route travels to the Transit Center in Astoria, switches head signs, and operate as the Lower Columbia Connector to Rainier. Trips cost \$1. Route 15 runs seven days per week.

Route 20 links Seaside and Cannon Beach with hourly service. A one-way trip costs \$1. Starting from the Seaside Cinema, Route 20 travels west to Necanicum Drive and then rejoins U.S. 101 at Broadway and travels south. At Cannon Beach, the bus takes the first exit into downtown and travels via Hemlock Street. South of Tolovana Park, the bus rejoins U.S. 101 then returns to Hemlock Street at Maher Street. Northbound, the bus turns right on 1<sup>st</sup> Avenue then north on Spruce Street past the visitor center and back onto U.S. 101. Entering Seaside, the bus turns at Avenue S and travels via Wahanna Road, deviates into Providence Seaside Hospital, then runs back to the Cinema. Route 20 runs on weekdays only. Three times per day, passengers can transfer to Tillamook County Transportation District vehicles – twice in Midtown in Cannon Beach (at 9:20 a.m. and 4:20 p.m.) and once in Manzanita. The 10:00 a.m. Route 20 trip provides the connection in Manzanita at 11:10 a.m.; as a result there is no 11:00 a.m. Route 20 departure in Seaside.

Route 21 operates on weekends year-round, and on weekdays during the summer. On weekends, Route 21 is very similar to Route 20. Service starts at the Seaside Cinema and travels south to Cannon Beach and back. Route 21, however, does not serve Seaside on every trip. On the 9:55 am trip leaving Seaside, the bus travels through Cannon Beach southbound and northbound, but at the Candy Kitchen rather than continuing to Seaside, the bus does another loop through Cannon Beach and does not get back to the Cinema until 11:25 am. A similar pattern occurs in the afternoon. The Route 21 driver operates a split shift, with no service operated between 12:20 pm-3 pm. Route 21 is funded by the City of Cannon Beach through an inter-governmental agreement that enhances summer service. During summer weekdays, the 21 supplements Route 20 and only runs back and forth in Cannon Beach. Fares are \$1 per one-way trip.

Route 101 has the second highest ridership, and links Astoria, Warrenton, the retail area near Costco, Gearhart, and Seaside. Service runs hourly except for two two-hour gap midday (11:00 a.m. and 1:00 p.m.). Southbound, after leaving the transit center, the route travels to Fred Meyer, then turns at Costco/Home Depot onto Ensign Lane. This approximately 5-minute deviation from U.S. 101 serves the quickly developing area that contains the Northwest Seniors and Disabilities Services office, the Probation office, Food Bank, and multi-family housing. A Walmart will open south of Costco in summer 2016, and is expected to increase shopping traffic and demand for access to this area. Route 101 makes deviations

upon request to Camp Rilea, which houses a veteran's clinic. Route 101 also deviates to serve the Sunset Beach community. This location is served on both northbound and southbound trips; northbound, the bus must often wait more than a minute to make a left-turn onto U.S. 101. During the summer, this turn can take many minutes. A planned "jughandle" turn south of the Sunset Beach turn would allow the northbound Route 101 bus to make a right-turn onto southbound U.S. 101 and use the jughandle turn to access northbound U.S. 101.

In Seaside, Route 101 stops at the Seaside Cinema, then travels clockwise via Wahanna Road back to U.S. 101, past McDonald's, and back to the Cinema, then travels northbound serving a similar route and stops. Route 101 runs on weekdays only. On weekends, the Pacific Connector route provides service in the U.S. 101 corridor.

Within Astoria, Route 101 travels counterclockwise along Marine Drive (Route 10 serves Marine Drive in the clockwise direction). The loops are quite long, meaning a passenger can experience significant travel savings by transferring depending upon their destination. For example, from Fred Meyer in Warrenton, a passenger heading to Clatsop Community College would have the fastest trip aboard the 101, which enters town and travels via the south side of Astoria directly to the college. Aboard Route 10, the passenger would end up going out to Emerald Heights and Tongue Point before coming back to the college. Alternately, Route 101 passengers wishing to go to a destination along Marine Drive near the Transit Center would have the fastest trip on Route 10. The Route 10 and 101 operators communicate with each other by radio and transfer passengers either at Fred Meyer (if it happens to be a time when Route 10 serves Fred Meyer) or in downtown Astoria around 14<sup>th</sup> and Exchange Streets (if Route 10 is not serving Fred Meyer).

Similarly, in Seaside Route 20 and Route 101 operate in opposite loops around Wahanna Road, Avenue S, U.S. 101, and 12<sup>th</sup> Street.

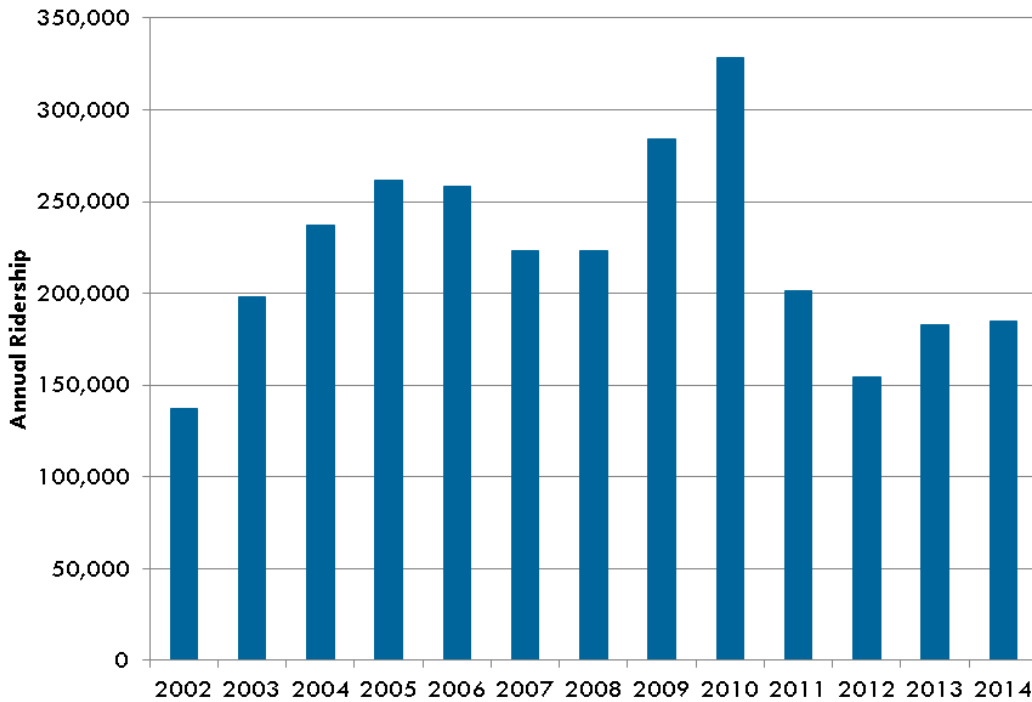
Lower Columbia Connector (LCC) links Astoria to Rainier, OR two times per day. This route also serves the Clatsop County communities of Svensen, Knappa, and Westport as well as Clatskanie in Columbia County. From Rainier, passengers can transfer to Longview, WA or to Portland via CC Rider. Passengers can also transfer to Amtrak service in Longview. Fares vary based on destination, up to \$8 for a one-way from Astoria to Rainier.

Pacific Connector runs on weekends following a route similar to a combined Route 101 and Route 20. The route operates three round trips per day from the Transit Center in Astoria to Fred Meyer, Seaside, and Cannon Beach. Two trips run in the morning (8:30 a.m. and 10:40 a.m.), then there is a break in service until the third trip from 3:20-5:30 pm. Similar to Route 20, passengers have three opportunities to transfer to Tillamook County service in Cannon Beach (two times) and in Manzanita (one time).

## **Ridership Trends**

SETD ridership fluctuated widely during the past 12 years due to financial and leadership constraints. Total annual ridership grew from 137,000 in 2002 to a high of 330,000 in 2010, an average annual **growth rate of approximately 12.8%. After the agency's financial crisis in 2010, SETD cut service back and ridership dropped sharply.** Since that time, ridership has begun climbing again to approximately 180,000 rides per year— see Figure 3-6. On average, approximately 18% of fixed-route riders are seniors and people with disabilities.

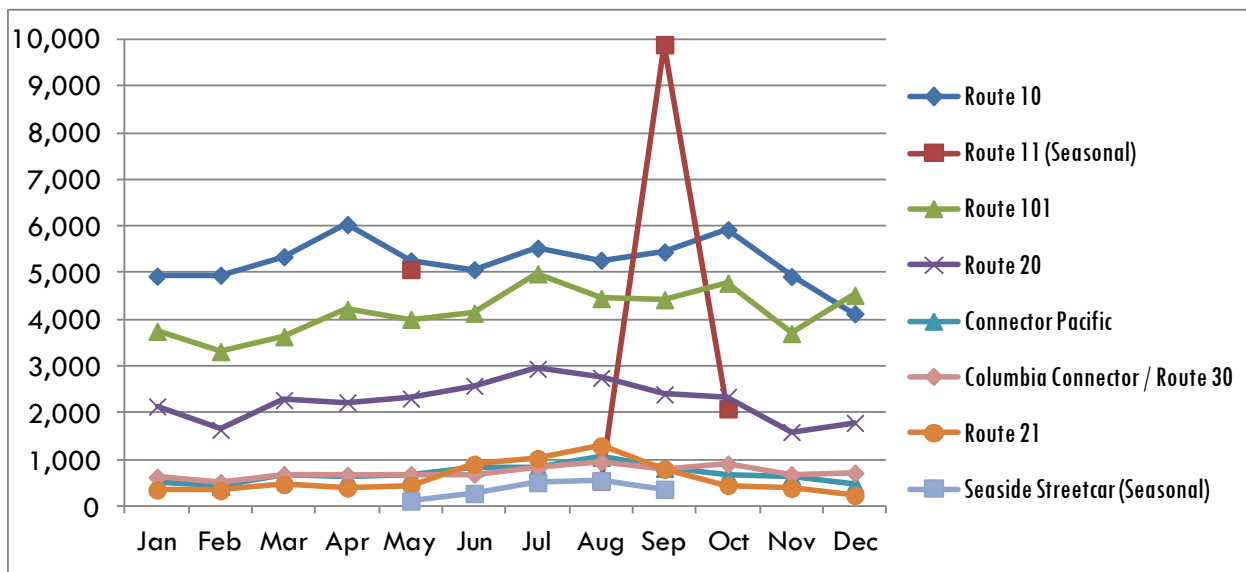
Figure 3-6 – Total Annual Fixed-Route Ridership, 2002-2014



Source: Sunset Empire Transportation District

At the route level, through the course of 2014 ridership on Routes 10 and 101 remained consistently highest of the group (Figure 3-7). **Route 11's** ridership spikes because it is a tourist-oriented shuttle that operates only during summer months.

Figure 3-7 – Route-Level Ridership by Month, 2014



## RideAssist

RideAssist is the federally-required ADA paratransit (curb-to-curb) service offered to people with disabilities who are unable to access or use fixed-route service. Passenger origins and destinations must be within a ¾-mile buffer of fixed-route service. RideAssist service is offered during the same days and times as fixed-route service.

Reservations for RideAssist can be made from 1 day to up to 2 weeks in advance. RideAssist ridership has increased during the past three years (Figure 3-8). This trend is similar to the experience of many transit agencies, given the demographic trend of an aging population that is more likely to have a disability.

Figure 3-8 Rides Provided by RideAssist between 2012 and 2014

	2012	2013	2014
Total	3,306	3,076	3,734
Average monthly	276	256	311

Source: Sunset Empire Transportation District

## Dial-A-Ride

Curb-to-curb Dial-a-Ride (DAR) service is open to anyone residing within two areas:

- Miles Crossing/Jeffers Gardens and Warrenton/Hammond, Monday-Friday between 8 am-5 pm
- John Day/Svensen and Knappa, on Tuesdays and Thursdays with a morning pick-up and an afternoon return

Riders must reserve trips at least two days in advance. Fares are based on distance; a one-way fare for a 0-10 mile trip costs \$8, and \$12 for an 11-20 mile trip.

Figure 3-9 lists DAR ridership from 2012-2014. Due to budget constraints, DAR service was cut for a time in 2014, and ridership after service was reinstated has remained extremely low.

Figure 3-9 Rides provided by DAR between 2012 and 2014

	2012	2013	2014
Total	854	669	27
Average monthly	71	56	2

Source: Sunset Empire Transportation District

## RideCare

Title XIX (Medicaid) non-emergency medical transportation (NEMT) requests are managed through RideCare, a regional call center. SETD also accepts ride requests from the Oregon Medical Assistance Program. RideCare's dispatchers allocate trips to the provider best meeting the passenger's needs—in some cases, RideCare assigns trips to SETD. RideCare-brokered ridership has increased during the past three years (see Figure 3-10).



**Figure 3-10 Rides Provided through RideCare between 2012 and 2014**

	2012	2013	2014
Total	1,872	2,372	2,402
Average monthly	156	198	200

Source: Sunset Empire Transportation District

## RidePal & RideNext

Through the RidePal program, SETD’s mobility manager operates both individualized and group travel training and provides a “how to ride the bus” orientation throughout the community.<sup>1</sup>

ODOT promotes Transportation Options as a way of providing policy support for and programs linking people to available services such as vanpools, carpools, transit, walking, and bicycling. The Northwest Transportation Options is a partnership of Clatsop, Columbia, and Tillamook Counties for promoting these options.<sup>2</sup>

## AGENCY OVERVIEW

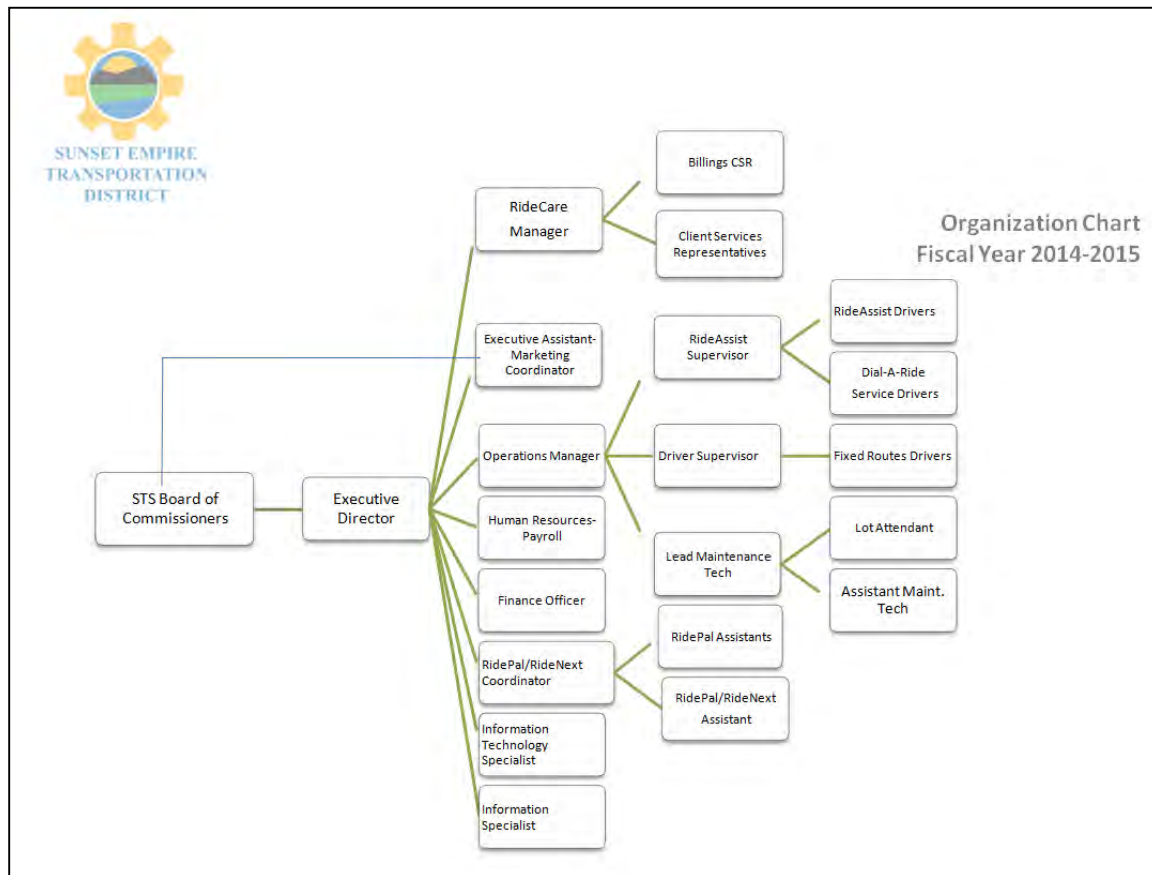
SETD is organized into six divisions, all of which are overseen by an Executive Director and the Board of Commissioners (Figure 3-11). SETD employs 40 people, of which 31 are full-time permanent employees. The Operations Division is the largest division, with 17 employees—15 of whom are bus operators. As of July 2015, SETD has been hiring additional administrative and operations staff. Staff are non-union. SETD has undertaken a wage study to determine if pay levels meet cost of living and skills required metrics, and recently began providing most operators with official lunch breaks..

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<sup>1</sup> <http://www.ridethebus.org/RIDEPal.aspx>

<sup>2</sup> <http://www.ridethebus.org/RIDENext.aspx>

Figure 3-11 SETD Organization Chart



Source: Sunset Empire Transportation District

## Budget

SETD's adopted FY 14-15 operating budget is \$3.26 million, which is slightly higher than the FY 13-14 budget of \$3.20 million, and significantly higher than the FY 12-13 budget of \$2.75 million. As a transportation district, SETD collects property taxes, which make up about a quarter of its revenues. Primary funding sources include:

- Property tax (28% of total revenues)
- Fares (7%)
- State timber revenue (5%)
- ODOT STF/STO funds
- 5310 Preventive Maintenance / Vehicles
- 5311 Rural Operations
- 5339 Bus and Bus facilities

Primary expenditures include:

- Wages and benefits (36%)
- Fuel (7%)
- Vehicle maintenance and repair (3%)

## Fare Structure

Given its large service area, SETD utilizes a tiered fare structure based upon distance traveled (Figure 3-12). SETD does not issue transfers. The agency does not offer a senior or disabled single-ride reduced fare.

Connector Passes for regional travel were introduced after the Northwest Connector study (discussed in more detail below). The five transit agencies that comprise the North by Northwest CONNECTOR partnership implemented a 3-day and 7-day visitor transit pass.

**Figure 3-12 Fare Structure for General Passengers**

Fare Type	Fare	Routes
Single Ride - Cash	\$1.00	10, 11, 15, 20, 21, Seaside Streetcar Trolley
Single Ride - Cash	\$3.00 - \$8.00	101, Lower Columbia Connector, Connector Pacific
Single Ride – Tickets	\$1 increments	The Transit Center sells bus tickets that can be used as cash aboard vehicles
Day pass	\$5	Unlimited rides for the day
Month pass	\$45	Monthly unlimited pass; tied to calendar month
Annual pass	\$495	Annual unlimited trips
Connector 3- Day Passes	\$25	Good for one trip to the coast from Portland or the Albany/Corvallis, area, one return trip, and unlimited travel in Clatsop, Tillamook, and Lincoln Counties (from Astoria to Yachats)
Connector 7- Day Passes	\$30	Good for one trip to the coast from Portland or the Albany/Corvallis, area, one return trip, and unlimited travel in Clatsop, Tillamook, and Lincoln Counties (from Astoria to Yachats)

Several pass discounts are available for eligible riders, including individuals who are 60 years of age and older, are a Social Security recipient, a Veteran, or a student. These individuals can receive a discount on monthly or yearly passes. Students who are in grades K-12 and or enrolled in college can also receive pass discounts with proof of school I.D. Students of all ages are also eligible to buy quarterly passes. Lastly, **youth aged 18 and younger can purchase a “Summer Fun Pass” for use between June 15<sup>th</sup> and September 6<sup>th</sup>.** This information is summarized in Figure 3-13.

**Figure 3-13 Fare Structure for Special Populations**

Passes:	Day	Month	Quarter	Year	Note:
Elderly and Disabled	\$5.00	\$30.00	N/A	\$330.00	
Military	\$5.00	\$30.00	N/A	\$330.00	United States Military ID Needed to Purchase Pass
Student (Grades K-12)	\$5.00	\$30.00	\$30.00	\$330.00	Current School ID Needed to Purchase Pass
College Student	\$5.00	\$30.00	\$60.00	\$330.00	Proof of Enrollment for Current Term
Summer Fun Pass - For ages 18 and younger between June 15th and September 6th - \$30.00					

Passengers certified for ADA Paratransit pay twice the regular fare, whatever that might be. Dial-A-Ride customers pay by distance. One-way trips from 0-10 miles cost \$8 and trips from 11-20 miles cost \$12.

## Vehicles

SETD operates service with 21 vehicles, 15 of which are used on its fixed-route services. Vehicles used on fixed-route services are between 30 and 35 feet in length, and have seating for up to 39 passengers. All SETD buses are equipped to carry at least 2 wheelchairs, but can hold up to 3-4 wheelchairs depending on the vehicle. All buses have bicycle racks.

The dial-a-ride vehicles are cutaways that have a seating capacity of 12 passengers. Vehicle ages range from one to 13 years old, with an average fleet age of 7.5 years. Two vehicles are expected to be replaced in FY 2014/15, with 12 more to be replaced between FY 2015/16 and FY 2019/20.

## Facilities

SETD owns two facilities, one in Astoria and one in Warrenton. The Astoria Transit Center at 900 Marine Drive is the primary transfer location and includes park-and-ride spaces. An indoor waiting area and **ticket window provide passengers with ticket sales and information. SETD’s operations center is located** in Warrenton. All vehicles are stored and maintained at this location, and all operators report here for shifts.

SETD recently opened a transit kiosk in the Seaside Factory Outlet Center to provide ticket sales and customer information. The agency is considering locating a transit facility in Seaside, given growth in the area and strong ridership on Route 101.

## ADDITIONAL TRANSPORTATION PROVIDERS

In addition to SETD, a number of service agencies, churches, and assisted living facilities provide transportation on a limited basis to their clients and/or parishioners. Most of the public agencies with special needs clients rely on public transit and do not provide any of their own transportation services: Department of Human Services—Self Sufficiency and Northwest Senior and Disability Services, Clatsop County Health Department, and Management Training Corporation (MTC). Clatsop County contracts with Columbia Community Mental Health to coordinate services for people with disabilities who receive state assistance.

## Transit Agencies

### Pacific County

Pacific Transit provides four trips per day into Clatsop County from Pacific County, WA. According to the agency, most passengers arrive for shopping, and some transfer to SETD for access to Fred Meyer, Costco, and other destinations. Oregon does not have a sales tax, making shopping more attractive. Route 24 serving Astoria has moderate productivity levels (number of passengers per vehicle revenue hour) and the agency does not plan to make any changes to the route in the near future.

### Northwest Point

Operated by MTR Western, Northwest Point is an Amtrak through route connecting Astoria, Seaside, Cannon Beach, and Portland's Union Station with two round trips per day. Buses are coach style with Wi-Fi and restrooms. Fares between Astoria and Portland are \$18 each way.

### CC Rider

Columbia County (CC) Rider connects Portland to St. Helens and to Rainier. CC Rider routes meet SETD routes twice per day, seven days per week, at the new Rainier transit center. A fare from Astoria to Portland via SETD and CC Rider costs \$15 (\$29 round trip).

### Tillamook County Transportation District

Tillamook County Transportation District (TCTD) links with SETD three times per day. Clatsop County residents reported accessing TCTD routes for travel to destinations in Manzanita and Nehalem in Tillamook County, while Tillamook County residents stated a need to get to medical destinations in Clatsop County, especially the Veteran's Clinic at Camp Rilea. Twice per day, TCTD travels to Midtown in Cannon Beach where passengers may transfer. Once per day, SETD's Route 20 travels to Manzanita.

### Northwest Connector

SETD and four other transit partners, including CC Rider and Tillamook County Transportation District, joined in a coalition called the North by Northwest Connector Alliance. The organization's purpose is to better facilitate regional connections between systems to connect people from Portland to the coast and across county lines. Through outreach and public workshops, the Alliance came up with the name Northwest Connector to brand all four transit systems. A system map of the Connector network is on the front of SETD's brochures, and many bus stops bear the OXO signage representing Connector. The alliance meets monthly and is currently undertaking a strategic planning effort.

## Other Providers

### MEDIX

MEDIX is a private ambulance service for specialized transportation. The Medix fleet in Clatsop County includes six vans, all of which are wheelchair and lift equipped. The vast majority (90%) of their business entails non-emergency medical transportation, and the primary clientele are older adults, people with disabilities, and Medicaid recipients. MEDIX averages 400 one-way trips per month, and will travel to Tillamook County, Pacific County in Washington State, Portland, and occasionally Columbia County.

Clatsop County also contracts with MEDIX to provide emergency medical transportation.

## Coast Rehabilitation

Coast Rehabilitation is the largest residential and vocational program serving individuals with disabilities with its own fleet of vehicles: 1 full-sized van or 1 minivan for each residential home. The scope of services involves vocational program transportation, medical transportation, social and recreational transportation, and transportation services for banking, shopping, and access to various community services. The primary geographic area served by Coast Rehabilitation is Seaside to Astoria. To cover other areas of the county, the Center collaborates with SETD.

## Taxis

Taxis are an expensive but sometimes last-resort option for transportation in rural areas. Several operators provide taxi service within Clatsop County. Taxis can become excellent transit agency partners through programs such as Guaranteed Ride Home, in which a transit rider may be reimbursed for a taxi fare a certain number of times per year in case of an emergency.

## Private Facilities

Assisted living facilities in Astoria, Gearhart, and Seaside own vans/buses for transporting their residents. These facilities primarily transport their residents on regularly scheduled weekly trips—shopping, prescription pick-ups, and church and social outings.

## Veteran's Services

The U.S. Department of Veterans Affairs owns one van operated by the Disabled American Veterans to transport veterans to medical appointments in Portland.

## School Districts

Finally, the largest transportation providers in the County are the school systems, including Astoria, Warrenton-Hammond, and Seaside School Districts. While excess capacity exists midday, school buses are not necessarily a good fit for populations with special transportation needs because most of their buses do not have wheelchair lifts and the widths of the aisles are narrower than a standard public transportation bus.

**Figure 3-14 Transportation Providers within Clatsop County**

Transportation	Type	Service Area	Website
Adam Airport Transportation	Shuttle	Various Cities (OR & WA)	<a href="http://www.adamairportshuttle.com">www.adamairportshuttle.com</a>
Arrow Taxi	Taxi Service	Astoria/Warrenton/Seaside	
Astoria Riverfront Trolley	Trolley	Astoria	<a href="http://www.old300.org">www.old300.org</a>
Astoria Senior Center	Shuttle	Clatsop County	<a href="http://www.astoriaseniorcenter.vpweb.com">www.astoriaseniorcenter.vpweb.com</a>
Astoria Warrenton Chamber of Commerce	Park and Ride	Astoria	<a href="http://www.olderogon.com">www.olderogon.com</a>
Bikes & Beyond	Rentals	Astoria	<a href="http://www.bikesanbeyond.com">www.bikesanbeyond.com</a>
Clatsop Care Center/Retirement Village	Bus	Private transportation for residents	<a href="http://www.clatsopcare.org">www.clatsopcare.org</a>
Coast Shuttle	Taxi Service	Astoria/Warrenton/Seaside	

**Long-Range Comprehensive Transportation Plan | Memo #2B Existing Systems - System Overview**  
Sunset Empire Transportation District

Transportation	Type	Service Area	Website
DAV Vans	Van	Clatsop County and Portland Area	<a href="http://davwi.org/vans/">http://davwi.org/vans/</a>
Dwayne's Shuttle	Taxi Service	Astoria/Warrenton/Seaside	
Enterprise Rent-a-Car	Rentals	Clatsop County	<a href="http://www.enterprise.com">www.enterprise.com</a>
Family Fun Cycles	Rentals	Cannon Beach	
Hertz Rent-a-Car	Rentals	Clatsop County	<a href="http://www.hertz.com">www.hertz.com</a>
Lum's Toyota Rental	Rentals	Clatsop County	<a href="http://www.lumstoyota.com/warrenton-toyota-rental">http://www.lumstoyota.com/warrenton-toyota-rental</a>
Medix Medivan Service	Medical	Clatsop County and Portland Area	<a href="http://www.medix.org">www.medix.org</a>
Mike's Bike Shop	Rentals	Cannon Beach	<a href="http://www.mikebike.com">www.mikebike.com</a>
Mom's Cab	Taxi Service	Astoria/Warrenton/Seaside	
Northwest Point	Motorcoach	Clatsop County and Portland Area	<a href="http://www.oregon-point.com">www.oregon-point.com</a>
Old Gray Cab	Taxi Service	Astoria/Warrenton/Seaside	
Partners for Seniors	Volunteer	Seaside Area	
Radio Cab	Taxi Service	Cannon Beach	
Red Cross: Oregon Trail Chapter	Volunteer	Clatsop County	<a href="http://www.oregonredcross.org">www.oregonredcross.org</a>
Regal Coach Taxi	Taxi Service	Astoria/Warrenton/Seaside	
Royal Cab	Taxi Service	Astoria/Warrenton/Seaside	
Seaside Cab Company	Taxi Service	Astoria/Warrenton/Seaside	
Sundial Charter Service	Charter	Astoria/Warrenton/Seaside	<a href="http://www.sundial-travel.com">www.sundial-travel.com</a>
Wahkiakum Ferry	Ferry	Westport/Cathlamet	<a href="http://www.co.wahkiakum.wa.us/depts/pw/index.htm">http://www.co.wahkiakum.wa.us/depts/pw/index.htm</a>

Source: SETD Human Services Coordinated Plan

## ROADWAY NETWORK

The major transportation routes through the county include U.S. 26, U.S. 30, and U.S. 101. U.S. 26 and U.S. 30 run east-west, connecting the county to the Portland metropolitan area. U.S. 101 parallels the coast running north-south, providing a connection between U.S. 30 and U.S. 26. These roadways are classified as Statewide Highways and are part of the National Highway System, and serve the highest volume of traffic in the county. Average annual daily traffic (AADT) volumes range from 6,000 to 8,000 along U.S. 26 and U.S. 30, up to 20,000 along portions of U.S. 101 north of U.S. 26, and around 5,000 south of U.S. 26. Other major highways in the county include U.S. 101 Business, OR 53, OR 103, OR 104, OR 104S, and OR 202. These highways serve less traffic, with AADT volumes generally less than 5,000.

Most county roadways provide direct connections to these highways. Major county roadways include Ridge Road, Sunset Beach Road, Highland Lane, Lewis and Clark Road, Fort Clatsop Road, Youngs River Road, Walluski Loop Road, Svensen Market Road, Old US Highway 30, Hillcrest Loop Road, Knappa Dock Road, Ziak-Gnat Creek Road, and Westport Ferry Road. The county classifies these as major

collector or minor arterial roadways. Traffic volumes are generally low on these roadways, with AADT volumes less than 2,500.

Motor vehicle conditions in the county vary based on the time of year. During the summer peak (typically in August), traffic volumes are much higher than during the average weekday (typically in May and September) and roadways become more congested. The Clatsop County TSP compared intersections in the county to mobility targets intended to maintain a minimum level of efficiency for motor vehicle travel. Intersection operations in the county are monitored using volume-to-capacity (v/c) ratios. A v/c ratio is a performance metric (with possible values between 0.00 and 1.00) of the proportion of capacity of the roadway that is being used. It is determined by dividing the peak hour traffic volume by the hourly capacity of a given turn movement, approach leg, or intersection. A lower ratio indicates smooth operations and minimal delays. As the ratio approaches 1.00, congestion increases and performance is reduced. At 1.00, capacity has been reached and the turn movement, approach leg, or intersection is congested with longer delays.

Most roadways in the county experience traffic volumes that utilize less than half of the available capacity during the summer (v/c ratio is less than 0.50). Drivers are generally able to travel unimpeded. However, the segment of U.S. 30 and U.S. 101 between Astoria and Seaside generally operates at up to 70% of capacity during the summer (v/c ratio of 0.70). Drivers may experience some slowing in travel during peak periods along this segment. Also, drivers at many of the unsignalized side street approaches to the highway along this segment experience high delays (over 90 seconds per vehicle) while waiting for a clearing to enter the highway.



## 4 SYSTEM PERFORMANCE

Transit agencies measure themselves to understand how efficient and effective their services are. Typical metrics used to assess performance include:

- Passengers per revenue hour – Total passengers divided by the total number of hours vehicles are in-service tells how many people consume service and speaks to efficiency.
- Passengers per revenue mile – Total passengers divided by total miles in service tells how efficiently an agency is operating with capital equipment.
- Cost per revenue hour – Total cost (including administration) of service divided by hours of service tells how cost-efficient the agency is running.
- Cost per passenger – Total cost (including administration) divided by total passengers. The differential between cost and the fare is the subsidy per passenger.

Figure 4-1 summarizes **SETD's** performance for all services including paratransit.

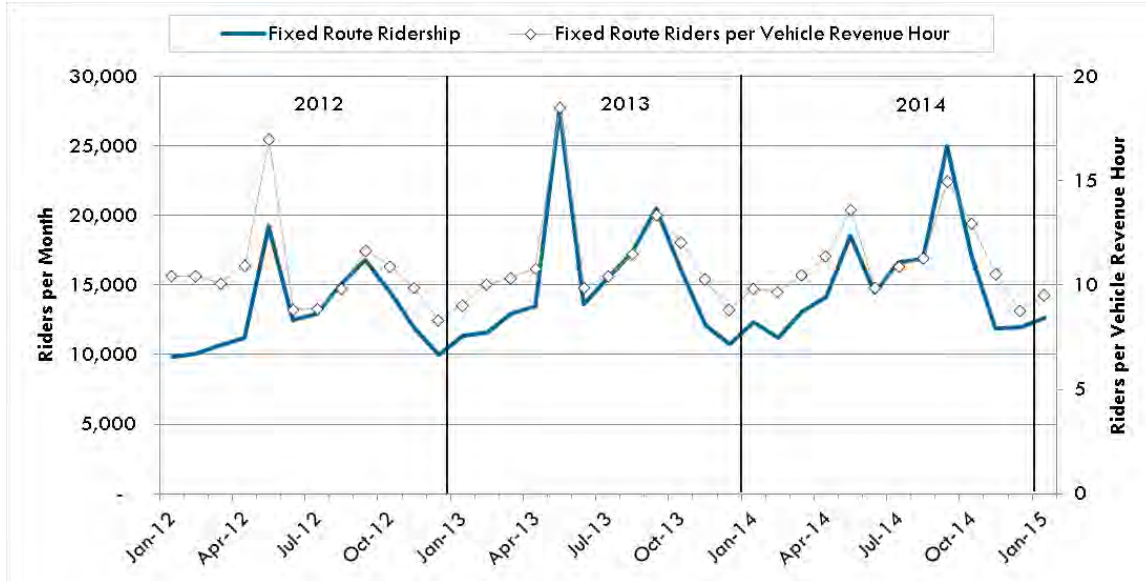
Figure 4-1 System-wide Performance, 2014

	Total Boardings	Total Revenue Hours	Boardings per Revenue Hour	Total Service Miles	Boardings per Revenue Mile
System	190,149	20,192	9.42	429,528	0.44

## FIXED ROUTE

During the past three calendar years, ridership, productivity and efficiency have remained relatively constant. Monthly fixed-route ridership has remained between 11,000 and 17,000 passengers during an average month. Monthly productivity has ranged from 9.8 to 11.4 riders per revenue hour (see Figure 4-2). The fluctuations of ridership and productivity are consistent with the number of service hours SETD operates (Figure 4-3). Service levels are higher during the summer months when additional routes are in operation.

Figure 4-2 Monthly Fixed Route Ridership and Productivity, 2012-2015



Source: Sunset Empire Transportation District

Figure 4-3 Monthly Fixed Route Service Hours, 2012-2014



Source: Sunset Empire Transportation District

From 2012 to 2014, annual fixed-route ridership increased 18.5%. During this same time, annual service hours increased 10.5%. This resulted in a 7.3% increase in productivity (see Figure 4-4).

**Figure 4-4 Annual Fixed Route Performance, 2012-2014**

Metric	2012	2013	2014
Total passengers	154,622	182,836	183,268
Total revenue miles	322,612	351,159	372,437
Total revenue hours	14,686	16,034	16,224
Passengers per revenue mile	0.48	0.52	0.49
Passengers per revenue hour (productivity)	10.53	11.40	11.30

Source: Data from Sunset Empire Transit District

For a rural transit agency, carrying more than 10 passengers per revenue hour is generally indicative of efficient and effective service. For small urban areas with 30,000-50,000 people, productivity of 12-15 passengers per hour may be expected. The primary population center **in SETD's service area** is the Astoria-Warrenton- -Seaside-Gearhart-Cannon Beach spine along Marine Drive and U.S. 101. The total population of these communities combined is 24,075 as of 2010, thus **SETD's** overall fixed-route productivity can be considered to be good. The next section describes productivity and other performance measures at the route level.

## Route-Level Performance

Routes 10, 101, and Connector Pacific (the weekend version of Route 101) perform well for the service area population and destination density. Route 20 performs decently given the lower densities of Seaside and Cannon Beach (Figure 4-5). Connector Columbia performs poorly, with less than three passengers per revenue hour. Productivity of Route 21 is also relatively low. Route 11 is an outlier because it serves a very specialized market, often cruise ships, with a limited number of coordinated trips and thus carries a large number of customers per revenue hour.

**Figure 4-5 Average Monthly Performance Data by Route, 2014**

Route	Monthly Boardings	Monthly Service Hours	Boardings per Service Hour	Monthly Service Miles	Boardings per Service Mile
Route 10	5,234	312.8	16.7	5,630	0.98
Route 11	4,400	87.8	50.1	795	5.54
Route 20	2,248	253.2	8.9	6,454	0.35
Route 21	589	109.4	5.4	2,294	0.26
Route 101	4,161	293.3	14.2	7,515	0.55
Connector Columbia	644	62.7	2.9	7,725	0.08
Connector Pacific	686	62.7	11.0	1,727	0.40
Seaside Streetcar	362	64.0	5.7	813	0.45
<b>OVERALL</b>	<b>18,801</b>	<b>1,569</b>	<b>11.3</b>	<b>37,919</b>	<b>0.49</b>

Source: Data from Sunset Empire Transit District

Figure 4-6 below summarizes the estimated cost of each route. These figures are based on a standard fixed-route cost per hour of \$54.66.<sup>3</sup> Route 10 and Route 101 are costly to operate, but costs per passenger are low given high ridership. Route 30 / Columbia Connector have the highest cost per passenger, followed by Route 21.

**Figure 4-6 Cost by Route, 2014**

	Total Cost	Cost per Mile	Cost per Passenger
Route 10	\$205,958	\$3.20	\$3.28
Route 11	\$19,186	\$6.04	\$1.09
Route 20	\$166,697	\$2.15	\$6.18
Route 21	\$71,353	\$2.59	\$10.09
Route 101	\$193,155	\$2.14	\$3.87
Connector Columbia	\$154,020	\$1.66	\$21.79
Connector Pacific	\$40,738	\$1.97	\$4.95
Seaside Streetcar	\$17,491	\$4.30	\$9.66
<b>Fixed Route Total</b>	<b>\$868,893</b>	<b>\$2.25</b>	<b>\$4.74</b>

Source: Data from Sunset Empire Transit District

## Route Profiles

Appendix A provides a set of route profiles for all SETD routes for weekdays and weekends. These profiles are based on data collected by SETD during May 2015. For selected routes, data was also collected during the summer (August 2015). The profiles are organized by Weekday and Weekend service.

Key findings, discussed by route, include:

- Columbia Connector (Route 30) – p. A-2 (May Weekday) and A-20 (August Weekend). This route has low productivity, with much of the ridership activity occurring in the Warrenton-Astoria local portion of the route (the Warrenton-Astoria Transit Center portion of the route has since been rebranded as Route 15). Ridership to/from Svensen/Knapka is almost as significant as ridership further east. On-time performance primarily reflects local service in Warrenton.
- Route 10 (Astoria) - p. A-5 (May Weekday). This route is highly productive (18.4 boardings per service hour); high ridership to the Job Corp (Tongue Point) is notable. Route 10 has high alightings at CCC but relatively few boardings (Route 101 provides a more direct return trip to downtown Astoria). There are some issues with on-time performance issues (20% late), although differences in running time reflect different route patterns, e.g., Route 10 provides service between Warrenton-Astoria or circulation in Warrenton on some trips.
- Route 101 (Astoria – Seaside) – p. A-7 (May Weekday) and A-9 (August Weekday). Route 101 is productive (15.6 boardings per service hour). Productivity is lower (but still reasonable) in the summer possibly due to fewer trips to CCC or other seasonal factors. SETD increased frequency on this route between May and August, so lower productivity also reflects passengers being spread across more trips and service hours. Passenger loading fairly even across

<sup>3</sup> Data provided by SETD multiplies the cost of hours by \$54.66

the route. There is strong midday demand, though more moderate in the summer. On-time performance worsened in the summer, but was perhaps mitigated by the increase in the number of trips. Boarding activity is stronger in the south part of Seaside, **particularly at McDonald's** (also seen on Route 20).

- Pacific Connector (Astoria – Seaside – Cannon Beach – Manzanita, Weekend) – p. A-23 (May Weekend) and p. A-25 (August Weekend). This route has good productivity (10.6), though slightly lower ridership and productivity in summer (8.3 boardings per service hour). Late afternoon ridership was particularly strong, indicating possible demand for another afternoon trip. On-time performance degrades on the summer weekends – indicating potential need for different summer and/or summer weekend schedules. Midday northbound demand falls off in Cannon Beach but remains strong between Seaside and Astoria.
- Route 20 (Seaside – Cannon Beach, Weekday) – p. A-11 (May Weekday) and A-13 (August Weekday); for weekend service, see Route 21 on p. A-27. Productivity is reasonable (9.7 boardings per service hour), though lower in summer (7.4) partly due to more trips (the former Route 101 Express pattern was folded into this route between the May and August surveys). In addition, seasonal weekday Route 21 (see below) is somewhat duplicative. **The 6:00 am trip doesn't perform well (could consider having service start later), but** the 7:00 pm trip looks strong (indicating potential demand for later evening service). On-time performance worsens in Summer. While there is some demand to Seaside Hospital, ridership is relatively low for a significant activity center. There are more alighting than boardings at Seaside Hospital, indicating passengers may be finding other ways to complete their return trip; there do not appear to be boardings or alightings for Route 101 at the hospital. Similar to Route 101, boarding activity is stronger in the south part of Seaside.
- Route 21 (Seaside – Cannon Beach, Weekend) – p. A-27 (May Weekend) and p. A-29 (August Weekend). Productivity is good (10.3 boardings per service hour) in the May survey but falls to 4.6 in the Summer survey. The route ran slightly late in the May survey, but had severe on-time performance issues in the Summer survey. For example, the 3:55 pm departure from Seaside arrived in Cannon Beach 21 minutes behind schedule, and missed its local run within Cannon Beach.
- Route 21 (Cannon Beach local service; summer only) – p. A-15 (August Weekday). Productivity is very low on this route (2.6 boardings per service hour). As noted for Route 20, there is some duplication in local Cannon Beach service on summer weekdays between this route and Route 20. The surveys indicated some on-time performance issues.
- Seaside Trolley (Seaside local, Summer only) – see p. A-17 (August). Productivity was reasonable (9.1 boardings per service hour).

## Technology

SETD employs the following technologies:

- Scheduling software – OBSS
- Web site – [www.ridethebus.org](http://www.ridethebus.org)
- General Transit Feed Specification

A major next step for the agency is equipping vehicles with GPS to allow for real-time arrival information.

## Regional Connections

The primary goal of the Northwest Connector branding lies in fostering inter-county connections. SETD, CC Rider, and TCTD coordinate monthly on scheduling and service coordination. Before August 1, 2015, riders had to transfer at either Westport or Clatskanie to switch from SETD to CC Rider. As shown in Figure 4-7, typically around 60 passengers per month transfer between systems. Starting in August 2015 riders will transfer at a single, consistent transfer location in Rainier. Service frequency will be reduced from three trips to two per day..

Figure 4-7 Transfers from SETD to CC Rider by Month



SETD also coordinates with TCTDbuses. Figure 4-8 shows how two of the three trips to Manzanita operate including transfers from Astoria. On the 8 am trip, a passenger gets to Seaside Cinema at 8:40 am; however, Route 20 does not depart until 9 am. In inclement weather the passenger could spend 20 minutes circling on Route 101, which arrives at the Cinema a second time at 8:55 am. Then the passenger transfers to Route 20 and arrives at Cannon Beach Family Market at 9:20 am. On the schedules, the transfer to TCTD is shown at 9:20 am in green; however, that is the time when the TCTD bus arrives northbound at Family Market. The bus does not actually leave at 9:20, but at 9:40 am, arriving in Manzanita at 10:04 am. This 124-minute trip via the bus could be made in 60 minutes via driving. The passenger must pay a second fare (\$1.50) to transfer to TCTD, for a total fare of \$5.50

On one trip per day, SETD travels straight through to Manzanita. In this case, the SETD fare is \$4.

Figure 4-8 Two trip itineraries from Astoria to Manzanita

Southbound Trip #1 from Astoria to Manzanita									
Depart	Arrive	Arrive (#2)	Transfer to Route 20	Depart	Arrive	Transfer to TCTD (NB bus arrives 9:20 AM)	Depart	Arrive	Fare
Astoria	Seaside Cinema	Seaside Cinema		Seaside Cinema	9:00 AM		Cannon Beach - Family Market	Cannon Beach - Family Market	
8:00 AM	8:40 AM	8:55 AM		9:20 AM	9:20 AM	9:40 AM	10:04 AM		
Southbound Trip #2 from Astoria to Manzanita									
Depart	Arrive	Arrive (#2)	Transfer to Route 20	Depart			Arrive	Fare	
Astoria	Seaside Cinema	Seaside Cinema		Seaside Cinema	10:00 AM			Manzanita	\$4
9:00 AM	9:40 AM	9:55 AM		10:00 AM			11:10 AM		

In the afternoon, the transfer to TCTD is listed on SETD schedules at 4:20 pm at Family Market. The TCTD bus arrives at 4:30 pm, lays over, and leaves for Manzanita at 4:50 pm. Thus the passenger arriving for a transfer waits 30 minutes before TCTD leaves.

## Amenities

Many major stops have shelters, including at Clatsop Community College, Fred Meyer, Safeway, the social services office on Marine Drive, Seaside Cinema, Avenue A in Seaside next to McDonald's, locations in Cannon Beach, and Emerald Heights.

SETD does not have a set schedule for maintaining and cleaning the shelters.

SETD is a flag system, meaning passengers can hail the bus anywhere along its route and the bus will stop if it is safe to do so. Some scheduled stops do have sign poles with either the OXO, "The Bus" (the previous branding), or SETD's logo, but most do not have signs.

## Marketing and Information

Currently SETD has a system schedule booklet and regional map, but no hand schedules with route-level maps. The route maps online show where the route goes in general, but not where it stops in specific cities. The schedules list stops but some may be difficult for new riders or people unfamiliar with the system to find, e.g., the "Hammond 4-Way" stop.

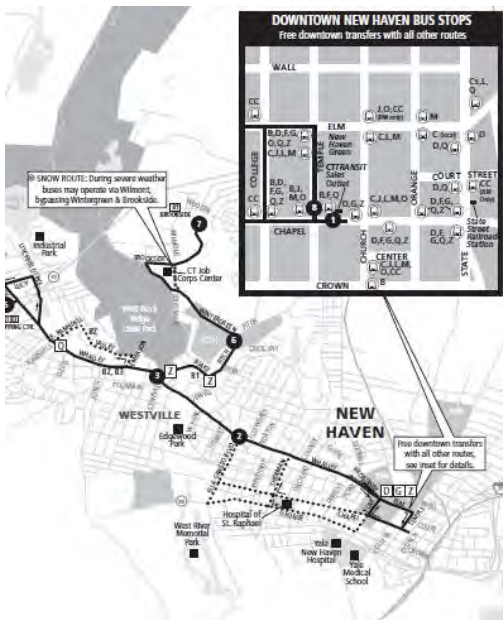
The schedules generally include a full round trip per column, then at one point halfway down the bus switches direction; highlighting that switch would be useful. Many transit agencies add numbers to schedules that then correspond to maps. For example, Route 20 in Cannon Beach has a schedule that includes many different stops; however, someone unfamiliar with the area might not realize that at Maher and Hemlock, the bus turns and travels northbound, because the stop names are all different. New riders also may not know that Family Market and Midtown are stops right across from each other.

Figure 4-9 Example of Route 20 schedule with route numbers and directions

1	Candy Kitchen	Cannon Beach	6:16 am	7:16 am	Southbound
2	Coaster Theater	Cannon Beach	6:18 am	7:18 am	
3	Family Market	Cannon Beach	6:20 am	7:20 am	
4	RV Park	Cannon Beach	6:22 am	7:22 am	
5	Surfcrest Market	Cannon Beach	6:26 am	7:26 am	
6	Tolovana	Cannon Beach	6:27 am	7:27 am	
7	MaHer & Hemlock	Cannon Beach	6:29 am	7:29 am	
8	Firestation	Manzanita	-	-	Northbound
6	Wayside Inn	Cannon Beach	6:31 am	7:31 am	
5	Yukon	Cannon Beach	6:32 am	7:32 am	
4	RV Park	Cannon Beach	-	-	
3	Midtown	Cannon Beach	6:34 am	7:34 am	
9	Visitor Center	Cannon Beach	6:37 am	7:37 am	

An example of a transit map with numbers corresponding to the schedule is shown in Figure 4-10.

Figure 4-10 Map with stops labeled with numbers (left) corresponding to schedule (right)



**WEEKDAY SERVICE**

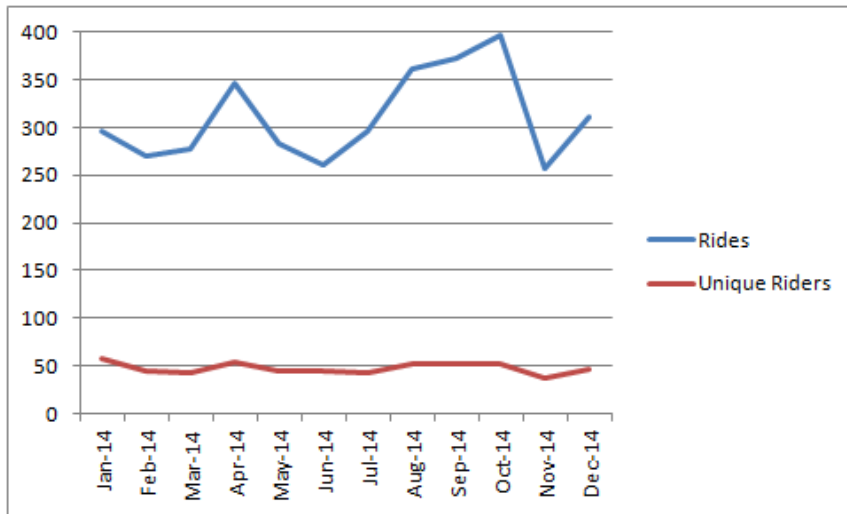
**New Haven ▶ Whalley Avenue ▶ Amity Rd/Brookside**

Timepoints	1	2	3	4	5	6	7
	Downtown New Haven Chapel & Temple	Whalley & Boulevard	Westville Center Whalley & Blake (B1, B2, B3)	Jewish Community Center (B3)	Amity Road Terminus Amity Shopping Center (BB2, B3)	Southern CT State Univ Fitch Street (B1)	Brookside Terminus Augustine Street (B1)
<b>B1</b>	4:35	4:43	4:46	..	..	4:49	4:55
<b>B3</b>	5:45	5:03	5:06	5:13	5:11	..	..
<b>B2</b>	5:15	5:22	5:25	..	5:32	..	..
<b>B1</b>	5:25	5:33	5:36	..	..	5:39	5:45
<b>B2</b>	5:35	5:42	5:45	..	5:52	..	..
<b>B1</b>	5:45	5:53	5:56	..	..	5:59	6:05
<b>B3</b>	5:50	5:58	6:01	6:08	6:06	..	..
<b>B2</b>	6:00	6:08	6:11	..	6:20	..	..
<b>B1</b>	6:10	6:18	6:21	..	..	6:24	6:30
<b>B3</b>	6:15	6:23	6:26	6:33	6:31	..	..
<b>B2</b>	6:20	6:28	6:31	..	6:40	..	..
<b>B1</b>	6:30	6:38	6:41	..	..	6:44	6:50
<b>B2</b>	6:40	6:48	6:51	..	7:00	..	..

## RIDE ASSIST PERFORMANCE

In 2014, RideAssist carried 3,734 passengers. In an average month, the system carried 311 passengers and 48 unique riders. Ridership by month peaked in March and again in the fall, while the number of unique riders remained relatively stable (Figure 4-11).

Figure 4-11 RideAssist Ridership by Month, 2014



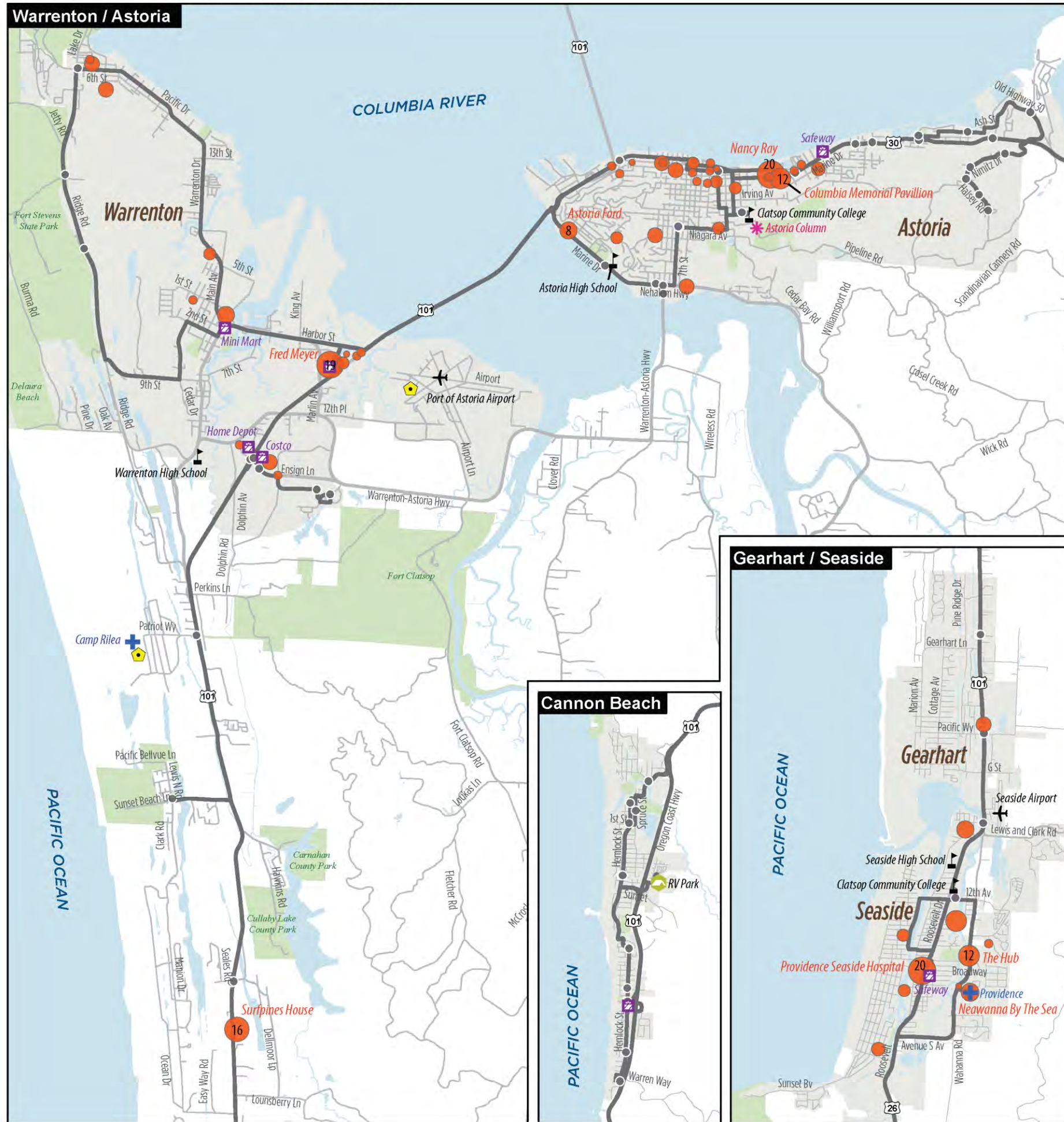
Two weeks of RideAssist data from fall 2014 was analyzed and mapped in Figure 4-12. While many pickups are along the fixed-route, several are within the Astoria peninsula, in the hilly neighborhoods not directly served by transit.



## **DIAL-A-RIDE PERFORMANCE**

As mentioned, Dial a Ride ceased operations for several months in 2014, thus 2014 is an outlier year. A total of 27 trips were taken on this service.

Figure 4-12 RideAssist Common Pick-ups and Dropoffs



**Ride Assist Origin and Destination Locations**

**Number of Trips**  
(During two weeks  
from 11/1/14 to 11/15/14)

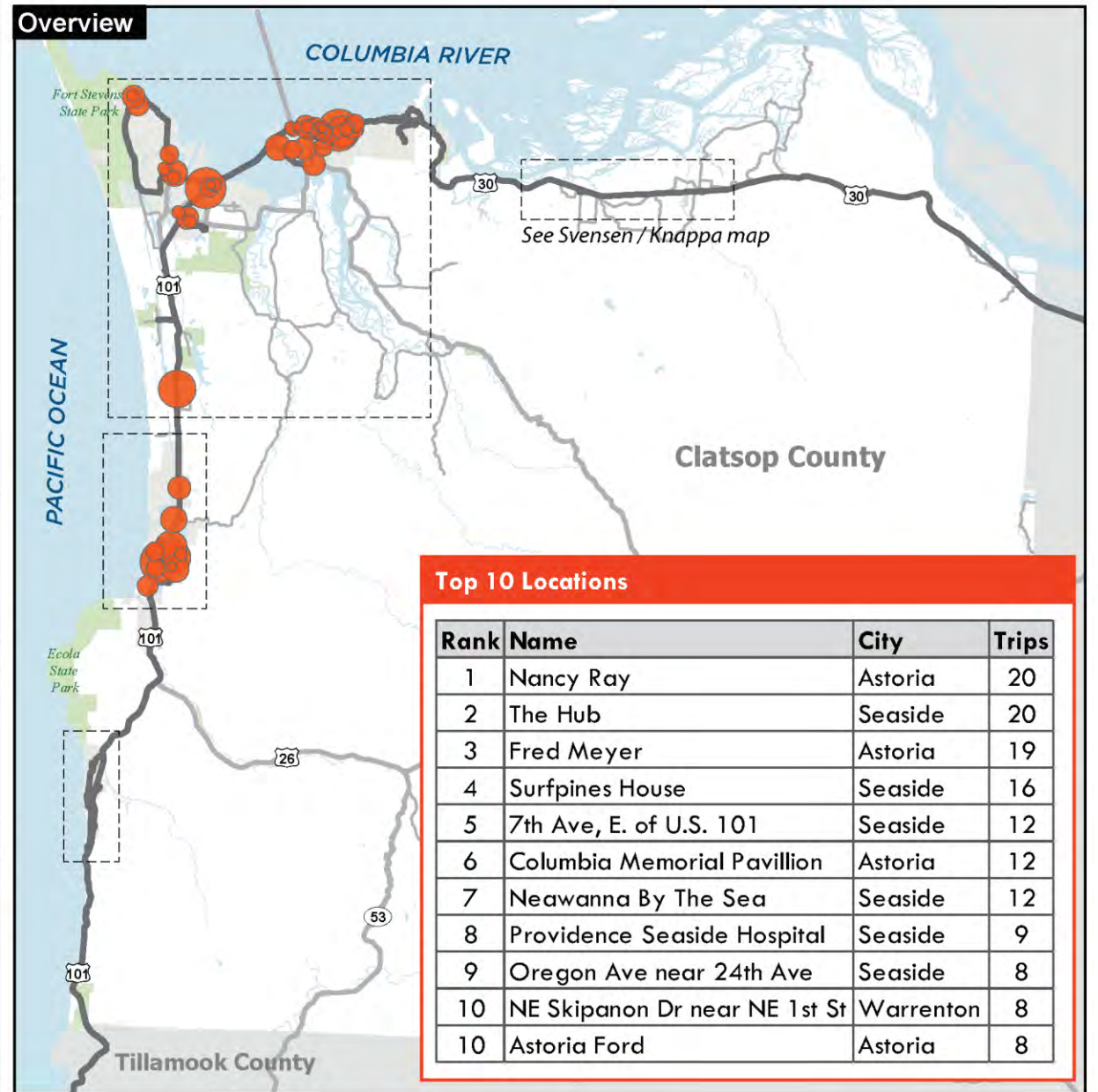
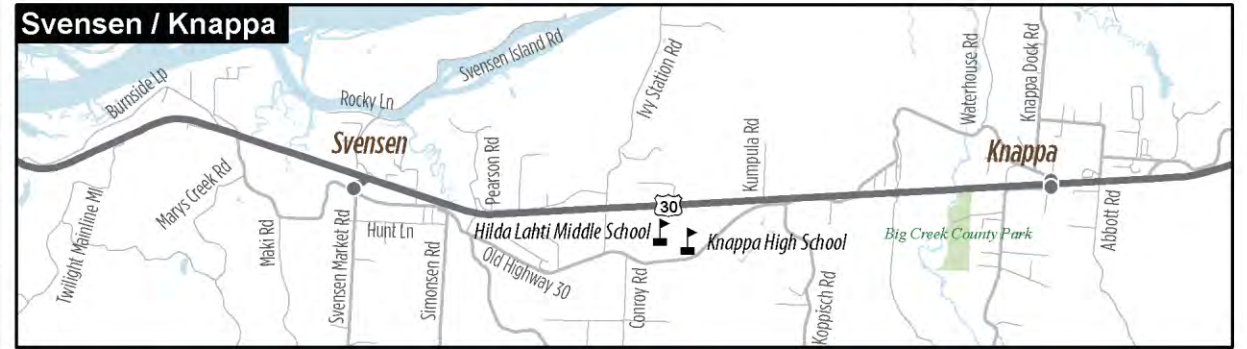
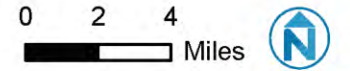
- 1
- 5
- 10

**Landmarks**

- ✳ Attractions
- ✚ Medical
- 🎓 Education
- ✈ Airport
- 🛒 Shopping
- 🏠 Coast/National Guard

— Sunset Empire Transportation District  
Routes and Stops

▭ City Boundaries



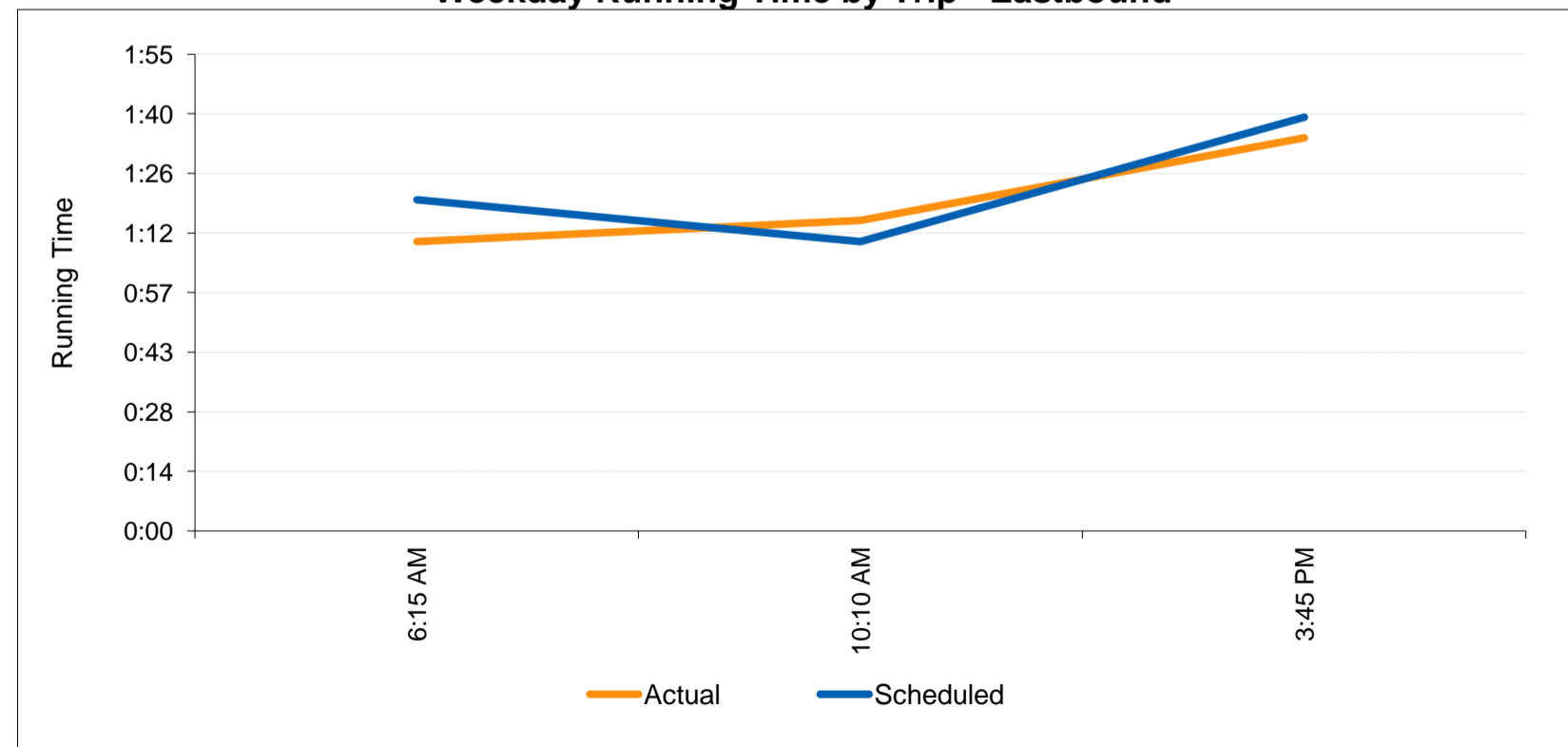
# **APPENDIX A - ROUTE PROFILES**

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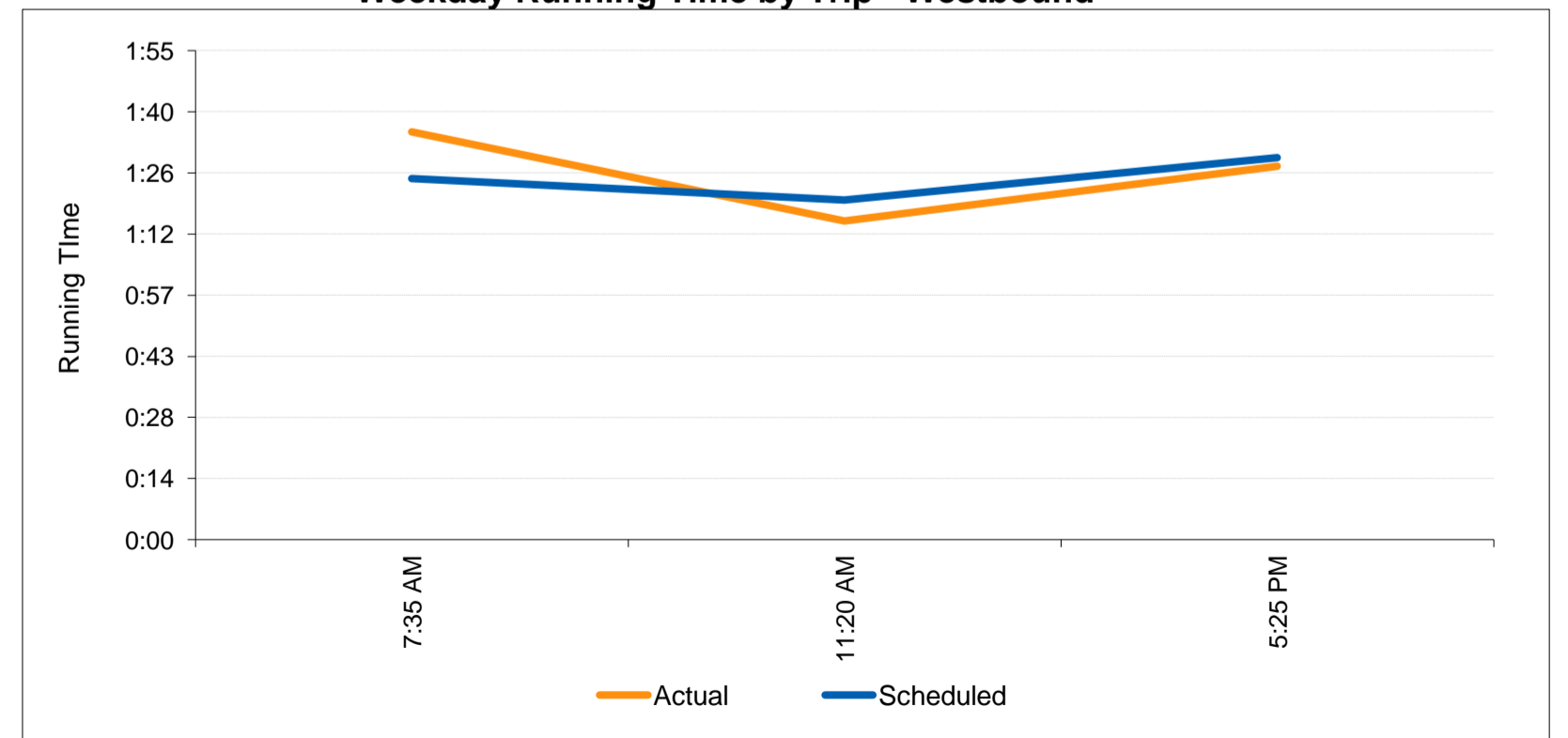
# Weekday Profiles

Columbia Connector Weekday (May 2015)		Route Productivity Summary				Route Operations Summary					
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		40	40	8.4	4.8	74%	13%	13%	6	Safeway &	E
Eastbound		26	27	4.2	6.2	68%	21%	11%	6	Safeway &	E
Westbound		14	13	4.3	3.3	79%	5%	16%	6	Fred Meyer &	W
<b>By Segment</b>											
1	Fred Meyer to Warrenton Mini Mart	5	3	0.8	6.4	80%		20%			
2	Warrenton Mini Mart to Fred Meyer	5	8	1.2	4.1	83%	17%				
3	Fred Meyer to Transit Center	6	5	1.5	4.0	83%	17%				
4	Transit Center to Safeway	4	4	0.7	5.7	67%		33%			
5	Safeway to Westport &	6	3	3.2	1.9	67%		33%			
6	Westport & to Safeway (Clatskanie)	1	4	1.0	1.0	60%	40%				
<b>By Time Period</b>											
Early AM											W
AM		14	12	2.8	5.1				2	Safeway &	E
Midday		17	17	2.5	6.8				4	4-Way Stop &	E
PM		6	8	1.7	3.6				2	Warrenton Mini Mart &	E
Eve		3	3	1.5	2.0				2	Safeway &	W
Night											W
Owl											W

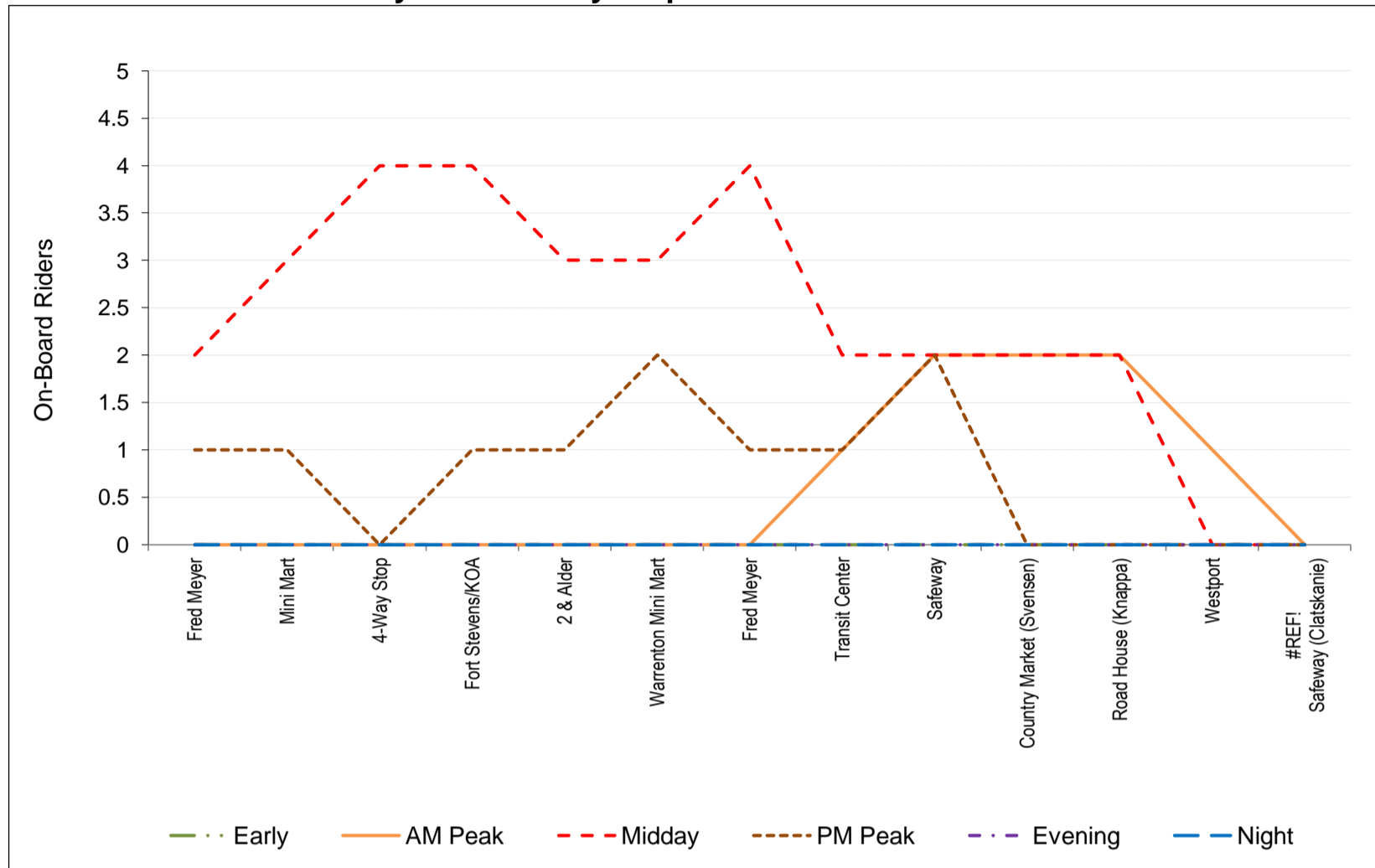
Weekday Running Time by Trip - Eastbound



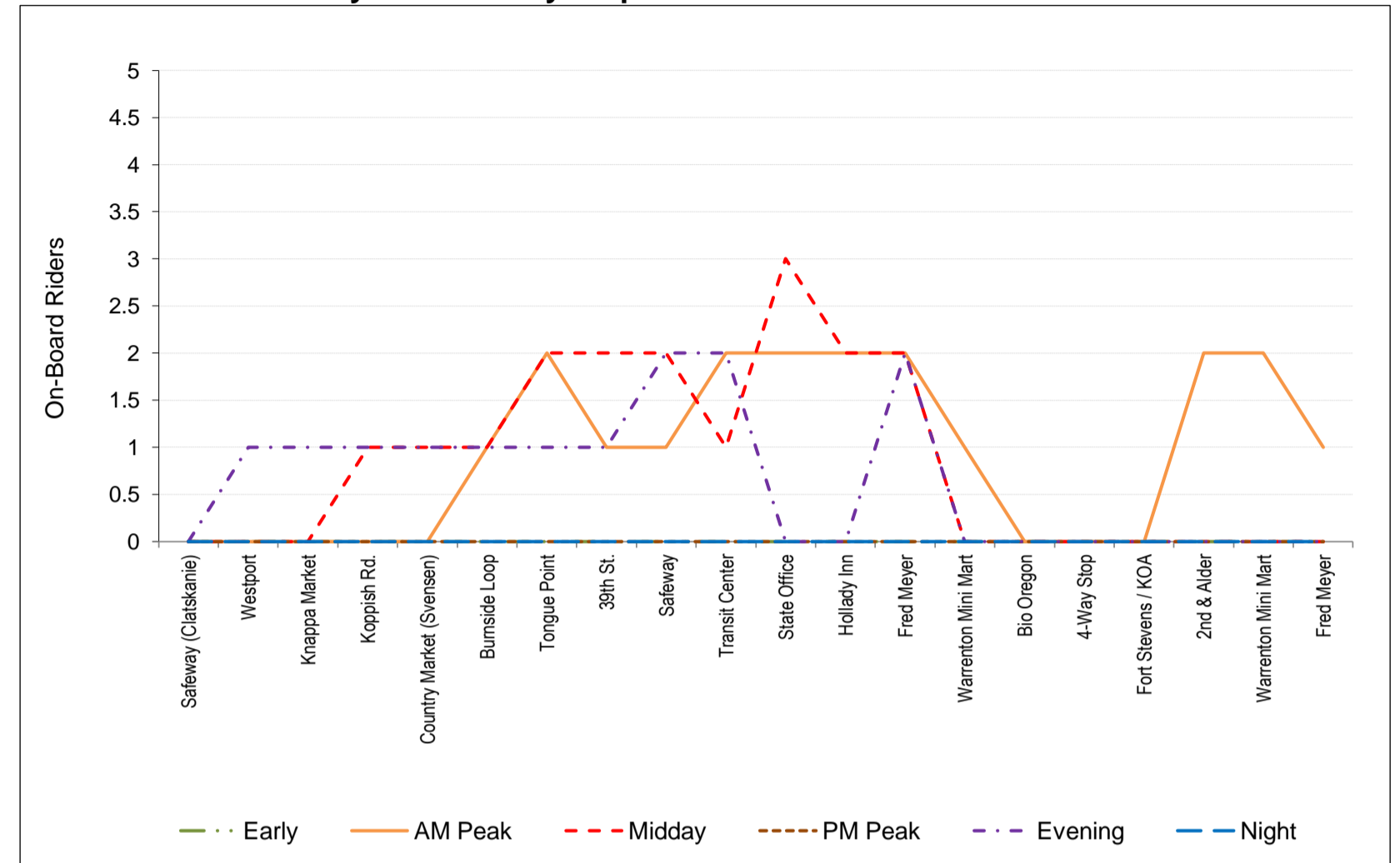
Weekday Running Time by Trip - Westbound



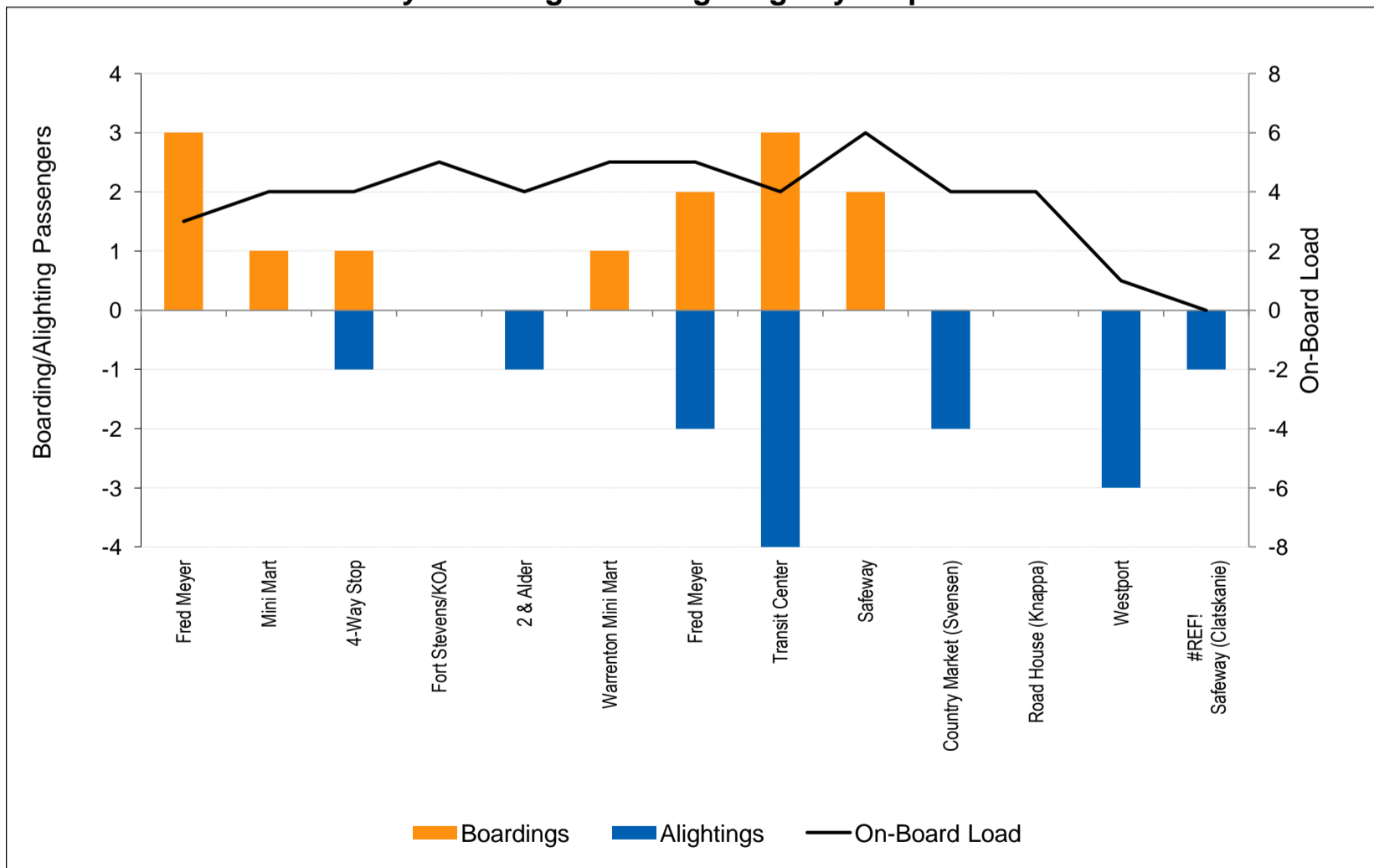
**Weekday On-Board by Stop and Time Period - Eastbound**



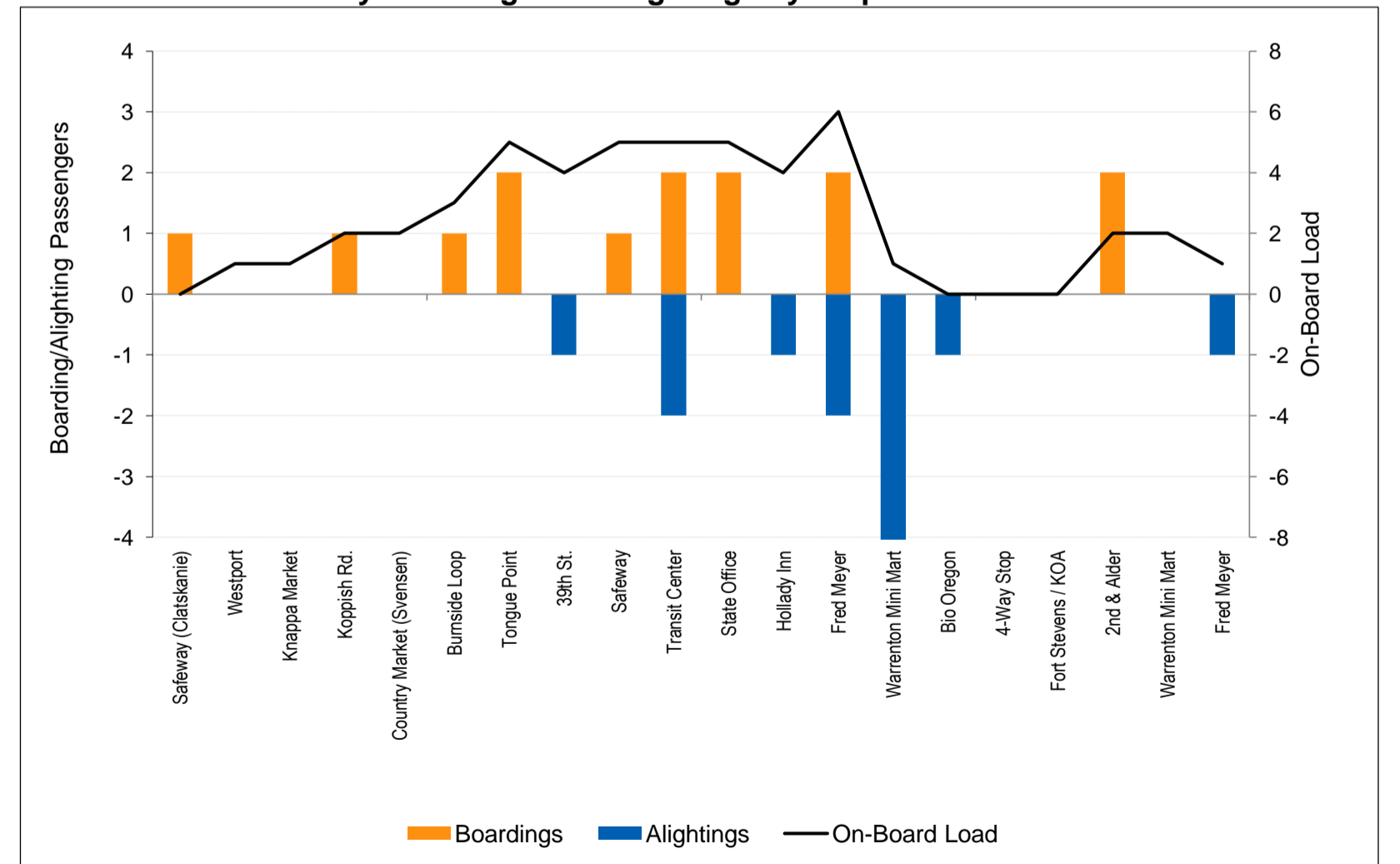
**Weekday On-Board by Stop and Time Period - Westbound**



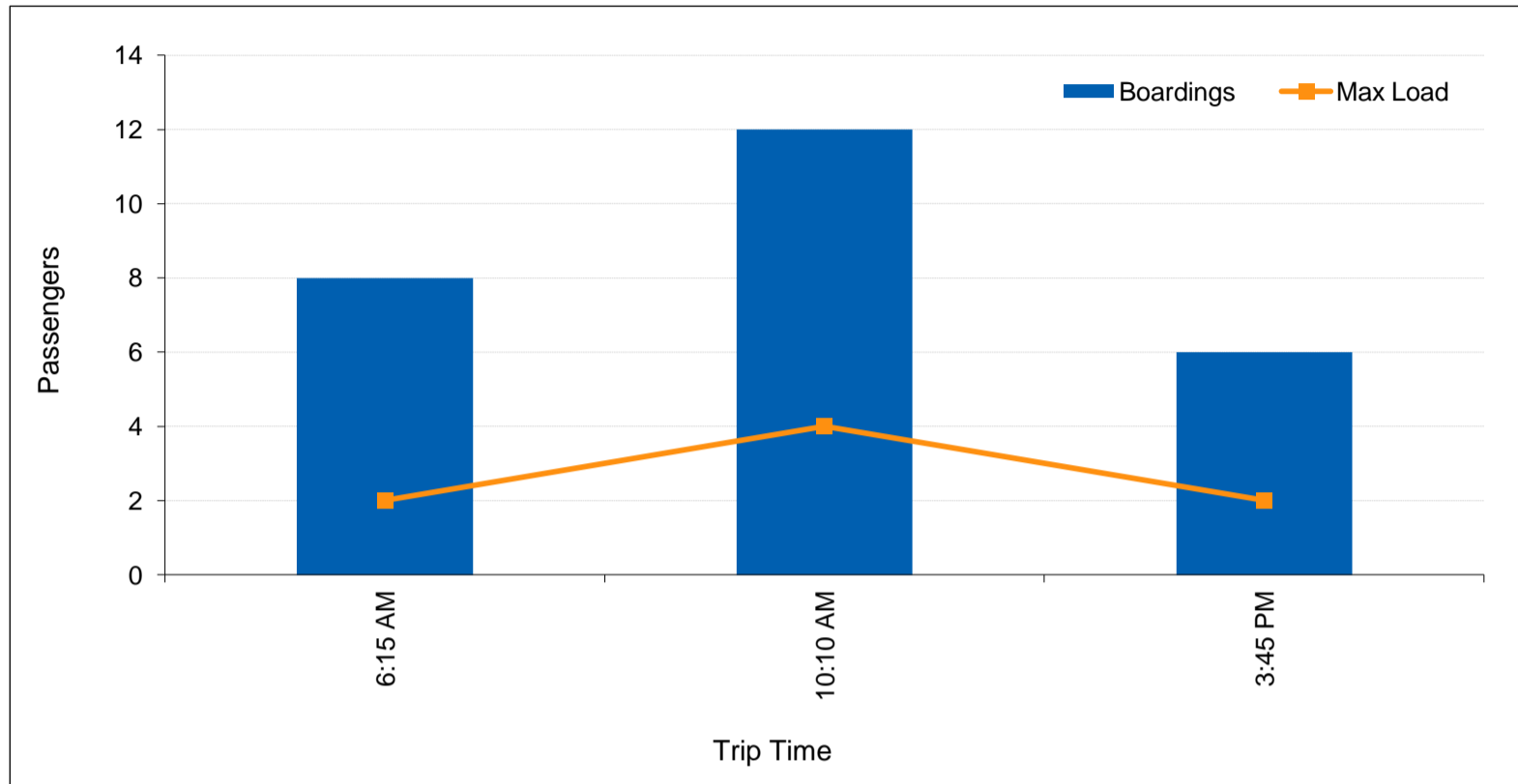
**Weekday Boardings and Alightings by Stop - Eastbound**



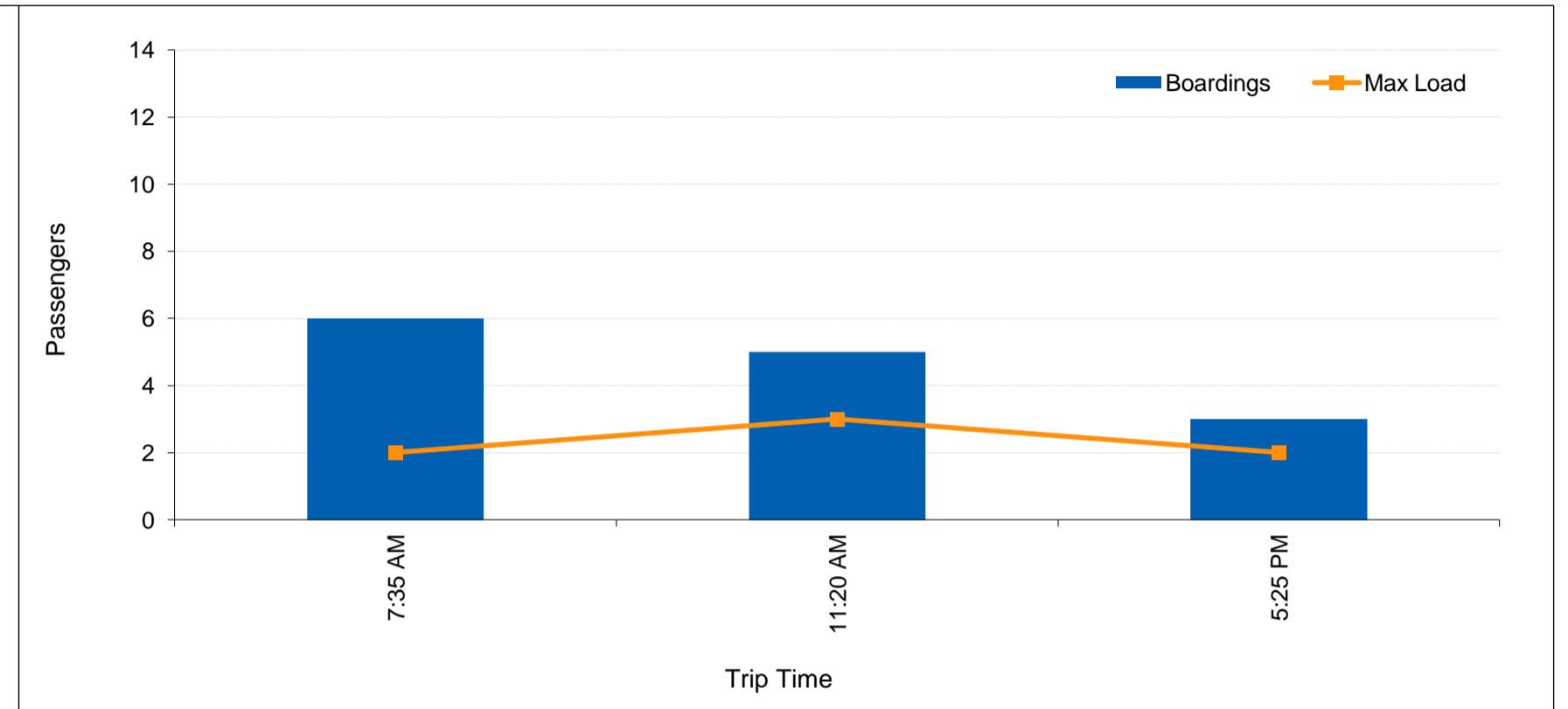
**Weekday Boardings and Alightings by Stop - Westbound**



Weekday Ridership by Trip - Eastbound

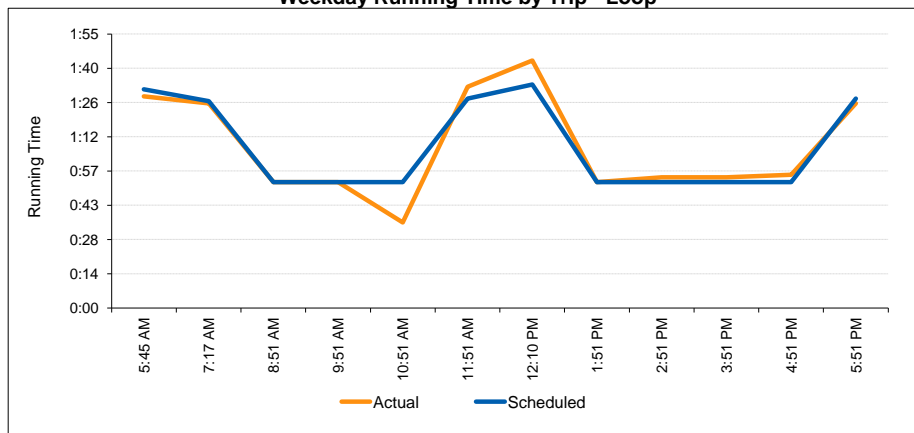


Weekday Ridership by Trip - Outbound

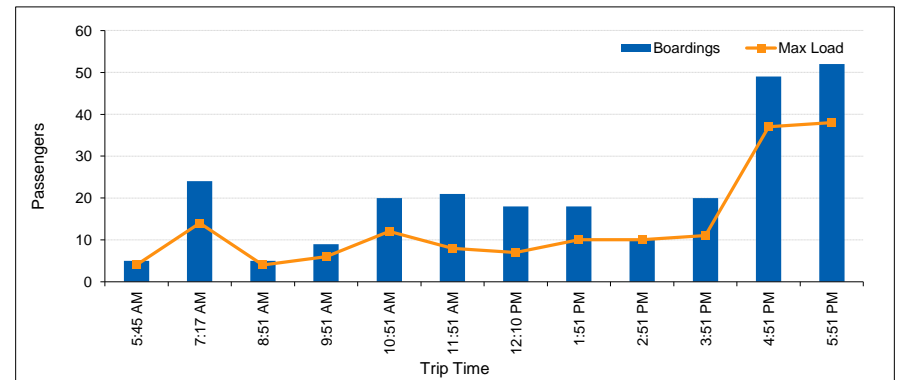


Route 10 Weekday - May 2015					Route Productivity Summary				Route Operations Summary					
					Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
					Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>					251	246	13.7	18.4	71%	8%	20%	142	39th Street Pier (flag) &	L
Loop					251	246	13.7	18.4	71%	8%	20%	142	39th Street Pier (flag) &	L
<b>By Segment</b>														
1	Fred Meyer to Warrenton Mini Mart						0.1		100%					
2	Warrenton Mini Mart to Fred Meyer				10		0.9	11.5	67%		33%			
3	Fred Meyer to Transit Center				3	5	0.8	3.8	83%	17%				
4	Transit Center to Safeway (East)				39	9	1.0	38.4	58%	8%	33%			
5	Safeway (East) to Emerald Hghts Office &				20	7	1.1	18.2	82%		18%			
6	Emerald Hghts Office & to Job Corp				28	28	1.7	17.0	75%	8%	17%			
7	Job Corp to Safeway (West)				96	17	1.4	69.4	75%		25%			
8	Safeway (West) to College				15	72	1.4	10.7	75%	8%	17%			
9	College to Transit Center				36	64	3.7	9.7	0%	33%	67%			
10	Transit Center to Warrenton Mini Mart				4	44	1.4	2.9	33%	33%	33%			
<b>By Time Period</b>														
AM					29	26	3.0	9.7				17	Safeway (West) &	L
Midday					91	86	6.6	13.9				39	Gateway Apts (flag) &	L
PM					79	82	2.7	29.8				50	51st & Birch (flag) &	L
Eve					52	52	1.5	35.5				38	Job Corp &	L

Weekday Running Time by Trip - Loop

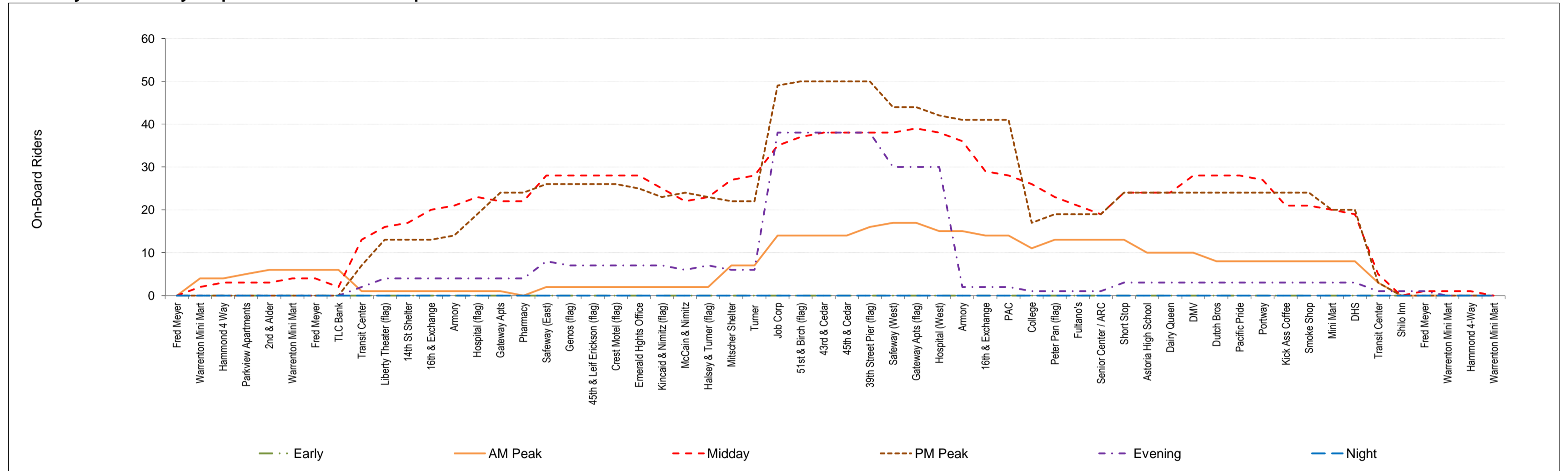


Weekday Ridership by Trip - Loop

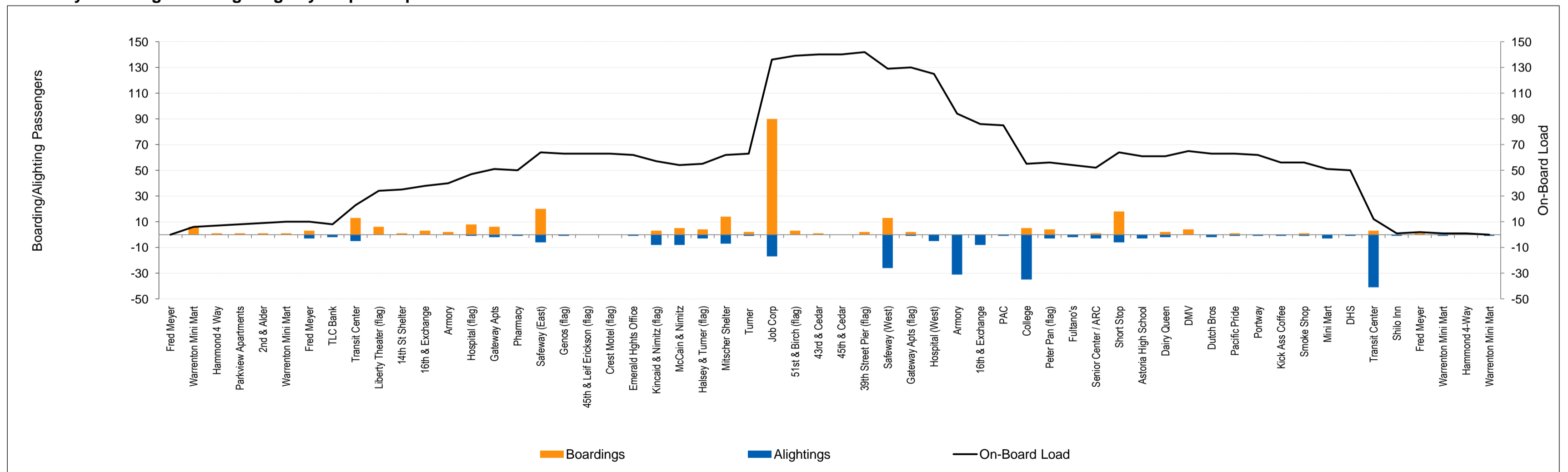




**Weekday On-Board by Stop and Time Period - Loop**



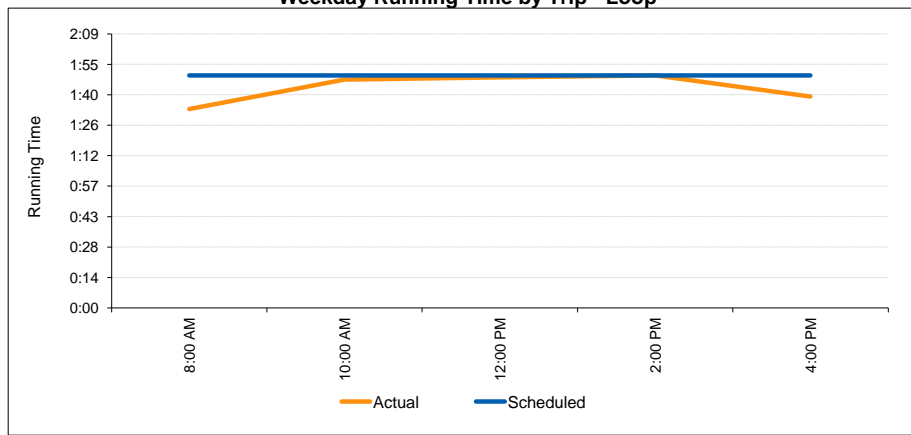
**Weekday Boardings and Alightings by Stop - Loop**



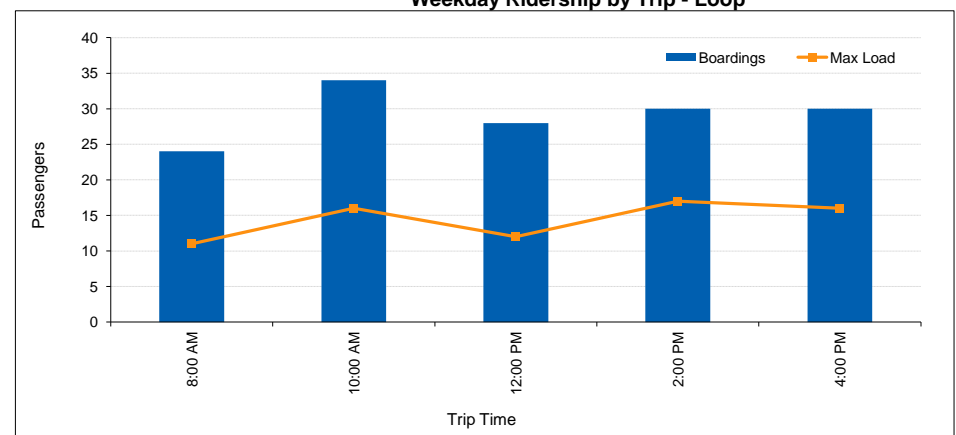
Route 101 Weekday - May 2015		Route Productivity Summary			
		Activity	Service Hours	Productivity	
		Boardings	Alightings	Service Hours	Boardings per Service Hour
<b>Total</b>		146	151	9.2	15.9
Loop		146	151	9.2	15.9
<b>By Segment</b>					
1	Transit Center to Fred Meyer	44	7	0.8	52.8
2	Fred Meyer to Home Depot	14	17	0.8	16.8
3	Home Depot to Sunset Beach	2	1	0.7	3.0
4	Sunset Beach to Seaside Cinema	10	18	1.0	10.0
5	Seaside Cinema to McDonald's Seaside &	6	14	0.6	10.3
6	McDonald's Seaside & to Seaside Cinema	27	26	0.7	40.5
7	Seaside Cinema to Sunset Beach	8	2	1.2	6.9
8	Sunset Beach to Costco	7	13	1.2	6.0
9	Costco to Fred Meyer	5	1	0.4	12.0
10	Fred Meyer to Transit Center	23	52	1.8	12.5
<b>By Time Period</b>					
	AM	24	26	1.8	13.1
	Midday	92	96	5.5	16.7
	PM	30	29	1.8	16.4

Route Operations Summary					
On-Time Performance			On-Board Load		
% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
64%	16%	20%	55	Triangle Tavern &	L
64%	16%	20%	55	Triangle Tavern &	L
80%		20%			
80%		20%			
60%	20%	20%			
80%		20%			
80%		20%			
40%	40%	20%			
	40%	20%			
60%	20%	20%			
40%	40%	20%			
60%	20%	20%			
			11	5th & Olney &	L
			34	Triangle Tavern &	L
			16	Triangle Tavern &	L

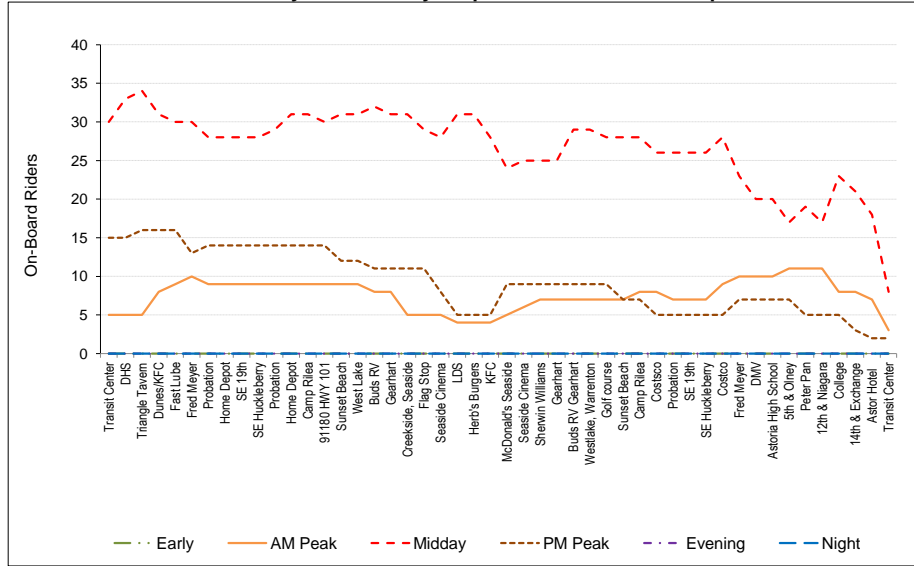
Weekday Running Time by Trip - Loop



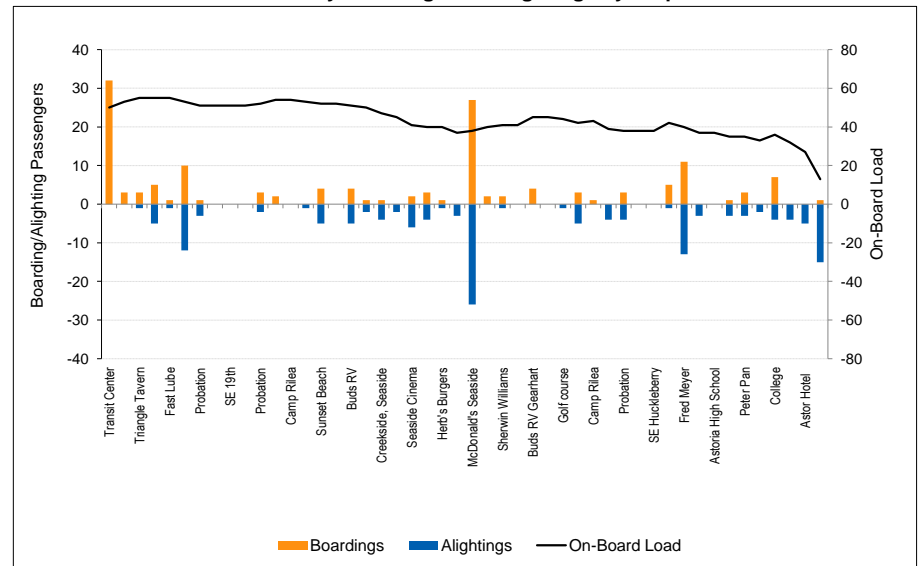
Weekday Ridership by Trip - Loop



Weekday On-Board by Stop and Time Period - Loop

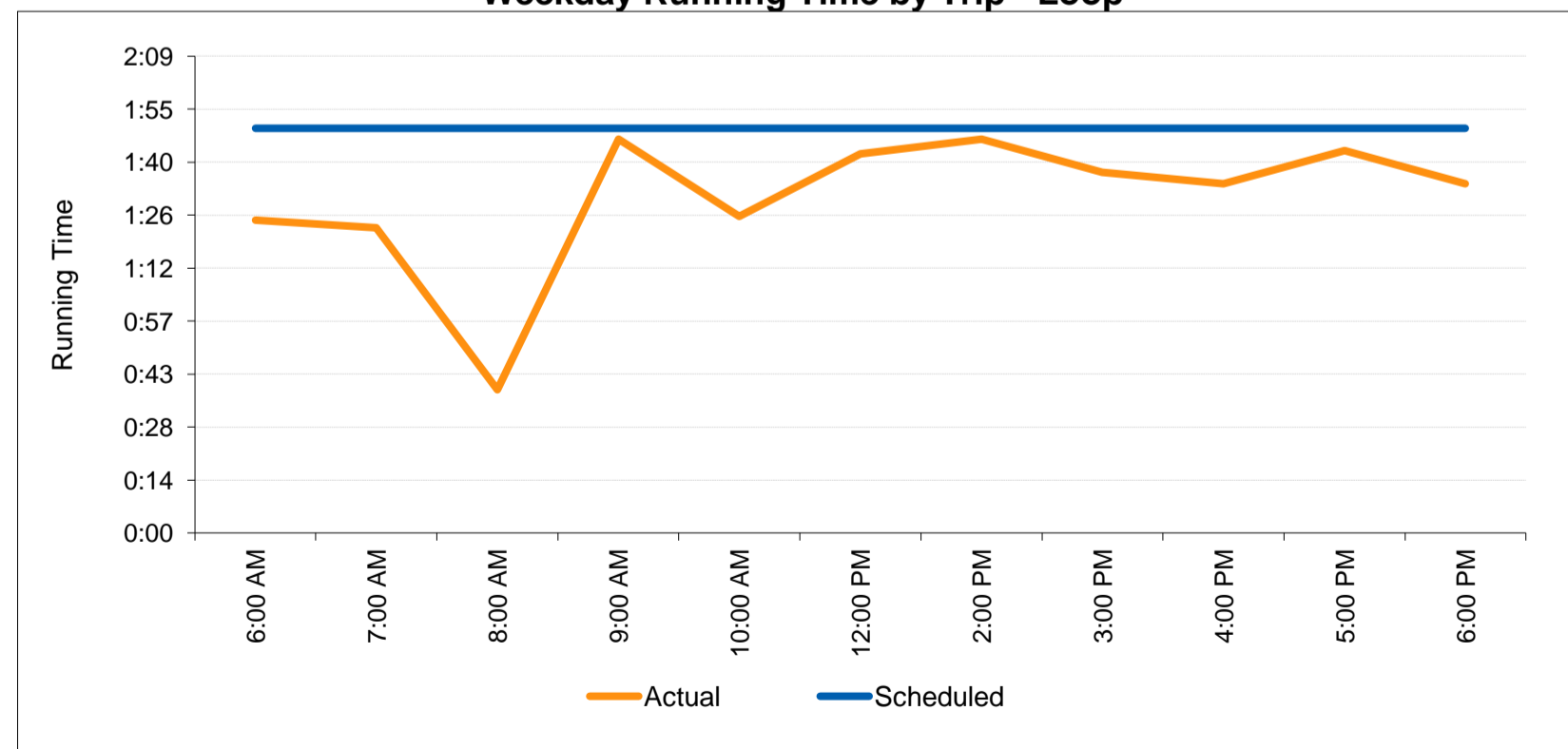


Weekday Boardings and Alightings by Stop -

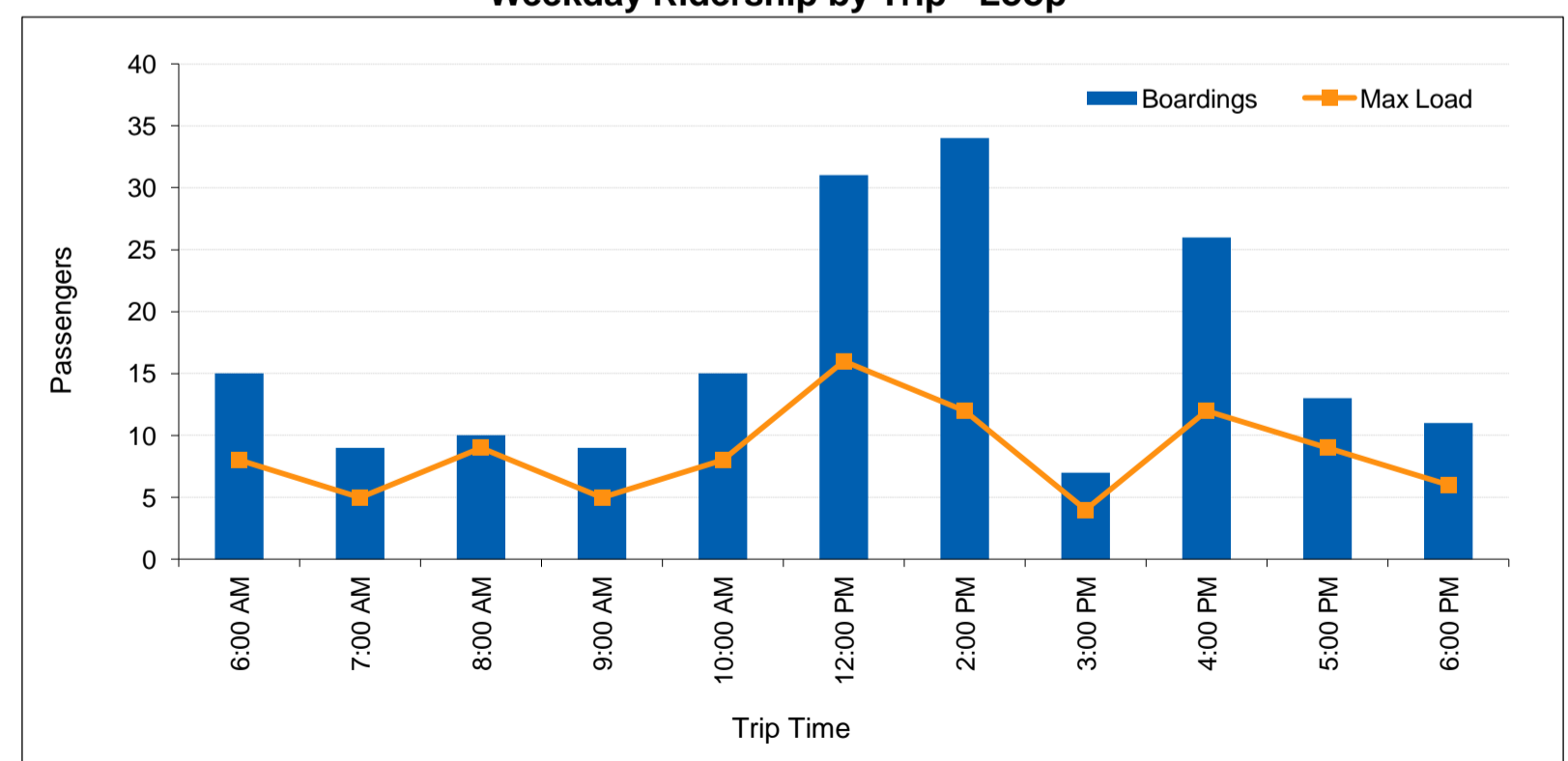


Route 101 Weekday - Summer 2015		Route Productivity Summary				Route Operations Summary					
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		180	180	20.2	8.9	64%	20%	16%	72	Fast Lube &	L
Loop		180	180	20.2	8.9	28%	40%	32%	72	Fast Lube &	L
<b>By Segment</b>											
1	Transit Center to Fred Meyer	68	2	1.8	37.1	45%	27%	27%			
2	Fred Meyer to Sunset Beach	17	33	3.3	5.2	18%	55%	27%			
3	Sunset Beach to Seaside Cinema	5	13	2.2	2.3	36%	36%	27%			
4	Seaside Cinema to McDonald's Seaside	9	19	1.3	7.0	25%	38%	38%			
5	McDonald's Seaside to Seaside Cinema &	28	25	1.5	19.1	10%	60%	30%			
6	Seaside Cinema & to Sunset Beach	20	9	2.6	7.8	20%	40%	40%			
7	Sunset Beach to Fred Meyer	7	8	3.5	2.0		50%	40%			
8	Fred Meyer to College	25	30	3.1	8.0	50%		50%			
9	College to Transit Center	1	41	0.9	1.1		100%				
<b>By Time Period</b>											
AM		34	30	5.5	6.2				18	Peter Pan &	L
Midday		89	92	7.3	12.1				36	Fast Lube &	L
PM		46	47	5.5	8.4				20	Fast Lube &	L
Eve		11	11	1.8	6.0				6	Fast Lube &	L

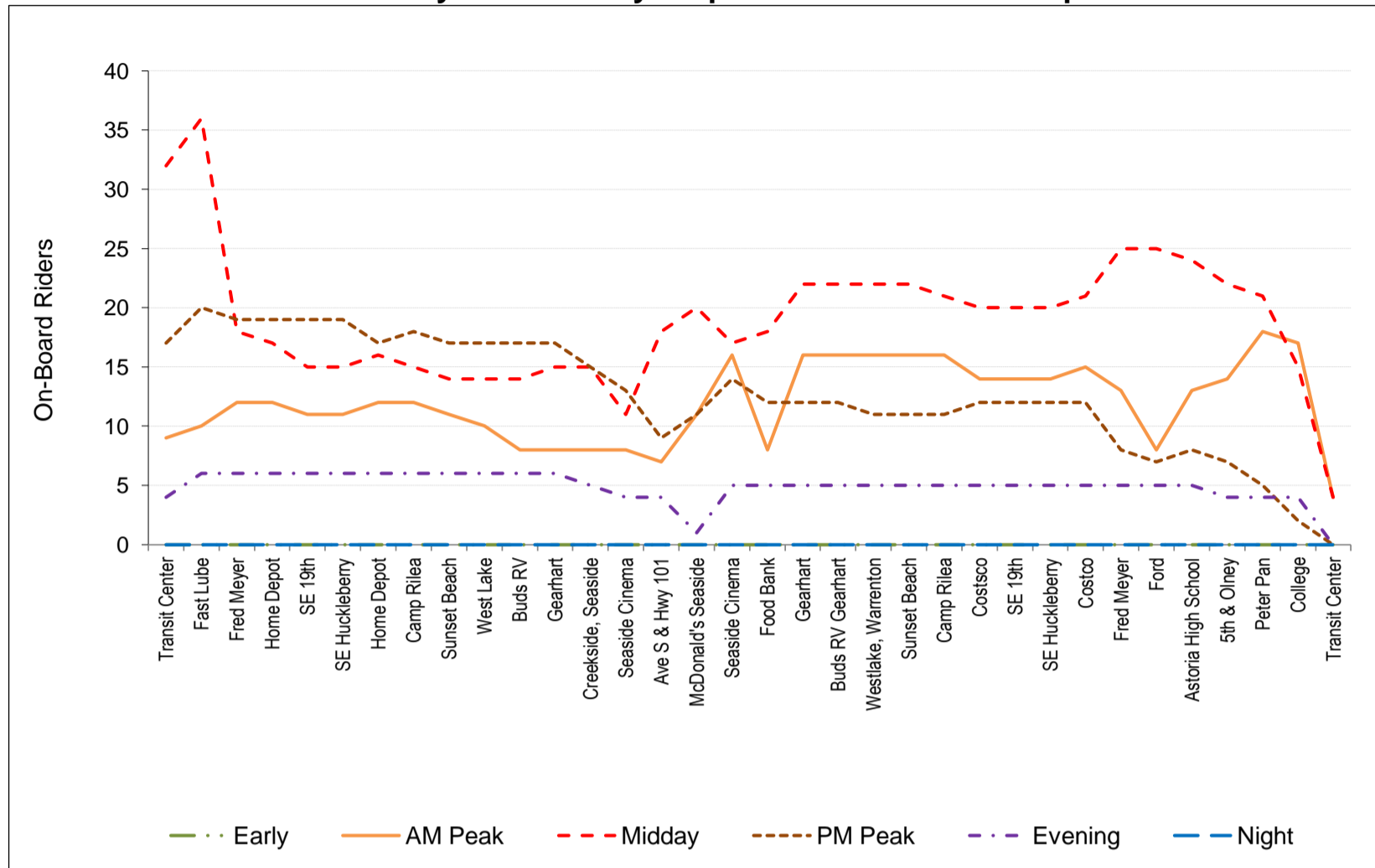
Weekday Running Time by Trip - Loop



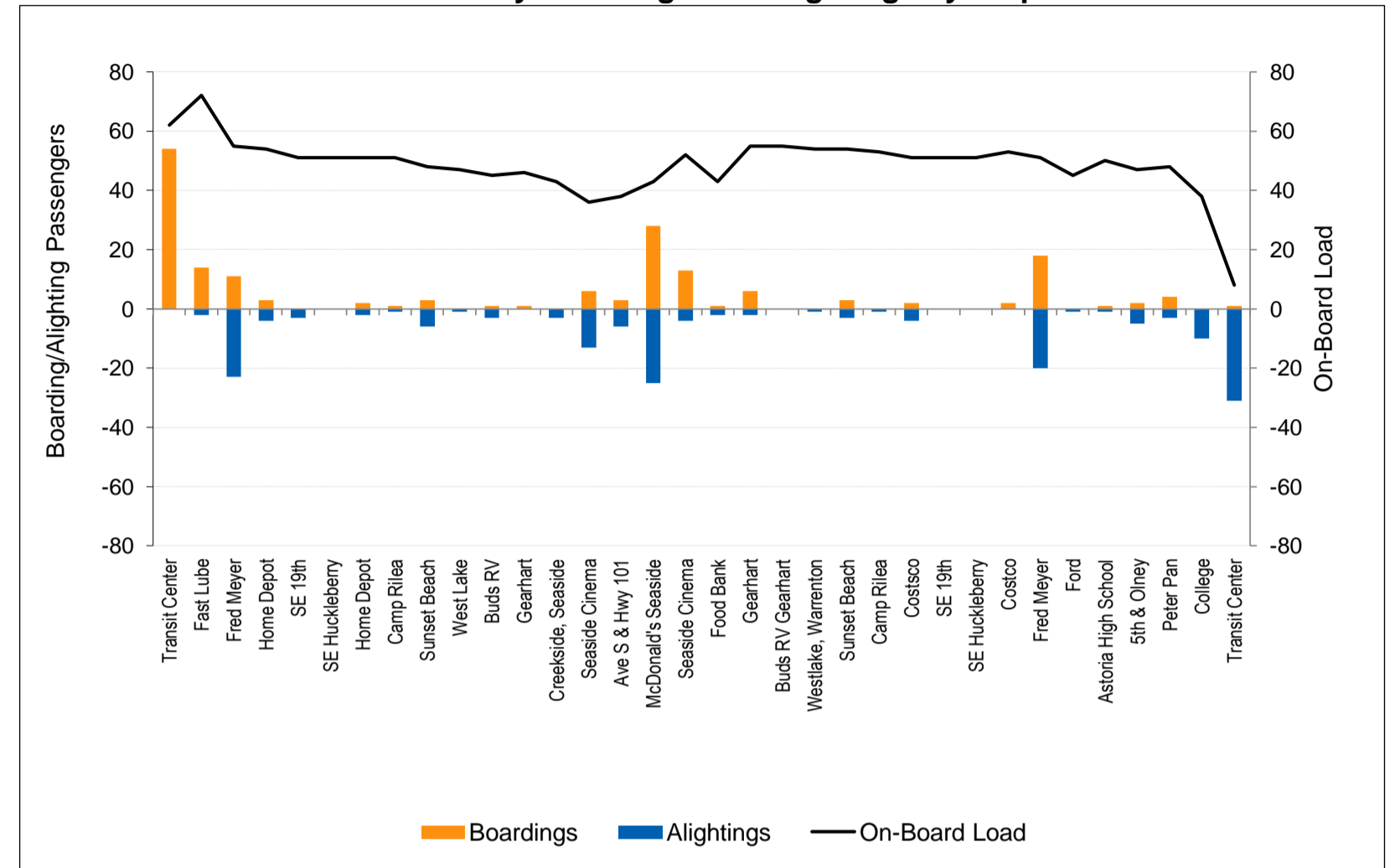
Weekday Ridership by Trip - Loop



**Weekday On-Board by Stop and Time Period - Loop**

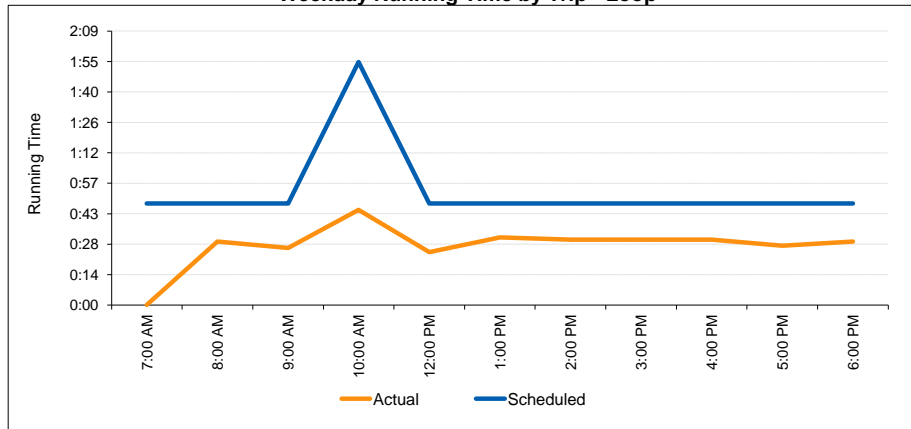


**Weekday Boardings and Alightings by Stop -**

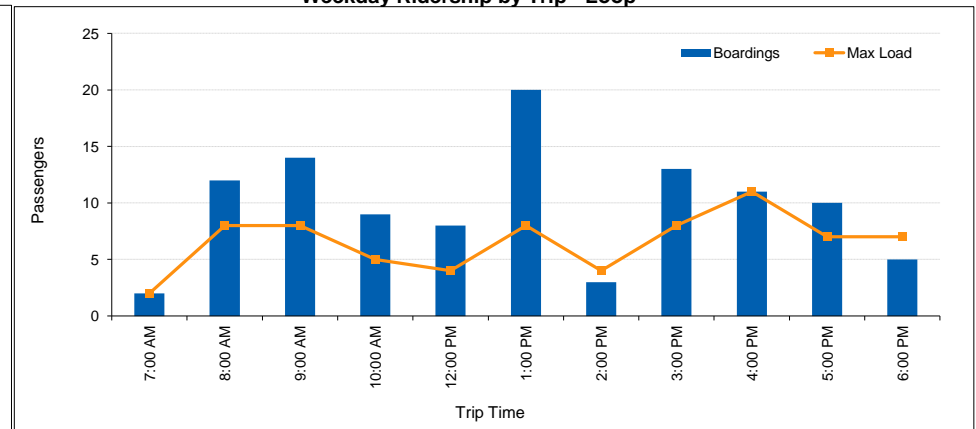


Route 20 Weekday - May 2015					Route Productivity Summary				Route Operations Summary					
					Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
					Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>					107	101	11.1	9.7	86%	3%	11%	50	Avenue A &	L
Loop					107	101	11.1	9.7	82%	4%	14%	50	Avenue A &	L
<b>By Segment</b>														
1	Seaside Cinema to Coaster Theater				10		3.3	3.0	80%		20%			
2	Coaster Theater to Tolovana				29	10	1.6	17.6	100%					
3	Tolovana to Firestation (Manzanita)				3	12	0.7	4.2		100%				
4	Firestation (Manzanita) to Midtown				5	4	0.4	12.5	78%		22%			
5	Midtown to Seaside Cinema &				2	16	3.9	0.5	100%					
<b>By Time Period</b>														
AM					14	14	1.8	7.6				9	Seaside Hospital &	L
Midday					54	50	5.6	9.7				24	Avenue A &	L
PM					34	30	2.8	12.4				23	Visitor Center &	L
Eve					5	7	0.9	5.5				7	Coaster Theater &	L

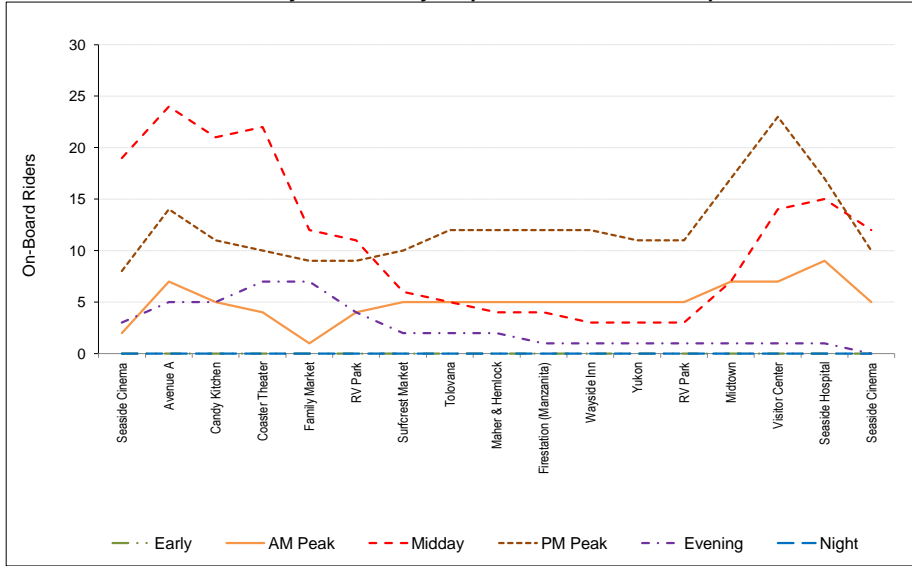
Weekday Running Time by Trip - Loop



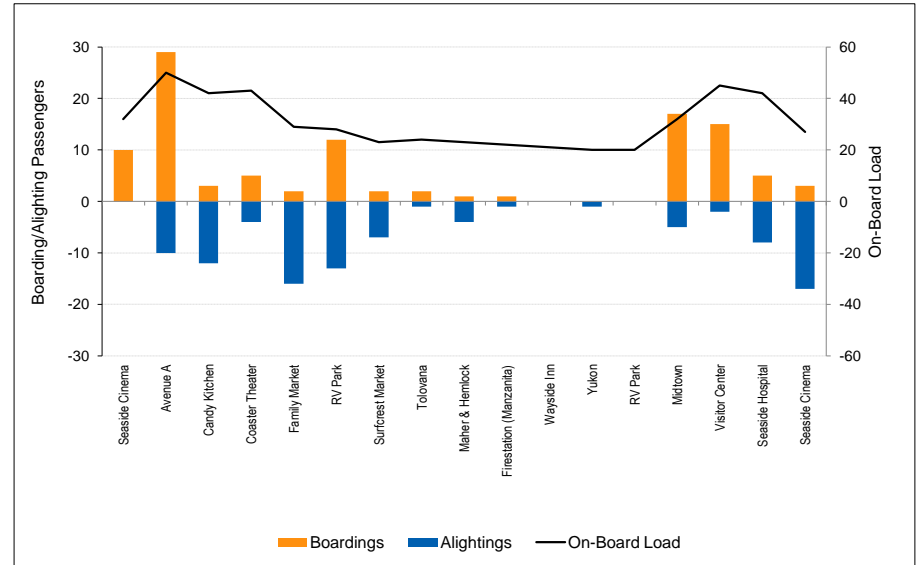
Weekday Ridership by Trip - Loop



**Weekday On-Board by Stop and Time Period - Loop**

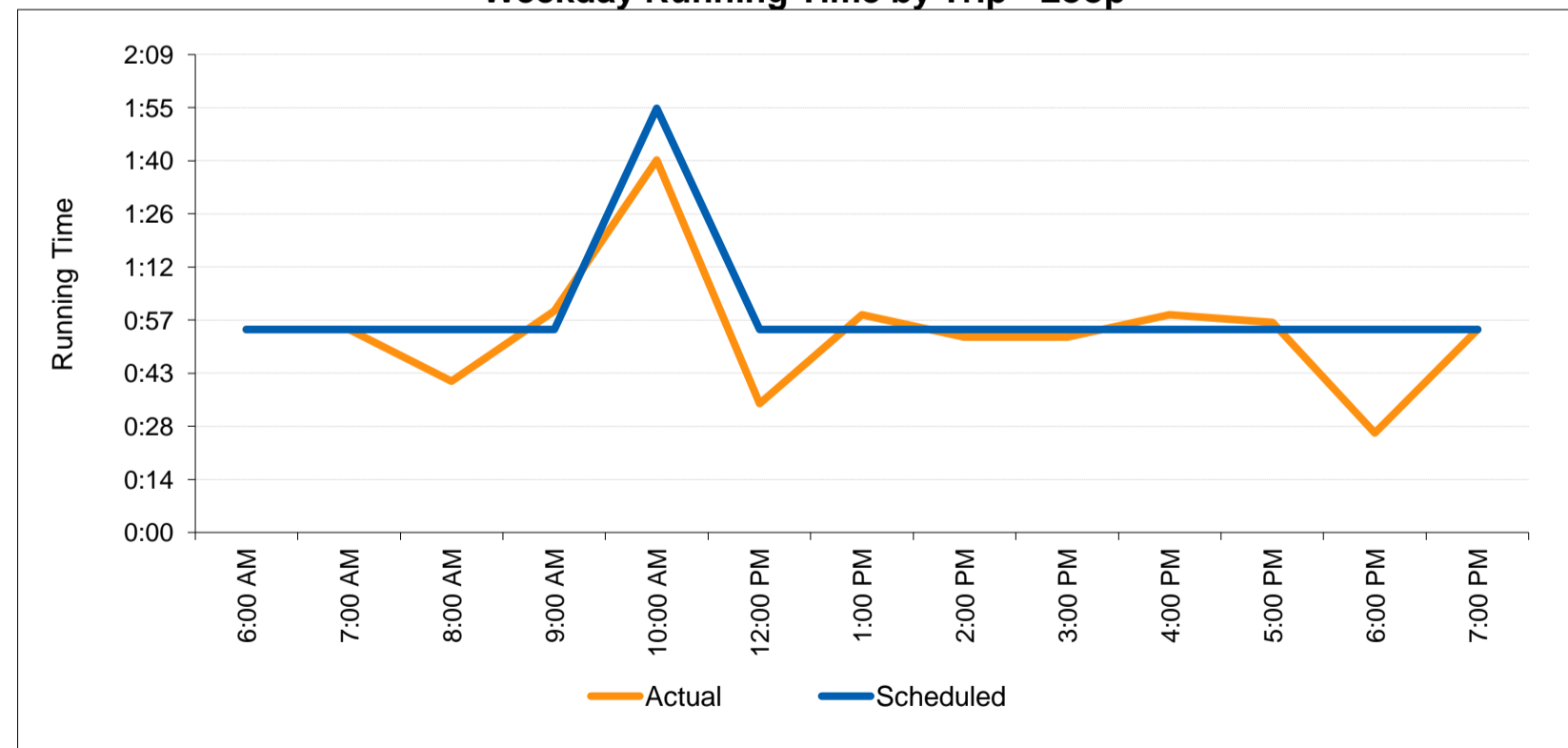


**Weekday Boardings and Alightings by Stop - Loop**

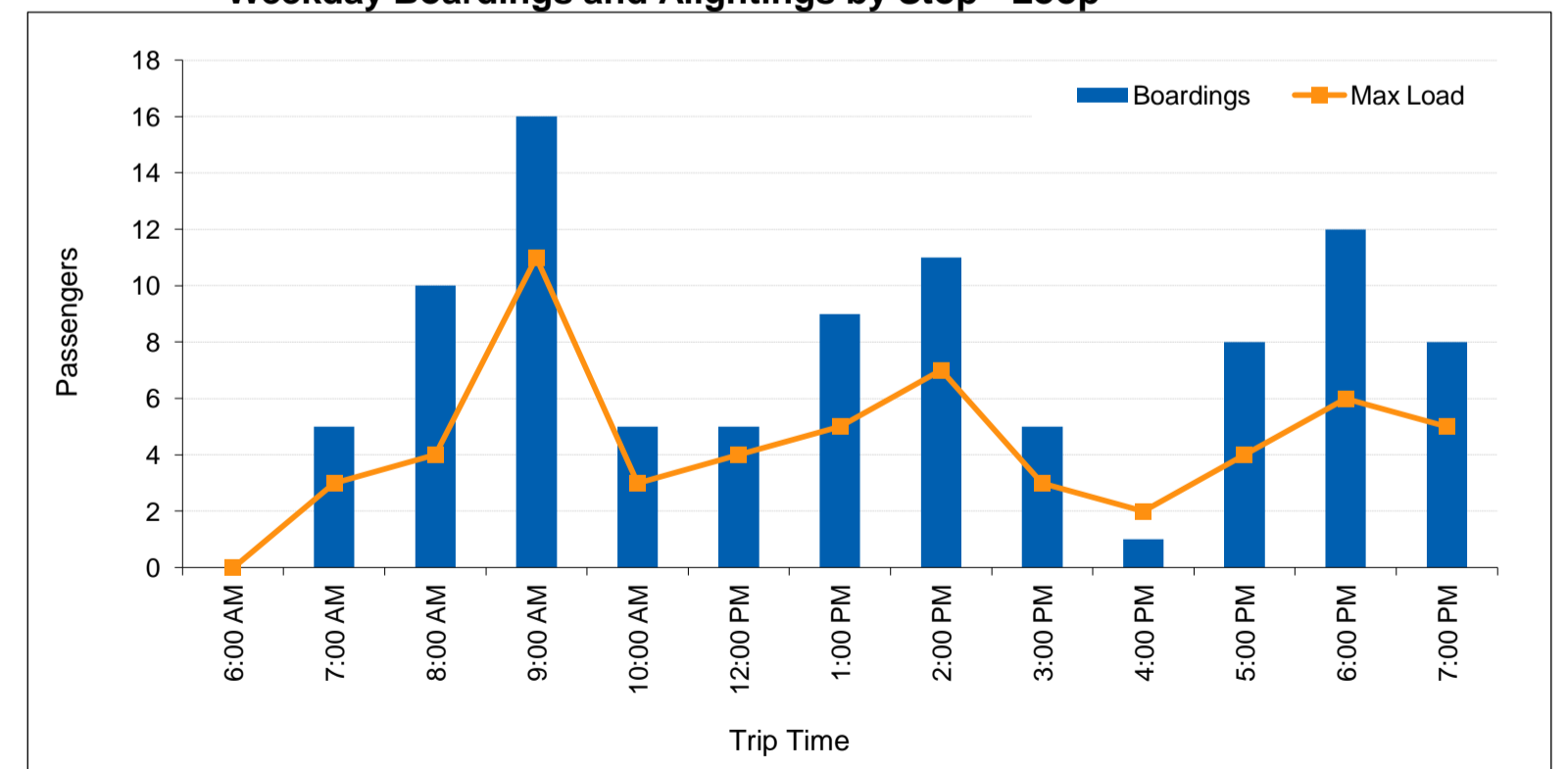


Route 20 Weekday - Summer 2015		Route Productivity Summary			Route Operations Summary						
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		95	93	12.9	7.4	84%	5%	11%	38	Stop & Go &	L
Loop		95	93	12.9	7.4	67%	10%	23%	38	Stop & Go &	L
<b>By Segment</b>											
1	Seaside Cinema to Coaster Theater	43	25	3.9	11.0	75%	0%	25%			
2	Coaster Theater to Tolovana	8	30	1.9	4.1	58%	8%	33%			
3	Tolovana to Firestation (Manzanita)	1	2	0.7	1.4	0%	100%	0%			
4	Firestation (Manzanita) to Midtown	11	5	1.8	6.1	54%	15%	31%			
5	Midtown to Seaside Cinema &	32	31	4.6	7.0	80%	10%	10%			
<b>By Time Period</b>											
AM		15	13	2.8	5.5				7	Avenue A &	L
Midday		46	47	5.6	8.2				19	Stop & Go &	L
PM		14	14	2.8	5.1				8	Visitor Center &	L
Eve		20	19	1.8	10.9				11	Coaster Theater &	L

Weekday Running Time by Trip - Loop

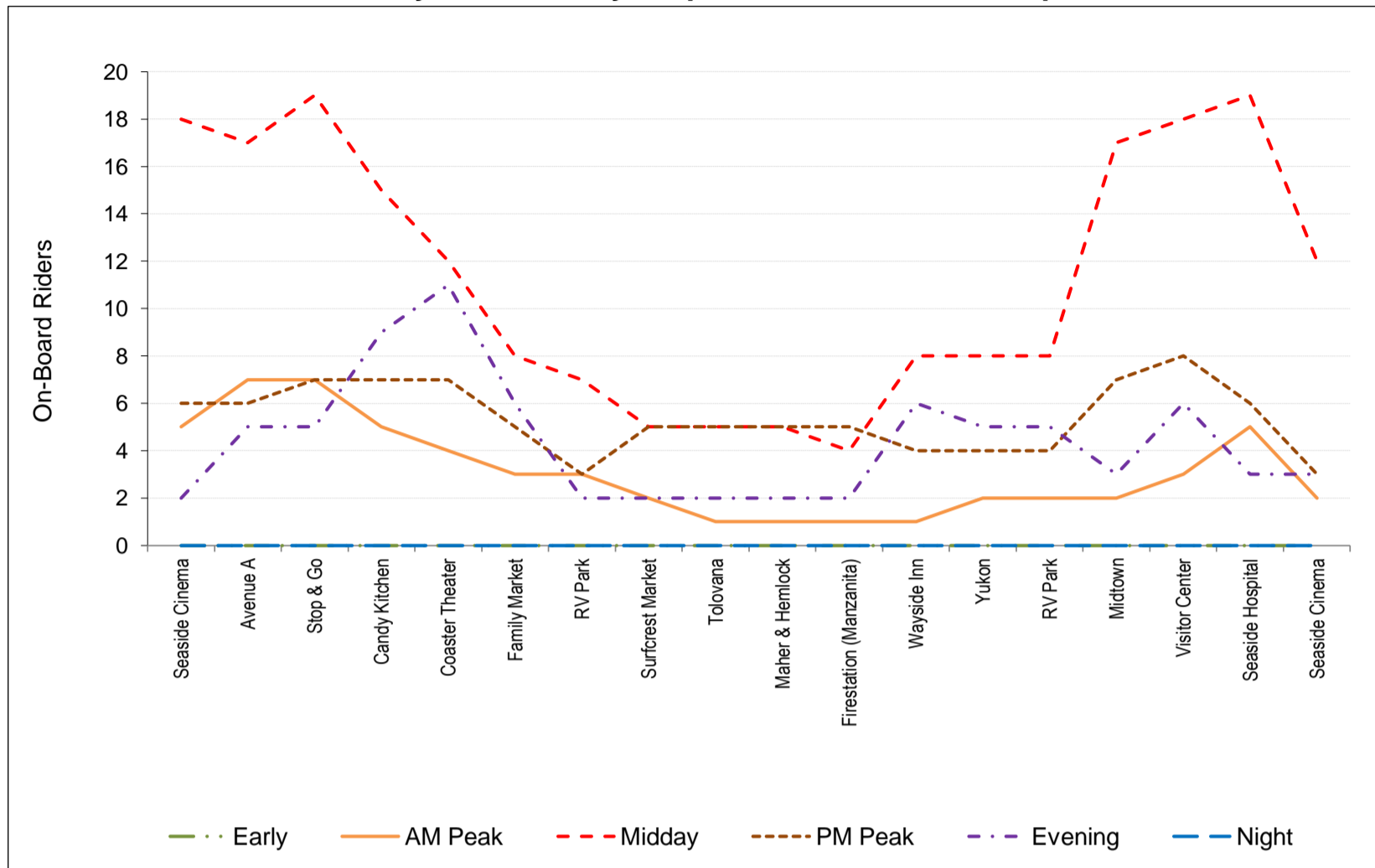


Weekday Boardings and Alightings by Stop - Loop

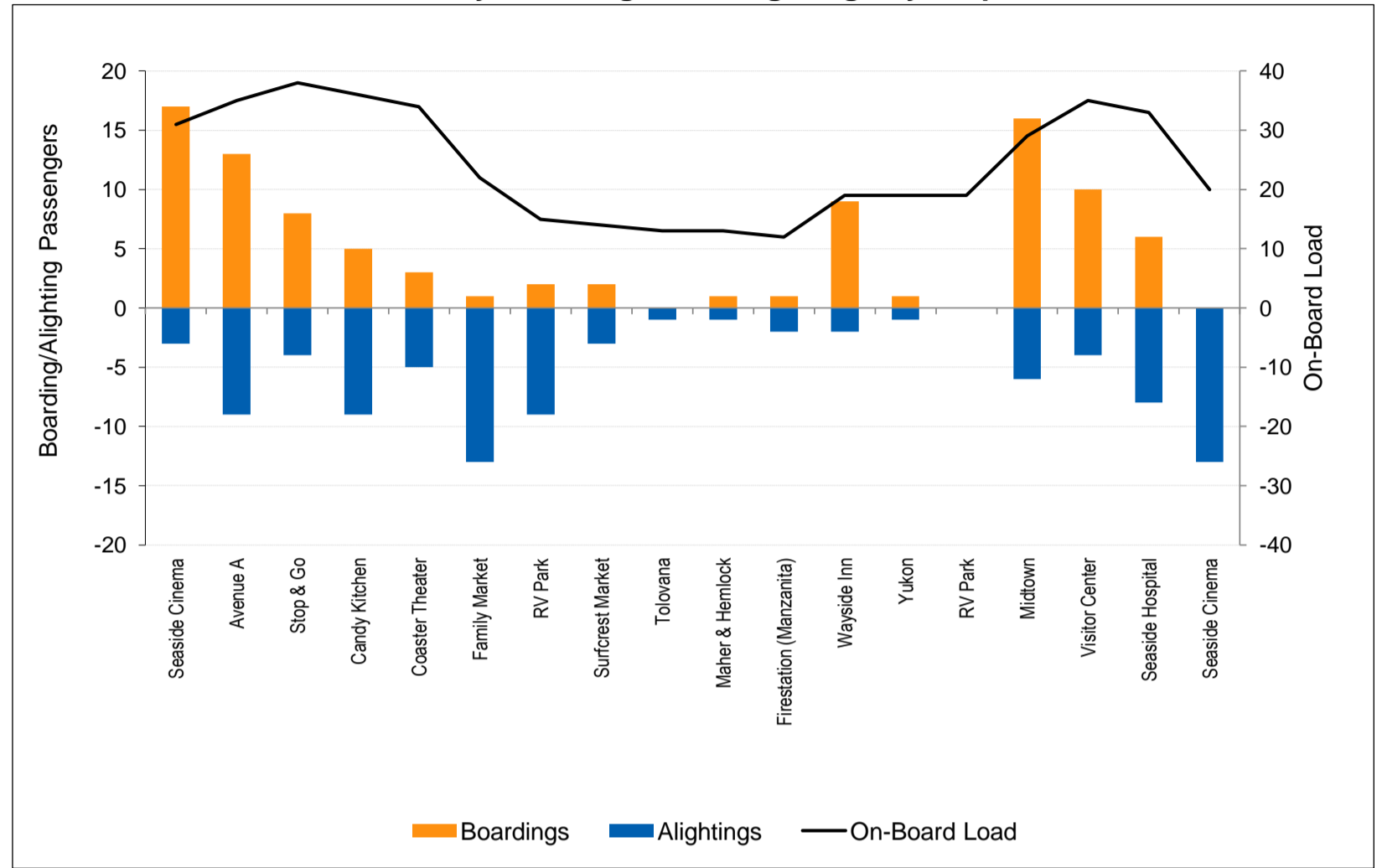




**Weekday On-Board by Stop and Time Period - Loop**



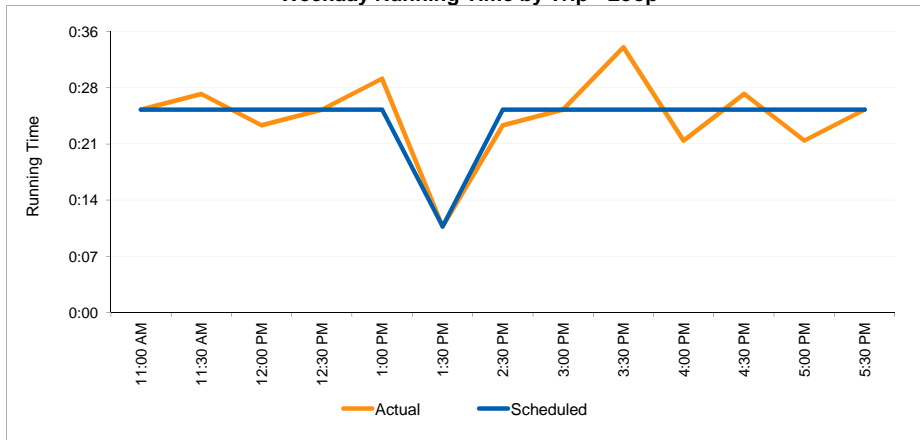
**Weekday Boardings and Alightings by Stop -**



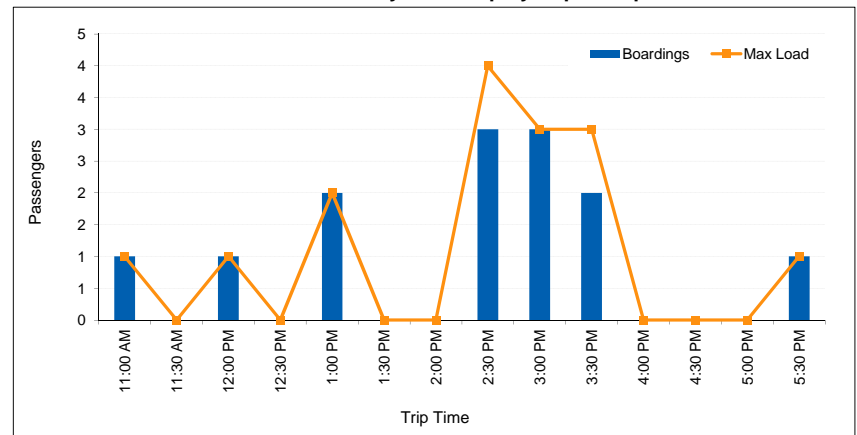
Route 21 Weekday - Summer 2015		Route Productivity Summary			
		Activity	Service Hours	Productivity	
		Boardings	Alightings	Service Hours	Boardings per Service Hour
<b>Total</b>		16	16	6.1	2.6
Loop		16	16	6.1	2.6
<b>By Segment</b>					
1	Les Shirley Park to Coaster Theater	10		0.7	14.3
2	Coaster Theater to Midtown	3		0.5	6.4
3	Midtown to Maher & Hemlock		9	1.4	
4	Maher & Hemlock to RV Park		3	2.0	
5	RV Park to Les Shirley Park &	3	4	1.3	2.3
<b>By Time Period</b>					
	Midday	9	9	3.5	2.6
	PM	7	7	2.6	2.7

Route Operations Summary					
On-Time Performance			On-Board Load		
% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
72%	11%	17%			
45%	22%	33%	13	Coaster Theater &	L
57%	7%	36%			
50%	14%	36%			
36%	29%	36%			
23%	46%	31%			
100%					
			7	Coaster Theater &	L
			6	Candy Kitchen &	L

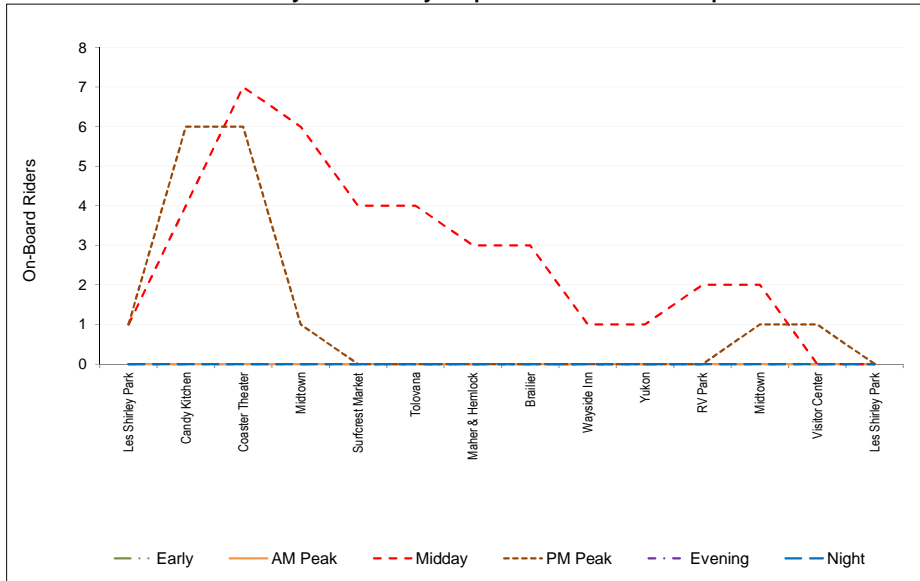
Weekday Running Time by Trip - Loop



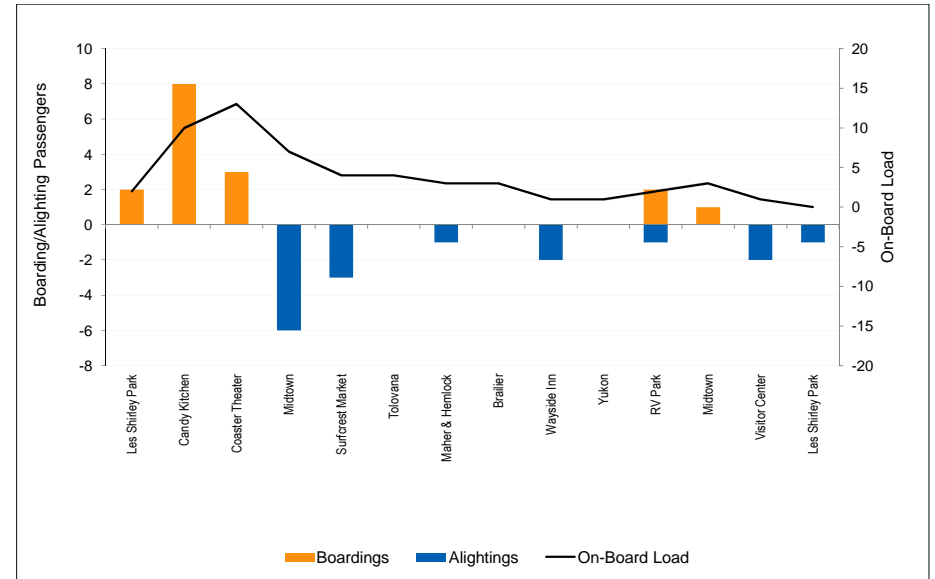
Weekday Ridership by Trip - Loop



**Weekday On-Board by Stop and Time Period - Loop**

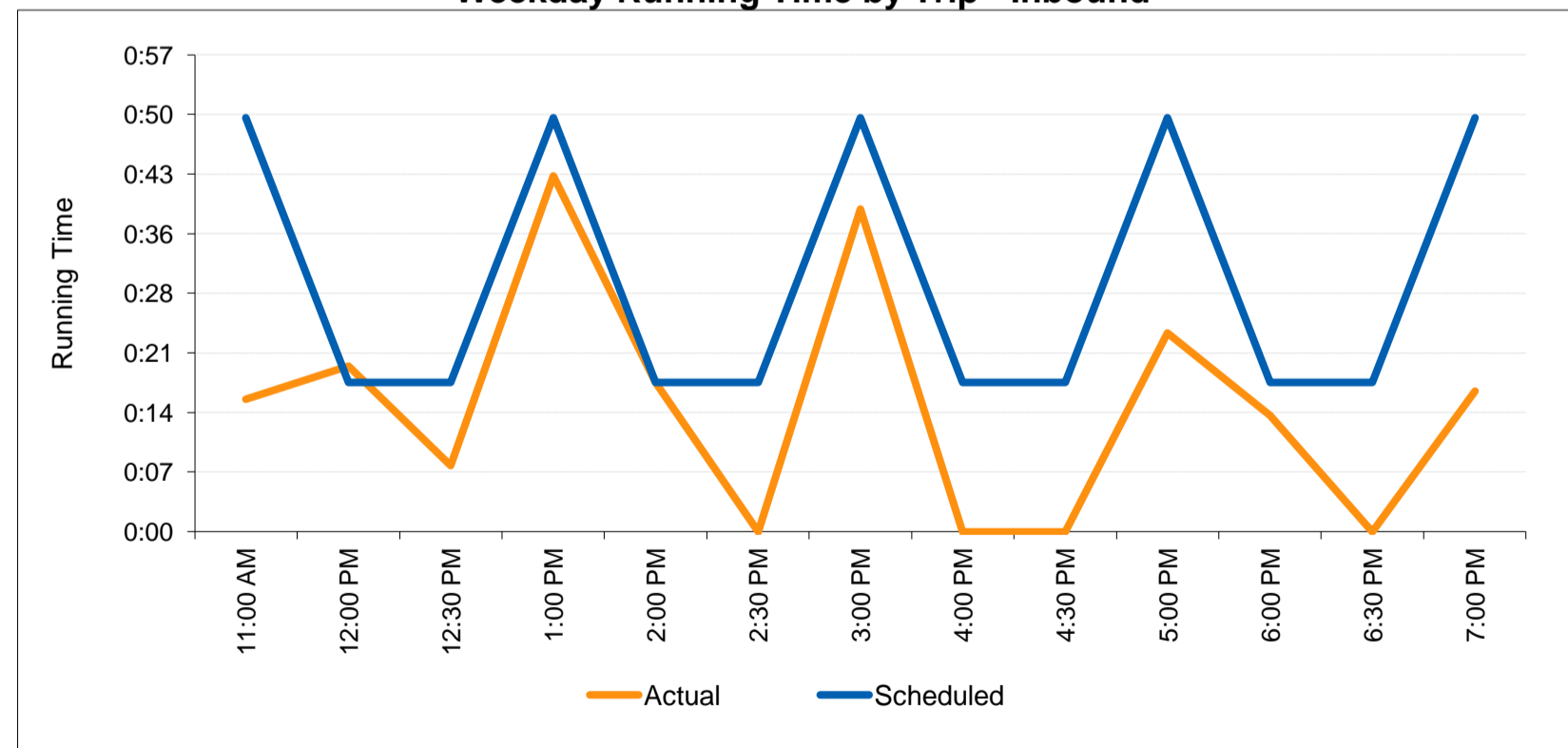


**Weekday Boardings and Alightings by Stop - Loop**

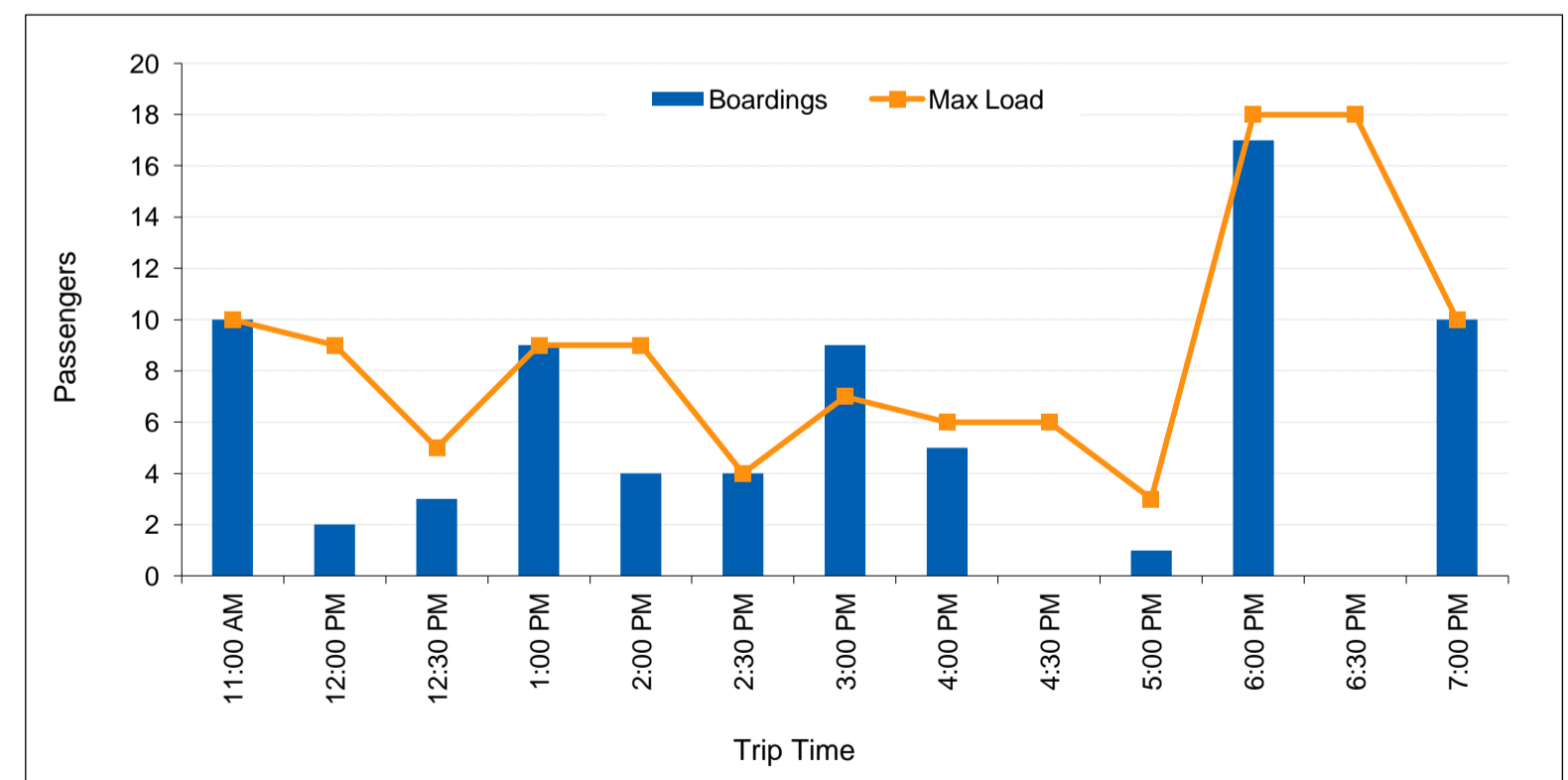


Seaside Trolley Weekday - Summer 2015		Route Productivity Summary				Route Operations Summary					
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		74	74	8.2	9.1	75%	22%	3%	67	Thousand Trails &	I
Inbound		74	74	8.2	9.1	50%	44%	6%	67	Thousand Trails &	I
<b>By Segment</b>											
1	Seaside Cinema to Convention Center	14	7	1.3	10.8	91%	9%				
2	Convention Center to Turnaround	20	26	2.6	7.7		100%				
3	Turnaround to Cove / Trail Head	19	11	0.5	38.0	0%	67%	33%			
4	Cove / Trail Head to Circle Creek			1.2		25%	50%	25%			
5	Circle Creek to Seaside Cinema &	21	30	1.0	21.0	40%	60%				
<b>By Time Period</b>											
	Midday	32	28	3.7	8.7				28	Thousand Trails &	I
	PM	15	18	2.7	5.6				19	Seaside Cinema &	I
	Eve	27	28	1.8	14.7				34	Tides &	I

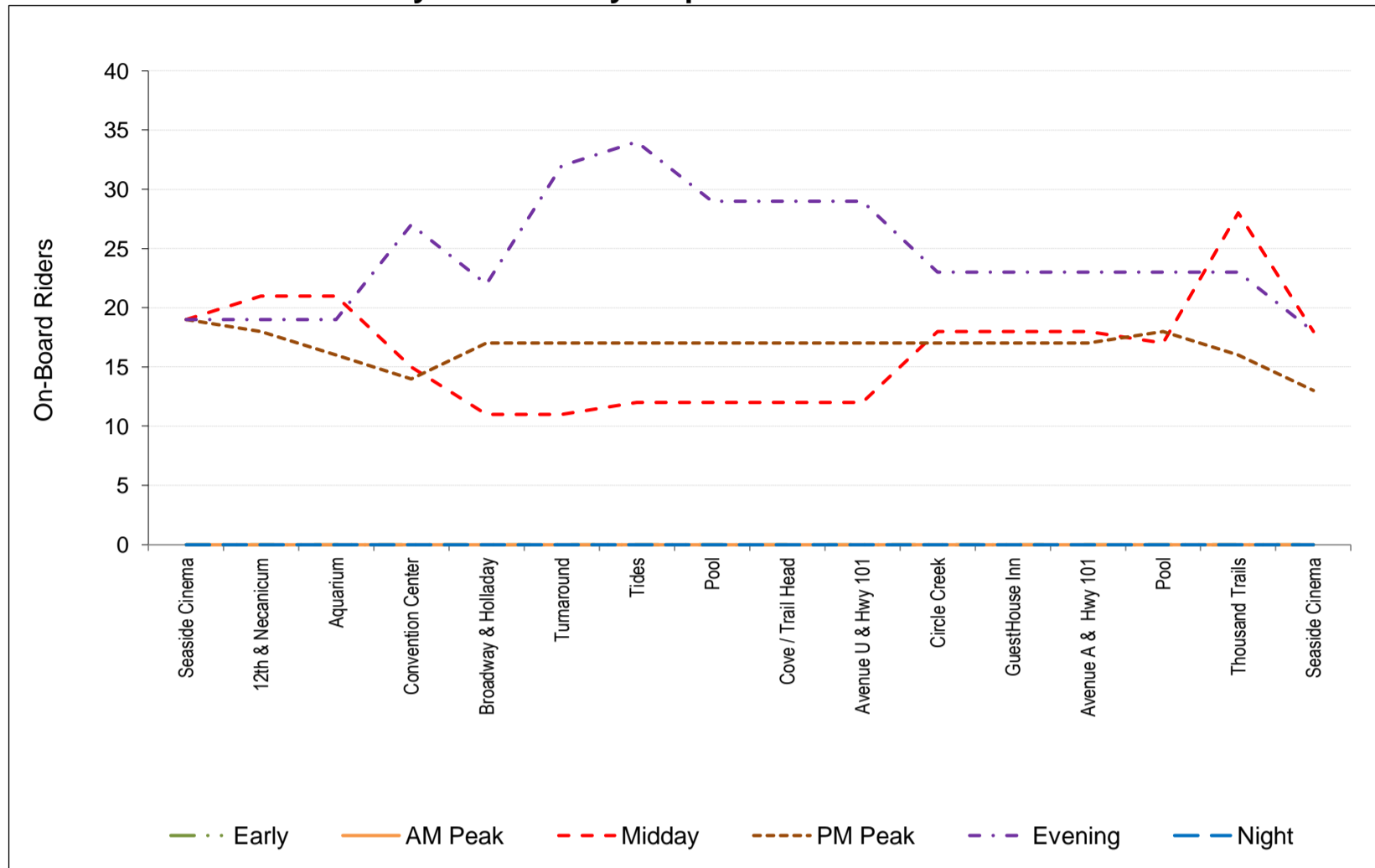
Weekday Running Time by Trip - Inbound



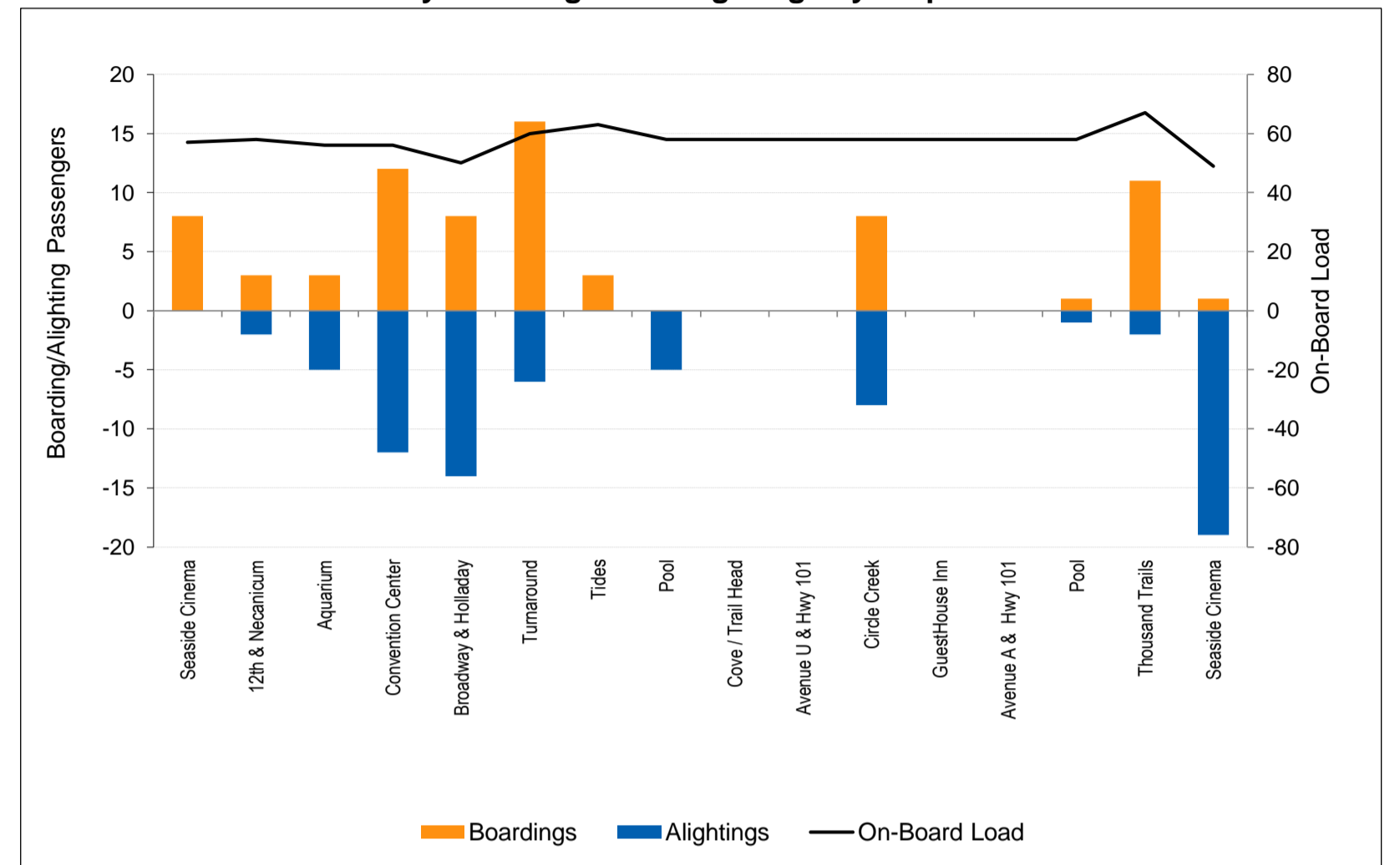
Weekday Ridership by Trip - Inbound



**Weekday On-Board by Stop and Time Period - Inbound**



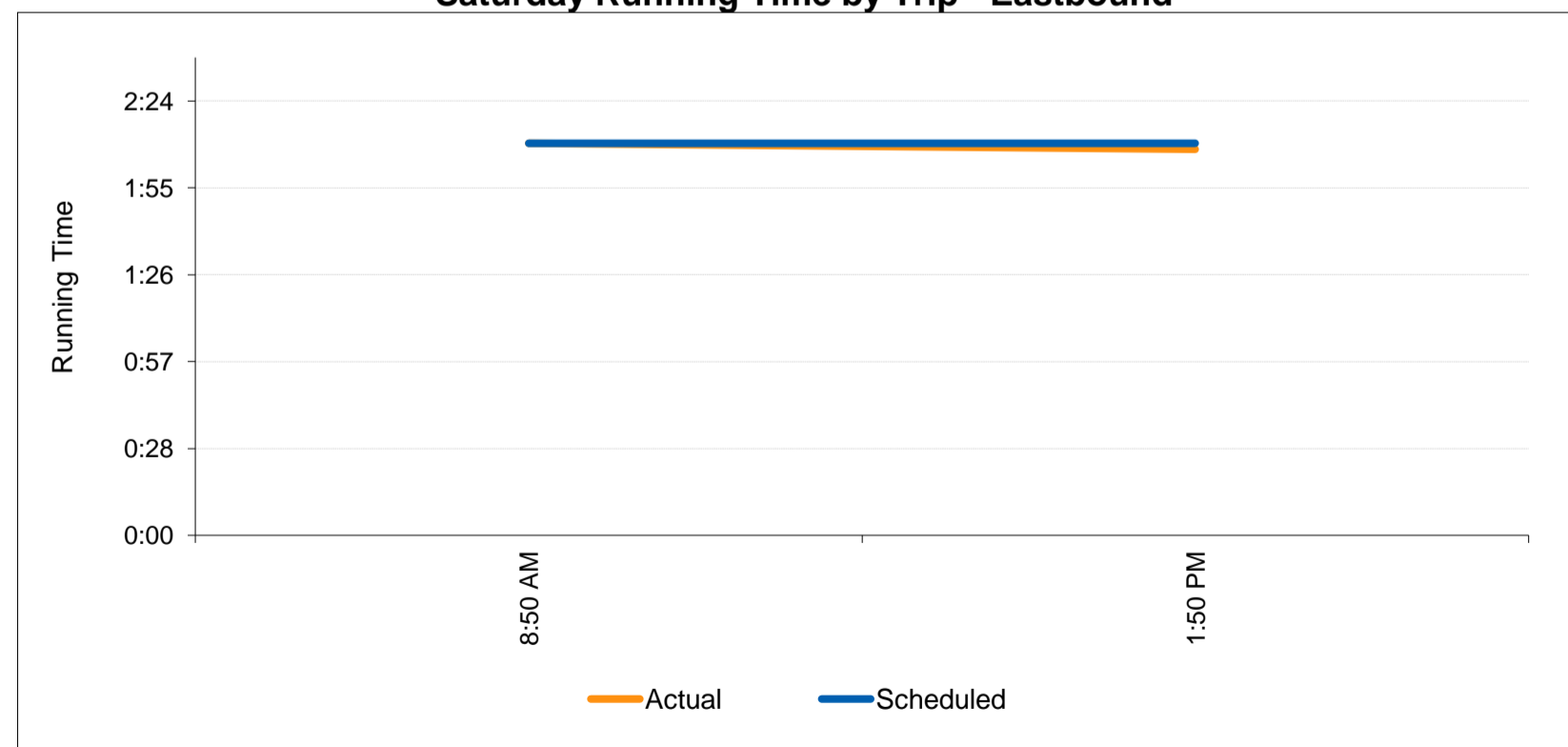
**Weekday Boardings and Alightings by Stop - Outbound**



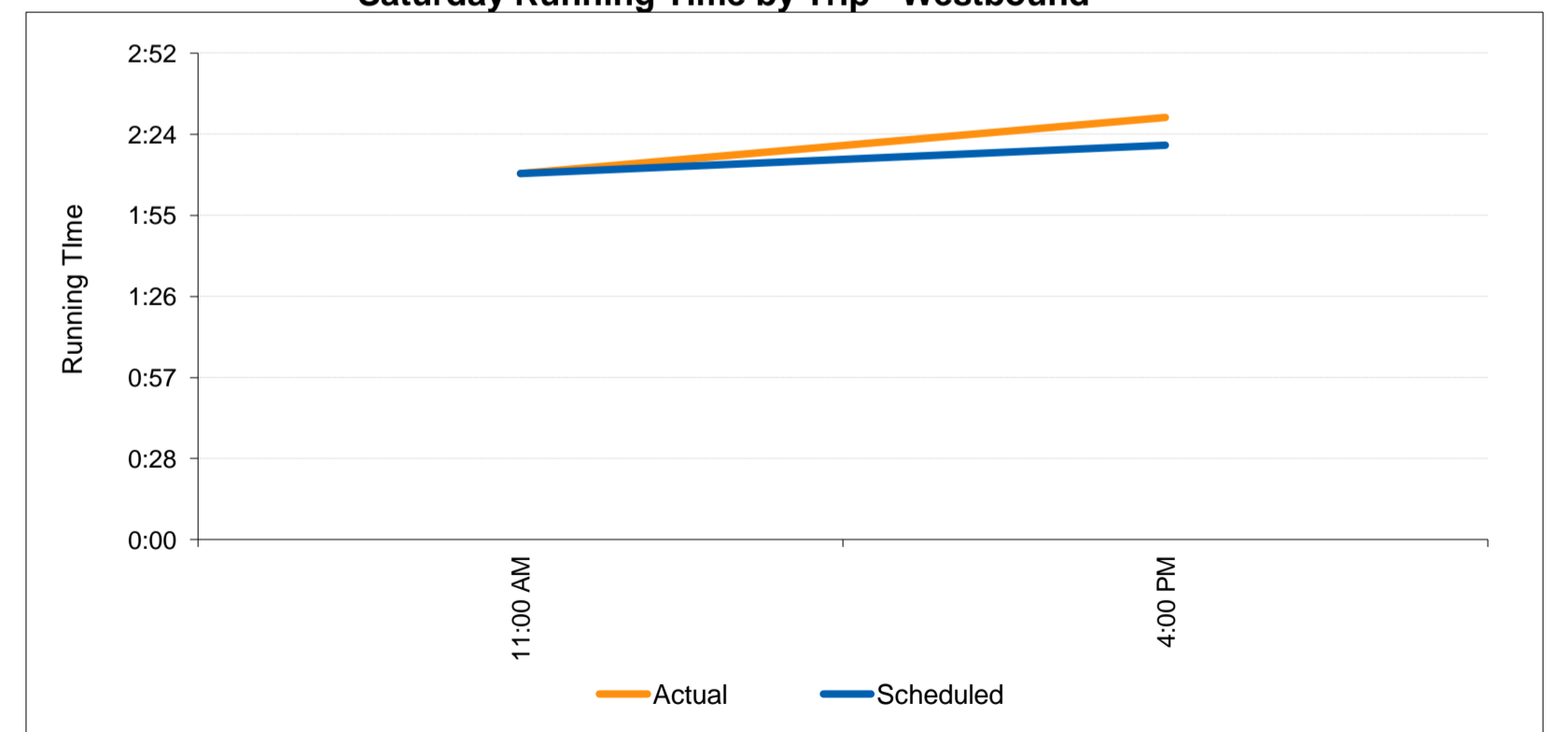
# Weekend Profiles

Route Connector Columbia Saturday - May 2015					Route Productivity Summary				Route Operations Summary						
					Activity		Service Hours	Productivity	On-Time Performance			On-Board Load			
					Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction	
<b>Total</b>					20	21	8.8	2.3	75%	13%	13%	6	Transit Center &	E	
Eastbound					16	16	4.3	3.7	62%	25%	12%	6	Transit Center &	E	
Westbound					4	5	4.5	0.9	87%	0%	13%	3	Safeway &	W	
<b>By Segment</b>															
1 Warrenton Mini Mart to Fred Meyer					6	4	1.6	3.8	75%		25%				
2 Fred Meyer to Transit Center					2	3	0.7	3.0	67%		33%				
3 Transit Center to Safeway					6	3	0.5	12.9	75%		25%				
4 Safeway to Westport					2	1	2.2	0.9	75%		25%				
5 Westport to Safeway (Clatskanie) &						1	1.0		75%	25%					
6 Safeway (Clatskanie) & to River City Transit Transfer Ctr							2.2		50%	50%					
7 River City Transit Transfer Ctr to Kelso Amtrak Station						4	0.8		75%	25%					
<b>By Time Period</b>															
Midday					18	18	6.5	2.8				6	Transit Center &	E	
PM					2	3	2.3	0.9				1	Knappa Market &	W	

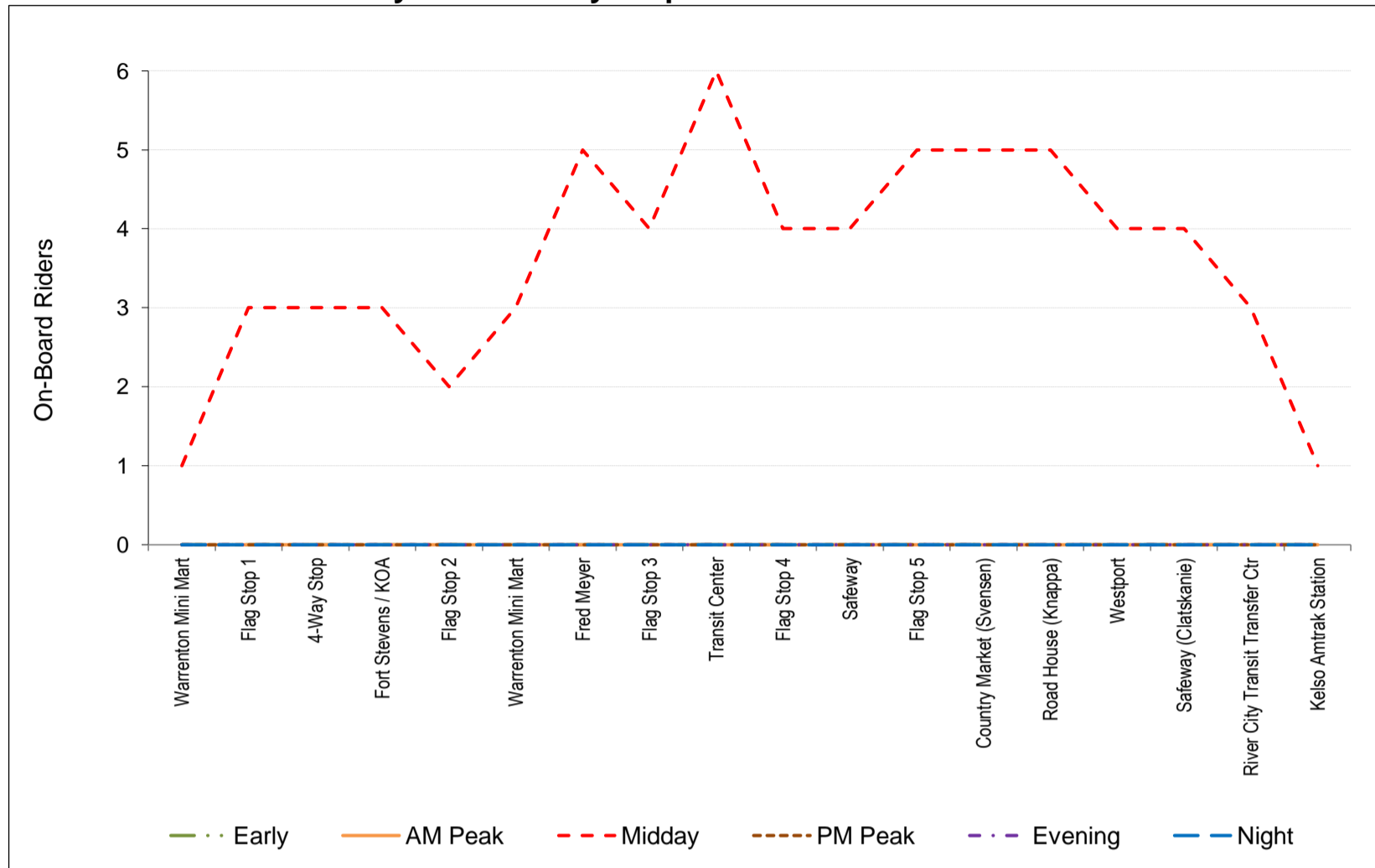
Saturday Running Time by Trip - Eastbound



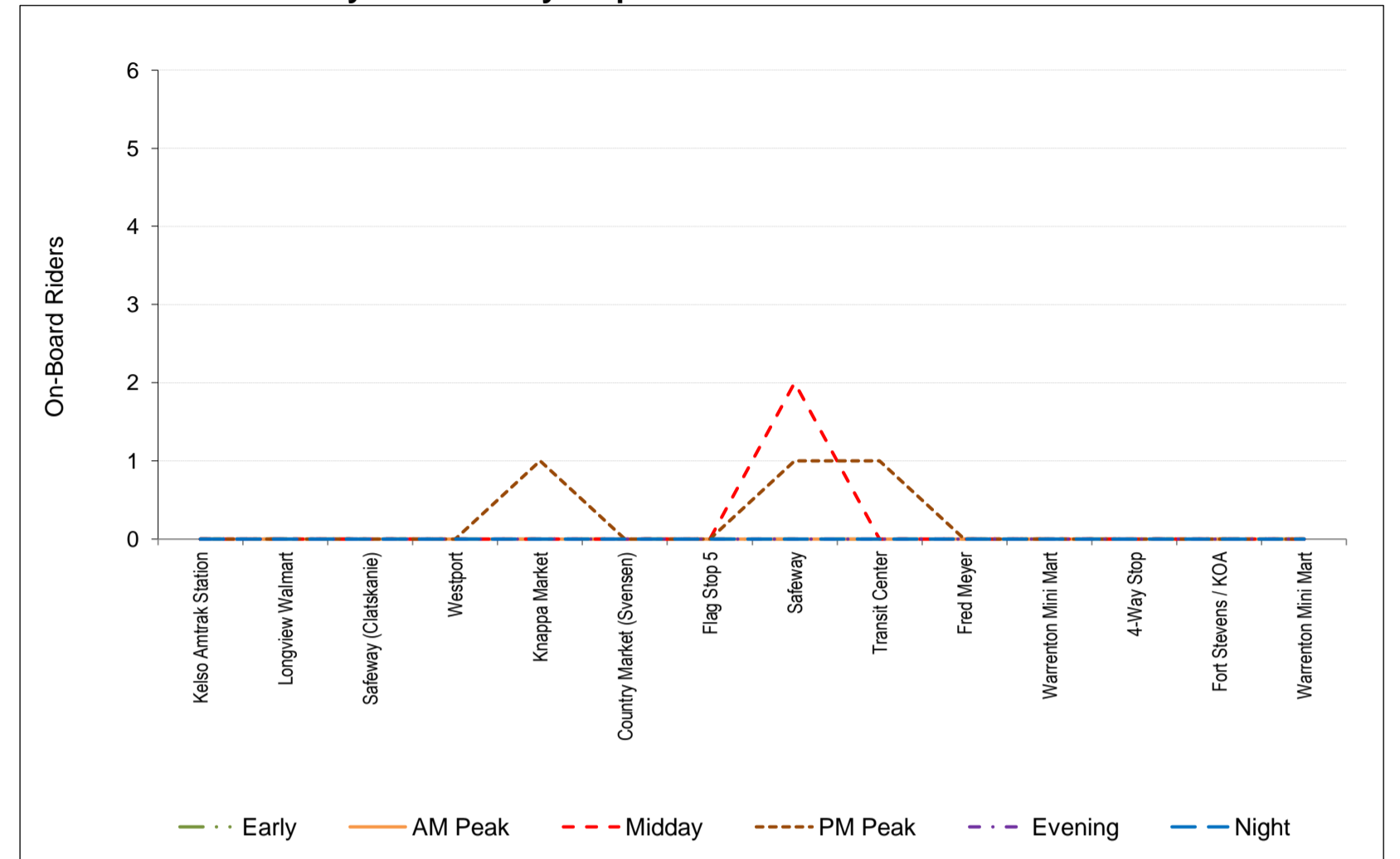
Saturday Running Time by Trip - Westbound



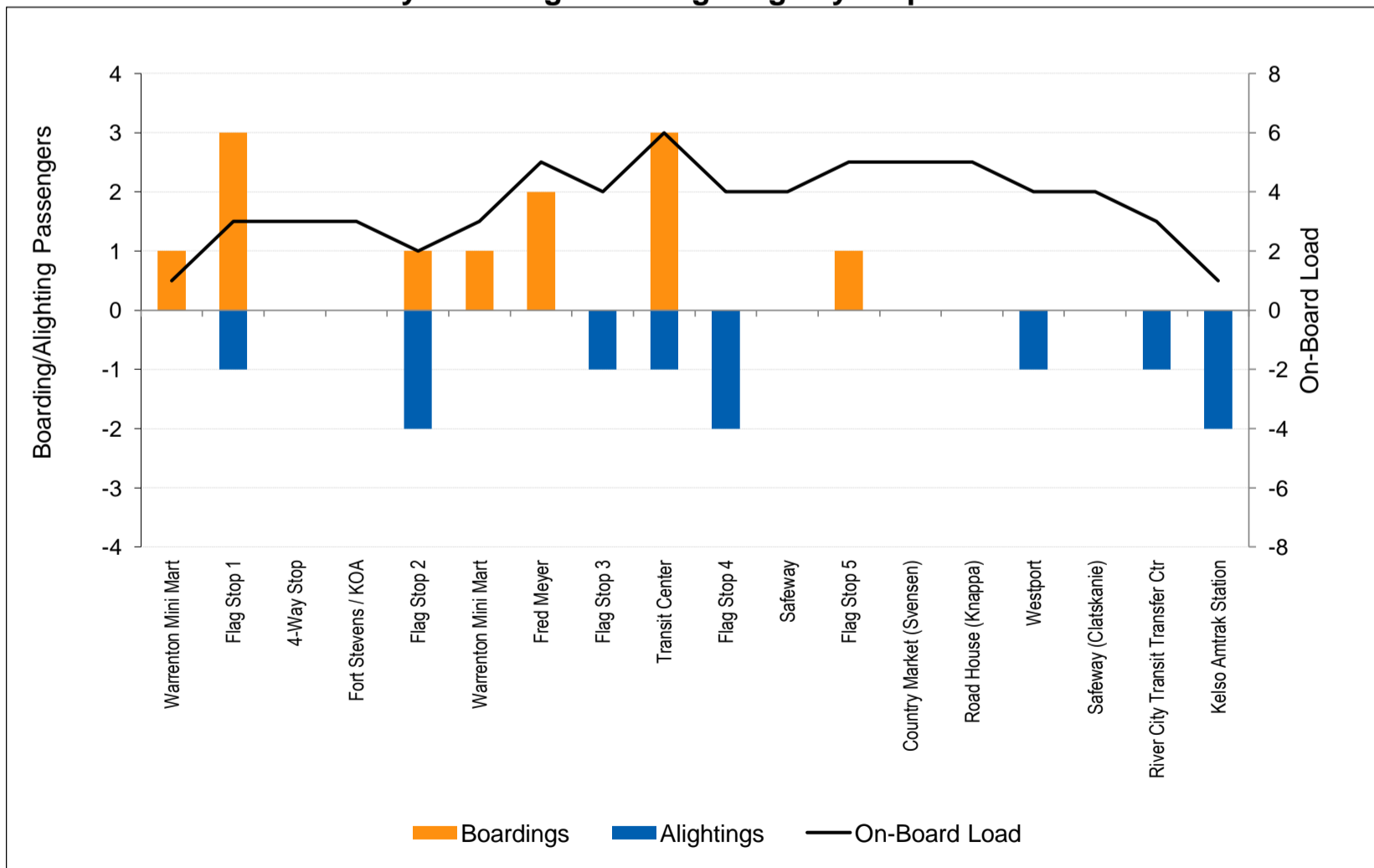
**Saturday On-Board by Stop and Time Period - Eastbound**



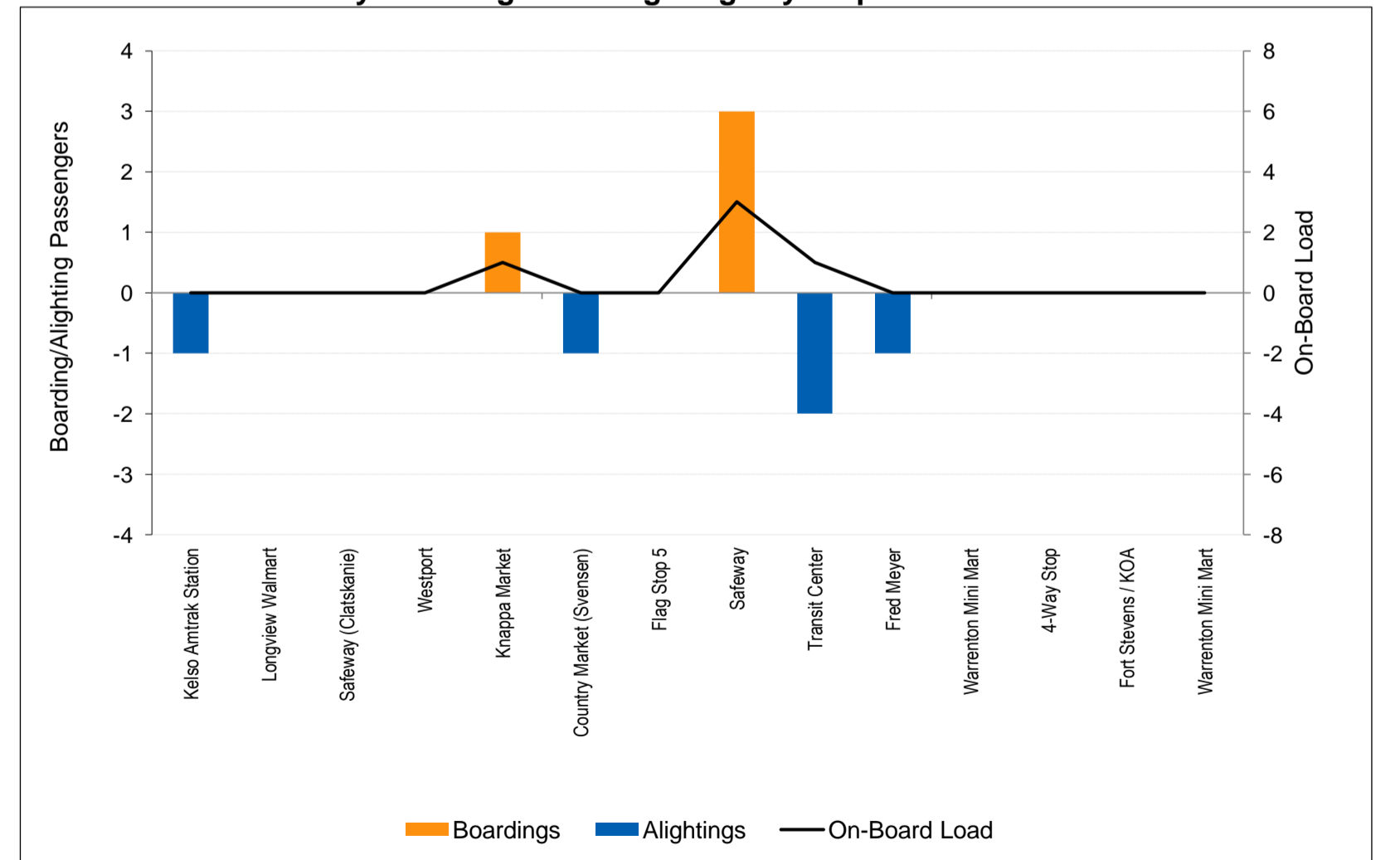
**Saturday On-Board by Stop and Time Period - Westbound**



**Saturday Boardings and Alightings by Stop - Eastbound**

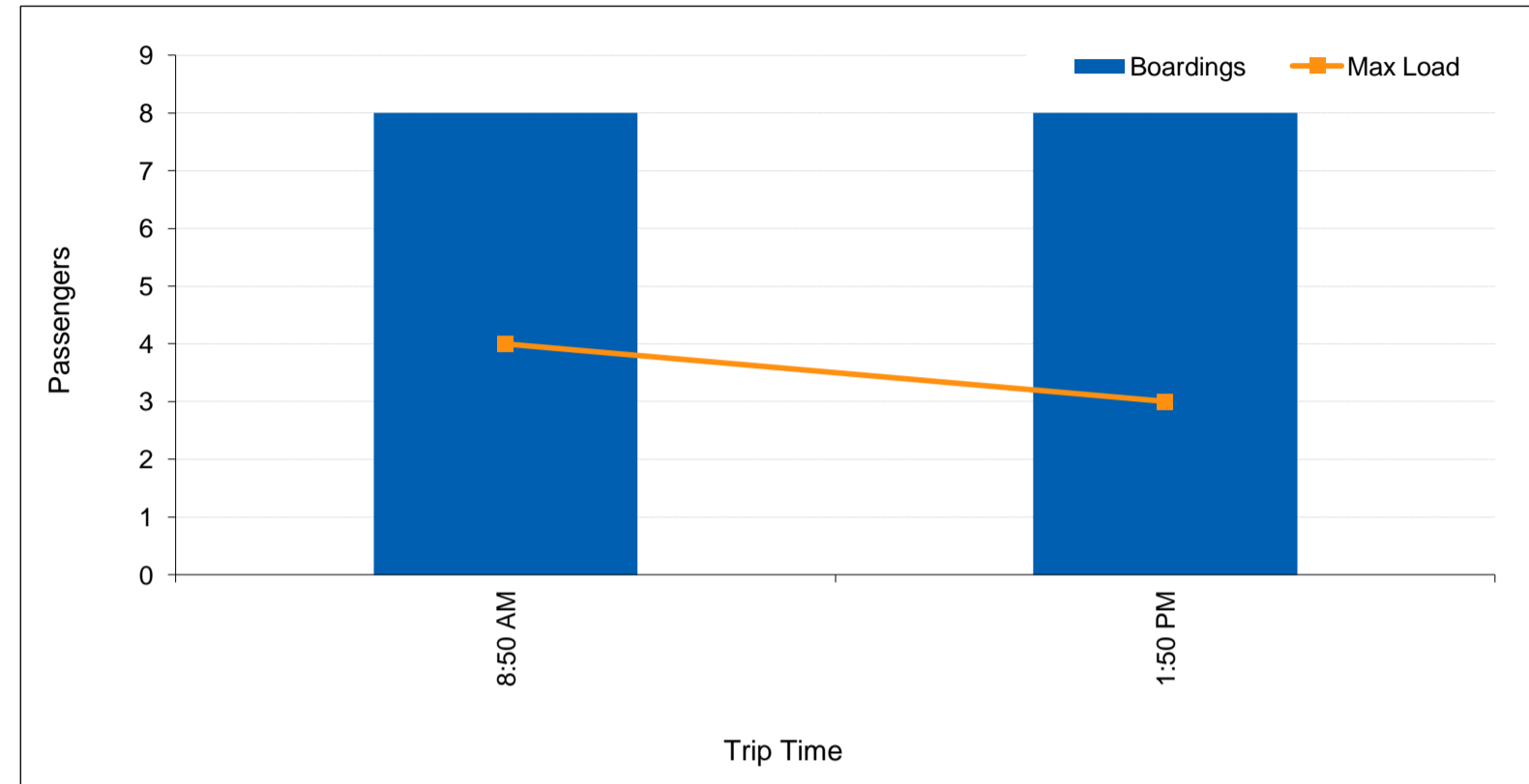


**Saturday Boardings and Alightings by Stop - Westbound**

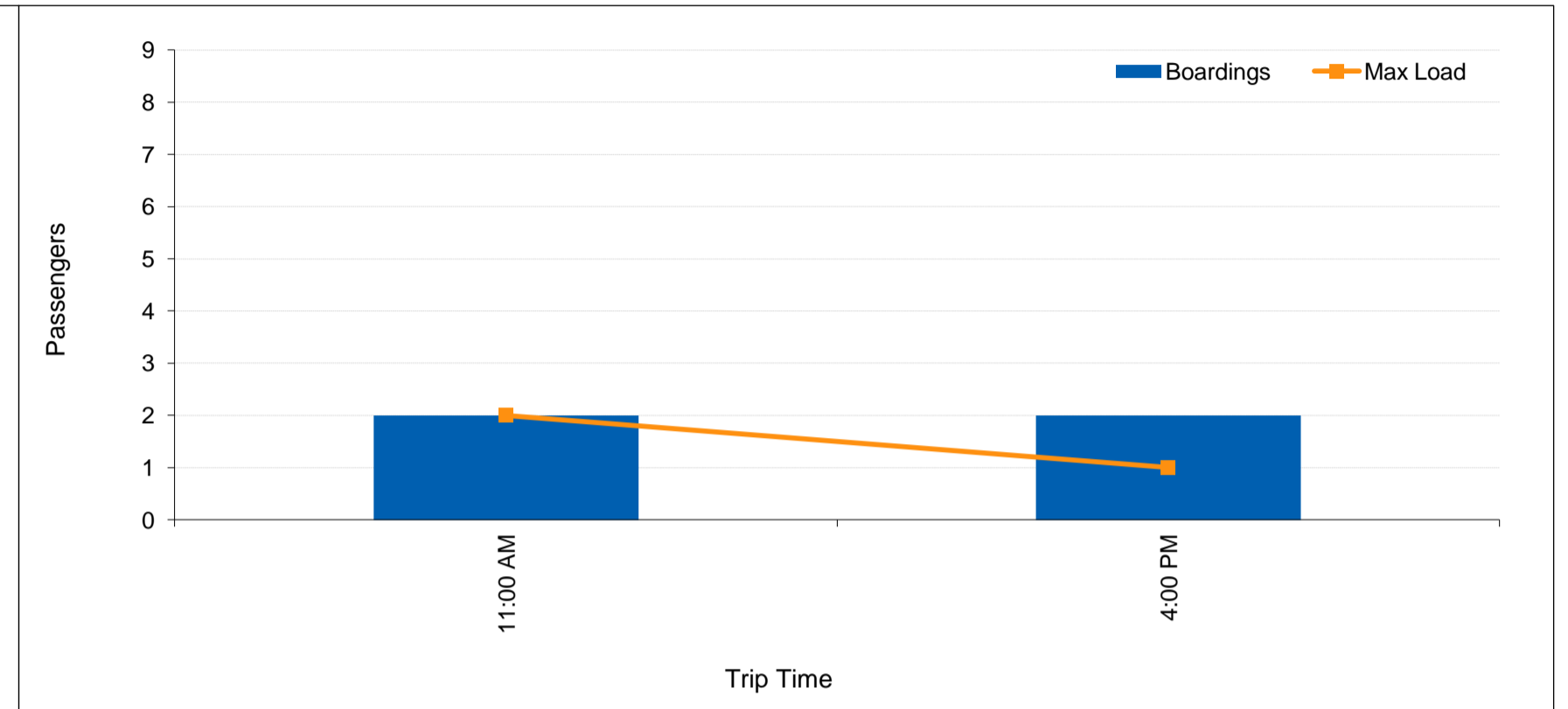




Saturday Ridership by Trip - Eastbound

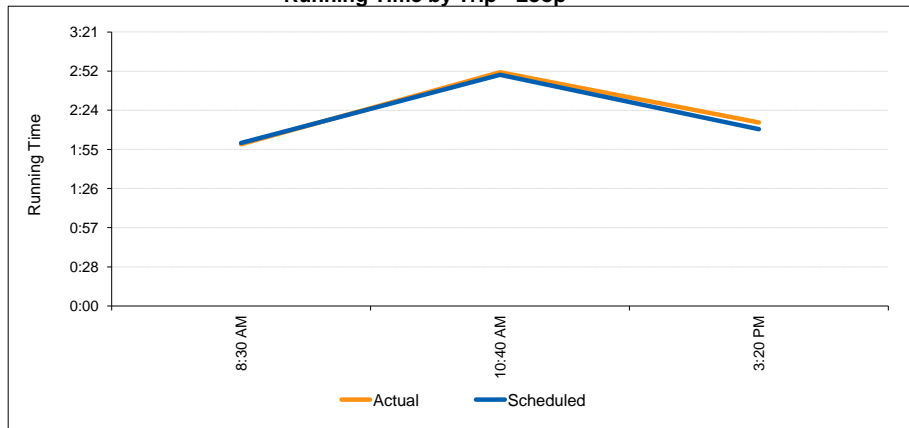


Saturday Ridership by Trip - Westbound

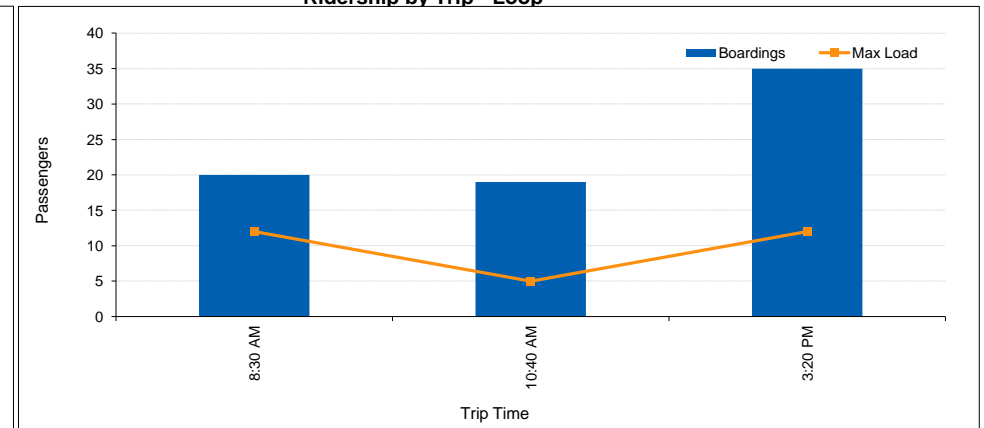


Pacific Connector (Weekend - May 2015)		Route Productivity Summary			Route Operations Summary						
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		74	74	7.0	10.6	87%	10%	3%	24	Fast Lube &	L
Loop		74	74	7.0	10.6	87%	10%	3%	24	Fast Lube &	L
<b>By Segment</b>											
1	Transit Center to Fred Meyer	24		0.5	48.0	100%					
2	Fred Meyer to Sunset Beach	5	14	0.5	10.0	100%					
3	Sunset Beach to Seaside Cinema	10	5	0.7	13.3	0%	67%	33%			
4	Seaside Cinema to Family Market	6	20	1.0	6.0	100%					
5	Family Market to Visitors Center &	9	6	1.6	5.8	100%					
6	Visitors Center & to Seaside Cinema	10	8	0.8	11.8	100%					
7	Seaside Cinema to Sunset Beach		2	0.7		100%					
8	Sunset Beach to Fred Meyer	4	3	0.7	5.7	67%	33%				
9	Fred Meyer to Transit Center	6	16	0.5	12.0	100%					
<b>By Time Period</b>											
Midday		39	39	4.8	8.1				14	West Lake &	L
PM		35	35	2.2	16.2				12	Transit Center &	L

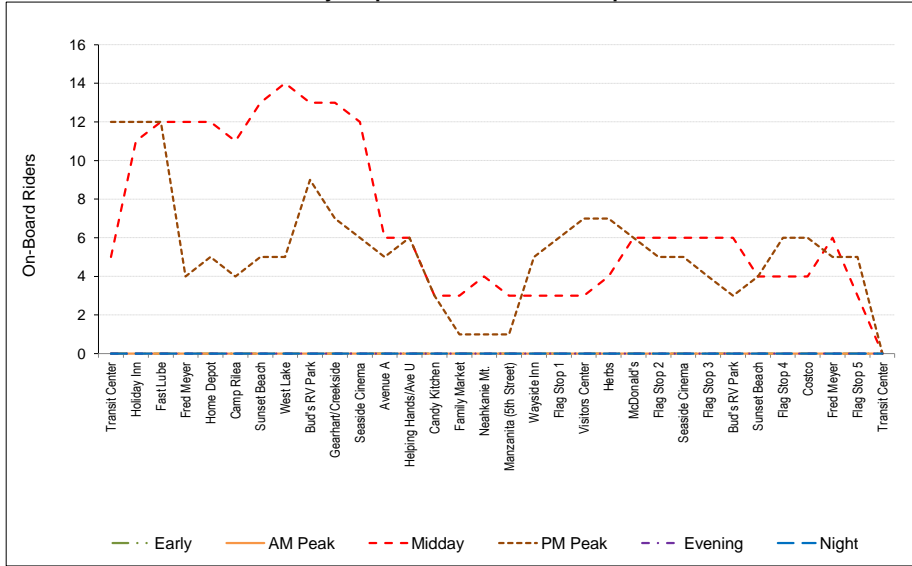
Running Time by Trip - Loop



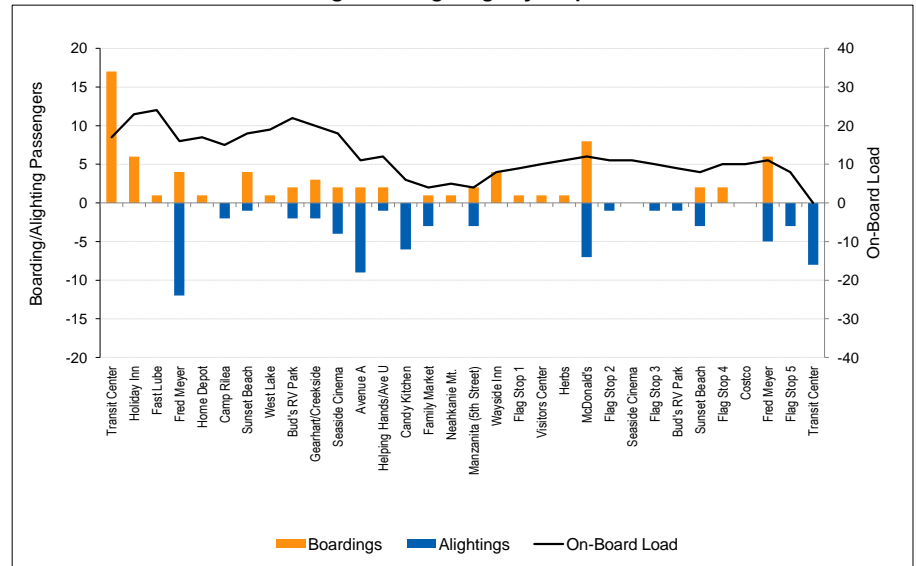
Ridership by Trip - Loop



**On-Board by Stop and Time Period - Loop**

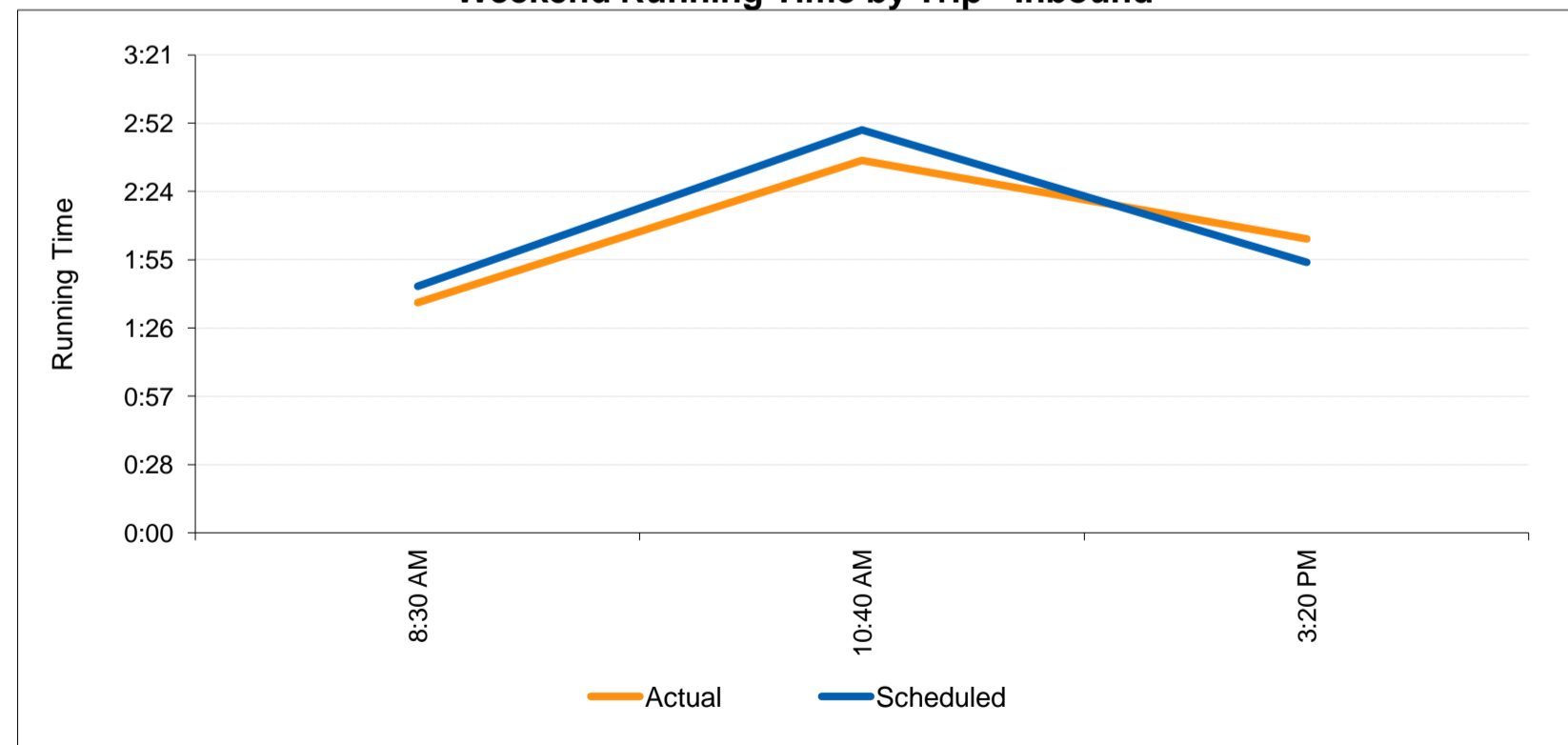


**Boardings and Alightings by Stop**

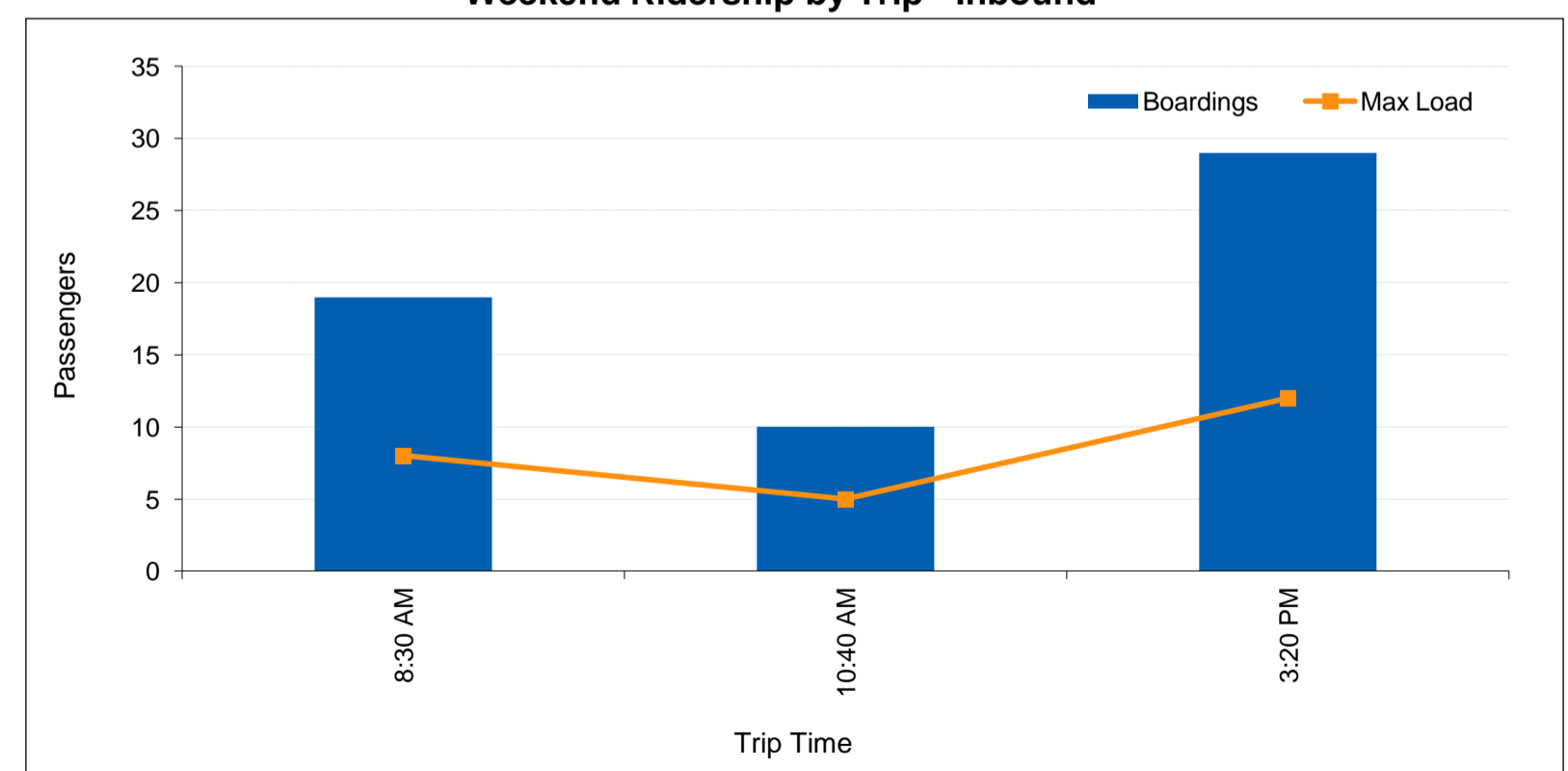


Pacific Connector (Weekend - Summer 2015)		Route Productivity Summary			Route Operations Summary						
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		58	57	7.0	8.3	77%	0%	23%	22	Seaside Cinema &	I
Inbound		58	57	7.0	8.3	55%	0%	45%	22	Seaside Cinema &	I
<b>By Segment</b>											
1	Transit Center to Fred Meyer	11		0.5	22.0	67%		33%			
2	Fred Meyer to Sunset Beach	6	3	0.5	12.0	67%		33%			
3	Sunset Beach to Seaside Cinema	4	2	0.7	5.3	67%		33%			
4	Seaside Cinema to Family Market	5	14	1.0	5.0	67%		33%			
5	Family Market to Manzanita (5th Street) &	4	2	0.4	9.6			100%			
6	Manzanita (5th Street) & to Visitors Center	9	5	0.6	15.0	33%		67%			
7	Visitors Center to Seaside Cinema	11	4	0.8	12.9			67%			
8	Seaside Cinema to Fred Meyer	5	11	1.4	3.7	67%		33%			
9	Fred Meyer to Transit Center	3	16	0.5	6.0	100%					
<b>By Time Period</b>											
	Midday	29	29	4.8	6.0				10	Sunset Beach &	I
	PM	29	28	2.2	13.4				12	McDonald's &	I

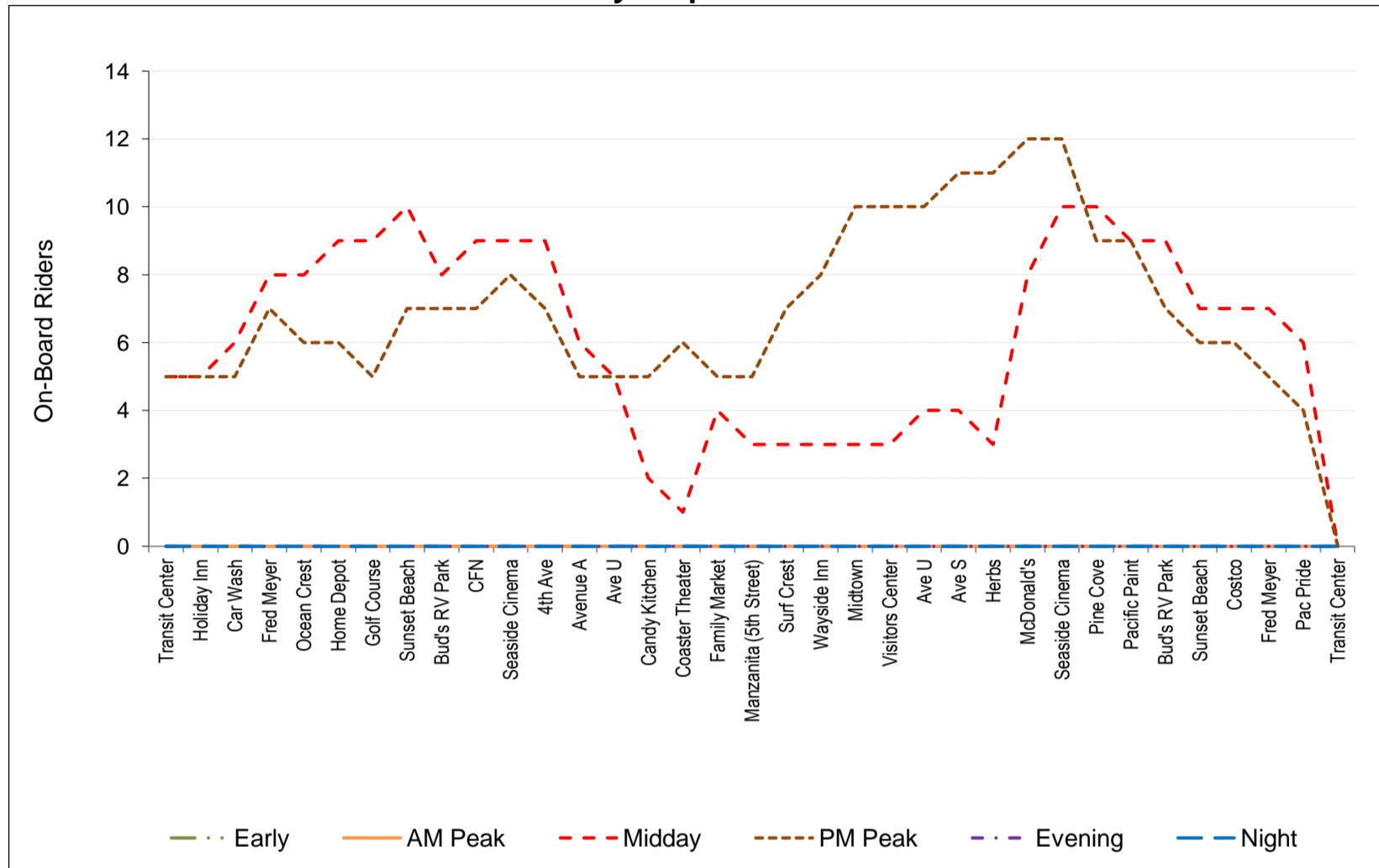
Weekend Running Time by Trip - Inbound



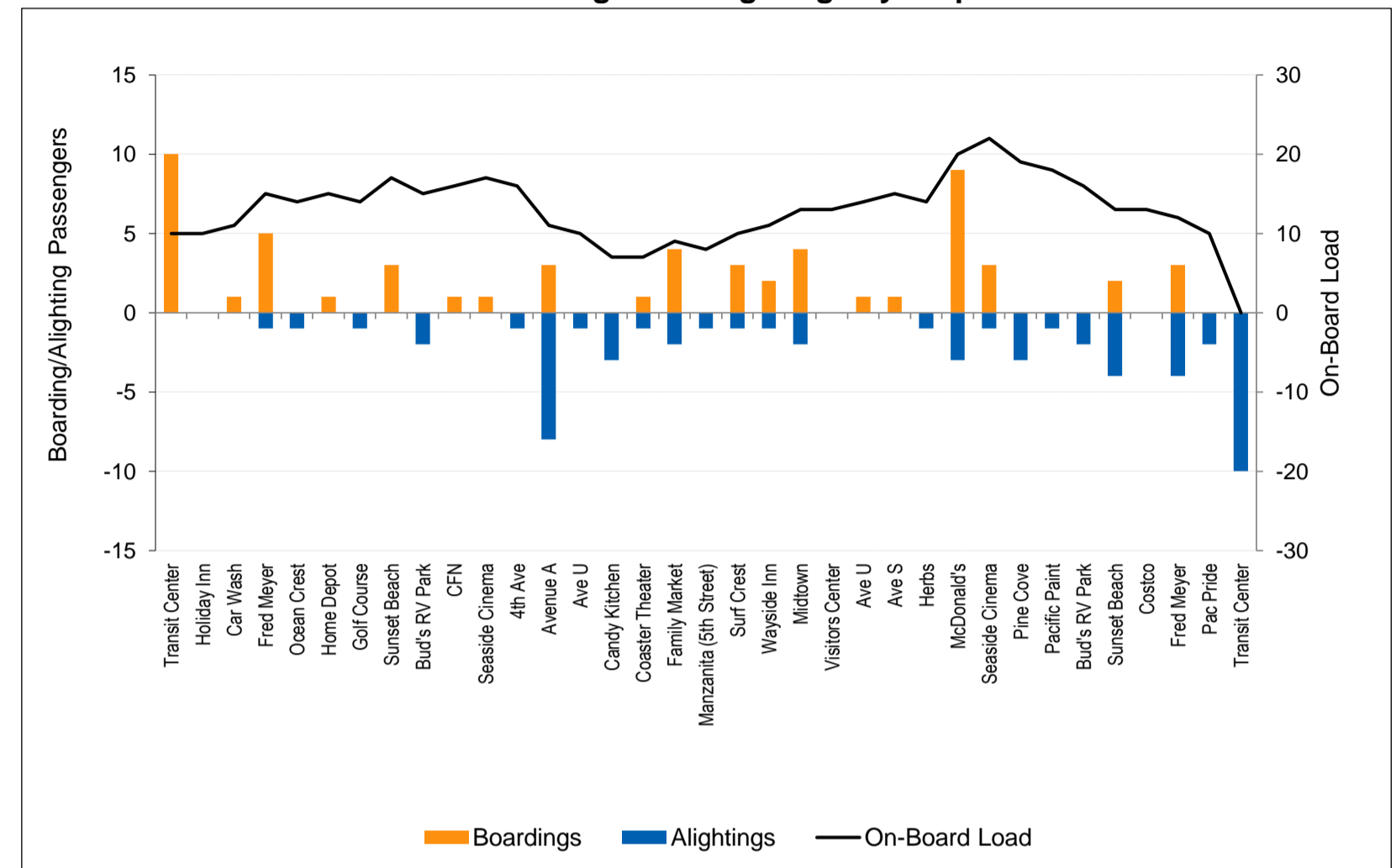
Weekend Ridership by Trip - Inbound



**Weekend On-Board by Stop and Time Period - Inbound**

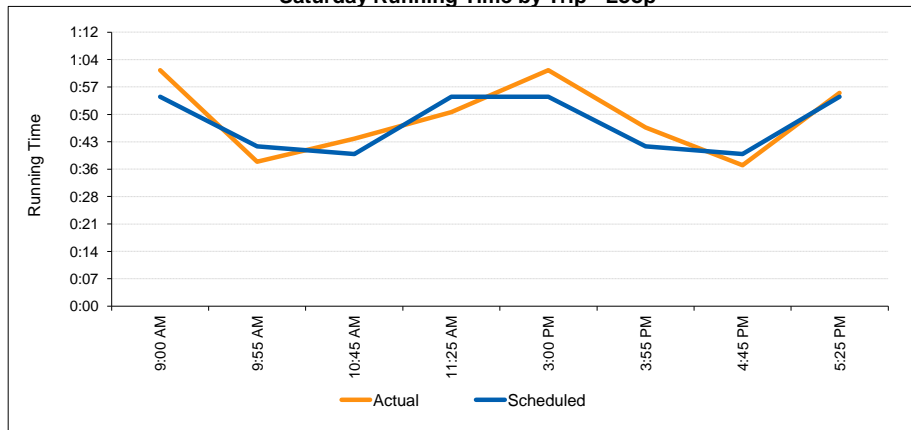


**Weekend Boardings and Alightings by Stop - Inbound**

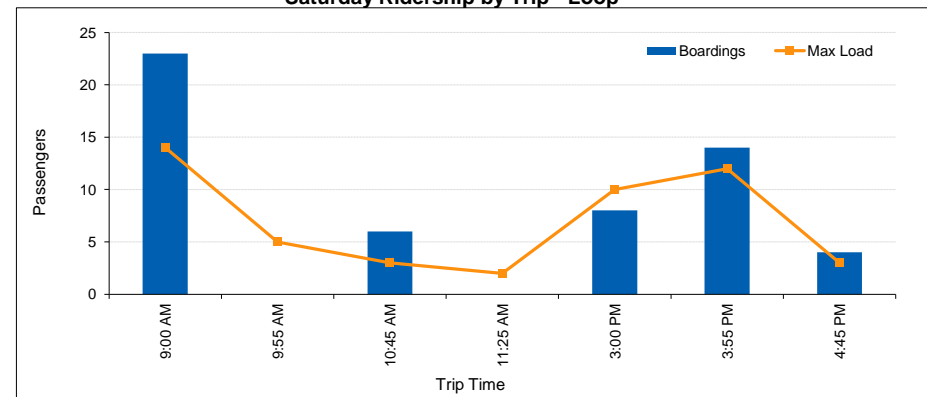


Route 21 Saturday - May 2015		Route Productivity Summary			Route Operations Summary						
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		66	67	6.4	10.3	80%	9%	11%	32	Avenue A &	L
Loop		66	67	6.4	10.3	80%	9%	11%	32	Avenue A &	L
<b>By Segment</b>											
1	Seaside Cinema to Coaster Theater	31	24	1.9	16.0	88%	13%				
2	Coaster Theater to Midtown	2	3	0.3	6.7	100%					
3	Midtown to Maher & Hemlock	1	9	0.8	1.3	100%					
4	Maher & Hemlock to RV Park	6	4	1.2	5.0	75%	25%				
5	RV Park to Visitor Center &	11	14	0.5	20.6	88%		13%			
6	Visitor Center & to Seaside Hospital	10	2	0.9	11.5	75%		25%			
7	Seaside Hospital to Seaside Cinema	5	2	0.3	15.0	25%	25%	50%			
8	Seaside Cinema to McDonald's		9	0.4		100%					
<b>By Time Period</b>											
	Midday	29	29	3.2	9.1				16	Ave P &	L
	PM	37	38	3.2	11.6				18	Avenue A &	L

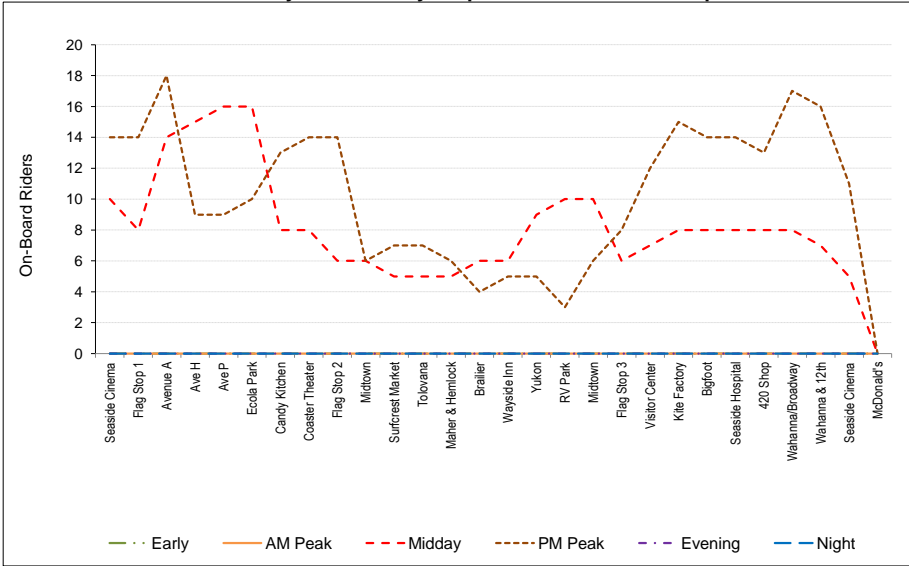
Saturday Running Time by Trip - Loop



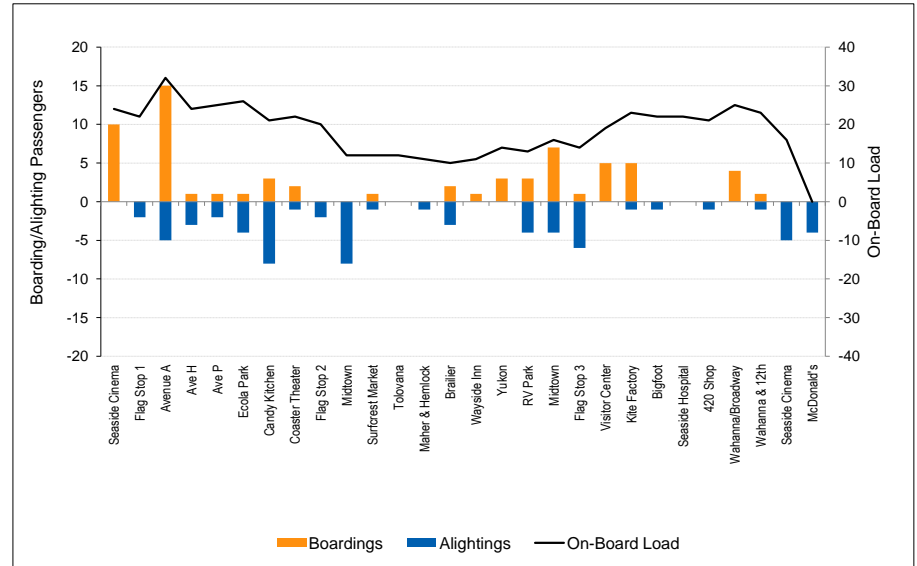
Saturday Ridership by Trip - Loop



Saturday On-Board by Stop and Time Period - Loop

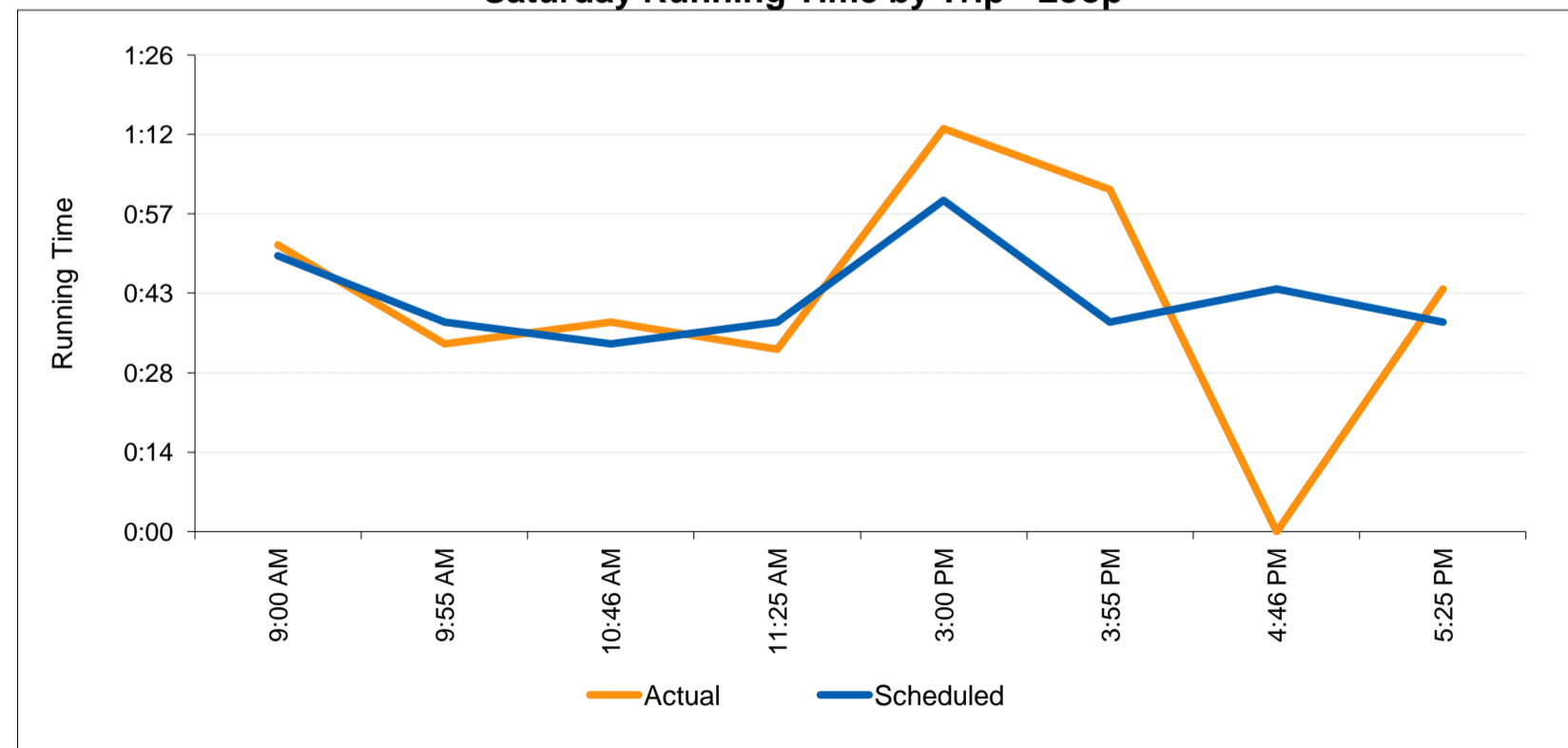


Saturday Boardings and Alightings by Stop -

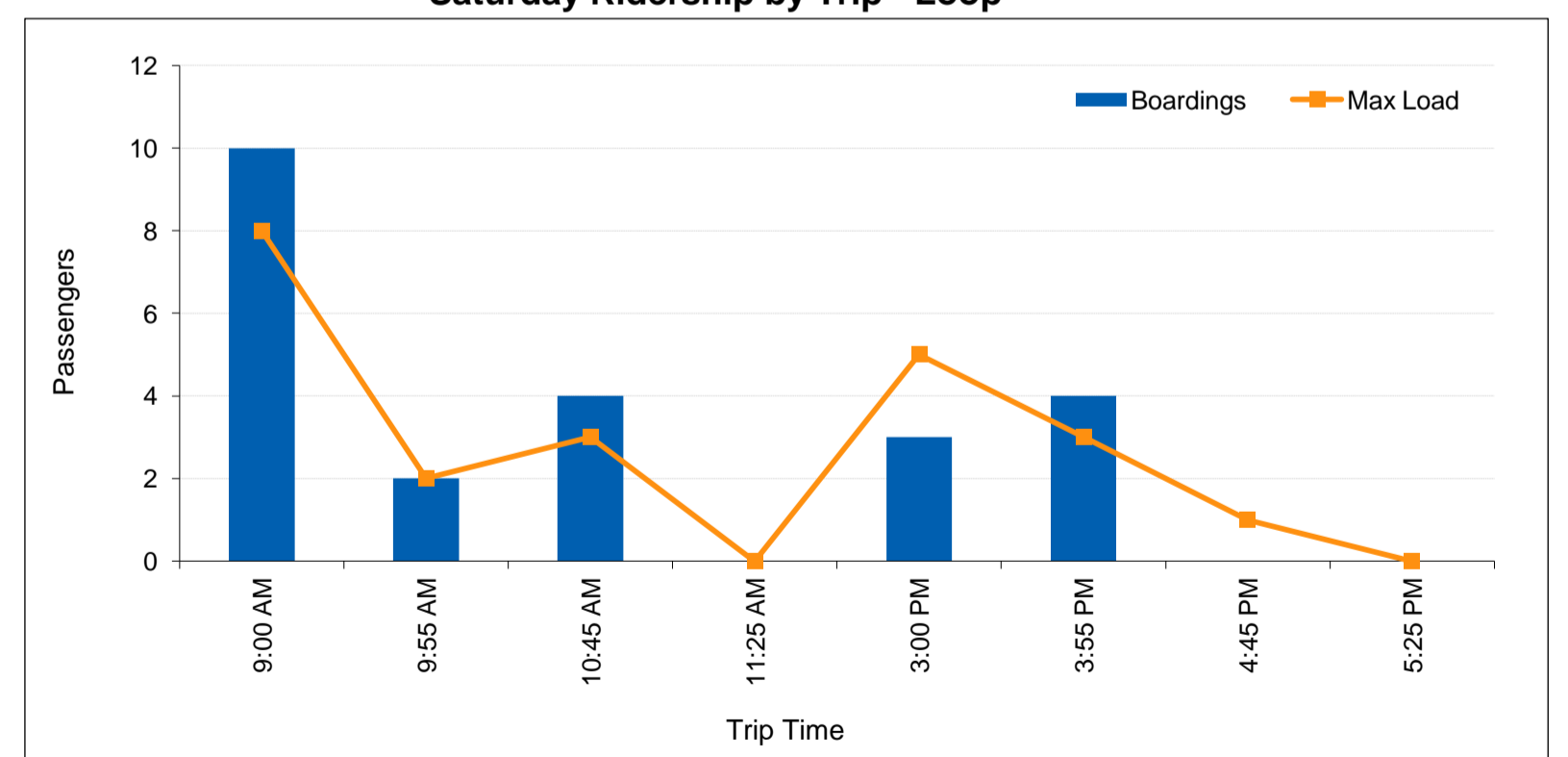


Route 21 Saturday (Summer 2015)		Route Productivity Summary				Route Operations Summary					
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		31	32	6.7	4.6	65%	9%	26%	16	Ave. I &	L
Loop		31	32	6.7	4.6	31%	18%	51%	16	Ave. I &	L
<b>By Segment</b>											
1	Seaside Cinema to Coaster Theater	6	1	1.9	3.1	13%	25%	63%			
2	Coaster Theater to Midtown	7	1	0.3	26.2	33%	17%	50%			
3	Midtown to Maher & Hemlock	2	4	0.8	2.5	29%	14%	57%			
4	Maher & Hemlock to RV Park	1	3	1.2	0.8	29%	29%	43%			
5	RV Park to Seaside Hospital &	3	4	1.1	2.6	33%	33%	33%			
6	Seaside Hospital & to Avenue A (McDonald's)	0	6	0.3	0.0	0%	0%	100%			
<b>By Time Period</b>											
	Midday	16	18	3.4	4.8				10	Ave. I &	L
	PM	15	14	3.4	4.5				8	Candy Kitchen &	L

Saturday Running Time by Trip - Loop

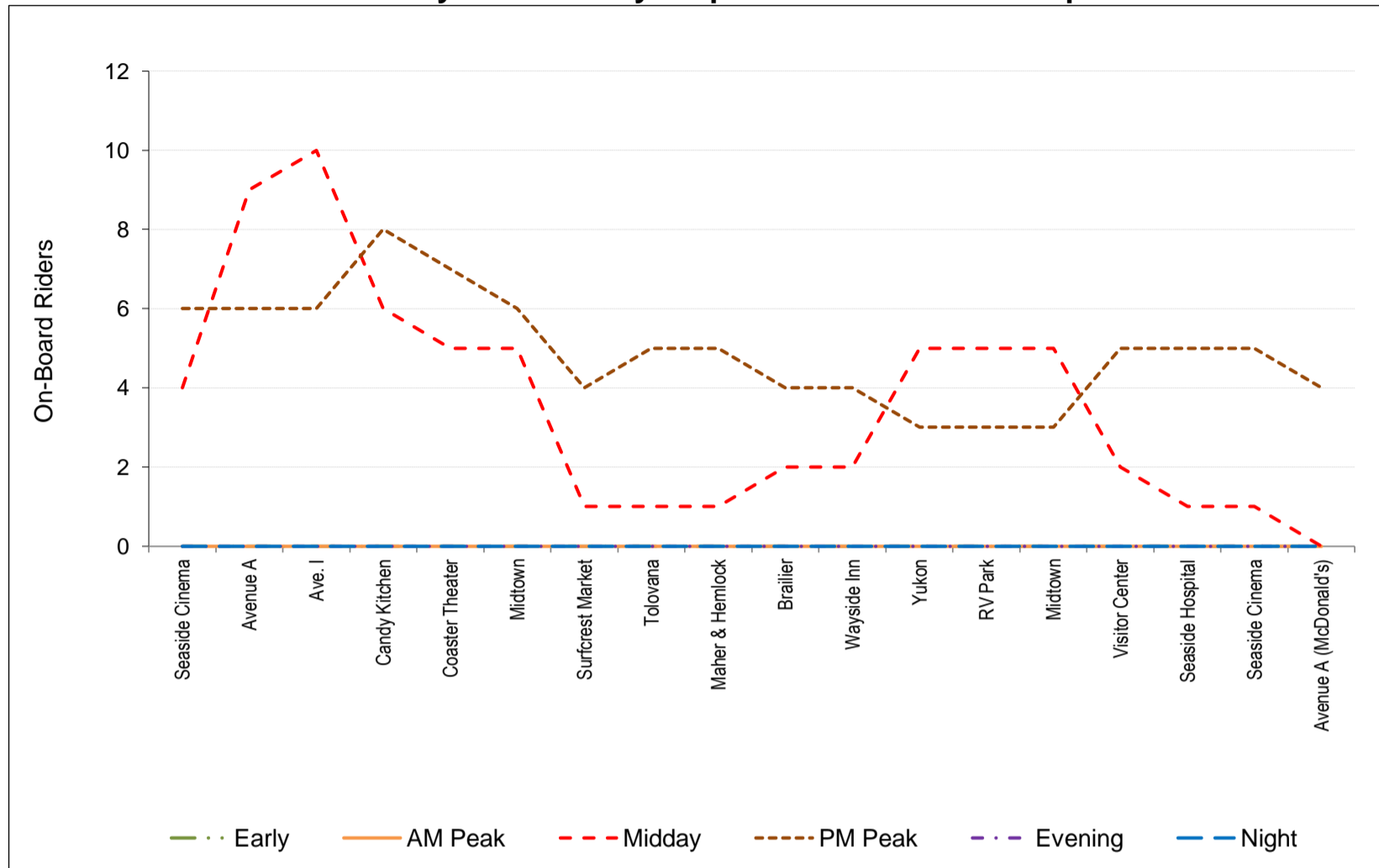


Saturday Ridership by Trip - Loop

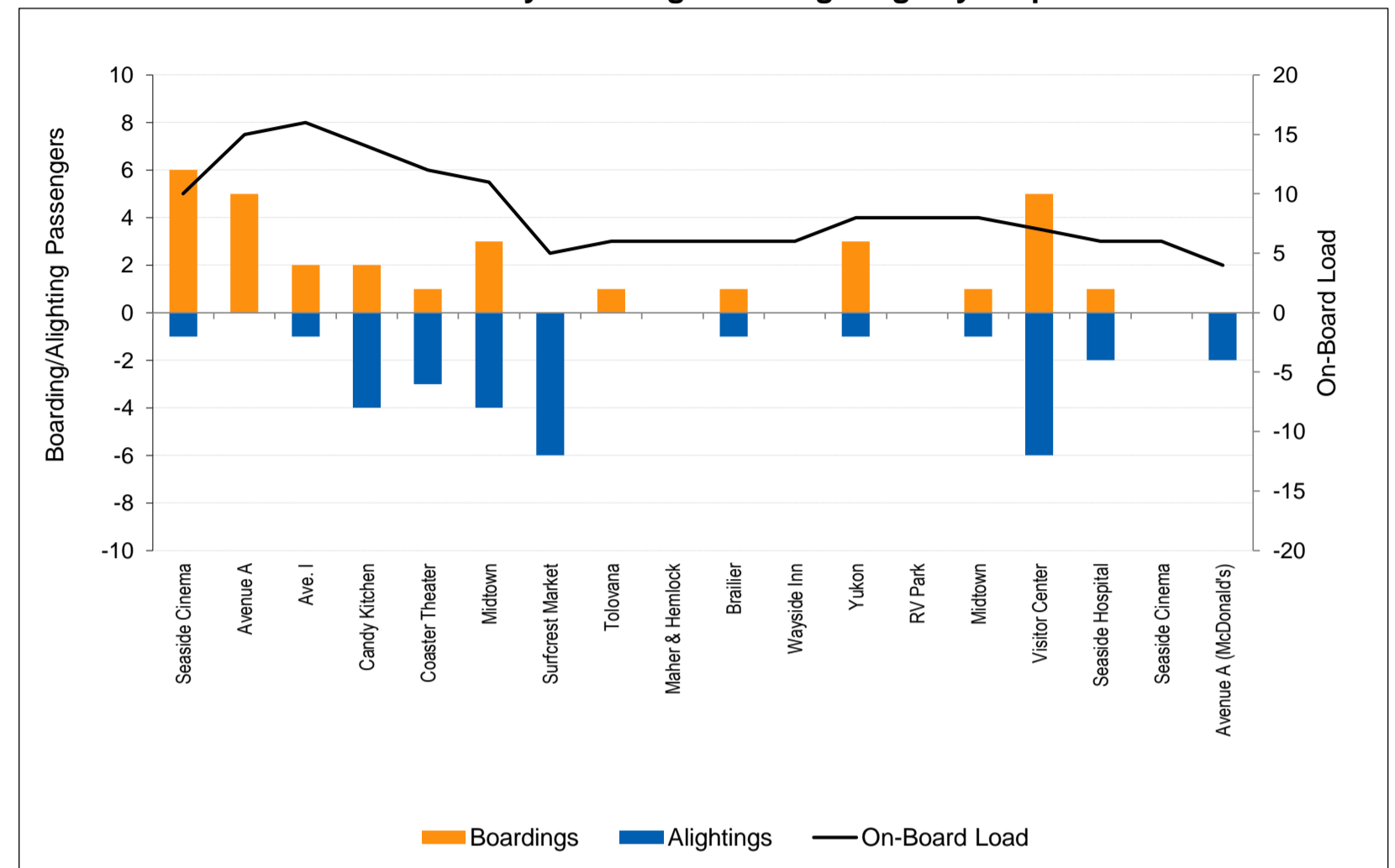




**Saturday On-Board by Stop and Time Period - Loop**



**Saturday Boardings and Alightings by Stop -**





## **SECTION C**

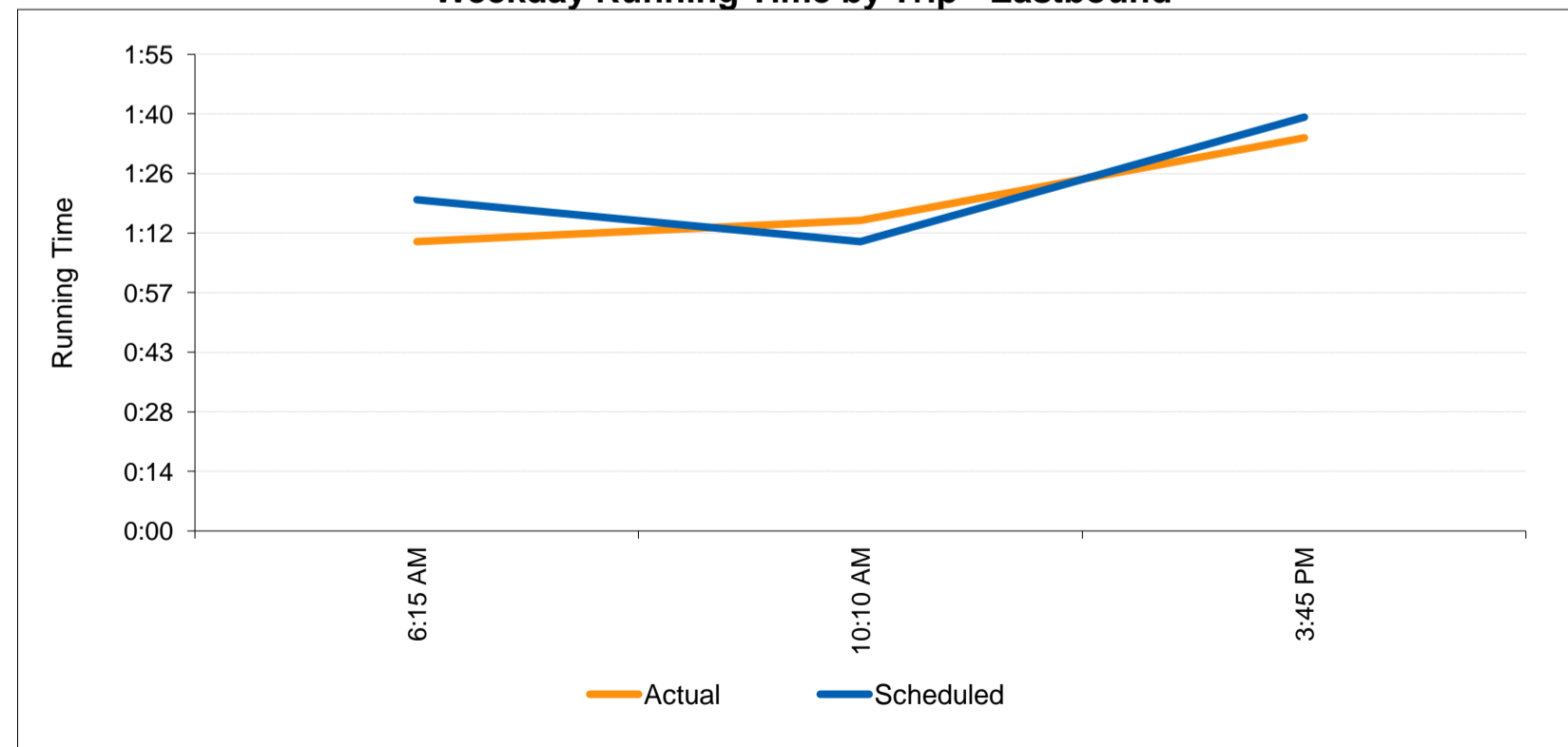
### Route Profiles



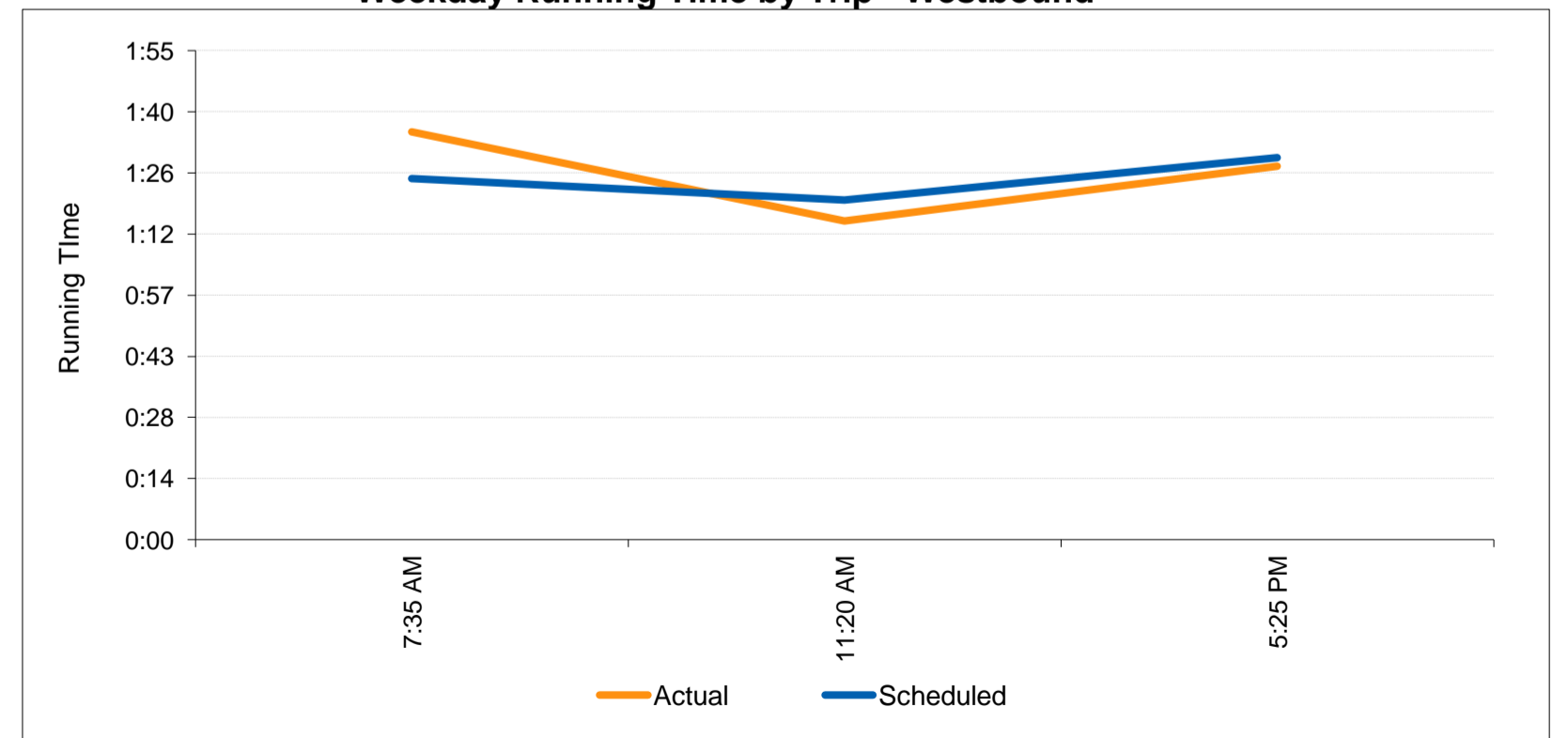
# Weekday Profiles

Columbia Connector Weekday (May 2015)		Route Productivity Summary				Route Operations Summary					
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		40	40	8.4	4.8	74%	13%	13%	6	Safeway &	E
Eastbound		26	27	4.2	6.2	68%	21%	11%	6	Safeway &	E
Westbound		14	13	4.3	3.3	79%	5%	16%	6	Fred Meyer &	W
<b>By Segment</b>											
1	Fred Meyer to Warrenton Mini Mart	5	3	0.8	6.4	80%		20%			
2	Warrenton Mini Mart to Fred Meyer	5	8	1.2	4.1	83%	17%				
3	Fred Meyer to Transit Center	6	5	1.5	4.0	83%	17%				
4	Transit Center to Safeway	4	4	0.7	5.7	67%		33%			
5	Safeway to Westport &	6	3	3.2	1.9	67%		33%			
6	Westport & to Safeway (Clatskanie)	1	4	1.0	1.0	60%	40%				
<b>By Time Period</b>											
Early AM											W
AM		14	12	2.8	5.1				2	Safeway &	E
Midday		17	17	2.5	6.8				4	4-Way Stop &	E
PM		6	8	1.7	3.6				2	Warrenton Mini Mart &	E
Eve		3	3	1.5	2.0				2	Safeway &	W
Night											W
Owl											W

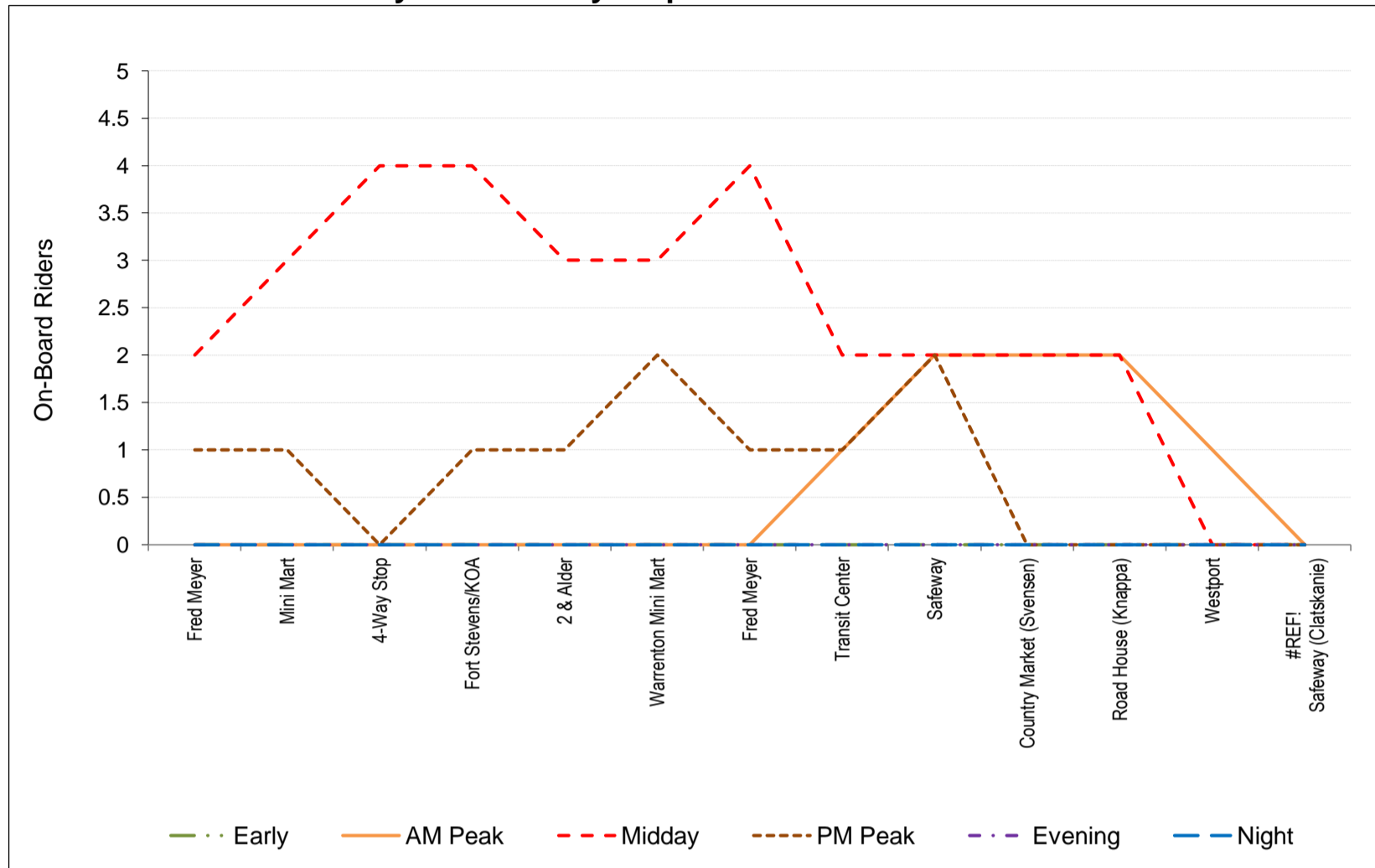
Weekday Running Time by Trip - Eastbound



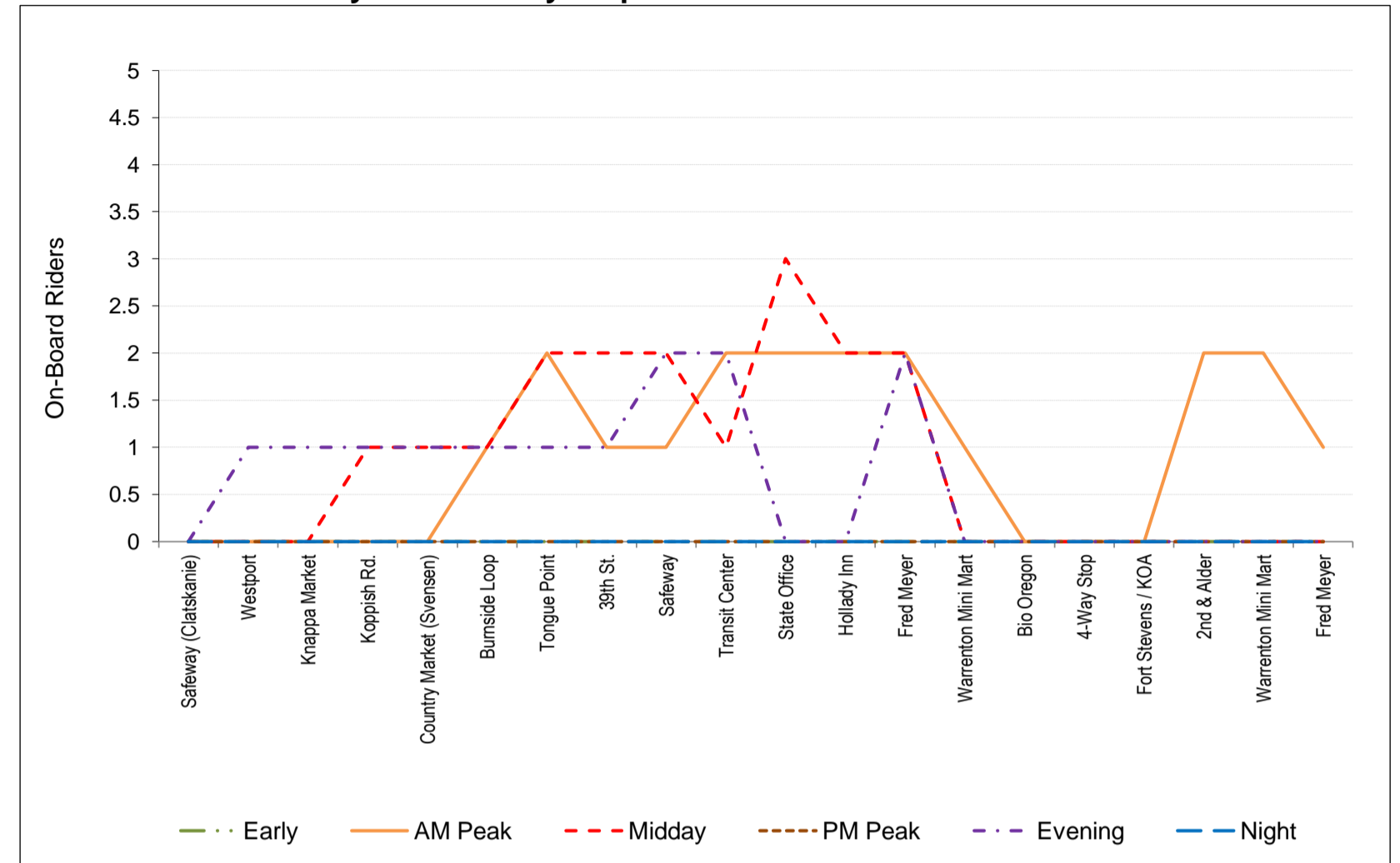
Weekday Running Time by Trip - Westbound



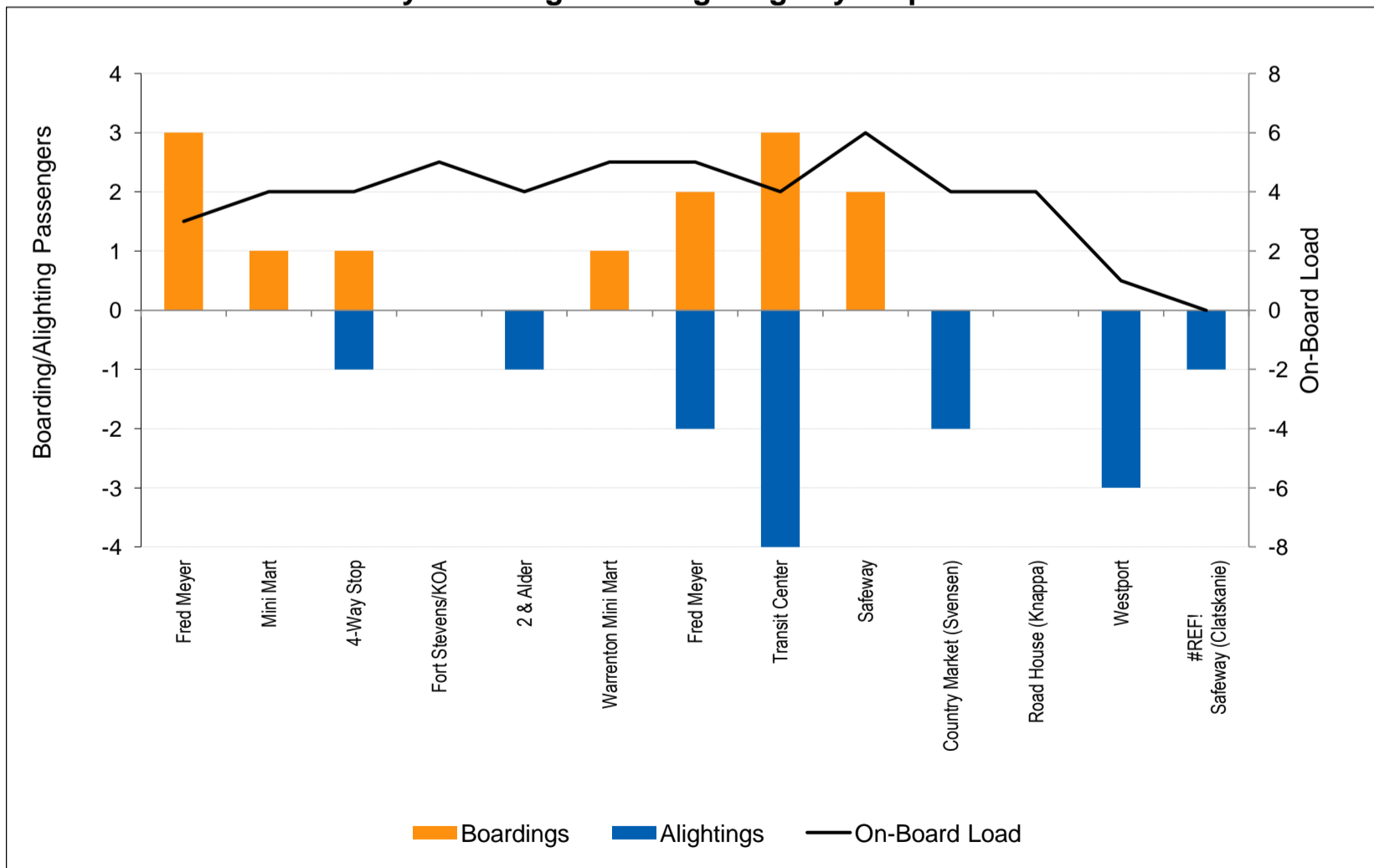
**Weekday On-Board by Stop and Time Period - Eastbound**



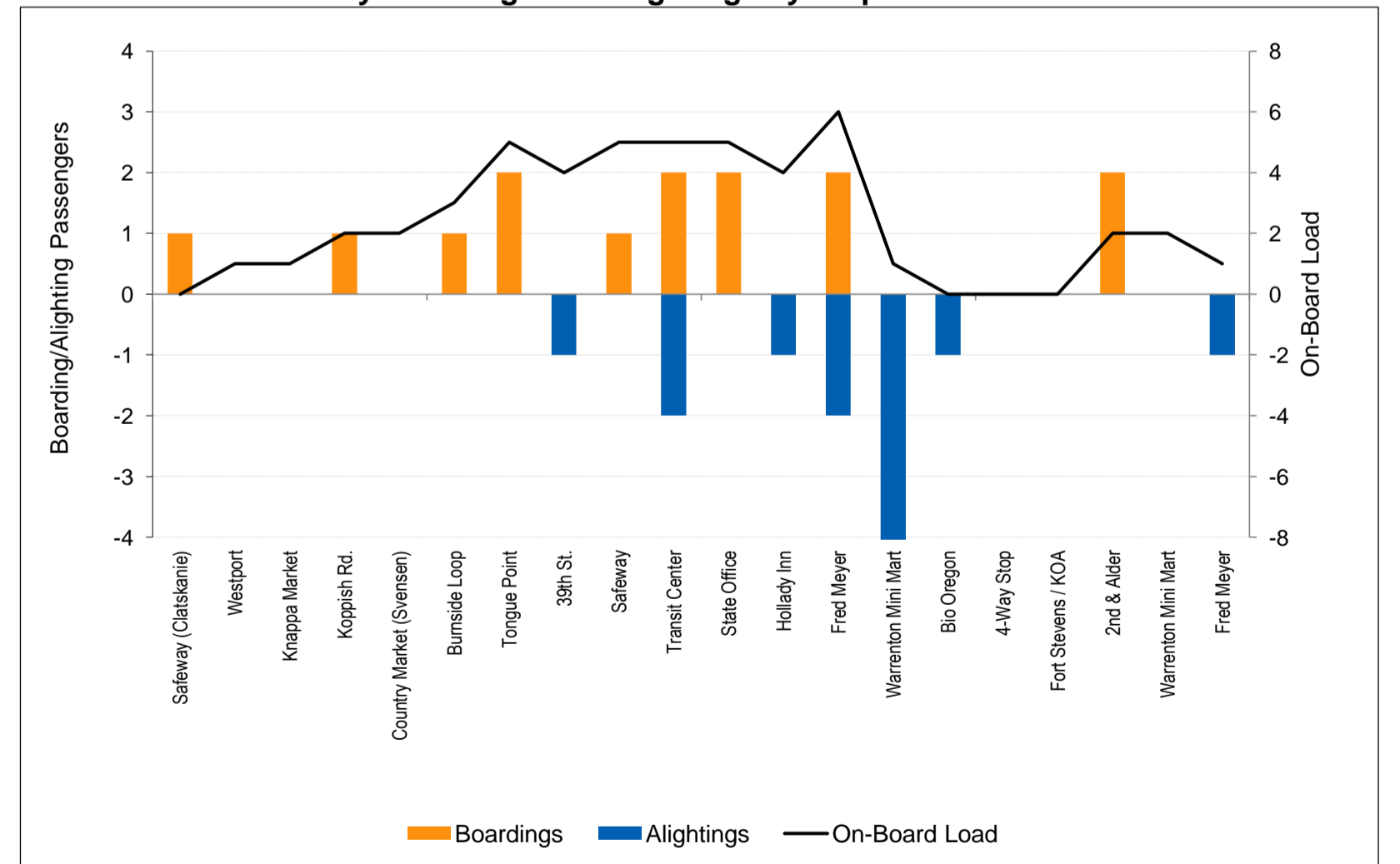
**Weekday On-Board by Stop and Time Period - Westbound**



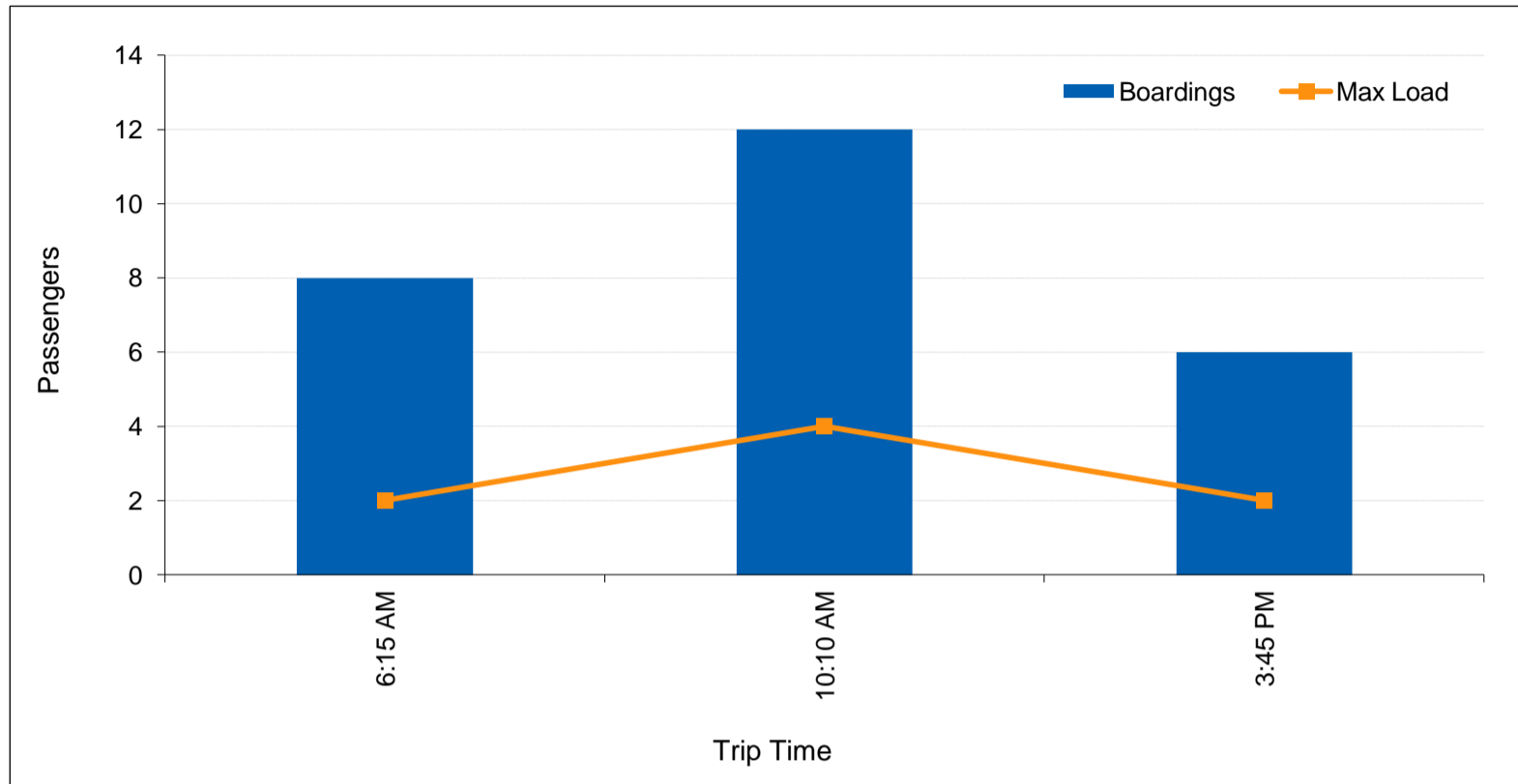
**Weekday Boardings and Alightings by Stop - Eastbound**



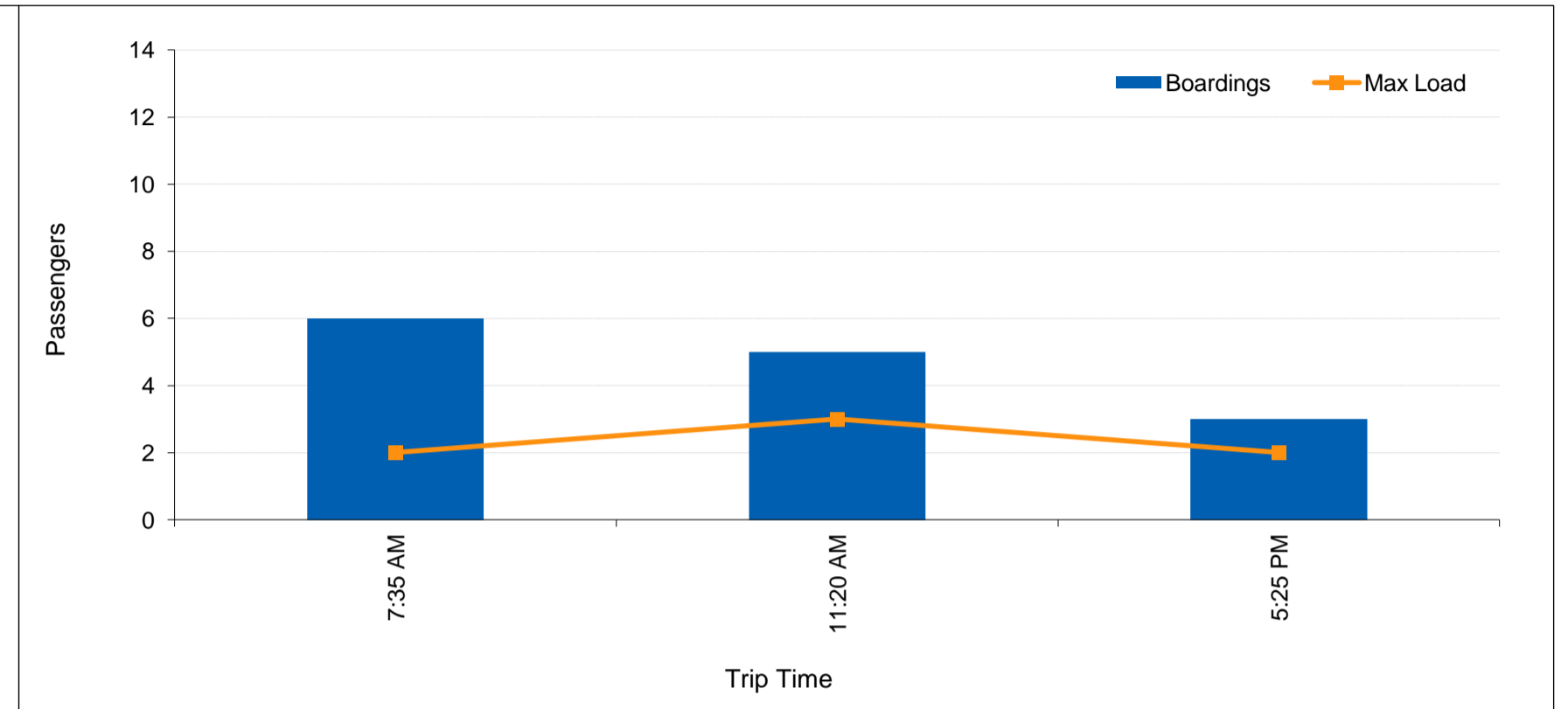
**Weekday Boardings and Alightings by Stop - Westbound**



Weekday Ridership by Trip - Eastbound



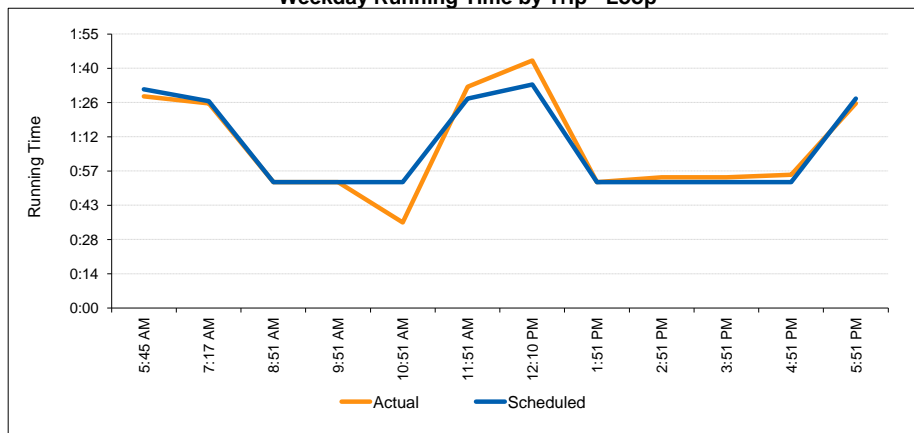
Weekday Ridership by Trip - Outbound



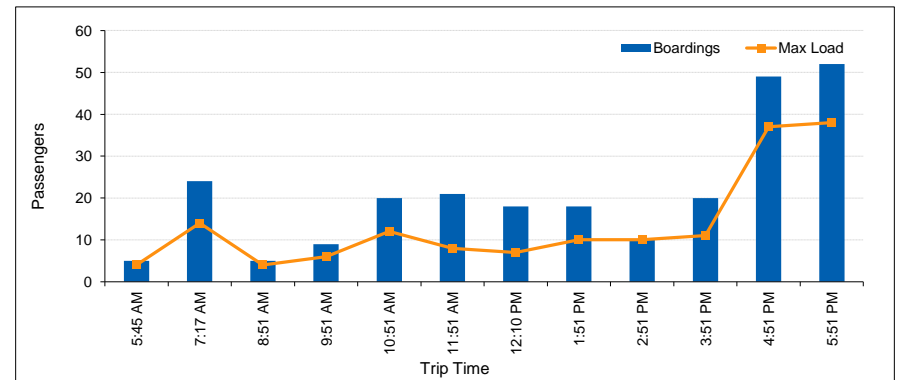


Route 10 Weekday - May 2015					Route Productivity Summary				Route Operations Summary					
					Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
					Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>					251	246	13.7	18.4	71%	8%	20%	142	39th Street Pier (flag) &	L
Loop					251	246	13.7	18.4	71%	8%	20%	142	39th Street Pier (flag) &	L
<b>By Segment</b>														
1	Fred Meyer to Warrenton Mini Mart						0.1		100%					
2	Warrenton Mini Mart to Fred Meyer				10		0.9	11.5	67%		33%			
3	Fred Meyer to Transit Center				3	5	0.8	3.8	83%	17%				
4	Transit Center to Safeway (East)				39	9	1.0	38.4	58%	8%	33%			
5	Safeway (East) to Emerald Hghts Office &				20	7	1.1	18.2	82%		18%			
6	Emerald Hghts Office & to Job Corp				28	28	1.7	17.0	75%	8%	17%			
7	Job Corp to Safeway (West)				96	17	1.4	69.4	75%		25%			
8	Safeway (West) to College				15	72	1.4	10.7	75%	8%	17%			
9	College to Transit Center				36	64	3.7	9.7	0%	33%	67%			
10	Transit Center to Warrenton Mini Mart				4	44	1.4	2.9	33%	33%	33%			
<b>By Time Period</b>														
AM					29	26	3.0	9.7				17	Safeway (West) &	L
Midday					91	86	6.6	13.9				39	Gateway Apts (flag) &	L
PM					79	82	2.7	29.8				50	51st & Birch (flag) &	L
Eve					52	52	1.5	35.5				38	Job Corp &	L

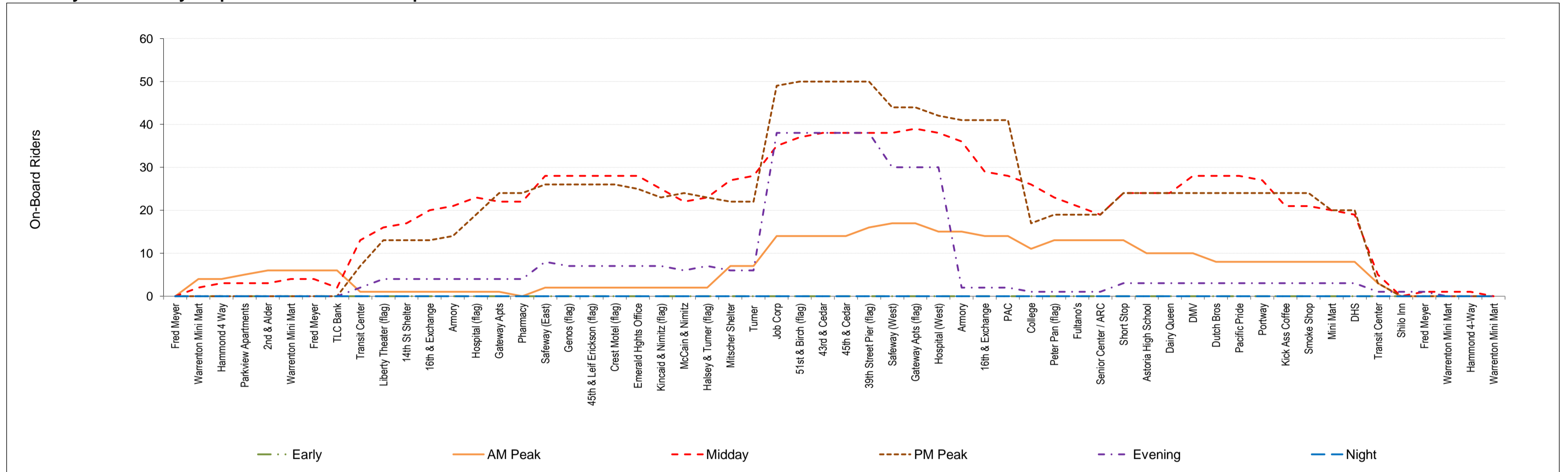
Weekday Running Time by Trip - Loop



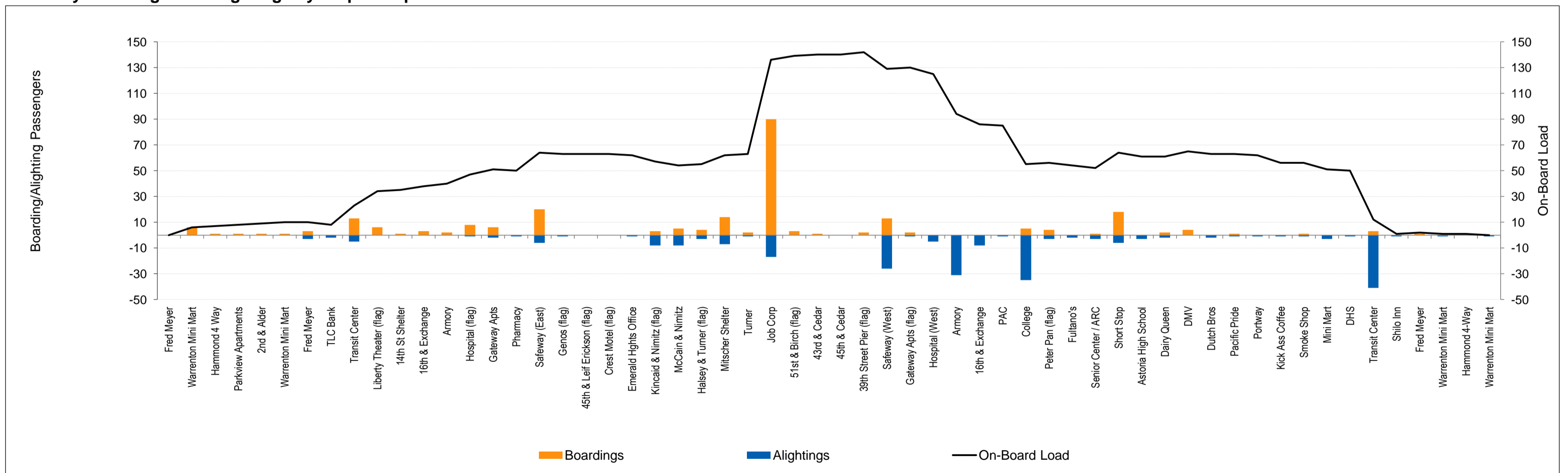
Weekday Ridership by Trip - Loop



**Weekday On-Board by Stop and Time Period - Loop**



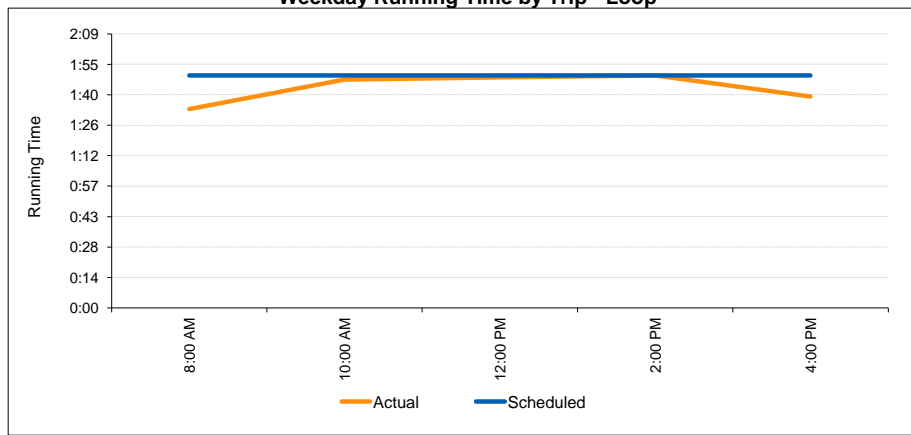
**Weekday Boardings and Alightings by Stop - Loop**



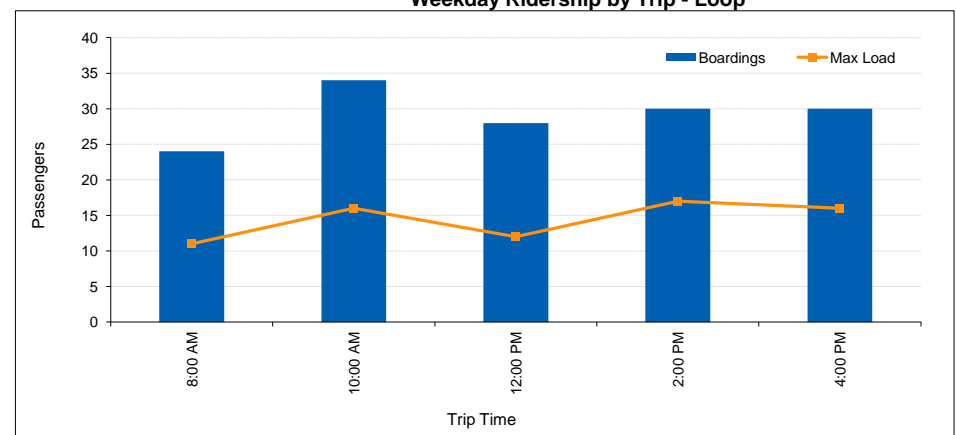
Route 101 Weekday - May 2015		Route Productivity Summary			
		Activity	Service Hours	Productivity	
		Boardings	Alightings	Service Hours	Boardings per Service Hour
<b>Total</b>		146	151	9.2	15.9
Loop		146	151	9.2	15.9
<b>By Segment</b>					
1	Transit Center to Fred Meyer	44	7	0.8	52.8
2	Fred Meyer to Home Depot	14	17	0.8	16.8
3	Home Depot to Sunset Beach	2	1	0.7	3.0
4	Sunset Beach to Seaside Cinema	10	18	1.0	10.0
5	Seaside Cinema to McDonald's Seaside &	6	14	0.6	10.3
6	McDonald's Seaside & to Seaside Cinema	27	26	0.7	40.5
7	Seaside Cinema to Sunset Beach	8	2	1.2	6.9
8	Sunset Beach to Costco	7	13	1.2	6.0
9	Costco to Fred Meyer	5	1	0.4	12.0
10	Fred Meyer to Transit Center	23	52	1.8	12.5
<b>By Time Period</b>					
	AM	24	26	1.8	13.1
	Midday	92	96	5.5	16.7
	PM	30	29	1.8	16.4

Route Operations Summary					
On-Time Performance			On-Board Load		
% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
64%	16%	20%	55	Triangle Tavern &	L
64%	16%	20%	55	Triangle Tavern &	L
80%		20%			
80%		20%			
60%	20%	20%			
80%		20%			
80%		20%			
40%	40%	20%			
	40%	20%			
60%	20%	20%			
40%	40%	20%			
60%	20%	20%			
			11	5th & Olney &	L
			34	Triangle Tavern &	L
			16	Triangle Tavern &	L

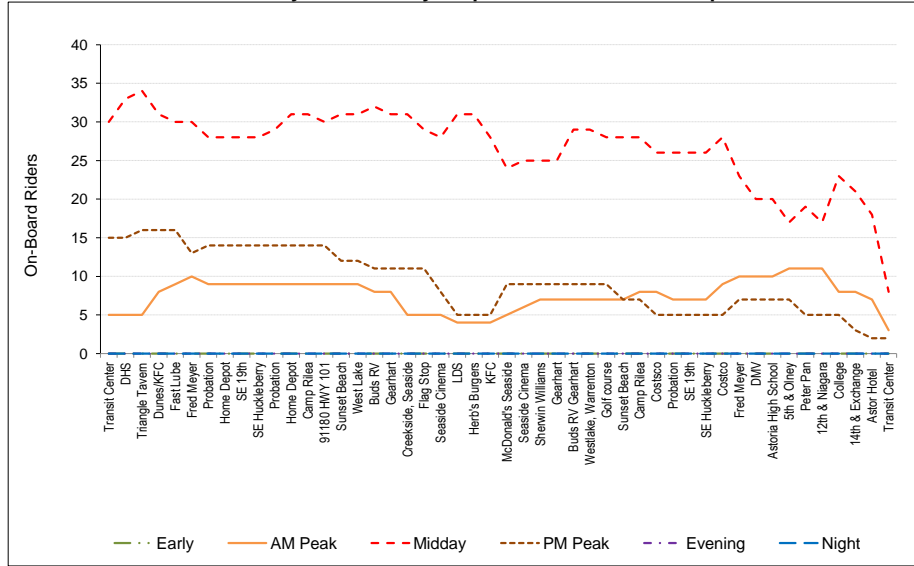
Weekday Running Time by Trip - Loop



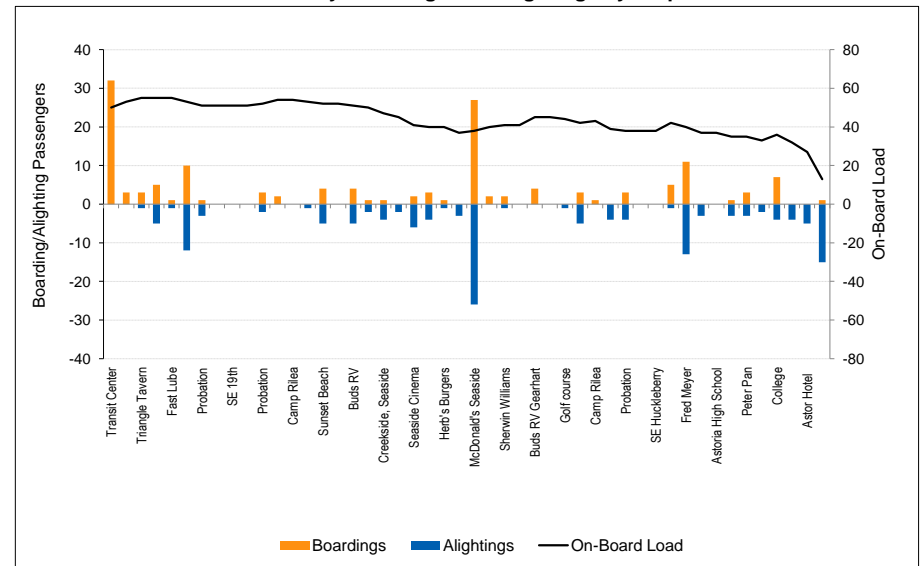
Weekday Ridership by Trip - Loop



Weekday On-Board by Stop and Time Period - Loop

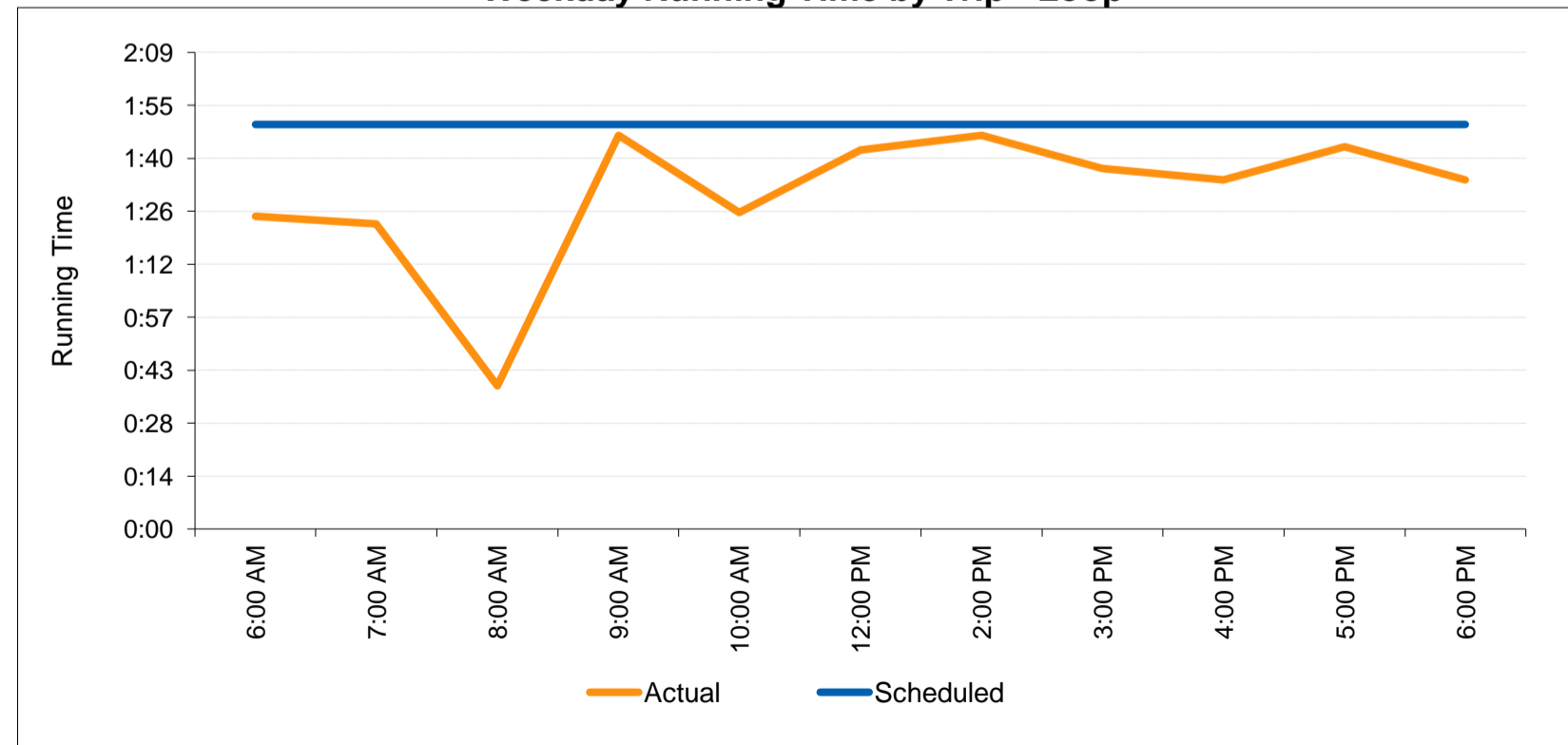


Weekday Boardings and Alightings by Stop -

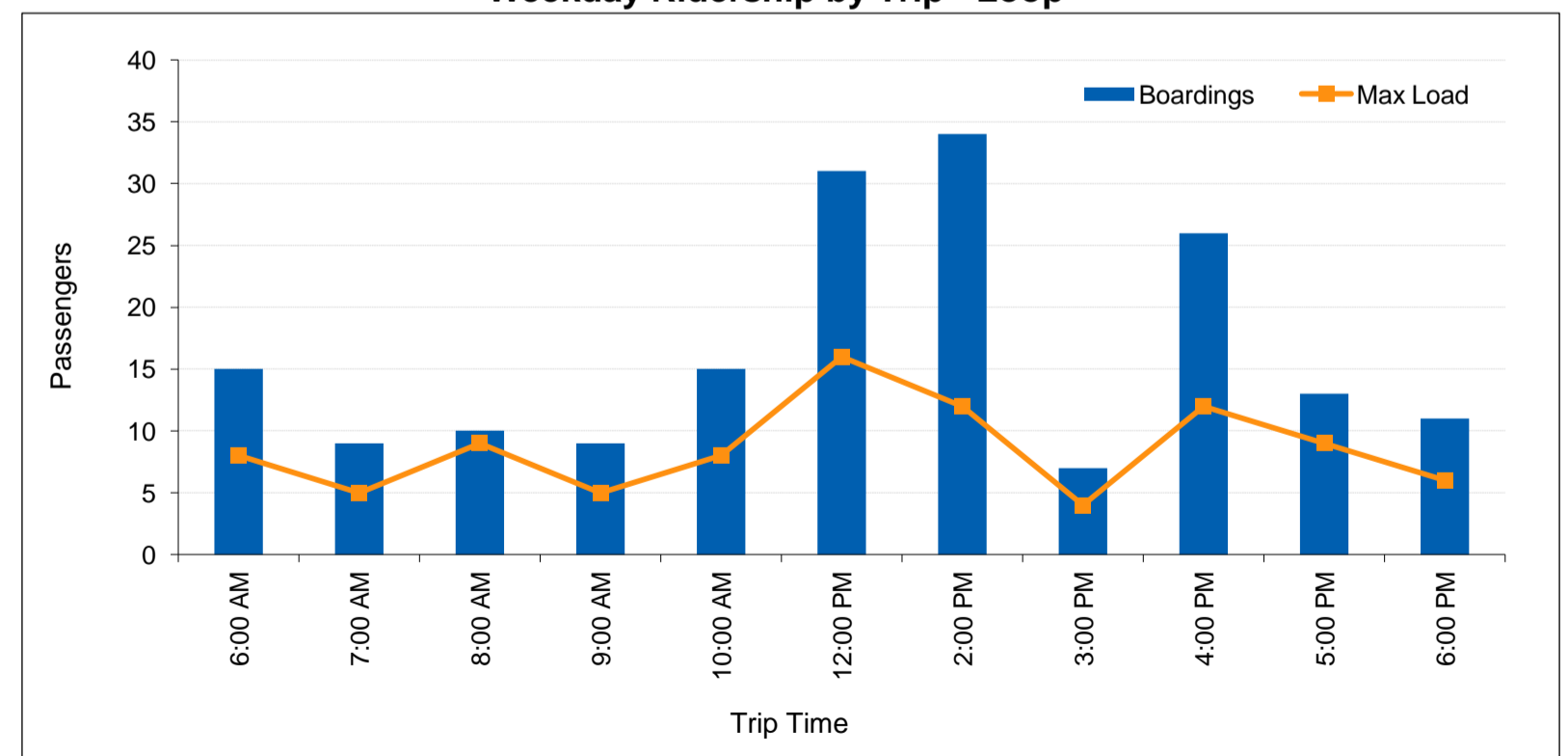


Route 101 Weekday - Summer 2015		Route Productivity Summary				Route Operations Summary					
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		180	180	20.2	8.9	64%	20%	16%	72	Fast Lube &	L
Loop		180	180	20.2	8.9	28%	40%	32%	72	Fast Lube &	L
<b>By Segment</b>											
1	Transit Center to Fred Meyer	68	2	1.8	37.1	45%	27%	27%			
2	Fred Meyer to Sunset Beach	17	33	3.3	5.2	18%	55%	27%			
3	Sunset Beach to Seaside Cinema	5	13	2.2	2.3	36%	36%	27%			
4	Seaside Cinema to McDonald's Seaside	9	19	1.3	7.0	25%	38%	38%			
5	McDonald's Seaside to Seaside Cinema &	28	25	1.5	19.1	10%	60%	30%			
6	Seaside Cinema & to Sunset Beach	20	9	2.6	7.8	20%	40%	40%			
7	Sunset Beach to Fred Meyer	7	8	3.5	2.0		50%	40%			
8	Fred Meyer to College	25	30	3.1	8.0	50%		50%			
9	College to Transit Center	1	41	0.9	1.1		100%				
<b>By Time Period</b>											
AM		34	30	5.5	6.2				18	Peter Pan &	L
Midday		89	92	7.3	12.1				36	Fast Lube &	L
PM		46	47	5.5	8.4				20	Fast Lube &	L
Eve		11	11	1.8	6.0				6	Fast Lube &	L

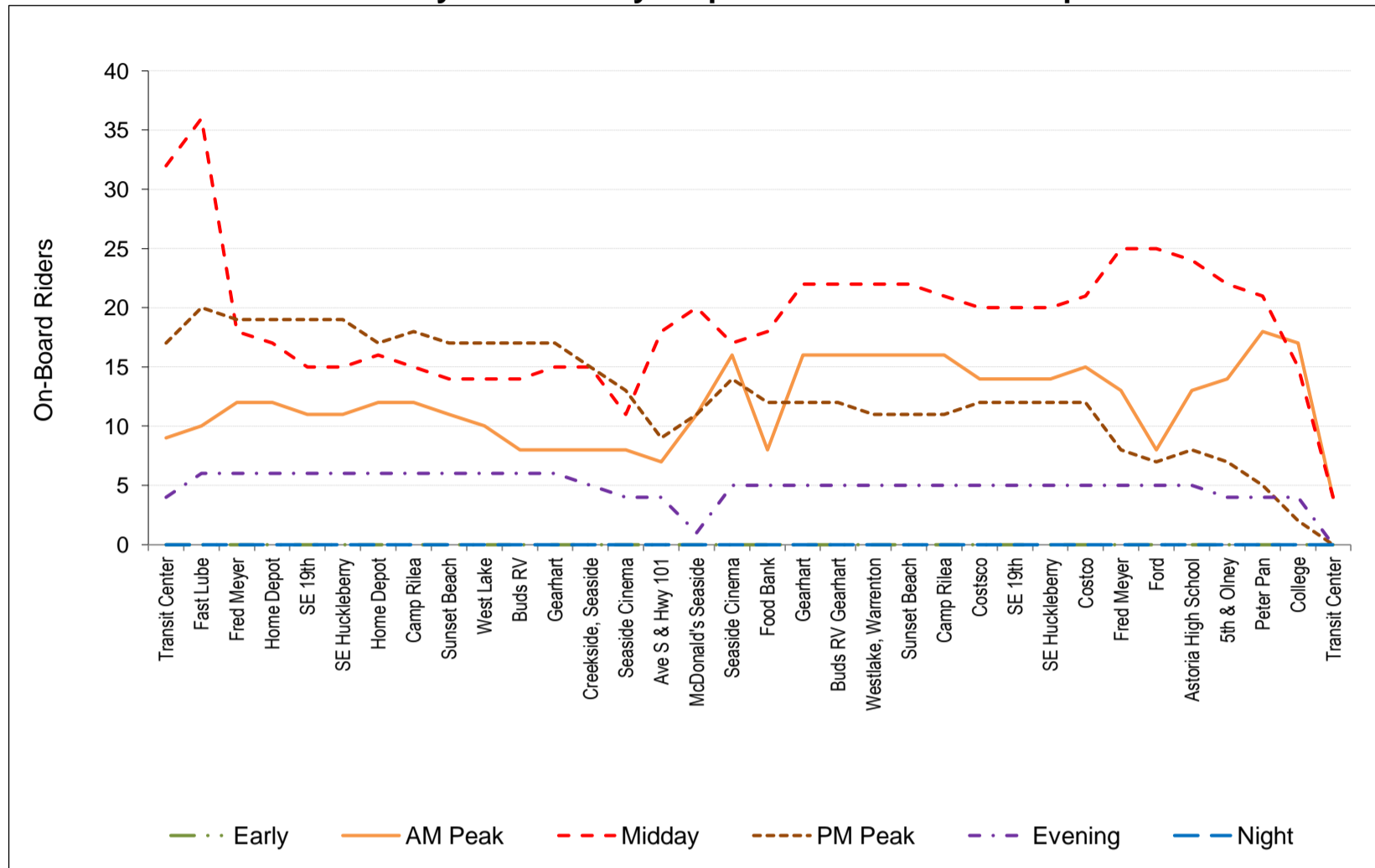
Weekday Running Time by Trip - Loop



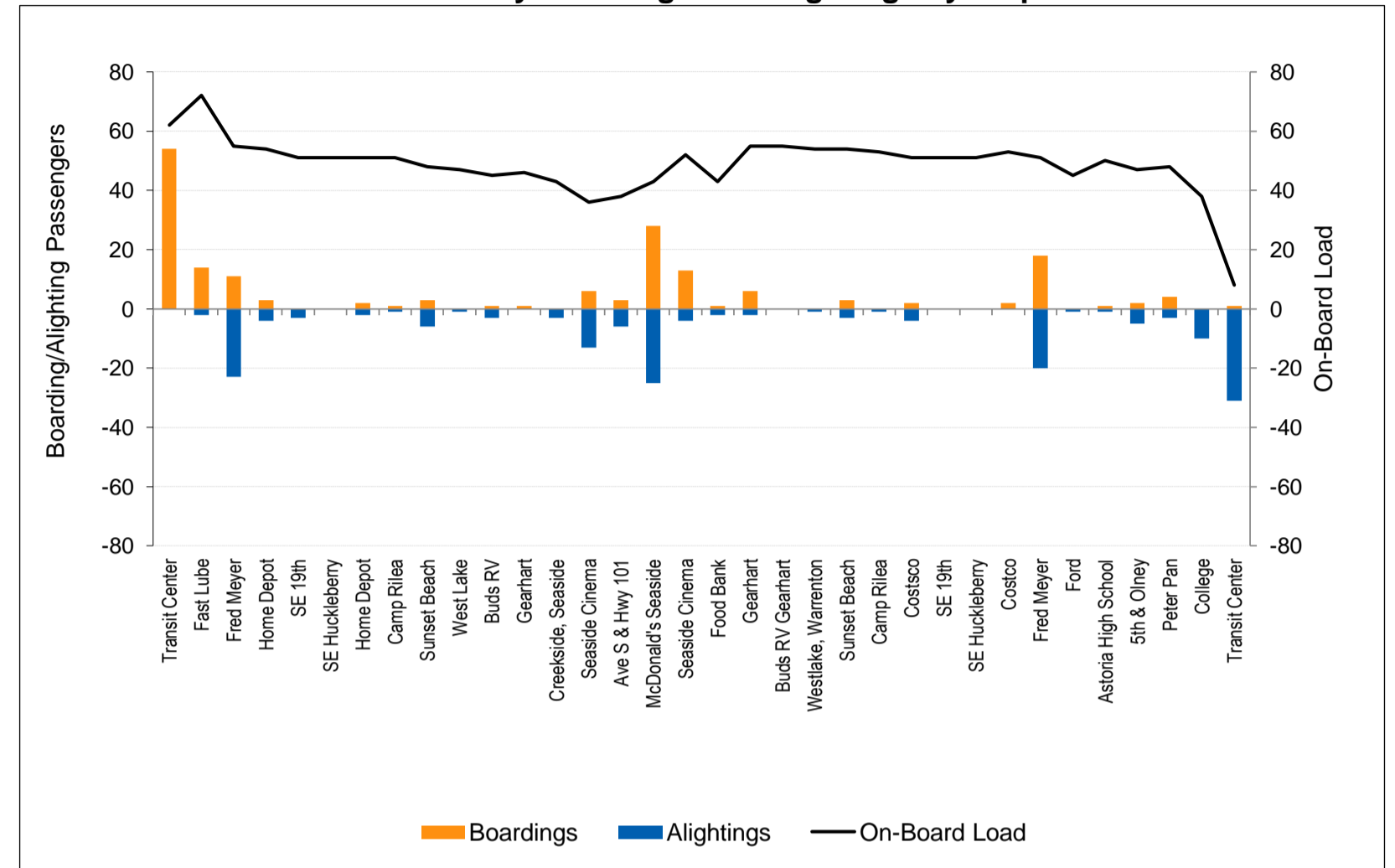
Weekday Ridership by Trip - Loop



**Weekday On-Board by Stop and Time Period - Loop**

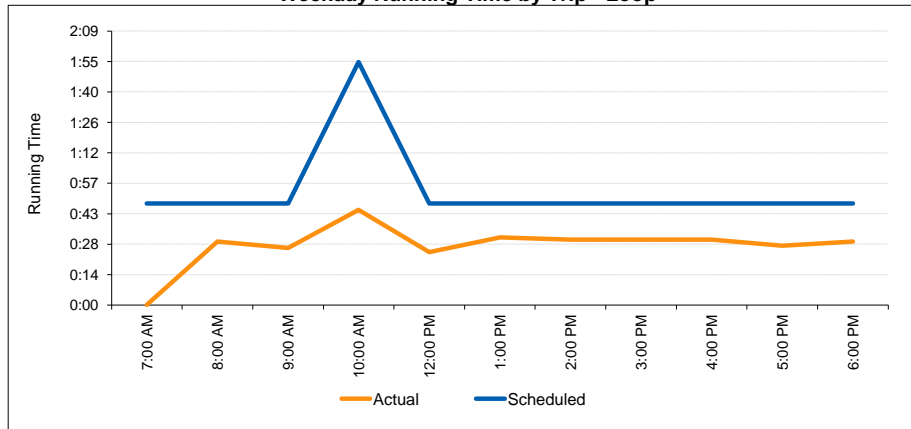


**Weekday Boardings and Alightings by Stop -**

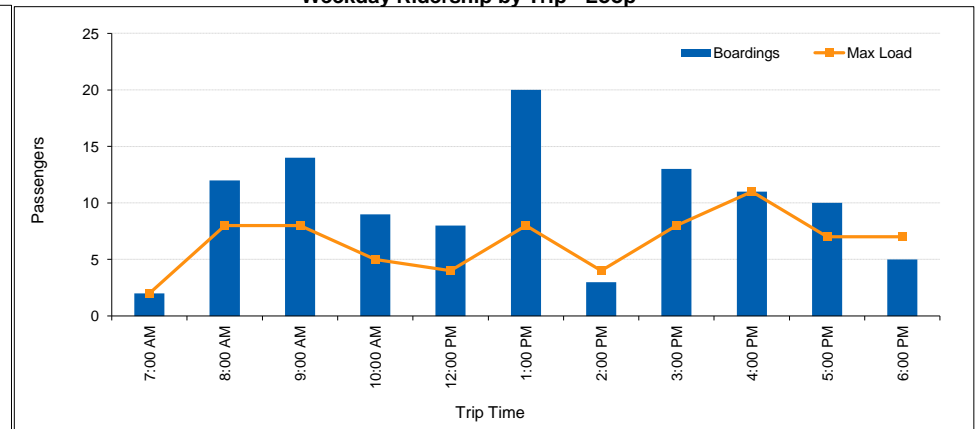


Route 20 Weekday - May 2015					Route Productivity Summary				Route Operations Summary					
					Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
					Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>					107	101	11.1	9.7	86%	3%	11%	50	Avenue A &	L
Loop					107	101	11.1	9.7	82%	4%	14%	50	Avenue A &	L
<b>By Segment</b>														
1	Seaside Cinema to Coaster Theater				10		3.3	3.0	80%		20%			
2	Coaster Theater to Tolovana				29	10	1.6	17.6	100%					
3	Tolovana to Firestation (Manzanita)				3	12	0.7	4.2		100%				
4	Firestation (Manzanita) to Midtown				5	4	0.4	12.5	78%		22%			
5	Midtown to Seaside Cinema &				2	16	3.9	0.5	100%					
<b>By Time Period</b>														
AM					14	14	1.8	7.6				9	Seaside Hospital &	L
Midday					54	50	5.6	9.7				24	Avenue A &	L
PM					34	30	2.8	12.4				23	Visitor Center &	L
Eve					5	7	0.9	5.5				7	Coaster Theater &	L

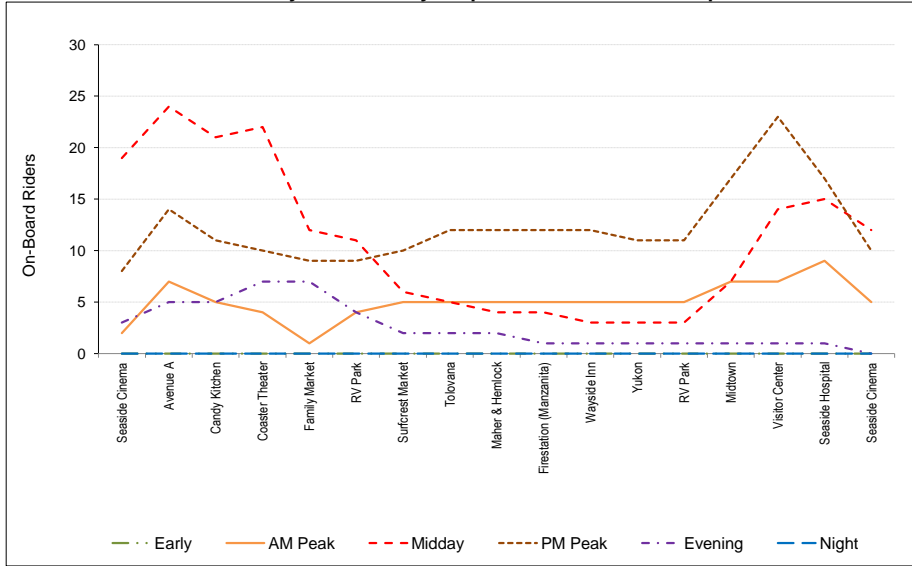
Weekday Running Time by Trip - Loop



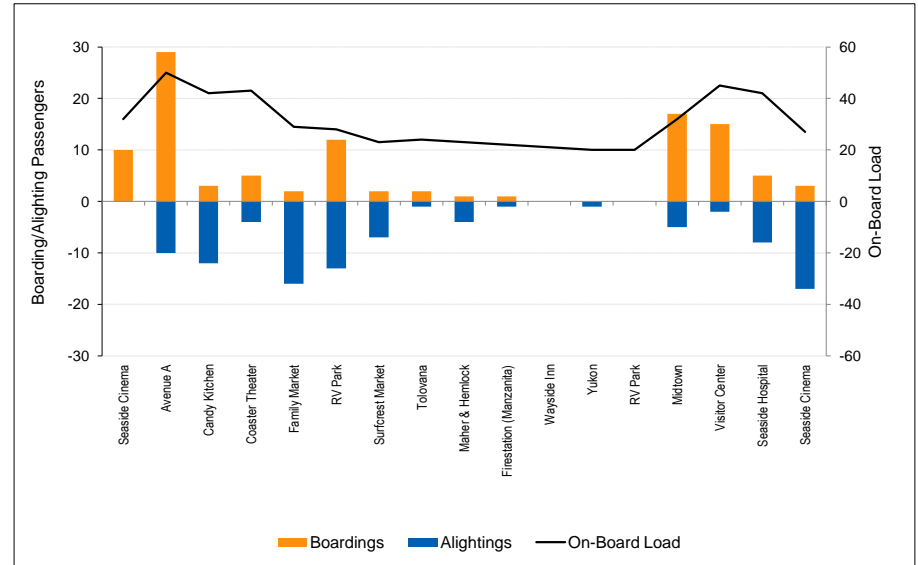
Weekday Ridership by Trip - Loop



**Weekday On-Board by Stop and Time Period - Loop**



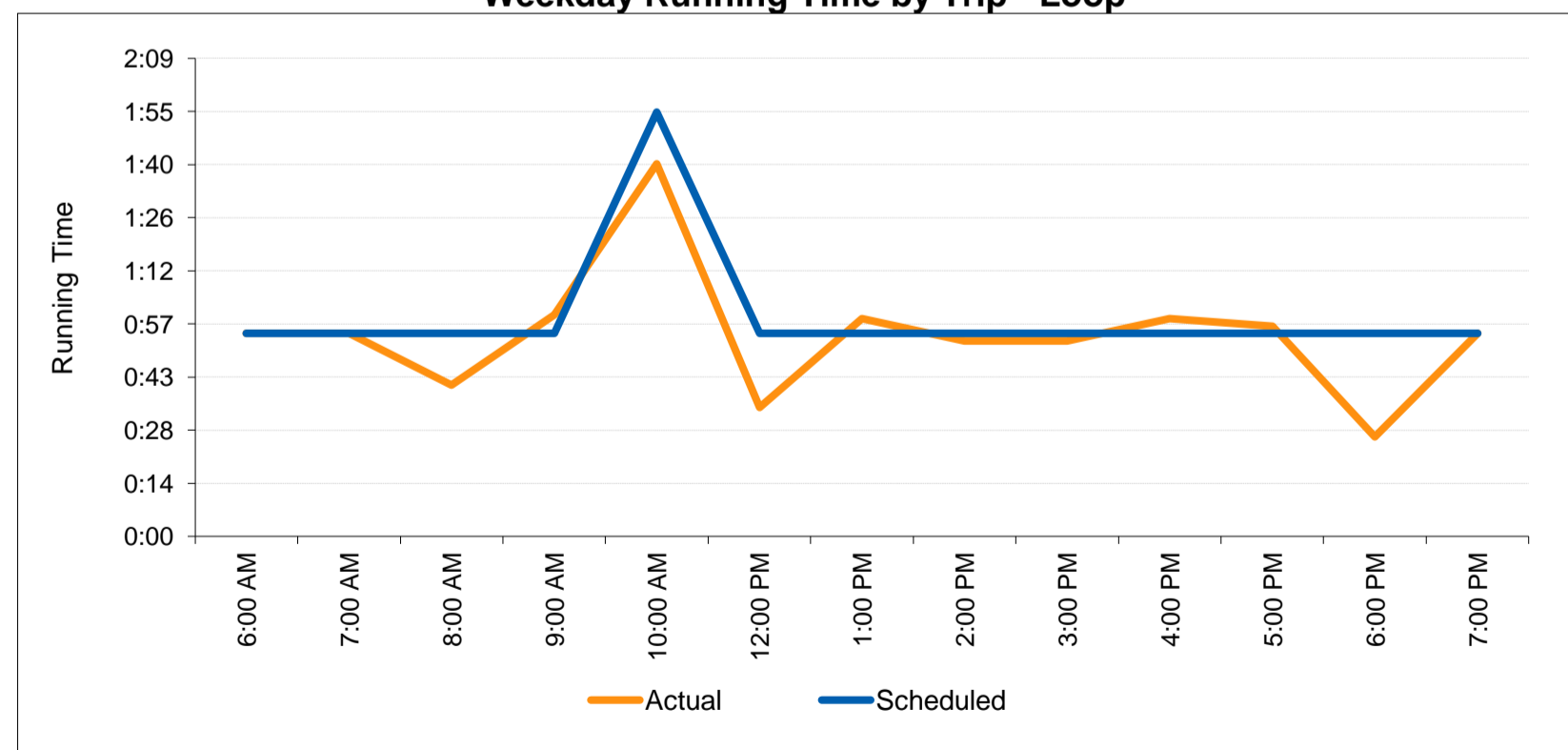
**Weekday Boardings and Alightings by Stop - Loop**



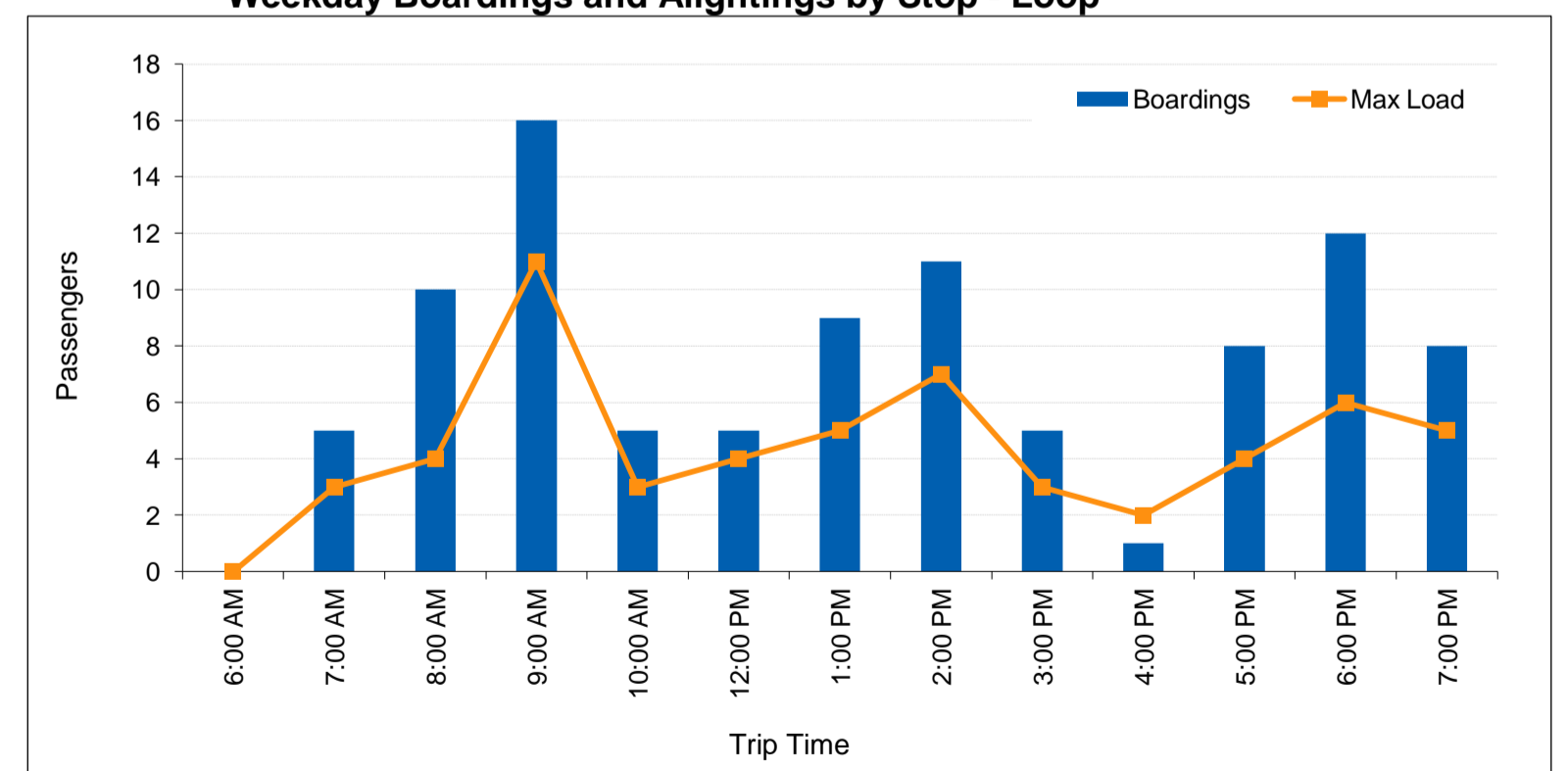


Route 20 Weekday - Summer 2015		Route Productivity Summary			Route Operations Summary						
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		95	93	12.9	7.4	84%	5%	11%	38	Stop & Go &	L
Loop		95	93	12.9	7.4	67%	10%	23%	38	Stop & Go &	L
<b>By Segment</b>											
1	Seaside Cinema to Coaster Theater	43	25	3.9	11.0	75%	0%	25%			
2	Coaster Theater to Tolovana	8	30	1.9	4.1	58%	8%	33%			
3	Tolovana to Firestation (Manzanita)	1	2	0.7	1.4	0%	100%	0%			
4	Firestation (Manzanita) to Midtown	11	5	1.8	6.1	54%	15%	31%			
5	Midtown to Seaside Cinema &	32	31	4.6	7.0	80%	10%	10%			
<b>By Time Period</b>											
AM		15	13	2.8	5.5				7	Avenue A &	L
Midday		46	47	5.6	8.2				19	Stop & Go &	L
PM		14	14	2.8	5.1				8	Visitor Center &	L
Eve		20	19	1.8	10.9				11	Coaster Theater &	L

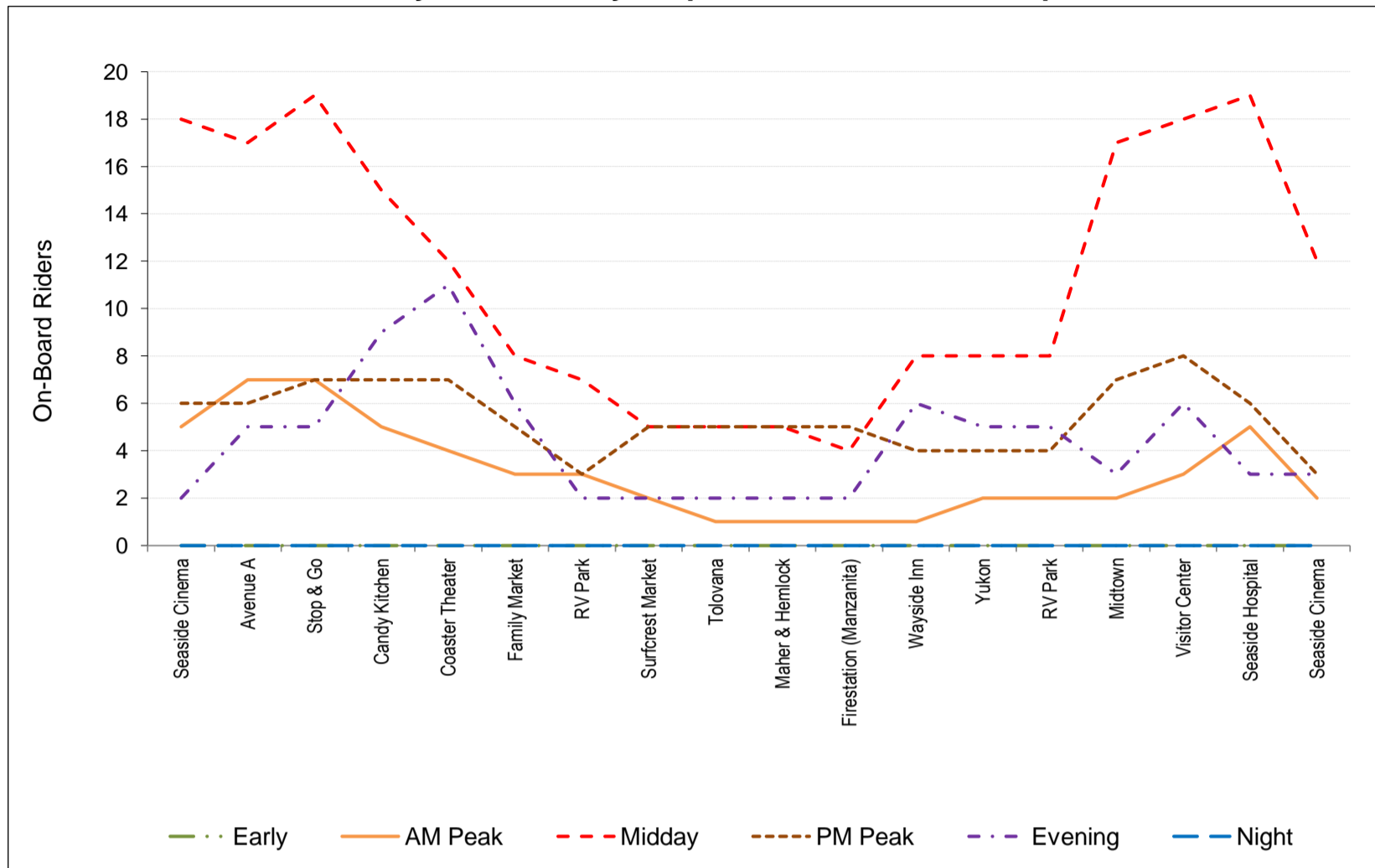
Weekday Running Time by Trip - Loop



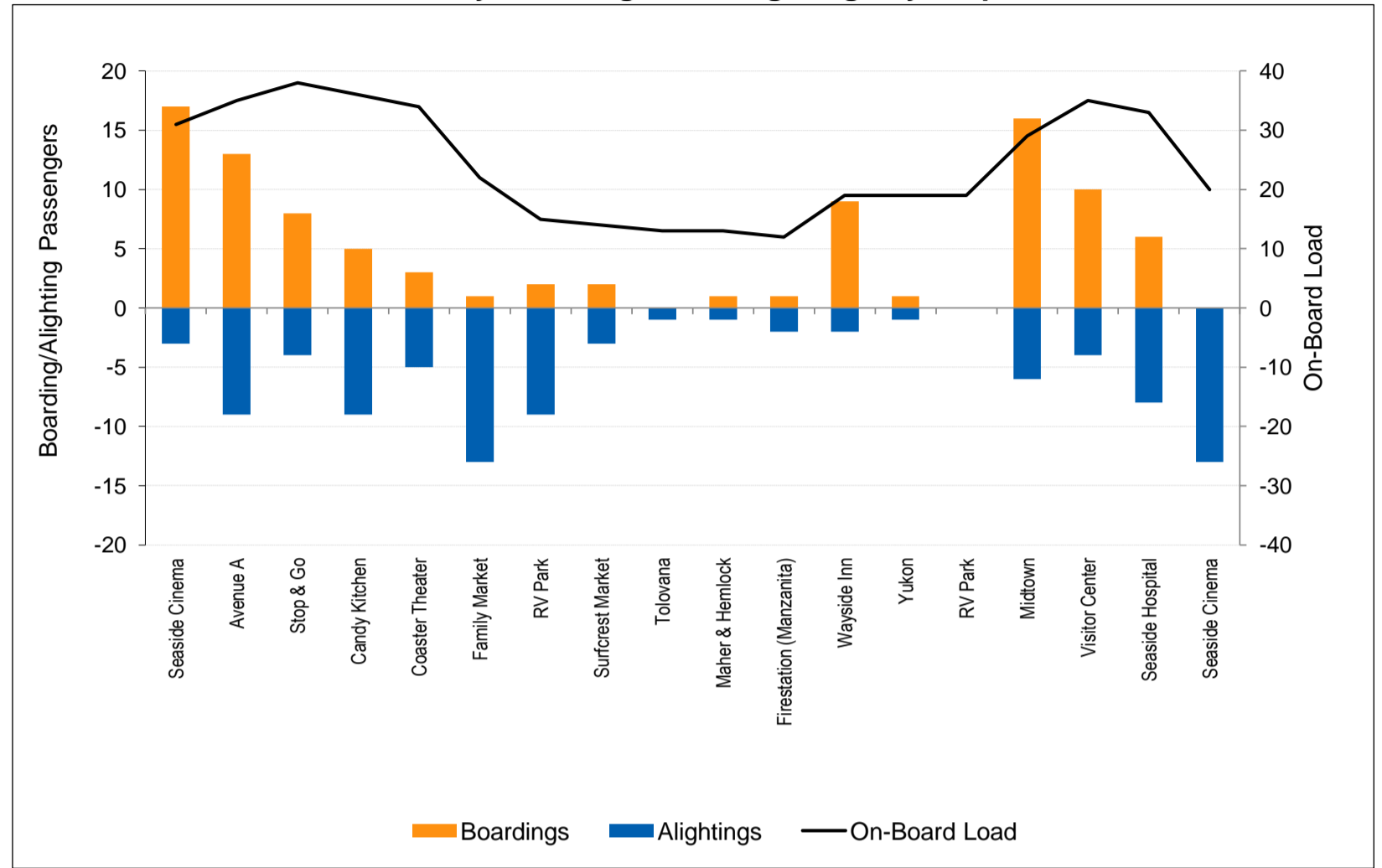
Weekday Boardings and Alightings by Stop - Loop



**Weekday On-Board by Stop and Time Period - Loop**



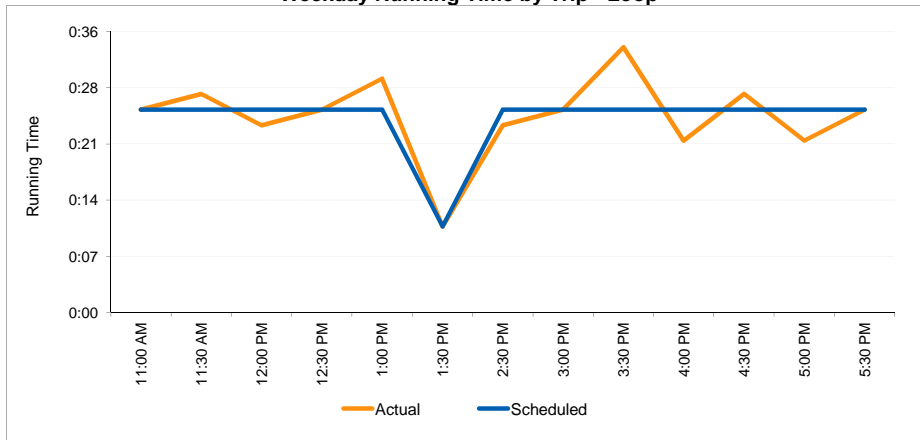
**Weekday Boardings and Alightings by Stop -**



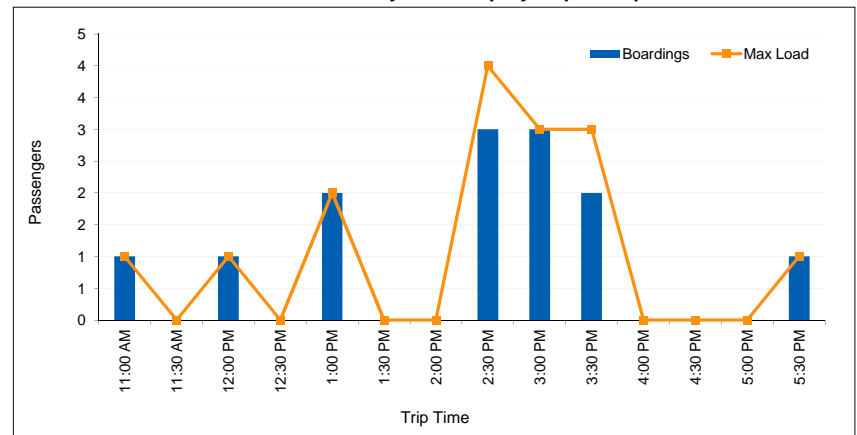
Route 21 Weekday - Summer 2015		Route Productivity Summary			
		Activity	Service Hours	Productivity	
		Boardings	Alightings	Service Hours	Boardings per Service Hour
<b>Total</b>		16	16	6.1	2.6
Loop		16	16	6.1	2.6
<b>By Segment</b>					
1	Les Shirley Park to Coaster Theater	10		0.7	14.3
2	Coaster Theater to Midtown	3		0.5	6.4
3	Midtown to Maher & Hemlock		9	1.4	
4	Maher & Hemlock to RV Park		3	2.0	
5	RV Park to Les Shirley Park &	3	4	1.3	2.3
<b>By Time Period</b>					
	Midday	9	9	3.5	2.6
	PM	7	7	2.6	2.7

Route Operations Summary					
On-Time Performance			On-Board Load		
% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
72%	11%	17%			
45%	22%	33%	13	Coaster Theater &	L
57%	7%	36%			
50%	14%	36%			
36%	29%	36%			
23%	46%	31%			
100%					
			7	Coaster Theater &	L
			6	Candy Kitchen &	L

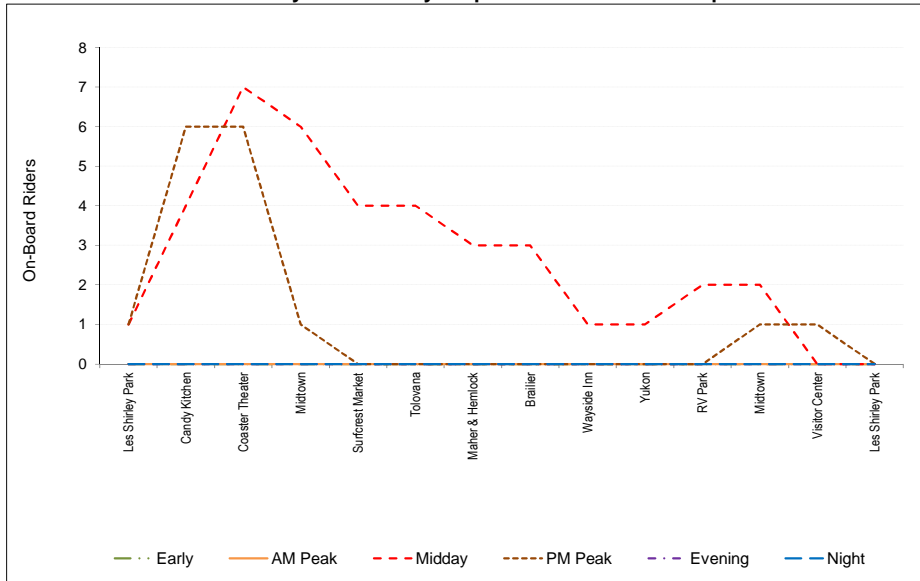
Weekday Running Time by Trip - Loop



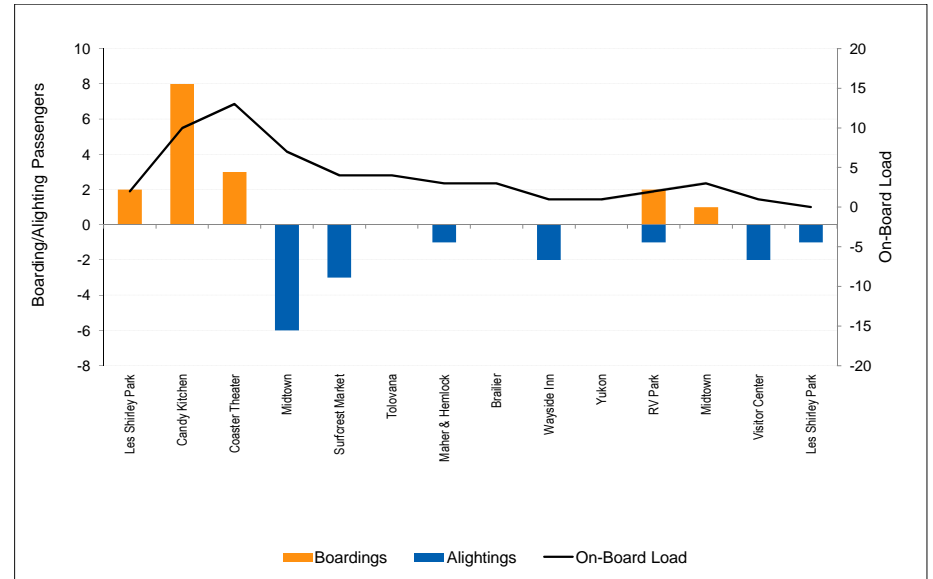
Weekday Ridership by Trip - Loop



**Weekday On-Board by Stop and Time Period - Loop**

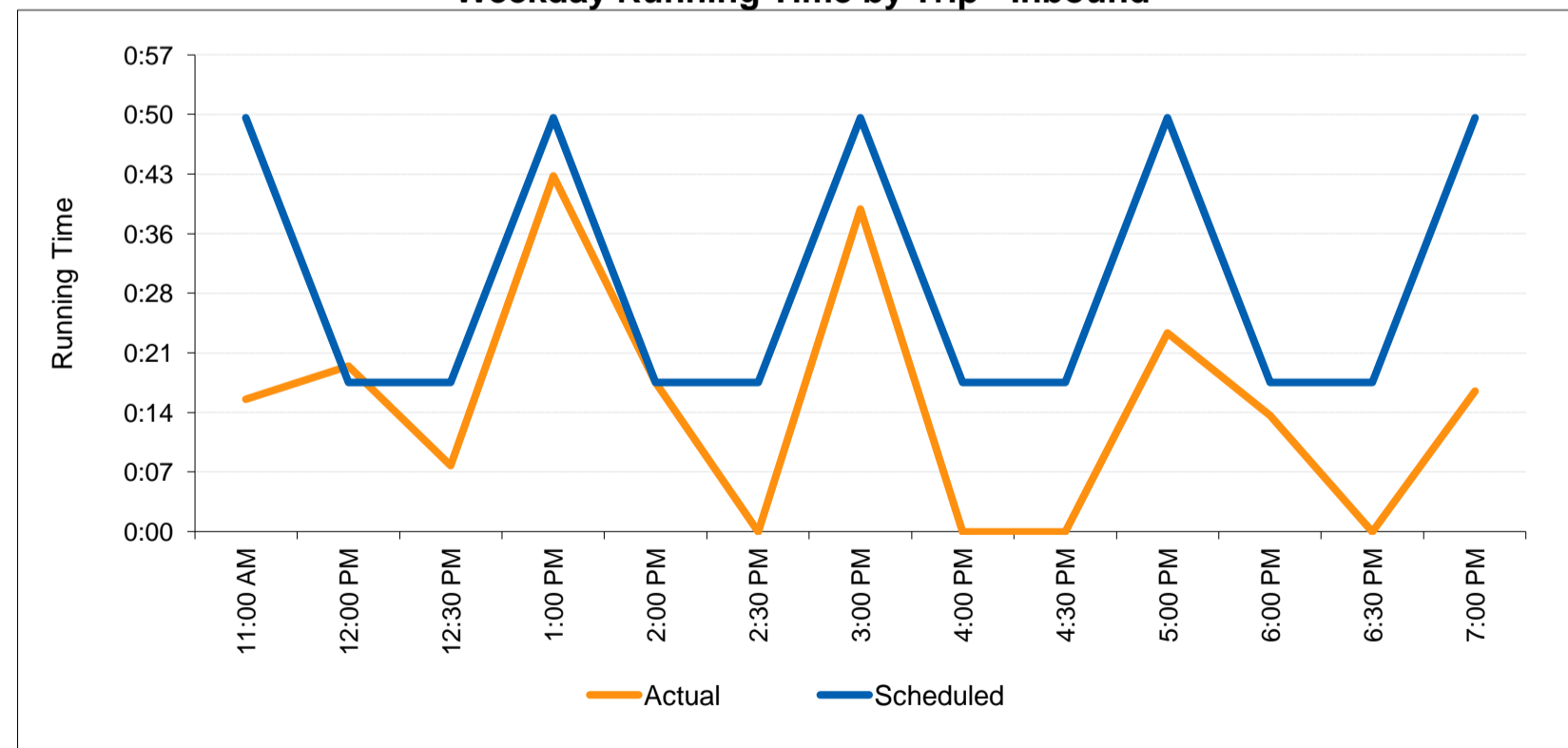


**Weekday Boardings and Alightings by Stop - Loop**

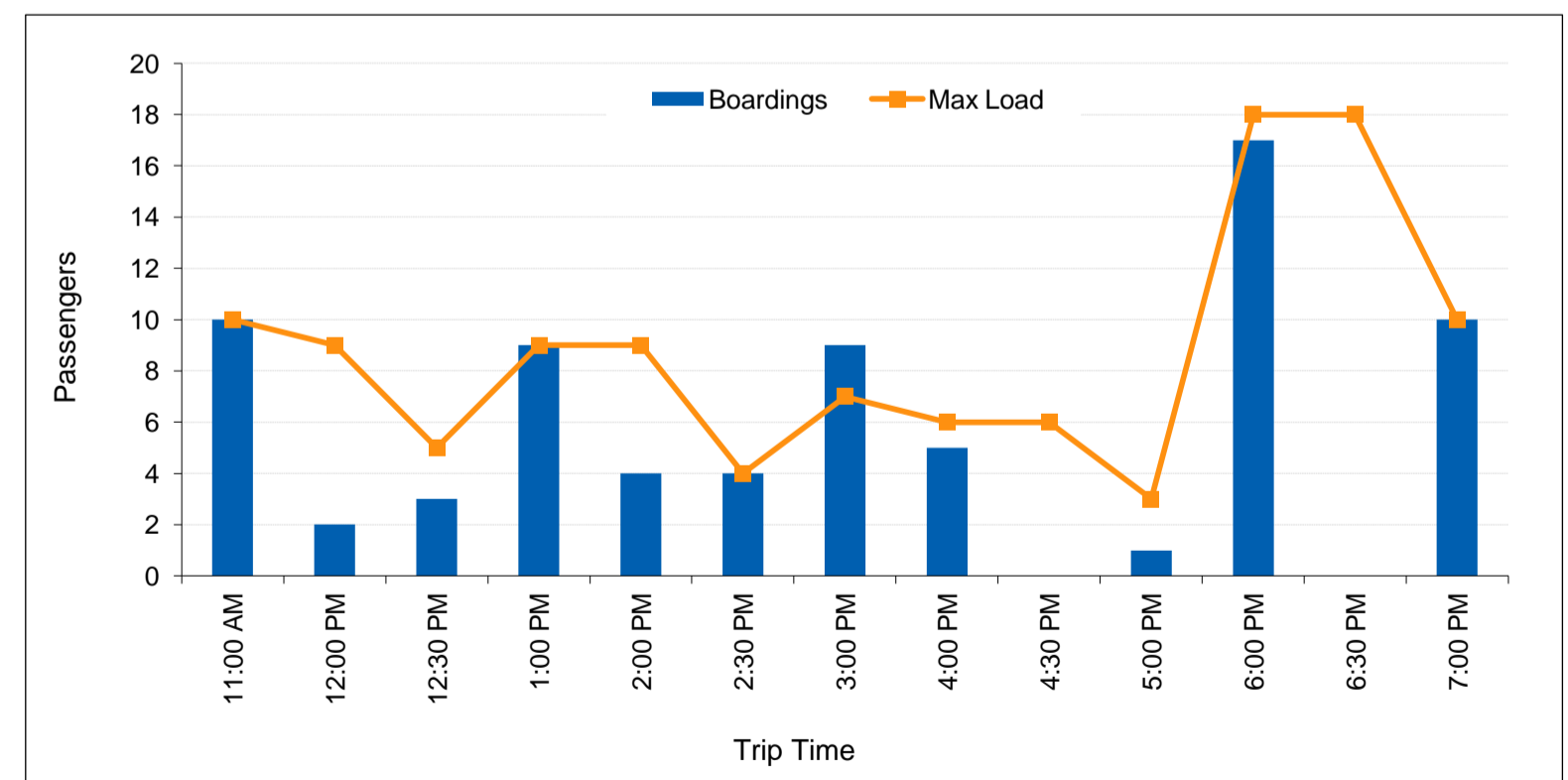


Seaside Trolley Weekday - Summer 2015		Route Productivity Summary				Route Operations Summary					
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		74	74	8.2	9.1	75%	22%	3%	67	Thousand Trails &	I
Inbound		74	74	8.2	9.1	50%	44%	6%	67	Thousand Trails &	I
<b>By Segment</b>											
1	Seaside Cinema to Convention Center	14	7	1.3	10.8	91%	9%				
2	Convention Center to Turnaround	20	26	2.6	7.7		100%				
3	Turnaround to Cove / Trail Head	19	11	0.5	38.0	0%	67%	33%			
4	Cove / Trail Head to Circle Creek			1.2		25%	50%	25%			
5	Circle Creek to Seaside Cinema &	21	30	1.0	21.0	40%	60%				
<b>By Time Period</b>											
Midday		32	28	3.7	8.7				28	Thousand Trails &	I
PM		15	18	2.7	5.6				19	Seaside Cinema &	I
Eve		27	28	1.8	14.7				34	Tides &	I

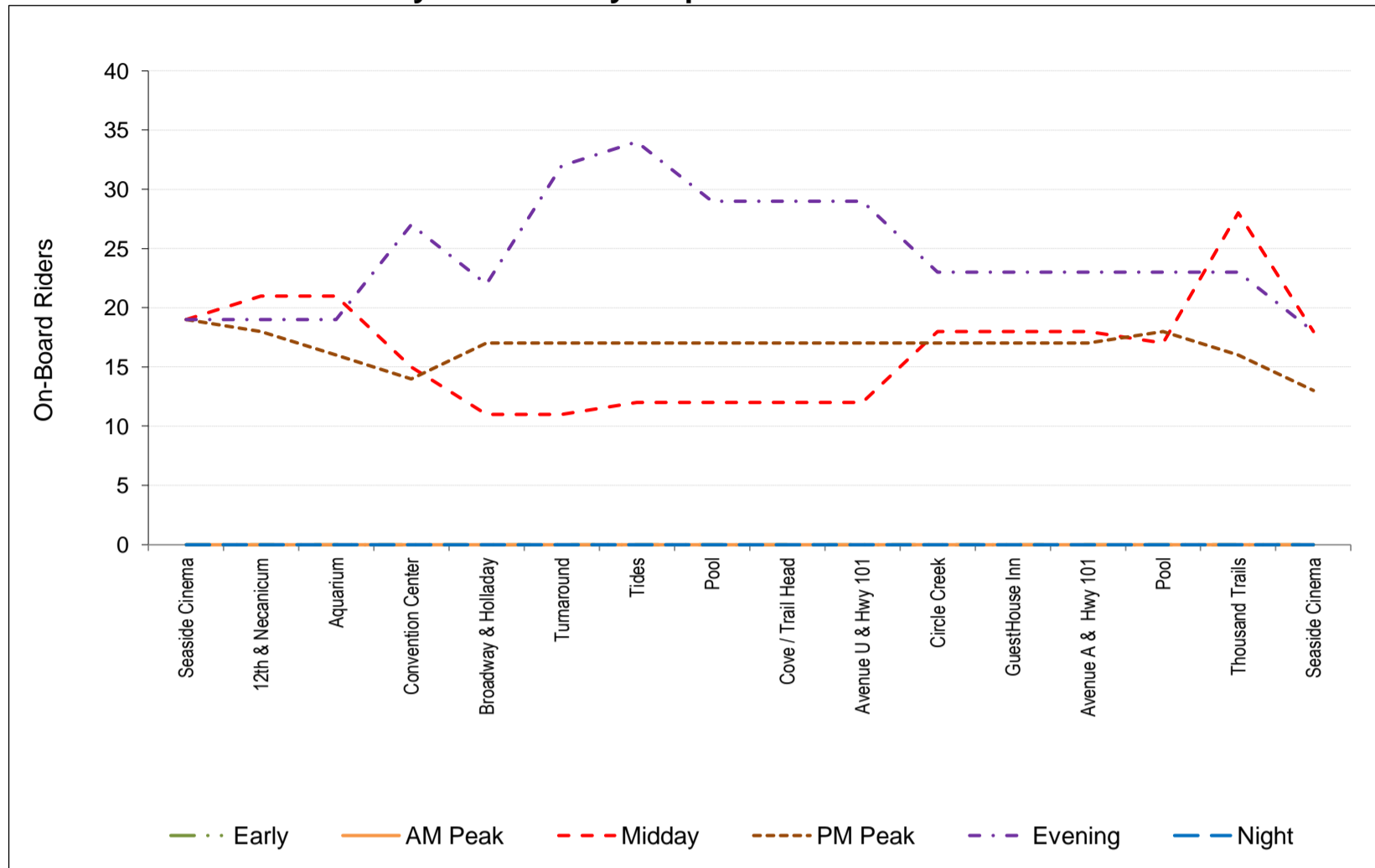
Weekday Running Time by Trip - Inbound



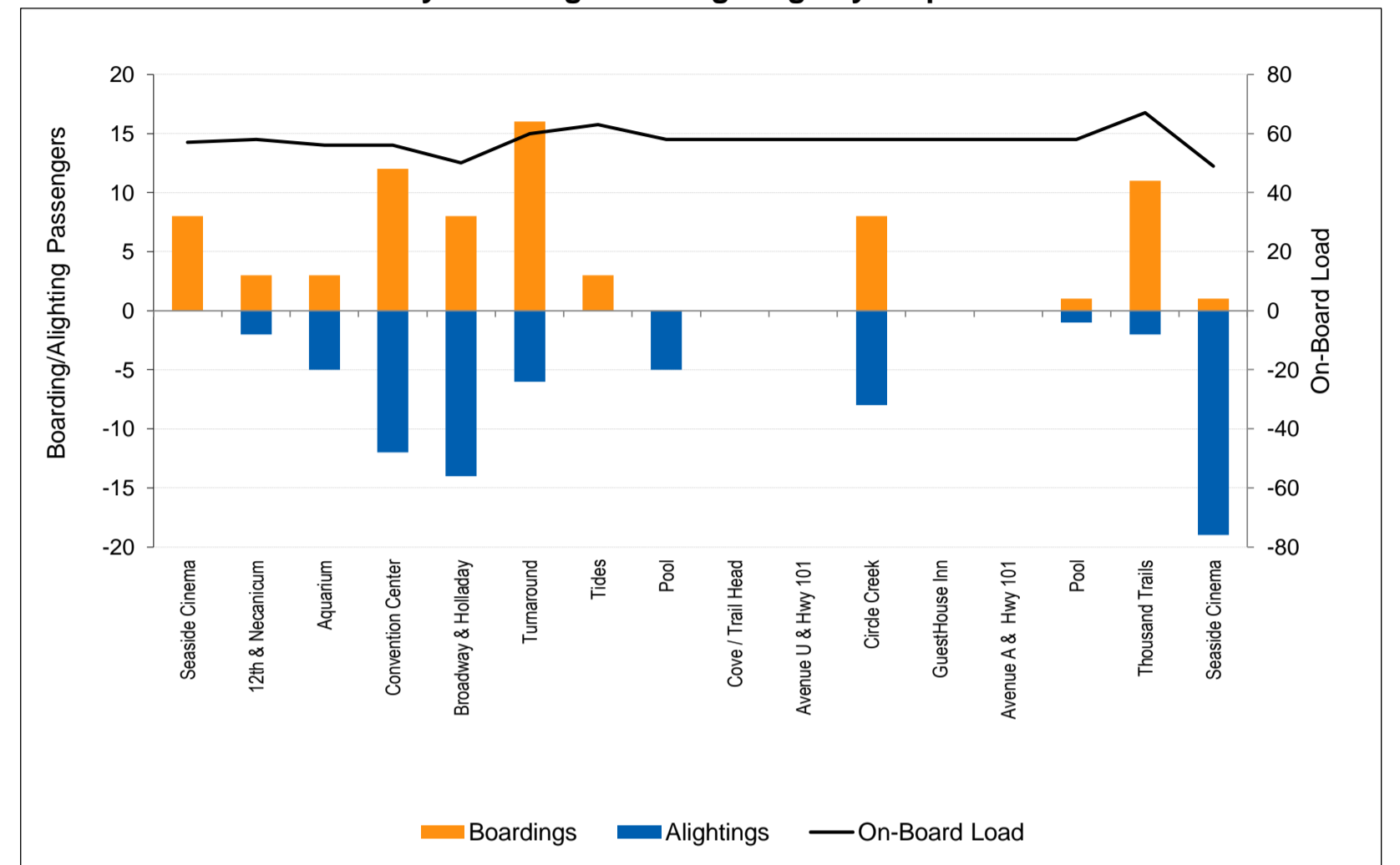
Weekday Ridership by Trip - Inbound



**Weekday On-Board by Stop and Time Period - Inbound**



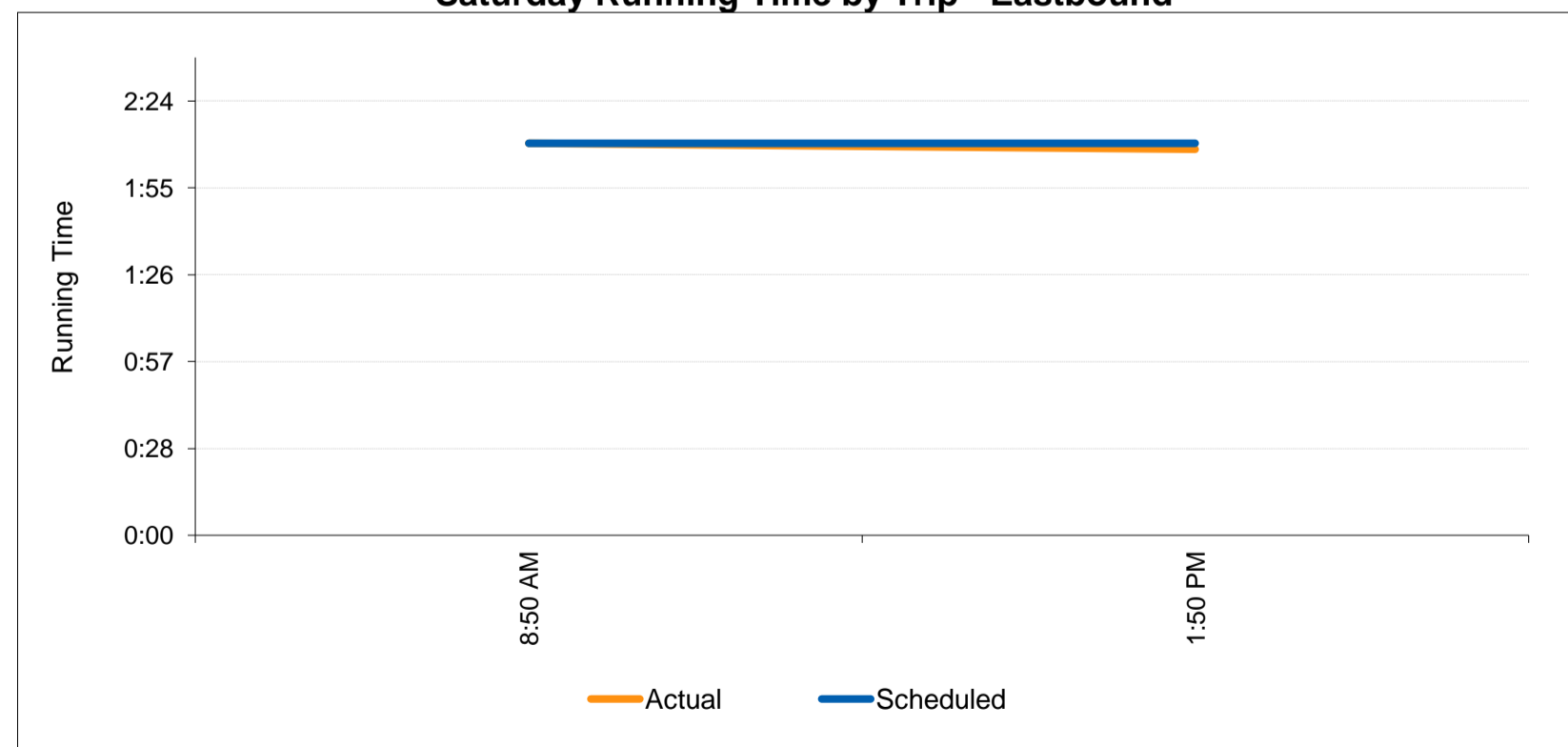
**Weekday Boardings and Alightings by Stop - Outbound**



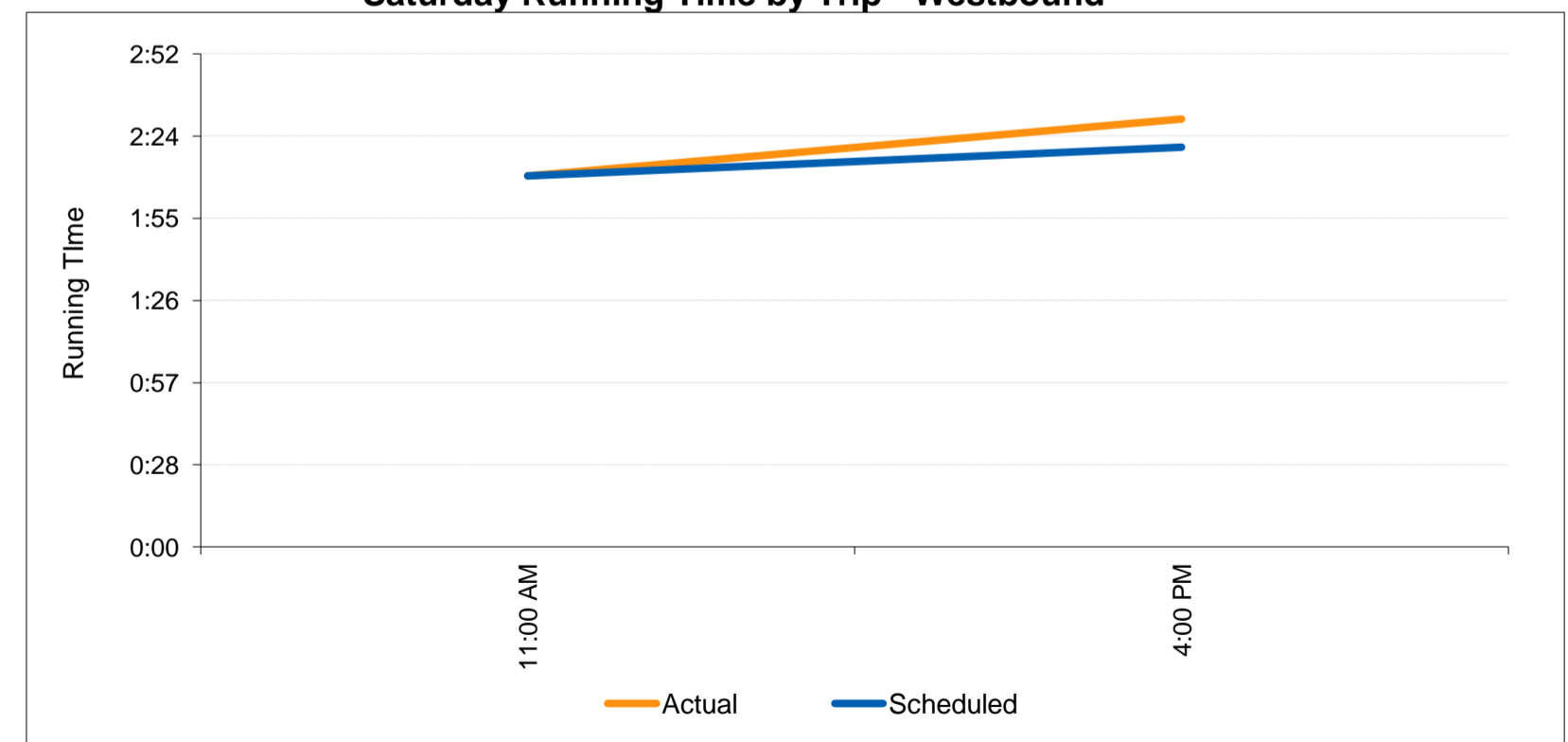
# Weekend Profiles

Route Connector Columbia Saturday - May 2015		Route Productivity Summary				Route Operations Summary					
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		20	21	8.8	2.3	75%	13%	13%	6	Transit Center &	E
Eastbound		16	16	4.3	3.7	62%	25%	12%	6	Transit Center &	E
Westbound		4	5	4.5	0.9	87%	0%	13%	3	Safeway &	W
<b>By Segment</b>											
1	Warrenton Mini Mart to Fred Meyer	6	4	1.6	3.8	75%		25%			
2	Fred Meyer to Transit Center	2	3	0.7	3.0	67%		33%			
3	Transit Center to Safeway	6	3	0.5	12.9	75%		25%			
4	Safeway to Westport	2	1	2.2	0.9	75%		25%			
5	Westport to Safeway (Clatskanie) &		1	1.0		75%	25%				
6	Safeway (Clatskanie) & to River City Transit Transfer Ctr			2.2		50%	50%				
7	River City Transit Transfer Ctr to Kelso Amtrak Station		4	0.8		75%	25%				
<b>By Time Period</b>											
Midday		18	18	6.5	2.8				6	Transit Center &	E
PM		2	3	2.3	0.9				1	Knappa Market &	W

Saturday Running Time by Trip - Eastbound

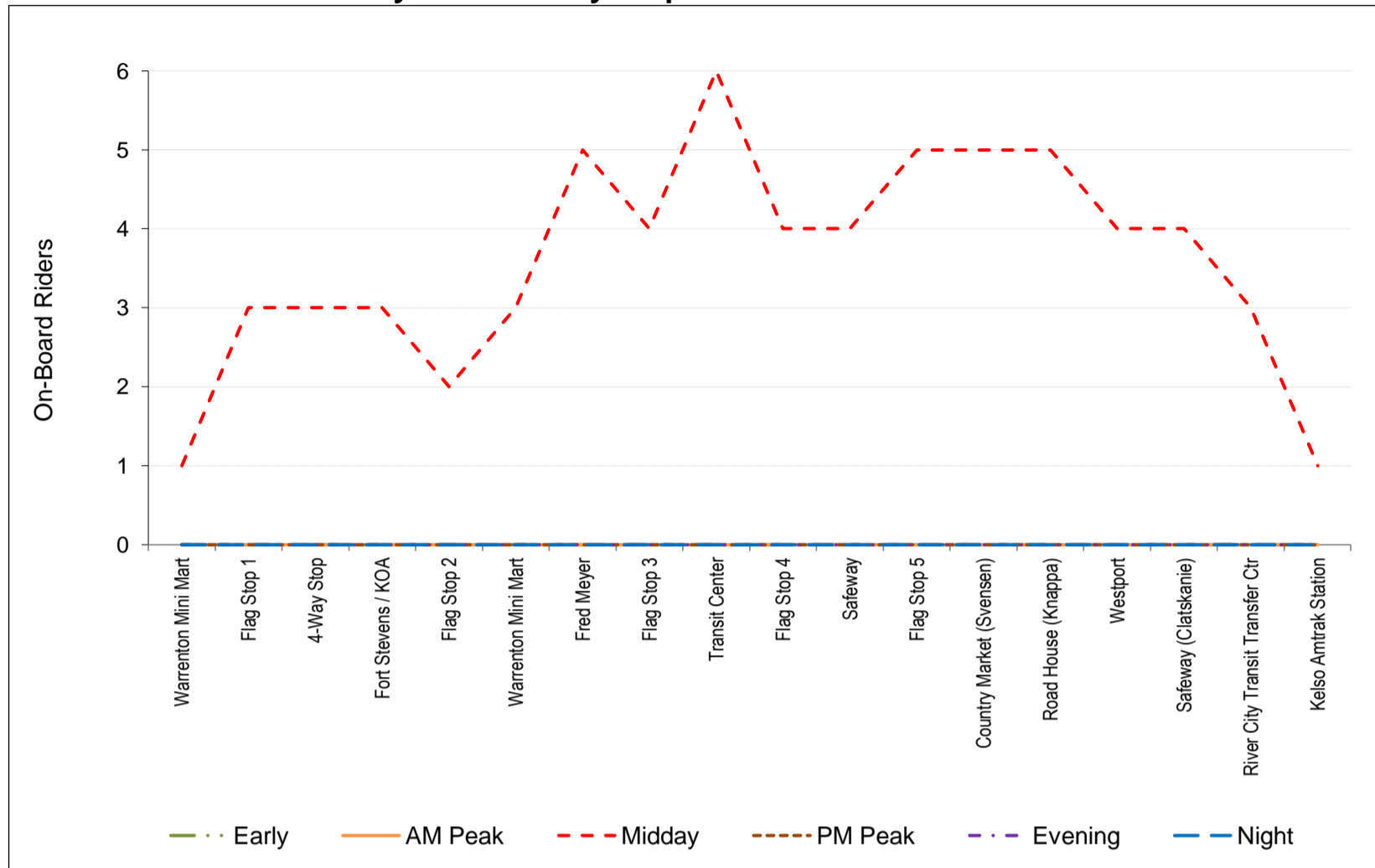


Saturday Running Time by Trip - Westbound

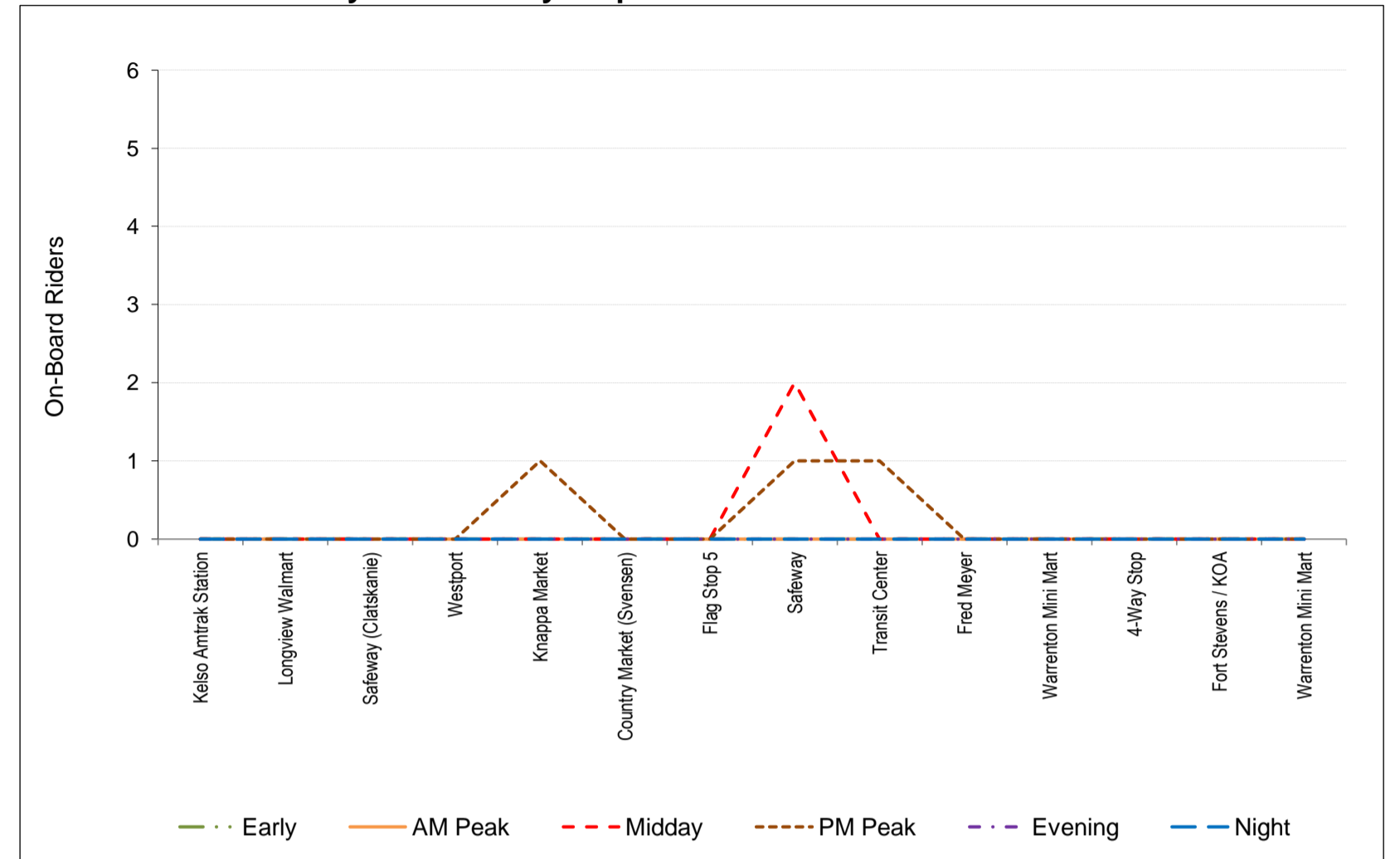




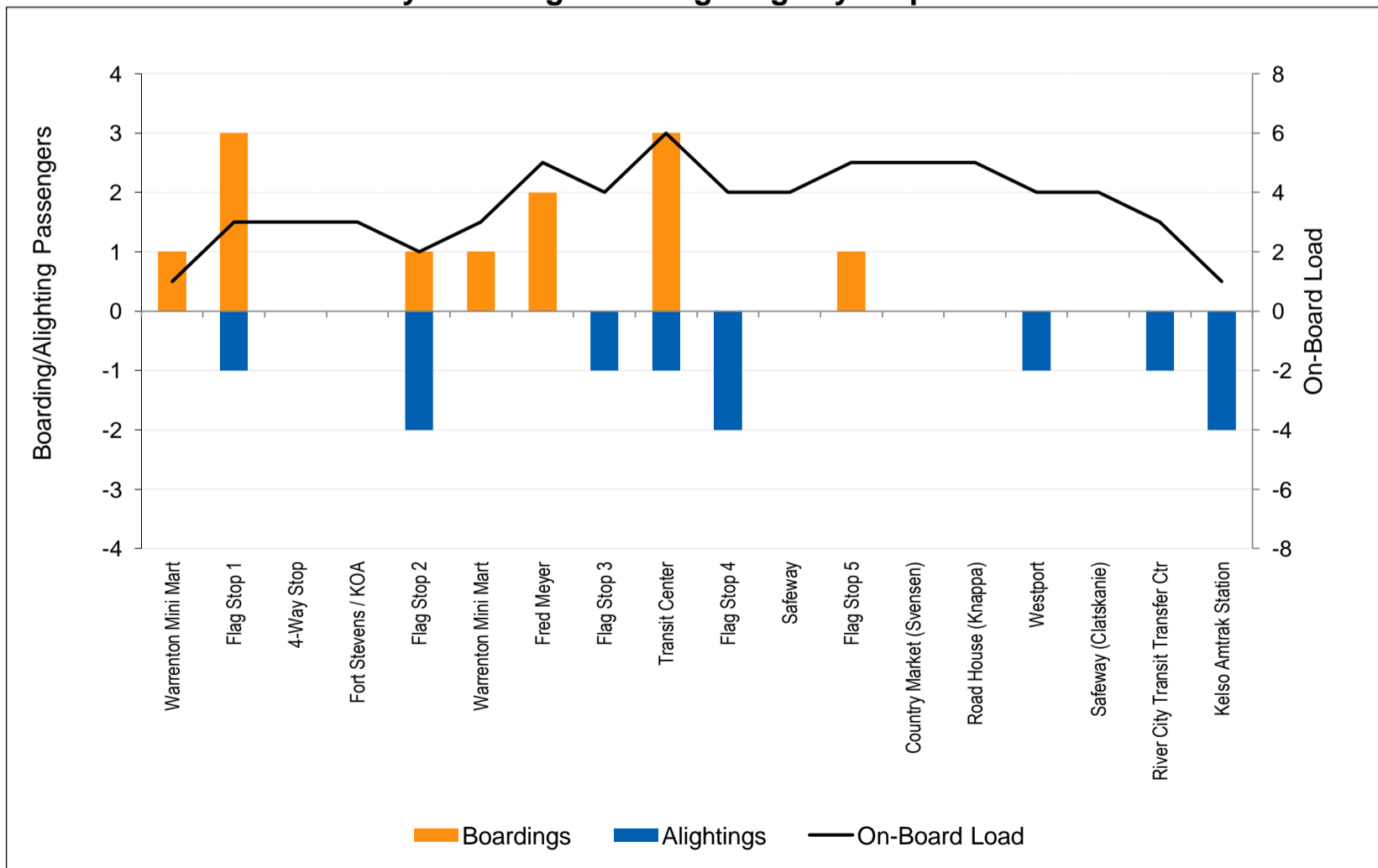
**Saturday On-Board by Stop and Time Period - Eastbound**



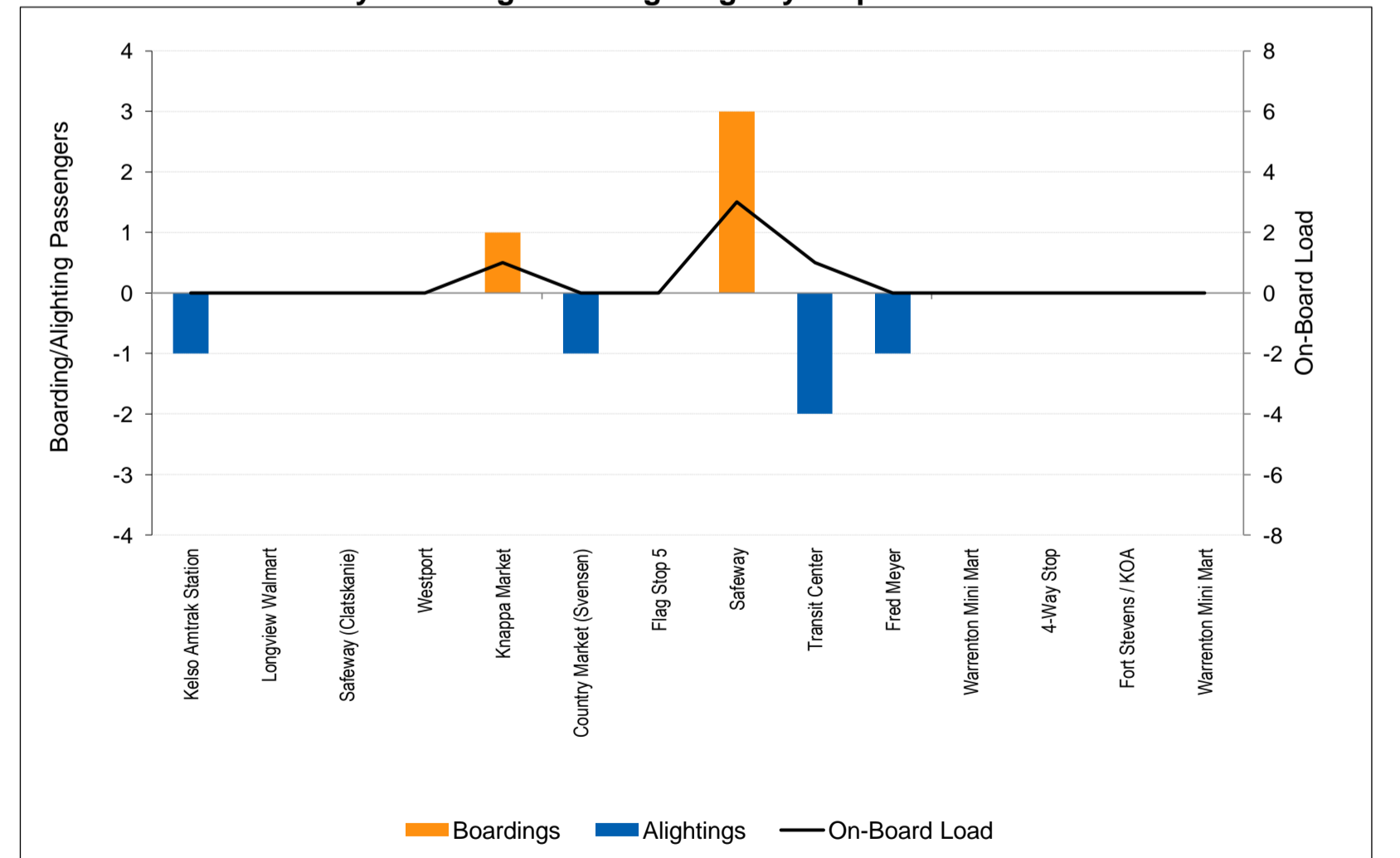
**Saturday On-Board by Stop and Time Period - Westbound**



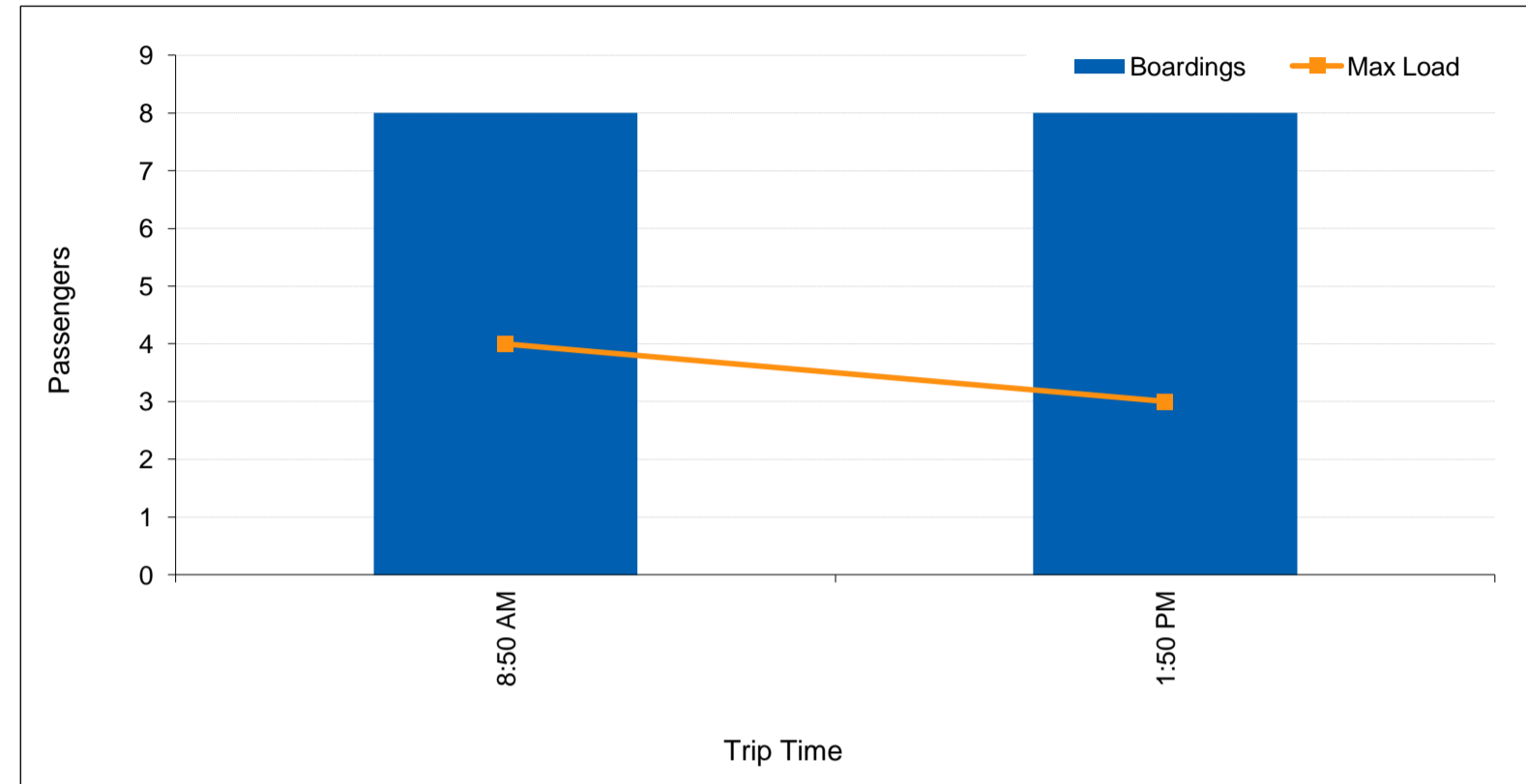
**Saturday Boardings and Alightings by Stop - Eastbound**



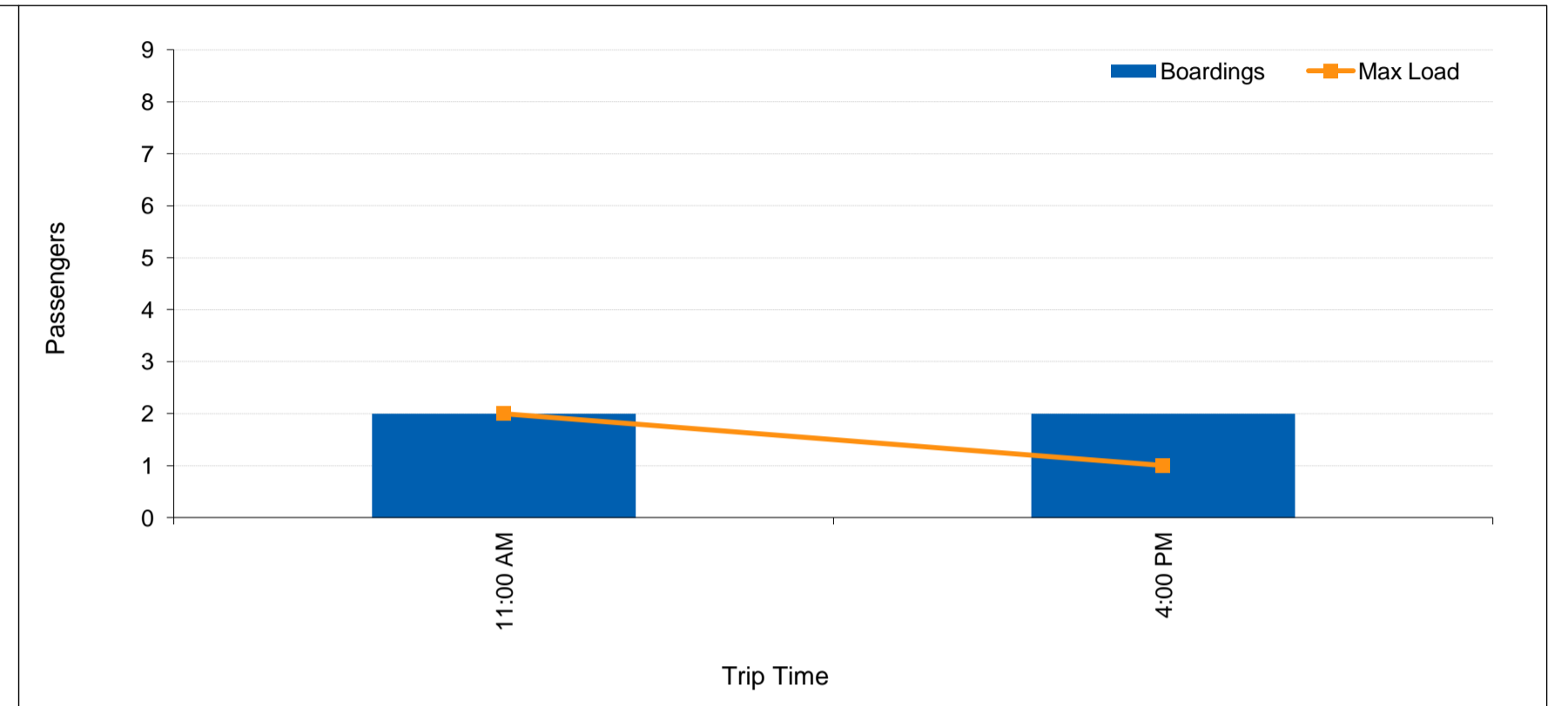
**Saturday Boardings and Alightings by Stop - Westbound**



Saturday Ridership by Trip - Eastbound

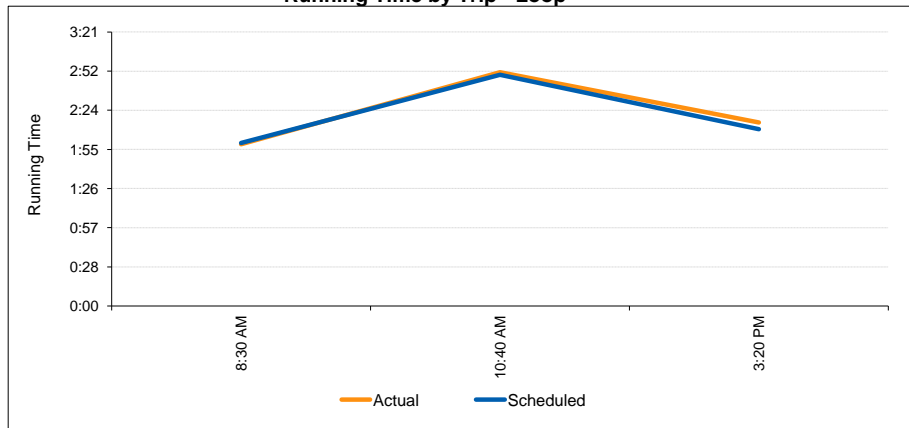


Saturday Ridership by Trip - Westbound

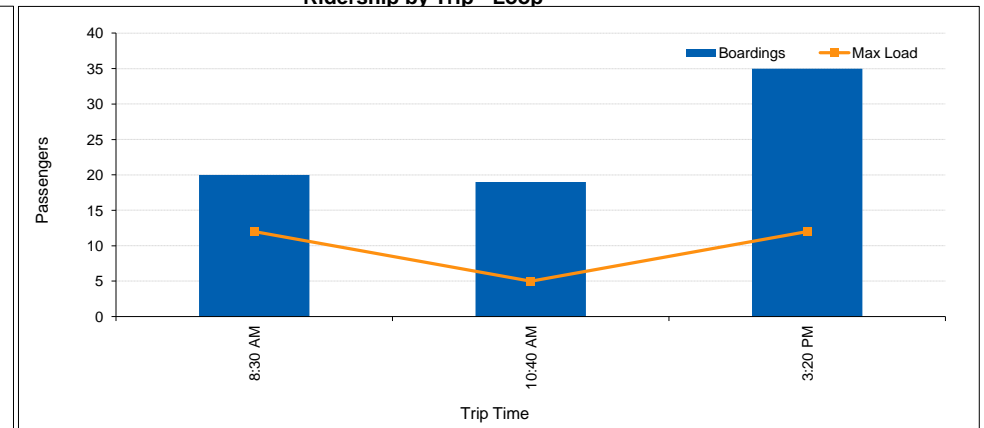


Pacific Connector (Weekend - May 2015)		Route Productivity Summary			Route Operations Summary						
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		74	74	7.0	10.6	87%	10%	3%	24	Fast Lube &	L
Loop		74	74	7.0	10.6	87%	10%	3%	24	Fast Lube &	L
<b>By Segment</b>											
1	Transit Center to Fred Meyer	24		0.5	48.0	100%					
2	Fred Meyer to Sunset Beach	5	14	0.5	10.0	100%					
3	Sunset Beach to Seaside Cinema	10	5	0.7	13.3	0%	67%	33%			
4	Seaside Cinema to Family Market	6	20	1.0	6.0	100%					
5	Family Market to Visitors Center &	9	6	1.6	5.8	100%					
6	Visitors Center & to Seaside Cinema	10	8	0.8	11.8	100%					
7	Seaside Cinema to Sunset Beach		2	0.7		100%					
8	Sunset Beach to Fred Meyer	4	3	0.7	5.7	67%	33%				
9	Fred Meyer to Transit Center	6	16	0.5	12.0	100%					
<b>By Time Period</b>											
Midday		39	39	4.8	8.1				14	West Lake &	L
PM		35	35	2.2	16.2				12	Transit Center &	L

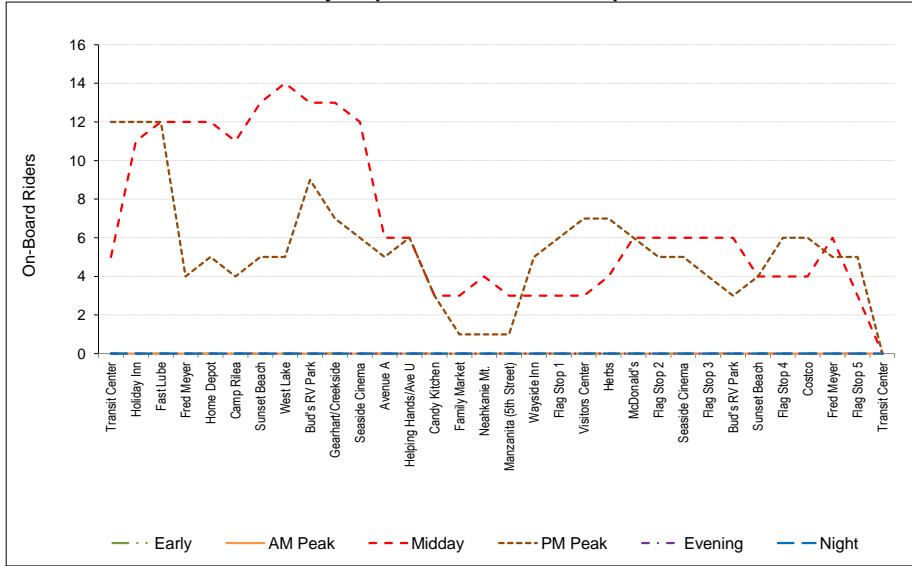
Running Time by Trip - Loop



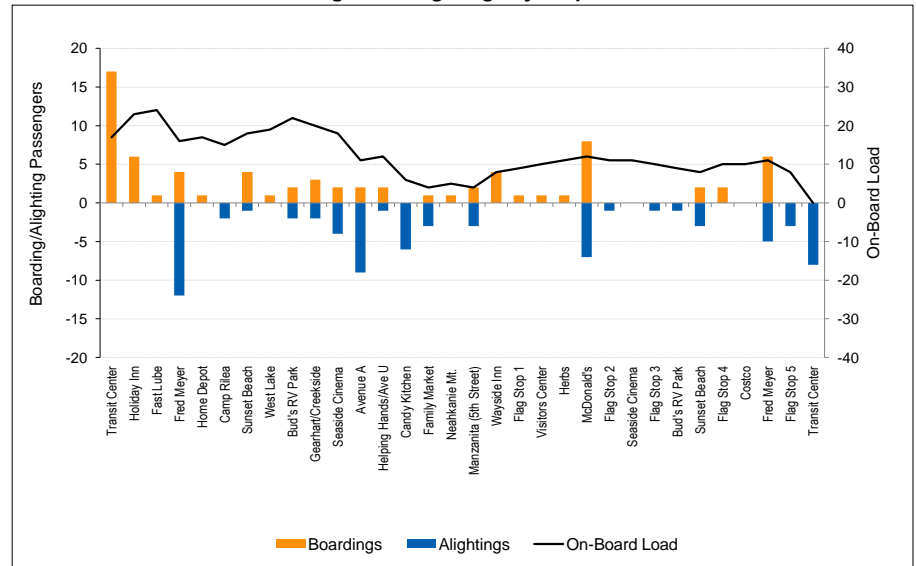
Ridership by Trip - Loop



**On-Board by Stop and Time Period - Loop**

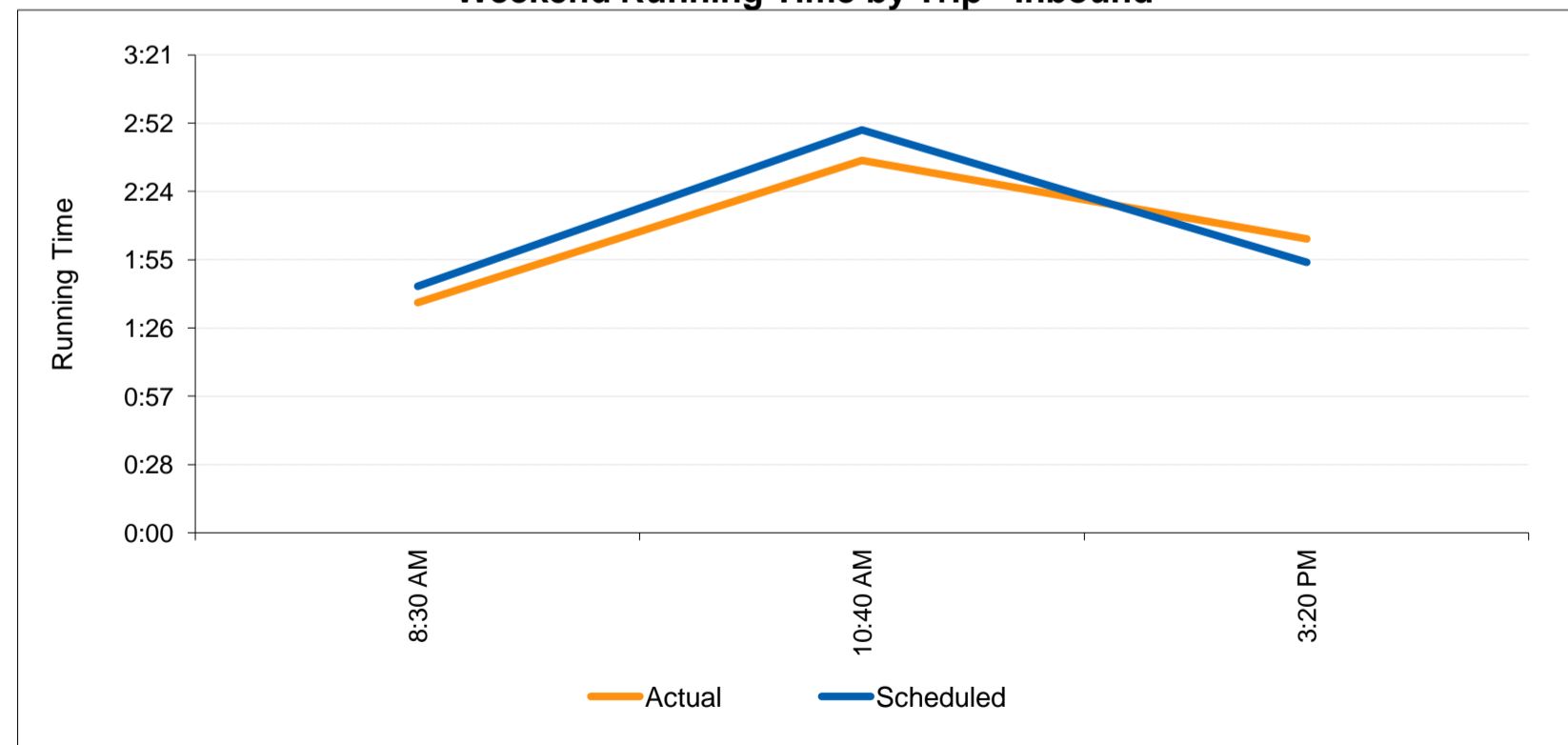


**Boardings and Alightings by Stop**

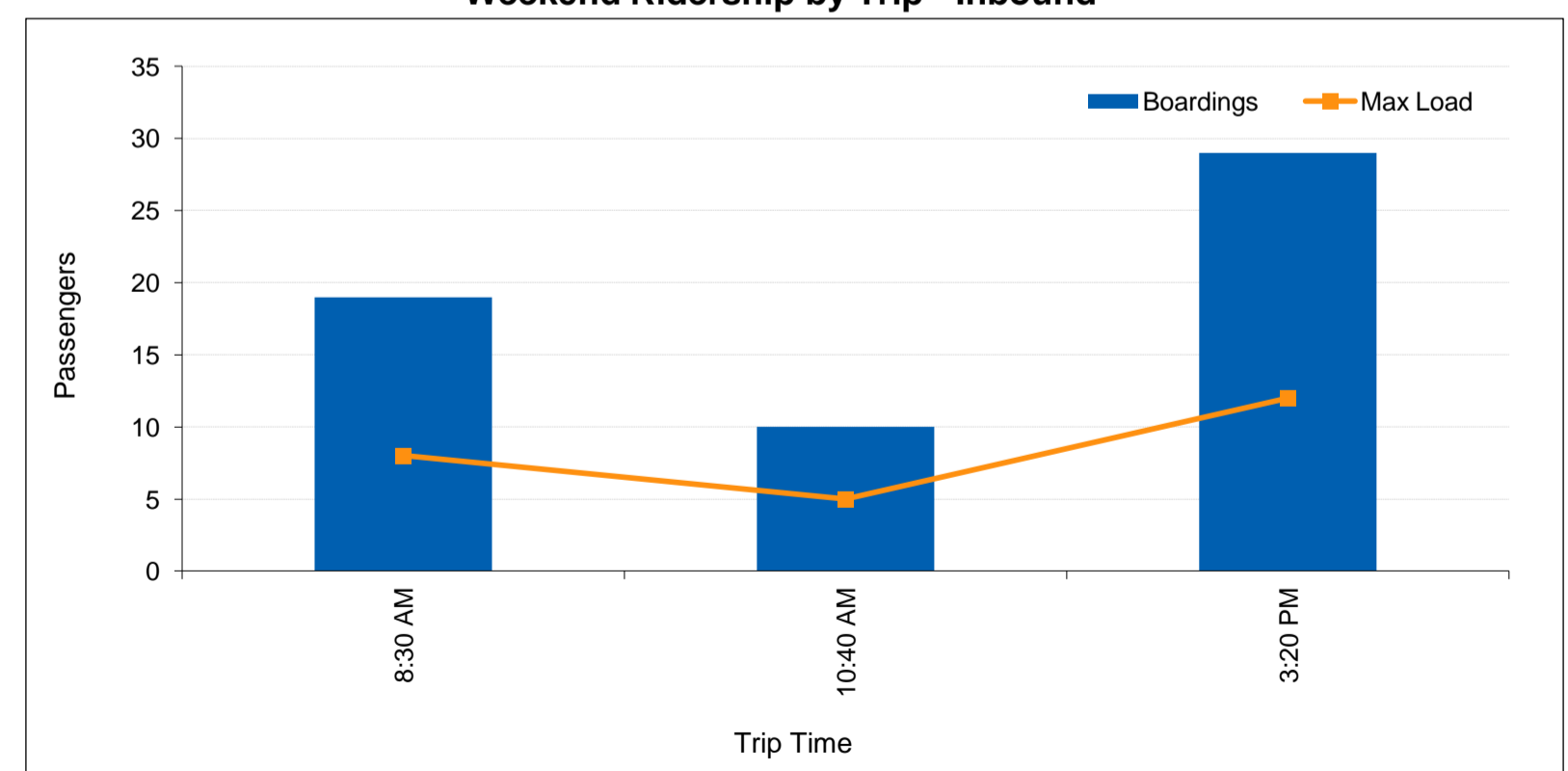


Pacific Connector (Weekend - Summer 2015)		Route Productivity Summary			Route Operations Summary						
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		58	57	7.0	8.3	77%	0%	23%	22	Seaside Cinema &	I
Inbound		58	57	7.0	8.3	55%	0%	45%	22	Seaside Cinema &	I
<b>By Segment</b>											
1	Transit Center to Fred Meyer	11		0.5	22.0	67%		33%			
2	Fred Meyer to Sunset Beach	6	3	0.5	12.0	67%		33%			
3	Sunset Beach to Seaside Cinema	4	2	0.7	5.3	67%		33%			
4	Seaside Cinema to Family Market	5	14	1.0	5.0	67%		33%			
5	Family Market to Manzanita (5th Street) &	4	2	0.4	9.6			100%			
6	Manzanita (5th Street) & to Visitors Center	9	5	0.6	15.0	33%		67%			
7	Visitors Center to Seaside Cinema	11	4	0.8	12.9			67%			
8	Seaside Cinema to Fred Meyer	5	11	1.4	3.7	67%		33%			
9	Fred Meyer to Transit Center	3	16	0.5	6.0	100%					
<b>By Time Period</b>											
	Midday	29	29	4.8	6.0				10	Sunset Beach &	I
	PM	29	28	2.2	13.4				12	McDonald's &	I

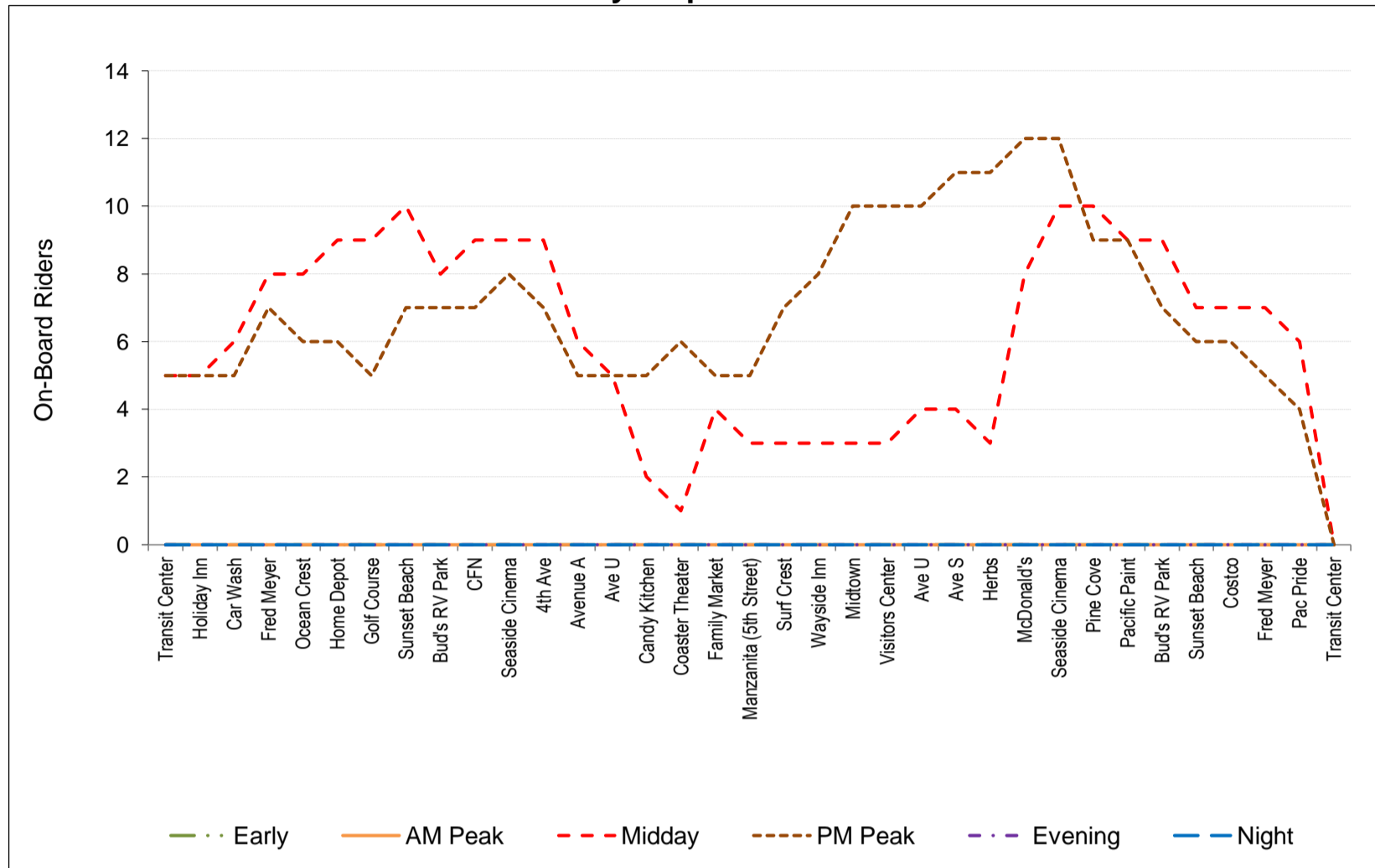
Weekend Running Time by Trip - Inbound



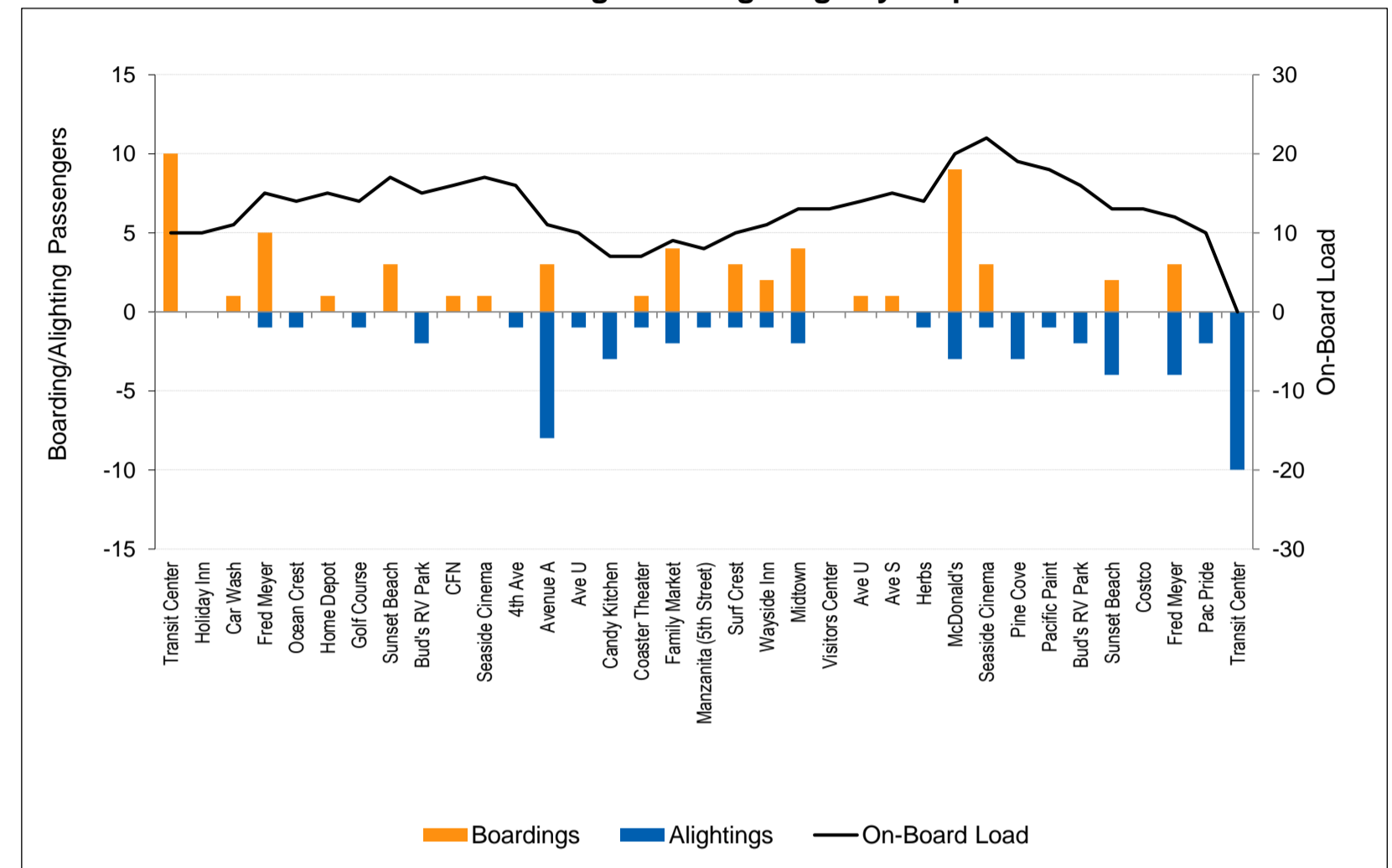
Weekend Ridership by Trip - Inbound



**Weekend On-Board by Stop and Time Period - Inbound**

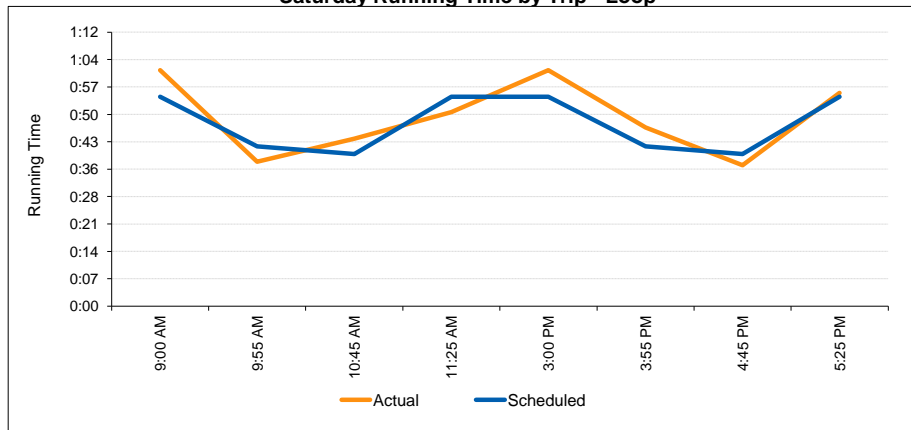


**Weekend Boardings and Alightings by Stop - Inbound**

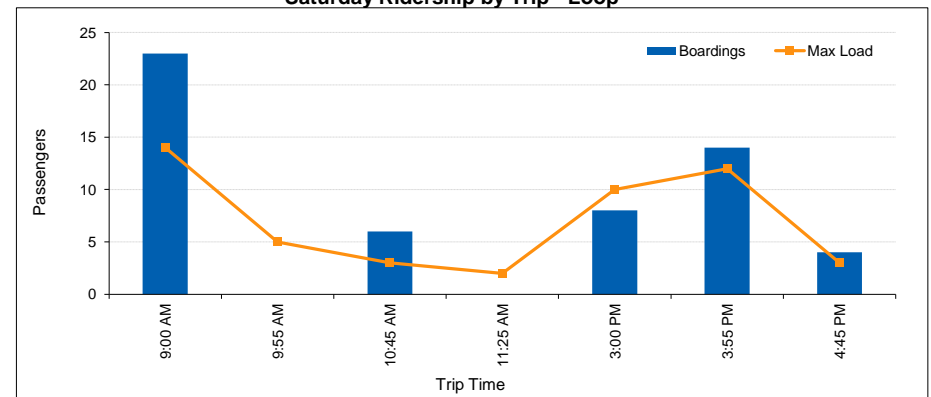


Route 21 Saturday - May 2015		Route Productivity Summary				Route Operations Summary					
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		66	67	6.4	10.3	80%	9%	11%	32	Avenue A &	L
Loop		66	67	6.4	10.3	80%	9%	11%	32	Avenue A &	L
<b>By Segment</b>											
1	Seaside Cinema to Coaster Theater	31	24	1.9	16.0	88%	13%				
2	Coaster Theater to Midtown	2	3	0.3	6.7	100%					
3	Midtown to Maher & Hemlock	1	9	0.8	1.3	100%					
4	Maher & Hemlock to RV Park	6	4	1.2	5.0	75%	25%				
5	RV Park to Visitor Center &	11	14	0.5	20.6	88%		13%			
6	Visitor Center & to Seaside Hospital	10	2	0.9	11.5	75%		25%			
7	Seaside Hospital to Seaside Cinema	5	2	0.3	15.0	25%	25%	50%			
8	Seaside Cinema to McDonald's		9	0.4		100%					
<b>By Time Period</b>											
	Midday	29	29	3.2	9.1				16	Ave P &	L
	PM	37	38	3.2	11.6				18	Avenue A &	L

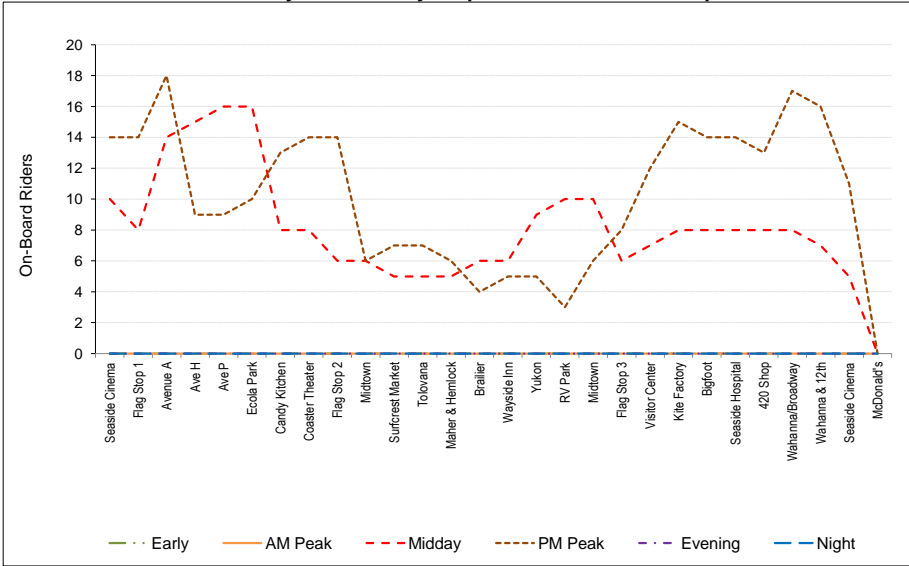
Saturday Running Time by Trip - Loop



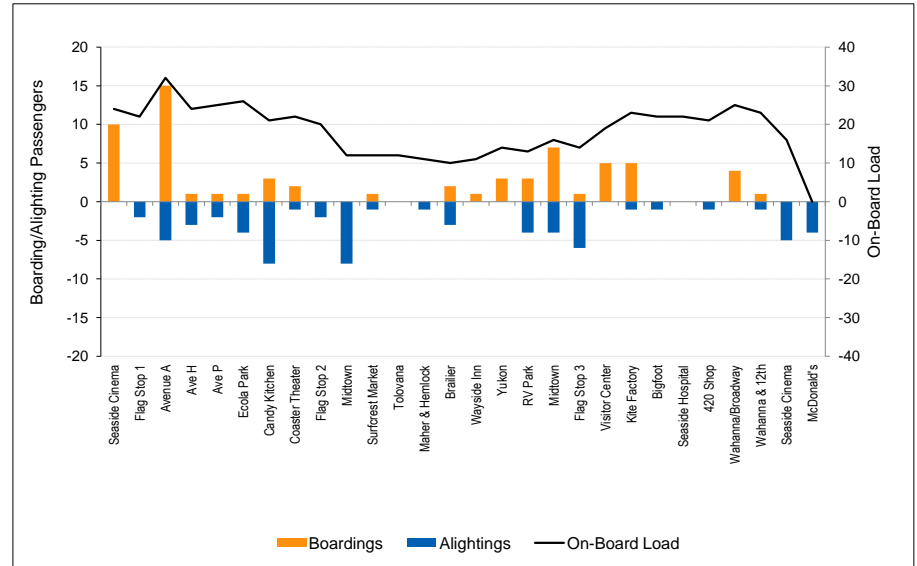
Saturday Ridership by Trip - Loop



Saturday On-Board by Stop and Time Period - Loop



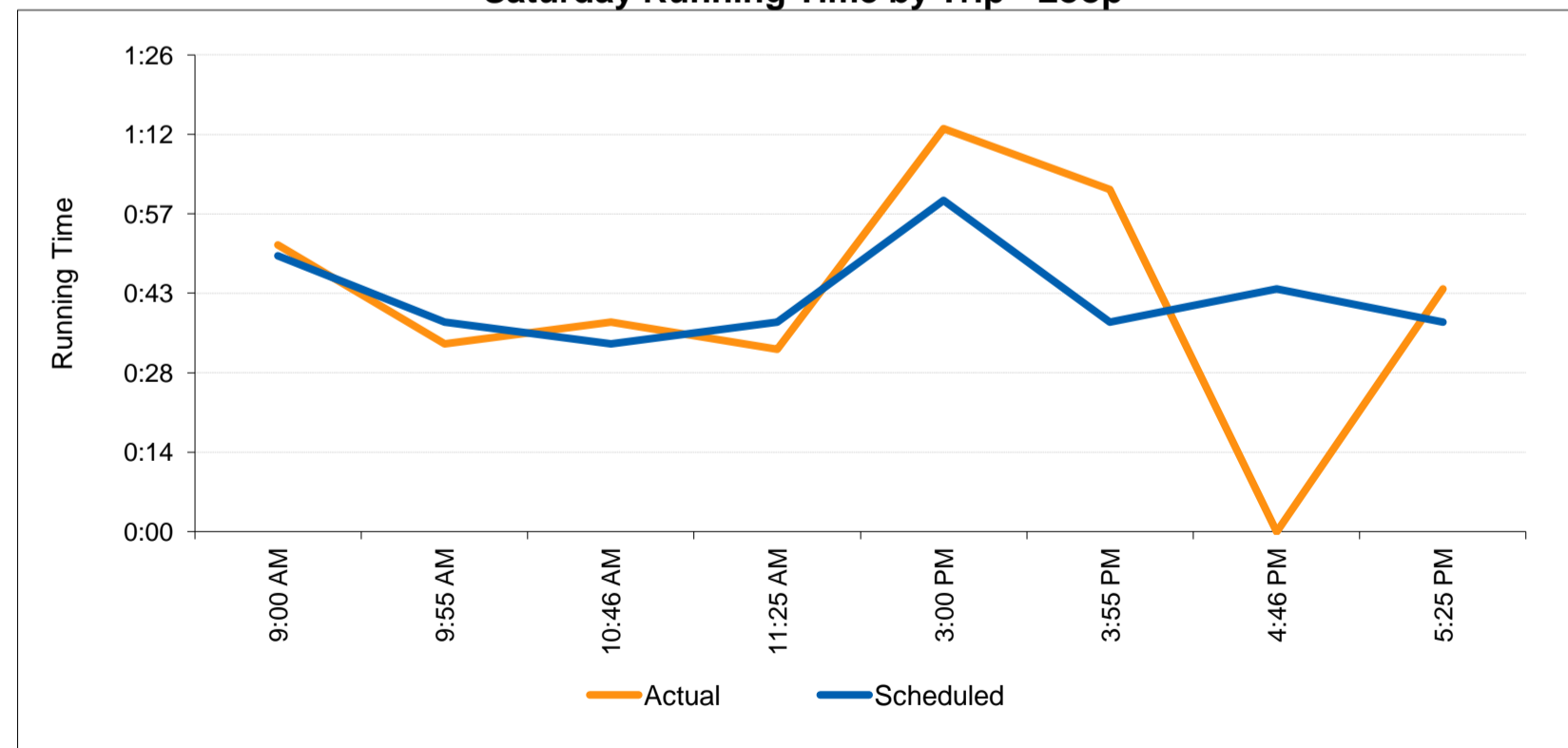
Saturday Boardings and Alightings by Stop -



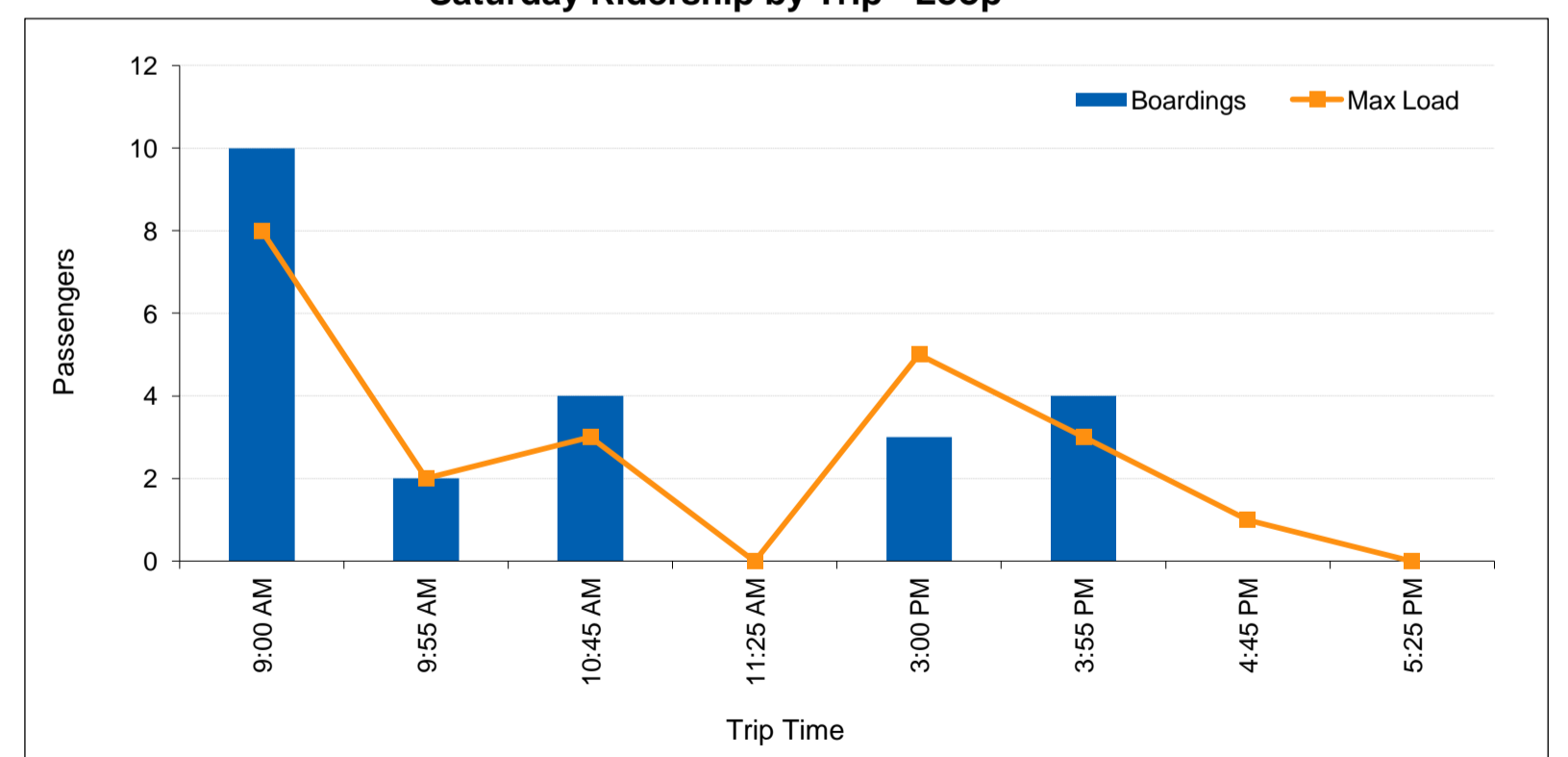


Route 21 Saturday (Summer 2015)		Route Productivity Summary				Route Operations Summary					
		Activity		Service Hours	Productivity	On-Time Performance			On-Board Load		
		Boardings	Alightings	Service Hours	Boardings per Service Hour	% On-Time	% Early	% Late	Max Passengers On Board	Max Load Location	Direction
<b>Total</b>		31	32	6.7	4.6	65%	9%	26%	16	Ave. I &	L
Loop		31	32	6.7	4.6	31%	18%	51%	16	Ave. I &	L
<b>By Segment</b>											
1	Seaside Cinema to Coaster Theater	6	1	1.9	3.1	13%	25%	63%			
2	Coaster Theater to Midtown	7	1	0.3	26.2	33%	17%	50%			
3	Midtown to Maher & Hemlock	2	4	0.8	2.5	29%	14%	57%			
4	Maher & Hemlock to RV Park	1	3	1.2	0.8	29%	29%	43%			
5	RV Park to Seaside Hospital &	3	4	1.1	2.6	33%	33%	33%			
6	Seaside Hospital & to Avenue A (McDonald's)	0	6	0.3	0.0	0%	0%	100%			
<b>By Time Period</b>											
	Midday	16	18	3.4	4.8				10	Ave. I &	L
	PM	15	14	3.4	4.5				8	Candy Kitchen &	L

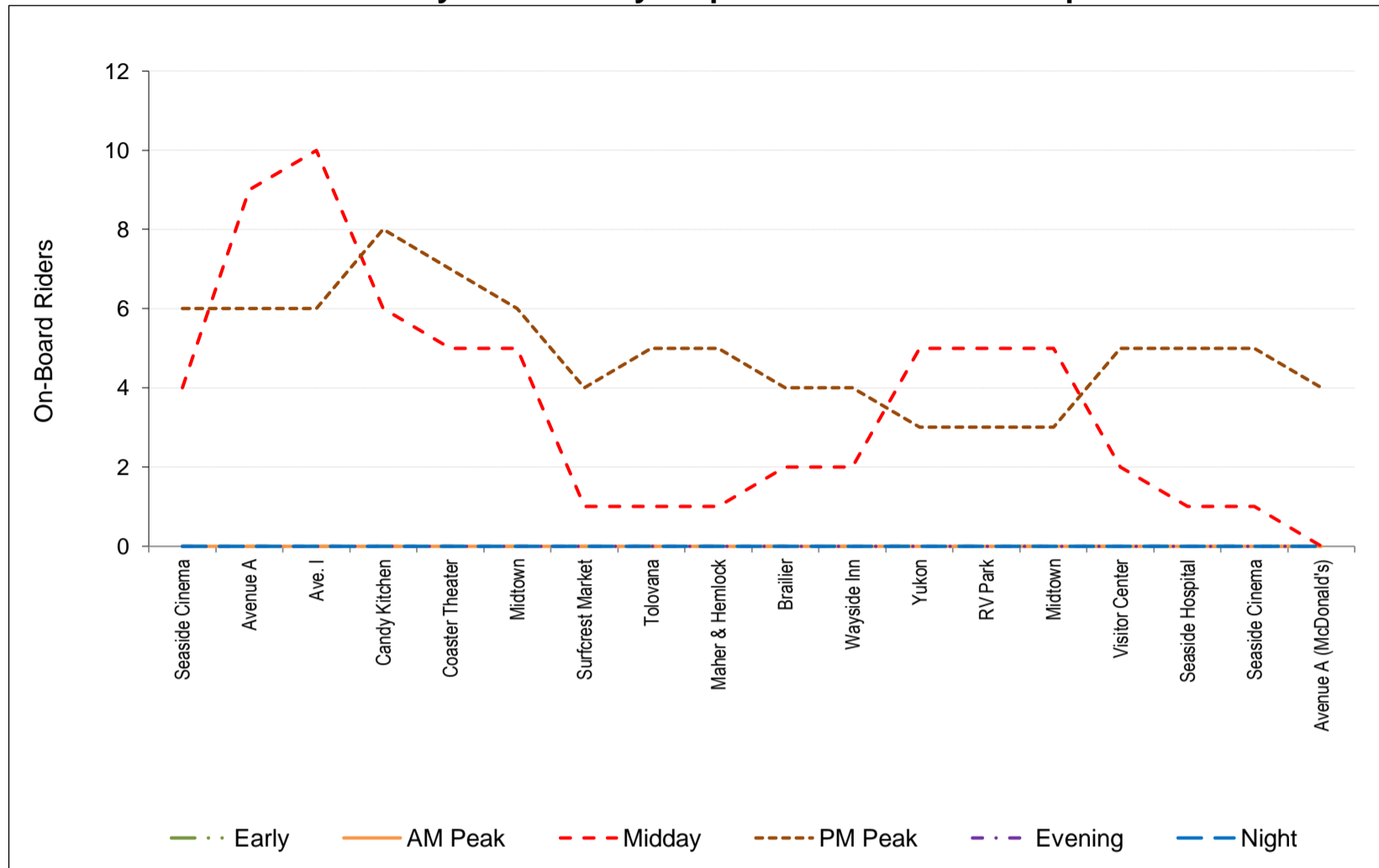
Saturday Running Time by Trip - Loop



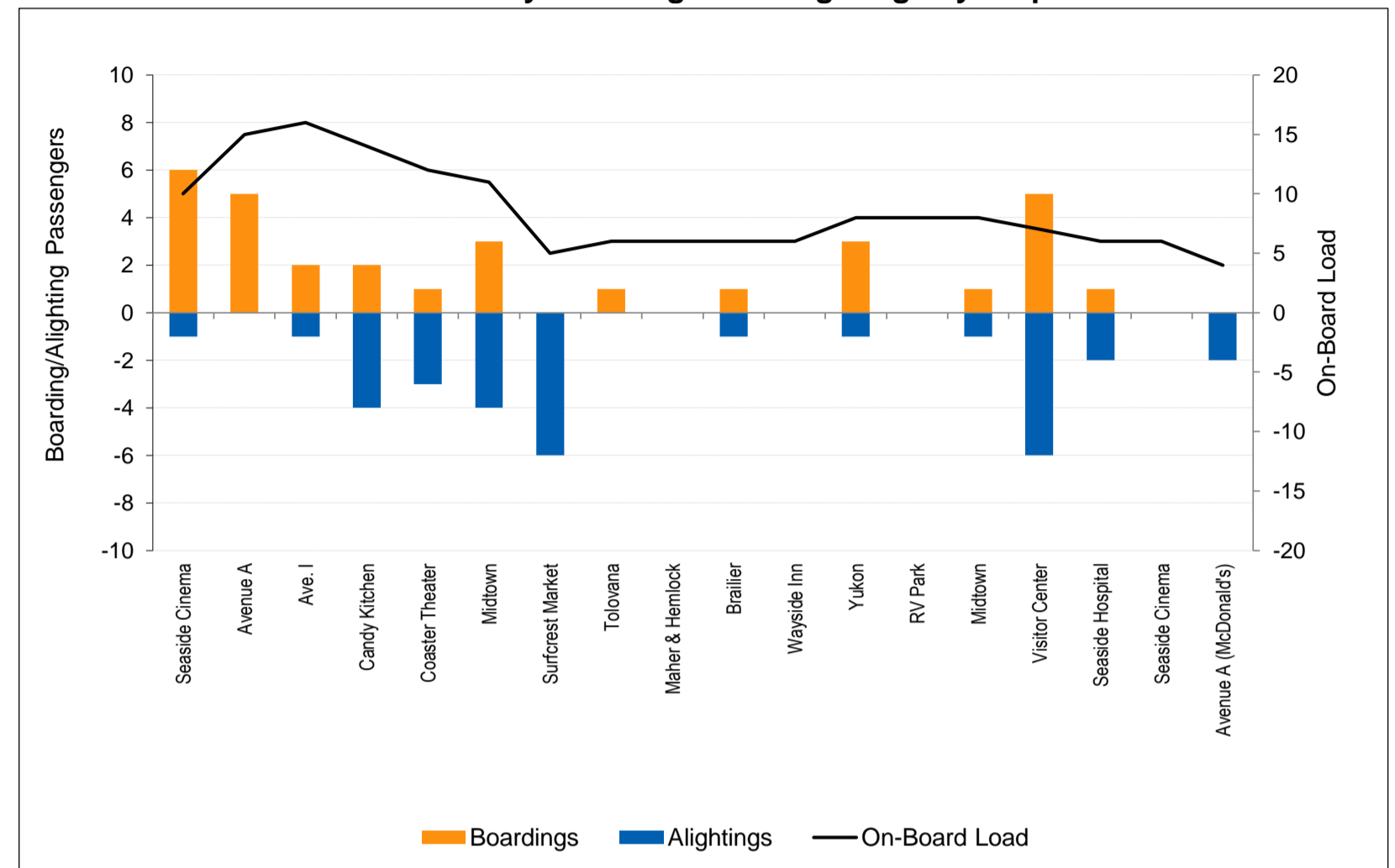
Saturday Ridership by Trip - Loop



**Saturday On-Board by Stop and Time Period - Loop**



**Saturday Boardings and Alightings by Stop -**



## **SECTION D**

### Memo 2C: Community Input



# MEMO #2C: COMMUNITY INPUT

**Memo #2A - Existing Systems: Community Overview** includes an analysis of Clatsop County’s demographics, market for transit, and a summary of previous planning efforts.

**Memo #2B – Existing Systems: Service Overview** includes analysis of existing transit services including origins and destinations, performance by route, financial data, organizational structure, fleet information, etc.

**Memo #2C – Community Input** provides the results of on-board passenger surveys and ridechecks, a community survey, and other stakeholder and public outreach that were conducted between May and September 2015.

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# 5 EXISTING CONDITIONS PHASE PUBLIC OUTREACH

## INTRODUCTION

This memo summarizes public input gathered in the Existing Conditions phase of the SETD Long-Range Comprehensive Transportation Plan (LRCTP) project. Input was gathered from current riders, stakeholders, and the general public. Additional public outreach is planned at future stages of the project, as summarized in Figure 5-1.

Figure 5-1 Summary of Community Input

Time Frame	Project Phase	Information Presented	Outreach Tools	Memo
Spring 2015	Existing Conditions	<ul style="list-style-type: none"> <li>▪ Community overview</li> <li>▪ Market analysis</li> <li>▪ Existing services</li> </ul>	<ul style="list-style-type: none"> <li>▪ On-board rider survey</li> <li>▪ Community survey</li> <li>▪ Stakeholder meetings</li> <li>▪ Mobile outreach events</li> </ul>	2C
Summer 2015	Goals and Service Opportunities	<ul style="list-style-type: none"> <li>▪ Goals</li> <li>▪ Initial service opportunities</li> </ul>	<ul style="list-style-type: none"> <li>▪ On-board rider survey</li> <li>▪ Community survey</li> </ul>	5B
December 2015	Service Concepts	<ul style="list-style-type: none"> <li>▪ Potential service changes</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mobile outreach events</li> </ul>	5B
June 2016 (Planned)	Long-Range Comprehensive Transportation Plan (LRTCP)	<ul style="list-style-type: none"> <li>▪ Final Plan: Service, capital, and transit-supportive elements</li> </ul>	<ul style="list-style-type: none"> <li>▪ Open houses</li> </ul>	Final Plan Appendix

This chapter is organized into several sections corresponding to each of the outreach elements of the Existing Conditions phase. The memo concludes with key themes and findings from the Community Overview and Market Analysis (Memo #2A), Existing Services Analysis (Memo #2B), and the public outreach efforts described in this document (Memo #2C).



## RIDER SURVEY

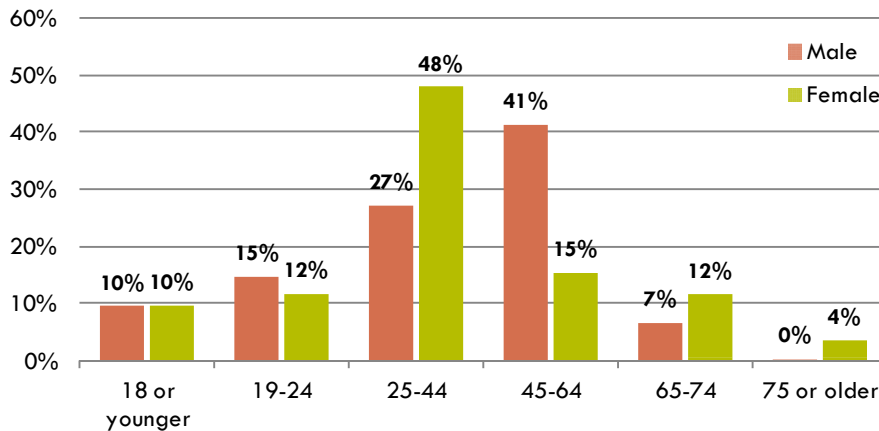
SETD staff conducted a survey of current riders aboard buses throughout the month of May 2015 to capture a typical weekday and weekend schedule. Appendix A provides the survey instrument, which was available in both English and Spanish. Staff collected a total of 204 surveys. In addition, SETD staff tracked boardings and alightings by stop and tracked on-time performance. A second survey of routes heavily affected by seasonal variations was conducted in Summer 2015. Seasonal differences are highlighted where they are deemed significant.

### Passenger Characteristics

The survey asked respondents a series of demographic questions. The largest share of respondents were full-time workers (38%), living alone (39%), between 25 and 44 years of age (36%), earning less than \$15,000 per year (58%), male (54%) and white (63%) (Figure 5-2, Figure 5-3, Figure 5-5, Figure 5-6, Figure 5-8). About 5% of the surveys were completed in Spanish, and 8% of respondents said they spoke English “not very well” or “not at all” (Figure 5-9).

In comparing household income category distributions for Spring and Summer (Figure 5-6 and Figure 5-7, respectively), it appears that more higher income riders were using the transit system in summer.

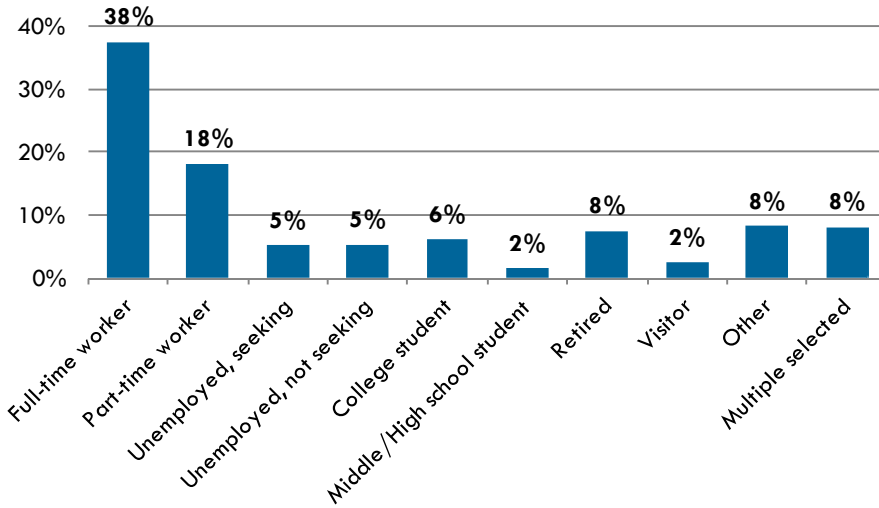
Figure 5-2 Age Distribution by Gender, Spring 2015



Q18: What is your age? Q19: What is your gender? n = 173; non-responses removed.

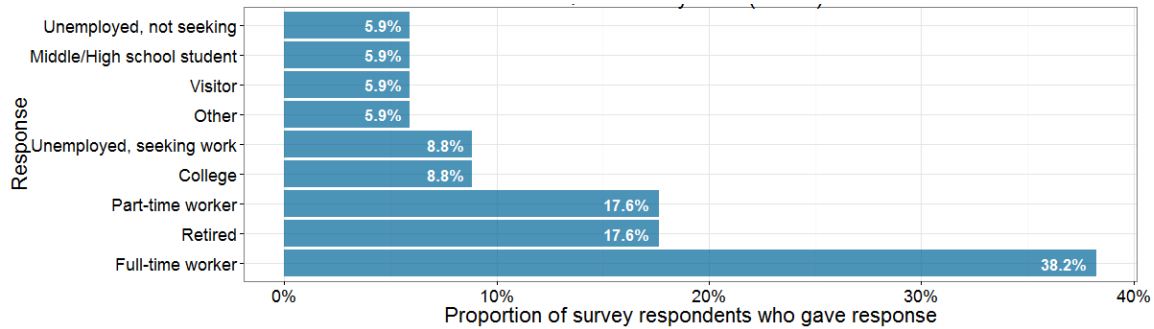
Figure 5-3 and Figure 3-4 illustrate labor market distributions in Spring and Summer 2015, respectively. Workers make up the majority of SETD riders, including about 40% who work full-time and about 18% who work part-time. Students comprise less than 10% of riders. Middle and high school students, college students, retirees and visitors all made up a larger proportion of the respondents in the summer season, indicating more use of transit for non-work purposes.

Figure 5-3 Labor Market Status, Spring 2015



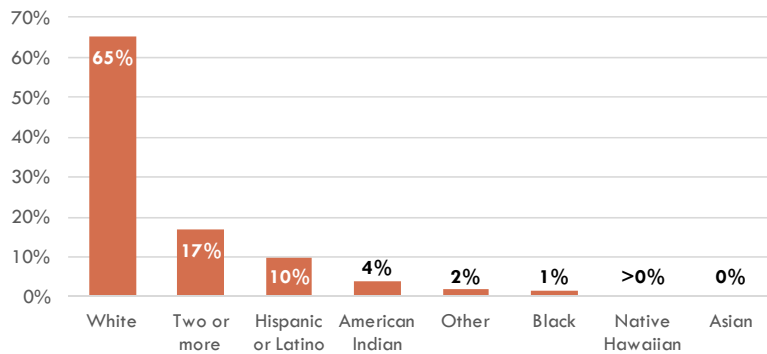
Q20: Are you [... which of the following]? n = 182; non-responses removed.

Figure 5-4 Labor Market Status, Summer 2015



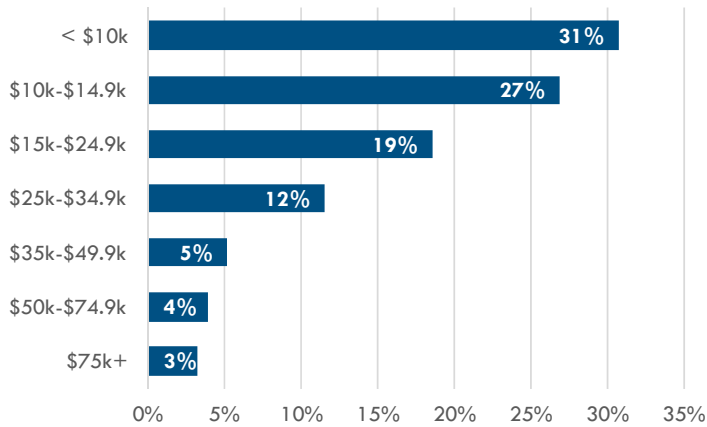
Q20: Are you [... which of the following]? n = 34; non-responses removed.

Figure 5-5 Race and Ethnicity, Spring 2015



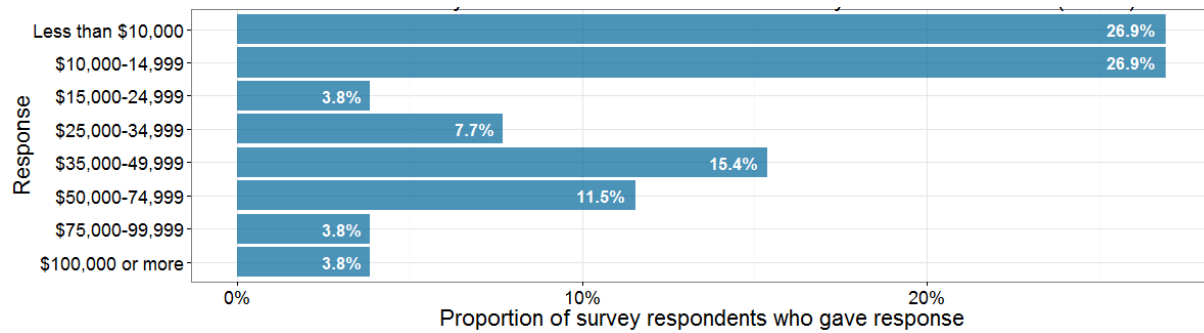
Q22: What is your ethnicity? n = 201; non-responses removed.

Figure 5-6 Gross Annual Household Income, Spring 2015



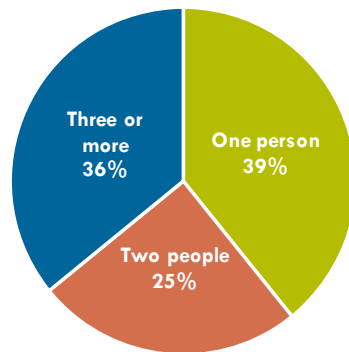
Q26: What was your total household income last year before taxes? n = 156; non-responses removed.

Figure 5-7 Gross Annual Household, Income, Summer 2015



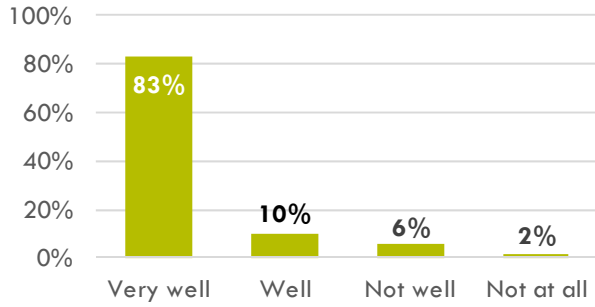
Q26: What was your total household income last year before taxes? n = 26; non-responses removed.

Figure 5-8 Household Size, Spring 2015



Q23: How many people are there in your household? n = 181; non-responses removed.

Figure 5-9 Proficiency in English, Spring 2015



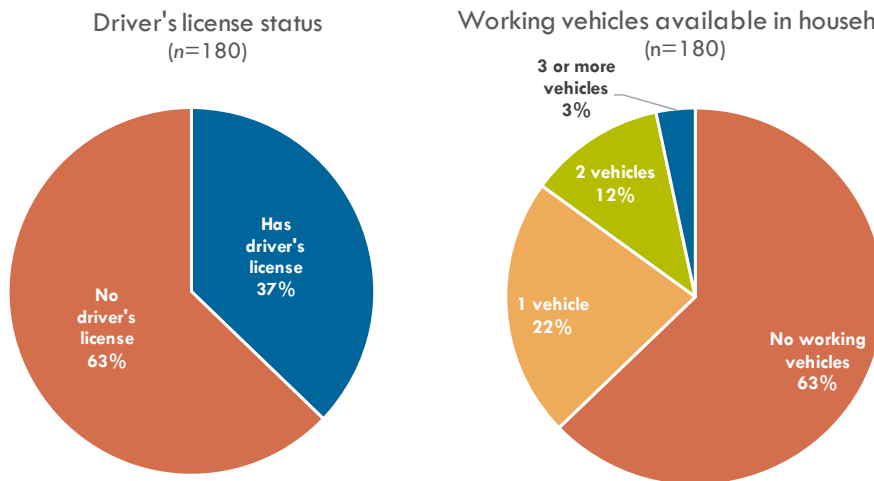
Q21: How well do you speak English? n = 180; non-responses removed.

## Vehicle Availability

About a third of survey respondents have at least one working household vehicle (37%) and two-thirds have no driver’s license (63%) (Figure 5-10). The distribution of vehicles available is about the same for both people with and people without a driver’s license (Figure 5-12), showing that a high number of people who have a license choose to or cannot own a car. Respondents without a driver’s license and without access to a vehicle are more likely to have reported not being able to make the trip if transit service was not available in their area. These people are more than twice as likely to not be able to make the trip compared to people with a driver’s license and access to a vehicle.

A second survey conducted during the Summer (July 2015) indicated that more discretionary riders (riders who have other means of transportation) may be utilizing the system during this season. About 64% of the Summer respondents had at least one car in their household, as compared to 37% of the Spring respondents (Figure 5-11).

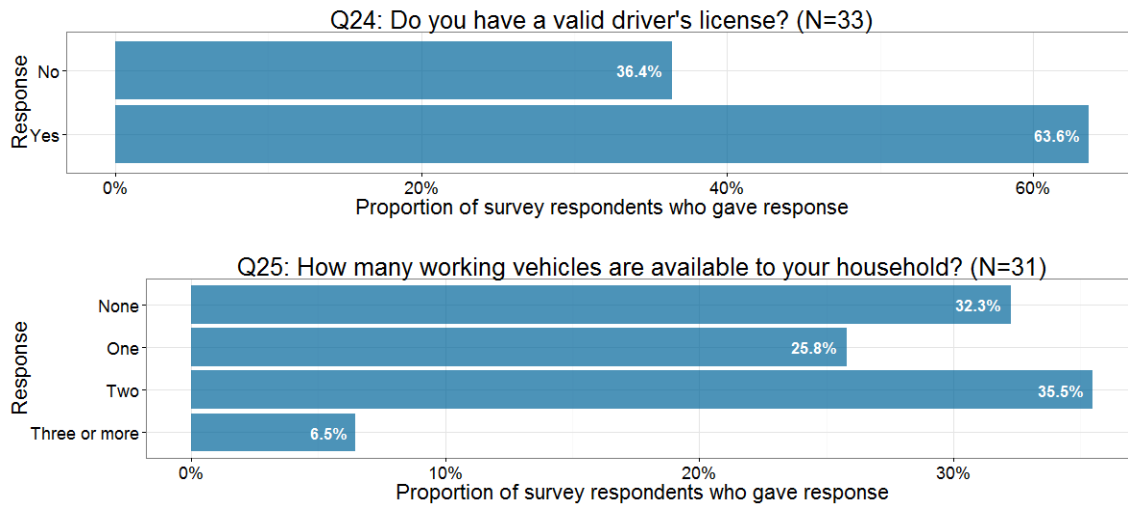
Figure 5-10 Driver’s License Status and Number of Working Vehicles in Household, Spring 2015



Q24: Do you have a valid driver’s license? n = 180; non-responses removed.

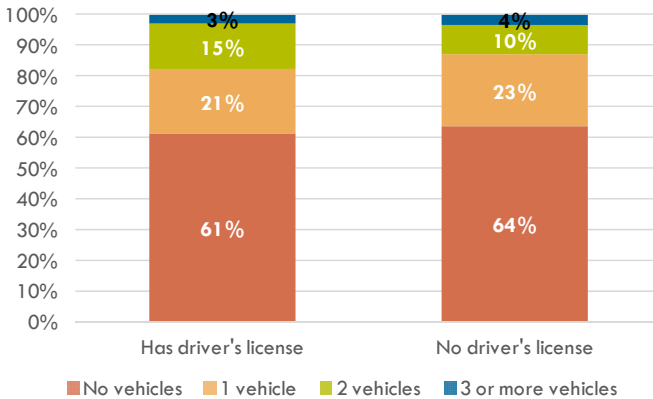
Q25: How many working vehicles are available in your household? n = 180; non-responses removed.

Figure 5-11 Driver's License Status and Number of Working Vehicles in Household, (Summer 2015)



Q24: Do you have a valid driver's license? n = 33; non-responses removed.  
Q25: How many working vehicles are available in your household? n = 31; non-responses removed.

Figure 5-12 Number of Vehicles in Household by Driver's License Status, Summer 2015



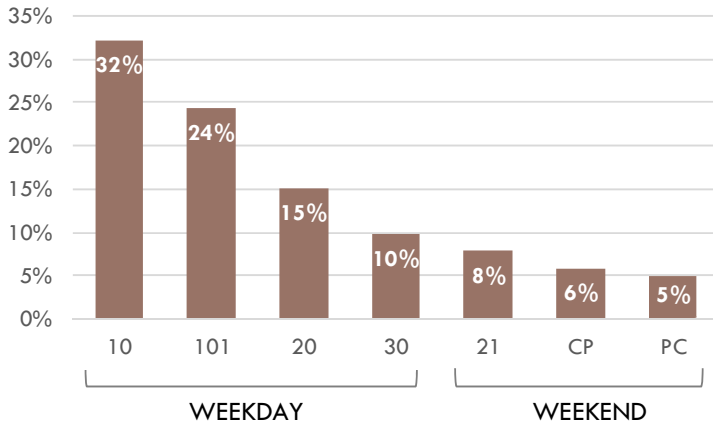
Q24: Do you have a valid driver's license? n = 33; non-responses removed.  
Q25: How many working vehicles are available in your household? n = 31; non-responses removed.

## Responses by Route

Intercept surveyors recorded which bus line participants were riding. More than half of the survey respondents were riding Route 10 (32%) or Route 101 (24%), and about a quarter were riding weekend

service (23%) (Figure 5-13). This is consistent with overall ridership patterns reported by SETD, in which Routes 10 and 101 have the highest utilization.

Figure 5-13 Proportion of Survey Responses by Route, Weekend and Weekday, Spring 2015

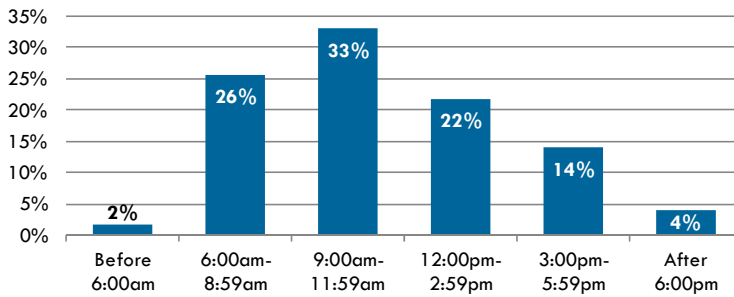


n=205

## Time of Response

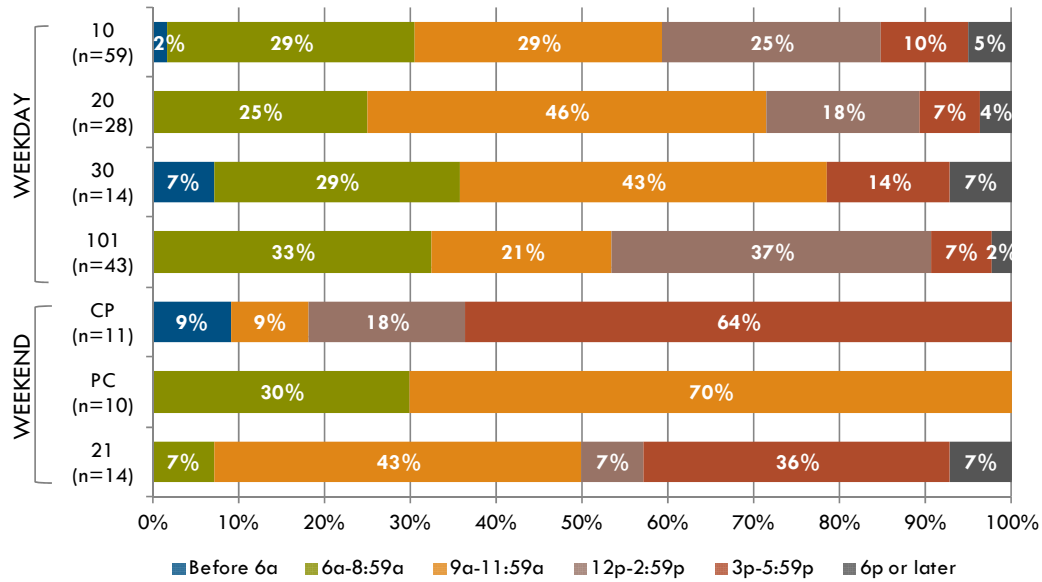
Respondents were asked what time they boarded the bus. Peak ride hours were between 9 am and noon, with approximately 60% of all respondents having boarded the bus between 6 am and noon (Figure 5-14). Reported boarding times varied by route, with Route 10, Route 20 and Route 101 having 15% or fewer respondents board the bus after 3 pm (Figure 5-15). Routes 101 and Pacific Connector had the fewest respondents boarding between 9 am and noon.

Figure 5-14 Time Respondents Reported Boarding the Bus, Spring 2015



Q4: What time did you board the bus today? n = 179; non-responses removed.

Figure 5-15 Boarding Time by Bus Route, Spring 2015



Q4: What time did you board the bus today? n = 179; non-responses removed.

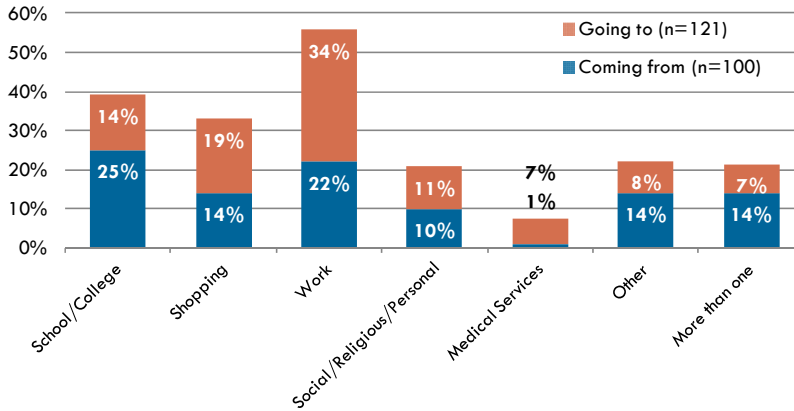
## Trip Purpose

As is common in passenger surveys, a majority of the respondent trips involved going to or from home. Home locations are addressed in the origin and destination mapping section. To understand trip purpose, home-based trips were excluded from the sample to reveal common trip types aside from going to and from home. The largest share of trips were traveling to work (34%) or from work (22%) (Figure 5-16). Many respondents also stated they were going to or coming from school or going shopping. About half of the respondents going to or from a school provided a specific school name; Tongue Point and Clatsop Community College were the most common destinations (Figure 5-17).

A second survey conducted in Summer 2015 indicated that there is more use of transit for recreational purposes in this season. Work trips comprised about the same share of trips while there were fewer school/college trips and a higher share of shopping and “other” trips (Figure 5-18).

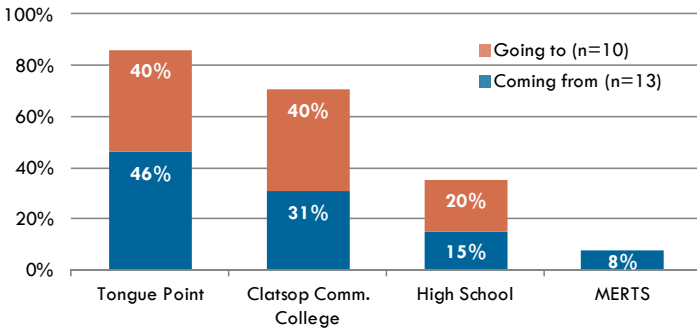
**Long-Range Comprehensive Transportation Plan | Memo #2C Community Input**  
SETD

**Figure 5-16 Purpose of Trip Reported by Origin and Destination for Non-Home-Based Trips, Spring 2015**



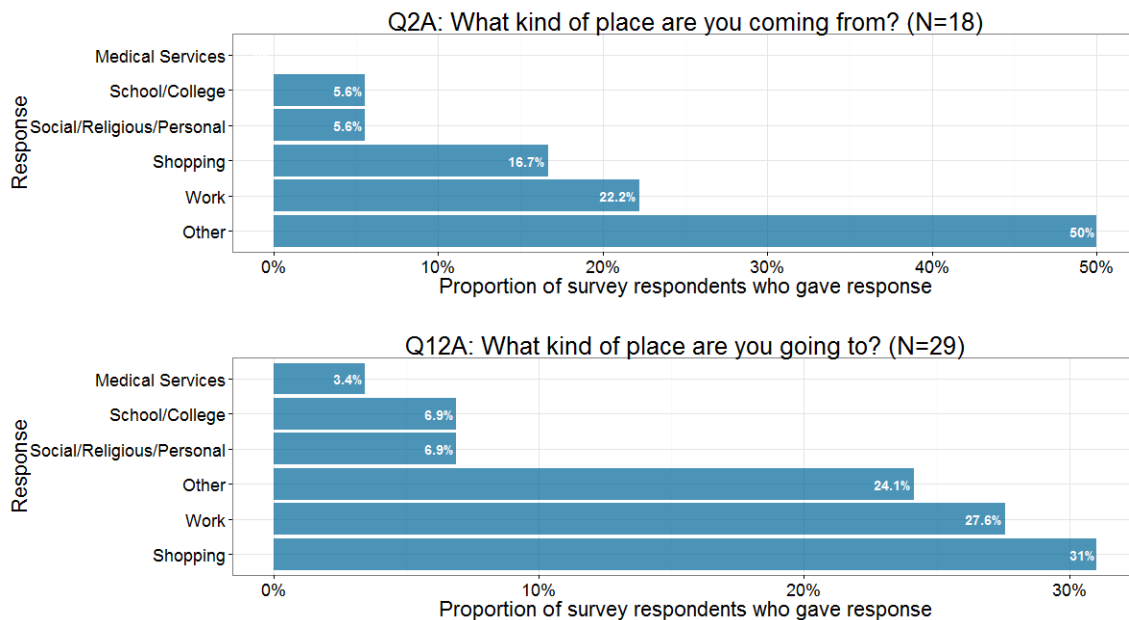
Q2 & Q12: What kind of place are you coming from (n = 100) / going to (n = 121)? "home"- and non-responses removed.

**Figure 5-17 School or College Specified as Origin or Destination, Spring 2015**



Q2 & Q12: Specify the school/college you are coming from or going to; non-responses removed.

**Figure 5-18 Purpose of Trip Reported By Origin and Destination for Non-Home-Based Trips, Summer 2015**



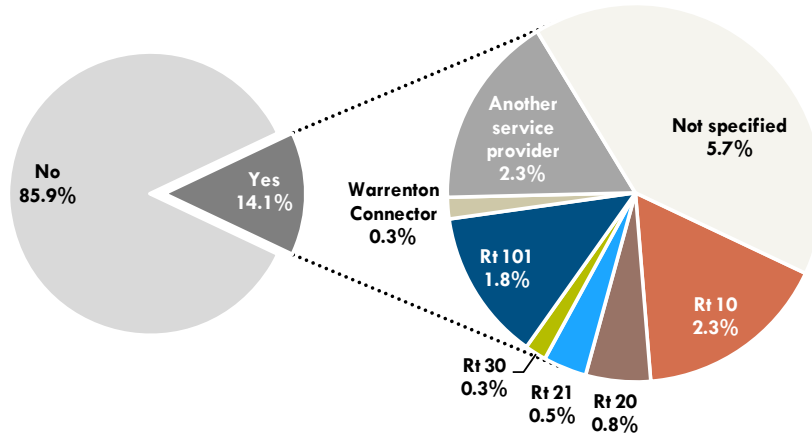


Q2 & 12: What kind of place are you coming from (n = 18) / going to (n = 29)? "home"- and non-responses removed.

## Transfer Activity

About 14% of survey respondents transferred at some point during their trip (Figure 5-19). Transfers most commonly occurred on SETD Routes 10 and 101. Transfers to or from “another service provider” included Tillamook County Transportation District and Amtrak.

Figure 5-19 Transfers Required During Respondents' Trip



Q1: Did you transfer to this bus from another bus? n = 189; Q9: Will you transfer to another bus? n = 195.

## Trip Origins and Destinations

Passengers were asked their origins and final destinations—where they started and will end their trip. Figure 5-20 illustrates travel patterns between and within communities. Trips starting and ending in Astoria comprised the highest share of trips. Aside from trips from Warrenton to Astoria, few respondents from outside Astoria named Astoria as their final destination; however, there were numerous regional trips that started in Astoria. Trips within Seaside and Cannon Beach—as well as trips between Seaside and Cannon Beach—also comprised a high share of trips. Some respondents reported traveling as far as Kelso, Ilwaco, and Tillamook. In general, intra-community transport comprised the highest share of trips for each community, but inter-community transport—particularly between Astoria and Warrenton, and Seaside and Cannon Beach—had considerable ridership.

A handful of people used SETD to travel just within Cannon Beach, where most destinations are clustered along Hemlock Street west of U.S. 101. The town’s 3-mile length makes Cannon Beach well-suited for use of transit in-town. The demographic analysis also showed that Cannon Beach has a very high percentage of older adult residents.

Figure 5-21 shows origin and destination locations in more detail. In most cases, passengers are starting or ending their trips fairly close to the bus routes. The exception is in Gearhart and Seaside, where some respondents reported going to destinations well off of U.S. 101.

Figure 5-20 Origin and Destination Pairs by Community

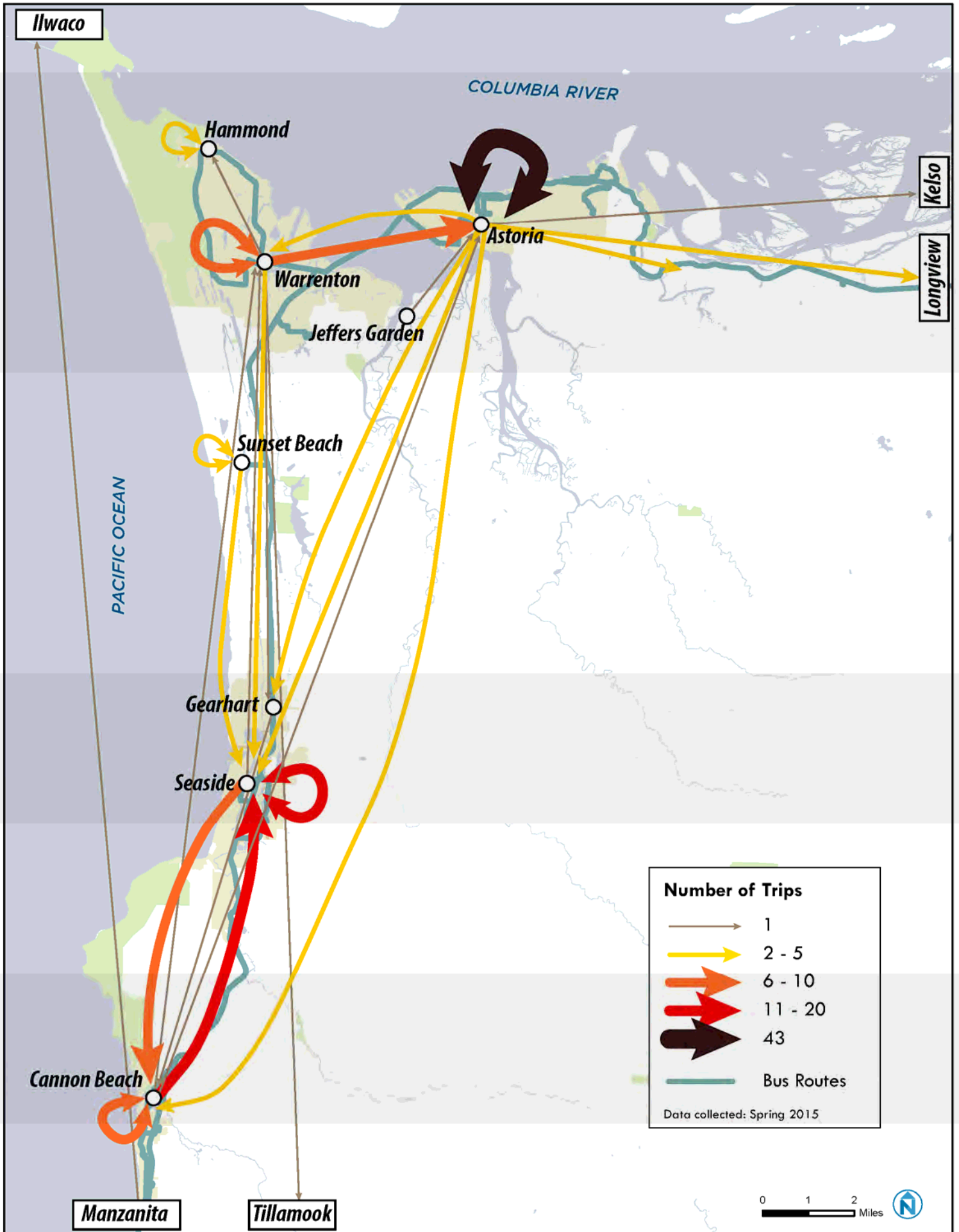
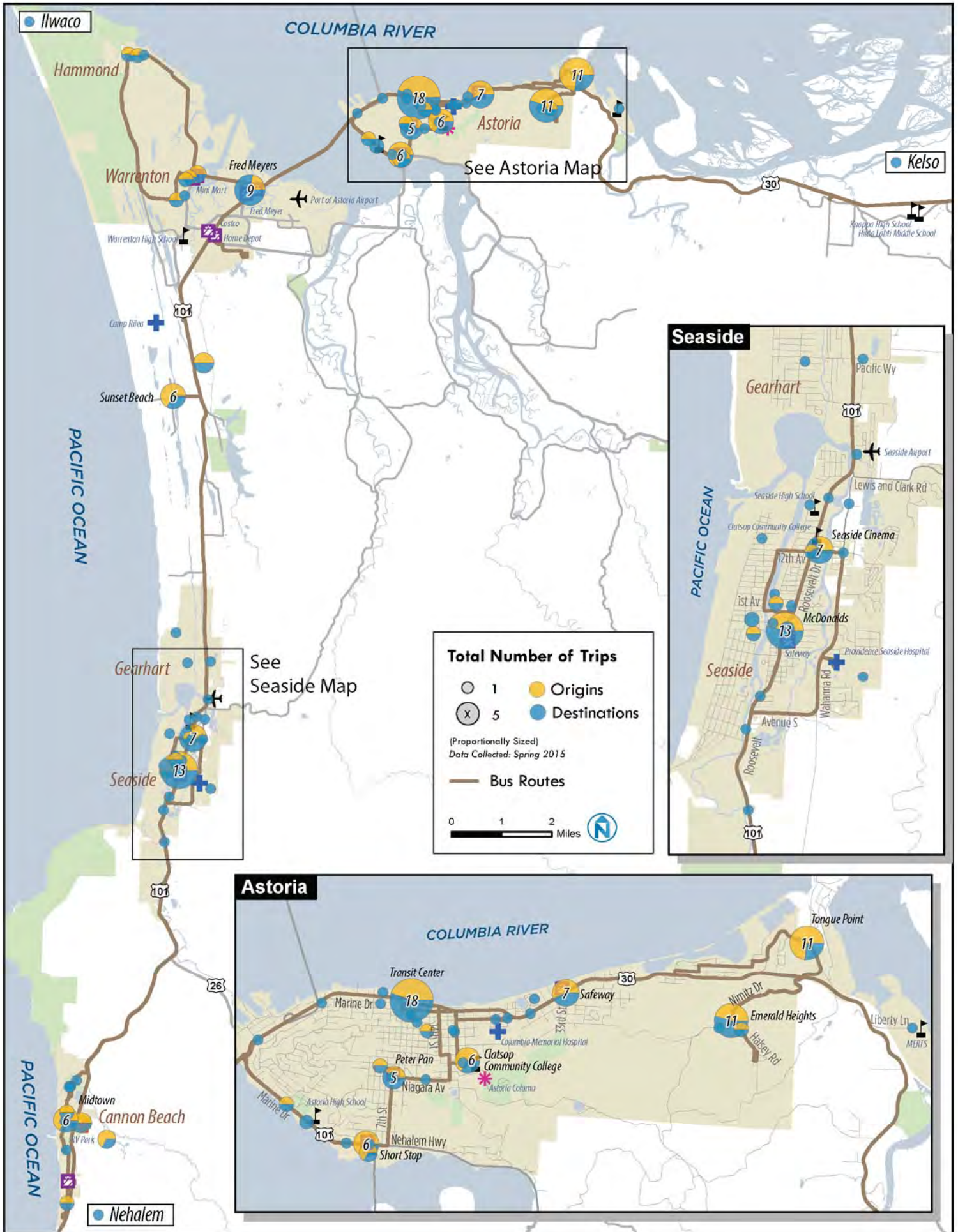


Figure 5-21 Number of Trips by Trip Origin and Destination



## Ridership by Stop

SETD staff recorded the boarding and alighting location of passengers. Figure 5-22 and Figure 5-23 show boardings and alightings by stop.

In Seaside, stop activity is concentrated at the Cinema, McDonald's, and Avenue A, whereas people's final origins or destinations based on the on-board survey data (Figure 5-21) are more scattered. This indicates that Seaside riders may walk long distances to and from bus stops.

The major ridership generators in Astoria are mostly in the eastern part of the city—Emerald Heights, the Job Corps (Tongue Point), Safeway, and Clatsop Community College. In the western part of Astoria, ridership activity along Marine Drive between the Transit Center and the Short Stop Market is steady but there are no major ridership attractors.

At Safeway, the predominant boarding pattern is at the eastbound stop and alightings comprise most of the ridership activity at the westbound stop. This may indicate that Safeway shoppers and employees live east of Safeway and take Route 10 from Emerald Heights and Tongue Point or other neighborhoods.

On weekends, Route 10 does not operate and there is no service to eastern Astoria except for the Lower Columbia Connector, which only operates two trips per day and is not convenient for activities such as shopping. The Pacific Connector does not run farther east than the Transit Center, meaning residents of western Astoria could not access activity centers such as Safeway on weekends. Residents of eastern Astoria would similarly have difficulty accessing destinations such as Safeway on weekends since Route 10 does not run.

Figure 5-22 Boardings and Alightings by Stop – Weekday (based on May 2015 service design)

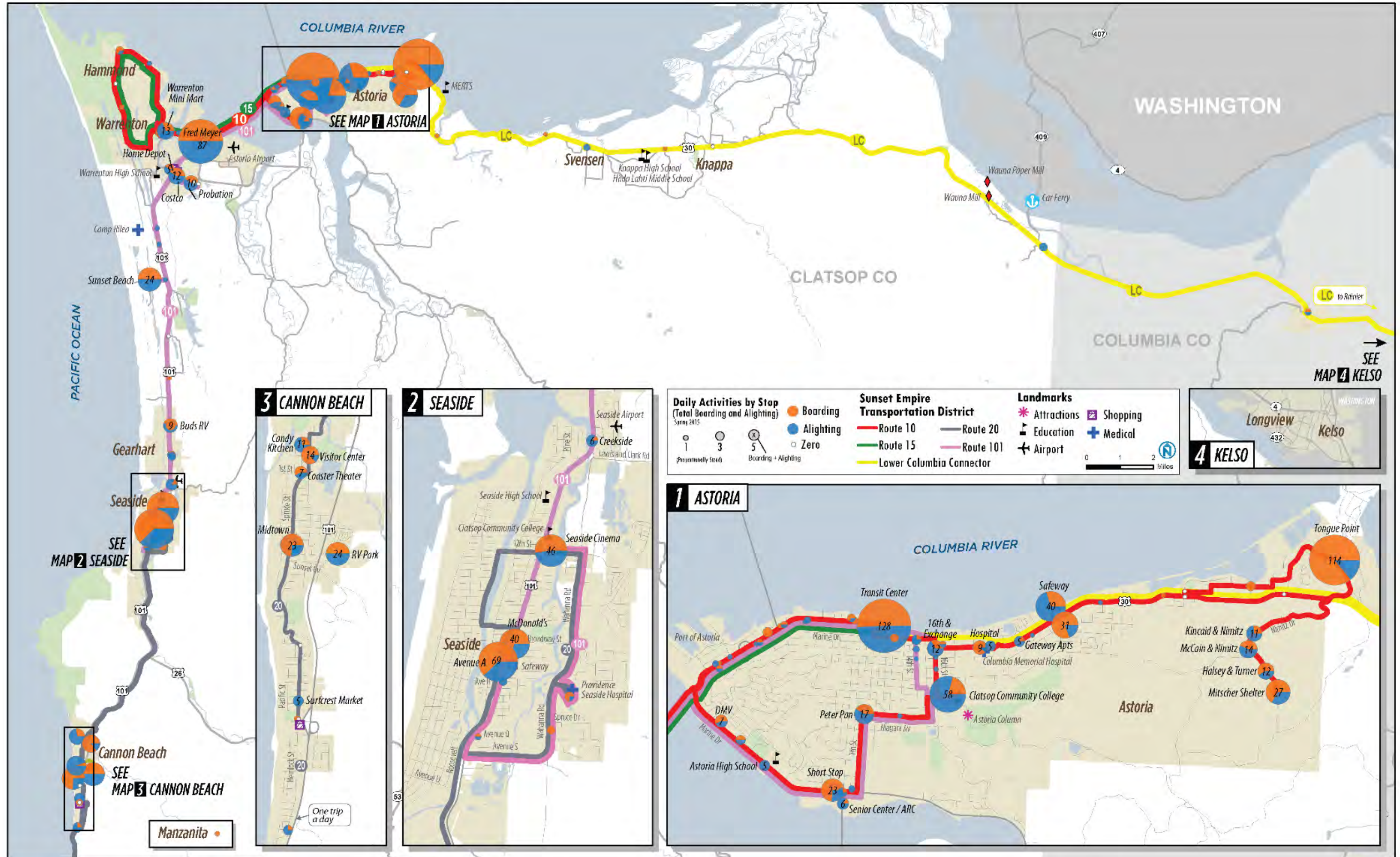


Figure 5-23 Boardings and Alightings by Stop – Weekend (based on May 2015 service design)

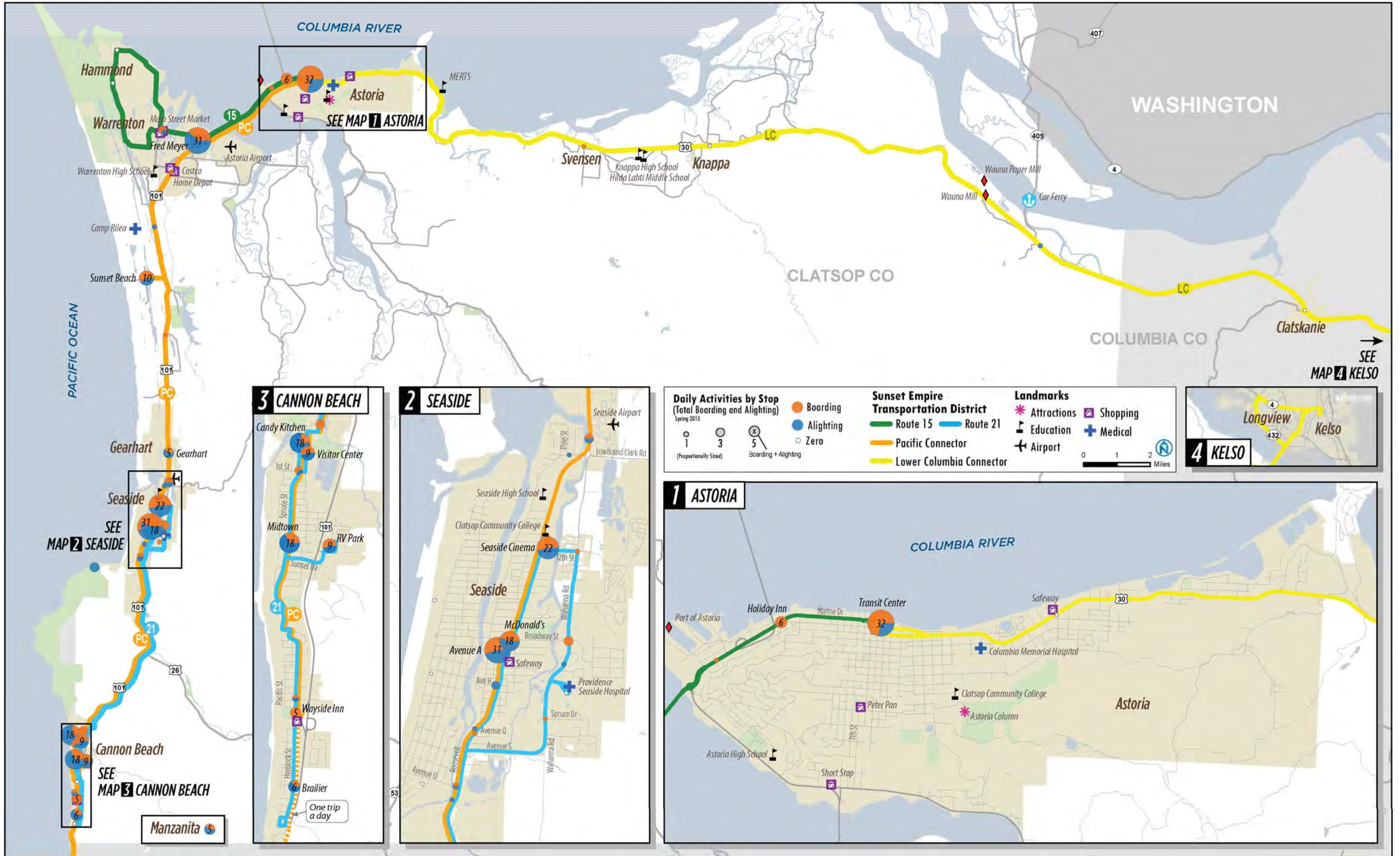


Figure 5-24 and Figure 5-25 show boardings and alightings by route. Multiple routes serve many destinations, therefore this analysis shows which route passengers use to access destinations.

At the time of the data collection (May 2015), Route 101 still ran every 120 minutes. Still, a large percentage of riders heading to and from Clatsop Community College took Route 101. This points to either students arriving from regional origins (Seaside, for example), or to people arriving from Warrenton who realize Route 101 is the most direct route.

A fair amount of people used the Columbia Connector in Warrenton (which has been rebranded as Route 15 east of the Transit Center in Astoria as of August 2015) to access the Warrenton Mini Mart and Fred Meyer, showing that people are aware that both Route 10 and Columbia Connector serve those destinations.

In Seaside, the vast majority of ridership occurs at the Cinema or at McDonald's. The portion along Wahanna Road sees very little activity. According to stakeholders, low-income housing is present along Wahanna Road; however, it may be that service is not known or needed along this area. Route 20 does also serve Wahanna Road and could feed passengers to the U.S. 101 corridor.

Figure 5-24 Boardings and Alightings by Route – Weekday (based on May 2015 service design)

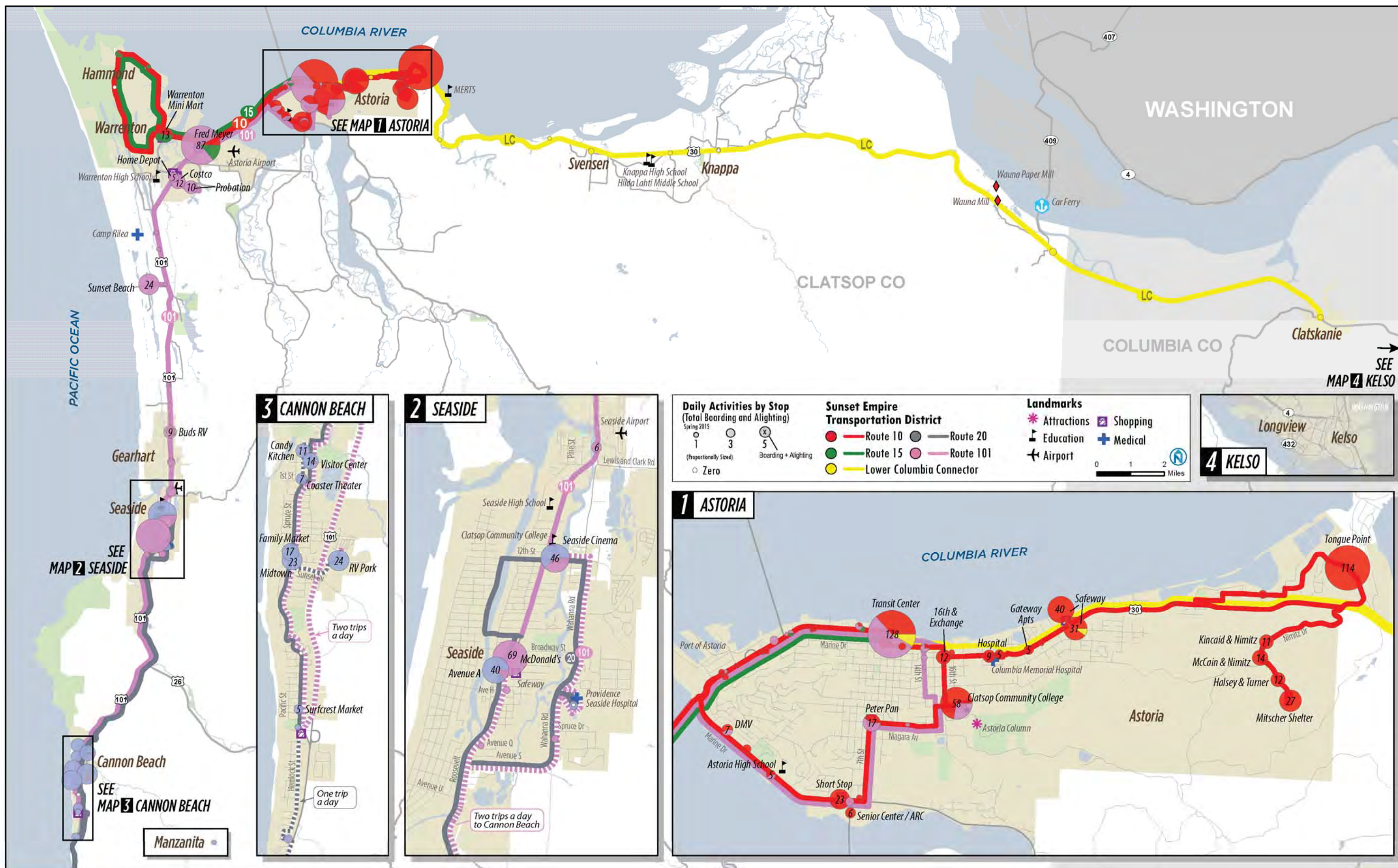




Figure 5-25 Boardings and Alightings by Route – Weekend (based on May 2015 service design)

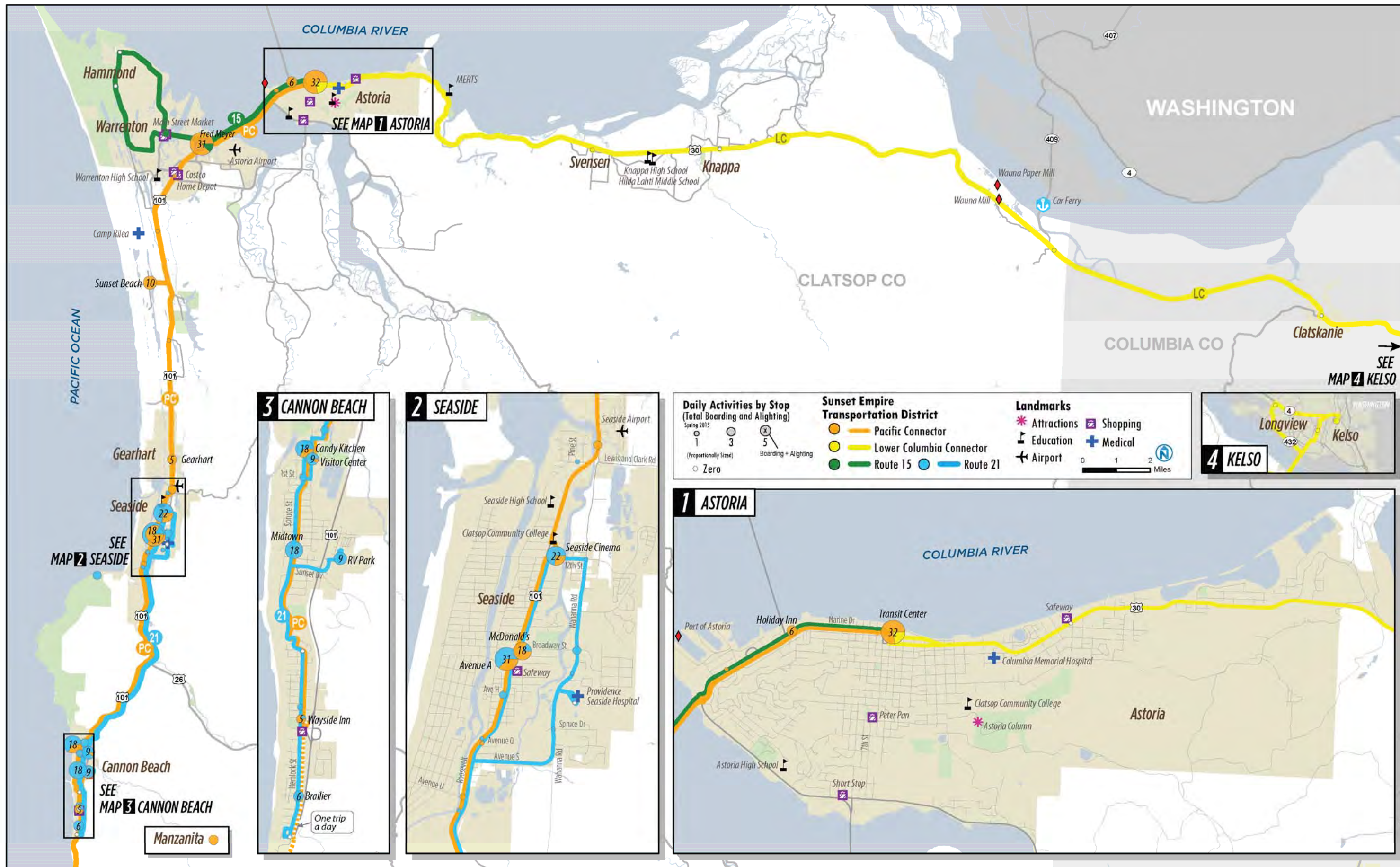


Figure 5-26 shows boarding and alighting data just for those routes that operate only during the summer (Route 21) or who carry a heavy amount of summer travel (Route 20, Route 101) during a weekday. The data shows 47 fewer stops at Clatsop Community College, as expected, but a handful of people are still taking the bus there for summer classes. The level of activity during weekdays in Seaside increased notably – for example, weekday 20/101 ridership carried 46 boardings and alightings at the Seaside Cinema while 70 people used the stop during summer. A similar uptick can be seen at Avenue A and the McDonald's. Activity in Cannon Beach increased slightly as well. Figure 5-27 shows that weekend transit ridership in Seaside is concentrated at the Cinema, Thousand Trail, and at destinations along Broadway (Aquarium, Convention Center, Pool, McDonald's, Avenue A).

Figure 5-28 shows boardings by route during summer weekdays. The increase in ridership at the Seaside Cinema is primarily coming from the 101, not the 20, indicating that seasonal visitors to Seaside originate from the north. In Cannon Beach, ridership at most stops went up, but ridership on Route 21 is fairly small – people may not realize that the 20 and 21 serve similar routes, or perhaps there is less demand for in-town Cannon Beach travel than for travel from Seaside to Cannon beach. Figure 5-29 shows boardings by route for a summer weekend. In this case, the 21 shows good ridership within Cannon Beach, with some pick-ups in Seaside as well. The Pacific Connector serves more trips in Seaside than Cannon Beach.

Figure 5-26 Boardings and Alightings by Stop – Summer Weekday (for routes serving seasonal market)

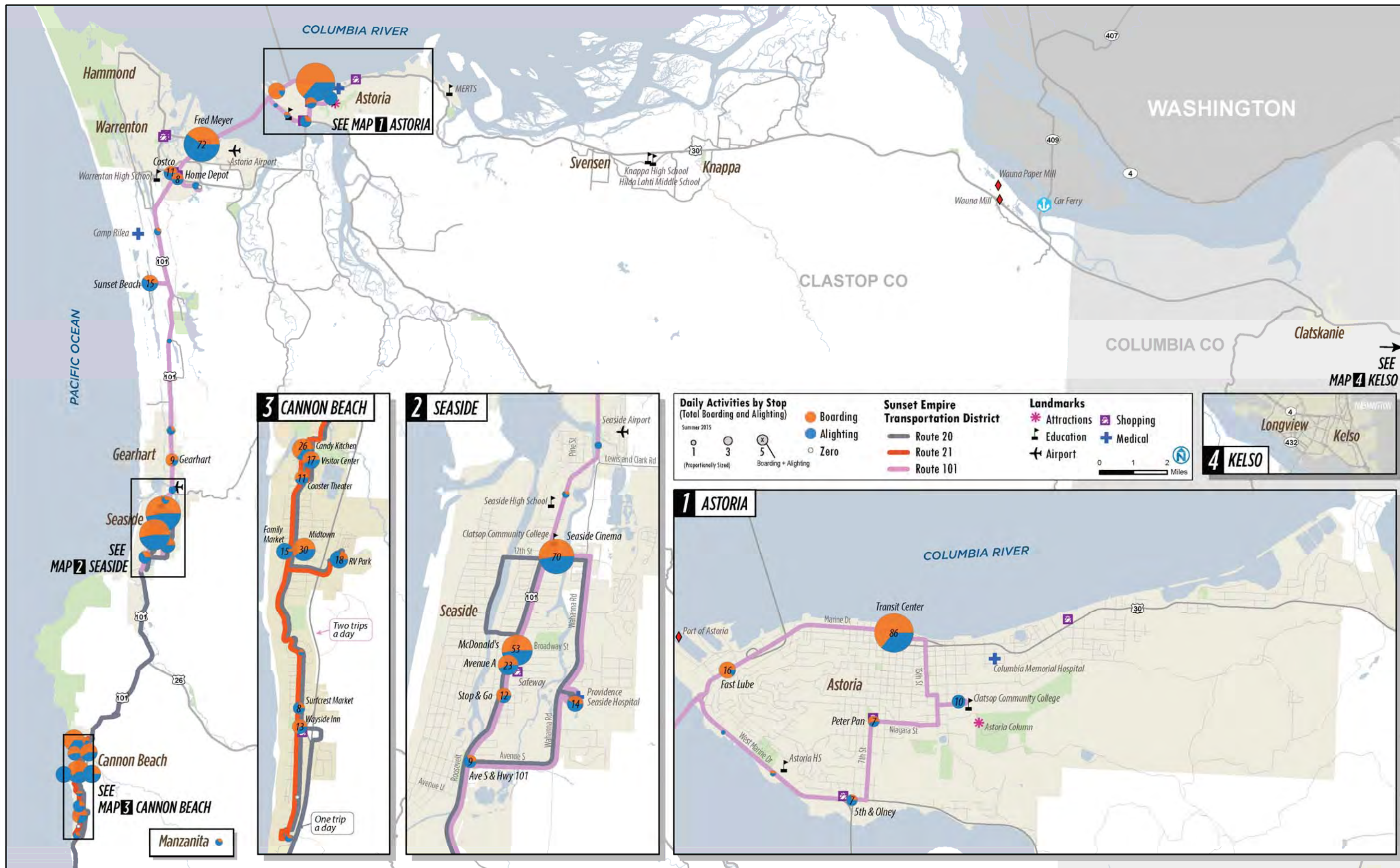


Figure 5-27 Boardings and Alightings by Stop – Summer Weekend (for routes serving seasonal market)

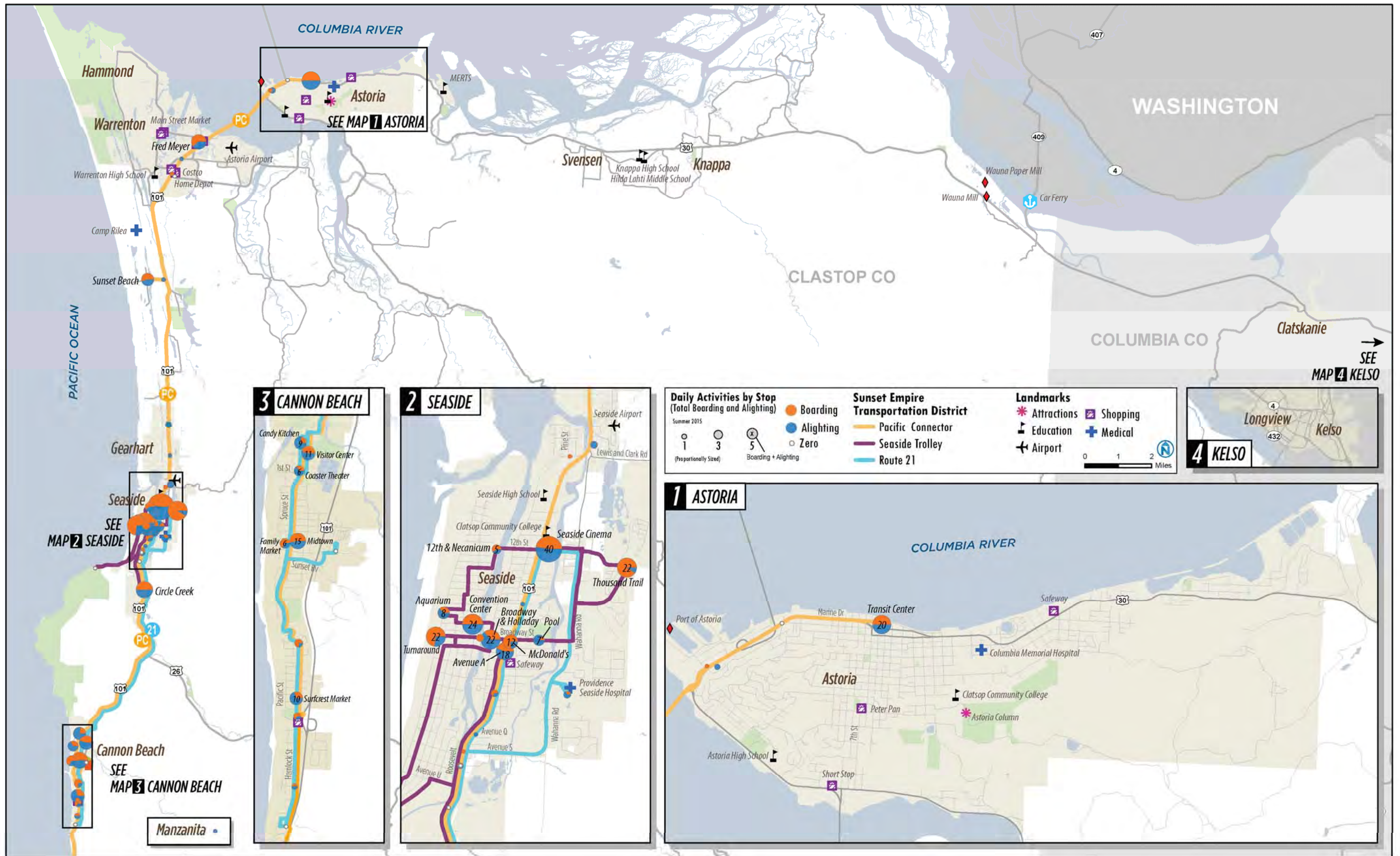
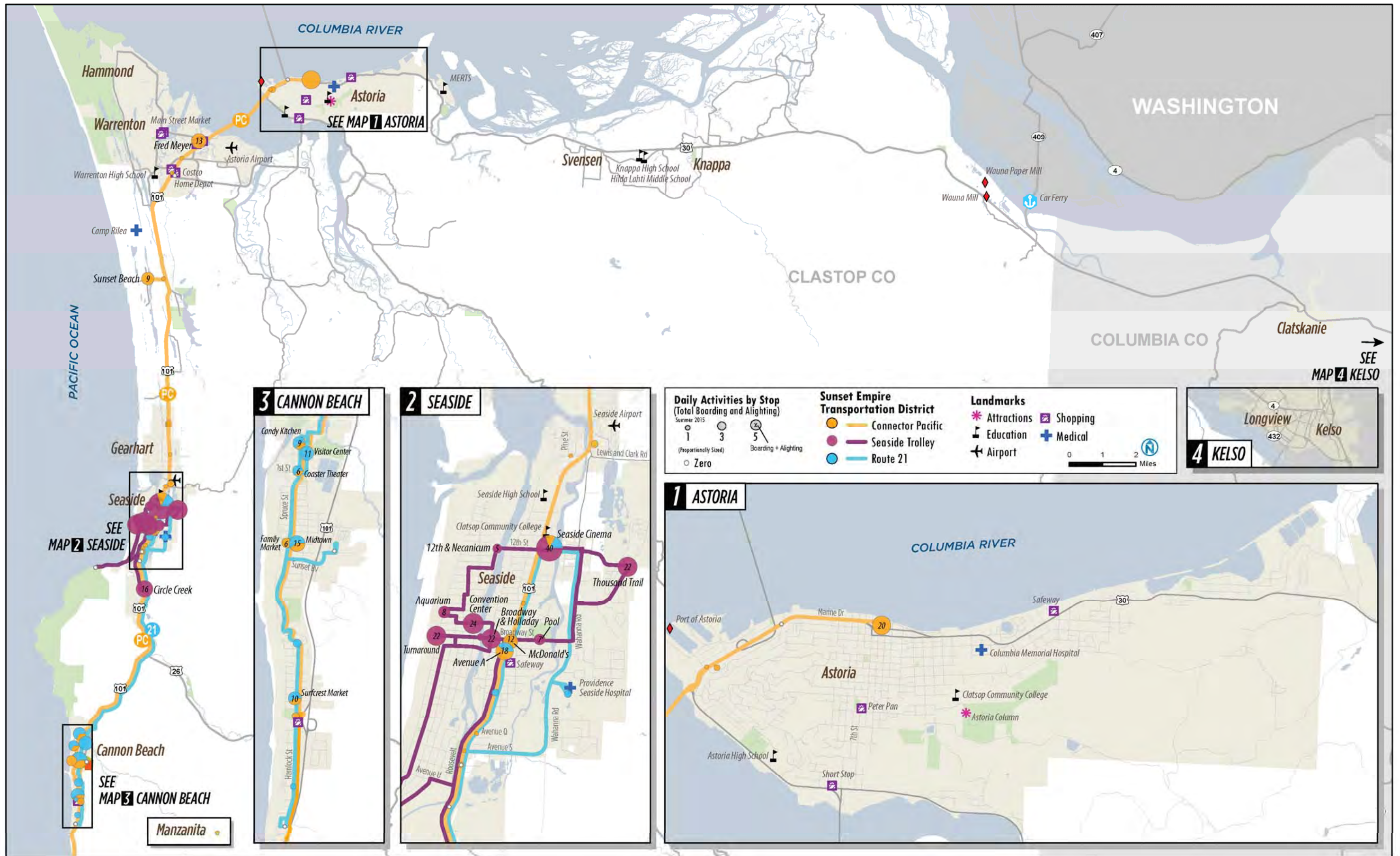




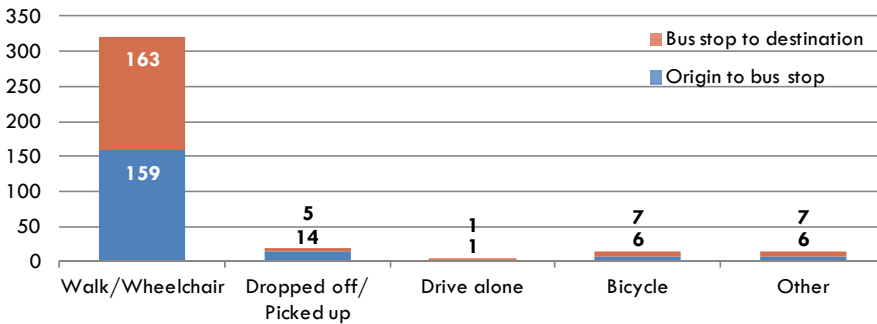
Figure 5-29 Boardings and Alightings by Route – Summer Weekend (for routes serving seasonal market)



## Access to Transit

More than 85% of respondents indicated they walk to and from the bus stop (Figure 5-30), which is common in transit systems. Respondents who did not walk or use a wheelchair were generally dropped off at the bus stop and others used a bicycle and other means of travel, such as taxi. Almost 80% of the connections made on foot to and from the bus stop took 10 minutes or fewer to make, and most were 5 minutes or fewer (Figure 5-31).

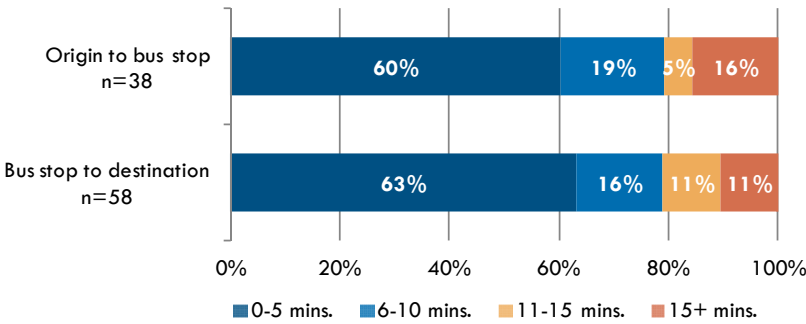
Figure 5-30 Access Mode to and from Bus Stop



Q5: How did you get to the first bus stop on your trip? n = 186; non-responses removed.

Q14: How will you go from the bus to your destination? n = 183; non-responses removed.

Figure 5-31 Walking Time between Origin/Destination and Bus Stop



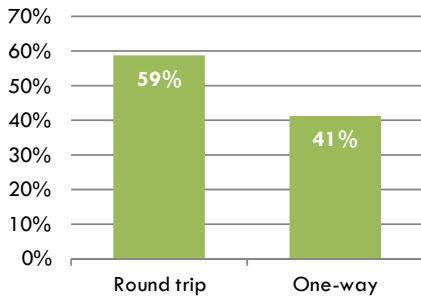
Q5B: Approx. # of minutes [to get to the first bus stop on trip], n = 38;

Q14B: Approx. # of minutes [to get from the bus to your destination], n = 58; non-responses removed.

## Frequency of Transit Use

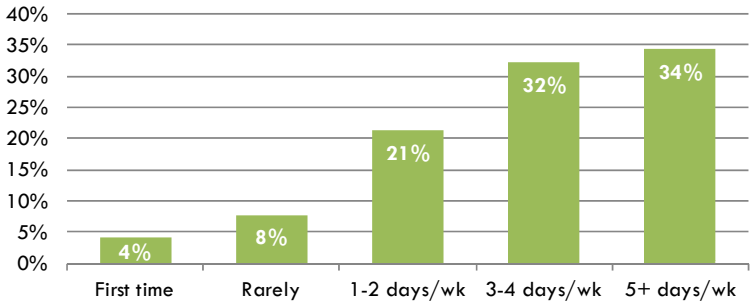
Respondents generally made round trips (Figure 5-32), which supports the finding that almost a third of all respondents were commuting between work and home. First-time riders and people who rarely ride the bus represented 12% of respondents (Figure 5-33). Frequent riders (3 or more days per week) comprised 65% of survey respondents.

Figure 5-32 Round Trip or One-Way Travel



Q6: Are you making a round trip on the bus today? n = 191; non-responses removed.

Figure 5-33 Frequency of Transit Use

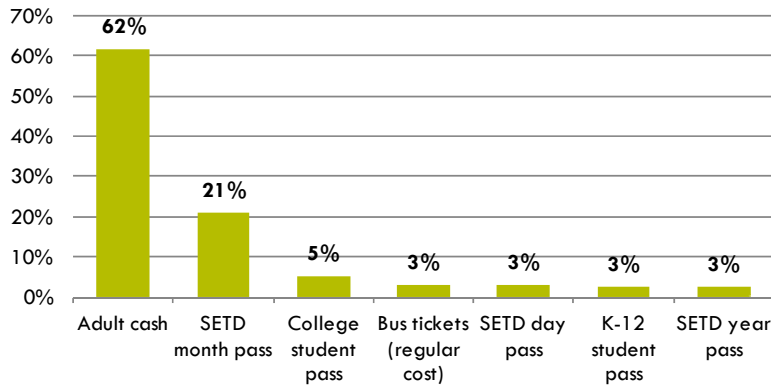


Q7: How often do you ride transit? n = 192; non-responses removed.

## Fare Type

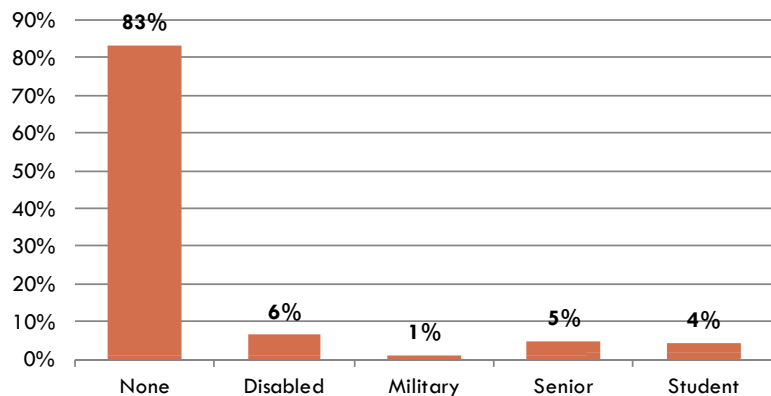
Most respondents (62%) paid for an adult fare with cash, followed by an SETD monthly pass (21%) (Figure 5-34). SETD provides a range of pass options, as discussed in Memo #2B. The relatively low pass use, particularly given the earlier finding that many riders use the system frequently, may indicate that people do not know about the pass programs or that passes are not well priced. Less than a fifth of customers used a special fare discount (Figure 5-35).

Figure 5-34 How Respondents Paid for Bus Fare



Q10: How did you pay for the bus trip? n = 186; non-responses removed.

Figure 5-35 Special Fare Discounts Utilized by Respondents



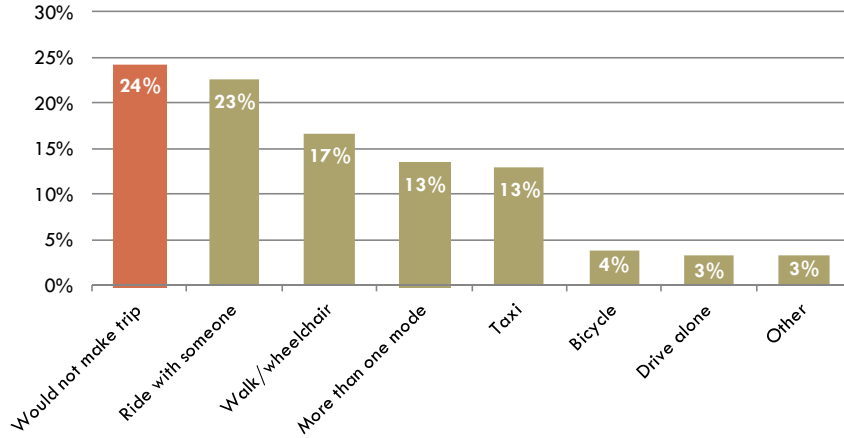
Q11: Did you receive any special fare discounts for your trip today? n = 187; non-responses removed.



## Transit Reliance

Nearly a quarter of all respondents are transit-reliant, meaning they would be unable to make the trip if the bus services were not available (Figure 5-36). Many reported they would walk (17%) or carpool (23%) if bus service weren't available.

Figure 5-36 Alternate Means to Make Trip If Bus Service Were Not Available.

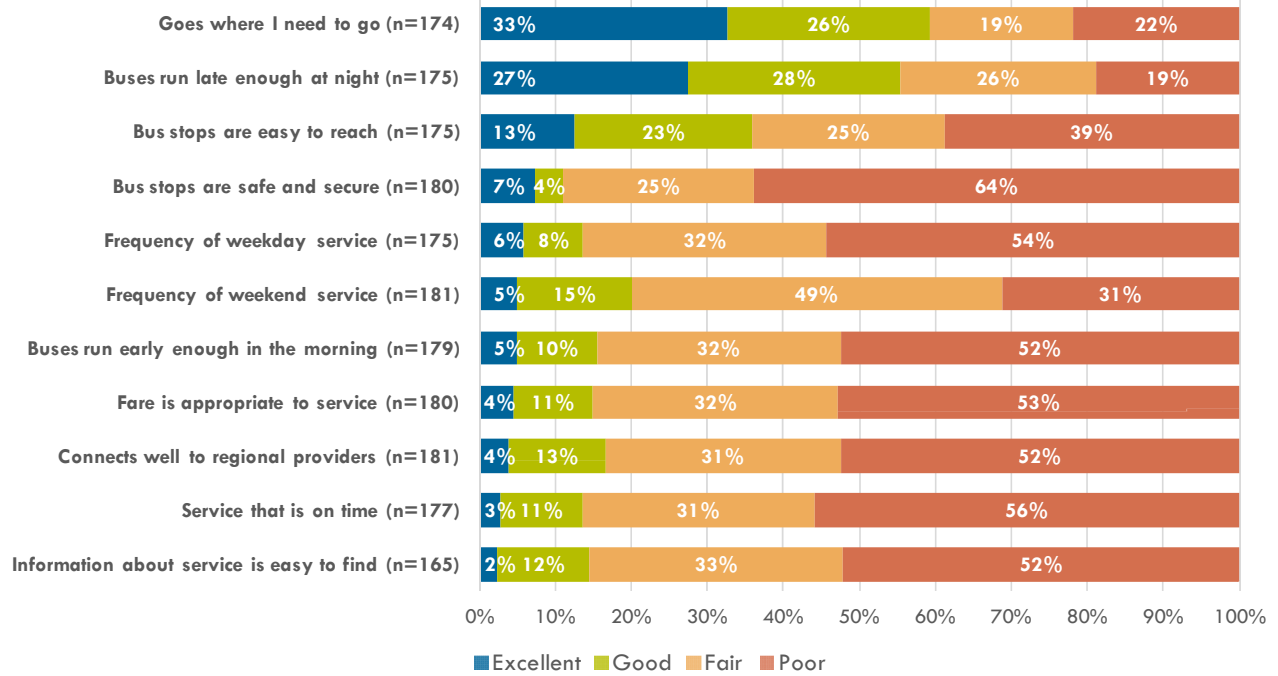


Q15: If bus service were not available how would you have made this trip? n = 186; non-responses removed.

## Customer Satisfaction

Overall, respondents are happiest with bus route coverage and service span in the evening—these two responses got the most “excellent” rankings (Figure 5-37). More than half of those responding to each service evaluation topic, however, ranked as “poor” the service’s bus stop safety, frequency of weekend service, early morning service, fare, regional connections, on-time performance, and availability of information. Including “fair” rankings, the biggest areas for improvement are bus stop safety and security and weekday service frequency.

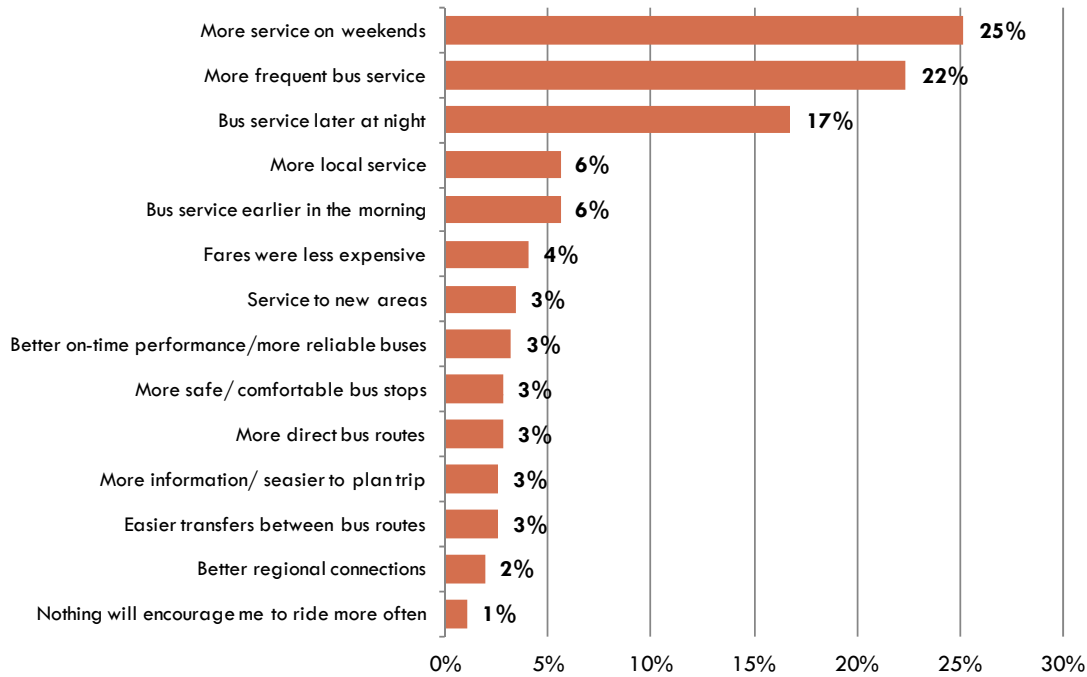
Figure 5-37 Satisfaction with Transit



Q16: Please rate the following items about transit in your area; non-responses removed.

The next question asked people to cite their top service improvements (Figure 5-38). More service on weekends and increased frequency were the top two requests, which is consistent with the items ranked poorly in the previous question. Bus service running later at night was cited as both a topic of high satisfaction in Figure 5-37 and a service need in Figure 5-38. It may be that the hours of evening service meet the needs of many current customers, but a sizeable market also exists of people who would like service to continue past 8 pm. This is consistent with results of the Community Survey (see below).

Figure 5-38 Top Service Improvements Requested by Respondents



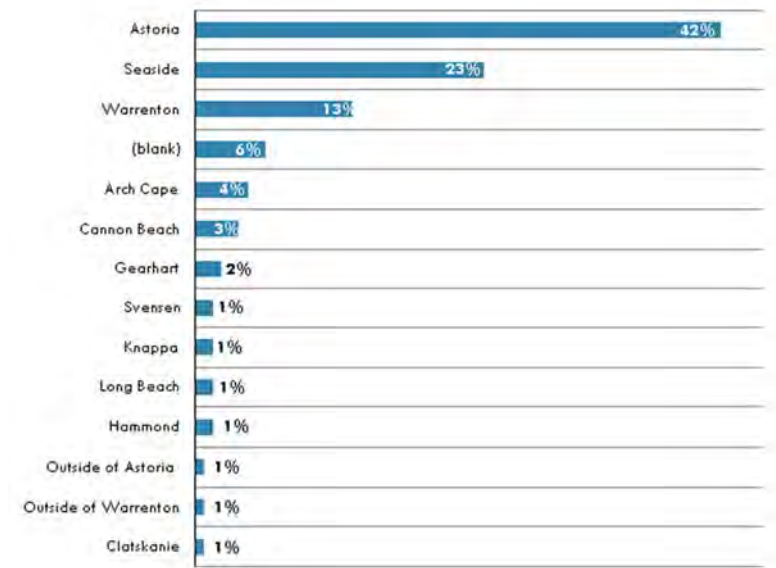
Q17: Please consider the potential service improvements shown below and select up to 3 that would help you choose to ride transit more often. n = 179 with 465 selections; non-responses removed.

## COMMUNITY SURVEY

A primary goal of SETD is to increase ridership and better serve community needs. A survey of the overall community was conducted to understand travel patterns, opinions about transit, and likelihood of taking transit. The survey was distributed online via SETD’s web site, the Daily Astorian’s Flyerboard (live for 30 days), and the project website. To reach people in the community who do not have access to computers, hard copies of the survey were distributed via stakeholders, the project advisory committee, the Clatskanie Library, the county social services agency, Seaside Library, the Cannon Beach Visitor Center, and others. The survey instrument is provided in Appendix A. Hard copy surveys were pre-stamped to maximize participation. A total of 144 responses were collected.

As shown in Figure 5-39, over 40% of respondents reside in Astoria and nearly a quarter live in Cannon Beach.

Figure 5-39 Respondents’ place of residence



n=144

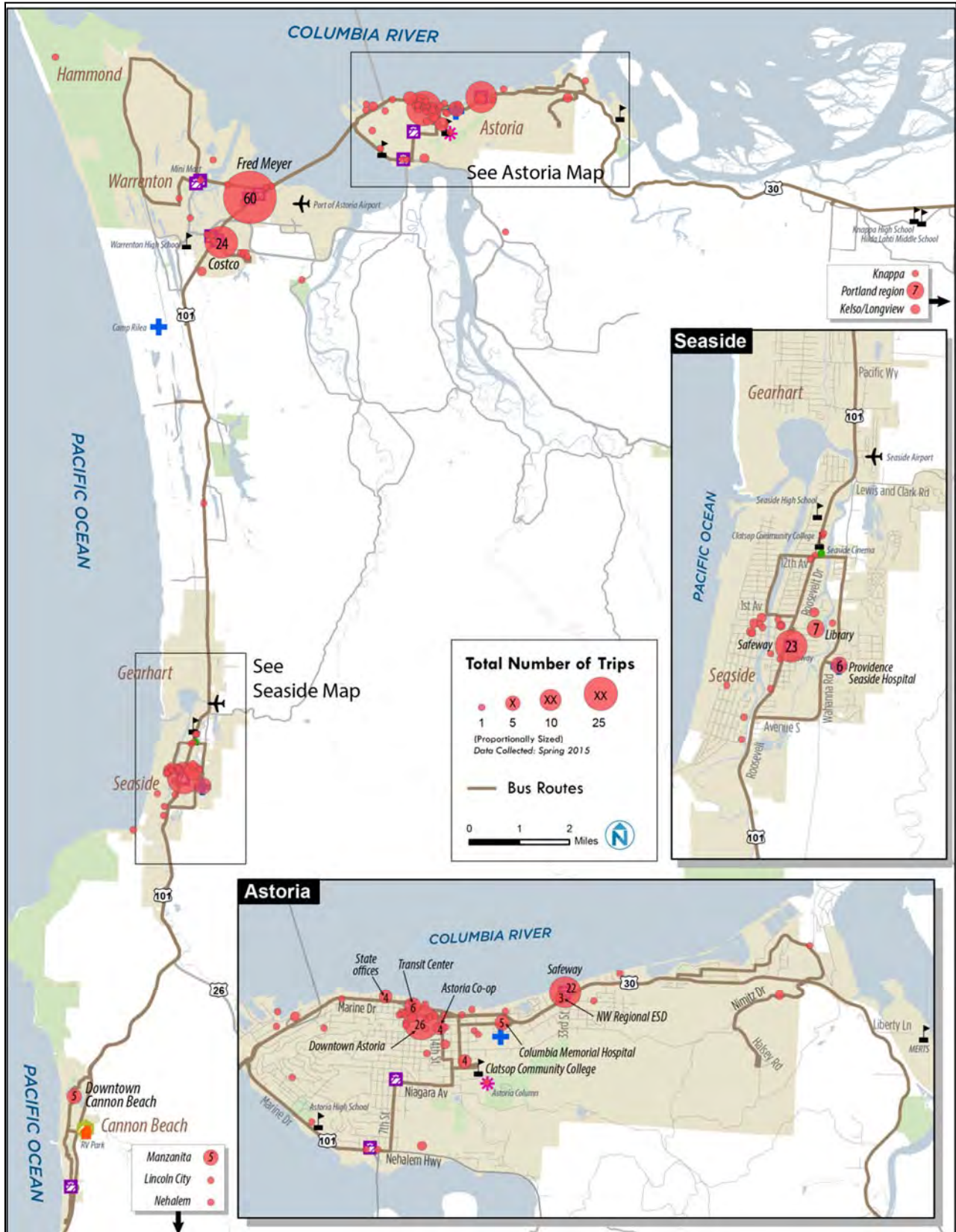
## Major Destinations

Transit routes serve destinations, thus understanding where people commonly travel helps determine transit routing. Respondents were asked to list their top three destinations and to identify how they currently access those destinations (Figure 5-40). While most of the destinations in Astoria lie along fixed-route service, survey respondents also identified a few destinations in the interior of Astoria that are not currently served by transit.

In Seaside, destinations lie south of 1<sup>st</sup> Avenue and west of U.S. 101. This quadrant of Seaside also has numerous employment locations and propensity for transit as discussed in Memo #2A. The top three destinations were Safeway, Seaside Library, and Providence Seaside Hospital, however the hospital has relatively low ridership via Route 20 and Route 101, presenting an opportunity to increase transit travel to this destination.

In Warrenton, the stretch of Fort Stevens Highway south of the Mini Mart and south to Warrenton High School is not served by transit and includes one destination identified through the survey.

Figure 5-40 Community Destinations



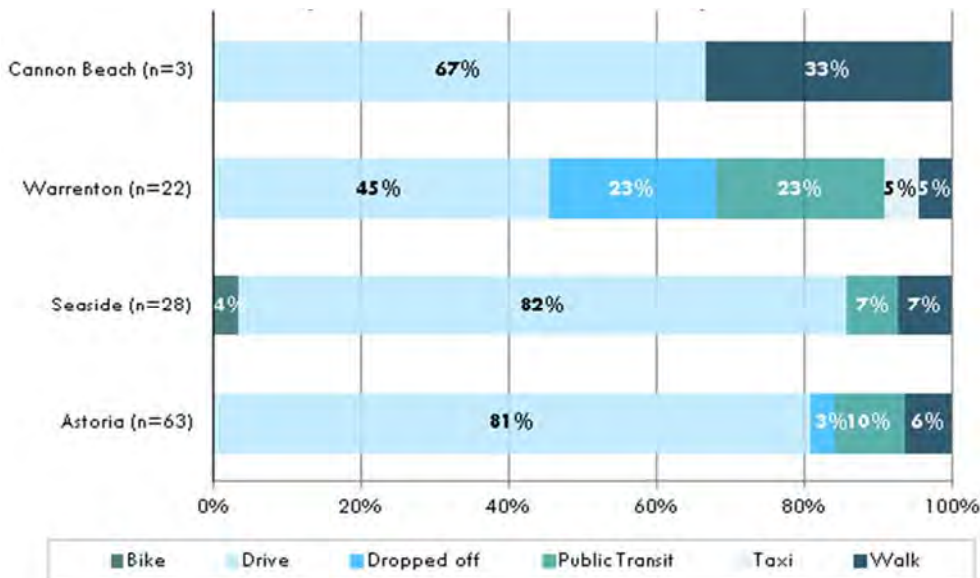
Respondents were asked how they currently access destinations. Figure 5-41 breaks down mode of access to the Astoria Safeway by place of residence. Only a few respondents access Safeway via public transportation.

Figure 5-41 Safeway (Astoria) mode of access



Fred Meyer, the most common destination reported, has a wider variety in access mode. Nearly one-quarter of respondents who live in Warrenton use public transportation to access Fred Meyer.

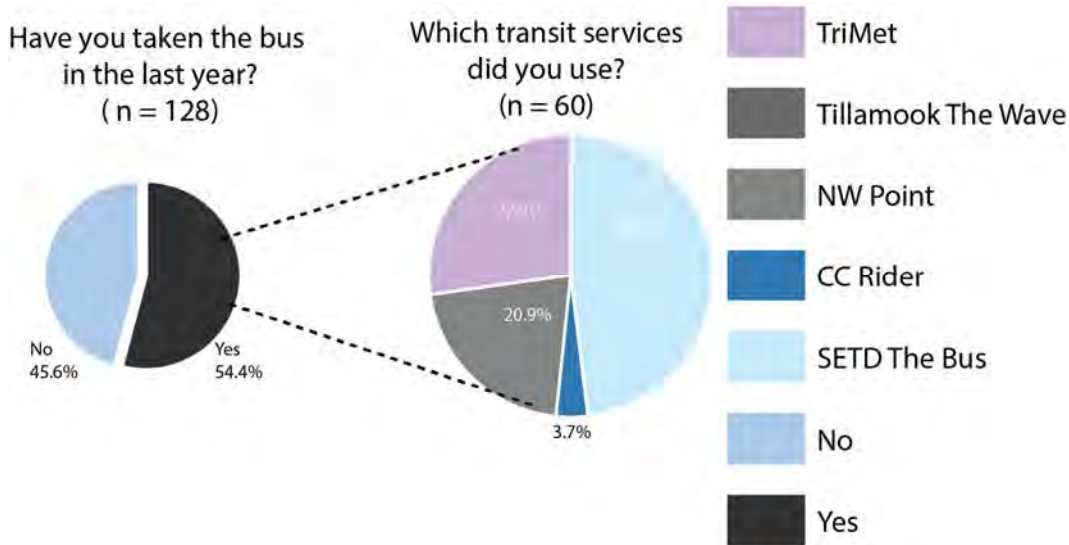
Figure 5-42 Fred Meyer mode of access



## Transit Usage

More than half of respondents reported having taken transit in the past year. Of those people, nearly half took SETD service. More than 25% used TriMet service in the Portland area, and nearly 21% used NorthWest Point service (e.g., Astoria – Portland).

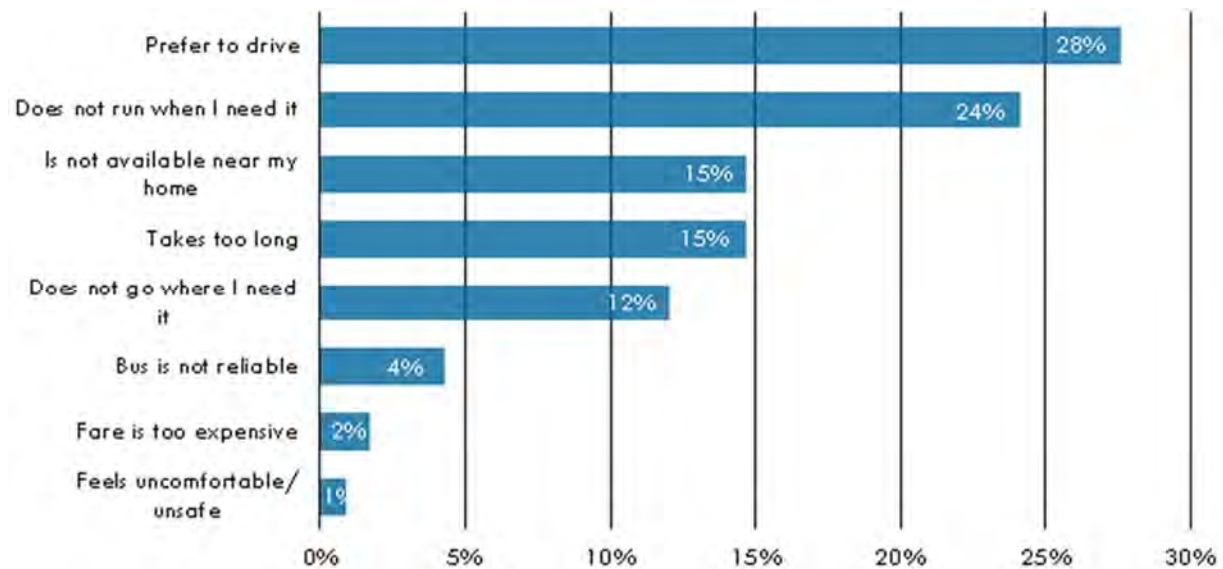
Figure 5-43 Transit use and system used



## Attitudes towards Transit

Respondents gave many reasons why transit does not currently work for them (Figure 5-44). The top response (28%) is that respondents simply prefer to drive; this is not surprising given that the community survey solicited input from the general public. However, nearly as many people (24%) responded that transit does not run *when* people need it. Service also takes too long or does not go *where* people need it to. Safety and fares were not cited as impediments to taking transit.

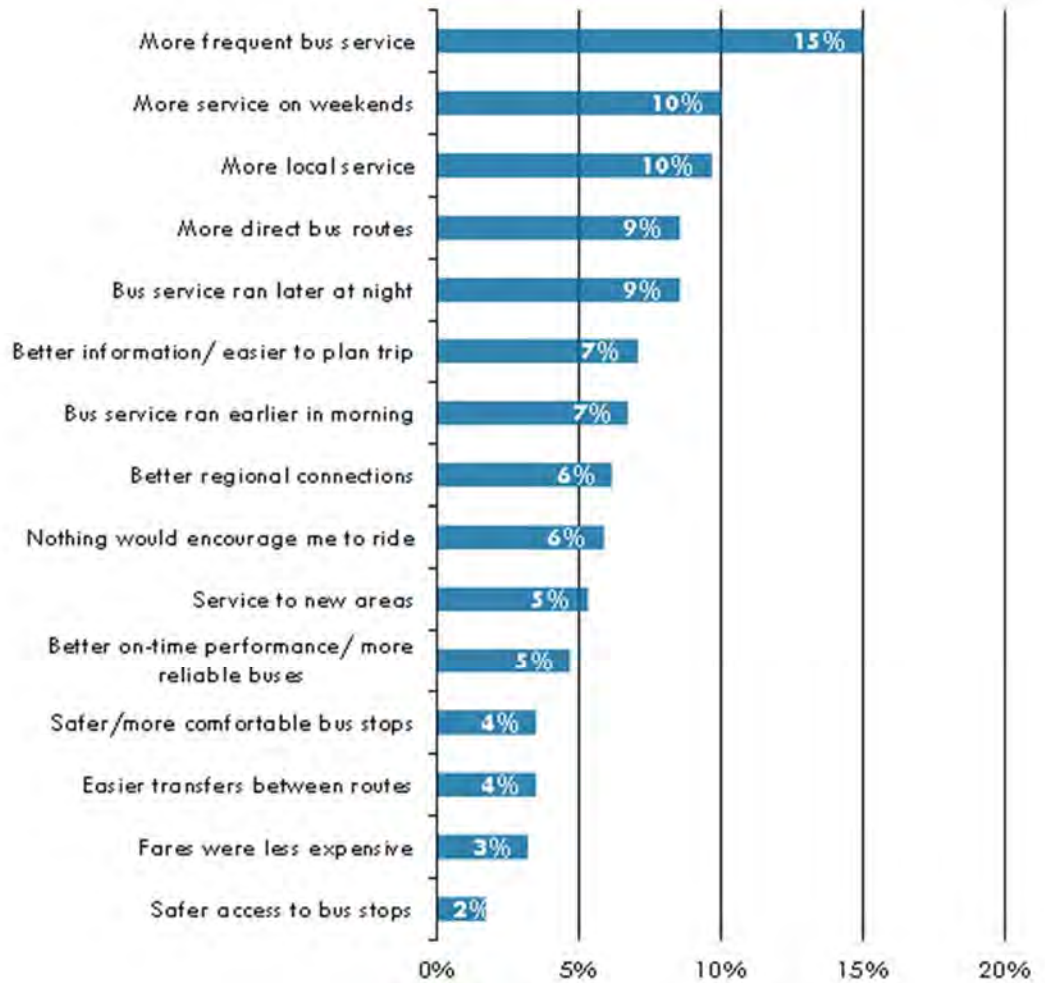
Figure 5-44 Reasons why public transportation does not meet travel needs.



Q9: Why isn't public transportation a good option for you? (n=142)

The most popular service element that would encourage respondents to try public transportation or use it more often is more frequent bus service (Figure 5-45), which is consistent with the complaint that service does not run when it is needed. More weekend and local service as well as more direct and later service were also priorities for respondents.

Figure 5-45 Service elements to encourage non-riders to try public transportation or use it more often.



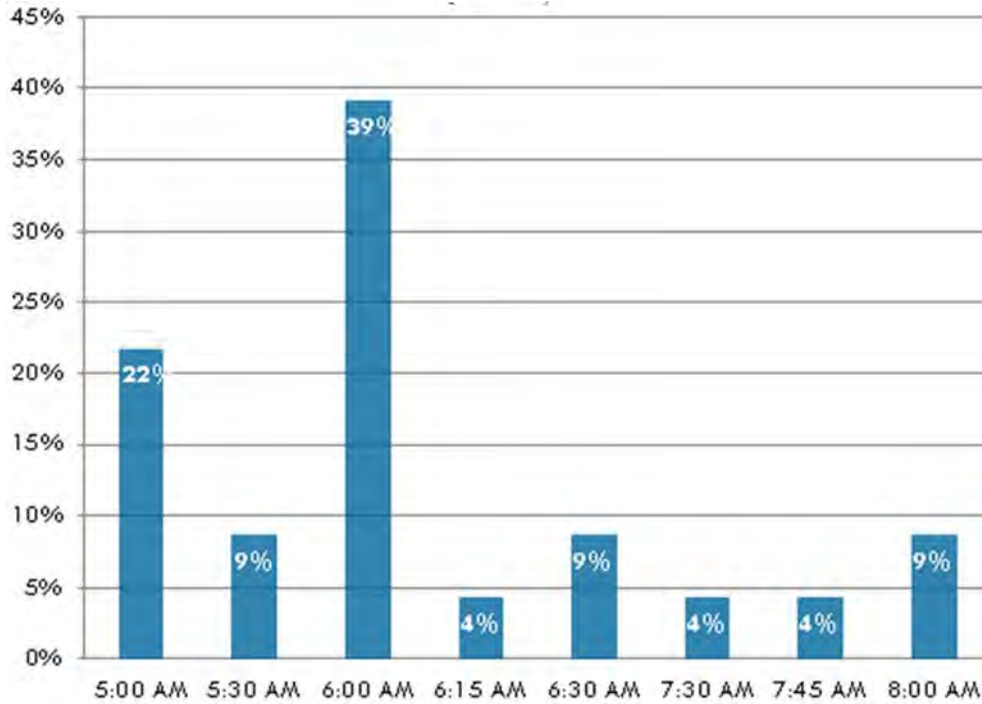
Q10: What would encourage you to try public transportation, or use it more often? Non-responses removed. (n=142)

Of those that said earlier service would encourage increased ridership, nearly 40% of respondents said service should begin at 6:00am (Figure 5-46), which is when some SETD service does start on weekdays. However, respondents either were not aware of it, or the routes that serve them still may not arrive at their destination as early as required. Another 22% stated that morning service should begin at 5:00 am, earlier than when current service starts.

Of those that said later service would encourage increased ridership, about 60% of respondents said service should end at 10:00 pm or earlier (SETD has since extended service hours until nearly 10:00 PM on some routes). Nearly 40% of respondents said service should continue until 11:00 pm or midnight (Figure 5-47).

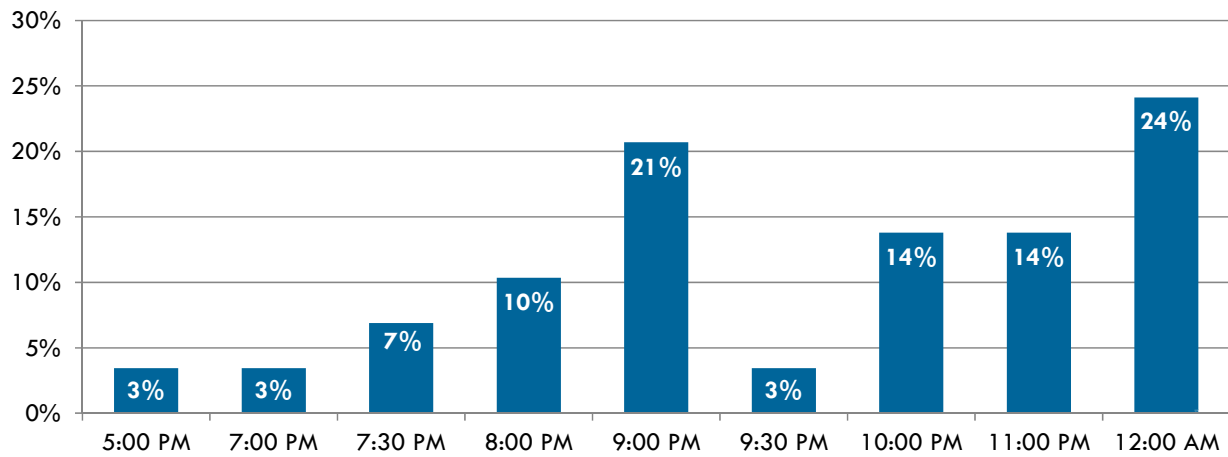


Figure 5-46 When should service begin in the morning?



Q10a: You said earlier service in the morning would encourage you to use transit. When would you like it to begin? (n=23)

Figure 5-47 When should service end at night?



Q10b: You said later service at night would encourage you to use transit. When would you like it to end? (n=29)

## STAKEHOLDER & PUBLIC OUTREACH

Both community stakeholders as well as the public were engaged to understand transportation needs. Stakeholder meetings were held April 22-24, 2015, and public outreach events were held in popular community locations June 19-20, 2015.

- June 19: Warrenton, Youngs Bay Plaza, 2-4 PM
- June 19: Astoria, Riversea Gallery, 5:30-7:30 PM
- June 20: Seaside, Public Library, 10 am - noon
- June 20: Cannon Beach, Coaster Theater, 2-4 PM

Appendix B provides the outreach materials used at these events.

Figure 5-48 Outreach Event Photos



Outreach events drew riders and non-riders to offer opinions on transportation needs.



## 6 CONCLUSIONS

In general, SETD's services meet the basic needs of the transit-dependent portion of the community. Routes generally cover the main population centers and destinations as shown by comparing community destinations with routes. The main areas service does not cover include the interior of Astoria, southwest Seaside, and the outlying communities of Svensen and Knappa. Previous plans and community surveys indicate that SETD's biggest opportunities lie in enhancing existing service frequency, investing in stop infrastructure that will enhance the profile and visibility of transit, and making routes and schedules easier to understand for the casual rider. Overall, SETD usage is on the rise, with increasing ridership on both fixed-route as well as more resource-intensive ADA Paratransit services.

Overall findings from this task (system analysis, community profile, public and stakeholder outreach) include:

### SETD Service Performance

- Following major service cuts in recent years, service is gaining in strength, resulting in more stable ridership and agency finances.
- Fixed-route productivity is good for a small urban/rural area; however, ADA productivity has room for improvement.

### Perceptions of SETD Service

- Service is generally perceived as safe, although there are issues at specific stops (e.g., lighting or accessibility).
- There is general consensus among stakeholders that current service attracts lower-income individuals/households and those that do not have other transportation options.

### SETD Riders

- More than a third of riders rely on the bus to get to work.
- Most riders are frequent riders (a third ride five or more days per week and another third ride three to four days per week).
- Many riders have very low incomes (more than half earn below \$15,000 per year).
- A high share of riders do not have a working vehicle in their household (about a third in the summer survey and over 60% in the spring survey).
- Riders are concerned about bus stop safety and security, on time performance, and frequency.
- Service is used for many in-town trips (e.g., within Astoria, within Cannon Beach, etc.)
- Topography and local stop access are a barrier to those unable to walk longer distances, e.g., seniors.

## Clatsop County Community

- Residents desire more frequent service and weekend service—and other elements similar to riders, such as more direct and later evening service.
- Residents are open to trying transit—a quarter of residents who responded to the community survey have used TriMet service in the Portland area and 20% have used Northwest Point—and expressed a willingness to take local services along the coast.
- However, residents generally do not know about SETD service or where it runs and need better information and service that is easier-to-understand.
- Non-transit users are interested in regional service.

## Regional Transit Needs

- Veterans need to get to the Veteran's Administration (VA) hospital in Portland for medical appointments; these trips are currently served by the Disabled Veterans of America (DAV) van, but there are scheduling challenges. Veterans in Tillamook County also need to get to Camp Rilea.
- There is a need for medical trips to access to specialists located outside of the county, e.g., in Longview and Portland.

## Seasonal/Tourist Needs

- As a tourism-focused transit provider, SETD service varies on weekdays and weekends and on and off season. The many route variants and name changes between weekday, weekend, and seasonal service may unnecessarily increase system complexity and the community's ability to understand how to ride the service.
- The community's transit needs are very different in the summer in terms of travel patterns and the hours of service. In particular, later service is needed – until 9 or 10 pm.
- Summer visitors staying in Gearhart and Seaside are not well-served.

## Geographic Coverage Gaps

Markets that are not well-served include:

- Astoria:
  - The middle of Astoria is not well covered, e.g., north of Niagara Avenue and south of northern W. Marine Drive, and stop access is challenging due to steep topography.
  - Service misses major destinations on weekends, e.g., Safeway in Astoria.
- Seaside:
  - The southwest portion of Seaside, e.g., west of Necanicum Drive and south of 1<sup>st</sup> Street where there are many origins and destinations.

## Transit Span/Frequency

- More frequency is needed particularly on Route 101.
- More frequency is needed in Warrenton. This is in part an issue of marketing and schedules rather than the actual number of trips. Regular passengers realize that two routes serve Warrenton-Hammond, but several members of the public requested more service to that

community, so some people may not realize this. According to stakeholders, Warrenton-Hammond contains a number of low-income housing areas, partially resulting from housing price increases in Astoria. Ideally the Route 10 trips through Warrenton-Hammond could also be branded as Route 15 so passengers understand they can board either bus.

- Related to Route 21, stakeholders stated that Cannon Beach is becoming a year-round destination and that such a long break in weekend service during peak shopping times may dissuade transit travelers.
- For Seaside residents, the first trip of the day leaving Seaside gets people to Midtown at 9:18 am. For stores that open at 10 am, employees must typically report at 9 am, therefore the first trip of the day may be too late for employees to use.
- Concern about service on Route 30 / Columbia Connector. Stakeholders expressed a desire to concentrate more service on the U.S. 101 corridor rather than U.S. 30; however, SETD feels Route 30 service is valuable.
- Nighttime service is needed on weekends.
- Lack of evening hours are key to serve low-income jobs.

## Drivers

- Rotating shifts provide drivers with variety and are appreciated.
- Lack of breaks can be an issue on routes that run late and in summer.
- 8-hour shifts can constrain schedule of routes.
- Would like to have two drivers closing shop late at night.
- Excellent communication between drivers, e.g., facilitating transfers.

## Transit Information/Marketing

- Lack of information and marketing is seen as a major barrier. Marketing improvements are needed to make the system more “legible.”
- More detailed route maps are needed to convey how the system operates.
- People do not know where the bus runs or where it stops. There is a need for more stop poles and/or more fixed stops to identify where transit runs on the ground (see stop infrastructure). Signs do not include schedules. Stops and shelters are an effective marketing tool for transit.
- Printed information is important. Clatsop County communities are not the “big city” – people still use the library, do not have smart phones, etc. Do not take printed materials for granted.
- Use real-world examples to demonstrate cost savings and profile who does ride the bus.
- Real time information is highly desirable.
- People unaware of ADA paratransit or even what it is.

## Stop Infrastructure and Facility Needs

- There is a need for signed stops, shelters at major stops or at stops far from a front door, and lighting and security at some stops
- A transit center is needed in Seaside
- Speed bumps at Sunset Beach and CCC are a comfort issue; improvements are needed.

## Fares

- Cost is an issue for human service agencies; need to identify opportunities for cost sharing.
- Fare equity is an issue. Zones work for longer-distance connections like Seaside-Astoria but for example community members and/or riders felt that fares should be less expensive for a relatively short-distance regional trips between Sunset Beach and Warrenton trip, or for short local trips such as within Cannon Beach.

## Land Use

- Uses that have located away from major transit corridors require significant deviations and increase travel time for all riders.
- New development areas include:
  - By Costco and the future Walmart in Warrenton: <https://goo.gl/maps/5ULvLaDDQjy>
  - Juniper Avenue in Warrenton: <https://goo.gl/maps/cFWCzWRpHax>

## Multimodal Transportation Needs

- It is necessary to get multiple services to communicate/coordinate and prioritize improvements to the built environment – sidewalks and bike access.

## Vehicles

- There is a desire for high-quality vehicles generally. For example, it is difficult to see out of the front of certain vehicles.
- Current vehicles are difficult for those with mobility impairments or older adults to board, and deploying the lift can take 2-3 minutes
- There is a need to improve radio interoperability with Tillamook and CC Rider

## Administration/Organization

- Need staff for things like marketing, grant funding [in the works]
- Pay too low for drivers / customer service

## Service Opportunities

SETD is currently implementing a number of changes desired by staff, stakeholders, and the public – e.g., increasing frequency on Route 101, extending evening hours on key regional routes, conducting a wage study, and instituting driver lunch breaks. Opportunities identified through the analysis and community and stakeholder outreach conducted as part of this task include:

- There is a general consensus is that there is an opportunity to make transit more attractive, e.g., based on the cost of driving (high gas prices), but that better information and marketing is the major barrier.
- Frequency is important, but there is a general consensus is that hourly service would be sufficient given community density.
- Increased school transportation (high school)
- Better timed schedules to major destinations, e.g. Community College

- More convenient transfers. For example, seasoned passengers appear to understand the need to transfer from Route 101 to Route 10 at X location, but some questioned why people were transferring and the purpose of the switch. Having the transfer location in two different places is also confusing to passengers.
- Explore extending service hours to at least 9 pm
- Create safer crossings at major stops such as along U.S. 101 and U.S. 30
- Provide a consistent location for transfers to Tillamook County Transportation District
- Expand partnerships similar to Tongue Point to Community College, Hospital, other major employers
- Improve marketing and providing schedules to present SETD information regularly around community
- Seaside Hospital was identified as a key destination in the community survey, but has relatively low ridership, indicating there is an opportunity to better market service.
- Consider renaming the system. There is confusion with the Sunset Empire Recreation District. People are also not sure what service area “Sunset Empire” covers.



# MEMO #2C: COMMUNITY INPUT – APPENDICES

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# APPENDIX A SURVEY INSTRUMENTS

# ON-BOARD SURVEY, SPRING/SUMMER 2015


Figure A-1 Passenger Survey (English)

### SUNSET EMPIRE TRANSPORTATION DISTRICT SURVEY

Sunset Empire Transportation District (SETD) is conducting a survey to help plan future transit service in the region. We would like to get your input on your travel patterns and experience on transit. The answers are completely confidential.

Check this box if you completed this survey on another trip

Please tell us about the one-way trip you are making now.



For Internal Use: Time of Survey \_\_\_\_\_ am pm Route: \_\_\_\_\_

- Did you transfer to this bus from another bus?
  - No
  - Yes: From SETD Route \_\_\_\_\_
  - Yes: From other provider \_\_\_\_\_
- What kind of place are you coming from?
  - Home
  - School/College (Students)
  - Work
  - Social, Religious, Personal
  - Tongue Point High School
  - Medical Services
  - Other: \_\_\_\_\_
  - Other, Specify: \_\_\_\_\_
  - Shopping
- Where did you start your trip today, before you reached the first bus stop?
 

Street Address/ Place \_\_\_\_\_

OR Intersection \_\_\_\_\_ & \_\_\_\_\_

City \_\_\_\_\_ Zip \_\_\_\_\_
- What time did you board the bus today?
 

Hour: Minute \_\_\_\_\_  AM  PM
- How did you get to the first bus stop on your trip?
  - Walked/ Wheelchair
  - Bicycle
  - Approx. # of minutes \_\_\_\_\_ Approx # of miles \_\_\_\_\_
  - Dropped off
  - Boarded bus with bike
  - Drove alone
  - Locked bike near bus stop
  - Carpool
  - Other, Specify: \_\_\_\_\_
- Are you making a round trip on the bus today?
  - Yes
  - No
- How often do you ride transit?
  - First time
  - 1-2 days/ wk
  - 3-4 days/ wk
  - 5+ days/ wk
  - Rarely
- How long have you ridden SETD transit?
  - More than 4 years
  - Less than 1 year
  - 1-4 years
  - First time riding

OVER ►

### SUNSET EMPIRE TRANSPORTATION DISTRICT SURVEY

#### 16. SERVICE EVALUATION:

Please rate the following items about transit in your area:

	Poor	Excellent
1. Buses run late enough at night	4 3 2 1	
2. Buses run early enough in the morning	4 3 2 1	
3. Service that is on time	4 3 2 1	
4. Frequency of weekday service	4 3 2 1	
5. Frequency of weekend service	4 3 2 1	
6. Bus Stops are easy to reach	4 3 2 1	
7. Goes where I need to go	4 3 2 1	
8. Fare is appropriate to service	4 3 2 1	
9. Connects well to regional providers	4 3 2 1	
10. Bus stops are safe and comfortable	4 3 2 1	
11. Information about service is easy to find	4 3 2 1	

#### 17. Please consider the potential service improvements shown below and select up to 3 that would help you choose to ride transit more often:

- More frequent bus service
- Bus service earlier in the morning (begins when \_\_\_\_\_)
- Bus service later at night (until when \_\_\_\_\_)
- More service on weekends
- Better on-time performance/ more reliable buses
- More direct bus routes
- Fares were less expensive
- Service to new areas; Specify: \_\_\_\_\_
- More local service
- Better regional connections
- Easier transfers between bus routes
- More safe/ comfortable bus stops
- More information/ easier to plan trip
- Nothing will encourage me to ride more often

#### 18. What is your age?

- 18 or under
- 19-24
- 25-44
- 45-54
- 55-74
- 75 and over

#### 19. What is your gender?

- Male
- Female

#### 20. Are you... (Choose all that apply)

- Full-time worker
- Part-time worker
- Unemployed, seeking work
- Unemployed, not seeking
- College
- Student
- Faculty/ Staff
- Middle/High School (student)
- Retired
- Visitor
- Other: \_\_\_\_\_

#### 21. How well do you speak English?

- Very Well
- Well
- Not well
- Not at All

#### 22. What is your ethnicity? (Choose all that apply)

- American Indian or Alaska Native
- Asian
- Black/African-American
- Hispanic/ Latino/ Spanish
- Native Hawaiian or Pacific Islander
- White/ Caucasian
- Other: \_\_\_\_\_

#### 23. Including yourself, how many people are there in your household?

- One
- Two
- Three or more

#### 24. Do you have a valid driver's license?

- Yes
- No

#### 25. How many working vehicles are available to your household?

- None
- 1
- 2
- 3 or more

#### 26. What was your total household income last year before taxes?

- Less than \$10,000
- \$10,000-14,999
- \$15,000-24,999
- \$25,000-34,999
- \$35,000-49,999
- \$50,000-74,999
- \$75,000-99,999
- \$100,000 or more

Comments:

**Thank you for your participation! Your responses will be kept strictly confidential. Please return form to surveyor or leave it with one of the drivers.**

Figure A-2 Passenger Survey (Spanish)

**SUNSET EMPIRE TRANSPORTATION DISTRICT ENCUESTA DE TRÁNSITO A BORDO**

Sunset Empire Transportation District (SETD) está realizando una encuesta para ayudar a planificar el futuro servicio de tránsito en la región. Nos gustaría obtener su entrada sobre sus patrones de viaje y experiencia en tránsito. Las respuestas son totalmente confidenciales.

Marque esta casilla si ha completado esta encuesta en otro viaje.

Por favor, díganos sobre el viaje de ida que usted está haciendo ahora.



**1. ¿Hizo trasbordo a este autobús desde otro autobús?**

- No  Sí; De la SETD ruta(s) \_\_\_\_\_
- Sí; De otros servicios \_\_\_\_\_

**2. ¿Qué tipo de lugar es su destino?**

- Casa  Compras
- Escuela/Colegio (solo estudiantes)  Trabajo
- Actividad Social, Religiosa, Personal
- ¿Cuál? Elije uno:  CCC MERTS  Servicios Médicos
- Tongue Point  Otro, explica: \_\_\_\_\_
- Escuela secundaria
- Otro: \_\_\_\_\_

**3. ¿Dónde comenzó su viaje hoy, antes de llegar a la parada de autobús?**

Dirección o punto de referencia: \_\_\_\_\_  
 O Intersección \_\_\_\_\_ & \_\_\_\_\_  
 Ciudad \_\_\_\_\_ Código postal \_\_\_\_\_

**4. ¿A qué hora abordó el autobús hoy?**

\_\_\_\_\_  AM  PM

**5. ¿Cómo llegó a la parada de autobús?**

- Caminé/ Utilicé silla de ruedas (¿cuántos minutos? \_\_\_\_\_)  Usé la bicicleta (¿cuántas millas? \_\_\_\_\_) y: \_\_\_\_\_
- Alguien me recogió  Abordé el autobús con mi bicicleta
- Conduje solo/a  Estacioné la bicicleta cerca de la parada de autobús
- Compartí automóvil (viaje grupal)  Estacióné la bicicleta cerca de la parada de autobús
- Otro, explica: \_\_\_\_\_

**6. ¿Está tomando un viaje de ida ida y vuelta en el autobús hoy?**

Sí  No

**7. ¿Con qué frecuencia utiliza tránsito?**

- Primera vez  3-4 días/semana
- Irregularmente/ara vez  5 o más días/semana
- 1-2 días/semana

**8. ¿Por cuánto tiempo ha sido un pasajero de SETD?**

- Más de 4 años  Menos de 1 año
- 1 a 4 años  Primera vez en SETD

Solo para uso interno: Time of Survey \_\_\_\_\_ am pm Route: \_\_\_\_\_

**9. ¿Hará trasbordo a otro autobús?**

- No  Sí; A la SETD ruta(s) \_\_\_\_\_
- Sí; A otros servicios \_\_\_\_\_

**10. ¿Cómo pagó por este viaje de autobús?**

- Adulto Efectivo  SETD pase de un día
- Boletos de autobús (costo normal)  SETD pase mensual
- SETD pase anual
- Summer Fun Pass (Pase de verano)  Pase de Connector de 3 días
- Pase trimestral estudiantil (K-12)  Pase de Connector de 7 días
- Pase trimestral estudiantil (Colegio)
- Pase trimestral estudiantil (Colegio)

**11. ¿Recibió un descuento especial de tarifas para su viaje hoy?**

- No  Persona mayor
- Discapacidad  Estudiante
- Militar  Joven (bajo 7 años)

**12. ¿Qué tipo de lugar es su destino?**

- Casa  Compras
- Escuela/Colegio (solo estudiantes)  Trabajo
- Actividad Social, Religiosa, Personal
- ¿Cuál? Elije uno:  CCC MERTS  Servicios Médicos
- Tongue Point  Otro, explica: \_\_\_\_\_
- Escuela secundaria
- Otro: \_\_\_\_\_

**13. ¿Dónde termina su viaje hoy, después de llegar a la parada de autobús?**

Dirección o punto de referencia: \_\_\_\_\_  
 O Intersección \_\_\_\_\_ & \_\_\_\_\_  
 Ciudad \_\_\_\_\_ Código postal \_\_\_\_\_

**14. ¿Cómo llegará a su destino?**

- Caminaré/ Usaré silla de ruedas (¿cuántos minutos? \_\_\_\_\_)  Usaré mi bicicleta (¿cuántas millas? \_\_\_\_\_)
- Alguien me recogerá  Otro, explica: \_\_\_\_\_
- Conduciré solo/a
- Compartiré automóvil (viaje grupal)

**15. Si este servicio de autobuses no estuviera disponible, ¿cómo haría este viaje?**

- Caminaré/Silla de ruedas  Usaré mi bicicleta
- Conduciré solo/a  No haría este viaje
- Alguien me llevaría en coche  Otro, explica: \_\_\_\_\_
- Taxi

Por favor completa la siguiente página ►

**SUNSET EMPIRE TRANSPORTATION DISTRICT ENCUESTA DE TRÁNSITO A BORDO**

**16. EVALUACIÓN DEL SERVICIO:**

Por favor califique los siguientes sobre el tránsito en su área:

	Mediocre	Excelente
1. Los autobuses salen bastante tarde en la noche	4	3 2 1
2. Los autobuses salen lo suficientemente temprano en la mañana	4	3 2 1
3. Servicio llega en tiempo	4	3 2 1
4. Frecuencia de servicio de lunes a viernes	4	3 2 1
5. Frecuencia de servicio de fin de semana	4	3 2 1
6. Las paradas de autobús son de fácil acceso	4	3 2 1
7. Va donde tengo que ir	4	3 2 1
8. La tarifa es apropiado para el servicio	4	3 2 1
9. Conecta bien a servicio regional	4	3 2 1
10. Las paradas de autobús son seguras y cómodas	4	3 2 1
11. Información sobre el servicio es fácil de encontrar	4	3 2 1

**17. Por favor considere las posibles mejoramientos en el servicio que se muestran abajo y selecciona hasta 3 que le ayudaría a elegir a usar tránsito con mayor frecuencia:**

- Servicio más frecuente  Servicio a nuevas áreas (Especifique: \_\_\_\_\_)
- Servicio más temprano en la mañana  Más servicio local (desde cuando? \_\_\_\_\_)
- Servicio más tarde en las noches (hasta cuando? \_\_\_\_\_)
- Más servicio el fin de semana  Mejores conexiones regionales
- Mejor puntualidad  Transferencia fácil entre rutas
- Más rutas directas  Más paradas de autobús seguras y cómodas
- Tarifas más baratas  Más información/Más fácil planificar un viaje
- Nada me incentivaría a usar tránsito con mayor frecuencia

Por favor, cuéntanos acerca de usted:

**18. ¿Cuál es su edad?**

- 18 o menos  25-44  65-74
- 19-24  45-64  75 y mayores

**19. ¿Es usted hombre o mujer?**

- Hombre
- Mujer

**20. ¿Es usted... (marque todo lo que corresponda)**

- Trabajador/a de tiempo completo  Estudiante de nivel secundario/preparatoria
- Trabajador/a de medio tiempo  Jubilado/a o retirado/a
- Desempleado/a, pero buscando trabajo  Turista/Visitante
- Otro: \_\_\_\_\_
- Desempleado/a, no estoy buscando trabajo
- Universidad/Colegio afiliación  Estudiante
- Facultad/Personal

**21. ¿Qué tan bien habla usted Inglés?**

- Muy bien  Mal
- Bien  Nada

**22. ¿Cuál es su origen étnico? (marque todo lo que corresponda)**

- Nativo Americano/de Alaska  Hawaiano u otra isla del Pacifico
- Asiático  Blanco/Caucásico
- Negro o Afroamericano  Otro: \_\_\_\_\_
- Hispano/Latino/Español

**23. Incluyéndose usted, ¿cuántos hay en su hogar?**

- Uno  Dos  Tres o más

**24. ¿Tiene usted una licencia de conducir válida?**

- Sí  No

**25. ¿Cuántos vehículos funcionales están disponibles en su hogar?**

- Ninguno  Dos
- Uno  Tres o más

**26. ¿Cuál fue el ingreso total de su hogar en el año pasado antes de impuestos?**

- Menos de \$10,000  \$35,000-49,999
- \$10,000-\$14,999  \$50,000-74,999
- \$15,000-24,999  \$75,000-99,999
- \$25,000-34,999  \$100,000 o más

¿Otros comentarios?

**¡Gracias por su participación! Sus respuestas son totalmente confidenciales. Por favor devuelva esta encuesta al inspector o conductor a bordo de este autobús.**

# COMMUNITY SURVEY, DECEMBER 2015

Figure A-3 Community Survey

Now we have a few questions about you. Your answers will be kept confidential and responses will only be reported in the aggregate.

**11. Are you ...** Choose all that apply.  
 Full-time worker     College Faculty/Staff  
 Part-time worker     Middle/High School Student  
 Unemployed     Retired  
 Seeking work     Visitor  
 Not seeking work     Other \_\_\_\_\_  
 College Student

**12. What is your age?**  
 17 or under     25-44     65-74  
 18-24     45-64     75 and over

**13. What is your ethnicity?**  
 American Indian/Alaska Native  
 Asian  
 Black/African American  
 Hispanic/Latino/Spanish  
 Native Hawaiian/Pacific Islander  
 White/Caucasian  
 Other \_\_\_\_\_

**14. What was your total household income last year before taxes?**  
 Less than \$10,000     \$35,000-49,999  
 \$10,000-14,999     \$50,000-74,999  
 \$15,000-24,999     \$75,000-99,999  
 \$25,000-34,999     \$100,000 or more

**15. Including yourself, how many people are there in your household?**  
 One     Two     Three or more


**16. How many working vehicles are available to your household?**  
 None     1     2     3 or more

Thank you for your participation! Survey takers will be entered into a drawing for a **\$50 Visa gift card!** If you are interested in participating, please provide your name and phone number.  
 Name: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Please tape or staple closed before mailing. Thank you!

NELSONNYGAARD CONSULTING ASSOCIATES  
 ATTN: STEPHANIE WRIGHT  
 621 SW MORRISON ST. STE 1250  
 PORTLAND OR 97205-3815

**We want to hear from you!**



**SUNSET EMPIRE  
TRANSPORTATION  
DISTRICT**

Help us envision the future of public transportation in Clatsop County! The Sunset Empire Transportation District (SETD) provides local and regional bus service and has undertaken a long-range plan to determine transit needs throughout Clatsop County.

We need your opinions on local and regional needs for public transportation services and hope you can participate in this short survey. This survey should take approximately 5 minutes to complete. For more information on the plan, visit <http://transitstudy.ndethebus.org/>.

Para obtener una copia en español, llame al 503-488-2232.

---

**1. What city/ZIP code do you live in?**

City \_\_\_\_\_

ZIP \_\_\_\_\_

**2. What are the closest cross streets to your home?**

Street 1 \_\_\_\_\_

Street 2 \_\_\_\_\_

**3. Please tell us where you usually travel. List the top THREE places and addresses.**  
 Examples: Work 1095 Duane St. Astoria  
 Shopping Safeway, Seaside

**Destination 1:**  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_ City/Town \_\_\_\_\_

**How often do you go there?**  
 5 or more days/week     2-4 days/week  
 1 day/week     A few times a year

**How do you usually get there?**  
 Drive     Dropped off     Taxi     Bike  
 Walk     Public Transit     Carpool  
 Agency Transportation (social services/volunteers)  
 Who? \_\_\_\_\_

**Destination 2:**  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_ City/Town \_\_\_\_\_

**How often do you go there?**  
 5 or more days/week     2-4 days/week  
 1 day/week     A few times a year

**How do you usually get there?**  
 Drive     Dropped off     Taxi     Bike  
 Walk     Public Transit     Carpool  
 Agency Transportation (social services/volunteers)  
 Who? \_\_\_\_\_

**Destination 3:**  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_ City/Town \_\_\_\_\_

**How often do you go there?**  
 5 or more days/week     2-4 days/week  
 1 day/week     A few times a year

**How do you usually get there?**  
 Drive     Dropped off     Taxi     Bike  
 Walk     Public Transit     Carpool  
 Agency Transportation (social services/volunteers)  
 Who? \_\_\_\_\_

**4. Are there places you wish you could go, but cannot because of lack of transportation?**  
 No     Yes  
 If yes, please list the destination and town.  
 Place 1: \_\_\_\_\_  
 Place 2: \_\_\_\_\_

**5. Do you have access to an automobile?**  
 No     Yes  
 Yes, but not on a regular basis

**6. Have you taken public transit in the past year?**  
 Yes     No

**7. If yes, which service did you ride?**  
 Choose all that apply.  
 SETD 'The Bus'  
 CC Rider  
 NW Point  
 Tillamook 'The Wave'  
 TriMet  
 Other: \_\_\_\_\_

**9. If no, why isn't public transportation a good option for you?**  
 Choose all that apply.  
 Doesn't run when I need it  
 Doesn't go where I need it  
 Takes too long  
 Is not available near me  
 Feels uncomfortable/unsafe  
 Bus is not reliable  
 Fare is too expensive  
 Prefer to drive  
 Other: \_\_\_\_\_

**7a. Which SETD route(s) have you taken in the past year?** Choose all that apply.  
**Weekday**  
 Rt 10 (Warrenton-Astoria)  
 Rt 101 (Astoria-Warrenton-Seaside-Cannon Beach)  
 Rt 30 (Warrenton-Astoria-Svensen-Knapka-Westport-Clatskanie)  
 Rt 20 (Seaside-Cannon Beach)  
 Dial-a-Ride  
 Warrenton/Jeffer's Garden/Miles/Crossing  
 Svensen/Knapka  
 Ride Assist

*continue here*

**Saturday/Sunday**  
 Rt 101 (Astoria-Warrenton-Gearhart-Seaside-Cannon Beach-Manzanita)  
 Rt 30 (Warrenton-Astoria-Svensen-Knapka-Westport-Clatskanie-Longview-Kelso)  
 Rt 21 (Seaside-Cannon Beach)  
 Ride Assist

**Seasonal**  
 Rt 11 (Astoria)  
 Rt 12 (Astoria)  
 Seaside Streetcar Trolley (Seaside)  
 Rt 21 (Seaside-Cannon Beach)

**8. If yes, how often do you ride transit?**  
 5 or more days/week  
 3-4 days/week  
 1-2 days/week  
 Rarely  
 ↓ continue below ↓

**10. What would encourage you to try public transportation or use it more often?**  
 More frequent bus service  
 Bus service ran earlier in morning  
 Beginning when? \_\_\_\_\_  
 Bus service ran later at night  
 Until when? \_\_\_\_\_  
 More service on weekends  
 Better on-time performance/more reliable buses  
 More direct bus routes  
 Fares were less expensive  
 Service to new areas  
 Specify: \_\_\_\_\_  
 More local service  
 Better regional connections  
 Easier transfers between routes  
 Safer/more comfortable bus stops  
 Safer access to bus stops  
 Better information/easier to plan trip  
 Nothing would encourage me to ride

# APPENDIX B OUTREACH EVENT MATERIALS

## PUBLIC OUTREACH BOARDS

### LEARN ABOUT SETD'S LONG RANGE COMPREHENSIVE TRANSPORTATION PLAN

The Sunset Empire Transportation District (SETD) serves communities across Clatsop County, including Clatskanie, Gearhart, Westport, Astoria, Warrenton, Cannon Beach and Seaside. SETD's transit service covers an area of approximately 840 square miles and 36,000 citizens. More than 180,000 trips per year are taken on the bus within Clatsop County and to neighboring Tillamook County, Longview, Columbia County and Portland.

### What's YOUR preference?

Transit providers must balance competing needs. Some people want the bus to run every 15 minutes. Some people want the bus to run until 10 pm. A transit agency can often do one of those things, but not both. What matters most to **you**?

TRANSIT NEEDS	CATEGORY A	← OR →	CATEGORY B
<b>COVERAGE</b>	Provide less frequent service to more areas	↔	Provide more service to fewer areas
<b>FREQUENCY &amp; SPAN</b>	Provide more frequent service for a shorter time	↔	Provide less frequent service, but for a longer time
<b>DAYS OF SERVICE</b>	Provide less weekday service; more weekend service	↔	Provide faster, more direct service that requires longer walks to stops
<b>TRANSFERS</b>	Provide more routes with less frequent service, but fewer transfers	↔	Provide fewer routes with more frequent service, but more transfers
<b>DIRECTNESS</b>	Provide slower, less direct service with shorter walks to stops	↔	Provide more weekday service; less weekend service
<b>STOP SPACING</b>	Serve many stops that make service slower, but reduce walks	↔	Serve fewer stops to speed service, but that increase walks

### Project Purpose

This project will guide the future of transit service in Clatsop County for the next 20 years. The project will help us determine:

- What is the role of transit in Clatsop County?
- Does the bus run when and where people need it?
- How to better connect people regionally – to Tillamook County, Portland, and Columbia County, for example?
- How can SETD improve customer access to the bus, including service changes, technology upgrades, increased marketing, etc.?

### Project Outcomes

Recommendations will include modifications to:

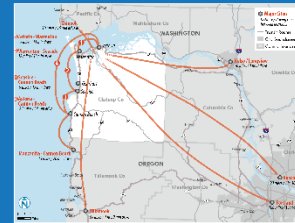
- Route alignments
- Route schedules
- Route frequencies
- Marketing and information
- Service standards and performance metrics
- Fare payment systems
- Organization structure
- Bus stops (lighting, shelters, signs)
- Linking land use and transportation investments

### Project Tasks

- Plan review – understand previous projects affecting transit service
- Market analysis – map locations of people, jobs, and activity centers (grocery stores, senior centers, apartments, social services, etc.)
- Service analysis – assess SETD route efficiency and effectiveness
- Rider survey – understand the needs of current riders
- Community survey – understand the needs of people not currently riding
- Outreach – talk to the public about transportation needs
- Service options – create service recommendations to meet needs
- Goals and policies – update agency goals to reflect community values
- Benchmarks – performance standards for successful transit

### Schedule

This project began in March 2015 and will be completed by July 2016.



### Please give us your feedback!

Take an online survey about public transit in Clatsop County by July 15 and be entered into a drawing for a \$50 gift card. Access the survey at:

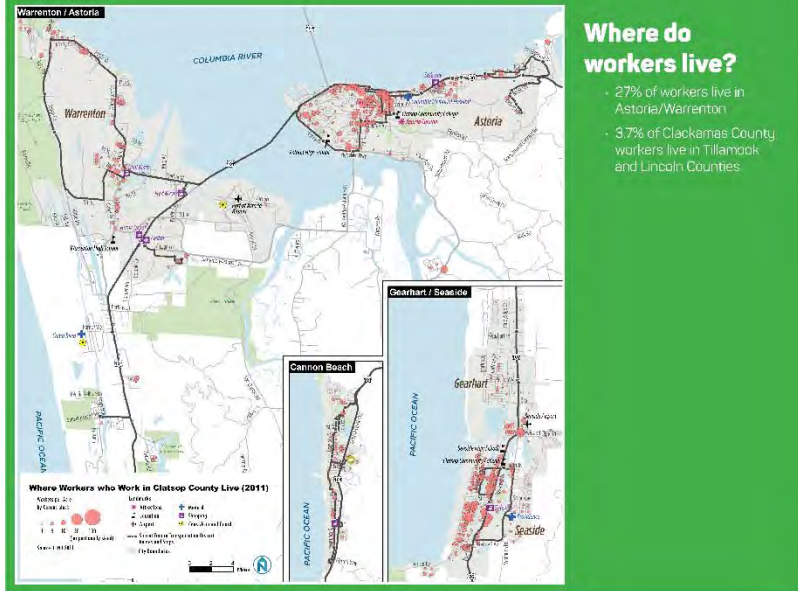
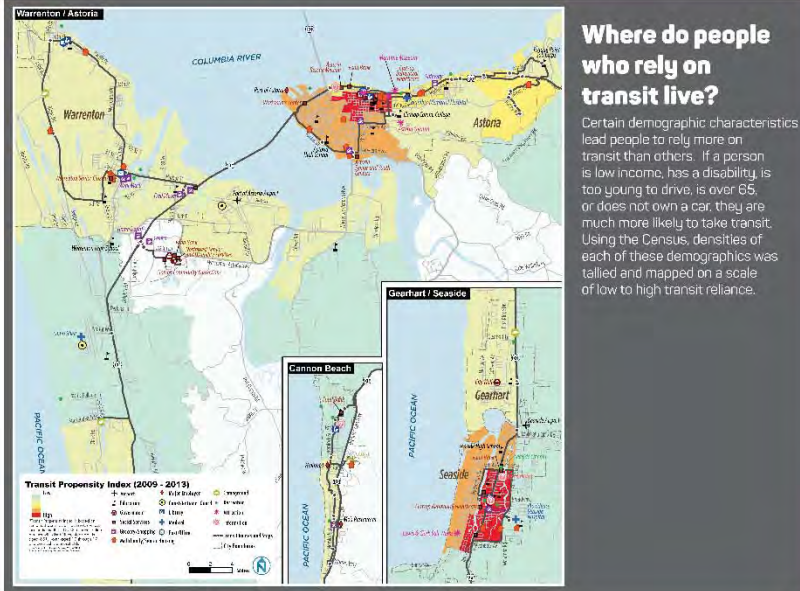
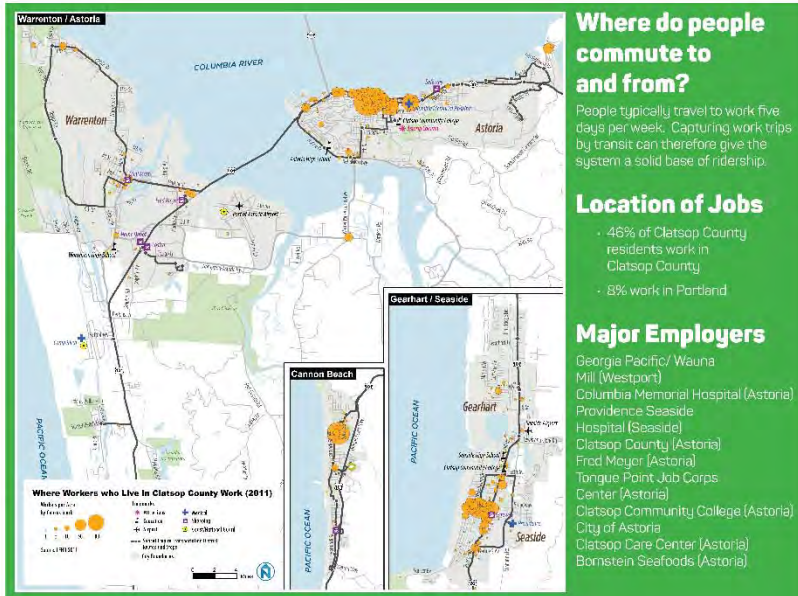
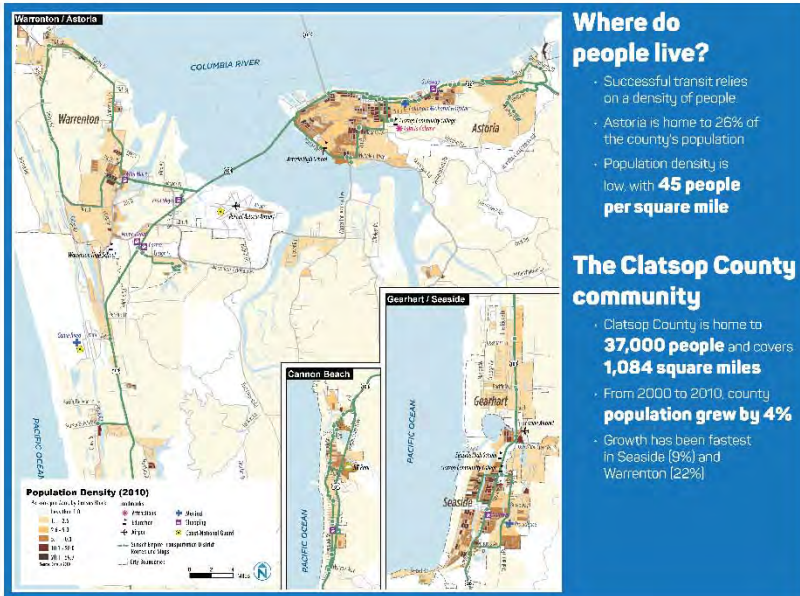
[TRANSITSTUDY.RIDETHEBUS.ORG/SURVEY](http://TRANSITSTUDY.RIDETHEBUS.ORG/SURVEY)

### For More Information

Jeff Hazen  
Executive Director  
Sunset Empire Transportation District  
900 Marina Drive | Astoria | OR | 97103  
Jeff@ridethebus.org

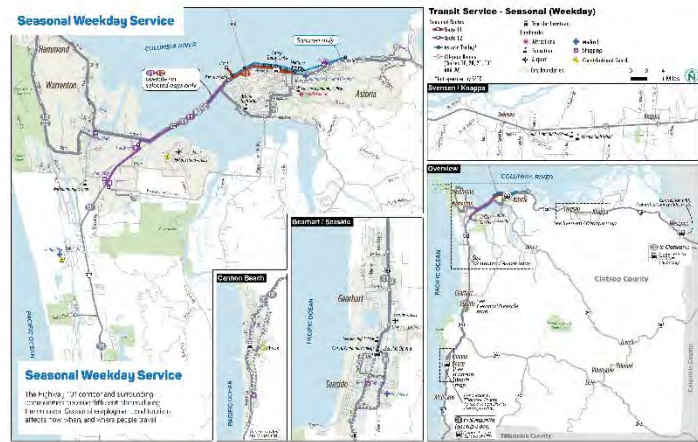
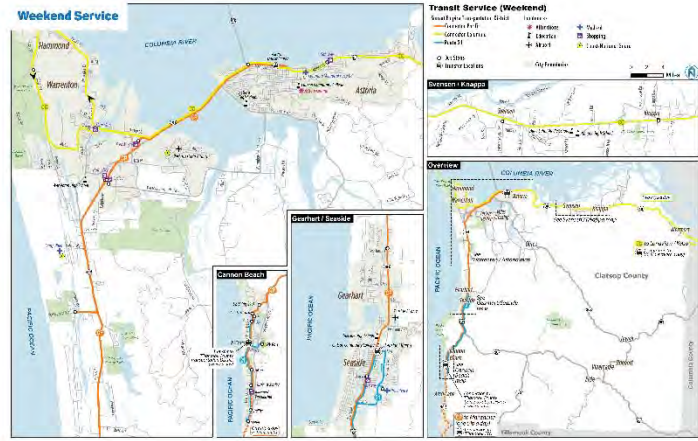
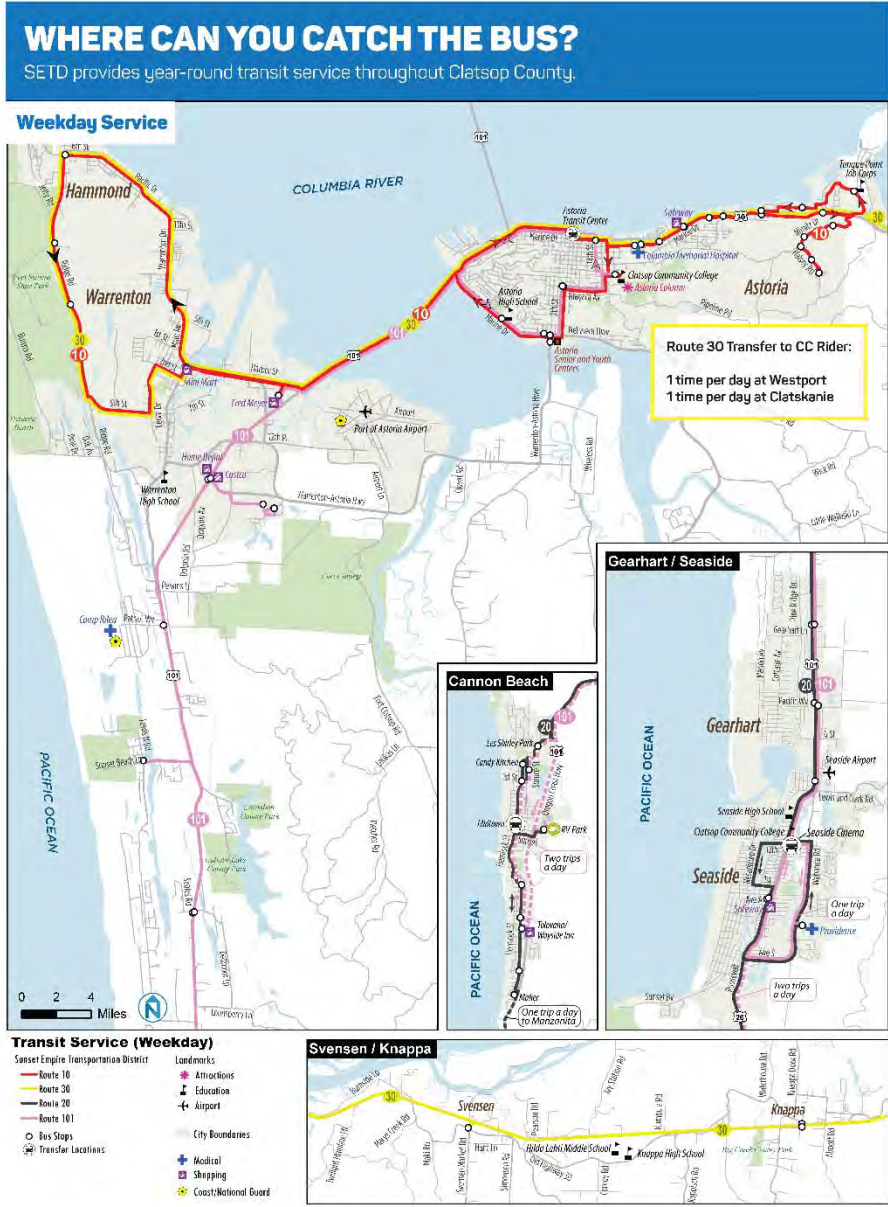


SUNSET EMPIRE  
TRANSPORTATION  
DISTRICT





Long-Range Comprehensive Transportation Plan | Memo #2C: Community Input - Appendices  
Sunset Empire Transportation District



Route Number and Name	Days of Operation	Span of Service	Frequency of Hourly or Daily Trips	Communities Served
<b>Year-round Service</b>				
10	Monday-Friday	5:45 am - 7:20 pm	60 min. LSP	Astoria, Hammond, Warrenton
30	Monday-Friday	7:00 am - 4:00 pm	60 min. LSP	Cannon Beach, Seaside, Manzanita
101	Saturday-Sunday	9:00 am - 12:30 pm	30-60 minutes	Cannon Beach, Seaside
102	Monday-Friday	6:00 am - 9:00 pm	120 minutes	Astoria, Warrenton, Cannon Beach, Cannon Beach
10	Monday-Friday	8:15 am - 7:20 pm	3 trips	Hammond, Warrenton, Astoria, Svensen, Knappa, Clifton, Clifton
101	Saturday-Sunday	8:00 am - 6:20 pm	2 trips	Hammond, Warrenton, Astoria, Svensen, Knappa, Clifton, Clifton
102	Saturday-Sunday	8:30 am - 5:20 pm	2 trips	Astoria, Warrenton, Cannon Beach, Cannon Beach, Cannon Beach
<b>Seasonal Service (summer only)</b>				
10	Saturday-Sunday	11:00 am - 3:00 pm	30 min. LSP	Astoria, Cannon Beach, Seaside
101	Saturday-Sunday	11:00 am - 6:00 pm	60 min. LSP	Astoria, Cannon Beach, Seaside
102	Saturday-Sunday	11:00 am - 6:00 pm	60 min. LSP	Astoria, Cannon Beach, Seaside

## PUBLIC OUTREACH FLYERS AND SIGNAGE

**WE WANT TO HEAR FROM YOU!**



SUNSET EMPIRE  
TRANSPORTATION  
DISTRICT

**COME ON IN!**

Sunset Empire Transportation District (SETD) wants your opinions about regional transit service. We provide local and regional bus service and are undertaking a long-range plan to determine the transit need of Clatsop County.

- ✱ When and where do you need to travel?
- ✱ How can public transportation help you?
- ✱ Where can service be improved?

**WE WANT TO HEAR FROM YOU!**



SUNSET EMPIRE  
TRANSPORTATION  
DISTRICT

Sunset Empire Transportation District (SETD) wants your opinions about regional transit service. We provide local and regional bus service and are undertaking a long-range plan to determine the transit need of Clatsop County.

- ✱ Where and when do you need to travel?
- ✱ How can public transportation help you?
- ✱ Where can service be improved?

**Stop by and talk to us as you go about your day:**

Friday, June 19 <sup>th</sup>	Saturday, June 20 <sup>th</sup>
✱ Youngs Bay Plaza, 2 - 4 pm 145 US 101, Warrenton	✱ Seaside Public Library, 10 am- noon 1131 Broadway St, Seaside
✱ Riversea Gallery, 5:30 - 7:30 pm 1160 Commercial St, Astoria	✱ Coaster Theatre, 2 - 4 pm 108 N. Hemlock St, Cannon Beach

For more information visit the plan website <http://transitstudy.ridethebus.org>

# APPENDICES

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# APPENDIX A SURVEY INSTRUMENTS

# ON-BOARD SURVEY, SPRING/SUMMER 2015

Figure A-1 Passenger Survey (English)

### SUNSET EMPIRE TRANSPORTATION DISTRICT SURVEY

Sunset Empire Transportation District (SETD) is conducting a survey to help plan future transit service in the region. We would like to get your input on your travel patterns and experience on transit. The answers are completely confidential.

Check this box if you completed this survey on another trip

Please tell us about the one-way trip you are making now.

For Internal Use: Time of Survey \_\_\_\_\_ am pm Route: \_\_\_\_\_

- Did you transfer to this bus from another bus?
  - No  Yes: From SETD Route \_\_\_\_\_
  - Yes: From other provider \_\_\_\_\_
- What kind of place are you coming from?
  - Home
  - School/College (Students)  Work
  - Circle: CCC MERTS  Social, Religious, Personal
  - Tongue Point High School  Medical Services
  - Other: \_\_\_\_\_  Other, Specify: \_\_\_\_\_
  - Shopping
- Where did you start your trip today, before you reached the first bus stop?
  - Street Address/ Place \_\_\_\_\_
  - OR Intersection \_\_\_\_\_ & \_\_\_\_\_
  - City \_\_\_\_\_ Zip \_\_\_\_\_
- What time did you board the bus today?
  - Hour: Minute \_\_\_\_\_  AM  PM
- How did you get to the first bus stop on your trip?
  - Walked/ Wheelchair  Bicycle
  - Approx. # of minutes \_\_\_\_\_ Approx # of miles \_\_\_\_\_
  - Dropped off  Boarded bus with bike
  - Drove alone  Locked bike near bus stop
  - Carpool  Other, Specify: \_\_\_\_\_
- Are you making a round trip on the bus today?
  - Yes  No
- How often do you ride transit?
  - First time  1-2 days/ wk  5+ days/ wk
  - Rarely  3-4 days/ wk
- How long have you ridden SETD transit?
  - More than 4 years  Less than 1 year
  - 1-4 years  First time riding

OVER ►

### SUNSET EMPIRE TRANSPORTATION DISTRICT SURVEY

#### 16. SERVICE EVALUATION:

Please rate the following items about transit in your area:

	Poor	Excellent
1. Buses run late enough at night	4 3 2 1	
2. Buses run early enough in the morning	4 3 2 1	
3. Service that is on time	4 3 2 1	
4. Frequency of weekday service	4 3 2 1	
5. Frequency of weekend service	4 3 2 1	
6. Bus Stops are easy to reach	4 3 2 1	
7. Goes where I need to go	4 3 2 1	
8. Fare is appropriate to service	4 3 2 1	
9. Connects well to regional providers	4 3 2 1	
10. Bus stops are safe and comfortable	4 3 2 1	
11. Information about service is easy to find	4 3 2 1	

17. Please consider the potential service improvements shown below and select up to 3 that would help you choose to ride transit more often:

- More frequent bus service
- Bus service earlier in the morning (begins when \_\_\_\_\_)
- Bus service later at night (until when \_\_\_\_\_)
- More service on weekends
- Better on-time performance/ more reliable buses
- More direct bus routes
- Fares were less expensive
- Service to new areas; Specify: \_\_\_\_\_
- More local service
- Better regional connections
- Easier transfers between bus routes
- More safe/ comfortable bus stops
- More information/ easier to plan trip
- Nothing will encourage me to ride more often

Please tell us about yourself:

- What is your age?
  - 18 or under  25-44  65-74
  - 19-24  45-54  75 and over
- What is your gender?
  - Male  Female

20. Are you... (Choose all that apply)

- Full-time worker  College  Retired
- Part-time worker  Student  Visitor
- Unemployed, seeking work  Faculty/ Staff  Other: \_\_\_\_\_
- Unemployed, not seeking  Middle/High School (student)

21. How well do you speak English?

- Very Well  Well  Not well  Not at All

22. What is your ethnicity? (Choose all that apply)

- American Indian or Alaska Native  Native Hawaiian or Pacific Islander
- Asian  White/ Caucasian
- Black/African-American  Hispanic/ Latino/ Spanish
- Other: \_\_\_\_\_

23. Including yourself, how many people are there in your household?

- One  Two  Three or more

24. Do you have a valid driver's license?

- Yes  No

25. How many working vehicles are available to your household?

- None  2
- 1  3 or more

26. What was your total household income last year before taxes?

- Less than \$10,000  \$35,000-49,999
- \$10,000-14,999  \$50,000-74,999
- \$15,000-24,999  \$75,000-99,999
- \$25,000-34,999  \$100,000 or more

Comments:

**Thank you for your participation! Your responses will be kept strictly confidential.**  
Please return form to surveyor or leave it with one of the drivers.

Figure A-2 Passenger Survey (Spanish)

**SUNSET EMPIRE TRANSPORTATION DISTRICT ENCUESTA DE TRÁNSITO A BORDO**

Sunset Empire Transportation District (SETD) está realizando una encuesta para ayudar a planificar el futuro servicio de tránsito en la región. Nos gustaría obtener su entrada sobre sus patrones de viaje y experiencia en tránsito. Las respuestas son totalmente confidenciales.

Marque esta casilla si ha completado esta encuesta en otro viaje.

Por favor, díganos sobre el viaje de ida que usted está haciendo ahora.



**1. ¿Hizo trasbordo a este autobús desde otro autobús?**

- No  Sí; De la SETD ruta(s) \_\_\_\_\_  
 Sí; De otros servicios \_\_\_\_\_

**2. ¿Qué tipo de lugar es su destino?**

- Casa  Compras  
 Escuela/Colegio (solo estudiantes)  Trabajo  
 Actividad Social, Religiosa, Personal  
 Cuál? Elije uno:  
 CCC MERTS  Servicios Médicos  
 Tongue Point  Otro, explica: \_\_\_\_\_  
 Escuela secundaria  
 Otro: \_\_\_\_\_

**3. ¿Dónde comenzó su viaje hoy, antes de llegar a la parada de autobús?**

Dirección o punto de referencia: \_\_\_\_\_  
 O Intersección \_\_\_\_\_ & \_\_\_\_\_  
 Ciudad \_\_\_\_\_ Código postal \_\_\_\_\_

**4. ¿A qué hora abordó el autobús hoy?**

\_\_\_\_\_  AM  PM

**5. ¿Cómo llegó a la parada de autobús?**

- Caminé/ Utilicé silla de ruedas (¿cuántos minutos? \_\_\_\_\_)  Usé la bicicleta (¿cuántas millas? \_\_\_\_\_) y: \_\_\_\_\_  
 Alguien me recogió  Abordé el autobús con mi bicicleta  
 Conduje solo/a  Estacioné la bicicleta cerca de la parada de autobús  
 Compartí automóvil (viaje grupal)  Otro, explica: \_\_\_\_\_  
 Otro, explica: \_\_\_\_\_

**6. ¿Está tomando un viaje de ida ida y vuelta en el autobús hoy?**

Sí  No

**7. ¿Con qué frecuencia utiliza tránsito?**

- Primera vez  3-4 días/semana  
 Irregularmente/ara vez  5 o más días/semana  
 1-2 días/semana

**8. ¿Por cuánto tiempo ha sido un pasajero de SETD?**

- Más de 4 años  Menos de 1 año  
 1 a 4 años  Primera vez en SETD

Solo para uso interno: Time of Survey \_\_\_\_\_ am pm Route: \_\_\_\_\_

**9. ¿Hará trasbordo a otro autobús?**

- No  Sí; A la SETD ruta(s) \_\_\_\_\_  
 Sí; A otros servicios \_\_\_\_\_

**10. ¿Cómo pagó por este viaje de autobús?**

- Adulto Efectivo  SETD pase de un día  
 Boleto de autobús (costo normal)  SETD pase mensual  
 SETD pase anual  
 Summer Fun Pass (Pase de verano)  Pase de Connector de 3 días  
 Pase trimestral estudiantil (K-12)  Pase de Connector de 7 días  
 Pase trimestral estudiantil (Colegio)  
 Pase trimestral estudiantil (Colegio)

**11. ¿Recibió un descuento especial de tarifas para su viaje hoy?**

- No  Persona mayor  
 Discapacidad  Estudiante  
 Militar  Joven (bajo 7 años)

**12. ¿Qué tipo de lugar es su destino?**

- Casa  Compras  
 Escuela/Colegio (solo estudiantes)  Trabajo  
 Actividad Social, Religiosa, Personal  
 Cuál? Elije uno:  
 CCC MERTS  Servicios Médicos  
 Tongue Point  Otro, explica: \_\_\_\_\_  
 Escuela secundaria  
 Otro: \_\_\_\_\_

**13. ¿Dónde termina su viaje hoy, después de llegar a la parada de autobús?**

Dirección o punto de referencia: \_\_\_\_\_  
 O Intersección \_\_\_\_\_ & \_\_\_\_\_  
 Ciudad \_\_\_\_\_ Código postal \_\_\_\_\_

**14. ¿Cómo llegará a su destino?**

- Caminará/ Usaré silla de ruedas (¿cuántos minutos? \_\_\_\_\_)  Usaré mi bicicleta (¿cuántas millas? \_\_\_\_\_) y: \_\_\_\_\_  
 Alguien me recogerá  Otro, explica: \_\_\_\_\_  
 Conduciré solo/a  
 Compartiré automóvil (viaje grupal)

**15. Si este servicio de autobuses no estuviera disponible, ¿cómo haría este viaje?**

- Caminaré/Silla de ruedas  Usaré mi bicicleta  
 Conduciré solo/a  No haría este viaje  
 Alguien me llevaría en coche  Otro, explica: \_\_\_\_\_  
 Taxi

Por favor completa la siguiente página ►

**SUNSET EMPIRE TRANSPORTATION DISTRICT ENCUESTA DE TRÁNSITO A BORDO**

**16. EVALUACIÓN DEL SERVICIO:**

Por favor califique los siguientes sobre el tránsito en su área:

	Mediocre	Excelente
1. Los autobuses salen bastante tarde en la noche	4	3 2 1
2. Los autobuses salen lo suficientemente temprano en la mañana	4	3 2 1
3. Servicio llega en tiempo	4	3 2 1
4. Frecuencia de servicio de lunes a viernes	4	3 2 1
5. Frecuencia de servicio de fin de semana	4	3 2 1
6. Las paradas de autobús son de fácil acceso	4	3 2 1
7. Va donde tengo que ir	4	3 2 1
8. La tarifa es apropiado para el servicio	4	3 2 1
9. Conecta bien a servicio regional	4	3 2 1
10. Las paradas de autobús son seguras y cómodas	4	3 2 1
11. Información sobre el servicio es fácil de encontrar	4	3 2 1

**17. Por favor considere las posibles mejoramientos en el servicio que se muestran abajo y selecciona hasta 3 que le ayudaría a elegir a usar tránsito con mayor frecuencia:**

- Servicio más frecuente  Servicio a nuevas áreas (Especifique: \_\_\_\_\_)  
 Servicio más temprano en la mañana  Más servicio local (desde cuando? \_\_\_\_\_)  
 Servicio más tarde en las noches (hasta cuando? \_\_\_\_\_)  
 Más servicio el fin de semana  Mejores conexiones regionales  
 Mejor puntualidad  Transferencia fácil entre rutas  
 Más rutas directas  Más paradas de autobús seguras y cómodas  
 Tarifas más baratas  Más información/Más fácil planificar un viaje  
 Nada me incentivaría a usar tránsito con mayor frecuencia

Por favor, cuéntenos acerca de usted:

**18. ¿Cuál es su edad?**

- 18 o menos  25-44  65-74  
 19-24  45-64  75 y mayores

**19. ¿Es usted hombre o mujer?**

- Hombre  
 Mujer

**20. ¿Es usted... (marque todo lo que corresponda)**

- Trabajador/a de tiempo completo  Estudiante de nivel secundario/preparatoria  
 Trabajador/a de medio tiempo  Jubilado/a o retirado/a  
 Desempleado/a, pero buscando trabajo  Turista/Visitante  
 Otro: \_\_\_\_\_  
 Desempleado/a, no estoy buscando trabajo  
 Universidad/Colegio afiliación  
 Estudiante  
 Facultad/Personal

**21. ¿Qué tan bien habla usted Inglés?**

- Muy bien  Mal  
 Bien  Nada

**22. ¿Cuál es su origen étnico? (marque todo lo que corresponda)**

- Nativo Americano/de Alaska  Hawaiano u otra isla del Pacifico  
 Asiático  Blanco/Caucásico  
 Negro o Afroamericano  Otro: \_\_\_\_\_  
 Hispano/Latino/Español

**23. Incluyéndose usted, ¿cuántos hay en su hogar?**

- Uno  Dos  Tres o más

**24. ¿Tiene usted una licencia de conducir válida?**

- Sí  No

**25. ¿Cuántos vehículos funcionales están disponibles en su hogar?**

- Ninguno  Dos  
 Uno  Tres o más

**26. ¿Cuál fue el ingreso total de su hogar en el año pasado antes de impuestos?**

- Menos de \$10,000  \$35,000-49,999  
 \$10,000-\$14,999  \$50,000-74,999  
 \$15,000-24,999  \$75,000-99,999  
 \$25,000-34,999  \$100,000 o más

¿Otros comentarios?

**¡Gracias por su participación! Sus respuestas son totalmente confidenciales.**  
**Por favor devuelva esta encuesta al inspector o conductor a bordo de este autobús.**

# COMMUNITY SURVEY, DECEMBER 2015

Figure A-3 Community Survey

Now we have a few questions about you. Your answers will be kept confidential and responses will only be reported in the aggregate.

**11. Are you ...** Choose all that apply.

<input type="checkbox"/> Full-time worker	<input type="checkbox"/> College Faculty/Staff
<input type="checkbox"/> Part-time worker	<input type="checkbox"/> Middle/High School Student
<input type="checkbox"/> Unemployed	<input type="checkbox"/> Retired
<input type="checkbox"/> Seeking work	<input type="checkbox"/> Visitor
<input type="checkbox"/> Not seeking work	<input type="checkbox"/> Other: _____
<input type="checkbox"/> College Student	

**12. What is your age?**

<input type="checkbox"/> 17 or under	<input type="checkbox"/> 25-44	<input type="checkbox"/> 65-74
<input type="checkbox"/> 18-24	<input type="checkbox"/> 45-64	<input type="checkbox"/> 75 and over

**13. What is your ethnicity?**

American Indian/Alaska Native  
 Asian  
 Black/African American  
 Hispanic/Latino/Spanish  
 Native Hawaiian/Pacific Islander  
 White/Caucasian  
 Other

**14. What was your total household income last year before taxes?**

<input type="checkbox"/> Less than \$10,000	<input type="checkbox"/> \$35,000-49,999
<input type="checkbox"/> \$10,000-14,999	<input type="checkbox"/> \$50,000-74,999
<input type="checkbox"/> \$15,000-24,999	<input type="checkbox"/> \$75,000-99,999
<input type="checkbox"/> \$25,000-34,999	<input type="checkbox"/> \$100,000 or more

**15. Including yourself, how many people are there in your household?**

One     Two     Three or more

**16. How many working vehicles are available to your household?**

None     1     2     3 or more

---


Thank you for your participation! Survey takers will be entered into a drawing for a **\$50 Visa gift card!** If you are interested in participating, please provide your name and phone number.

Name: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Please tape or staple closed before mailing. Thank you!

NELSONNYGAARD CONSULTING ASSOCIATES  
 ATTN: STEPHANIE WRIGHT  
 621 SW MORRISON ST. STE 1250  
 PORTLAND OR 97205-3815

**We want to hear from you!**



**SUNSET EMPIRE  
TRANSPORTATION  
DISTRICT**

Help us envision the future of public transportation in Clatsop County! The Sunset Empire Transportation District (SETD) provides local and regional bus service and has undertaken a long-range plan to determine transit needs throughout Clatsop County.

We need your opinions on local and regional needs for public transportation services and hope you can participate in this short survey. This survey should take approximately 5 minutes to complete. For more information on the plan, visit <http://transitstudy.ndethebus.org/>.

Para obtener una copia en español, llame al 503-488-2232.

---

**1. What city/ZIP code do you live in?**

City: \_\_\_\_\_  
 ZIP: \_\_\_\_\_

**2. What are the closest cross streets to your home?**

Street 1: \_\_\_\_\_  
 Street 2: \_\_\_\_\_

**3. Please tell us where you usually travel. List the top THREE places and addresses.**

Examples: Work 1095 Duane St. Astoria  
 Shopping Safeway, Seaside

**Destination 1:**

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_ City/Town: \_\_\_\_\_

**How often do you go there?**

5 or more days/week     2-4 days/week  
 1 day/week     A few times a year

**How do you usually get there?**

Drive     Dropped off     Taxi     Bike  
 Walk     Public Transit     Carpool  
 Agency Transportation (social services/volunteers)  
 Who? \_\_\_\_\_

**Destination 2:**

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_ City/Town: \_\_\_\_\_

**How often do you go there?**

5 or more days/week     2-4 days/week  
 1 day/week     A few times a year

**How do you usually get there?**

Drive     Dropped off     Taxi     Bike  
 Walk     Public Transit     Carpool  
 Agency Transportation (social services/volunteers)  
 Who? \_\_\_\_\_

**Destination 3:**

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_ City/Town: \_\_\_\_\_

**How often do you go there?**

5 or more days/week     2-4 days/week  
 1 day/week     A few times a year

**How do you usually get there?**

Drive     Dropped off     Taxi     Bike  
 Walk     Public Transit     Carpool  
 Agency Transportation (social services/volunteers)  
 Who? \_\_\_\_\_

**4. Are there places you wish you could go, but cannot because of lack of transportation?**

No     Yes

If yes, please list the destination and town.

Place 1: \_\_\_\_\_  
 Place 2: \_\_\_\_\_

**5. Do you have access to an automobile?**

No     Yes  
 Yes, but not on a regular basis

**6. Have you taken public transit in the past year?**

Yes     No

**7. If yes, which service did you ride?**

Choose all that apply.

SETD 'The Bus'  
 CC Rider  
 NW Point  
 Tillamook 'The Wave'  
 TriMet  
 Other: \_\_\_\_\_

**9. If no, why isn't public transportation a good option for you?**

Choose all that apply.

Doesn't run when I need it  
 Doesn't go where I need it  
 Takes too long  
 Is not available near me  
 Feels uncomfortable/unsafe  
 Bus is not reliable  
 Fare is too expensive  
 Prefer to drive  
 Other: \_\_\_\_\_

**7a. Which SETD route(s) have you taken in the past year?** Choose all that apply.

**Weekday**

Rt 10 (Warrenton-Astoria)  
 Rt 101 (Astoria-Warrenton-Seaside-Cannon Beach)  
 Rt 30 (Warrenton-Astoria-Svensen-Knapka-Westport-Clatskanie)  
 Rt 20 (Seaside-Cannon Beach)  
 Dial-a-Ride  
 Warrenton/Leffers Garden/Miles/Crossing  
 Svensen/Knapka  
 Ride Assist

*continue here*

**Saturday/Sunday**

Rt 101 (Astoria-Warrenton-Gearhart-Seaside-Cannon Beach-Manzanita)  
 Rt 30 (Warrenton-Astoria-Svensen-Knapka-Westport-Clatskanie-Longview-Kelso)  
 Rt 21 (Seaside-Cannon Beach)  
 Ride Assist

**Seasonal**

Rt 11 (Astoria)  
 Rt 12 (Astoria)  
 Seaside Streetcar Trolley (Seaside)  
 Rt 21 (Seaside-Cannon Beach)

**8. If yes, how often do you ride transit?**

5 or more days/week  
 3-4 days/week  
 1-2 days/week  
 Rarely

↓ continue below ↓

**10. What would encourage you to try public transportation or use it more often?**

More frequent bus service  
 Bus service ran earlier in morning  
 Beginning when? \_\_\_\_\_  
 Bus service ran later at night  
 Until when? \_\_\_\_\_  
 More service on weekends  
 Better on-time performance/more reliable buses  
 More direct bus routes  
 Fares were less expensive  
 Service to new areas  
 Specify: \_\_\_\_\_

More local service  
 Better regional connections  
 Easier transfers between routes  
 Safer/more comfortable bus stops  
 Safer access to bus stops  
 Better information/easier to plan trip  
 Nothing would encourage me to ride

# APPENDIX B OUTREACH EVENT MATERIALS



## PUBLIC OUTREACH BOARDS

### LEARN ABOUT SETD'S LONG RANGE COMPREHENSIVE TRANSPORTATION PLAN

The Sunset Empire Transportation District (SETD) serves communities across Clatsop County, including Clatskanie, Gearhart, Westport, Astoria, Warrenton, Cannon Beach and Seaside. SETD's transit service covers an area of approximately 840 square miles and 36,000 citizens. More than 180,000 trips per year are taken on the bus within Clatsop County and to neighboring Tillamook County, Longview, Columbia County and Portland.

### What's YOUR preference?

Transit providers must balance competing needs. Some people want the bus to run every 15 minutes. Some people want the bus to run until 10 pm. A transit agency can often do one of those things, but not both. What matters most to **you**?

TRANSIT NEEDS	CATEGORY A	← OR →	CATEGORY B
<b>COVERAGE</b>	Provide less frequent service to more areas	↔	Provide more service to fewer areas
<b>FREQUENCY &amp; SPAN</b>	Provide more frequent service for a shorter time	↔	Provide less frequent service, but for a longer time
<b>DAYS OF SERVICE</b>	Provide less weekday service; more weekend service	↔	Provide faster, more direct service that requires longer walks to stops
<b>TRANSFERS</b>	Provide more routes with less frequent service, but fewer transfers	↔	Provide fewer routes with more frequent service, but more transfers
<b>DIRECTNESS</b>	Provide slower, less direct service with shorter walks to stops	↔	Provide more weekday service; less weekend service
<b>STOP SPACING</b>	Serve many stops that make service slower, but reduce walks	↔	Serve fewer stops to speed service, but that increase walks

### Project Purpose

This project will guide the future of transit service in Clatsop County for the next 20 years. The project will help us determine:

- What is the role of transit in Clatsop County?
- Does the bus run when and where people need it?
- How to better connect people regionally – to Tillamook County, Portland, and Columbia County, for example?
- How can SETD improve customer access to the bus, including service changes, technology upgrades, increased marketing, etc.?

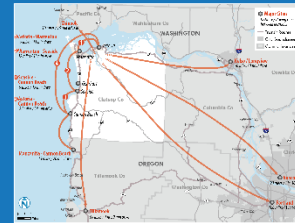
### Project Tasks

- Plan review – understand previous projects affecting transit service
- Market analysis – map locations of people, jobs, and activity centers (grocery stores, senior centers, apartments, social services, etc.)
- Service analysis – assess SETD route efficiency and effectiveness
- Rider survey – understand the needs of current riders
- Community survey – understand the needs of people not currently riding
- Outreach – talk to the public about transportation needs
- Service options – create service recommendations to meet needs
- Goals and policies – update agency goals to reflect community values
- Benchmarks – performance standards for successful transit

### Project Outcomes

Recommendations will include modifications to:

- Route alignments
- Route schedules
- Route frequencies
- Marketing and information
- Service standards and performance metrics
- Fare payment systems
- Organization structure
- Bus stops (lighting, shelters, signs)
- Linking land use and transportation investments



### Schedule

This project began in March 2015 and will be completed by July 2016.



### Please give us your feedback!

Take an online survey about public transit in Clatsop County by July 15 and be entered into a drawing for a \$50 gift card. Access the survey at:

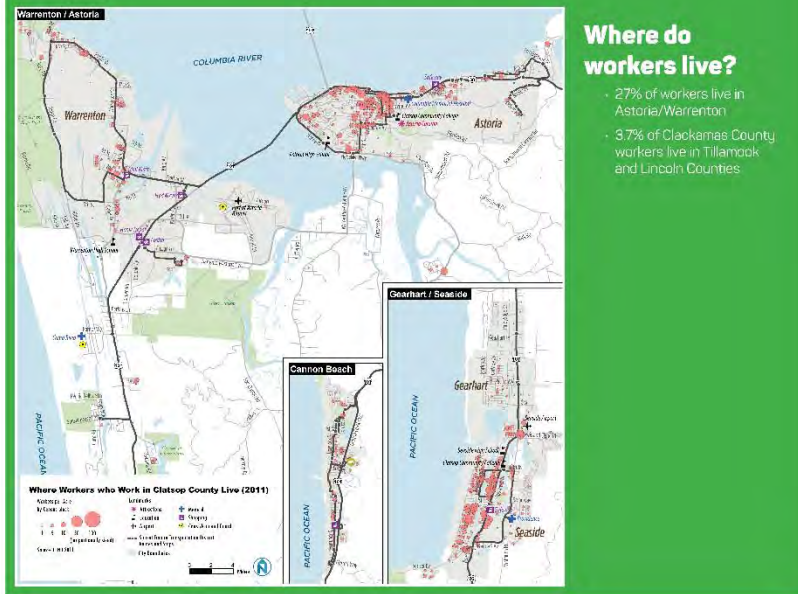
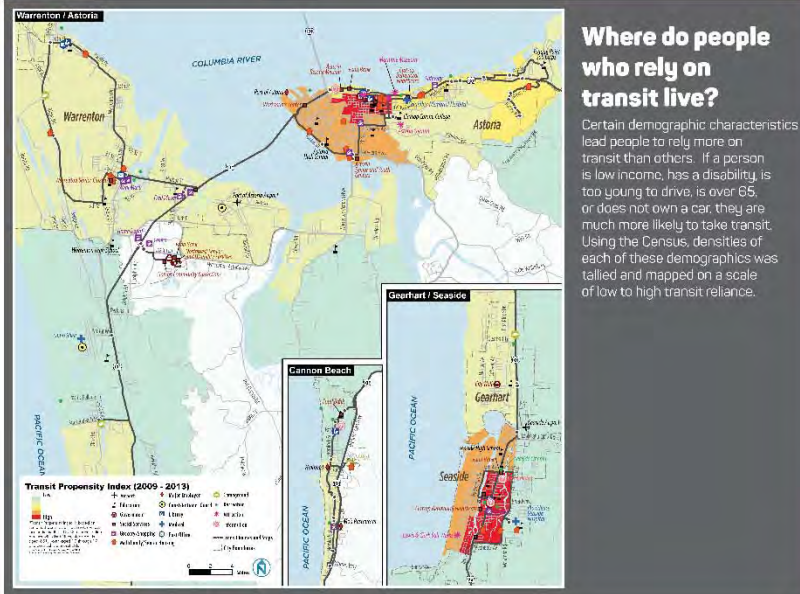
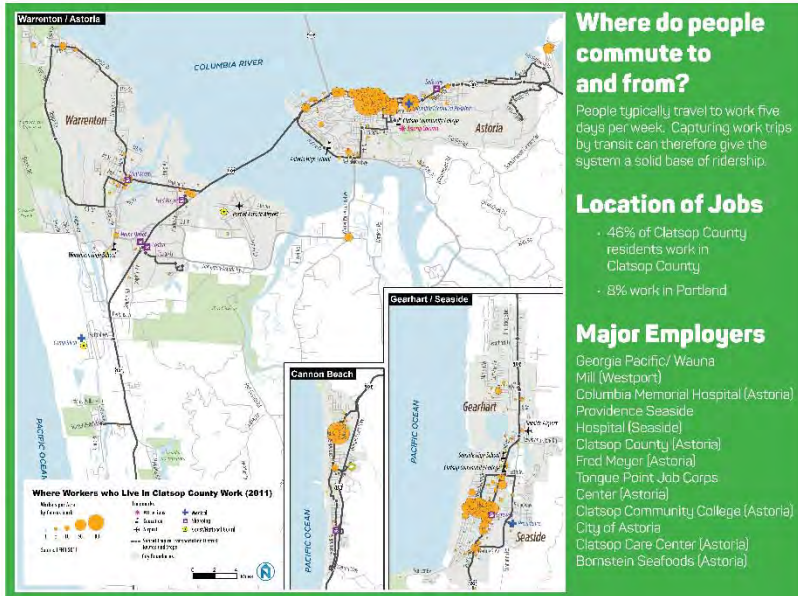
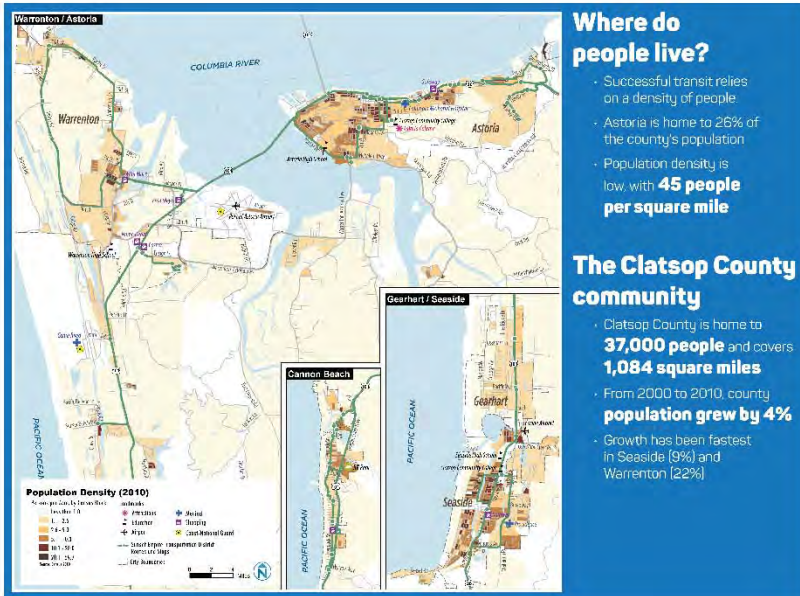
[TRANSITSTUDY.RIDETHEBUS.ORG/SURVEY](http://TRANSITSTUDY.RIDETHEBUS.ORG/SURVEY)

### For More Information

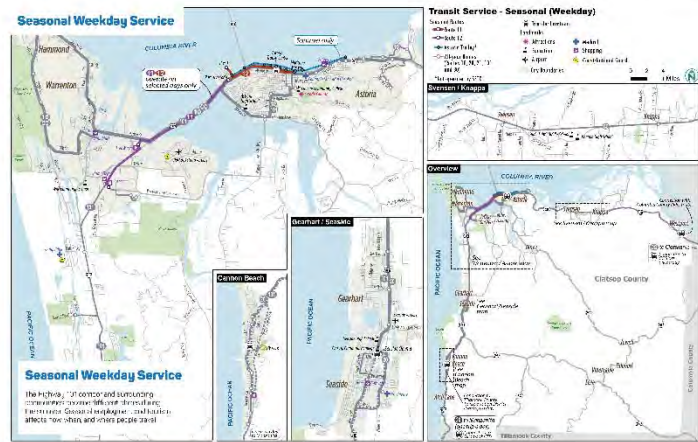
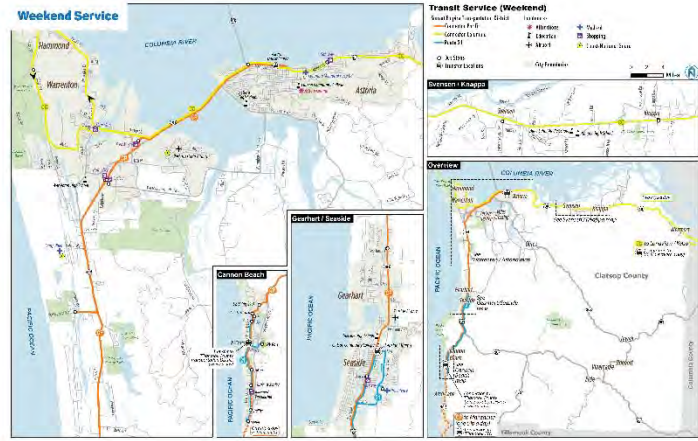
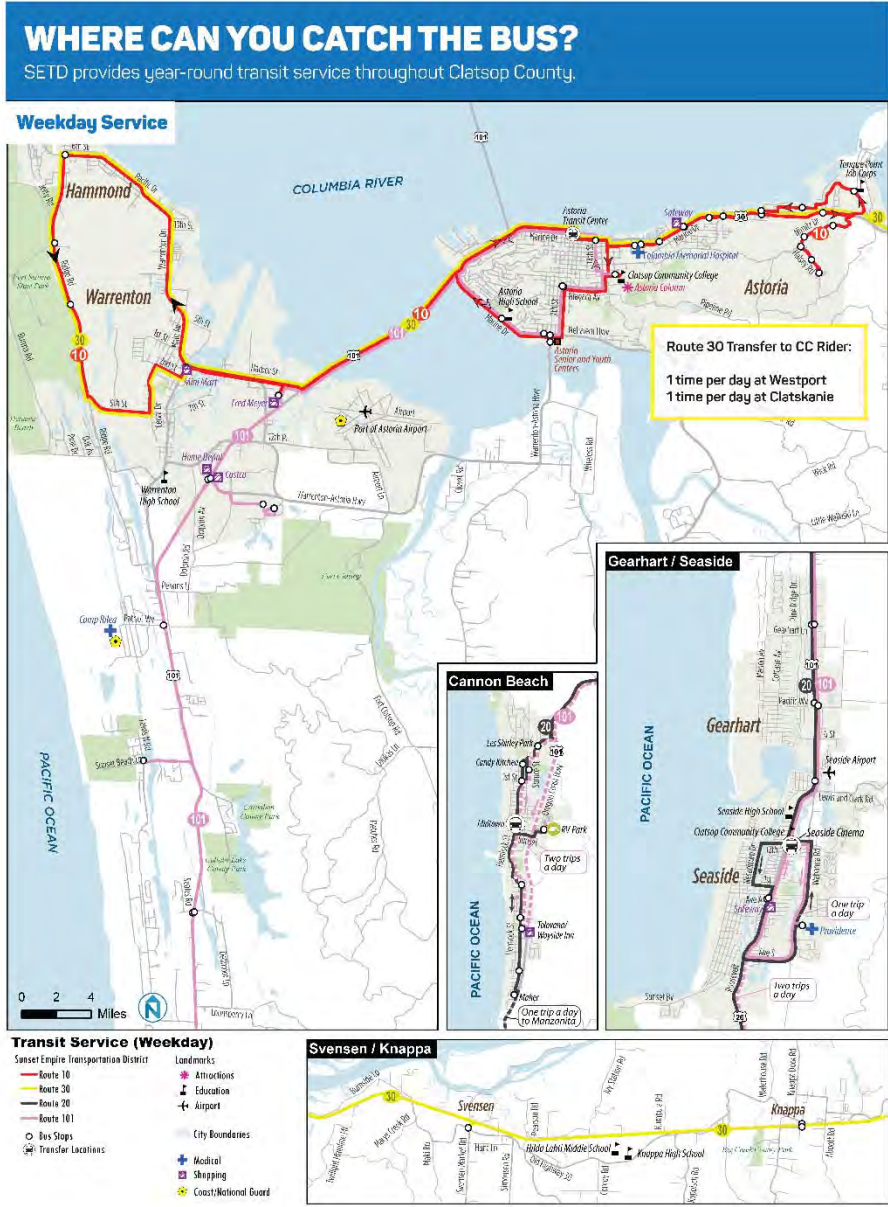
Jeff Hazen  
Executive Director  
Sunset Empire Transportation District  
900 Marina Drive | Astoria | OR | 97103  
Jeff@ridethebus.org



SUNSET EMPIRE  
TRANSPORTATION  
DISTRICT



Long-Range Comprehensive Transportation Plan | Memo #2C: Community Input - Appendices  
Sunset Empire Transportation District



Route Number and Name	Days of Operation	Span of Service	Frequency of Hourly or Daily Trips	Communities Served
<b>Year-round Service</b>				
10	Monday-Friday	5:45 am - 7:20 pm	60 min. LSP	Astoria, Hammond, Warrenton
20	Monday-Friday	7:00 am - 4:00 pm	60 min. LSP	Cannon Beach, Seaside, Manzanita
30	Saturday-Sunday	8:00 am - 12:30 pm 3:00 pm - 5:30 pm	30-60 minutes	Cannon Beach, Seaside
101	Monday-Friday	6:00 am - 9:00 pm	120 minutes	Astoria, Warrenton, Cannon Beach, Gearhart/Seaside
102	Monday-Friday	8:15 am - 7:20 pm	3 trips	Hammond, Warrenton, Astoria, Svensen, Knappa, Clatskanie, Clifton
Coastline / Columbia	Saturday-Sunday	8:00 am - 6:20 pm	2 trips	Hammond, Warrenton, Astoria, Gearhart, Seaside, Clatskanie, Clifton
Coastline / Pacific	Saturday-Sunday	8:30 am - 5:30 pm	2 trips	Astoria, Warrenton, Gearhart, Seaside, Cannon Beach, Manzanita
<b>Seasonal Service (summer only)</b>				
21	Saturday-Sunday	11:00 am - 3:00 pm	30 min. LSP	Astoria, Clatskanie
102	Saturday-Sunday	8:00 am - 4:00 pm	20 minutes	Astoria, Clatskanie
Seaside/Estacada/Indio	Saturday-Sunday	11:00 am - 4:00 pm	60 min. LSP	Estacada

## PUBLIC OUTREACH FLYERS AND SIGNAGE

**WE WANT TO HEAR FROM YOU!**



SUNSET EMPIRE  
TRANSPORTATION  
DISTRICT

**COME ON IN!**

Sunset Empire Transportation District (SETD) wants your opinions about regional transit service. We provide local and regional bus service and are undertaking a long-range plan to determine the transit need of Clatsop County.

- ✱ When and where do you need to travel?
- ✱ How can public transportation help you?
- ✱ Where can service be improved?

**WE WANT TO HEAR FROM YOU!**



SUNSET EMPIRE  
TRANSPORTATION  
DISTRICT

Sunset Empire Transportation District (SETD) wants your opinions about regional transit service. We provide local and regional bus service and are undertaking a long-range plan to determine the transit need of Clatsop County.

- ✱ Where and when do you need to travel?
- ✱ How can public transportation help you?
- ✱ Where can service be improved?

**Stop by and talk to us as you go about your day:**

Friday, June 19 <sup>th</sup>	Saturday, June 20 <sup>th</sup>
✱ Youngs Bay Plaza, 2 - 4 pm 145 US 101, Warrenton	✱ Seaside Public Library, 10 am- noon 1131 Broadway St, Seaside
✱ Riversea Gallery, 5:30 - 7:30 pm 1160 Commercial St, Astoria	✱ Coaster Theatre, 2 - 4 pm 108 N. Hemlock St, Cannon Beach

For more information visit the plan website <http://transitstudy.ridethebus.org>

## **SECTION E**

### Memo 3: Land Use



# MEMO #3: LAND USE & TRANSPORTATION NEEDS

<b>1</b>	<b>Land Use</b> .....	<b>1-2</b>
	Current Land Use .....	1-2
	Growth Opportunities.....	1-8
<b>2</b>	<b>Transportation Network</b> .....	<b>2-1</b>
	Roadways.....	2-1
	Walking & Bicycling.....	2-4
	Proposed Transportation facilities.....	2-5
<b>3</b>	<b>Future Transit Corridors</b> .....	<b>3-1</b>
	Transit Supportive Land Use.....	3-1
	Transit Corridors.....	3-3

# 1 LAND USE

The best transportation plan is a land use plan. Transit cannot succeed without population, and how population moves itself is based entirely on land use. The location of homes, jobs, grocery stores, shopping malls, and other destinations determines how easily a person can access places, the length of the trip, and the directness of the route. Greenfield development, destinations far from main roads, and low-density zoning all inhibits transit success. This memo provides an assessment of existing and future land use and transportation facility opportunities and constraints as they relate to existing and potential transit corridors in Clatsop County. The goal of this memo is to identify opportunities to coordinate transit and land use investments and ultimately enhance future transit demand.

## CURRENT LAND USE

The type of development allowed is prescribed by the zoning code. This section describes existing zoning in Clatsop County and the communities in the County.

### Zoning

Clatsop County's Comprehensive Plan guides land use and development in coordination with the community plans of each urban area. Each city's Comprehensive Plan or zoning code creates zoning text and maps that identify land uses and an Urban Growth Boundary (UGB). The UGB demarcates land appropriate for annexation and urban development based upon a 20-year population projection.

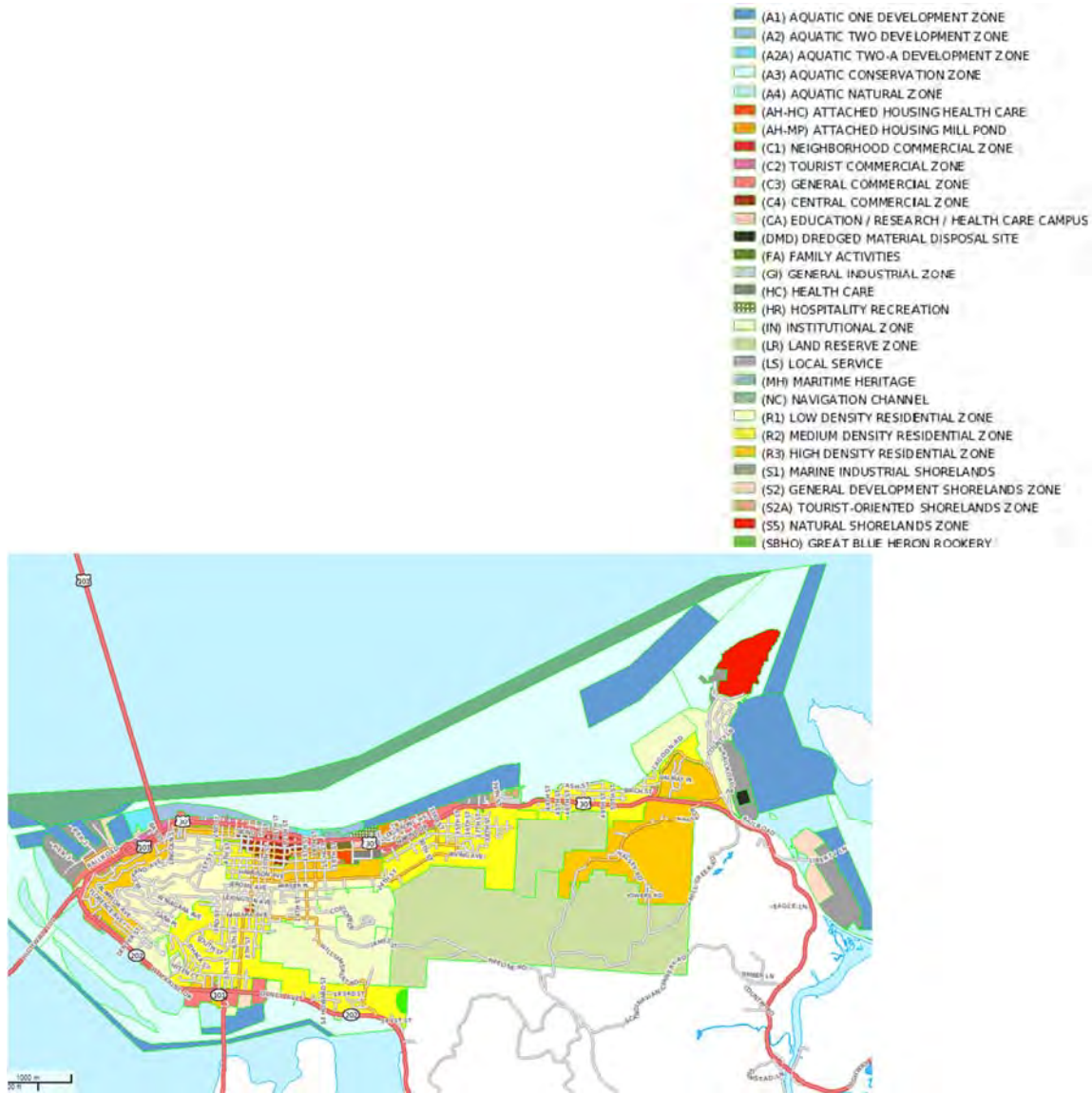
Development codes describe the characteristics of the zoning categories throughout Clatsop County. Broad categories include several types of residential zones, non-residential zones such as commercial or industrial, and mixed-use zones allowing both residential and non-residential uses to be combined on a site. As a county with several parks and oceanic resources, zoning for aquatic conservation and wetlands is also common.

### Astoria

In Astoria, the downtown area along Marine Drive is primarily zoned as commercial and health (representing the hospital). High density residential is concentrated along Marine Drive/Highway 30 and continues around the peninsula to portions of Business 101. The hills making up the central area of Astoria are zoned as low density residential and represent historic housing stock. The light green parcel in the southeast corner of the map represents the land reserve zone, and the large institutional use is Clatsop Community College.



Figure 1-1 Zoning in Astoria



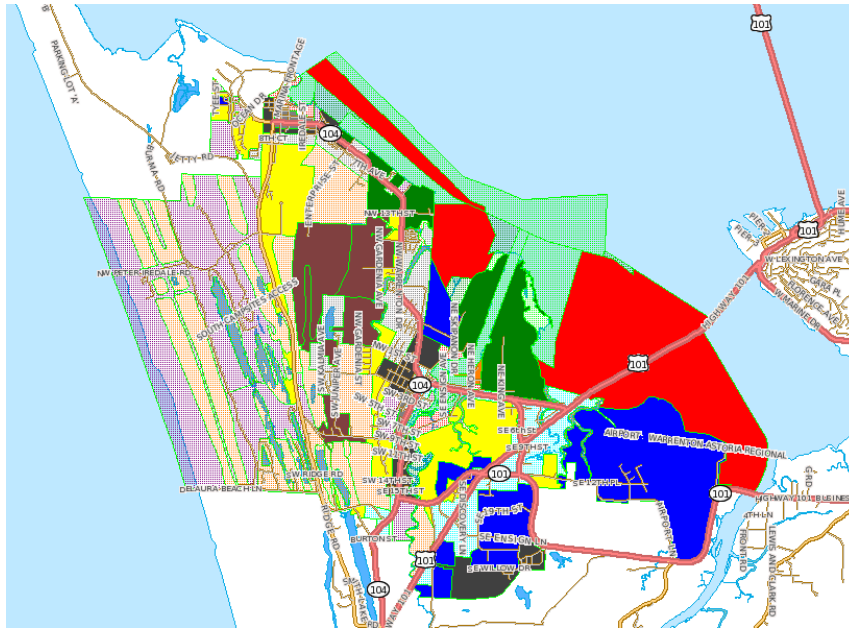
Source: Clatsop County Webmaps <http://maps.co.clatsop.or.us/applications/index.html#>

## Warrenton

In contrast to Astoria, zoning in Warrenton is striking for its large swaths of “aquatic natural” zoning and industrial parcels. The area bound by US 101 and Business 101 contains high density residential and industrial and commercial (Fred Meyer, Costco, Home Depot) and a pocket of high density residential also exists at Highway 104 (NE Skipanon Drive) and the Warrenton-Astoria Highway.

**Long-Range Comprehensive Transportation Plan | Memo #3: Land Use**  
 Sunset Empire Transportation District

**Figure 1-2 Zoning in Warrenton**



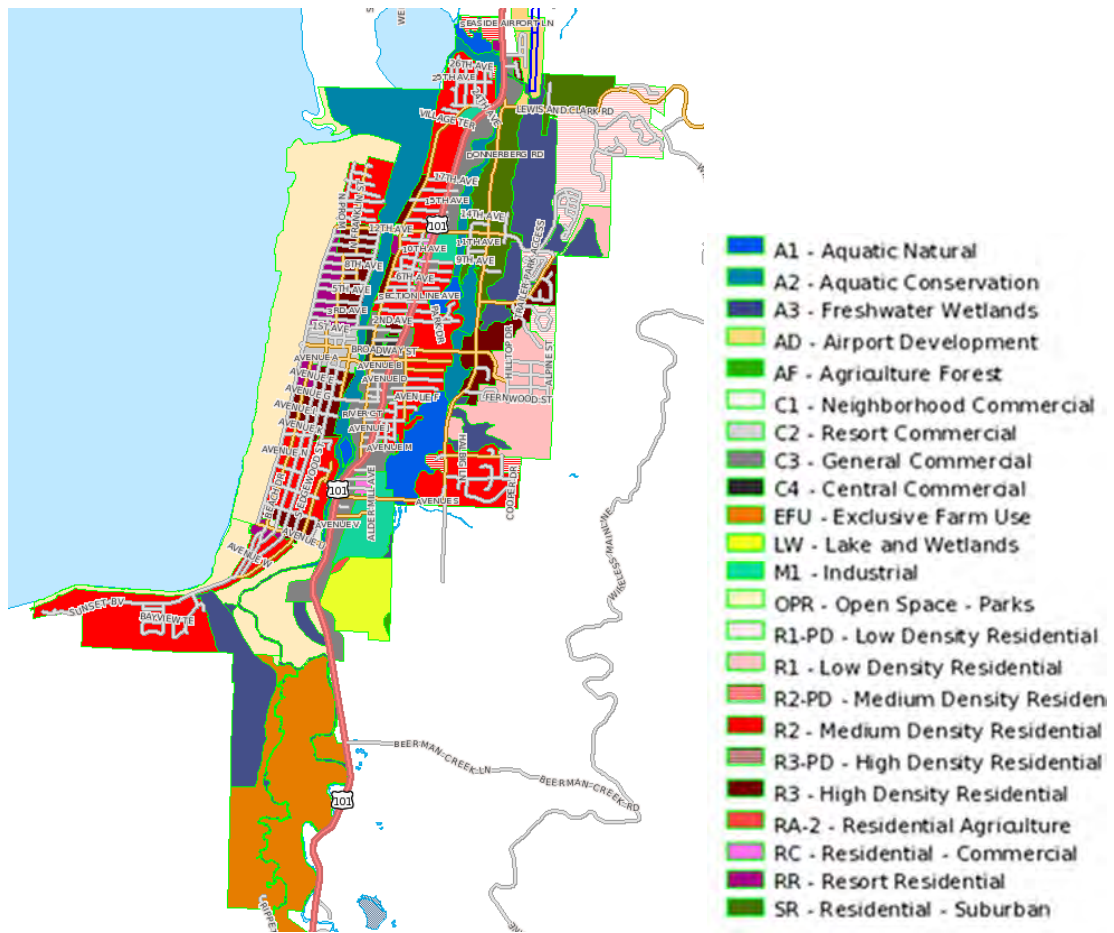
Source: Clatsop County Webmaps <http://maps.co.clatsop.or.us/applications/index.html#>

- A1-Aquatic Development
- A2-Aquatic Conservation
- A3-Aquatic Natural
- A5-Lake and Freshwater Wetland
- C1-General Commercial
- C2-Water Dependent Commercial
- CMU-Mixed Use Commercial
- I1-General Industrial
- I2-Water Dependent Industrial
- OSI-Open Space Institutional
- R10-Intermediate Density Residential
- R40-Low Density Residential
- RC-Recreational Commercial
- RGM-R-10 Growth Management Zone
- RH-High Density Residential
- RM-Medium Density Residential

## Seaside

In Seaside, medium and high density residential zoning, as well as “resort commercial” zoning, dominate the parcels around U.S. 101 and west toward the beach (Figure 1-3). The northeast section of Seaside has residential suburban zoning and the southeast is dominated by industrial and wetlands zoning. The far southern part of Seaside is zoned for agriculture.

Figure 1-3 Zoning in Seaside

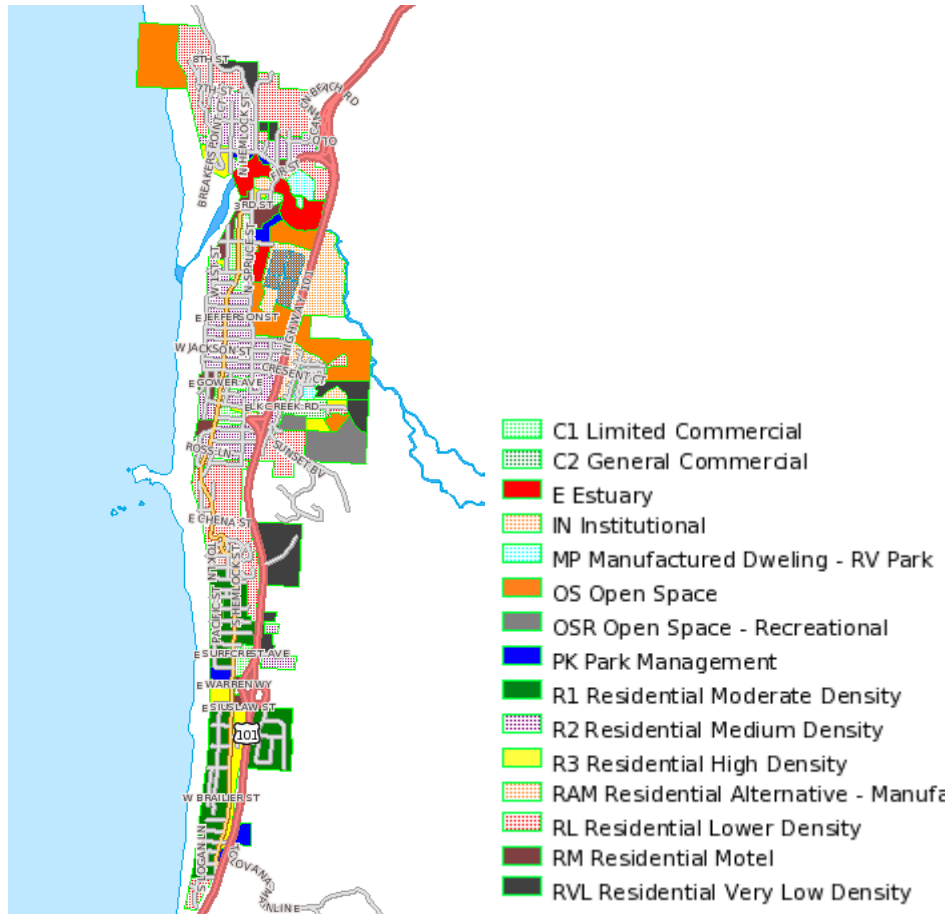


Source: Clatsop County Webmaps <http://maps.co.clatsop.or.us/applications/index.html#>

## Cannon Beach

In Cannon Beach, low and moderate residential areas are concentrated throughout downtown. Nearly all development is concentrated west of US 101. The highest density of residences exists south of the downtown core. There are no industrial zoning designations in Cannon Beach.

Figure 1-4 Zoning in Cannon Beach



Source: Clatsop County Webmaps <http://maps.co.clatsop.or.us/applications/index.html#>

In general, zoning in these communities follows typical patterns of isolating uses within a particular designation. For example, none of the communities has a specific mixed-use zoning category.

Allowable residential densities affect the success of transit service. The more dense an area, the more customers and destinations exist. Density also affects the frequency of transit service, as illustrated in Figure 1-5. A community could provide high frequency transit in low-density areas, but the service would not be productive.

Figure 1-5 Density and Transit Service Supported



Source: Adapted from various sources, including TCRP Report 100: Transit Capacity and Quality of Service Manual.

Figure 1-6 shows residential densities allowed in the zoning code. Astoria's density metrics all meet or exceed thresholds for 60-minute service, for example, as do most of the moderate or higher density metrics in other jurisdictions (the exception is the intermediate-density zone in Warrenton).

Figure 1-6 Residential Land Use Types by City (Clatsop County)

City	Residential Land Use Type	Density
Astoria <sup>1</sup>	R1 – Low Density Residential Zone	8 units / acre
	R2 – Medium Density Residential Zone	16 units/acre
	R3 – High Density Residential Zone	26 units/acre
	CR – Compact Residential Zone	24 units/acre
Warrenton <sup>2</sup>	R-40: Low Density Residential	>10,000 sq ft/lot [approx 4 units/acre]; >40,000 sq ft/lot (with on-site sewage)
	R-10: Intermediate Density Residential	>10,000 sq ft/lot [approx 4 units/acre]
	R-M: Medium Density Residential	>7,000 sq ft/single-family detached; [approx. 6 units/acre] >2,500 sq ft/single-family attached [approx. 17 units/acre]
	R-H: High Density Residential	5 units/acre
Seaside <sup>3</sup>	R-1: Residential Low Density	5 units/acre
	R-2: Residential Medium Density	10 units/acre
	R-3: Residential High Density	20 units/acre
Cannon Beach <sup>4</sup>	RVL: Residential Very Low Density Zone	1 unit/acre
	RL: Residential Lower Density Zone	4 units/acre
	R1: Residential Moderate Density Zone	8 units/acre
	R2: Residential Medium Density Zone	11 units/acre
	R3: Residential High Density Zone	15 units/acre

## GROWTH OPPORTUNITIES

This section identifies proposed major developments and growth projections.

### Proposed Development

The major development coming to the region is a Walmart in the North Coast Business Park at US 101 and Ensign Lane.

In general, Walmart stores are major transit attractors. The area already contains several trip generators, including Costco, Goodwill, and Home Depot. Farther east along on Ensign Lane, the

<sup>1</sup> [http://www.astoria.or.us/Assets/dept\\_1/pm/pdf/article.2.pdf](http://www.astoria.or.us/Assets/dept_1/pm/pdf/article.2.pdf)

<sup>2</sup> [http://www.oregon.gov/LCD/OCMP/docs/Public\\_Notice/Warrenton\\_Title%2016%20highlighted.pdf](http://www.oregon.gov/LCD/OCMP/docs/Public_Notice/Warrenton_Title%2016%20highlighted.pdf)

<sup>3</sup> <http://www.cityofseaside.us/sites/default/files/Zoning%20Ordinance.pdf>

<sup>4</sup> <http://ci.cannon-beach.or.us/docs/Planning/Zoning%20Ordinance.pdf>

Northwest Senior and Disability Services office, Food Bank, and probation office also make this area of Warrenton a major draw.

Lastly, a multi-family development in Miles Crossing has been proposed and will be built contingent upon zoning changes.

Figure 1-7 – North Coast Business Park Site Plan



## Future Population

Clatsop County's population is projected to grow by about 7% by 2035, from 37,750 residents in 2015 to 40,500 residents in 2035. Figure 1-8 provides breakdowns by 5-year periods and applies the assumed growth in the County population to incorporated communities based on the actual trends from the previous five years (2010-2015), where Warrenton and Seaside are growing slightly faster than other communities.

The share of residents over age 65 is projected to increase nearly 10%, accounting for over a quarter of the population (27%) and school-age children are projected to make up nearly a quarter of the population (23%).<sup>5</sup>

Employment is projected to grow by 30% by 2035, from 17,000 jobs in 2015 to 22,000 jobs in 2035.<sup>6</sup>

<sup>5</sup> Clatsop County Transportation System Plan, 2015

<sup>6</sup> Clatsop County Transportation System Plan, 2015

**Long-Range Comprehensive Transportation Plan | Memo #3: Land Use**  
Sunset Empire Transportation District

**Figure 1-8 Clatsop County Population, 2010-2015, and Projected Population, 2015-2035**

Geography	Actual					Projected						
	2010 [1]	2015 [2]	% of County Population, 2015	% of County Growth, 2010-2015	% Change, Average Annual 2010-2015	2020 [3]	2025 [3]	2030 [3]	2035 [3]	Change, 2015-2035	% Change, Average Annual 2015- 2035	% of County Population, 2035 [3]
Oregon	3,831,074	4,013,845	N/A	N/A	1.0%	4,252,100	4,516,200	4,768,000	4,995,200	981,355	1.2%	N/A
Clatsop County	37,039	37,750	N/A	N/A	0.4%	38,461	39,358	40,072	40,521	2,771	0.4%	N/A
<b>Incorporated Communities</b>	<b>24,075</b>	<b>24,525</b>	<b>65.0%</b>	<b>63%</b>	<b>0.4%</b>	<b>24,975</b>	<b>25,543</b>	<b>25,995</b>	<b>26,279</b>	<b>1,754</b>	<b>0.4%</b>	<b>64.9%</b>
Astoria	9,477	9,580	25.4%	14%	0.2%	9,683	9,813	9,916	9,981	401	0.2%	24.6%
Seaside	6,457	6,585	17.4%	18%	0.4%	6,713	6,874	7,003	7,084	499	0.4%	17.5%
Warrenton	4,989	5,175	13.7%	26%	0.7%	5,361	5,596	5,782	5,900	725	0.7%	14.6%
Cannon Beach	1,690	1,705	4.5%	2%	0.2%	1,720	1,739	1,754	1,763	58	0.2%	4.4%
Gearhart	1,462	1,480	3.9%	3%	0.2%	1,498	1,521	1,539	1,550	70	0.2%	3.8%
<b>Unincorporated Areas</b>	<b>12,964</b>	<b>13,225</b>	<b>35.0%</b>	<b>37%</b>	<b>0.4%</b>	<b>13,486</b>	<b>13,815</b>	<b>14,077</b>	<b>14,242</b>	<b>1,017</b>	<b>0.4%</b>	<b>35.1%</b>

Source: [1] U.S. Census Bureau, Decennial Census, 2010. [2] Portland State University, Population Research Center, Certified Population Estimates, 2015. [4] State and county projections are from the Oregon Office of Economic Analysis, Released 3/28/2013. These projections are more recent than those used in the County's 2012 Comprehensive Plan update. The projection for Clatsop County shows the same average annual rate of growth as the 2010-2015 actual trends. The breakdowns provided in this table for incorporated communities for 2015-2035 assume the 2010-2015 rate of growth to the 2015-2035 projection for the County from the State Office of Economic Analysis.



## Land Use Policies

Linking land use and transportation requires folding transit considerations into business as usual – development review, zoning update, and urban design policies. Per the Astoria Comprehensive Plan, the coordination of transportation and land use designations is a goal. These practices not only support transit, but may also reduce costs of related infrastructure (stormwater, sewer).

A scan of zoning codes revealed little support for transit in current land use policies. No mention of transit is included in Seaside or Cannon Beach codes. Astoria code includes transit integration in Article 7, related to parking.<sup>7</sup> The code states that:

- In lieu of providing on-street parking, a development could pay the city (\$180 per year) that the city could put toward transit
- Off-street parking reductions if adjacent to bus stop served by 15-min or better service

Additional code language presents opportunities to fully integrate all modes into land use decisions. Strategies such as shared parking (to allow for park and ride), bike parking, street-fronting design, and others can be explored.

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<sup>7</sup> [http://www.astoria.or.us/Development\\_Zoning.aspx](http://www.astoria.or.us/Development_Zoning.aspx)

## 2 TRANSPORTATION NETWORK

Buses need streets. The current and future transportation network therefore helps determine where transit will run. Taking a multimodal approach, the walking and bicycling network providing access to transit also plays a crucial role in future transit.

### ROADWAYS

The major transportation routes through the county include U.S. 26, U.S. 30, and U.S. 101. U.S. 26 and U.S. 30 run east-to-west, connecting the county to the Portland metropolitan area. U.S. 101 parallels the coast running north-to-south, providing a connection between U.S. 30 and U.S. 26. These roadways, classified as Statewide Highways and are part of the National Highway System, serve the highest volume of traffic in the county. Average annual daily traffic (AADT) volumes range from 6,000 to 8,000 along U.S. 26 and U.S. 30, up to 20,000 along portions of U.S. 101 north of U.S. 26, and around 5,000 south of U.S. 26. Other Statewide Highways in the county include U.S. 101 Business, OR 53, OR 103, OR 104, OR 104S, and OR 202. These highways serve less traffic, with AADT volumes generally less than 5,000 each.

Most county roadways provide direct connections to these highways. Major county roadways include Ridge Road, Sunset Beach Road, Highland Lane, Lewis and Clark Road, Fort Clatsop Road, Youngs River Road, Walluski Loop Road, Svensen Market Road, Old U.S. Highway 30, Hillcrest Loop Road, Knappa Dock Road, Ziak-Gnat Creek Road, and Westport Ferry Road. The county classifies these as major collector or minor arterial roadways. Traffic volumes are generally low on these roadways, with AADT volumes less than 2,500 each.

Motor vehicle conditions in the county vary based on the time of year. During the summer peak (typically in August), traffic volumes are much higher than during the average weekday (typically in May and September) and, therefore, roadways are relatively more congested.

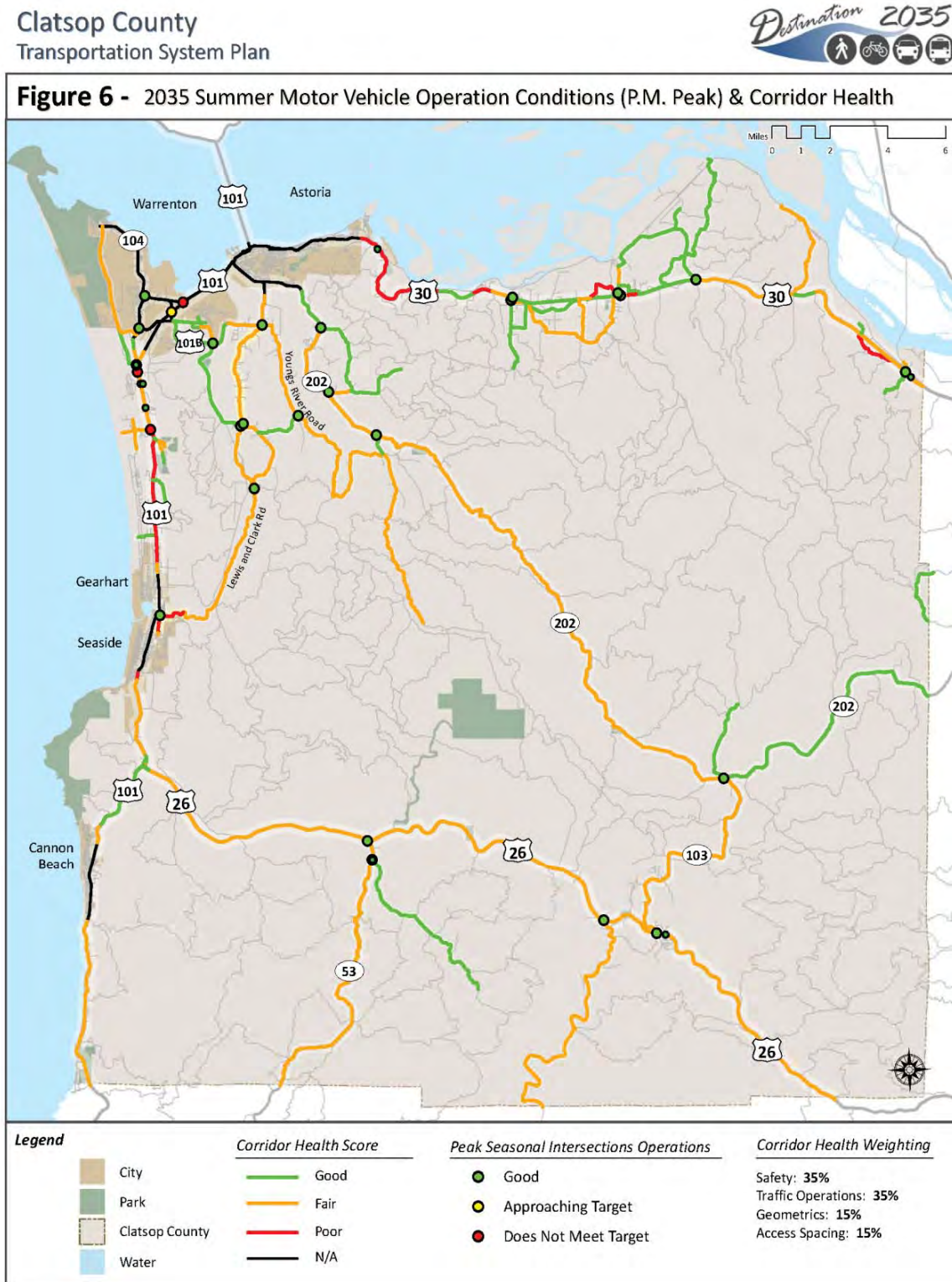
The Clatsop County TSP compared intersections in the county to mobility targets intended to maintain a minimum level of efficiency for motor vehicle travel. Intersection operations in the county are monitored through volume-to-capacity (v/c) ratios. A v/c ratio is a decimal representation (between 0.00 and 1.00) of the proportion of capacity of the roadway that is being used. It is determined by dividing the peak hour traffic volume by the hourly capacity of a given turn movement, approach leg, or intersection. A lower ratio indicates smooth operations and minimal delays. As the ratio approaches 1.00, congestion increases and performance is reduced. At 1.00, capacity has been reached and the turn movement, approach leg, or intersection is congested with longer delays.

Most roadways in the county experience traffic volumes that utilize less than half of the available capacity during the summer (v/c ratio is less than 0.50). Drivers are generally able to travel unimpeded. However, the segment of U.S. 101 between Astoria and Seaside generally operates at up to 70% of capacity during the summer (v/c ratio of 0.70). Drivers may experience some slowing in travel along this segment of the roadway system during times of peak travel demand,

considered to be highest during the afternoon/evening in peak summer months (July-September). Also, drivers at many of the unsignalized side street approaches to the highway along this segment experience high delays (over 90 seconds per vehicle), while waiting for a clearing to enter the highway. By 2035, motor vehicle trips along this segment are projected to increase by 45%. Summer congestion greatly affects SETD services.

Figure 2-1 illustrates projected roadway conditions in summer peak months and hours by 2035.

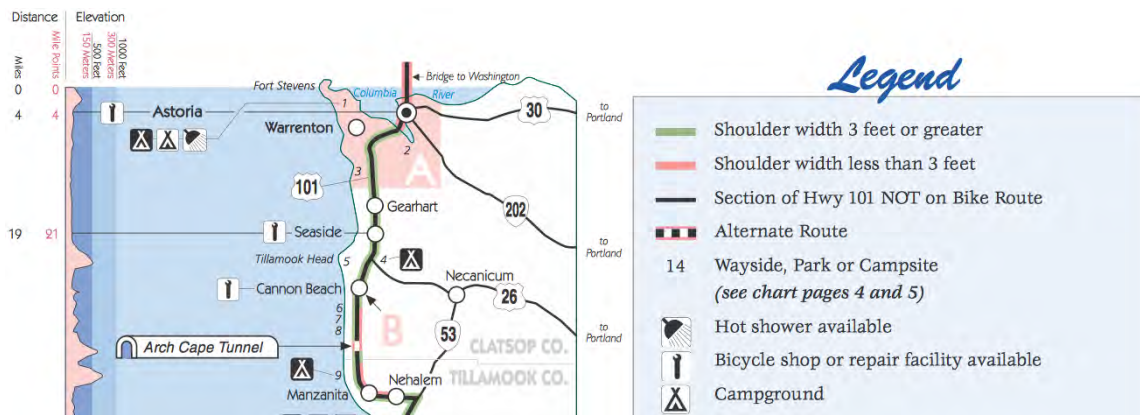
Figure 2-1 Projected Motor Vehicle Conditions, Summer PM Peak, 2035



## WALKING & BICYCLING

Every transit rider is a pedestrian. In some cases, transit riders are also bicyclists. Non-motorized infrastructure may be linked to land use policies – for example, often times a developer must build sidewalk and curb and gutter as part of a new project. In general, the urban areas contain sidewalks. ADA-compliant curb ramps and frequent safe street crossings are not as prevalent, however, which inhibit walking in general (and by default, walking to transit). The Clatsop County TSP recommends pedestrian crossings every 330 feet. Bicycle lanes are present in some areas of Astoria and along US 101; this highway is designated as part of the Oregon Coast bicycle route (Figure 2-2).

Figure 2-2 – Oregon Coast Bike Map showing Clatsop County



Source: [http://www.oregon.gov/ODOT/HWY/BIKEPED/docs/oregon\\_coast\\_bike\\_route\\_map.pdf](http://www.oregon.gov/ODOT/HWY/BIKEPED/docs/oregon_coast_bike_route_map.pdf)

Figure 2-3 – Bike lanes nearing Seaside



Figure 2-4 – Skinny shoulders with maintenance issues in Gerhart



## PROPOSED TRANSPORTATION FACILITIES

The following transportation project has committed funding and relevance to public transit in the county:

- **U.S. 101 / Sunset Beach Jughandle.** A “J” turn will be installed just to the south of the U.S. 101 / Sunset Beach intersection. The project will allow eastbound drivers on Sunset Beach Road destined for northbound U.S. 101 to make a right onto southbound U.S. 101, and then make a U-turn to northbound U.S. 101. Transit operators must currently wait several minutes to make the left turn during summer. This does not assist in getting pedestrians across the road.

The following transportation projects are identified in the Clatsop County under the fiscally constrained scenario, meaning funding will likely become available.

- **OR 202 and US 30.** Examine feasibility of creating a 2-lane county road as alternate route between OR 202 south of Astoria and US 30 east of Astoria.
- **Irving Avenue.** Extend Irving Avenue east to meet Nimitz Drive (Emerald Heights).
- **Sunset Beach Road.** Pedestrian improvements between US 101 and the coast. Potential to have Sunset Beach customers board along US 101 if a safe roadway crossing of US 101 can be provided.

## 3 FUTURE TRANSIT CORRIDORS

### TRANSIT SUPPORTIVE LAND USE

Transit-supportive land use refers to the integration of land use and transit via the creation of compact, walkable, mixed-use neighborhoods within walking distance of a transit stop or station. This pattern of development brings together people, jobs, and services and is designed in a way that makes it efficient, safe, and convenient to travel by walking, bicycling, or riding transit. These same elements also apply to “pedestrian-oriented development” and can be realized at scales ranging from “nodes” to complete neighborhoods.

Figure 3-1 illustrates the interdependence between land use, bicycle and pedestrian access, and transit. All three elements are needed to achieve community (and transit) goals – increasing transit ridership, reducing vehicle miles-traveled, and enhancing mobility for all residents.

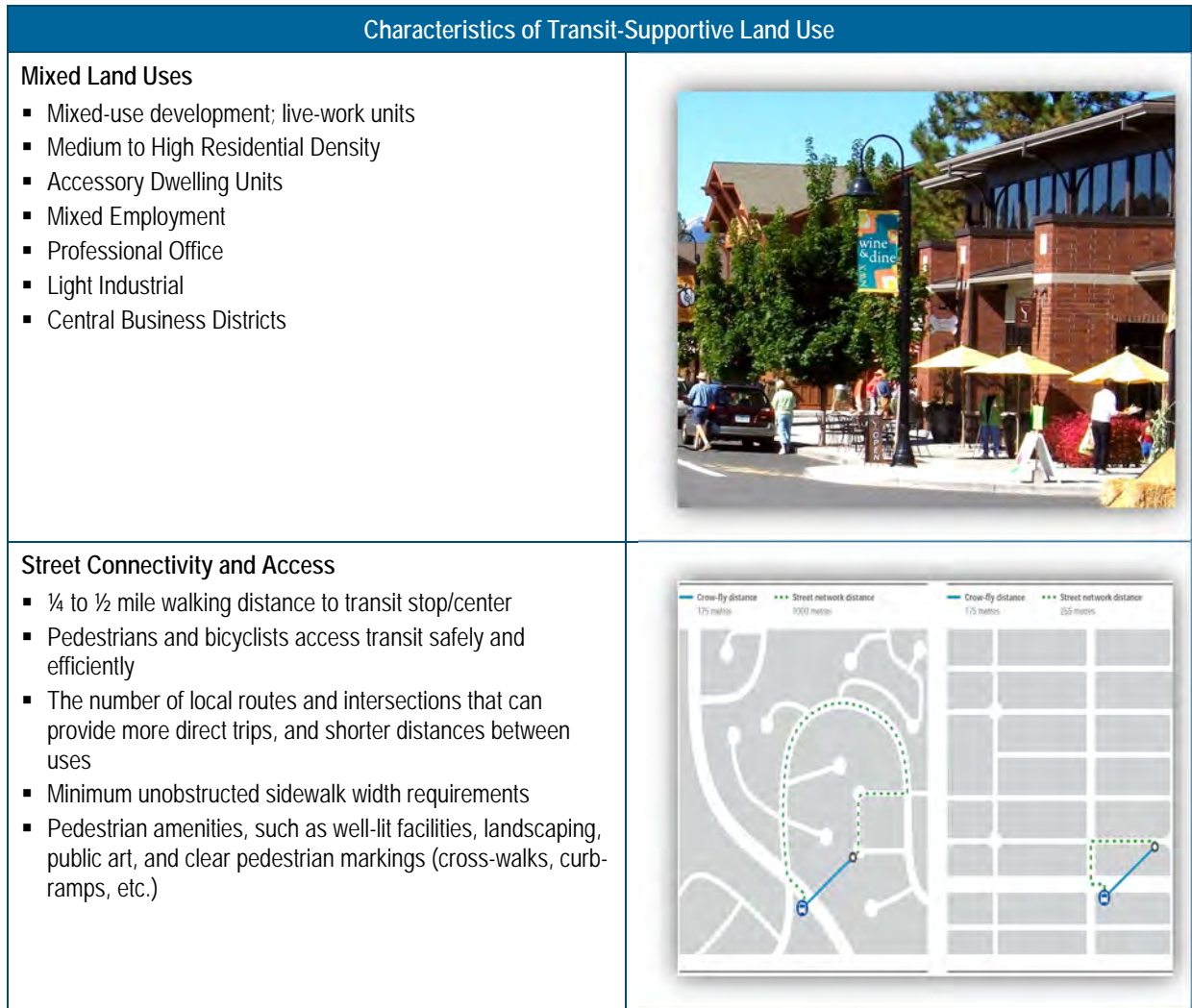
Figure 3-1 Relationship between Land Use, Transit Service, and Bicycle/Pedestrian Access



## Transit-Supportive Land Use Elements

Figure 3-2 below outlines typical characteristics of transit-supportive land use.

Figure 3-2 Characteristics of Transit-Supportive Land Use





Characteristics of Transit-Supportive Land Use	
<p><b>Land Use Density</b></p> <ul style="list-style-type: none"> <li>▪ Density (combined persons and jobs per acre) typically within ¼ to ½ mile of transit is a key predictor of mode share</li> <li>▪ Density should be paired with urban form principles (i.e., short block length)</li> <li>▪ Minimum floor area ratio requirements (e.g., Non-residential: 0.5 to 2.0 depending on the use or location; Residential: average density of up to 15-25 dwelling units per acre)</li> </ul>	
<p><b>Parking Requirements</b></p> <ul style="list-style-type: none"> <li>▪ Reduced off-street parking along transit corridors: reduce minimum requirements (e.g., by up to 40%) and/or set maximum (e.g., parking shall not exceed 125% of minimum City requirement)</li> <li>▪ Prohibit parking between buildings and street</li> <li>▪ Encourage shared parking</li> <li>▪ Design requirements for ingress/egress and landscaping of surface parking</li> <li>▪ Minimum bicycle parking requirements (i.e., 1 bicycle parking space per 2,000 – 3,000 square feet of leasable space and/or 1 bicycle parking space for every 10 employees)</li> </ul>	
<p><b>Urban Form</b></p> <ul style="list-style-type: none"> <li>▪ Maximum building set-backs to encourage “active” frontages (i.e., 0-10 feet)</li> <li>▪ Outdoor seating for restaurants</li> <li>▪ Street buffers (i.e. on-street parking)</li> <li>▪ Active frontage buildings with at least one main entrance on the street located closest to the transit station</li> <li>▪ Minimum lot coverage (i.e., 65%)</li> <li>▪ Higher allowable building heights</li> <li>▪ Prohibit surface parking abutting the roadway</li> <li>▪ Minimize driveways</li> <li>▪ Short block lengths, e.g., 400 feet</li> </ul>	

## TRANSIT CORRIDORS

This section identifies existing transit corridors served by SETD and potential transit corridors that SETD may serve in the future. The transit corridors described in this section do not

correspond to individual transit routes or a service plan. Rather, defining a network of transit corridors is a key policy mechanism to help SETD prioritize transit service investments and help SETD and local jurisdictions coordinate transit investments and land use policy and development. Some transit corridor segments may warrant service by multiple routes, providing increased frequency or connections on important segments of the SETD system. In addition, the identified transit corridors do not preclude transit routes that provide service coverage in other parts of the SETD service area, which would continue to be served by a supporting network of transit services. For example, while land use densities may not point toward a particular route serving the interior of Astoria, which is primarily single family housing, stakeholders and others have pointed toward a need for service in this area. This analysis focuses upon where it makes sense to run transit based upon land use.

The preliminary corridors described in this memo are categorized into several tiers based on the type of service provided, e.g., local and regional, and based on their potential for future transit demand and likely phasing:

- **Primary corridors** are the most densely developed corridors or have the highest future potential population/employment density, and/or connect the most significant transit demand generators. They have the highest potential to warrant investments in higher levels of transit service (e.g., more frequent or more direct service).
- **Secondary corridors**, categorized as local or regional, may be less densely developed or have longer-term development potential, and/or serve important but less significant activity centers. They do not warrant the highest levels of service, but are important parts of the SETD system.
- **Potential corridors** could be elevated to a primary or secondary transit corridor(s) if land uses become more transit-supportive (discussed above) and destinations that generate transit demand develop along the corridors. These corridors may have existing service or may not currently be served by transit.

## Role of Primary Transit Corridors

As described above, primary transit corridors are not bus routes or a service plan, but a policy tool to help SETD, Clatsop County, and other local jurisdictions manage land use, public infrastructure, and transit service provision. These corridors support a long-term policy goal of providing service that is frequent enough to be convenient and make transfers feasible even without timed connections.

Primary transit corridors help accomplish this policy goal by:

- Identifying where SETD will focus future investments in service capacity, frequency, and amenities – along identified corridors consistent with areas where local jurisdictions will focus land use planning. Influencing zoning and development policies to encourage intensification of land use around transit corridors is a key element of providing the necessary level of ridership and accessibility to support improved transit service.
- Providing direction to local jurisdiction engineers and planners about where street rights-of-way should be designed and managed to help maintain transit operating speed and reliability. This enables transit to provide the best possible user experience, prevents timed-transfer connections from breaking down, and allows transit operating resources

to be spent on improving service, rather than simply maintaining headways as traffic congestion increases.

- Encouraging dense and/or transit-intensive land uses to locate on primary/secondary corridors, or at a minimum, along the supporting network. Defining transit corridors communicates preferred locations for uses that generate high transit demand and/or that desire to have transit service. For example, if a planned land use that is known to require transit, such as a social services office, senior facility, or school, chooses not to locate on a primary corridor, they do so with the knowledge that they may not get the best transit service, or any at all. When such uses locate away from transit, they inevitably create pressure for the transit agency to provide service where it cannot be done efficiently.

## Recommended Transit Corridors

The identified corridors are described below and illustrated in Figure 3-3.

### Primary and Regional Corridors

- **U.S. 101.** Primary transit corridor connecting Astoria, Warrenton, Seaside, and Cannon Beach to the Midtown area (and potentially south to connect to high density housing)
- **U.S. 30.** Primary transit corridor through Astoria and connecting to the Tongue Point/MERTS area
- **Astoria-Warrenton Highway.** The section between Fred Meyer and the Warrenton Mini-Mart has high activity characteristics of commercial and high-density residential.
- **Business US 101.** In Astoria, as US 101 runs over Youngs Bay Bridge, the portion of Highway 202 running along the south side of the peninsula exhibits high density residential along a portion of the area between the bridge and Astoria High School

### Secondary Local Corridors

Additional corridors provide important local service and major activity center connections to the primary network.

- **Nimitz Drive.** This corridor serves Emerald Heights and high-density housing.
- **Maritime Road.** This corridor serves Tongue Point.
- **Highway 104 and Ridge Road.** This corridor is zoned for commercial uses and has exhibited growth.
- **7<sup>th</sup> Street.** This corridor provides access to Clatsop Community College and links to the Business 101 bridge.
- **Camp Rilea.** Access to this destination serves both local and potentially regional users.
- **Sunset Beach Road.** Serves high-density housing.
- **Wahanna Drive and Downing Street** in Seaside. These corridors serve high density housing.
- **Elk Creek Road** in Cannon Beach. Serves RV park.

### Secondary Regional Corridors

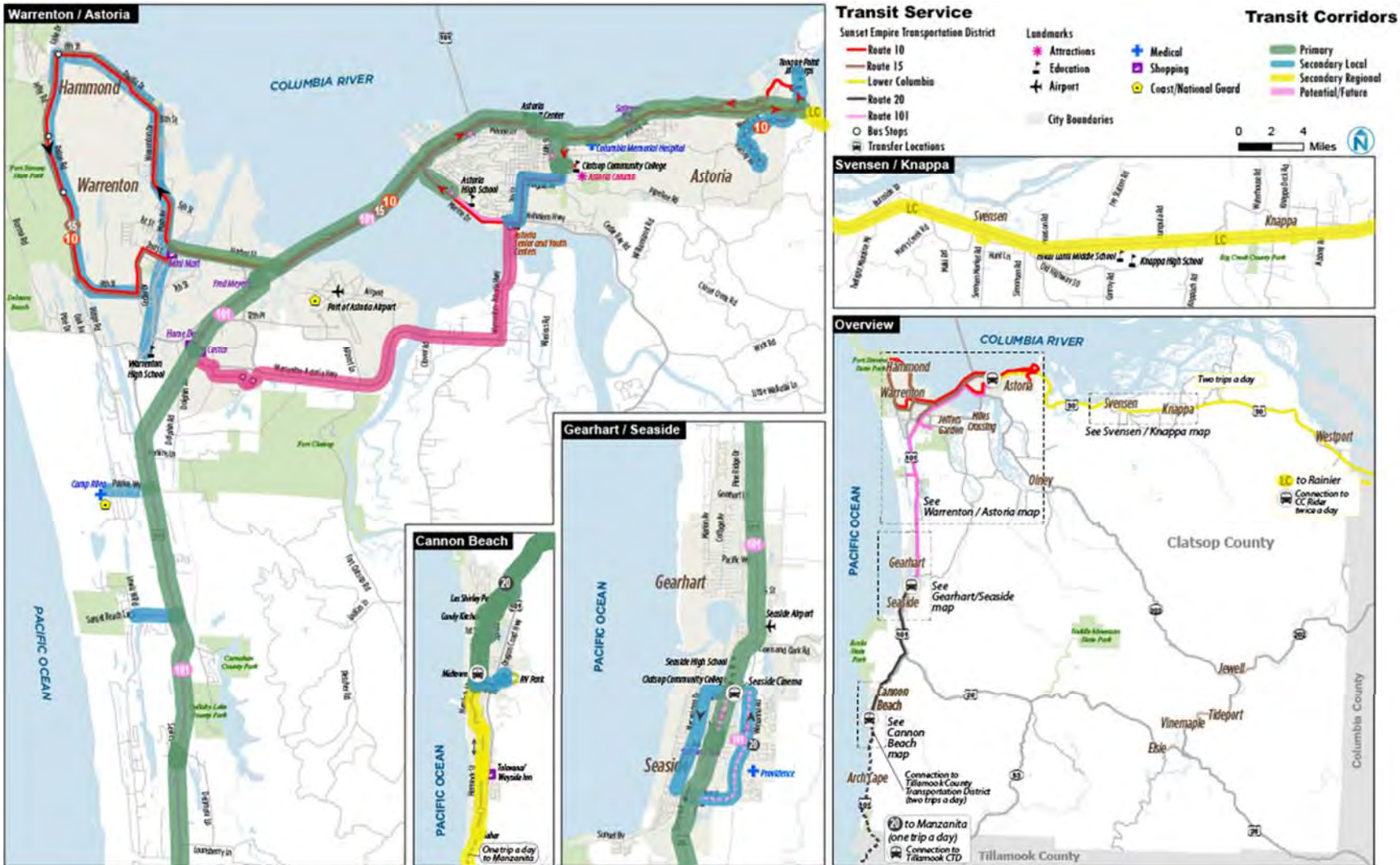
- **U.S. 30.** East of Tongue Point, this roadway links to Svenssen, Knappa, Westport, and Columbia County.
- **U.S. 101.** South of Cannon Beach, this roadway links to Arch Cape and Manzanita.

### Potential Corridors

- **U.S. 101 Business.** Once the Business 101 bridge is repaired, this corridor reopens for transit. The airport and other land uses along this corridor, plus its link to the Walmart development, make it possible transit corridor.

Figure 3-3 Map of Key Transit Corridors

Long-Range Comprehensive Transportation Plan | Memo #3: Land Use  
Sunset Empire Transportation District



## **SECTION F**

### Land Use and Development Code Policy Analysis





**DATE:** June 3, 2016

**TO:** Sunset Empire Transportation Transit District Long Range Comprehensive Transportation Plan Project Management Team

**FROM:** Matt Hastie, Angelo Planning Group  
Shayna Rehberg, Angelo Planning Group

**SUBJECT:** Sunset Empire Transportation District Long Range Comprehensive Transportation Plan  
**Task 5.2, Policy and Development Code Memorandum**

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This memorandum addresses potential comprehensive plan policy and development code amendments for jurisdictions within the Sunset Empire Transportation District (SETD) service area, to be included as an appendix of the SETD Long Range Comprehensive Transportation Plan (“Transportation Plan”), pursuant to project Task 5.2.

In both the Comprehensive Plan Policies and Development Code sections of this memorandum, policy and code language that is recommended for potential incorporation into the comprehensive plans and development codes of jurisdictions within the SETD service area is presented. The recommended language is followed by an assessment of consistency between existing and recommended provisions. The recommended language is designed to serve a number of purposes, including to:

- Reflect the objectives and recommendations from the SETD Transportation Plan;
- Provide consistency with State transportation planning rules related to transit; and
- Generally support and promote transit in communities within the SETD service area.

The assessment has been conducted for larger jurisdictions in the SETD service area, listed below.

1. Clatsop County
2. Astoria
3. Warrenton
4. Seaside
5. Cannon Beach

The assessment is intended to guide the jurisdictions in determining what new language should be integrated into their respective comprehensive plans and development codes at a future date. For Gearhart and other smaller communities in the SETD service area, it is generally recommended that they consider all of the policies and development requirements recommended in this memorandum for adoption as appropriate. Opportunities for further developing and adopting these policy and code amendments are discussed following the assessment.

This memorandum will be included in the SETD Transportation Plan as an appendix to the plan. As discussed in the following sections, the recommended language can be integrated as needed as part of a legislative amendment procedure by the respective local jurisdictions. In a subsequent memorandum, APG will provide recommended adoption-ready development code language for Warrenton to consider for adoption as a follow-up to this process, given more immediate development prospects in that community. Other jurisdictions in SETD's service area would be expected to adopt language on varying timelines.

## Comprehensive Plan Policies

Comprehensive plan policies direct land use planning, transportation planning, and their implementation within a jurisdiction. The comprehensive plan policies presented in this section are recommended for integration into jurisdictions' existing comprehensive plan policies in order to provide consistency with the SETD Transportation Plan and a solid foundation for transit-supportive land use planning, transportation planning, and implementation going forward.

## Recommended Policies

The recommended policies below draw from a number of references and resources including the project scope, the Oregon Transportation Planning Rule (TPR), and policy recommendations from peer documents such as the Columbia County Transit Plan, Lincoln City Transportation System Plan, and Draft Pendleton Bicycle, Pedestrian, and Transit Plan. An assessment of the consistency of jurisdictions' existing policies with the recommended policies follows the presentation of these policies, and finds that all the jurisdictions should adopt these more specific transit-supportive policies as comprehensive plan policies.

- 1. The [City/County] will facilitate provision of transit service to its community members, with special attention to members who may be classified as "transit dependent" due to factors such as age, income, or disabilities.*
- 2. The Sunset Empire Transportation District Long Range Comprehensive Transportation Plan provides the policy and implementation direction for [City/County] transit planning, which includes route development, financing, and physical improvements necessary to maintain and improve public transit service for [City/County] residents, businesses, and visitors.*
- 3. The [City/County] will work with Sunset Empire Transportation District to appropriately site and implement new transit stops and park-and-ride lots within the [city/county] in support of the district-wide public transit system, with an emphasis on sites that are safe and convenient for riders. Transit improvements within the [city/county] shall be guided by the findings and recommendations of the Sunset Empire Transportation District Long Range Comprehensive Transportation Plan.*
- 4. The [City/County] will work to improve safety for transit riders through measures such as providing enhanced roadway crossings, restricting transit stops from being sited where there are existing driveways, and restricting driveways from being located near an existing or planned transit stop.*
- 5. The [City/County] will participate in Sunset Empire Transportation District's efforts to promote and implement rideshare (e.g., carpool/vanpool) programs for reducing commuter vehicular travel demand on US 101. The [City/County] will establish development requirements that*

*provide preferential parking for ridesharing and allow parking areas to be used for park-and-ride/rideshare facilities.*

*6. The [City/County] will support increased opportunities for local and regional public transit routes and facilities.*

*7. The [City/County] will invite transit service providers to participate in the review of land use applications that may have implications for transit service.*

*8. The [City/County] will provide or will require development to provide improvements such as pedestrian and bicycle connections, shelters, and/or lighting to complement transit service and encourage higher levels of transit use. Transit stop improvements shall be coordinated with the transit service provider.*

*9. The [City/County] will target improvements to the [City's/County's] pedestrian environment, including lighting, landscaping, public art, marked and protected crossings, and curb ramps, to improve conditions for and encourage walking and to promote transit.*

*10. The [City/County] will support higher-density and mixed land use around transit stops and in transit corridors to make transit service more feasible and effective.*

*11. In lower-density areas, the [City/County] will support park-and-ride/rideshare facilities, demand-responsive transit services, and other facilities and services that are appropriate where it is less feasible to serve the area with fixed-route transit.*

## **Policy Consistency**

Overall, there is some degree of consistency between jurisdictions' existing policies and the policies recommended above. However, the consistency is more general and conceptual than in detail. Thus, all the jurisdictions could benefit from adopting these more specific transit-supportive policies as comprehensive plan policies. A Transportation System Plan (TSP) update process provides a natural opportunity to adopt the recommended policies; TSPs are adopted as elements of the City's or County's comprehensive plan. However, a couple of the jurisdictions have recently gone through an update process, so will not necessarily be updating their TSPs again in the near term. For these jurisdictions, adoption of the recommended policies could potentially be folded in with other legislative amendment procedures in the near term.

A summary assessment of policy consistency is provided in Table 1. Relevant goals, policies, and objectives referred to in Table 1 are included in Appendix A. The finding of "partial" consistency that is made in most cases, in tandem with the list of applicable goals, policies, and objectives that follows the finding, generally indicate that there are usually several goals, policies, and/or objectives that reflect some element of the recommended policy, but often in a general or indirect manner. For example, an Astoria transportation objective directing the City to "increase access to the transportation system for all modes regardless of age, ability, income, and geographic location" is in spirit very similar to the first

recommended policy regarding facilitation of transit service particularly for those who are “transit dependent,” without specifying transit or being an exact fit with the proposed policy.

The following set of observations present an overview of the policy consistency assessment.

- Clatsop County, Astoria, and Warrenton – These are the larger jurisdictions within the SETD service area and, accordingly, their existing policies are more extensive and comprehensive to start with than the smaller jurisdictions within the SETD service area. Even so, existing policies do not provide the level of specificity and direction that the recommended policies provide. Clatsop County and Astoria completed updates of their TSPs in 2015 and 2013 respectively, and Warrenton is currently in the process of updating its TSP.
- Seaside and Cannon Beach – These smaller jurisdictions within the SETD service area have less extensive existing policies, particularly related to transit. Seaside policies are very broad and general regarding multimodal transportation and transit, while Cannon Beach policies are relatively minimal overall. Therefore, the addition of the recommended policies to each city’s comprehensive plans will make them significantly more robust regarding transit. Seaside’s TSP was updated in 2010, so it is possible that it will undergo another update in the next five years. Cannon Beach has been seeking funding for a TSP update. While its policies were not formally assessed as part of this report, a plan and policy review conducted for Gearhart in February 2016 as part of a TSP update process found its existing transportation policies to be lacking in terms of transit. The more robust policies recommended in this memorandum should be considered when the Gearhart TSP update process enters into its implementation stages.

**Table 1: Assessment of Policy Consistency**

Policy	Clatsop County <sup>1</sup>	Astoria <sup>2</sup>	Warrenton <sup>3</sup>	Seaside <sup>4</sup>	Cannon Beach <sup>5</sup>
1. The [City/County] will facilitate provision of transit service to its community members, with special attention to members who may be classified as “transit dependent” due to factors such age, income, or disabilities.	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 4</li> <li>• Policy 4b</li> <li>• Policy 9d</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 1, Objective 2</li> <li>• Goal 2</li> <li>• Goal 2, Objective 5</li> <li>• Goal 5</li> <li>• Goal 5, Objective 1</li> </ul>	<p><b>Yes</b></p> <ul style="list-style-type: none"> <li>• Goal 1</li> <li>• Goal 1, Objective 5</li> <li>• Goal 4</li> <li>• Goal 4, Objective 2</li> <li>• Goal 6</li> <li>• Goal 6, Objectives 1, 2, and 3</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 2</li> <li>• Goal 3</li> <li>• Goal 3, Policy 2</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Policy 9</li> </ul>

<sup>1</sup> Goals and policies from the *Clatsop County Comprehensive Plan, Goals and Policies (Last Amended 2015)* currently govern and were referred to.

<sup>2</sup> Goals and objectives from the *2013 Astoria Transportation System Plan, Volume 2, Section D: Memo 3 – Goals, Objectives, and Evaluation Criteria* currently govern and were referred to.

<sup>3</sup> Goals and policies from the *2004 City of Warrenton Transportation System Plan* currently govern and were referred to. Transportation policies from the *City of Warrenton Comprehensive Plan (Last Amended 2011)* also govern, but were not found to be relevant to this assessment.

<sup>4</sup> Goals and policies from the *2010 City of Seaside Transportation System Plan* currently govern and were referred to. Transportation policies from the *City of Seaside Comprehensive Plan (Adopted 1983, Last Amended 1996)* also govern, but were not found to be relevant to this assessment.

<sup>5</sup> Policies from the *City of Cannon Beach Comprehensive Plan (Last Amended 2012)* currently govern and were referred to.

Policy	Clatsop County <sup>1</sup>	Astoria <sup>2</sup>	Warrenton <sup>3</sup>	Seaside <sup>4</sup>	Cannon Beach <sup>5</sup>
<p>2. The Sunset Empire Transportation District Long Range Comprehensive Transportation Plan provides the policy and implementation direction for [City/County] transit planning, which includes route development, financing, and physical improvements necessary to maintain and improve public transit service for [City/County] residents, businesses, and visitors.</p>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 4</li> <li>• Policy 4b</li> <li>• Goal 9</li> <li>• Policy 9d</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 7</li> <li>• Goal 7, Objective 2</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 1</li> <li>• Goal 4</li> <li>• Goal 4, Objective 2</li> <li>• Goal 6</li> <li>• Goal 6, Objective 3</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 2</li> <li>• Goal 3</li> <li>• Goal 3, Policy 2</li> <li>• Goal 4, Policy 3</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Policy 10</li> </ul>
<p>3. The [City/County] will work with Sunset Empire Transportation District to appropriately site new transit stops and park-and-ride lots within the [city/county] in support of the district-wide public transit system, with an emphasis on sites that are safe and convenient for riders. Transit improvements within the [city/county] shall be guided by the findings and recommendations of the Sunset Empire Transportation District Long Range Comprehensive Transportation Plan.</p>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 4</li> <li>• Policies 4a and 4b</li> <li>• Goal 9</li> <li>• Policy 9d</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 2</li> <li>• Goal 5</li> <li>• Goal 5, Objective 4</li> <li>• Goal 7</li> <li>• Goal 7, Objectives 1 and 2</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 3, Objective 2</li> <li>• Goal 4</li> <li>• Goal 4, Objectives 1 and 2</li> <li>• Goal 5, Objective 11</li> <li>• Goal 11</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 1</li> <li>• Goal 3</li> <li>• Goal 3, Policy 2</li> <li>• Goal 4, Policy 3</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Policy 10</li> </ul>

Policy	Clatsop County <sup>1</sup>	Astoria <sup>2</sup>	Warrenton <sup>3</sup>	Seaside <sup>4</sup>	Cannon Beach <sup>5</sup>
4. The [City/County] will work to improve safety for transit riders through measures such as providing enhanced roadway crossings, restricting transit stops from being sited where there are existing driveways, and restricting driveways from being located near an existing or planned transit stop.	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 6</li> <li>• Policies 6c, 6d, and 6e</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 1</li> <li>• Goal 1, Objective 2</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 4</li> <li>• Goal 4, Objective 2</li> <li>• Goal 11</li> <li>• Goal 11, Objectives 2 and 3</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 1</li> <li>• Goal 1, Policy 2</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Policy 2</li> <li>• Policy 10</li> </ul>
5. The [City/County] will participate in Sunset Empire Transportation District's efforts to promote and implement rideshare (e.g., carpool/vanpool) programs for reducing commuter vehicular travel demand on US 101. The [City/County] will establish development requirements that provide preferential parking for ridesharing and allow parking areas to be used for park-and-ride/rideshare facilities.	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 4</li> <li>• Policy 4a</li> <li>• Goal 9</li> <li>• Policy 9d</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 2</li> <li>• Goal 5</li> <li>• Goal 5, Objectives 1 and 4</li> <li>• Goal 7</li> <li>• Goal 7, Objectives 1, 2, and 3</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 4</li> <li>• Goal 4, Objective 1</li> <li>• Goal 8, Objective 1</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 3</li> <li>• Goal 3, Policies 1 and 2</li> <li>• Goal 4</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Policy 10</li> </ul>
6. The [City/County] will support increased opportunities for local and regional public transit routes and	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 4</li> <li>• Policies 4b</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 2</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 1, Objective 5</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 3</li> <li>• Goal 3,</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Policy 1</li> </ul>



Policy	Clatsop County <sup>1</sup>	Astoria <sup>2</sup>	Warrenton <sup>3</sup>	Seaside <sup>4</sup>	Cannon Beach <sup>5</sup>
<i>facilities.</i>	<ul style="list-style-type: none"> <li>and 4c</li> <li>• Goal 5</li> <li>• Policy 9d</li> </ul>	<ul style="list-style-type: none"> <li>• Goal 5</li> <li>• Goal 5, Objectives 1 and 4</li> <li>• Goal 7</li> <li>• Goal 7, Objectives 1, 2, and 3</li> </ul>	<ul style="list-style-type: none"> <li>• Goal 4</li> <li>• Goal 4, Objectives 2, 3, and 4</li> <li>• Goal 6, Objective 1</li> <li>• Goal 8, Objective 1</li> </ul>	<ul style="list-style-type: none"> <li>Policies 1 and 2</li> <li>• Goal 4</li> <li>• Goal 4, Policy 3</li> </ul>	<ul style="list-style-type: none"> <li>• Policy 10</li> </ul>
<i>7. The [City/County] will invite transit service providers to participate in the review of land use applications that may have implications for transit service.</i>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 9</li> <li>• Policy 9d</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 7</li> <li>• Goal 7, Objectives 1 and 2</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 8, Objective 1</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 3, Policy 2</li> </ul>	<p><b>No</b></p>
<i>8. The [City/County] will provide or will require development to provide improvements such as pedestrian and bicycle connections, shelters, and/or lighting to complement transit service and encourage higher levels of transit use. Transit stop improvements shall be coordinated with the transit service provider.</i>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Policy 3e</li> <li>• Goal 4</li> <li>• Policy 4c</li> <li>• Goal 5</li> <li>• Policy 5a</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 2</li> <li>• Goal 3, Objective 7</li> <li>• Goal 5, Objective 4</li> <li>• Goal 7</li> <li>• Goal 7,</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 7, Objective 2</li> <li>• Goal 8, Objective 1</li> <li>• Goal 11, Objectives 2 and 3</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 3</li> <li>• Goal 3, Policy 2</li> <li>• Goal 4</li> <li>• Goal 4, Policies 2 and 3</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Policy 10</li> </ul>

Policy	Clatsop County <sup>1</sup>	Astoria <sup>2</sup>	Warrenton <sup>3</sup>	Seaside <sup>4</sup>	Cannon Beach <sup>5</sup>
		Objective 2			
9. The [City/County] will target improvements to the [City's/County's] pedestrian environment, including lighting, landscaping, public art, marked and protected crossings, and curb ramps, to improve conditions for and encourage walking and to promote transit.	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 3</li> <li>• Policies 3a and 3c</li> <li>• Goal 4</li> <li>• Policy 4c</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 2</li> <li>• Goal 3, Objectives 6 and 7</li> <li>• Goal 4, Objectives 4 and 5</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 5, Objective 11</li> <li>• Goal 8, Objective 1</li> <li>• Goal 11, Objectives 2 and 3</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 3</li> <li>• Goal 3, Policy 2</li> <li>• Goal 4</li> <li>• Goal 4, Policies 2 and 3</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Policy 10</li> </ul>
10. The [City/County] will support higher-density and mixed land use around transit stops to make transit service more feasible and effective.	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Policy 7d</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 3, Objective 5</li> <li>• Goal 5, Objectives 1 and 4</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 1, Objective 7</li> <li>• Goal 7, Objective 2</li> <li>• Goal 8, Objective 2</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 3, Policy 2</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Policy 10</li> </ul>
11. In lower-density areas, the [City/County] will support park-and-ride/rideshare facilities, demand-responsive transit services, and other facilities and services that are appropriate where it is less feasible to	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Policy 4a</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 3, Objective 5</li> <li>• Goal 5, Objectives 1</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 7, Objective 2</li> <li>• Goal 8, Objective 2</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Goal 3, Policy 2</li> </ul>	<p><b>Partial</b></p> <ul style="list-style-type: none"> <li>• Policy 10</li> </ul>

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Policy	Clatsop County <sup>1</sup>	Astoria <sup>2</sup>	Warrenton <sup>3</sup>	Seaside <sup>4</sup>	Cannon Beach <sup>5</sup>
<i>serve the area with fixed-route transit.</i>		and 4			

## Development Code

There are several ways in which development code requirements can support the development and implementation of transit-related improvements. This idea is captured in the transit-related development provisions required by the TPR in communities with existing or planned transit service.<sup>6</sup>

This section presents sample development code language that is recommended in order to achieve consistency with the TPR, reflect the objectives of this project and the updated SETD Transportation Plan, and implement the policies recommended earlier in this memorandum. The recommended code language is organized into the following topic areas, which were developed based on topics identified in the project scope, project memoranda (e.g., Memo #3: Land Use), and the TPR.

- Coordination with transit agencies
- Access to transit
- Transit supportive facilities
- Other transit-related provisions (vehicle parking, bicycle parking, and urban form)

Recommended development code language is drawn predominantly from the State of Oregon Transportation and Growth Management Model Development Code for Small Cities, 3<sup>rd</sup> Edition (“Model Code”); language from peer jurisdictions in Oregon is also drawn upon. While all of the recommended language should be modified as needed for individual jurisdictions, there is specifically language in [brackets] to indicate text that needs to be customized to the jurisdiction.

An assessment of each jurisdiction’s existing development code language in terms of consistency with recommended language is provided after the following subsections presenting the recommended language (Table 2). The assessment indicates a number of opportunities for the jurisdictions to improve existing development code provisions. Many of the following subsections open with summary statements based on the assessment.

## Recommended Development Code Language

### Coordination with Transit Agencies

Improving coordination with transit agencies is a key part of implementing the SETD Transportation Plan and improving transit service and facilities in Clatsop County. Some jurisdictions may have a practice of consulting with SETD about land use applications, but there is limited formalization of this practice in their development codes. Therefore, it is recommended that SETD, or just generally transportation service and facility providers, be included in the application process – at the pre-application, application review, and hearing stages – when applications may affect an existing or planned facility or service.

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<sup>6</sup> OAR 660-012-0045(4)

### **1. Pre-Application Conference**

In some cases, the jurisdictions within the SETD service area only require the applicant and Community Development Director or City Manager to meet for a pre-application conference. The following language should be integrated into existing or expanded pre-application requirements, so that SETD has the opportunity to be involved in the application and development process early on.

The [City/County Community Development/Planning Director/City Manager or designee] shall invite [City/County] staff from other departments to provide technical expertise applicable to the proposal, as necessary, as well as other public agency staff such as transportation and transit agency staff.

### **2. Application Review**

The jurisdictions generally have a process for notifying and involving other agencies in application review, quasi-judicial reviews in particular. However, for the most part, their development code language does not specifically refer to notification or involvement of transit service providers, or only requires that notice of application processing be provided to adjacent and nearby land owners.

For applications that involve administrative review with notice (e.g., Type II procedures) and quasi-judicial review (e.g., Type III procedures), the following language is recommended:

Referrals [requests to review and comment on the application] shall be sent to interested and affected agencies. Interested agencies include but are not limited to [City/County] departments, police department, fire district, school district, utility companies, and applicable City, County, and State agencies. Affected agencies include but are not limited to the Oregon Department of Transportation and Sunset Empire Transportation District.

### **3. Hearing Notice**

Similar to the notice procedures associated with application processing described above, hearing notice would be sent to SETD if it were an adjacent or nearby property owner. However, those conditions are narrow and, thus, it is recommended that notice provisions be broadened to account for agencies like SETD, whose facilities or services may be affected by the proposed land use action.

Notice of a pending quasi-judicial public hearing shall be given by the [City/County Community Development/Planning Department] in the following manner:

- A. At least [twenty] days prior to the scheduled hearing date, notice shall be sent by mail to:

Any governmental agency or utility whose property, services, or facilities may be affected by the decision. Agencies include and are not limited to: [list of agencies appropriate to jurisdiction, e.g., counterpart County or City Planning/Community Development, ODOT, ODOT Rail, ODOT Transit, railroad,

Port, school district, other transit/transportation service providers] and Sunset Empire Transportation District.

### **Access to Transit and Transit Supportive Facilities**

A fundamental set of development requirements to support transit are those that ensure that community members can easily get to transit stops and that the stops are appropriately furnished with transit supportive facilities and features.

#### ***Site Access***

#### ***4. Access Between the Site and the Street***

One element of providing access to transit is establishing connections between the site and the street where there is existing or planned transit service. In particular, the site should connect to the sidewalk. Generally, existing development code provisions in the larger jurisdictions within the SETD service area have some form of this requirement, while the smaller ones do not. The following recommended language establishes these connections.

#### **Pedestrian Access and Circulation**

Standards. Developments shall conform to the following standards for pedestrian access and circulation:

- A. Continuous Walkway System. A pedestrian walkway system shall extend throughout the development site and connect to adjacent sidewalks, if any, and to all future phases of the development, as applicable.

#### ***5. Access to the Transit Stop and Supportive Facilities***

Another element of providing access to transit from a site is to specifically require connections between buildings and the transit stop. This can be part of a new section of transit-specific development code provisions that address direct access, including building entrance orientation, as well as the facilities and features that are needed as part of the transit stop itself. These requirements are not necessarily found in existing development code provisions in any of the jurisdictions within the SETD service area.

#### **Transit Access and Supportive Facilities**

Development that is proposed adjacent to an existing or planned transit stop, as designated in an adopted transportation or transit plan, shall provide the following transit access and supportive facilities in coordination with the transit service provider:

- A. Reasonably direct pedestrian connections between the transit stop and primary entrances of the buildings on site. For the purpose of this Section, "reasonably direct" means a route that does not deviate unnecessarily from a straight line or

a route that does not involve a significant amount of out-of-direction travel for users.

- B. The primary entrance of the building closest to the street where the transit stop is located that is oriented to that street.
- C. A transit passenger landing pad that is ADA accessible.
- D. An easement or dedication for a passenger shelter or bench if such an improvement is identified in an adopted plan.
- E. Lighting at the transit stop.
- F. Other improvements identified in an adopted plan.

### **Area Access**

#### **6. Access to Transit Stops from Beyond the Site**

A final element of access to transit stops is access from beyond the site adjacent to the stop. Access from beyond the site is provided through a combination of:

1. a connected roadway system (with pedestrian and bicycle facilities), primarily addressed in the transportation system planning process; and
2. pedestrian and bicycle access ways between roadways, primarily addressed in the development code.

Similar to the other access provisions, the following recommended requirements regarding pedestrian and bicycle access ways tend to already be established in the development code for the larger jurisdictions but not for the smaller jurisdictions.

#### Pedestrian and Bicycle Access Ways

The [decision body] in approving a land use application with conditions may require a developer to provide an access way where the creation of a street is infeasible and the creation of a cul-de-sac or dead-end street is unavoidable. An access way connects the end of the street to another right-of-way or a public access easement. An access way shall be contained within a public right-of-way or public access easement, as required by the [City/County]. An access way shall be a minimum of [10]-feet-wide and shall provide a minimum [6]-foot-wide paved surface or other all-weather surface approved by the [City/County decision body]. Design features should be considered that allow access to emergency vehicles but that restrict access to non-emergency motorized vehicles.

## Other Transit-Related Development Code Provisions

There are other transit-related development code provisions that can reflect and implement the SETD Transportation Plan and policies recommended in this memorandum, as well as provide consistency with transit-related requirements in the TPR. These recommended provisions address vehicle parking, bicycle parking, and urban form.

In some cases, these provisions may appear to be less directly related to transit than the previous recommendations regarding coordination with transit agencies and access to transit stops. However, they address critical complementary elements like creating safe and inviting pedestrian and bicycling environments and, therefore, are part of a comprehensive set of strategies to support and promote transit in the SETD service area. This set of strategies includes a number of parking-related tools. Shared parking was also considered amongst these strategies, but there are already provisions for shared parking in each jurisdiction's development code; therefore, no recommendation is needed for that strategy.

### ***Vehicle Parking***

#### ***7. Transit Facilities in Parking Areas***

Bus stops and park-and-ride areas in parking lots may informally exist in parking areas in the SETD service area. However, existing development code does not explicitly allow this. Therefore, to codify these uses, and to comply with a subsection of the TPR specifically addressing these uses<sup>7</sup>, the language below is recommended for integration into code sections regarding off-street parking.

Parking spaces and parking areas may be used for transit-related uses such as transit stops and park-and-ride/rideshare areas, provided minimum parking space requirements can still be met.

#### ***8. Carpool/Vanpool Parking***

While not necessarily public transit, ridesharing is a form of transit that may be more informal and private. In these ways, this form of transit may be more accessible to parts of communities within the SETD service area that are less dense and more distant from fixed route service. As such, it is important to support ridesharing, and providing preferential parking is one way of supporting it in terms of development requirements. The following recommended language targets commuting and reflects TPR language specific to this topic<sup>8</sup>.

Parking areas that have designated employee parking and more than 20 automobile parking spaces shall provide at least 10% of the employee parking spaces (minimum two spaces) as preferential carpool and vanpool parking spaces. Preferential carpool and

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<sup>7</sup> OAR 660-012-0045(4)(e)

<sup>8</sup> OAR 660-012-0045(4)(d)



vanpool parking spaces shall be closer to the employee entrance of the building than other parking spaces, with the exception of ADA accessible parking spaces.

### **9. Maximum Parking Requirements**

Maximum off-street parking requirements help manage parking and encourage the use of transit, typically in dense urban areas. Existing development code language does not address them.<sup>9</sup> While these requirements are recommended in the SETD service area, their applicability can be specified for sites adjacent to transit stops and transit routes and/or for more urban-oriented zones where transit stops may be most likely to be located (e.g., central or general commercial zones).

Maximum Number of Off-Street Automobile Parking Spaces. The maximum number of off-street automobile parking spaces allowed per site equals the minimum number of required spaces, pursuant to Table [ ], multiplied by a factor of:

- A. [1.2] spaces for uses fronting a street with adjacent on-street parking spaces; or
- B. [1.5] spaces, for uses fronting no street with adjacent on-street parking; or
- C. A factor determined according to a parking analysis.

### **10. Reduced Parking Requirements**

Similar to maximum parking requirements, allowing reductions in off-street parking requirements in cases such as being adjacent or close to a transit stop helps manage parking and supports the use of transit. Some of the larger jurisdictions already have language similar to the recommended language below.

#### Modification of Off-Street Parking Requirements

The applicant may propose a parking space standard that is different than the standard in Section [ ], for review and action by the [Community Development Director] through a [variance procedure], pursuant to [ ]. The applicant's proposal shall consist of a written request, and a parking analysis prepared by a qualified professional. The parking analysis, at a minimum, shall assess the average parking demand and available supply for existing and proposed uses on the subject site; opportunities for shared parking with other uses in the vicinity; existing public parking in the vicinity; transportation options existing or planned near the site, such as frequent transit service, carpools, or private shuttles; and other relevant factors. The [Community Development Director] may reduce the off-street parking standards for sites with one or more of the following features:

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<sup>9</sup> While existing development code language may not include maximum off-street parking requirements, there are some cases where jurisdictions do not require off-street parking (e.g., in parts of Downtown Astoria), which is an even more robust measure for managing parking and encouraging transit. However, it is understood that this strategy is only appropriate and effective in the densest, most urbanized parts of the SETD service area.

- A. Site has a transit stop with existing or planned frequent transit service (30-minute headway or less) located adjacent to it, and the site's frontage is improved with a transit stop shelter, consistent with the standards of the applicable transit service provider: Allow up to a 20 percent reduction to the standard number of automobile parking spaces;
- B. Site has dedicated parking spaces for carpool/vanpool vehicles: Allow up to a 10 percent reduction to the standard number of automobile parking spaces;
- C. Site has dedicated parking spaces for motorcycle and/or scooter or electric carts: Allow reductions to the standard dimensions for parking spaces and the ratio of standard to compact parking spaces;
- D. Available on-street parking spaces adjacent to the subject site in amounts equal to the proposed reductions to the standard number of parking spaces.
- E. Site has more than the minimum number of required bicycle parking spaces: Allow up to a 10 percent reduction to the number of automobile parking spaces.

### **11. Parking Area Landscaping**

Parking area landscaping is a significant, yet perhaps unappreciated, element in creating an attractive environment for walking and taking transit. While most jurisdictions have established requirements for landscaping (or "screening") around the perimeter of parking areas, not every development code has provisions regarding internal landscaping. Internal parking area landscaping breaks up large areas of pavement and, along with walkways, provides an inviting and less intimidating experience of crossing a parking area to access a sidewalk and a transit stop.

The following recommended language addresses both perimeter and internal parking area landscaping.

**Parking Lot Landscaping.** All of the following standards shall be met for each parking lot or each parking bay where a development contains multiple parking areas:

- A. A minimum of [10] percent of the total surface area of all parking areas, as measured around the perimeter of all parking spaces and maneuvering areas, shall be landscaped. Such landscaping shall consist of canopy trees distributed throughout the parking area. A combination of deciduous and evergreen trees, shrubs, and ground cover plants is required. The trees shall be planned so that they provide [a partial / # percent] canopy cover over the parking lot within [#] years. At a minimum, one tree per [12] parking spaces on average shall be planted over and around the parking area.
- B. All parking areas with more than [20] spaces shall provide landscape islands with trees that break up the parking area into rows of not more than [10-12] contiguous parking spaces. Landscape islands and planters shall have dimensions of not less than [48]

square feet of area and no dimension of less than [6] feet, to ensure adequate soil, water, and space for healthy plant growth;

- C. All required parking lot landscape areas not otherwise planted with trees must contain a combination of shrubs and groundcover plants so that, within [2] years of planting, not less than [50-75] percent of that area is covered with living plants; and
- D. Wheel stops, curbs, bollards or other physical barriers are required along the edges of all vehicle-maneuvering areas to protect landscaping from being damaged by vehicles. Trees shall be planted not less than [2] feet from any such barrier.
- E. Trees planted in tree wells within sidewalks or other paved areas shall be installed with root barriers, consistent with applicable nursery standards.

**Screening Requirements.** Screening is required for outdoor storage areas, unenclosed uses, and parking lots, and may be required in other situations as determined by the [City/County decision body]. Landscaping shall be provided pursuant with the standards of subsections - , below:

- A. Parking Lots. The edges of parking lots shall be screened to minimize vehicle headlights shining into adjacent rights-of-way and residential yards. Parking lots abutting sidewalk or walkway shall be screened using a low-growing hedge or low garden wall to a height of between [3] feet and [4] feet.

**Maintenance.** All landscaping shall be maintained in good condition, or otherwise replaced by the property owner.

## ***Bicycle Parking***

### ***12. Minimum Bicycle Parking Requirements***

In addition to generally encouraging active transportation and addressing TPR provisions<sup>10</sup>, establishing minimum bicycle parking requirements also supports the use of transit, particularly when customers are riding bicycles to a transit stop.

The recommended language below is a comprehensive set of provisions that establishes not just requirements for the minimum number of bicycle parking spaces but direction for location and design. There is also the option to establish numbers of parking spaces and design specific to short term and long term parking.

The larger jurisdictions tend to have at least basic bicycle parking provisions in place. For these jurisdictions, the recommended language provides ideas for expanding and strengthening basic provisions. For the smaller jurisdictions, adopting at least minimum parking space requirements is

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<sup>10</sup> OAR 660-012-0045(3)(a)

necessary to comply with TPR requirements, and adopting at least some of the provisions regarding location and design is advised.

### **Bicycle Parking**

- A. **Standards.** Bicycle parking spaces shall be provided with new development and where a change of use occurs, at a minimum, based on the standards in Table \_\_\_\_ . Where an application is subject to Conditional Use Permit approval or the applicant has requested a reduction to an automobile-parking standard, pursuant with Subsection [ \_\_\_\_ ], the [City/County decision body] may require bicycle parking spaces in addition to those in Table \_\_\_\_ .

<b>Table ____</b>		<b>Long and Short Term Bicycle Parking</b>
<b>Minimum Required Bicycle Parking Spaces</b>		
<b>Use</b>	<b>Minimum Number of Spaces</b>	<b>(As % of Minimum Required Bicycle Parking Spaces)</b>
<b>Multifamily Residential</b> (required for 4 or more dwelling units)	2 spaces per 4 dwelling units	75% long term 25% short term
<b>Commercial</b>	2 spaces per primary use or 1 per 5 vehicle spaces, whichever is greater	25% long term 75% short term
<b>Industrial</b>	2 spaces per primary use or 1 per 10 vehicle spaces, whichever is greater	25% long term 75% short term
<b>Schools</b> (all types)	2 spaces per classroom	50% long term 50% short term
<b>Institutional Uses and Places of Worship</b>	2 spaces per primary use or 1 per 10 vehicle spaces, whichever is greater	50% long term 50% short term
<b>Parks</b> (active recreation areas only)	4 spaces	100% short term
<b>Transit Stops</b>	2 spaces	100% short term

Table ____		Long and Short Term Bicycle Parking
Minimum Required Bicycle Parking Spaces		
Use	Minimum Number of Spaces	(As % of Minimum Required Bicycle Parking Spaces)
Transit Centers	4 spaces or 1 per 10 vehicle spaces, whichever is greater	50% long term 50% short term
Other Uses	2 bike spaces per primary use or 1 per 10 vehicle spaces, whichever is greater	50% long term 50% short term

### **B. Design and Location.**

1. All bicycle parking shall be securely anchored to the ground or to a structure.
2. All bicycle parking shall be well lighted.
3. All bicycle parking shall be designed so that bicycles may be secured to them without undue inconvenience, including being accessible without removing another bicycle. [Bicycle parking spaces shall be at least six (6) feet long and two-and-one-half (2 ½) feet wide, and overhead clearance in covered spaces should be a minimum of seven (7) feet. A five (5) foot aisle for bicycle maneuvering should be provided and maintained beside or between each row/ rack of bicycle parking.]
4. Bicycle parking racks shall accommodate locking the frame and both wheels using either a cable or U-shaped lock.
5. Direct access from the bicycle parking area to the public right-of-way shall be provided at-grade or by ramp access, and pedestrian access shall be provided from the bicycle parking area to the building entrance.
6. Bicycle parking shall not impede or create a hazard to pedestrians or vehicles, and shall not conflict with the vision clearance standards of Section [ \_\_\_\_ ].
7. All bicycle parking should be integrated with other elements in the planter strip when in the public right-of-way.
8. Short-term bicycle parking.
  - a. Short-term bicycle parking shall consist of a stationary rack or other approved structure to which the bicycle can be locked securely.
  - b. If more than 10 short-term bicycle parking spaces are required, at least 50% of the spaces must be sheltered. Sheltered short-term parking consists of a minimum 7-foot overhead clearance and sufficient area to completely cover all bicycle parking

and bicycles that are parked correctly.

- c. Short-term bicycle parking shall be located within 50 feet of the main building entrance or one of several main entrances, and no further from an entrance than the closest automobile parking space.
  9. Long-term bicycle parking. Long-term bicycle parking shall consist of a lockable enclosure, a secure room in a building on-site, monitored parking, or another form of sheltered and secure parking.
- C. Exemptions.** This Section does not apply to single-family and duplex housing, home occupations, and agricultural uses. The [City/County decision-making body] may exempt other uses upon finding that, due to the nature of the use or its location, it is unlikely to have any patrons or employees arriving by bicycle.
- D. Hazards.** Bicycle parking shall not impede or create a hazard to pedestrians or vehicles, and shall be located so as to not conflict with the vision clearance standards of Section [ ].

## **Urban Form**

### **13. Maximum Building Setbacks**

Buildings that are built to the front property line, or close to it, are recognized as a key urban design element in creating pedestrian-friendly, walkable environments. One mechanism for achieving building presence on the street frontage is establishing maximum front yard setbacks, requiring buildings to be located no more than a certain distance from the right-of-way. Maximum setbacks in commercial areas typically vary from 0 to 10 feet. A related but slightly less powerful mechanism is establishing no minimum front yard setbacks, allowing buildings to be located up to the right-of-way but also allowing them to be set further back, with no limit on that distance. Most of the jurisdictions have established no minimum front yard setbacks in several of their commercial zones.

Either to build upon existing provisions (no minimum setbacks) or to add provisions where none exist, the following language is recommended for integration into development code sections in neighborhood, general, and central commercial zones. These zones feature services that are likely to be popular destinations for transit trips and, thus, are likely to be locations for transit stops.

#### Development Standards.

#### Setback Requirements.

1. Minimum front yard setback: none
2. Maximum front yard setback: [0-10] feet

### **14. Pedestrian Amenities in Front Yard Setbacks**

While good urban design generally dictates bringing buildings up to the sidewalk, another urban design element that plays a role in creating pedestrian-friendly environments is allowing for pedestrian-

oriented amenities in the front yard setback. Some of the larger jurisdictions allow for this in targeted areas of the community. It is recommended that the language below supplement language regarding maximum setbacks proposed in the previous subsection.

The [decision body] may allow a greater front yard setback when the applicant proposes extending an adjacent sidewalk or plaza for public use, or some other pedestrian amenity is proposed between the building and public right-of-way, subject to [Site Design/Development Review] approval.

### **15. Parking Between the Building and the Street**

Prohibiting parking in the front yard setback is another variation on the theme of creating pedestrian-friendly street frontage environments. Whereas maximum front yard setbacks and pedestrian amenities in these setbacks may be most appropriate for a limited set of zones, prohibiting parking between buildings and the adjacent street is a way of creating more inviting, accessible, and safer connections between buildings and transit stops, regardless of zone. Some of the jurisdictions already have code provisions along these lines, but it is generally recommended that the following language be adopted into the parking section of the development code.

**Parking and Loading Area Development Requirements.** All parking and loading areas required under this ordinance, except those for a detached single-family dwelling on an individual lot or unless otherwise noted, shall be developed and maintained as follows:

- A. Location on site. Required yards adjacent to a street shall not be used for parking and loading areas unless otherwise specifically permitted in this ordinance. Side and rear yards that are not adjacent to a street may be used for such areas when developed and maintained as required in this ordinance.

### **16. Maximum Block Length**

Setting limits on block length, in conjunction with requirements for pedestrian/bicycle access ways, supports greater connectivity, which is a cornerstone of a pedestrian-friendly environment. While most of the jurisdictions have existing provisions regarding block length, many of the maximum regulations appear high and may reflect more rural and suburban-oriented development conditions in these communities. Given that, it is recommended that the jurisdictions consider the following block length standards for urban residential, commercial, and industrial zones, ideally incorporating them into a code subsection on street connectivity (vehicle access and circulation section) or street layout (land division chapter).

**Street Connectivity and Formation of Blocks.** In order to promote efficient vehicular and pedestrian circulation throughout the city, subdivisions and site developments shall be served by an interconnected street network, pursuant with the standards in subsections (a) through (d) below (distances are measured from the edge of street rights-of-way). Where a street connection cannot be made due to physical site

constraints, approach spacing/access management requirements, or similar restrictions, where practicable, a pedestrian access way connection shall be provided pursuant to [ ].

- A. Residential zones: Minimum of [200] foot block length and maximum of [600] length; maximum [1,400] feet block perimeter
- B. [Downtown/Central Commercial] zone: Minimum of [200] foot length and maximum of [400] foot length; maximum [1,200] foot perimeter
- C. [General Commercial zone and Light Industrial zone]: Minimum of [100] foot length and maximum of [600] foot length; maximum [1,400] foot perimeter
- D. Not applicable in General Industrial zone

### **Development Code Consistency**

There are varying levels of consistency between the recommended development code language presented in this memorandum and existing Clatsop County, Astoria, Warrenton, Seaside, and Cannon Beach development code provisions. It is not surprising that there is generally more consistency in the larger jurisdictions, which tend to have larger, denser urban areas and, thus, have had a greater need for urban-oriented development code language, and have had opportunities to develop this language through State grant funded planning processes. However, even these jurisdictions can improve the transit orientation of their communities by adopting recommended development code language where there are “gaps,” either as new code sections or as modifications to existing code sections. As was discussed regarding policies, integrating this recommended language could be dovetailed with a TSP update or other legislative amendment process.

A summary assessment of development code consistency is provided in Table 2. Relevant development code passages from each jurisdiction are included in Appendix B.



**Table 2: Assessment of Development Code Consistency**

		Clatsop County <sup>11</sup>	Astoria <sup>12</sup>	Warrenton <sup>13</sup>	Seaside <sup>14</sup>	Cannon Beach <sup>15</sup>
<b>Coordination with Transit Agencies</b>						
1.	Pre-application conference	Partial	Yes	No	No	No
2.	Application review	Partial	Partial	Partial	No	No
3.	Hearing notice	No	Yes	Partial	No	No
<b>Access to Transit and Supportive Facilities</b>						
<b>Site Access</b>						
4.	Access between the site and the street	Yes	Yes	Yes	Partial	No

<sup>11</sup> Clatsop County Land and Water Development and Use Ordinance and Clatsop County Standards Document:

[http://www.co.clatsop.or.us/sites/default/files/fileattachments/land\\_use\\_planning/page/612/zoning\\_Ordinance\\_80-14\\_codified\\_11-14-15.pdf](http://www.co.clatsop.or.us/sites/default/files/fileattachments/land_use_planning/page/612/zoning_Ordinance_80-14_codified_11-14-15.pdf)

[http://www.co.clatsop.or.us/sites/default/files/fileattachments/land\\_use\\_planning/page/612/standards\\_document\\_codified\\_11-14-15.pdf](http://www.co.clatsop.or.us/sites/default/files/fileattachments/land_use_planning/page/612/standards_document_codified_11-14-15.pdf)

<sup>12</sup> City of Astoria Development Code:

<http://www.astoria.or.us/default.asp?pageid=115&deptid=1>

<sup>13</sup> City of Warrenton Municipal Code, Title 16 (Development Code)

<http://qcode.us/codes/warrenton/>

<sup>14</sup> City of Seaside Zoning Ordinance and City of Seaside Subdivision and Land Partitioning Ordinance

[http://www.cityofseaside.us/sites/default/files/docs/ZONINGORDINANCE%20MASTER2004\\_0.pdf](http://www.cityofseaside.us/sites/default/files/docs/ZONINGORDINANCE%20MASTER2004_0.pdf)

<http://www.cityofseaside.us/sites/default/files/docs/Land%20Division%20Ord.%2074-36.pdf>

<sup>15</sup> City of Cannon Beach Municipal Code, Title 16 (Subdivisions) and Title 17 (Zoning)

<http://www.qcode.us/codes/cannonbeach/>

		<b>Clatsop County<sup>11</sup></b>	<b>Astoria<sup>12</sup></b>	<b>Warrenton<sup>13</sup></b>	<b>Seaside<sup>14</sup></b>	<b>Cannon Beach<sup>15</sup></b>
5.	Access to transit stop and supportive facilities	Partial	Partial	Partial	No	No
<b>Area Access</b>						
6.	Access to transit stops from beyond the site	Yes	Yes	Yes	Partial	No
<b>Other Transit-Related Provisions</b>						
<b>Vehicle Parking</b>						
7.	Transit facilities in parking areas	Partial	No	No	No	No
8.	Preferential parking for employee ridesharing	Yes	Partial	No	No	No
9.	Maximum parking requirements	No	Partial	No	No	No
10.	Reduced parking requirements	Yes	Yes	No	No	No
11.	Parking area landscaping	Partial	Yes	Yes	No	Partial

		Clatsop County <sup>11</sup>	Astoria <sup>12</sup>	Warrenton <sup>13</sup>	Seaside <sup>14</sup>	Cannon Beach <sup>15</sup>
<b><i>Bicycle Parking</i></b>						
12.	Minimum requirements	Yes	Yes	Partial	No	No
<b><i>Urban Form</i></b>						
13.	Maximum building setbacks	No	Partial	Partial	Partial	Partial
14.	Pedestrian amenities in front yard setbacks	No	Partial	Partial	No	No
15.	Parking between the building and the street	Partial	Yes	No	No	Partial
16.	Maximum block length	Partial	Yes	Partial	Partial	No

## Appendix A: Applicable Existing Policies

*Note: Where numbering or lettering of objectives or policies is not provided in the original document, it has been added here [in brackets] to aid in referencing.*

### **Clatsop County Comprehensive Plan, Goals and Policies (Last Amended 2015)**

#### **GOAL 3: Increase the convenience and availability of pedestrian and bicycle modes.**

Policy 3a: Identify improvements (e.g., street lighting, bike parking) that complement pedestrian and bicycle facilities such as sidewalks and bike lanes and that encourage more use of these facilities.

Policy 3c: Enhance way finding signage for those walking and biking, directing them to bus stops, key routes and destinations, and tsunami evacuation routes.

Policy 3e: Identify necessary changes to the land development code to improve connectivity between compatible land uses for pedestrian and bicycle trips.

#### **GOAL 4: Coordinate countywide transit services, facilities, and improvements with local jurisdictions that encourage a higher level of ridership.**

Policy 4a: Assist in identifying potential locations for designated park-and-ride lots.

Policy 4b: Assist in identifying areas that support additional transit services, and coordinate with transit providers to improve the coverage, quality and frequency of services

Policy 4c: Assist in identifying improvements (e.g., sidewalk and bicycle connections, shelters, benches) that complement transit facilities such as bus stops and that encourage higher usage of transit.

#### **GOAL 5: Provide an equitable, balanced and connected multi-modal transportation system.**

Policy 5a: Identify new or improved transportation connections to enhance system efficiency.

#### **GOAL 6: Enhance the health and safety of residents.**

Policy 6c: Identify improvements to address high collision locations and improve safety for walking, biking and driving trips in the county.

Policy 6d: Enhance existing highway crossings for walking and biking users.

Policy 6e: Identify deficient locations in the county where enhanced street crossings for walking and biking users are needed.

#### **GOAL 7: Foster a sustainable transportation system.**

Policy 7d: Identify areas where alternative land use types would significantly shorten trip lengths or reduce the need for motor vehicle travel within the county.

**GOAL 9: Coordinate with local and state agencies and transportation plans.**

Policy 9d: Coordinate regional project development and implementation with local jurisdictions (e.g., evacuation routes, countywide transit, and jurisdictional transfer of roadways).

**2013 Astoria Transportation System Plan, Volume 2, Section D: Memo 3 – Goals, Objectives, and Evaluation Criteria**

**Goal 1: Health and Safety**

Develop a transportation system that maintains and improves individual health and safety by maximizing active transportation options, public safety and service access, and safe and smooth connect[ion]s for all modes.

Goal 1 Objectives

2. Improve safety and provide safe connections for all modes and meet applicable City and Americans with Disabilities (ADA) standards

**Goal 2: Travel Choices**

**Develop and maintain a well-connected transportation system that offers travel choices, reduces travel distance, improves reliability, and manages congestion for all modes.**

Goal 2 Objectives

5. Increase access to the transportation system for all modes regardless of age, ability, income, and geographic location

**Goal 3: Economic Vitality**

**Support the development and revitalization efforts of the City, Region, and State economies and create a climate that encourages growth of existing and new businesses.**

Goal 3 Objectives

5. Provide transportation facilities that support existing and planned land uses

6. Enhance the vitality of the Astoria downtown area by incorporating roadway design elements for all modes

7. Ensure that all new development contributes a fair share toward on-site and off-site transportation system improvements

#### **Goal 4: Livability**

**Customize transportation solutions to suit the local context while providing a system that supports active transportation, promotes public health, facilitates access to daily needs and services, and enhances the livability of the Astoria neighborhoods and business community.**

##### Goal 4 Objectives

4. Design streets to serve the widest range of users, support adjacent land uses, and increase livability
5. Enhance the quality of life in commercial areas and in neighborhoods

#### **Goal 5: Sustainability**

**Provide a sustainable transportation system that meets the needs of present and future generations and is environmentally, fiscally and socially sustainable.**

##### Goal 5 Objectives

1. Support travel options that allow individuals to reduce single-occupant vehicle trips
4. Support and encourage transportation system management (TSM) and transportation demand management (TDM) solutions to congestion

#### **Goal 7: Compatibility**

**Develop a transportation system that is consistent with the City's Comprehensive Plan and that is coordinated with County, State, and Regional plans.**

##### Goal 7 Objectives

1. Coordinate and cooperate with adjacent jurisdictions and other transportation agencies to develop transportation projects that benefit the City, Region, and State as a whole
2. Work collaboratively with other jurisdictions and agencies to ensure the transportation system functions seamlessly
3. Coordinate with other jurisdictions and community organizations to develop and distribute transportation-related information

## **2004 Warrenton Transportation System Plan**

### **Goal 1: Mobility**

**Develop a multimodal transportation system that serves the travel needs of Warrenton residents, businesses, visitors, and freight transport.**

Objectives:

[Objective 5] Safely, efficiently, and economically move motor vehicles, pedestrians, bicyclists, transit, trucks, and trains to and through Warrenton.

[Objective 7] Encourage development patterns that offer connectivity and mobility options for members of the community.

### **Goal 3: Coordination**

**Maintain a TSP that is consistent with the goals and objectives of Warrenton, Clatsop County, and the State.**

Objectives:

[Objective 2] Coordinate land use and transportation decisions to efficiently use public infrastructure investments to:

- Maintain the mobility and safety of the roadway system
- Foster compact development patterns
- Encourage the availability and use of transportation alternatives
- Enhance livability and economic competitiveness

### **Goal 4: Public Transportation**

**Work to improve cost-effective and safe public transportation through and within Warrenton.**

Objectives:

[Objective 1] Encourage a carpooling program for City employees and others to increase vehicle occupancy and minimize energy consumption.

[Objective 2] Work with the Sunset Empire Transportation District (SETD) to develop transit systems and stations and related facilities in convenient and appropriate locations that adequately and efficiently serve resident and employee needs.

[Objective 3] Work to improve the signage and amenities at transit stops and stations.

[Objective 4] Work with SETD to expand transit service as necessary during summer months of peak travel.

#### **Goal 5: Pedestrian and Bicycle Facilities**

**Provide for an interconnected system of pedestrian and bicycle facilities in Warrenton to serve commuters and recreational users.**

Objectives:

[Objective 11] Develop safe and convenient pedestrian and bicycle systems that link all land uses, provide connections to transit facilities, and provide access to publicly owned land intended for general public use, such as the beach or park facilities.

#### **Goal 6: Accessibility**

**Provide a transportation system that serves the needs of all members of the community.**

Objectives:

[Objective 1] Coordinate with SETD to encourage programs that serve the needs of the transportation disadvantaged.

[Objective 2] Provide for the transportation disadvantaged by complying with State and Federal regulations and cooperating with SETD and other agencies to provide transportation services for the disadvantaged.

[Objective 3] Upgrade existing transportation facilities and work with public transportation providers to provide services that improve access for all users.

#### **Goal 7: Environment**

**Provide a transportation system that balances transportation services with the need to protect the environment and significant natural features.**

Objectives:

[Objective 2] Encourage use of alternative modes of transportation and encourage development that minimizes reliance on the automobile.

#### **Goal 8: System Preservation**

**Work to ensure that development does not preclude the construction of identified future transportation improvements, and that development mitigates the transportation impacts it generates when appropriate.**



**Objectives:**

[Objective 1] Require developers to aid in the development of the transportation system by dedicating or reserving needed rights-of-way, by constructing half- or full-street improvements needed to serve new development, and by constructing off-street pedestrian, bicycle and transit facilities when appropriate.

[Objective 2] Consider transportation impacts when making land use decisions, and consider land use impacts (in terms of land use patterns, densities, and designated uses) when making transportation-related decisions.

**Goal 11: Safety**

**Provide a transportation system that maintains adequate levels of safety for all users.**

**Objectives:**

[Objective 2] Work to improve the safety of rail, bicycle, and pedestrian routes and crossings.

[Objective 3] Identify safe connections for vehicles, bicycles, and pedestrians across US 101.

**2010 City of Seaside Transportation System Plan****Goal 1: Safety for all modes**

**Provide a transportation system that maintains adequate levels of safety for all users.**

**Policies:**

[Policy 2] Address bicycle and pedestrian safety at known problem areas.

**Goal 2: Access for all modes**

**Provide a transportation system that allows all users to access destinations throughout Seaside.**

**Goal 3: Mobility**

**Provide a viable transportation system that meets the needs of local residents, visitors, and the freight industry. The transportation system would allow different users of the network a reliable means of getting from origins to destinations.**

**Policies:**

[Policy 1] Provide a viable transportation system that accommodates future growth and addresses the regional and local travel needs of residents, businesses, and industries.

[Policy 2] Accommodate future and existing transit.

#### **Goal 4: Connectivity**

**Provide an interconnected transportation system that provides route choices for users.**

Policies:

[Policy 2] Improve bicycle and pedestrian connectivity by addressing gaps in the current network.

[Policy 3] Provide for and support a transit system that serves popular local and regional origins and destinations.

### **City of Cannon Beach Comprehensive Plan (Last Amended 2012)**

#### TRANSPORTATION POLICIES

1. The city should maintain a local bus service, at an appropriate level of service, to provide for the transportation requirements of persons without vehicles, to reduce vehicular congestion particularly during peak tourist periods, and to conserve energy. The local bus service should be designed to provide convenient connection to available intercity and regional bus service.
5. The City supports maintaining the existing Highway 101 cross section within the City's urban growth boundary. The City also recognizes the need to make safety improvements to the highway such as improved vehicular safety at the north entrance to the City and improved merging lanes at the Sunset Boulevard interchange. The City is opposed to highway widening that would result in the creation of a passing lane or a four lane cross section within the urban growth boundary.
9. The city will implement the action elements of its Americans with Disabilities Act transition plan.
10. The city will continue to emphasize the use of land-use techniques and appropriate pedestrian, bicycle and transit improvements as a means of reducing the demand for motor vehicle trips.

## Appendix B: Applicable Existing Development Code

### Coordination with Transit Agencies

#### 1. Pre-Application Conference

##### ***Clatsop County***

Section 2.045 Pre-application Conference.

(2) The Director shall invite applicable service agencies, such as Clatsop County Public Works and the Oregon Department of Transportation, to the pre-application conference if it is determined that the agencies' facilities or services may be significantly impacted by the proposed development.

##### ***Astoria***

9.010. APPLICATION INFORMATION AND PROCEDURES.

J. Coordinated Review.

1. In addition to the general notice provisions set forth in Section 9.020, the City shall invite the Oregon Department of Transportation (ODOT) and/or any other transportation facility and service providers potentially affected by the application to pre-application conferences, as applicable. The City shall provide notice of a public hearing or an administrative action to potentially affected transportation facility and service providers.

##### ***Warrenton***

16.208.070 General Provisions.

C. Pre-Application Conferences.

1. Participants. When a pre-application conference is required, the applicant shall meet with the Community Development Director or his/her designee(s).

##### ***Seaside***

Section 3.110 PD - PLANNED DEVELOPMENT

3.114 Planned Development Procedures. There shall be a three-stage review process for planned developments consisting of Pre-application (stage one), Preliminary Approval (stage two), and Final Approval (stage three).

Section 3.300 SENSITIVE DEVELOPMENT (SD) OVERLAY ZONE

Section 3.308 Additional Provisions

A pre-application conference with the Planning Director is required prior to submission of the conceptual and final development plan.

***Cannon Beach***

17.44.040 Design review plan—Review procedures.

The following procedures shall be used in reviewing design review plans:

A. Preapplication Conference. Prior to applying for design review plan approval, applicants shall meet with the city manager, or a designee, and present a preliminary plan which shall contain in an approximate manner the information required on a design review plan application.

**2. Application Review*****Clatsop County***

Section 2.080 Referral and Review of the Development Permit Applications.

(1) Transmit one copy of the application, or appropriate parts of the application, to appropriate referral agencies for review and comment and for determination of compliance with state and federal requirements.

***Astoria***

9.010. APPLICATION INFORMATION AND PROCEDURES.

J. Coordinated Review.

1. In addition to the general notice provisions set forth in Section 9.020, the City shall invite the Oregon Department of Transportation (ODOT) and/or any other transportation facility and service providers potentially affected by the application to pre-application conferences, as applicable. The City shall provide notice of a public hearing or an administrative action to potentially affected transportation facility and service providers.

2. Coordinated review of applications with ODOT and/or any other applicable transportation facility and service providers may also occur through Traffic Impact Study provisions, pursuant to Subsection 3.015.A.5.

***Warrenton***

16.208.040 Type II Procedure (Administrative)

C. Notice of Application for Type II Administrative Decision.

1. Before making a Type II administrative decision, the Community Development Director shall mail notice to:

a. All owners of record of real property within 100 feet of the subject area not less than 20 days prior to the decision date;

- d. Any person who submits a written request to receive a notice; and
- e. Any governmental agency which is entitled to notice under an intergovernmental agreement entered into with the City. The City may notify other affected agencies, as appropriate, for review of the application. ODOT shall be notified when there is a land division abutting a state facility for review of, comment on, and suggestion of conditions of approval for, the application.

16.208.070 General Provisions.

D. Applications.

3. Check for Acceptance and Completeness.

b. Completeness.

iv. Coordinated Review. When required by this Code, or at the direction of the Community Development Director, the City shall submit the application for review and comment to ODOT and other applicable City, county, state, and federal review agencies.

***Seaside***

Section 10.030 NOTICE OF PENDING PLANNING DIRECTOR DECISION

Section 10.031

2. Notice of quasi-judicial land use actions shall be provided to the applicant and to owners of record of property on the most recent property tax assessment roll which is located within 100 feet of the property which is the subject of the notice, or within 500 feet of property which is the subject of the notice where the subject property is within a farm or forest zone.

***Cannon Beach***

**Chapter 17.92 ADMINISTRATIVE PROVISIONS**

17.92.010 Development permits.

A. Permit Required.

3. Administrative review of Type 3 development permits shall follow the following procedure:

b. A notice of the proposed development shall be mailed to property owners within one hundred feet of the exterior boundary of the subject property.

**3. Hearing Notice**

***Clatsop County***

Section 2.110 Mailed Notice of a Public Hearing.

(2) Notice of the hearings governed by this section shall be provided:

(A) To the applicant; and

(B) To owners of record ...; and

(F) To any neighborhood or community organization recognized by the governing body and whose boundaries include the site; and

(G) To the Oregon Department of Transportation (ODOT)...

### ***Astoria***

9.010. APPLICATION INFORMATION AND PROCEDURES.

9.020. PUBLIC NOTICE.

B. Mailed Notice - Distribution, Time Requirements.

1. Mailed notice shall be sent to property owners within the following distances from the exterior boundary of the subject property...

### ***Warrenton***

16.208.050 Type III Procedure (Quasi-Judicial).

C. Notice of Hearing.

1. Mailed Notice. Notice of a Type III application hearing (or appeal) or Type I or II appeal hearing shall be given by the Community Development Director in the following manner:

a. At least 20 days before the hearing date, notice shall be mailed to:

i. The applicant and all owners or contract purchasers of record of the property which is the subject of the application;

ii. All property owners of record within 200 feet of the site (N/A for Type I appeal);

iii. Any governmental agency which has entered into an intergovernmental agreement with the City, which includes provision for such notice, or who is otherwise entitled to such notice. ODOT shall be notified when there is a land division abutting a state facility for review of, comment on, and suggestion of conditions of approval for, the application. [Owners of airports shall be notified of a proposed zone change in accordance with ORS 227.175.];

iv. Any neighborhood or community organization recognized by the City Commission and whose boundaries include the property proposed for development;

v. Any person who submits a written request to receive notice;

vi. For appeals, the appellant and all persons who provided testimony; and

- vii. For a land use district change affecting a manufactured home or mobile home park, all mailing addresses within the park, in accordance with ORS 227.175.

### ***Seaside***

#### Section 10.060 NOTICE OF PUBLIC HEARING

Section 10.061 Notice of Public Hearing. When either the Planning Commission or City Council elects or is required to hold a public hearing, notice of public hearing shall be given in the following manner:

2. Notice of public hearings on quasi-judicial land use actions shall be provided to the applicant and to owners of record of property on the most recent property tax assessment roll which is located within 100 feet of the property which is the subject of the notice, or within 500 feet of the property which is the subject of the notice where the subject property is within a farm or forest zone.

### ***Cannon Beach***

#### **Chapter 17.88 PUBLIC DELIBERATIONS AND HEARINGS**

17.88.010 Procedure for mailed notice.

A. Mailed notice shall be sent to property owners within the following distances from the exterior boundary of the subject property...

## **Access to Transit and Supportive Facilities**

### **Site Access**

#### **4. Access Between Site and Street**

### ***Clatsop County***

#### S5.040. PEDESTRIAN AND BICYCLE ACCESS AND CIRCULATION

S5.041. Purpose.

To ensure safe, direct and convenient pedestrian and bicycle circulation, all new development in rural communities, except single family detached housing (i.e., on individual lots), shall provide a continuous pedestrian and/or multi-use pathway system. (Pathways only provide for pedestrian circulation. Multi-use pathways accommodate pedestrians and bicycles.) The system of pathways shall be designed based on the standards in Subsections S5.034(1) and S5.034(2) below:

(1) Continuous Pathways. The pathway system shall extend throughout the development site, and connect to all future phases of development, adjacent trails, public parks and open space areas whenever possible. The developer may also be required to connect or stub pathway(s) to adjacent streets and private property, in accordance with the provisions of S5.033 - Access Control Standards,

and S6.000 - Transportation Improvements and Road Standard Specifications for Design and Construction

(2) Safe, Direct, and Convenient Pathways. Pathways within developments shall provide safe, reasonably direct and convenient connections between primary building entrances, and all adjacent streets based on the following definitions...

### ***Astoria***

#### 3.010. ON-SITE PEDESTRIAN AND BICYCLE ACCESS AND CIRCULATION.

##### C. Standards.

2. Safe, Direct, and Convenient Walkways. Walkways within developments shall provide safe, reasonably direct, and convenient connections between primary building entrances and all adjacent parking areas, open spaces, recreational areas/playgrounds, and public rights-of-way based on all of the following criteria...

### ***Warrenton***

#### 16.120.030 Pedestrian Access and Circulation.

A. Pedestrian Access and Circulation. To ensure safe, direct and convenient pedestrian circulation, all developments, except single-family detached housing, duplexes, or triplexes on individual lots, shall provide a continuous pedestrian and/or multi-use pathway system. (Pathways only provide for pedestrian circulation. Multi-use pathways accommodate pedestrians and bicycles.) The system of pathways shall be designed based on the standards in paragraphs 1 through 3 of this subsection:

1. Continuous Pathways. The pathway system shall extend throughout the development site, and connect to all future phases of development, adjacent trails, public parks and open space areas whenever possible. The developer may also be required to connect or stub pathway(s) to adjacent streets and private property, in accordance with the provisions of Section 16.120.020, Vehicular Access and Circulation, and Chapter 16.136, Public Facilities Standards.

2. Safe, Direct, and Convenient Pathways. Pathways within developments shall provide safe, reasonably direct and convenient connections between primary building entrances and all adjacent streets, based on the following definitions...

### ***Seaside***

#### Section 3.300 SENSITIVE DEVELOPMENT (SD) OVERLAY ZONE

##### Section 3:305 General Development

2. General Development Standards. The conceptual development plan shall ensure compliance with the following criteria:

A. Developable Areas are all areas except identified significant natural resource areas. Dwellings, accessory uses and other uses are to occur within identified building envelopes on each lot.



4. Pedestrian, Bicycle and Other Access ways. Designated paths and trails shall provide pedestrian, bicycle and other accessways which provide routes within the plan boundaries and links to developed facilities adjacent to such boundaries.

Section 4.027 SIDEWALK AND RECREATION TRAILS. Developers shall include and construct the portion of the proposed bike or hiking routes that run through or along the new development property as shown on the City's Comprehensive Plan Transportation Plan Maps. In land division and partitioning approval actions, the Planning Commission may waive the requirement for sidewalks where a bike and/or foot path system would be continued, and would be more appropriate for pedestrians and bicycling transportation.

### ***Cannon Beach***

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## **5. Access Between Site and Transit Stop/Supportive Facilities**

### ***Clatsop County***

S2.202. Minimum Off-Street Parking Space Requirements.

(7) The number of minimum required parking spaces may be reduced by up to 10% if:

(A) The proposal is located within a ¼ mile of an existing or planned transit route, and;

(B) Transit-related amenities such as transit stops, pull-outs, shelters, park-and-ride lots, transit-oriented development, and transit service on an adjacent street are present or will be provided by the applicant.

### ***Astoria***

3.010. ON-SITE PEDESTRIAN AND BICYCLE ACCESS AND CIRCULATION.

C. Standards.

2. Safe, Direct, and Convenient Walkways. Walkways within developments shall provide safe, reasonably direct, and convenient connections between primary building entrances and all adjacent parking areas, open spaces, recreational areas/playgrounds, and public rights-of-way based on all of the following criteria...

ARTICLE 14

GO: GATEWAY OVERLAY ZONE

14.030. OTHER APPLICABLE USE STANDARDS.

C. Access and Parking Design.

2. Building facades and entries should face the adjacent street.

### **Warrenton**

16.120.030 Pedestrian Access and Circulation.

A. Pedestrian Access and Circulation. To ensure safe, direct and convenient pedestrian circulation, all developments, except single-family detached housing, duplexes, or triplexes on individual lots, shall provide a continuous pedestrian and/or multi-use pathway system. (Pathways only provide for pedestrian circulation. Multi-use pathways accommodate pedestrians and bicycles.) The system of pathways shall be designed based on the standards in paragraphs 1 through 3 of this subsection:

1. Continuous Pathways. The pathway system shall extend throughout the development site, and connect to all future phases of development, adjacent trails, public parks and open space areas whenever possible. The developer may also be required to connect or stub pathway(s) to adjacent streets and private property, in accordance with the provisions of Section 16.120.020, Vehicular Access and Circulation, and Chapter 16.136, Public Facilities Standards.
2. Safe, Direct, and Convenient Pathways. Pathways within developments shall provide safe, reasonably direct and convenient connections between primary building entrances and all adjacent streets, based on the following definitions...

16.116.030 Design Standards.

The City's development design standards are for the commercial district along Highway 101, SW Dolphin and SE Marlin Avenues.

A. Orientation of Buildings. Building(s) shall be located on the property with the principal building entrance oriented toward the primary focal point of the property/development.

### **Seaside**

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### **Cannon Beach**

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## **6. Access to Transit Stop From Beyond Site**

### **Clatsop County**

S5.040. PEDESTRIAN AND BICYCLE ACCESS AND CIRCULATION

S5.041. Purpose.

(4) Street Connectivity. Shared use pathways (for pedestrians and bicycles) shall be provided at or near mid-block where the block length exceeds the length required by Section S5.104. Pathways shall also be provided where cul-de-sacs or dead-end streets are planned, to connect the ends of the streets together, to other streets, and/or to other developments.

**Astoria**

## 3.015. TRANSPORTATION STANDARDS.

## D. Transportation Connectivity and Future Street Plans.

## 4. Cul-de-sac Street.

c. The cul-de-sac shall provide a pedestrian and bicycle access way between it and adjacent developable lands. Such access ways shall conform to Section 3.010.B.5.

5. Access Ways. The Community Development Director or Planning Commission, as applicable, in approving a land use application with conditions, may require a developer to provide an access way where the creation of a cul-de-sac or dead-end street is unavoidable and the access way connects the end of the street to another street, a park, or a public access way. Where an access way is required, it shall be not less than ten (10) feet wide and shall consist of a minimum six (6) foot wide paved surface or other all-weather surface approved by the Community Development Director or Planning Commission. Access ways shall be contained within a public right-of-way or public access easement.

## 13.440. BLOCKS.

## ARTICLE 13

## SUBDIVISION AND LAND PARTITION GENERAL PROVISIONS

C. Walkways. The applicant may be required to dedicate and improve ten (10) foot walkways, with at least six (6) feet of all-weather surface, at 330-foot intervals across blocks that exceed the block standards in Table 1 (Spacing Standards) in the Transportation System Plan or to provide access to school, park, or other public areas.

**Warrenton**

## 16.120.030 Pedestrian Access and Circulation.

A. Pedestrian Access and Circulation...

4. Street Connectivity. Pathways (for pedestrians and bicycles) shall be provided at or near mid-block where the block length exceeds the length required by Section 16.120.020. Pathways shall also be provided where cul-de-sacs or dead-end streets are planned, to connect the ends of the streets together, to other streets, and/or to other developments, as applicable. Pathways used to comply with these standards shall conform to all of the following criteria...

**Seaside**

## SUBDIVISION AND LAND PARTITIONING ORDINANCE

## SECTION 37 – BLOCKS

General: The length, width and shape of blocks shall take into account the need for adequate building site size and street width and shall recognize the limitations of the topography. Walkways: The subdivider may be required to dedicate and improve ten foot (10') walkways across blocks over six hundred feet (600') in length or to provide access to school, park, or other public areas.

### ***Cannon Beach***

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## **Other Transit-Related Provisions**

### **Vehicle Parking**

#### **7. Transit Facilities in Parking Areas**

##### ***Clatsop County***

S2.202. Minimum Off-Street Parking Space Requirements.

(7) The number of minimum required parking spaces may be reduced by up to 10% if:

(A) The proposal is located within a ¼ mile of an existing or planned transit route, and;

(B) Transit-related amenities such as transit stops, pull-outs, shelters, park-and-ride lots, transit-oriented development, and transit service on an adjacent street are present or will be provided by the applicant.

##### ***Astoria***

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##### ***Warrenton***

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##### ***Seaside***

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##### ***Cannon Beach***

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#### **8. Preferential Parking for Employee Ridesharing**

##### ***Clatsop County***

S2.210. Design Requirements for Off-Street Parking.

(H) Parking lots for commercial and office uses that have designated employee parking and more than 20 parking spaces shall provide at least 10% of the employee parking spaces (with a minimum of one

space) as preferential long-term carpool and vanpool parking spaces. Preferential carpool and vanpool parking spaces shall be closer to the entrances of the building than other parking spaces, with the exception of ADA accessible parking spaces.

### ***Astoria***

#### **B. Modification of Parking Space Requirements.**

1. The applicant may propose a parking space standard that is different than the standard in Section 7.100, for review and action by the Community Development Director through a Class 1 variance, pursuant to Article 9. The applicant's proposal shall consist of a written request, and a parking analysis prepared by a qualified professional. The parking analysis, at a minimum, shall assess the average parking demand and available supply for existing and proposed uses on the subject site; opportunities for shared parking with other uses in the vicinity; existing public parking in the vicinity; transportation options existing or planned near the site, such as frequent bus service, carpools, or private shuttles; and other relevant factors. The Community Development Director may reduce the off-street parking standards for sites with one or more of the following features:

- a. Site has a bus stop with existing or planned frequent transit service (15- minute headway or less) located adjacent to it, and the site's frontage is improved with a bus stop waiting shelter, consistent with the standards of the applicable transit service provider: Allow up to a 20 percent reduction to the standard number of automobile parking spaces;
- b. Site has dedicated parking spaces for carpool/vanpool vehicles: Allow up to a 10 percent reduction to the standard number of automobile parking spaces; City of Astoria Development Code 7.110
- c. Site has dedicated parking spaces for motorcycle and/or scooter or electric carts: Allow reductions to the standard dimensions for parking spaces and the ratio of standard to compact parking spaces;
- d. Available on-street parking spaces adjacent to the subject site in amounts equal to the proposed reductions to the standard number of parking spaces. e. Site has more than the minimum number of required bicycle parking spaces: Allow up to a 10 percent reduction to the number of automobile parking spaces.

### ***Warrenton***

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### ***Seaside***

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### ***Cannon Beach***

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## 9. Maximum Parking Requirements

### *Clatsop County*

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### *Astoria*

[parking not required in some zones and locations]

#### 7.062 SPECIAL EXCEPTIONS TO OFF-STREET VEHICLE PARKING REQUIREMENTS.

A. Developed Sites Exemption. Existing buildings which encompass all or a major portion of a lot with little or no possibility of providing off-street parking in compliance with City Code may apply to the Community Development Director for authority to participate in a program whereby, in lieu of providing required off-street parking, annual payments would be made to the City for the purpose of supporting mass transit, and development of public parking. As an alternative to making annual cash payments, the applicant may, with approval of the City Council, provide a public service of equal or greater value than the cash payment.

C. Downtown Area. Uses in the C-4 Zone (Central Commercial) and uses between 7th and 14th Streets in the A-2 (Aquatic Two Development) and S-2A Zones (Tourist Oriented Shoreland) are not required to provide off-street parking.

Exception: In the C-4 Zone, off-street parking and loading requirements shall apply to Lots 1, 2, 3, Block 40, McClure's Addition (south side of 600 Block Duane Street) as required by Amendment A99-02, Ordinance 99-21.

### *Warrenton*

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### *Seaside*

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### *Cannon Beach*

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## 10. Reduced Off-Street Parking Requirements

### *Clatsop County*

S2.202. Minimum Off-Street Parking Space Requirements.

(7) The number of minimum required parking spaces may be reduced by up to 10% if:

(A) The proposal is located within a ¼ mile of an existing or planned transit route, and;

(B) Transit-related amenities such as transit stops, pull-outs, shelters, park-and-ride lots, transit-oriented development, and transit service on an adjacent street are present or will be provided by the applicant.

### ***Astoria***

#### ARTICLE 7 OFF-STREET PARKING AND LOADING

##### 7.062 SPECIAL EXCEPTIONS TO OFF-STREET VEHICLE PARKING REQUIREMENTS.

B. Modification of Parking Space Requirements. 1. The applicant may propose a parking space standard that is different than the standard in Section 7.100, for review and action by the Community Development Director through a Class 1 variance, pursuant to Article 9. The applicant's proposal shall consist of a written request, and a parking analysis prepared by a qualified professional. The parking analysis, at a minimum, shall assess the average parking demand and available supply for existing and proposed uses on the subject site; opportunities for shared parking with other uses in the vicinity; existing public parking in the vicinity; transportation options existing or planned near the site, such as frequent bus service, carpools, or private shuttles; and other relevant factors. The Community Development Director may reduce the off-street parking standards for sites with one or more of the following features:

- a. Site has a bus stop with existing or planned frequent transit service (15- minute headway or less) located adjacent to it, and the site's frontage is improved with a bus stop waiting shelter, consistent with the standards of the applicable transit service provider: Allow up to a 20 percent reduction to the standard number of automobile parking spaces;
- b. Site has dedicated parking spaces for carpool/vanpool vehicles: Allow up to a 10 percent reduction to the standard number of automobile parking spaces;
- c. Site has dedicated parking spaces for motorcycle and/or scooter or electric carts: Allow reductions to the standard dimensions for parking spaces and the ratio of standard to compact parking spaces;

### ***Warrenton***

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### ***Seaside***

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### ***Cannon Beach***

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## 12. Parking Area Landscaping

### *Clatsop County*

S2.210. Design Requirements for Off-Street Parking. Parking spaces shall be a minimum of 9 feet by 19 feet in size. Driveways and turnarounds providing access to parking areas shall conform to the following provisions:

(5) The following off-street parking development and maintenance shall apply in all cases, except single and two family dwellings:

(E) Where parking abuts a public right-of-way, a wall or screen planting shall be provided sufficient to screen the parking facilities but without causing encroachment into vision clearance areas. Except in residential areas, where a parking facility or driveway is serving other than a one or two family dwelling and is located adjacent to residential, agricultural or institutional uses, a site obscuring fence, wall or evergreen hedge shall be provided on the property line. Such screening shall be maintained in good condition and protected from being damaged by vehicles using the parking area.

### *Astoria*

#### 3.120. LANDSCAPING REQUIREMENTS.

7. Planting areas shall be designed to separate parking lots from the sidewalk and street and shall contain a mixture of trees and shrubs, except where the presence of chairwalls or public utilities makes the planting infeasible, as determined by the City Engineer, in which case concrete, stone, or other manufactured containers may be used.

8. Parking areas with 20 spaces or more shall have a minimum of one landscaping divider per ten (10) parking spaces. Each ten (10) parking spaces shall be bordered by a landscaped area. Such area shall consist of a curbed planter of at least three (3) feet by 16 feet, or at least 48 square feet. Each planter shall contain at least one (1) tree, along with hedge or shrub material.

#### 7.170. LANDSCAPING OF OUTDOOR STORAGE OR PARKING AREAS.

A minimum of 5% of the gross parking lot area shall be designed and maintained as landscaped area, subject to the standards in Sections 3.105 through 3.120. This requirement shall apply to all parking lots with an area of 600 square feet or greater. Approved sight obscuring fences or vegetative buffers shall be constructed where commercial parking lots abut Residential Zones. The minimum 5% landscaping shall be counted as part of the total landscaping required for the property.

### *Warrenton*

#### 16.124.070 New Landscaping.

##### E. Landscape Design Standards



2. **Parking Areas.** A minimum of eight percent of the combined area of all parking areas, as measured around the perimeter of all parking spaces and maneuvering areas, shall be landscaped. Such landscaping shall consist of an evenly distributed mix of shade trees with shrubs and/or groundcover plants. "Evenly distributed" means that the trees and other plants are distributed around the parking lot perimeter and between parking bays to provide a partial canopy. At a minimum, one tree per five parking spaces total shall be planted to create a partial tree canopy over and around the parking area. All parking areas with more than 20 spaces shall include landscape islands with trees to break up the parking area into rows of not more than 12 contiguous parking spaces. All landscaped areas shall have minimum dimensions of four feet by four feet to ensure adequate soil, water, and space for healthy plant growth...

### ***Seaside***

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### ***Cannon Beach***

#### Chapter 17.78 OFF-STREET PARKING

##### 17.78.030 Design standards.

A. The following design requirements shall apply to an off-street parking area consisting of five or more parking spaces:

5. At a minimum, ten percent of the area of the parking lot shall be landscaped. In determining the area of the parking lot and required landscaping the minimum area separation between the building and the parking lot described in subsection (A)(6) of this section shall not be included. The landscaped area of the parking lot shall contain at least one tree for every one hundred seventy-five square feet of landscaping provided. Areas that contain a tree shall have a minimum width of five feet. Any landscaped area shall have a minimum area of fifty square feet.

### **Bicycle Parking**

#### **12. Minimum Requirements**

##### ***Clatsop County***

##### S2.211. Bicycle Parking Requirements

##### ***Astoria***

##### 7.105. BICYCLE PARKING.

##### ***Warrenton***

##### 16.128.040 Bicycle Parking Requirements.

- A. All uses shall provide bicycle parking in conformance with the following standards which are evaluated during development review or site design review.
- B. Number of Bicycle Parking Spaces. A minimum of two bicycle parking spaces per use is required for all uses with more than 10 vehicle parking spaces. The following additional standards apply to specific types of development:
1. Multifamily Residences. Every residential use of four or more dwelling units provides at least one sheltered bicycle parking space for each dwelling unit. Sheltered bicycle parking spaces may be located within a garage, storage shed, basement, utility room or similar area. In those instances in which the residential complex has no garage or other easily accessible storage unit, the bicycle parking spaces may be sheltered from sun and precipitation under an eave, overhang, an independent structure, or similar cover.
  2. Parking Lots. All public and commercial parking lots and parking structures provide a minimum of one bicycle parking space for every 10 motor vehicle parking spaces, with a maximum of 28 bicycle parking spaces per commercial lot.
  3. Schools. Elementary and middle schools, both private and public, provide one bicycle parking space for every 10 students and employees. High schools provide one bicycle parking space for every five students and employees. All spaces should be sheltered under an eave, overhang, or bicycle shelter.

### ***Seaside***

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### ***Cannon Beach***

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### **Urban Form**

## **13. Maximum Building Setbacks**

### ***Clatsop County***

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### ***Astoria***

[Article 2 Zoning: No minimum front yard setback in commercial and industrial zones, except when adjacent to residential zones; minimum setbacks in institutional zone]

2.845. YARDS. The minimum yard requirements in an IN Zone will be as follows:

1. The minimum front yard will be 20 feet.

**Warrenton**

## Chapter 16.40 GENERAL COMMERCIAL (C-1) DISTRICT

## 16.40.040 Development Standards.

B. Setback Requirements.

1. Minimum front yard setback, commercial uses: none except where adjoining a residential zone, in which case it shall be 15 feet. See Section 16.40.050 for maximum front yard setback for commercial uses.

## 16.40.050 Design Standards.

- B. Lots fronting onto U.S. Highway 101 shall have a setback of at least 50 feet between any part of the proposed building and the nearest right-of-way line of U.S. Highway 101.
- D. Maximum front yard setback for commercial buildings in the C-1 zone along Fort Stevens Highway/State Highway 104 shall be 10 feet.

## Chapter 16.44 COMMERCIAL MIXED USE (C-MU) DISTRICT

## 16.44.040 Development Standards.

The following development standards are applicable in the C-MU district:

C. Setback Requirements (Commercial Uses).

1. Minimum front yard setback: none.

**Seaside**

No front yard setback requirements in Resort Commercial C-2, General Commercial C-3, and Central Commercial C-4 zones

## Section 3.070 C-2 COMMERCIAL RESORT

Section 3.075 Standards. In a C-2 Zone, the following standards shall apply:

3. Front Yard: None

## Section 3.080 C-3 COMMERCIAL, GENERAL

Section 3.085 Standards. In a C-3 Zone, the following standards shall apply:

3. Front Yard: None

## Section 3.090 C-4 COMMERCIAL, CENTRAL

Section 3.095 Standards. In a C-4 Zone, the following standards shall apply:

3. Front Yard: None

### ***Cannon Beach***

#### Chapter 17.22 LIMITED COMMERCIAL (C1) ZONE

17.22.050 Standards.

In a C1 zone, the following standards shall apply except as they may be modified through the design review process pursuant to Chapter 17.44:

B. Lot Dimension.

2. Yards. None, except where a lot is adjacent to an R1, R2, R3, or MP zone, the same yard as in the abutting residential zone shall apply.

#### Chapter 17.24 GENERAL COMMERCIAL (C2) ZONE

17.24.050 Standards.

In a C2 zone, the following standards shall apply except as they may be modified through the design review process pursuant to Chapter 17.44:

B. Lot Dimensions.

2. Yards. None, except where adjacent to another zone, a minimum yard of twenty-five feet shall be provided; and where adjacent to a public right-of-way, a minimum yard of ten feet shall be provided

#### Chapter 17.36 INSTITUTIONAL (IN) ZONE

17.36.040 Standards.

In an IN zone, the following standards shall apply except as they may be modified through the design review process pursuant to Chapter 17.44:

A. Setbacks. Structures adjoining another zone or public right-of-way shall be set back twenty-five feet. No parking shall be permitted in this setback.

## **14. Pedestrian Amenities in Front Yard Setbacks**

### ***Clatsop County***

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**Astoria**

## ARTICLE 14

## GO: GATEWAY OVERLAY ZONE

## 14.030. OTHER APPLICABLE USE STANDARDS.

## A. Building Orientation.

1. Development projects should form visually continuous, pedestrian-oriented streetfronts with no vehicle use area between building faces and the street.

a. Exceptions to this requirement may be allowed to form an outdoor space such as a plaza, courtyard, patio, or garden between a building and a sidewalk. Such a larger front yard area should have landscaping, low walls, fencing, railings, a tree canopy, or other site improvements.

**Warrenton**

## 16.116.030 Design Standards.

The City's development design standards are for the commercial district along Highway 101, SW Dolphin and SE Marlin Avenues.

D. Community Amenities. Each building shall contribute to the establishment or enhancement of the community and public spaces by providing at least two community amenities such as: a patio/seating area, water feature, art work or sculpture, clock tower, pedestrian plaza with park benches, open spaces, or other features, such as a park acceptable to the review authority.

**Seaside**

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**Cannon Beach**

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**15. Parking Between Building and Street****Clatsop County**

## S2.204. Off-Street Parking Restrictions.

(3) Except for industrial uses, required parking shall not be located in a required front or side yard setback area abutting a public street, unless there is a five(5) foot sidewalk in accordance with County standards, and a five (5) foot landscaped buffer separating the parking from on street traffic.

**Astoria**

## A-2: AQUATIC TWO DEVELOPMENT ZONE

## 2.540. DEVELOPMENT STANDARDS AND PROCEDURAL REQUIREMENTS.

8. Special siting standards. All buildings shall meet the following special siting standards:

a. Buildings shall be located no closer than 25 feet to a line extending from a point of intersection of a City right-of-way and the shoreline of the Columbia River Estuary, to the pierhead line. The required setback areas shall include open space, publicly accessible walkways, plazas or landscaped areas, where feasible but not parking or storage.

## 7.062 SPECIAL EXCEPTIONS TO OFF-STREET VEHICLE PARKING REQUIREMENTS.

A. Developed Sites Exemption. Existing buildings which encompass all or a major portion of a lot with little or no possibility of providing off-street parking in compliance with City Code may apply to the Community Development Director for authority to participate in a program whereby, in lieu of providing required off-street parking, annual payments would be made to the City for the purpose of supporting mass transit, and development of public parking. As an alternative to making annual cash payments, the applicant may, with approval of the City Council, provide a public service of equal or greater value than the cash payment.

C. Downtown Area. Uses in the C-4 Zone (Central Commercial) and uses between 7th and 14th Streets in the A-2 (Aquatic Two Development) and S-2A Zones (Tourist Oriented Shoreland) are not required to provide off-street parking. Exception...

7.110. PARKING AND LOADING AREA DEVELOPMENT REQUIREMENTS. All parking and loading areas required under this ordinance, except those for a detached single-family dwelling on an individual lot unless otherwise noted, shall be developed and maintained as follows:

A. Location on site. Required yards adjacent to a street, shall not be used for parking and loading areas unless otherwise specifically permitted in this ordinance. Side and rear yards which are not adjacent to a street may be used for such areas when developed and maintained as required in this ordinance.

## ARTICLE 14

### GO: GATEWAY OVERLAY ZONE

#### 14.030. OTHER APPLICABLE USE STANDARDS.

A. Building Orientation.

1. Development projects should form visually continuous, pedestrian-oriented streetfronts with no vehicle use area between building faces and the street.

### **Warrenton**

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**Seaside**

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**Cannon Beach**

## Chapter 17.36 INSTITUTIONAL (IN) ZONE

## 17.36.040 Standards.

In an IN zone, the following standards shall apply except as they may be modified through the design review process pursuant to Chapter 17.44:

A. Setbacks. Structures adjoining another zone or public right-of-way shall be set back twenty-five feet. No parking shall be permitted in this setback.

**16. Maximum Block Length****Clatsop County**

## CHAPTER 5 VEHICLE ACCESS CONTROL AND CIRCULATION.

## S5.033 Access Control Standards.

(10) Street Connectivity and Formation of Blocks Required. In order to promote efficient vehicular and pedestrian circulation throughout the county, land divisions and large site developments, as determined by the Community Development Director, shall produce complete blocks bounded by a connecting network of public and/or private streets, in accordance with the following standards:

(A) Block Length and Perimeter. No block shall be more than 1,000 feet in length between street corner lines unless it is adjacent to an arterial street. The recommended minimum length of blocks along an arterial street is 1,800 feet. An exception to the above standard may be granted, as part of the applicable review process, when blocks are divided by one or more pathway(s); pathways shall be located to minimize out-of-direction travel by pedestrians and may be designed to accommodate bicycles; or where the site's topography or the location of adjoining streets makes it impractical to meet the standard.

**Astoria**

## 13.440. BLOCKS.

B. Size. Block size shall conform to the standards in Table 1 (Spacing Standards) of the Transportation System Plan. (Section 13.440.B amended by Ordinance 14-03, 4-21-14)

[e.g., local streets: min 150 feet, max 530 feet spacing; collectors: min 250 feet, max 530 feet]

C. Walkways. The applicant may be required to dedicate and improve ten (10) foot walkways, with at least six (6) feet of all-weather surface, at 330-foot intervals across blocks that exceed the block standards in Table 1 (Spacing Standards) in the Transportation System Plan or to provide access to school, park, or other public areas.

### **Warrenton**

16.120.020 Vehicular Access and Circulation.

#### J. Street Connectivity and Formation of Blocks Required

1. Block Length and Perimeter. The maximum block length shall not exceed 1,000 feet between street corner lines unless it is adjacent to an arterial street or unless the topography or the location of adjoining streets justifies an exception. The minimum length of blocks along an arterial is 1,800 feet. A block shall have sufficient width to provide for two tiers of building sites unless topography or location of adjoining streets justifies an exception.

### **Seaside**

SECTION 37 – BLOCKS General: The length, width and shape of blocks shall take into account the need for adequate building site size and street width and shall recognize the limitations of the topography.

Size: No block shall be more than one thousand feet (1,000') in length between street corner lines unless it is adjacent to an arterial street, or unless the topography or the location of adjoining streets justifies an exception. The recommended minimum length of blocks along an arterial street is one thousand, eight hundred feet (1,800'). A block shall have sufficient width to provide for two tiers of building sites unless topography or the location of adjoining streets justifies an exception. Walkways: The subdivider may be required to dedicate and improve ten foot (10') walkways across blocks over six hundred feet (600') in length or to provide access to school, park, or other public areas.

### **Cannon Beach**

Title 16 SUBDIVISIONS

Chapter 16.04 SUBDIVISIONS

16.04.300 Design standards—Blocks.

The following design standards are required for blocks:

Dimensions. Block, length, width and area within bounding roads shall be such as to accommodate the size of lots required by the zoning ordinance and to provide for convenient access, circulation control and safety of street traffic.



## **SECTION G**

### Land Use and Policy Code Recommendations for Warrenton



**DATE:** June 3, 2016

**TO:** Sunset Empire Transportation District Long Range Comprehensive Transportation Plan  
Project Management Team

**FROM:** Matt Hastie, Angelo Planning Group  
Shayna Rehberg, Angelo Planning Group

**SUBJECT:** Sunset Empire Transportation District Long Range Comprehensive Transportation Plan  
**Task 5.2, Policy and Development Code Memorandum SUPPLEMENTAL**

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The Policy and Development Code Memorandum (also dated June 3, 2016) presents recommended language intended for incorporation into the development codes of jurisdictions within the Sunset Empire Transportation District (SETD) service area, depending on the consistency of existing language with the recommended language. In addition to general recommended language, the memorandum noted that specific adoption-ready language is needed for the City of Warrenton, where there are significant imminent development prospects. This supplemental memorandum presents adoption-ready language for the City of Warrenton to consider for integration into its development code. The language should be the subject of a legislative process separate from this process for updating the SETD Long Range Comprehensive Transportation Plan, so that it receives full and proper vetting by Warrenton community members and decision makers. Some or all of the proposed amendments could be considered as part of the code amendment process that will be undertaken as part of a follow-up to the City's Transportation System Plan update process.

### Proposed Development Code Language

The development code language proposed below represents where existing City of Warrenton Development Code language was found to be partially consistent or inconsistent with recommended language in the Policy and Development Code Memorandum. As stated in that memorandum, recommended language was drawn predominantly from the State of Oregon Transportation and Growth Management Model Development Code for Small Cities, 3<sup>rd</sup> Edition, as well as from peer jurisdictions in Oregon.

The proposed development code language addresses the following transit-related provisions:

- Coordination with transit agencies
- Access to transit and supportive facilities
- Vehicle parking
- Bicycle parking
- Front yard setbacks and pedestrian amenities
- Block length

Proposed development code amendments are presented in the first column in “adoption-ready” format where language proposed for addition to the City of Warrenton Development Code is underlined and language proposed for deletion is ~~struck through~~. Commentary in the second column provides connections to the recommendations in the Policy and Development Code Memorandum, as well as other brief descriptions or explanations of the proposed amendments.

Proposed Development Code Amendments	Commentary
<b>Coordination with Transit Agencies</b>	
<p><b>16.208.040 Type II Procedure (Administrative).</b></p> <p>C. Notice of Application for Type II Administrative Decision.</p> <p>1. Before making a Type II administrative decision, the Community Development Director shall mail notice to:</p> <p style="padding-left: 40px;">a. All owners of record of real property within 100 feet of the subject area not less than 20 days prior to the decision date;</p> <p style="padding-left: 40px;">[...]</p>	<p>The proposed amendments correspond to Recommendations #1, #2, and #3 in the Policy and Development Code Memorandum regarding improving coordination between SETD and jurisdictions at the pre-application review, application review, and hearing stages of the application process.</p> <p>The proposed amendments are minor in that they simply provide more specificity and clarity of</p>

Proposed Development Code Amendments	Commentary
<p>d. Any person who submits a written request to receive a notice; and</p> <p>e. Any governmental agency which is entitled to notice under an intergovernmental agreement entered into with the City. The City <del>may</del> shall notify other affected agencies, as appropriate, for review of the application. <u>Affected agencies include but are not limited to other City and corresponding County departments; Warrenton-Hammond School District; utility companies; and Sunset Empire Transportation District and other transit and transportation facility and service providers.</u> ODOT shall be notified when there is a land division abutting a state facility for review of, comment on, and suggestion of conditions of approval for, the application.</p> <p><b>16.208.050 Type III Procedure (Quasi-Judicial).</b></p> <p>C. Notice of Hearing.</p> <p>1. Mailed Notice. Notice of a Type III application hearing (or appeal) or Type I or II appeal hearing shall be given by the Community Development Director in the following manner:</p> <p>a. At least 20 days before the hearing date, notice shall be mailed to:</p> <p>i. The applicant and all owners or contract purchasers of record of the property which is the subject of the application;</p> <p>ii. All property owners of record within 200 feet of the site (N/A for Type I appeal);</p> <p>iii. Any governmental agency which has entered into an intergovernmental agreement with the City, which includes provision for such notice, or who is otherwise entitled to such notice. ODOT shall be notified when there is a land division abutting a state facility for review of, comment on, and suggestion of conditions of approval for, the application. <u>Transit and other transportation facility and service providers shall be notified of Type III application hearings when the application potentially affects their facility or service.</u></p>	<p>existing language.</p>

Proposed Development Code Amendments	Commentary
<p>[Owners of airports shall be notified of a proposed zone change in accordance with ORS 227.175.];</p> <p>iv. Any neighborhood or community organization recognized by the City Commission and whose boundaries include the property proposed for development;</p> <p><b>16.208.070 General Provisions.</b></p> <p>C. Pre-Application Conferences.</p> <p>1. Participants. When a pre-application conference is required, the applicant shall meet with the Community Development Director or his/her designee(s). <u>The Community Development Director shall invite City staff from other departments to provide technical expertise applicable to the proposal, as necessary, as well as other public agency staff such as transportation and transit agency staff.</u></p> <p>[...]</p> <p>D. Applications.</p> <p>3. Check for Acceptance and Completeness.</p> <p>b. Completeness.</p> <p>[...]</p> <p>iv. Coordinated Review. When required by this Code, or at the direction of the Community Development Director, the City shall submit the application for review and comment to ODOT and other applicable City, county, state, and federal review agencies. <u>Potential applicable agencies include but are not limited to City Building, Public Works, Fire, Police, and Parks departments; Clatsop County Building, Planning, Parks, Public Health, Public Safety, and Public Works departments; Warrenton-Hammond School District; utility companies; and Sunset Empire Transportation District and other transit and transportation facility and service providers.</u></p>	

Proposed Development Code Amendments	Commentary
<b>Access to Transit and Supportive Facilities</b>	
<p><b>Division 3 DESIGN STANDARDS</b></p> <p><b><u>Chapter 16.204 Transit Access and Supportive Facilities</u></b></p> <p><u>Development that is proposed adjacent to an existing or planned transit stop, as designated in an adopted transportation or transit plan, shall provide the following transit access and supportive facilities in coordination with the transit service provider:</u></p> <p><u>A. Reasonably direct pedestrian connections between the transit stop and primary entrances of the buildings on site. For the purpose of this Section, "reasonably direct" means a route that does not deviate unnecessarily from a straight line or a route that does not involve a significant amount of out-of-direction travel for users.</u></p> <p><u>B. The primary entrance of the building closest to the street where the transit stop is located that is oriented to that street.</u></p> <p><u>C. A transit passenger landing pad that is ADA accessible.</u></p> <p><u>D. An easement or dedication for a passenger shelter or bench if such an improvement is identified in an adopted plan.</u></p> <p><u>E. Lighting at the transit stop.</u></p> <p><u>F. Other improvements identified in an adopted plan.</u></p>	<p>The proposed amendments correspond to Recommendation #5 in the Policy and Development Code Memorandum regarding providing direct access to transit stops as well as facilities needed at the transit stop.</p> <p>It is proposed that a new chapter be created to house this comprehensive set of transit-oriented development requirements rather than attempt to shoehorn them into an existing section or integrate them piecemeal.</p>
<b>Vehicle Parking</b>	
<p><b>16.128.030 Vehicle Parking Standards.</b></p> <p>At the time a structure is erected or enlarged, or the use of a structure or parcel of land is changed within any zone in the City, off-street parking spaces shall be provided in accordance with requirements in this section, chapter, and Code, unless greater requirements are otherwise established. The minimum number of required off-street vehicle parking spaces (i.e., parking that is located in parking lots and garages and not in the street right-of-</p>	<p>The proposed amendments correspond to Recommendations #7, #8, #9, #10, and #15 in the Policy and Development Code Memorandum regarding transit facilities in parking areas, preferential carpool/vanpool parking, targeted maximum parking requirements, reductions</p>

Proposed Development Code Amendments	Commentary
<p>way) shall be determined based on the standards in Table 16.128.030.A.</p> <p>A. General Provisions.</p> <p>1. Groups of four or more off-street parking spaces shall be served by a driveway or aisle so that no backing movements or other maneuvering within a street or right-of-way, other than an alley, will be required. Section 16.120.020 contains driveway opening and width standards.</p> <p>[...]</p> <p>6. Uses not specifically listed above shall furnish parking as required by the Community Development Director, who shall consider uses similar to those listed in Table 16.128.030.A and the Institute of Traffic Engineers <i>Parking Generation</i> as guides for determining requirements for other uses.</p> <p><u>7. Parking spaces and parking areas may be used for transit-related uses such as transit stops and park-and-ride/rideshare areas, provided minimum parking space requirements can still be met.</u></p> <p><u>8. Parking areas that have designated employee parking and more than 20 automobile parking spaces shall provide at least 10% of the employee parking spaces (minimum two spaces) as preferential carpool and vanpool parking spaces. Preferential carpool and vanpool parking spaces shall be closer to the employee entrance of the building than other parking spaces, with the exception of ADA accessible parking spaces.</u></p> <p><u>9. Sites that are adjacent to existing or planned transit stops or are in the General Commercial (C-1) and Commercial Mixed Use (C-MU) districts are subject to maximum off-street vehicle parking requirements. [City: Apply to other zones in addition to or instead of these? Open Space and Institutional (OSI) and/or Recreational-Commercial (R-C) districts?] The maximum number of off-street vehicle parking spaces allowed per site shall be equal the minimum number of required spaces, pursuant to Table 16.128.030.A, multiplied by a factor of:</u></p> <p>a. <u>[1.2] spaces for uses fronting a street with adjacent on-street parking spaces; or</u></p> <p>b. <u>[1.5] spaces, for uses fronting no street with adjacent on-street parking; or</u></p>	<p>in parking requirements, and parking between buildings and the street.</p> <p>These proposed amendments can be easily integrated into existing vehicle parking provisions. They tend to be focused on specific commercial zones and/or locations with existing or planned transit service.</p>



Proposed Development Code Amendments	Commentary
<p>c. <u>A factor determined according to a parking analysis prepared by a <b>qualified professional/registered engineer</b> and submitted by the applicant. [City: If keeping this provision, do you want to specify that a parking analysis must be prepared by a qualified professional or registered engineer?]</u></p> <p>10. <u>The applicant may propose a parking space standard that is different than the standard in Table 16.128.030.A, for review and action by the Community Development Director <b>through a variance procedure, pursuant to Chapter 16.272.</b> The applicant’s proposal shall consist of a written request, and a parking analysis prepared by a <b>qualified professional/registered engineer.</b> The parking analysis, at a minimum, shall assess the average parking demand and available supply for existing and proposed uses on the subject site; opportunities for shared parking with other uses in the vicinity; existing public parking in the vicinity; transportation options existing or planned near the site, such as frequent transit service, carpools, or private shuttles; and other relevant factors.</u></p> <p><u>The Community Development Director may reduce the off-street parking standards for sites with one or more of the following features:</u></p> <p>[City: Do you want changes/reductions to parking standards to require a variance procedure and professional parking analysis, per passages highlighted above, or to be made by the CDD simply determining consistency with the following criteria?]</p> <p>a. <u>Site has a transit stop with existing or planned frequent transit service (30-minute headway or less) located adjacent to it, and the site’s frontage is improved with a transit stop shelter, consistent with the standards of the applicable transit service provider: Allow up to a 20 percent reduction to the standard number of automobile parking spaces;</u></p> <p>b. <u>Site has dedicated parking spaces for carpool/vanpool vehicles: Allow up to a 10 percent reduction to the standard number of automobile parking spaces;</u></p> <p>c. <u>Site has dedicated parking spaces for motorcycle and/or scooter or electric carts: Allow reductions to the standard</u></p>	

Proposed Development Code Amendments	Commentary
<p><u>dimensions for parking spaces and the ratio of standard to compact parking spaces;</u></p> <p><u>d. Available on-street parking spaces adjacent to the subject site in amounts equal to the proposed reductions to the standard number of parking spaces.</u></p> <p><u>e. Site has more than the minimum number of required bicycle parking spaces: Allow up to a 10 percent reduction to the number of automobile parking spaces.</u></p> <p>B. Parking Location and Shared Parking.</p> <p>1. Location. Vehicle parking is allowed only on approved parking shoulders (streets), within garages, carports and other structures, or on driveways or parking lots that have been developed in conformance with this Code. <u>Parking and loadings areas shall not be located in required yards adjacent to a street unless otherwise specifically permitted in this ordinance. [City: Specify this in the C-1 and C-MU districts, other districts, and/or adjacent to an existing or planned transit route or stop?]</u> <u>Side and rear yards that are not adjacent to a street may be used for such areas when developed and maintained as required in this ordinance. Specific locations for parking are indicated in Division 2 for some land uses (e.g., the requirement that parking be located to side or rear of buildings, with access from alleys, for some uses). [Note: I did not find these provisions in Division 2 or 3]</u> See also Chapter 16.120, Access and Circulation.</p> <p>2. Off-Site Parking. Except for single-family, two-family, and three-family dwellings, the vehicle parking spaces required by this chapter may be located on another parcel of land, provided the parcel is within 200 feet or a reasonable walking distance of the use it serves. The distance from the parking area to the use shall be measured from the nearest parking space to a building entrance, following a sidewalk or other pedestrian route. The right to use the off-site parking must be evidenced by a recorded deed, lease, easement, or similar written instrument.</p>	
<b>Bicycle Parking</b>	
<p><b>16.128.040 Bicycle Parking Requirements.</b></p> <p>A. All uses shall provide bicycle parking in conformance with the following standards which are evaluated during development</p>	<p>The proposed amendments correspond to Recommendation #12 in the Policy and Development Code Memorandum regarding requirements for the</p>

Proposed Development Code Amendments	Commentary
<p>review or site design review.</p> <p><del>B. Number of Bicycle Parking Spaces. <u>The minimum number of bicycle parking spaces required for uses is provided in Table 16.128.040.A. A minimum of two bicycle parking spaces per use is required for all uses with more than 10 vehicle parking spaces. The following additional standards apply to specific types of development:</u></del></p> <p><del>1. <u>Multifamily Residences.</u> Every residential use of four or more dwelling units provides at least one sheltered bicycle parking space for each dwelling unit. Sheltered bicycle parking spaces may be located within a garage, storage shed, basement, utility room or similar area. In those instances in which the residential complex has no garage or other easily accessible storage unit, the bicycle parking spaces may be sheltered from sun and precipitation under an eave, overhang, an independent structure, or similar cover.</del></p> <p><del>2. <u>Parking Lots.</u> All public and commercial parking lots and parking structures provide a minimum of one bicycle parking space for every 10 motor vehicle parking spaces, with a maximum of 28 bicycle parking spaces per commercial lot.</del></p> <p><del>3. <u>Schools.</u> Elementary and middle schools, both private and public, provide one bicycle parking space for every 10 students and employees. High schools provide one bicycle parking space for every five students and employees. All spaces should be sheltered under an eave, overhang, or bicycle shelter.</del></p> <p><u>Where an application is subject to Conditional Use Permit approval or the applicant has requested a reduction to the vehicle parking standard, pursuant to 16.128.030(A)(10), the City may require bicycle parking spaces in addition to those in Table 16.128.040.A.</u></p> <p style="text-align: center;"><b><u>Table 16.128.040.A</u></b>  <b><u>Bicycle Parking Requirements</u></b>  <b>[*provided at the end of the memorandum]</b></p> <p>C. <u>Design and Location.</u></p> <p>1. All bicycle parking shall be securely anchored to the ground</p>	<p>number of bicycle parking spaces, location, and design.</p> <p>The amendments more fully address bicycle parking by providing direction regarding location and design. Requirements for the number of spaces, presented in Table 16.128.040.A at the end of this document, do not differ greatly from existing requirements, and are intended to do the following:</p> <ul style="list-style-type: none"> <li>• Provide a metric for schools that is easier to administer;</li> <li>• Include suitable standards for transit stops and centers, pursuant to the State Transportation Planning Rule; and</li> <li>• Set clear standards for short-term and long-term parking, without making design requirements for long-term parking onerous.</li> </ul>

Proposed Development Code Amendments	Commentary
<p><u>or to a structure.</u></p> <p><u>2. All bicycle parking shall be well lighted.</u></p> <p><u>3. All bicycle parking shall be designed so that bicycles may be secured to them without undue inconvenience, including being accessible without removing another bicycle. [City: The following is an option in providing more specific guidance regarding bicycle parking design if desired to supplement this more general language.] Bicycle parking spaces shall be at least six (6) feet long and two-and-one-half (2 ½) feet wide, and overhead clearance in covered spaces should be a minimum of seven (7) feet. A five (5) foot aisle for bicycle maneuvering should be provided and maintained beside or between each row/rack of bicycle parking.</u></p> <p><u>4. Bicycle parking racks shall accommodate locking the frame and both wheels using either a cable or U-shaped lock.</u></p> <p><u>5. Direct access from the bicycle parking area to the public right-of-way shall be provided at-grade or by ramp access, and pedestrian access shall be provided from the bicycle parking area to the building entrance.</u></p> <p><u>6. Bicycle parking shall not impede or create a hazard to pedestrians or vehicles, and shall not conflict with the vision clearance standards of Chapter 16.132.</u></p> <p><u>7. All bicycle parking should be integrated with other elements in the planter strip when in the public right-of-way.</u></p> <p><u>8. Short-term bicycle parking.</u></p> <p><u>a. Short-term bicycle parking shall consist of a stationary rack or other approved structure to which the bicycle can be locked securely.</u></p> <p><u>b. If more than 10 short-term bicycle parking spaces are required, at least 50% of the spaces must be sheltered. Sheltered short-term parking consists of a minimum 7-foot overhead clearance and sufficient area to completely cover all bicycle parking and bicycles that are parked correctly.</u></p> <p><u>c. Short-term bicycle parking shall be located within 50 feet of the main building entrance or one of several main entrances, and no further from an entrance than the closest</u></p>	

Proposed Development Code Amendments	Commentary
<p><u>automobile parking space.</u></p> <p><u>9. Long-term bicycle parking. Long-term bicycle parking shall consist of a lockable enclosure, a secure room in a building on-site, monitored parking, or another form of sheltered and secure parking.</u></p> <p><u>D. Exemptions. This Section does not apply to single-family and duplex housing, home occupations, and agricultural uses. The City may exempt other uses upon finding that, due to the nature of the use or its location, it is unlikely to have any patrons or employees arriving by bicycle.</u></p> <p><u>E. Hazards. Bicycle parking shall not impede or create a hazard to pedestrians or vehicles, and shall be located so as to not conflict with the vision clearance standards of Chapter 16.132.</u></p>	
<b>Front Yard Setbacks and Pedestrian Amenities</b>	
<p><b>Chapter 16.40 GENERAL COMMERCIAL (C-1) DISTRICT</b></p> <p><b>16.40.040 Development Standards.</b></p> <p>[...]</p> <p>B. Setback Requirements.</p> <p>1. Minimum front yard setback, commercial uses: none except where adjoining a residential zone, in which case it shall be 15 feet. See Section 16.40.050 for maximum front yard setback for commercial uses.</p> <p>[...]</p> <p><b>16.40.050 Design Standards.</b></p> <p>The following design standards are applicable in the C-1 zone:</p> <p>A. Any commercial development shall comply with Chapter 16.116 of the Development Code.</p> <p>B. Lots fronting onto U.S. Highway 101 shall have a setback of at least 50 feet between any part of the proposed building and the nearest right-of-way line of U.S. Highway 101.</p> <p>C. Signs in General Commercial Districts along Fort Stevens</p>	<p>The proposed amendments correspond to Recommendations #13 and #14 in the Policy and Development Code Memorandum regarding maximum building setbacks and pedestrian amenities in the setbacks.</p> <p>Provisions for maximum front yard setbacks and pedestrian amenities in front yard setbacks are targeted for zoning districts that may be more urban in nature and where transit corridors are currently located or may be located in the future.</p> <p>[City: Apply this to Recreational-Commercial (R-C) district and/or other districts, too?]</p>

Proposed Development Code Amendments	Commentary
<p>Highway/State Highway 104 (i.e., S. Main Avenue, N. Main Avenue, NW Warrenton Drive, and Pacific Drive) shall comply with the special sign standards of Section 16.144.040.</p> <p>D. Maximum front yard setback for commercial buildings in the C-1 zone along Fort Stevens Highway/State Highway 104 shall be 10 feet.</p> <p><u>E. Maximum front yard setback for commercial buildings in the C-1 zone adjacent to existing or planned transit stops shall be 10 feet.</u></p> <p style="padding-left: 40px;"><u>1. The Community Development Director may allow a greater front yard setback when the applicant proposes extending an adjacent sidewalk or plaza for public use, or some other pedestrian amenity is proposed between the building and public right-of-way, subject to Site Design approval.</u></p> <p><b>Chapter 16.44 COMMERCIAL MIXED USE (C-MU) DISTRICT</b></p> <p><b>16.44.040 Development Standards.</b></p> <p>The following development standards are applicable in the C-MU district:</p> <p>[...]</p> <p>B. Setback Requirements (Residential and Multiple Uses).</p> <p>1. Minimum front yard setback: 15 feet <u>(Residential); none (Multiple Uses).</u></p> <p>2. Minimum side yard setback: 8 feet.</p> <p>3. Minimum corner lot street side yard setback: 8 feet.</p> <p>4. Minimum rear yard setback: 15 feet except accessory structures that meet the criteria of Section 16.280.020 may extend to within five feet of a rear property line.</p> <p>5. <u>Maximum front yard setback: 10 feet for Multiple Uses adjacent to existing or planned transit stops.</u></p> <p style="padding-left: 40px;"><u>a. The Community Development Director may allow a greater front yard setback when the applicant proposes extending an adjacent sidewalk or plaza for public use, or</u></p>	

Proposed Development Code Amendments	Commentary
<p><u>some other pedestrian amenity is proposed between the building and public right-of-way, subject to Site Design approval.</u></p> <p>C. Setback Requirements (Commercial Uses).</p> <ol style="list-style-type: none"> <li>1. Minimum front yard setback: none.</li> <li>2. Minimum side yard setback: None except where adjoining a residential zone in which case there shall be a visual buffer strip of at least 10 feet wide to provide a dense evergreen landscape buffer which attains a mature height of at least eight feet. Such buffers must conform to the standards in Chapter 16.124, Landscaping, Street Trees, Fences and Walls.</li> <li>3. Minimum rear yard setback: None except where adjoining a residential zone in which case there shall be a visual buffer strip of at least 10 feet wide to provide a dense evergreen landscape buffer which attains a mature height of at least eight feet. Such buffers must conform to the standards in Chapter 16.124, Landscaping, Street Trees, Fences and Walls.</li> <li>4. <u>Maximum front yard setback: 10 feet for Commercial Uses adjacent to existing or planned transit stops.</u> <ol style="list-style-type: none"> <li>a. <u>The Community Development Director may allow a greater front yard setback when the applicant proposes extending an adjacent sidewalk or plaza for public use, or some other pedestrian amenity is proposed between the building and public right-of-way, subject to Site Design approval.</u></li> </ol> </li> </ol>	
<b>Block Length</b>	
<p><b>16.120.020 Vehicular Access and Circulation.</b></p> <p>J. Street Connectivity and Formation of Blocks Required</p> <ol style="list-style-type: none"> <li>1. Block Length and Perimeter. The maximum block length shall not exceed <u>600 feet <del>1,000 feet</del> between street corner lines in Residential and C-1 zones, 400 feet in the C-MU zone, and 1,000 feet in other zones</u> unless it is adjacent to an arterial street or unless the topography or the location of adjoining streets justifies an exception. <b>[City: Specify a maximum less than 1,000 feet for other zones, too?]</b> The minimum length of</li> </ol>	<p>The proposed amendments correspond to Recommendation #16 in the Policy and Development Code Memorandum regarding limiting block lengths.</p> <p>Maximum block length standards are targeted for zoning districts that may be more urban in nature and where transit corridors are currently located or may be located in the future.</p>

Proposed Development Code Amendments	Commentary
<p>blocks along an arterial <u>in zones other than Residential, C-1, and C-MU</u> is 1,800 feet. [City: Specify exception to 1,800-foot minimum for other zones, too?] A block shall have sufficient width to provide for two tiers of building sites unless topography or location of adjoining streets justifies an exception.</p>	



**Table 16.128.040.A**  
**Bicycle Parking Requirements**

<u>Minimum Required Bicycle Parking Spaces</u>		<u>Long and Short Term Bicycle Parking</u>
<u>Use</u>	<u>Minimum Number of Spaces</u>	<u>(As % of Minimum Required Bicycle Parking Spaces)</u>
<b><u>Multifamily Residential</u></b> (required for 4 or more dwelling units)	<u>2 spaces per 4 dwelling units</u>	<u>75% long term</u> <u>25% short term</u>
<b><u>Commercial</u></b>	<u>2 spaces per primary use or 1 per 5 vehicle spaces, whichever is greater</u>	<u>25% long term</u> <u>75% short term</u>
<b><u>Schools</u></b> (all types)	<u>2 spaces per classroom</u>	<u>100% long term</u>
<b><u>Parks</u></b> (active recreation areas only)	<u>4 spaces</u>	<u>100% short term</u>
<b><u>Transit Stops</u></b>	<u>2 spaces</u>	<u>100% short term</u>
<b><u>Transit Centers</u></b>	<u>4 spaces or 1 per 10 vehicle spaces, whichever is greater</u>	<u>50% long term</u> <u>50% short term</u>
<b><u>Other Uses</u></b>	<u>2 spaces per primary use or 1 per 10 vehicle spaces, whichever is greater</u>	<u>50% long term</u> <u>50% short term</u>



## **SECTION H**

### Memo 5A: Service Opportunities



# MEMO #5A: SERVICE OPPORTUNITIES

**Memo #5A – Service Opportunities** provides an initial list of service opportunities and an evaluation of the opportunities, including input from the TPAC. This memo was first presented at TPAC Meeting #3 (October 2015).

**Memo #5B – Community Input on Service Opportunities** provides results from community outreach, including rider and general public surveys. This memo was first presented at TPAC Meeting #4 (January 2016).

**Memo #5C – Service Concepts** takes the service opportunities that received community support to a greater level of detail. This memo was first presented at TPAC Meeting #4 (January 2016).

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# 1 SERVICE OPPORTUNITIES

## INTRODUCTION

This memo provides an initial list of service opportunities and evaluates the opportunities based upon the objectives in TM #4 – Evaluation Framework. These options were gathered from stakeholders, the public, SETD staff, and the consultant team. With the help of the TPAC, this list was refined into a set of high-priority options that provide the most benefit to SETD riders. These options were brought to the public and riders to receive broader input (see Memo #5B). More detailed service concepts were then developed for the options that received the most support (see Memo #5C).

This memo focuses upon service opportunities – where the bus runs, when it runs, and how frequently it runs. Opportunities for SETD as an organization, capital investments, and marketing and education will be detailed in subsequent versions of this memo.

Figure 1-1 Service Opportunity Evaluation Process



## INITIAL SERVICE OPPORTUNITIES

The following options were brought to the TPAC in October 2015.

### Local Service Options

1. **Create a Seaside local circulator.** Run Seaside trolley-like route year round on transit vehicles. Feed Seaside Cinema transfer center to Cannon Beach and Astoria. Service satellite parking lots (Strategy 14).
2. **New route serving Astoria interior.** Create a route covering the interior of Astoria, such as along Lexington Street. Provide hourly service connecting to the Transit Center.
3. **New local route on Business 101.** With reopening of Business 101, resume route connecting from Astoria along Business 101 to Ensign Lane destinations and future Walmart.

## Regional Route Options

4. **Astoria-Cannon Beach link.** Establish one continuous route that does not require transfers linking Astoria-Warrenton-Seaside-Cannon Beach. Run route hourly.
5. **Svensen/Knappa.** Increase frequency of service between Svensen/Knappa to Astoria along Highway 30. Circulate to business area north of Highway 30 (Knappa Market, The Logger) and the Svensen Market.

## Route Design

6. **Streamline routing.** With implementation of Strategy 1, streamline Route 20 and Route 101 routing to remain on US 101 in Seaside rather than looping around on Wahanna Road.
7. **Consistent routing.** Standardize Route 10 so all trips serve Fred Meyer, Transit Center, Emerald Heights, Tongue Point, and Clatsop Community College. Standardize Route 21 so all trips consistently travel between Cannon Beach and Seaside or stay just within Cannon Beach.
8. **Shorter, more legible, and more direct local routes.** Currently all routes take 60-120 minutes per round trip. Redesign service with shorter routes serving a couple targeted markets rather than a couple long routes. E.g., Emerald Heights and Tongue Point on own route; Astoria-Walmart-Fred Meyer on a route; Warrenton-Hammond on another route. This would make service easier to understand and minimize out-of-direction travel.
9. **Route deviations on primary regional services.** Remove route deviations, such as Sunset Beach and Ensign Lane areas, that add to running time to core regional routes. Implement in combination with local circulators or other routes providing service to those areas. Keep Highway 101 service as direct and fast as possible.

## Other Service Types

10. **Dial-a-Ride in Svensen/Knappa.** Provide five-day per week dial a ride in Svensen/Knappa. This service would be designed to connect with regional service connecting to Astoria and/or US 30 service to the east part of Clatsop County.
11. **Flex routes.** Introduce new route type. Flexible routes have fixed time points (e.g. Fred Meyer, Transit Center, Seaside Cinema) but can deviate between points if a rider calls to request a pickup  $\frac{3}{4}$  mile from the route. This will increase travel times for some riders, but provides more access for others. Implement on local services such as Route 10, 30, 20, and 15.
12. **Dial a Ride by community.** Introduce more Dial a Ride by day of week by community. For example, every Mon/Wed Westport has service. Every Tues/Thurs Svensen/Knappa has service. Every Fri, Arch Cape. Customers would have to call in advance and schedule a ride.
13. **Owl service.** Provide demand-response late night service (10 pm-5 am) for employment trips, such as those working third shifts or those working in bars and restaurants. Riders would need to call ahead to schedule a pick-up.
14. **Seaside park and ride.** Allocate parking at the north and south ends of Seaside and create park & ride spaces.

## Service Schedules

15. **Eastern Astoria weekends.** Provide regular fixed-route service to destinations such as Emerald Heights and Safeway that have high boardings on weekdays and likely have demand on weekends.
16. **All-day hourly headways on Route 101.** Close up remaining gaps in service to provide hourly trips between Astoria and Seaside.
17. **Weekday late night service.** Extend Route 10 and Route 101 year-round with weekday service to 9 or 10 pm in Astoria, Seaside, and Cannon Beach. Align end of service with Clatsop Community College class times.
18. **Seasonal schedules.** Create seasonal schedule for summer months with service aligned to the end of bar and restaurant peak hours, such as 11 pm or midnight, in Astoria, Seaside, and Cannon Beach. Owl service (strategy 13) would continue to provide late night service for employees.
19. **Weekend late night service.** Extend year-round weekend service to 9 or 10 pm in Astoria, Seaside, and Cannon Beach.
20. **Timed transfers.** Create timed transfers between Route 10 and Route 101 on all trips at a set location.
21. **Additional service in Warrenton.** Provide consistent local headways in Warrenton. Service should have an easily identifiable route number/signage. Current service is provided by various routes (Route 15 and Route 30) and does not have a consistent headway.

## HIGH-LEVEL EVALUATION OF INITIAL LIST OF SERVICE OPPORTUNITIES

The evaluation matrix created in TM#4 provides the framework to assess each service opportunity based upon how well it meets or detracts from the agency's goals. The process of evaluating each service opportunity provides a space to think through the benefits and drawbacks of each project, which projects have little support, and which projects should be moved forward into conceptual design. Figure 1-2 below provides an abbreviated naming of each opportunity presented above, its order-of-magnitude cost, and how well it meets each of the service-related goals presented in TM#4.

These opportunities were presented to the TPAC at a meeting on October 26, 2015. TPAC members subsequently provided the team with input on each opportunity. This input is included in the table along with an assessment of which items should be advanced and included in the community outreach conducted in December 2015 and in the development of service concepts. These are described in Memos #5B and #5C.



**Long-Range Comprehensive Transportation Plan | TM#5A: Service Opportunities**  
Sunset Empire Transportation District

Figure 1-2 Evaluation of Initial Service Opportunities

Category	#	Strategy	Cost	Proposed SETD Goals (Refer to Evaluation Framework for Objectives)						TPAC Priority				
				Efficiency: Provide cost-effective service	Mobility: Service a wide range of mobility needs	Availability: Ensure service availability	Sustainability: Compete with SOV travel tames and reduce VMT	Reliability: Provide reliable service	Capacity: Ensure sufficient system capacity	# High (3 pts)	# Med (2 pts)	# Low (1pt)	Total Points	Move Forward?
Local	1	Seaside circulator	\$\$	+	+	+	+	N	N	3	4	1	20	Yes / Medium
	2	New route serving Astoria interior	\$\$\$	+	+	+	+	N	N	2	7	1	19	Yes / Medium
	3	New local route on Business 101	\$\$\$	-	+	+	-	+	N	3	3	3	18	Yes / Medium
Regional	4	Astoria-Warrenton-Seaside-Cannon Beach continuous direct service	\$	N	+	N	+	-	N	4	1	3	18	TBD
	5	Svensen/Knappa – more fixed route frequency	\$	-	+	N	+	N	+	0	0	7	9	No
Route Design	6	Streamline Routing – Route 20/101 remain on US 101 in Seaside		+	N	-	+	+	N	6	1	2	23	Yes / High
	7	Consistent Routing – Route 10 and Route 21 schedules		N	N	N	+	N	N	5	3	1	22	Yes / High
	8	More direct and market-focused routes – multiple short routes rather than a couple very long routes	\$	+	N	N	+	+	N	4	2	2	20	Yes / High

**Long-Range Comprehensive Transportation Plan | TM#5A: Service Opportunities**  
Sunset Empire Transportation District

Category	#	Strategy	Cost	Proposed SETD Goals (Refer to Evaluation Framework for Objectives)						TPAC Priority				
				Efficiency: Provide cost-effective service	Mobility: Service a wide range of mobility needs	Availability: Ensure service availability	Sustainability: Compete with SOV travel tames and reduce VMT	Reliability: Provide reliable service	Capacity: Ensure sufficient system capacity	# High (3 pts)	# Med (2 pts)	# Low (1pt)	Total Points	Move Forward?
	9	Remove Route Deviations on Regional Routes (coordinated with local service)	\$	+	N	N	+	+	N	2	6	1	19	Yes / Medium (in tandem with #8)
Other Service Types	10	Add demand-response in Svensen/Knapka with feeder to Astoria service	\$	-	+	+	-	N	+	1	1	7	12	No / Low
	11	Introduce flex routes allowing deviations to Routes 10, 15, 20, 30	\$	-	N	+	-	N	N	2	5	2	18	TBD / Medium [2]
	12	Introduce demand-response service by community	\$	N	+	+	-	N	N	2	3	4	15	No / Low-Medium
	13	Owl service (demand-response) 10 pm-5 am	\$\$	-	+	N	+	N	N	0	0	7	9	No / Low
	14	Dedicated Seaside Park & Ride in north and south sides of city		+	N	N	+	N	N	4	3	1	21	Yes / High
Service Schedules	15	Serve eastern Astoria destinations on weekends (Safeway, Emerald Heights)	\$	-	+	+	+	N	N	4	4	0	22	Yes / High
	16	All-day hourly headways on Route 101	\$\$	+	+	N	+	N	+	4	3	1	19	Yes / High

**Long-Range Comprehensive Transportation Plan | TM#5A: Service Opportunities**  
Sunset Empire Transportation District

Category	#	Strategy	Cost	Proposed SETD Goals (Refer to Evaluation Framework for Objectives)						TPAC Priority				
				Efficiency: Provide cost-effective service	Mobility: Service a wide range of mobility needs	Availability: Ensure service availability	Sustainability: Compete with SOV travel tames and reduce VMT	Reliability: Provide reliable service	Capacity: Ensure sufficient system capacity	# High (3 pts)	# Med (2 pts)	# Low (1pt)	Total Points	Move Forward?
	17	Weekday late night service until 9 or 10 pm	\$\$\$	-	+	N	+	N	N	2	5	3	17	TBD / Medium [1]
	18	Seasonal schedules – later service in peak season til 11 pm or midnight	\$\$	-	+	N	+	N	N	2	5	2	18	TBD / Medium
	19	Weekend late night service til 9 or 10 pm	\$	-	+	N	+	N	N	1	3	5	15	No
	20	Timed transfers between SETD routes and other providers		N	+	N	+	N	N	5	2	1	21	Yes / High
	21	Additional service frequencies in Warrenton/Hammond	\$	-	+	N	+	+	N	2	8	0	20	Yes / Medium

Notes: [1] SETD already plans to implement weekday service until approximately 10 pm starting in February 2016 (last trip leaves at approximately 8 pm, completing between about 9:30 – 10:00 pm).  
[2] Reevaluate based on further input from rider and general community outreach / surveys.

**Cost**

\$\$\$ = Most expense needed

\$\$ = Medium expensive

\$ = Low expense

[blank] = Cost neutral

**Evaluation**

+ = Supports / helps achieve goal

N = Neutral – neither hurts nor helps goal

- = May degrade progress toward goal



## **SECTION I**

### Memo 5B: Service Opportunities Outreach



# MEMO #5B: COMMUNITY INPUT ON SERVICE OPPORTUNITIES

**Memo #5A – Service Opportunities** provides an initial list of service opportunities and an evaluation of the opportunities, including input from the TPAC. This memo was first presented at TPAC Meeting #3 (October 2015).

**Memo #5B – Community Input on Service Opportunities** provides results from community outreach, including rider and general public surveys. This memo was first presented at TPAC Meeting #4 (January 2016).

**Memo #5C – Service Concepts** takes the service opportunities that received community support to a greater level of detail. This memo was first presented at TPAC Meeting #4 (January 2016).

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**Long-Range Comprehensive Transportation Plan | TM#5B: Community Input on Service Opportunities**  
Sunset Empire Transportation District

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## 2 COMMUNITY INPUT ON SERVICE OPPORTUNITIES

### INTRODUCTION

Three outreach strategies were used to obtain input from transit riders and the general public on service opportunities (see Memo #5A) that were developed for the Sunset Empire Transportation District's (SETD) Long Range Comprehensive Transportation Plan (LRCTP):

- An on-board survey of riders conducted by SETD staff during the weeks of December 7 and 14, 2015
- An online survey publicized and distributed to members of the general public in the SETD service area between December 14-28, 2015
- Outreach events conducted at several locations in the SETD service area on December 11-12, 2015

This document summarizes the results of the outreach efforts and makes recommendations regarding how these results can be used to support the development of the LRTP.

### KEY FINDINGS

The general public and rider surveys differed on a number of important characteristics. In general, riders placed a higher priority on local improvements while the general public placed higher priority on regional improvements.

Key findings from the outreach efforts are summarized below:

- **Rider Survey:** Riders were primarily concerned with filling in specific *local* service gaps.
  - Shopper shuttles were given a high priority as a possible service enhancement.
  - Increased service in Seaside and Astoria was given high priority.
- **General Public Survey:** The general public was primarily concerned with *regional* coverage and transit performance.
  - The performance and availability of regional service were key priorities of respondents.
  - General frequency, time span, and reliability improvements were prominent desires among respondents.
- **Community Outreach:** Non-riders were particularly interested in learning about the bus system in general, highlighting the need to make service consistent and easy to

understand and communicate. Riders had a variety of opinions on service options; in particular:

- Riders were supportive of plans for later evening service.
- Riders were generally supportive of *well-timed* transfers.

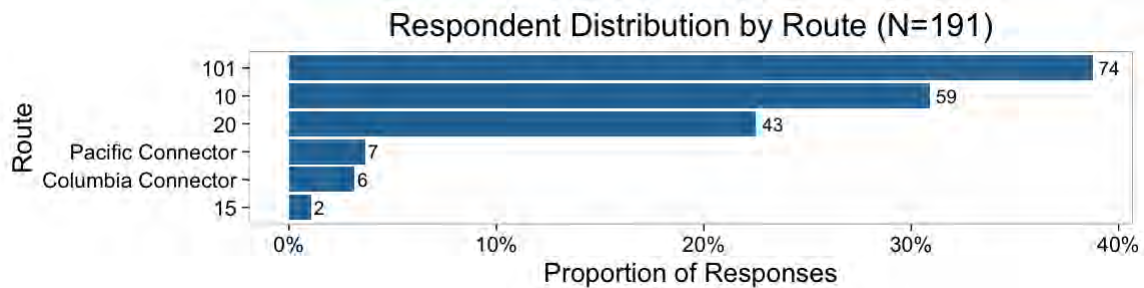
## SURVEY METHODOLOGY AND RESPONDENT ROUTES/LOCATIONS

### Rider Survey

The on-board survey resulted in 228 total responses from riders.

Respondents were asked to indicate the route they were riding upon at the time of the survey; these results are illustrated in Figure 2-1. 39% of respondents were riding route 101 during the survey administration, while riders on routes 10 and 20 comprised 31% and 23% of respondents, respectively.

Figure 2-1 Respondent Distribution by Route (Riders)



### General Public Survey

The general public survey was administered through SurveyMonkey, an online survey tool. There were 49 total responses to the survey between December 14<sup>th</sup> and December 28<sup>th</sup>, 2015.

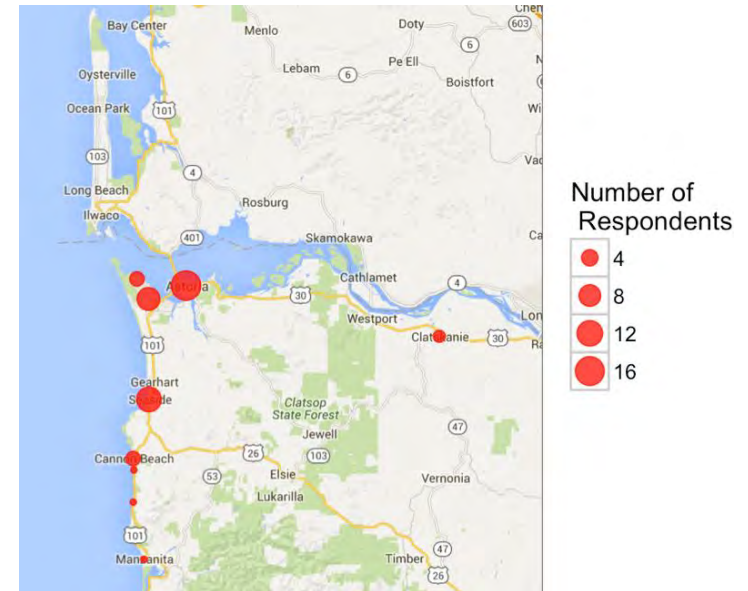
**Long Range Transit Plan | Service Opportunities Outreach**  
Sunset Empire Transportation District

Respondents' ZIP codes were used to determine their location in the SETD service area. A table of the distribution of respondents is presented in Figure 2-2 and a map is provided in Figure 2-3. The majority of respondents live in Astoria (35%), Seaside (22%), and Warrenton (18%).

**Figure 2-2 Locations of Respondents (General Public - Table)**

Zip Code	Place	Area	# of Responses	Proportion of Responses
97103	Astoria	Astoria	17	34.7%
97138	Seaside	Seaside	11	22.4%
97146	Warrenton	Warrenton/Hammond	9	18.4%
97110	Cannon Beach	Cannon Beach area	3	6.1%
97121	Hammond	Warrenton/Hammond	3	6.1%
97016	Clatskanie	Clatskanie	2	4.1%
97102	Arch Cape	Cannon Beach area	1	2.0%
97130	Manzanita	Tillamook County	1	2.0%
97141	Tillamook	Tillamook County	1	2.0%
97145	Tolovana Park	Cannon Beach Area	1	2.0%

**Figure 2-3 Respondent Residence Locations (General Public - Map)**



## SURVEY RESULTS

Respondents were asked to indicate their preferences for several proposed service modifications and enhancements. In cases where respondents were asked to rank their preferences ('Low', 'Medium', and 'High') average scores were calculated to approximate aggregate preferences.

General information about the relative cost of options, where applicable, was provided in the online survey only, due to space limitations.

### Inter-Community Regional Service Changes

Respondents were asked to prioritize potential changes to SETD services between Clatsop County communities, and between Clatsop County and adjacent counties. Figure 2-4 and Figure 2-5 provide the results.

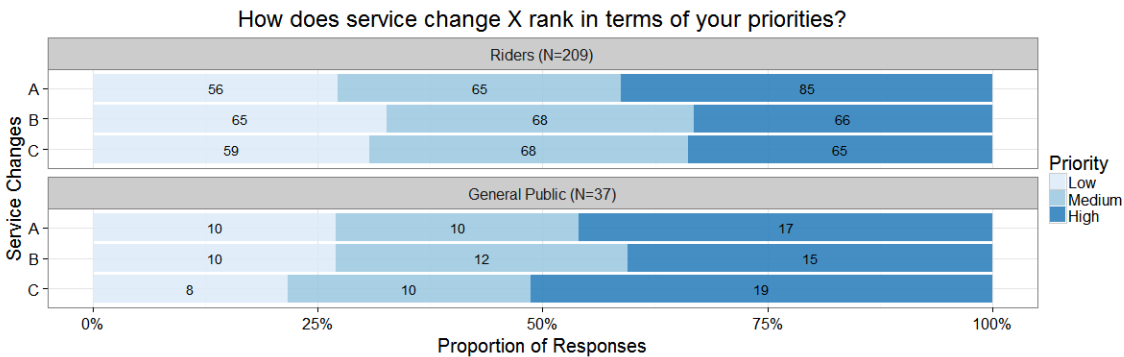
- **Riders:** All three options presented received comparable rider support, with option A receiving the highest average score
- **General Public:** All three options presented received comparable support, with option C (improvements to regional and inter-county service) scored the highest overall (2.3)

Figure 2-4 Regional/Inter-Community Service Change Average Priority Scores

Service Change	Description	Estimated Costs*	Average Score (1=Low, 3=High)	
			Riders	General Public
A	Minimize deviations to make service between communities faster and more direct (Routes 101 & 20).	No additional cost	2.14	2.19
B	Streamline Seaside - Cannon Beach routes and schedules (Routes 20 & 21).	No additional cost	2.01	2.14
C	Improve Regional, Inter-County Service, i.e., improve frequency and convenience of connections.	\$ to \$\$\$	2.03	2.30

Note: \* General public survey only

Figure 2-5 Regional/Inter-Community Service Change Response Distribution



## Service Types

Respondents were asked whether SETD should consider providing other service types, in addition to the current fixed-route, ADA Paratransit, regional/inter-county service, and general public dial-a-ride. The potential service types and the results are presented in Figure 2-6 and Figure 2-7.

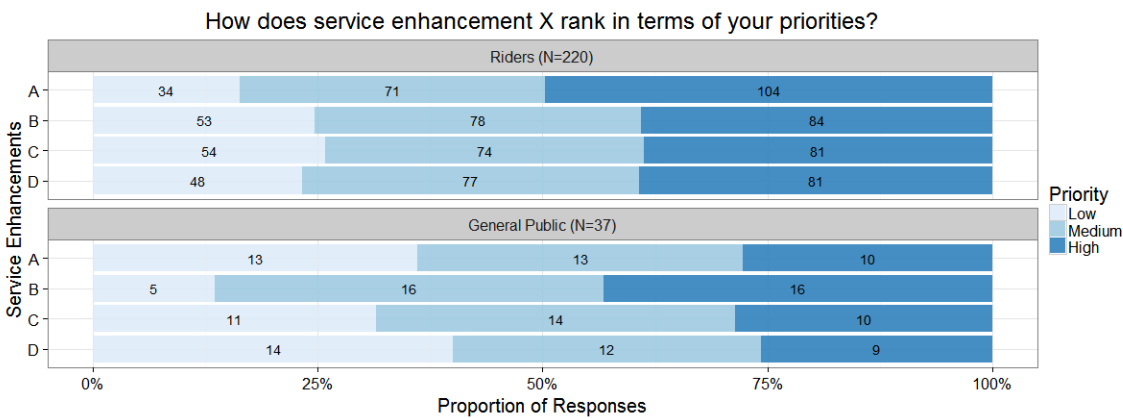
- **Riders:** The most popular service enhancement was shopper shuttles (Option A, 2.33)
- **General Public:** The most popular service enhancement was more frequent regional service (Option B, 2.30)

The difference in priorities may indicate that riders are more reliant on transit for non-discretionary trips (such as shopping trips) than the general public respondents.

**Figure 2-6 Other Service Types Average Priority Scores**

Service Type	Description	Average Score (1=Low, 3=High)	
		Riders	General Public
A	Shopper shuttles	2.33	1.92
B	More frequent regional service	2.14	2.30
C	Expanded Dial-A-Ride service	2.13	1.97
D	Flex-route service	2.16	1.86

**Figure 2-7 Service Type Response Distribution**



In order to understand how community preferences for these other service types vary by geography, the responses were categorized by route (rider survey) or geography (general public survey). For riders, service type preference is shown by route in Figure 2-8. Generally, preferences were comparable across routes. Although the sample size on this route was small, riders completing the survey on Route 15 placed a lower emphasis on regional service and a higher emphasis on Dial-A-Ride.

For the general public, service type preference is shown by geographic area in Figure 2-9; results were also fairly comparable by geography. Service type A (shopper shuttles) was slightly more important in the Astoria and Warrenton/Hammond area. Service type B (regional service) was the highest priority for all geographies. Service type C (Dial-A-Ride) was more important in the Cannon Beach and Astoria areas while service type D (flex routes) was more important in Warrenton/Hammond and in Seaside.

Figure 2-8 Service Type Priorities for Riders by Route

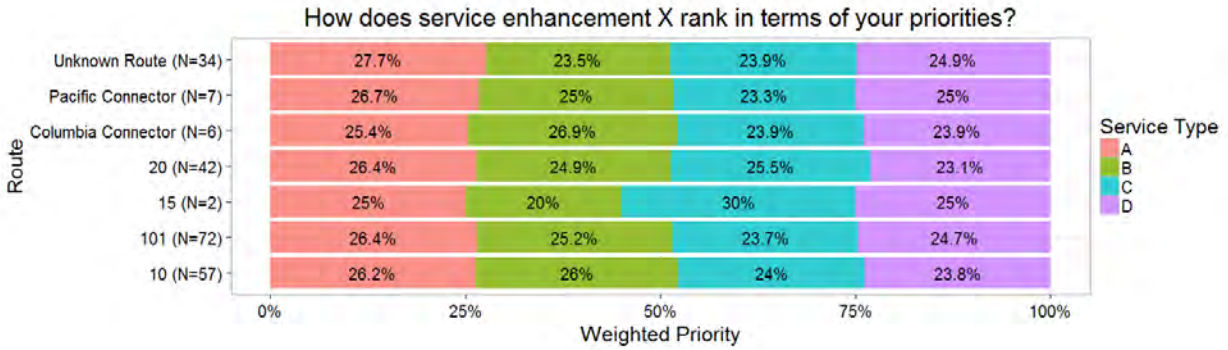
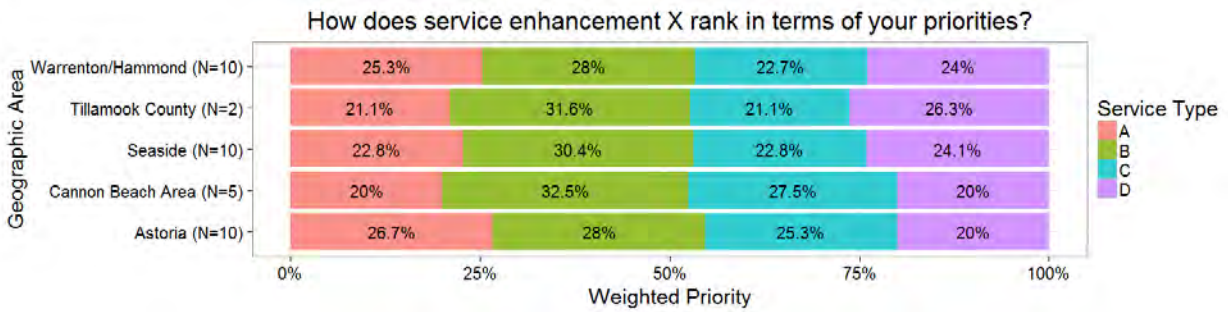


Figure 2-9 Service Type Priorities for the General Public by Geographic Area



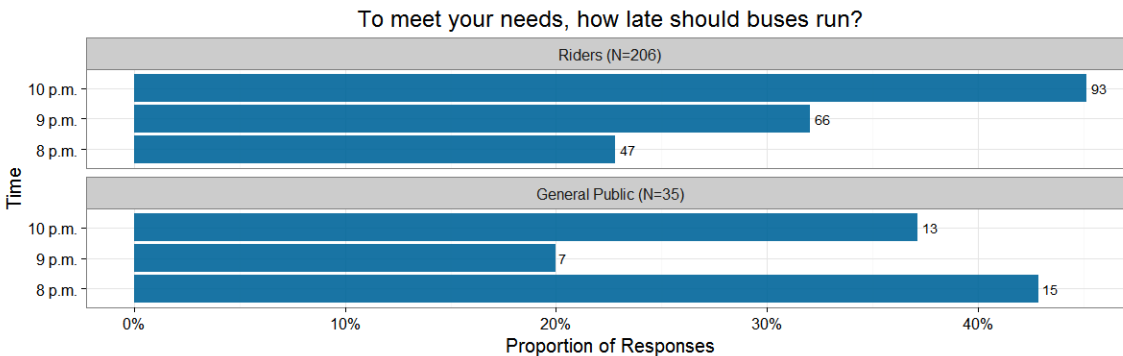
Notes: A = Shopper shuttle, B = More frequent regional service, C = Expanded Dial-A-Ride, D = Flex route service. Responses were weighted by adding up the points (1 being low, and 3 being high) for each service type and geography combination, and dividing the total number of points in the geographic group.

## Service Hours

SETD planned to increase service hours effective February 1, 2016. Respondents were asked to indicate how late buses should operate to meet their needs. Figure 2-10 provides the results. Overall, the most respondents favored service until 10 p.m., although this was a higher priority for riders. The results support SETD's plan to extend service until 10 p.m. on selected routes.

- **Riders:** The largest proportion of riders (45%) indicated buses should run until 10 p.m.
- **General Public:** 29% of respondents did not answer the question. Of respondents who answered the question, 44% indicated buses should run until 8 p.m., while 38% indicated buses should run until 10 p.m. The smallest number of respondents supported service until 9 p.m.

Figure 2-10 Service Hours Response Distribution

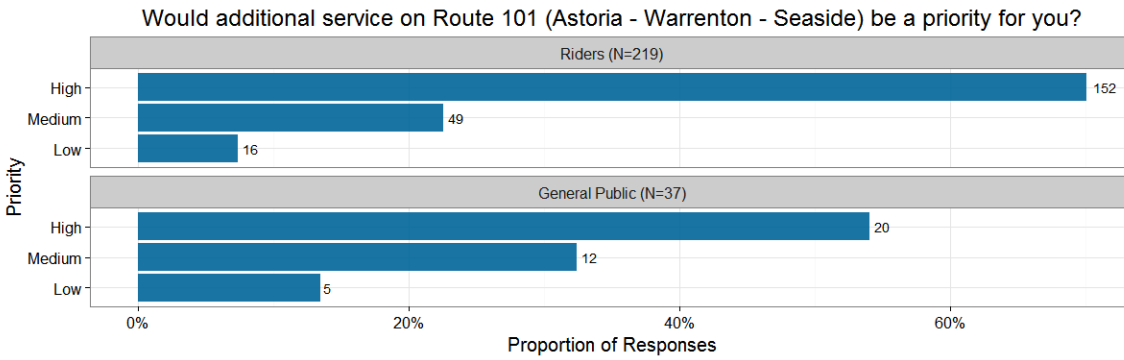


## Frequency

Respondents were asked to prioritize service frequency on Route 101; these results are illustrated in Figure 2-11. The results for both surveys are relatively similar, though riders placed a higher priority on transit frequency (on the Route 101 corridor) than the general public.

- **Riders:** The majority of riders (69%) indicated that improving service frequency in the Route 101 corridor, e.g., to hourly by adding new trips at 11 a.m. and 1 p.m., was a high priority for them.
- **General Public:** 54% of respondents who answered the question indicated that improved frequency on Route 101 is a high priority.

Figure 2-11 Service Frequency Response Distribution



## Astoria/Warrenton/Hammond Opportunities

Respondents were asked to prioritize service modifications for the SETD system in the Astoria/Warrenton/Hammond area; these results are presented in Figure 2-12 and Figure 2-13.

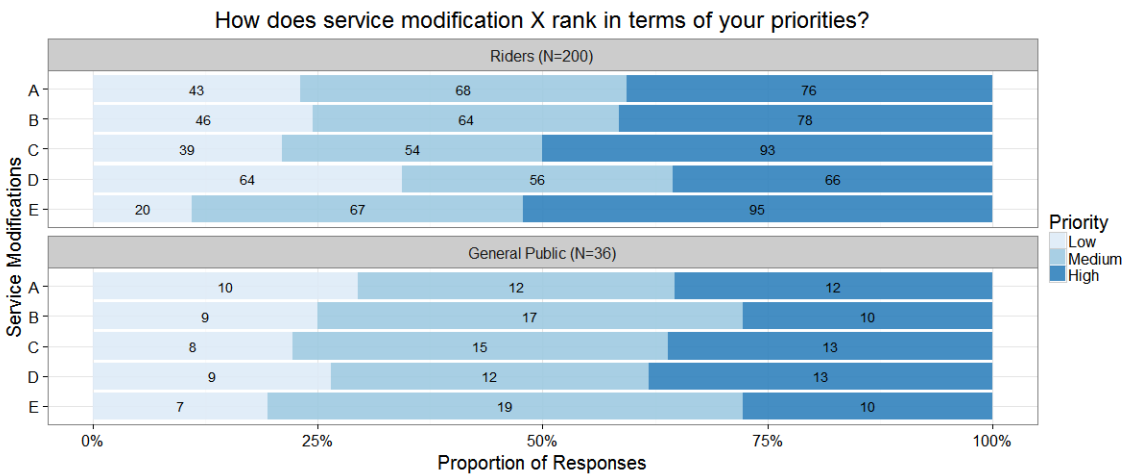
- **Riders:** The highest priorities for riders in the Astoria/Warrenton area were to provide consistent routing and schedules for Warrenton/Hammond service (Option E) and serve eastern Astoria destinations on weekends (Option C).
- **General Public:** Serving eastern Astoria destinations on weekends (Option C) and providing shorter, more focused routes (Option D) received the most ‘High’ priority rankings and had the highest average scores, although a new local route serving the interior of Astoria (Option A) had nearly as many ‘High’ rankings, and consistent schedules/routing in Warrenton/Hammond had the most combined High and Medium rankings.

Figure 2-12 Astoria/Warrenton/Hammond Service Modification Average Priority Scores

Service Change	Description	Estimated Costs*	Average Score (1=Low, 3=High)	
			Riders	General Public
A	New local route servicing interior Astoria.	\$\$	2.18	2.06
B	Provide route on Business 101.	\$\$\$	2.17	2.03
C	Serve eastern Astoria destinations on weekends.	\$	2.29	2.14
D	Break up long routes (10 & 15) into shorter, more direct and focused routes.	\$\$ - \$\$\$	2.01	2.12
E	Consistent schedules and routing for service in Warrenton/Hammond.	\$	2.41	2.08

Note: \* General public survey only

Figure 2-13 Astoria/Warrenton/Hammond Service Modification Response Distribution





## Seaside/Cannon Beach Opportunities

Riders were also asked for input on potential service changes in the Seaside/Cannon Beach area. these results are presented in Figure 2-14 and Figure 2-15. Overall, a local Seaside circulator (Option A) was the higher priority in both riders and the general public.

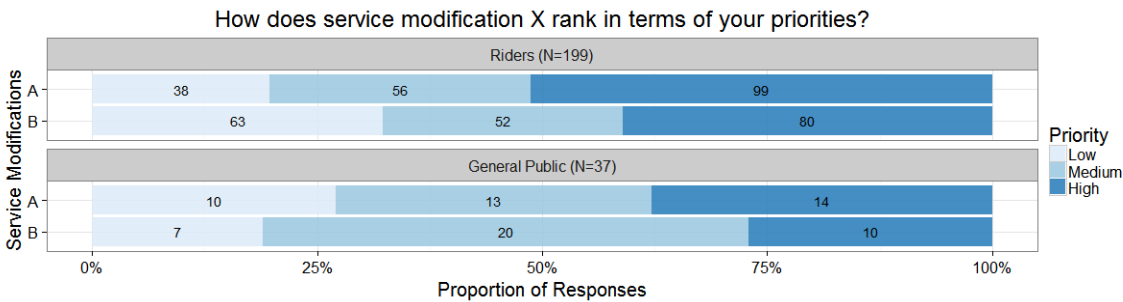
- **Riders:** A majority of riders ranked Option A (local Seaside circulator) as a high priority, although about two-third of riders considered park & rides a medium or high priority.
- **General Public:** Option A (local Seaside circulator) was a slightly higher priority than Option B (park & ride); approximately 10% more respondents indicated Option A was a ‘High’ priority.

Figure 2-14 Seaside/Cannon Beach Service Modification Average Priority Scores

Service Change	Description	Estimated Costs*	Average Score (1=Low, 3=High)	
			Riders	General Public
A	Local "Seaside Circulator" oriented to resident/employee needs. This would allow Routes 20 & 101 to remain on Highway 101 and provide faster service between Seaside, Cannon Beach, and Astoria	\$\$\$	2.32	2.11
B	Park & ride(s) on north and south side of community for access to Routes 20 (to Cannon Beach) and 101 (to Astoria).	\$	2.09	2.08

Note: \* General public survey only

Figure 2-15 Seaside/Cannon Beach Service Modification Response Distribution



## Goals and Objectives

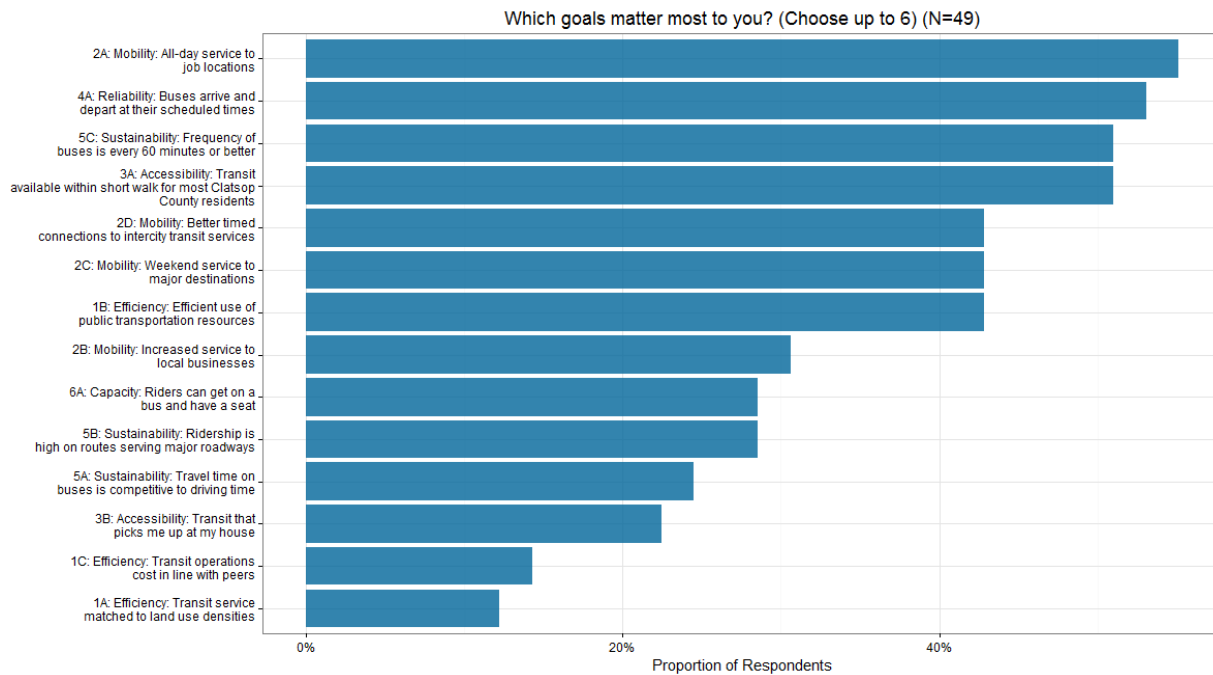
The draft SETD goals and corresponding objectives were presented to online survey respondents only (due to space limitations) and respondents were asked to indicate which objectives are most important to them; they could select up to six objectives. Respondents’ preferences are provided in Figure 2-16. Objective 2A (Mobility: All-day service to job locations) was the most frequently selected (55% of respondents), and the following three objectives were also selected by at least 50% of respondents:

- 4A: Reliability: Buses arrive and depart at their scheduled times
- 5C: Sustainability: Frequency of buses is every 60 minutes or better
- 3A: Accessibility: Transit available within short walk for most Clatsop County residents

**Figure 2-16 Transit Agency Service Goals and Objectives (General Public)**

Goal	Objective	Prioritized	
		#	%
1. Efficiency	A. Transit service matched to land use densities	6	12.2%
	B. Efficient use of public transportation resources	21	42.9%
	C. Transit operations cost in line with peers	7	14.3%
2. Mobility	A. All-day service to job locations	27	55.1%
	B. Increased service to local businesses	15	30.6%
	C. Weekend service to major destinations	21	42.9%
	D. Better timed connections to intercity transit services	21	42.9%
3. Accessibility	A. Transit available within short walk for most Clatsop County residents	25	51.0%
	B. Transit that picks me up at my house	11	22.4%
4. Reliability	A. Buses arrive and depart at their scheduled times	26	53.1%
5. Sustainability	A. Travel time on buses is competitive to driving time	12	24.5%
	B. Ridership is high on routes serving major roadways	14	28.6%
	C. Frequency of buses is every 60 minutes or better	25	51.0%
6. Capacity	A. Riders can get on a bus and have a seat	14	28.6%

**Figure 2-17 Transit Service Prioritization of Service Goals/Objectives**



## COMMUNITY CONVERSATIONS

On December 11 and 12, 2015, the project team brought information about the draft SETD goals and on service opportunities to the community, hosting events to gather public input (see images below). Structured as an open-air open house, the team spent two hours at each of the following locations:

- Rite Aid in Young's Bay Plaza, Warrenton
- Riversea Gallery, Astoria
- Library, Seaside
- Chamber of Commerce, Cannon Beach

Outreach materials are provided in Appendix A.

Figure 2-18 Community Event Photos



## Input on Goals

Goals receiving votes and the number of votes are shown below:

- Efficiency
  - Efficient use of transportation resources (1)
- Mobility
  - Weekend service (1)

- Better connections to intercity service (2)
- Reliability
  - On time buses (1)

## **Service Opportunities**

Service options receiving votes and the number of votes are shown below:

- Regional Service
  - Minimize deviations along regional service such as Route 101 (4)
  - Improve regional, inter-county service (2)
- Service Types
  - Expand Dial a Ride (1)
  - More frequent regional service (1)
- Time of service
  - Run service until 8 pm (1)
  - Run service until 10 pm (1)
  - Hourly all-day 101 (4)
- Local service – Astoria/Warrenton/Hammond
  - Provide route on Business 101 (2)
  - New local route serving interior of Astoria (1)
  - Serve eastern Astoria on weekends (2)
  - Break up long routes into shorter, more direct routes (1)
- Local service – Seaside / Cannon Beach
  - Park and ride in the north and south ends of Seaside (2)

## **General Comments**

General comments from members of the public and riders included:

- **Lack of information.** Riders had many opinions on the service options; however, non-riders were mostly interested in learning more about the bus system in general. Cannon Beach Chamber of Commerce staff find the Route 20/21 schedules and the transfers to the Tillamook buses extremely confusing. Many people ask about bus service but Chamber staff have difficulty clearly explaining the routes to the public.
- **People are okay with transfers as long as they are well-timed.** In running through route options with current riders, people generally felt that shorter routes requiring a transfer at SETD's transit center would work fine as long as the transfers were well-timed with short wait times.
- **Later service greatly appreciated.** Current riders expressed a lot of enthusiasm for buses running later at night – until 8 or 10 pm. When a person gets off of work at 6 pm, and then must pick up kids or go to the grocery store, the final trip home happens later at night. Service running only until 6 pm does not allow a person to make after-work trips.

# APPENDICES

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# Appendix A Outreach Materials

## SURVEY PUBLICITY



**WHAT'S YOUR PRIORITY FOR BUS SERVICE IN CLATSOP COUNTY?**

Direct bus route from **ASTORIA** to **SEASIDE**?  
Shoppers shuttles serving **YOUR** neighborhood?  
More service to **COLUMBIA** and **TILLAMOOK** Counties?

The **Sunset Empire Transportation District (SETD)** provides local and regional bus service and has undertaken a long-range plan to determine transit needs throughout Clatsop County. We need your opinions and regional needs for public transportation services and hope you can participate in this short survey.

Please **Take 5 minutes** to fill out the survey about public transit in Clatsop County

**TRANSITSTUDY.RIDETHEBUS.ORG/SURVEY**



**We want to hear from you!**

**SUNSET EMPIRE TRANSPORTATION DISTRICT**

Direct bus route from Astoria to Seaside?  
Shoppers shuttles serving your neighborhood?  
More service to Columbia and Tillamook Counties?

What changes would get **YOU** on the bus?  
The Sunset Empire Transportation District wants to know!

**Please help us by filling out our survey:**  
<http://TransitStudy.RidetheBus.org/Survey>

Your input will help shape the future of travel in the places where you live and work.

<http://TransitStudy.RidetheBus.org/Survey>

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<http://TransitStudy.RidetheBus.org/Survey>

# RIDER SURVEY - ENGLISH

## SUNSET EMPIRE TRANSPORTATION DISTRICT SURVEY

In May, Sunset Empire Transportation District (SETD) surveyed riders to understand travel behavior and service needs. Now we want to know your priorities around the opportunities gathered from riders and the public.

Check this box if you completed this survey on another trip

For Internal Use: Time of Survey \_\_\_\_\_ am/pm Route: \_\_\_\_\_

Please rank these potential service changes in terms of your priorities (High, Medium, Low):

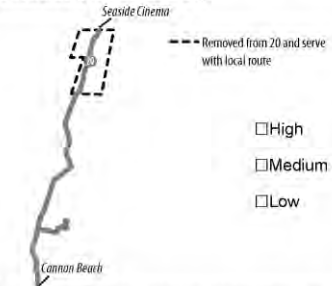
### Inter-Community and Regional Service

1. Minimize deviations to make service between communities faster and more direct (Routes 101 & 20).



High  
 Medium  
 Low

2. Streamline Seaside - Cannon Beach routes and schedules (Routes 20 & 21).



High  
 Medium  
 Low

3. Improve regional service connections to Columbia County Rider and to Tillamook County Transit.



High  
 Medium  
 Low

### Service Types

SETD currently provides fixed-route service, ADA Paratransit, Regional Service (Inter-County) and General Public Dial-A-Ride. Should the following other service types be considered?

4. **Shopper Shuttles** – A shopper shuttle could serve a different community on each day of the week and would take people from their homes to one major destination, such as a mall or grocery store.  
 High  Medium  Low

5. **More Frequent Regional Service** – Currently two round trips per day connect Clatsop County to Columbia County and three round trips connect Clatsop County to Tillamook County.  
 High  Medium  Low

6. **Expanded Dial-A-Ride Service** – Today people living in Warrenton, Hammond, Jeffers Gardens, Miles Crossing, John Day, Svensen, or Knappa may call and schedule a pick-up and drop-off using Dial-A-Ride.  
 High  Medium  Low

7. **Flex Route Service** – Flex routes have set schedules and routes, but the bus driver can deviate off the route to pick up a passenger who calls ahead. This increases the overall travel time, but serves those who can't walk to the bus route.  
 High  Medium  Low

### Service Hours

SETD is planning to expand evening service in February 2016 with these added times:

Route 10	Route 20	Route 101
7:51 p.m. - 9:19 p.m.	8 p.m. - 8:55 p.m.	8 p.m. - 9:50 p.m.

8. Should the last trip for each route leave at: (Circle one)

8 p.m.      9 p.m.      10 p.m.

9. All-day hourly service on Route 101 from 6 a.m. to 10 p.m. by adding new trips at 11 a.m. and 1 p.m. (Astoria - Warrenton - Seaside).  
 High  Medium  Low

Please rank these potential service changes in terms of your priorities (High, Medium, Low):

### Astoria/Warrenton Local Service

10. New local route serving interior of Astoria.



High  Medium  Low

11. Provide route on Business 101.



High  Medium  Low

12. Serve eastern Astoria destinations on weekends.



High  Medium  Low

13. Break up long routes (10 & 15) into shorter, more direct routes.



High  Medium  Low

14. Consistent schedules and routing for service in Warrenton/Hammond.

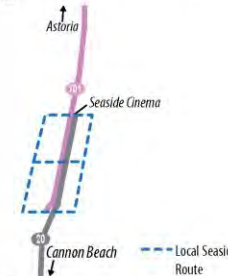
High  Medium  Low

Current Schedule of Routes 10 and 15 during AM hours

Route	10	15	10	15	10	15
Warrenton Mini Mart	5:45 a.m.	6:15 a.m.	7:17 a.m.	9:55 a.m.	10:20 a.m.	12:15 p.m.
Potential Consistent Schedule	6:00 a.m.	7:00 a.m.	8:00 a.m.	9:00 a.m.	10:00 a.m.	12:00 p.m.

### Seaside

15. Local "Seaside Circulator" oriented to resident/employee needs. This would allow Routes 20 & 101 to remain on Highway 101 and provide faster service between Seaside, Cannon Beach, and Astoria.



High  
 Medium  
 Low

16. Park & ride on north and south side of Seaside for access to Route 20 (to Cannon Beach) and Route 101 (to Astoria).



High  
 Medium  
 Low

Thank you for your input! Please return this sheet to SETD staff or the bus driver.

OVER

## RIDER SURVEY - SPANISH

### ENCUESTA DEL DISTRITO DE TRANSPORTACIÓN SUNSET EMPIRE

En Mayo, el Distrito de Transportación Sunset Empire (SETD) hizo una encuesta de pasajeros para entender como viajan y cuales servicios necesitan. Ya queremos saber cuales de estos oportunidades son prioridades para usted.

Marque la cuadrada si ha realizado esta encuesta durante otro viaje Para Uso Interno: Time of Survey \_\_\_\_\_ am/pm Route: \_\_\_\_\_

Por favor clasifica los posibles cambios de servicio de acuerdo con sus prioridades (Alta, Medio, Bajo):

#### Servicio Regional

1. Menos desviación, para que el servicio entre las comunidades sea mas rápido y directo (Rutas 101 & 20).



- Alta
- Medio
- Bajo

2. Coordinar las rutas y horarios entre Seaside y Cannon Beach (Rutas 20 & 21).



- Alta
- Medio
- Bajo

3. Mejorar las conexiones entre el servicio regional y los servicios de transporte del Condado de Columbia y del Condado de Tillamook.



- Alta
- Medio
- Bajo

#### Tipos de Servicio

SETD actualmente ofrece autobuses programados de ruta fija, tránsito para personas con discapacidades físicas, Servicio Regional (Entre Condados) y servicio de pedido telefónico de transporte para el público. Debemos considerar los siguientes formas de servicio?

4. Transporte de Compras – Un transporte de compras podría servir a una comunidad distinta cada día de la semana. Llevaría las personas desde sus casas a un destino mayor, como un centro comercial o supermercado.

- Alta
- Medio
- Bajo

5. Servicio Regional Mas Frecuente – Actualmente, dos viajes diarios de ida y vuelta conectan el Condado de Clatsop al Condado de Columbia y tres viajes diarios de ida y vuelta conectan el Condado de Clatsop al Condado de Tillamook.

- Alta
- Medio
- Bajo

6. Servicio De Pedido Telefónico De Transporte – Actualmente, los residentes de Warrenton, Hammond, Jeffers Gardens, Miles Crossing, John Day, Svensen, y Knappa puedan llamar y arreglar servicio de transporte.

- Alta
- Medio
- Bajo

7. Servicio de Ruta Flexible – Los autobuses de ruta flexible tienen horarios y rutas fijas, pero el conductor puede desviar de la ruta para recoger a un pasajero que ha llamado de antemano. Aumenta la duración del viaje, pero provee servicios a ellos quienes no puedan andar de pie a las paradas del autobús.

- Alta
- Medio
- Bajo

#### Horas de Servicio

SETD planea aumentar el servicio en las noches con estos horarios adicionales:

Ruta 10	Ruta 20	Ruta 101
7:51 p.m. - 9:19 p.m.	8 p.m. - 8:55 p.m.	8 p.m. - 9:50 p.m.

8. El ultimo viaje de cada ruta debe partir a las: (Escoge uno)

- 8 p.m.
- 9 p.m.
- 10 p.m.

9. Servicio de autobús cada hora por todo el día en Ruta 101 de 6 a.m. a 10 p.m., con la adición de nuevos viajes a 11 a.m. y 1 p.m.. (Astoria - Warrenton - Seaside).

- Alta
- Medio
- Bajo

REVES ▶

Por favor clasifica los posibles cambios de servicio de acuerdo con sus prioridades (Alta, Medio, Bajo):

#### Astoria/Warrenton Servicio Local

10. Nueva ruta local adentro de Astoria.



- Alta
- Medio
- Bajo

11. Provee ruta en la Calletera 101 Comercial.



- Alta
- Medio
- Bajo

12. Sirve destinos al este de Astoria durante los fines de semana.



- Alta
- Medio
- Bajo

13. Divide las rutas largas (10 & 15) para crear rutas mas cortas y directas.



- Alta
- Medio
- Bajo

14. Horarios y rutas consistentes para el servicio de Warrenton/Hammond.

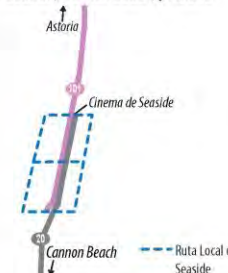
- Alta
- Medio
- Bajo

#### Horario Actual de las Rutas 10 y 15 durante la mañana

Ruta	10	15	10	15	15
Warrenton Mini Mart	5:45 a.m.	8:15 a.m.	7:17 a.m.	9:55 a.m.	10:20 a.m.
Possible Horario Consistente	6:00 a.m.	7:00 a.m.	8:00 a.m.	9:00 a.m.	10:00 a.m.
					12:00 p.m.

#### Seaside

15. Autobús local "Seaside Circulador" orientada a las necesidades de los residentes/empleados. Permite que las Rutas 20 & 101 sigan en la Calletera 101 y provee servicio mas rapido entra Seaside, Cannon Beach, y Astoria.



- Alta
- Medio
- Bajo

16. Aparcamiento "Park & Ride" en el norte y sur de Seaside para acceso a la Ruta 20 (a Cannon Beach) y la Ruta 101 (a Astoria).



- Alta
- Medio
- Bajo

Gracias para su participación! Por favor devuelva esta hoja a un empleado de SETD o al conductor.



## COMMUNITY OUTREACH EVENT DISPLAY BOARDS

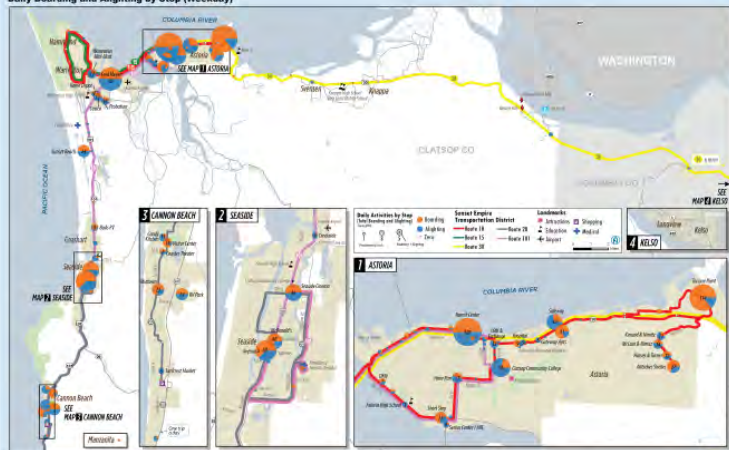
### HELP SETD PLAN ITS TRANSIT SERVICE!

The Sunset Empire Transportation District provides 180,000 transit trips per year to Clatsop County's 36,000 residents. SETD is creating its long-term vision for service and we need your input!

### Where are Transit Riders traveling?

SETD staff surveyed all transit routes to understand where people get on and off the bus.

Daily Boarding and Alighting by Stop (Weekday)



[TRANSITSTUDY.RIDETHEBUS.ORG/SURVEY](https://transitstudy.ridethebus.org/survey)

#### For More Information

Jeff Hazen  
Executive Director  
Sunset Empire Transportation District  
900 Marine Drive | Astoria | OR | 97103  
Jeff@ridethebus.org  
503-861-7433



SUNSET EMPIRE  
TRANSPORTATION  
DISTRICT

Transit Agency Goals	What this could mean to me and my community?	Which goals matter to you? (Vote using your "Dots")
<b>EFFICIENCY</b> Provide cost-effective public transportation	<ul style="list-style-type: none"> <li>Transit service matched to land use densities</li> <li>Efficient use of public transportation resources</li> <li>Transit operations cost in line with peers</li> </ul>	
<b>MOBILITY</b> Serve a wide range of travel needs	<ul style="list-style-type: none"> <li>All-day service to job locations</li> <li>Increased service to local businesses</li> <li>Weekend service to major destinations</li> <li>Better timed connections to intercity transit services</li> </ul>	
<b>ACCESSIBILITY</b> Ensure access to transit service	<ul style="list-style-type: none"> <li>Transit available within short walk for most Clatsop County residents</li> <li>Transit that picks me up at my house</li> </ul>	
<b>RELIABILITY</b> Provide dependable public transportation	<ul style="list-style-type: none"> <li>Buses arrive and depart at their scheduled times</li> </ul>	
<b>SUSTAINABILITY</b> Make public transportation an option for those who can drive	<ul style="list-style-type: none"> <li>Travel time on buses is competitive to driving time</li> <li>Ridership is high on routes serving major roadways</li> <li>Frequency of buses is every 60 minutes or better</li> </ul>	
<b>CAPACITY</b> Provide enough buses and seats to meet demand for public transportation	<ul style="list-style-type: none"> <li>Riders can get on a bus and have a seat</li> </ul>	

## REGIONAL SERVICE OPPORTUNITIES

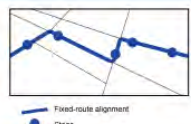


### Inter-Community Service Improvements

<p><b>Minimize deviations to make service between communities faster and more direct.</b></p> <ul style="list-style-type: none"> <li>- Deviation to Sunset Beach would remain.</li> </ul>	<p><b>No Added Cost</b></p>	<p>Remove from 101/20 and serve with local route</p>
<p>What do you think?</p>	<p>●</p>	
<p><b>Streamline Seaside-Cannon Beach routes and schedules (Routes 20/21).</b></p> <ul style="list-style-type: none"> <li>- Single route that follows the same routing on weekdays and weekends.</li> <li>- Consistent weekend schedule.</li> </ul>	<p><b>No Added Cost</b></p>	<p>Route 20</p> <ul style="list-style-type: none"> <li>• Weekday</li> <li>• Saturday</li> <li>• Sunday</li> </ul> <p>Removed from 20 and serve with local route</p>
<p>What do you think?</p>	<p>●</p>	
<p><b>Improve Regional, Inter-County Service:</b></p> <ul style="list-style-type: none"> <li>- More frequent trips and well-timed transfers to Tillamook County and Columbia County services</li> </ul>	<p><b>\$ to \$\$\$</b></p>	
<p>What do you think?</p>	<p>●</p>	

### Service Types

SETD currently provides several types of transit service:

<p><b>Fixed-route service</b></p> <ul style="list-style-type: none"> <li>- 7 days a week in and between Astoria, Warrenton, Hammond, Gearhart, Seaside, and Cannon Beach</li> <li>- ADA Paratransit for riders who are unable to use fixed-route service.</li> </ul>	<p><b>Regional service</b></p> <ul style="list-style-type: none"> <li>- (2 round trips per day) connecting with Columbia County service in Rainier (serves Svensen, Knappa, Westport, and Clatskanie) and with Tillamook County service in Cannon Beach or Manzanita.</li> </ul>	<p><b>General-Public Dial-A-Ride</b></p> <ul style="list-style-type: none"> <li>- Warrenton/Hammond and Jeffers Garden/Miles Crossing (Monday-Friday, 8 a.m.-5 p.m.) and John Day/Svensen/Knappa (Tuesday and Thursday, AM pickup, PM return). Two-day advance reservation required, \$8 to \$12 per one-way trip based on distance.</li> </ul>
--	--	---

What do you think? Which service type enhancements should SETD provide?

<p><b>Shopper shuttles</b></p>	<p><b>More frequent regional service</b></p>	<p><b>Expand Dial-A-Ride service</b></p>	<p><b>Flex-route service</b></p>
<p>●</p>	<p>●</p>	<p>●</p>	<p>●</p>





### Service Hours

SETD is planning to expand evening service in February 2016 with these added times:



<p><b>Route 10</b></p> <ul style="list-style-type: none"> <li>- 7:51 p.m. - 9:19 p.m.</li> </ul>	<p><b>Route 20</b></p> <ul style="list-style-type: none"> <li>- 8 p.m. - 8:55 p.m.</li> </ul>	<p><b>Route 101</b></p> <ul style="list-style-type: none"> <li>- 8 p.m. - 9:50 p.m.</li> </ul>	<p><b>All-day hourly service on Route 101 from 6 a.m. to 10 p.m.</b></p>
<p><b>\$ to \$\$\$</b></p>			<p>New trips at 11 a.m. and 1 p.m. to close gaps in service</p>
<p><b>What do you think? Which planned service meets your needs?</b></p>			<p><b>\$\$</b></p>
<p>Last trip leaves at 8:00 p.m.?</p>	<p>Last trip leaves at 9:00 p.m.?</p>	<p>Last trip leaves at 10:00 p.m.?</p>	<p>●</p>

## LOCAL SERVICE OPPORTUNITIES

### Astoria/Warrenton Area

New local route serving interior of Astoria.	\$\$	
What do you think?		
Provide route on Business 101 (between Astoria and Costco/Walmart area).	\$\$\$	
What do you think?		
Serve eastern Astoria destinations on weekends (Safeway Emerald Heights, etc.).	\$	
What do you think?		
Break up long routes (10 and 15) into shorter, more direct and focused routes.	\$\$ to \$\$\$	
What do you think?		

### Seaside Area

Local "Seaside Circulator" oriented to resident/employee needs. This would allow Routes 20 and 101 to remain on Highway 101 and provide faster service between Seaside, Cannon Beach, and Astoria.	\$\$\$																													
What do you think?																														
Park & ride on north and south side of community for access to Routes 20 (to Cannon Beach) and 101 (to Astoria).	\$																													
What do you think?																														
Consistent schedules and routing for service in Warrenton/Hammond (Routes 10/15).	\$	<p><b>Current Schedule of Route 10 and 15 during AM hours</b></p> <table border="1"> <thead> <tr> <th>Route</th> <th>10</th> <th>15</th> <th>10</th> <th>15</th> <th>10</th> <th>15</th> </tr> </thead> <tbody> <tr> <td>Warrenton Mini Mart</td> <td>5:45 a.m.</td> <td>6:15 a.m.</td> <td>7:17 a.m.</td> <td>9:55 a.m.</td> <td>10:20 a.m.</td> <td>12:15 p.m.</td> </tr> <tr> <td>Destination</td> <td>Hammond / Astoria</td> <td>Astoria</td> <td>Hammond / Astoria</td> <td>Costco</td> <td>Costco</td> <td>Hammond / Astoria</td> </tr> <tr> <td>Poential Consistent Schedule</td> <td>6:00 a.m.</td> <td>7:00 a.m.</td> <td>8:00 a.m.</td> <td>9:00 a.m.</td> <td>10:00 a.m.</td> <td>12:00 p.m.</td> </tr> </tbody> </table>	Route	10	15	10	15	10	15	Warrenton Mini Mart	5:45 a.m.	6:15 a.m.	7:17 a.m.	9:55 a.m.	10:20 a.m.	12:15 p.m.	Destination	Hammond / Astoria	Astoria	Hammond / Astoria	Costco	Costco	Hammond / Astoria	Poential Consistent Schedule	6:00 a.m.	7:00 a.m.	8:00 a.m.	9:00 a.m.	10:00 a.m.	12:00 p.m.
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Destination	Hammond / Astoria	Astoria	Hammond / Astoria	Costco	Costco	Hammond / Astoria																								
Poential Consistent Schedule	6:00 a.m.	7:00 a.m.	8:00 a.m.	9:00 a.m.	10:00 a.m.	12:00 p.m.																								
What do you think?																														



## **SECTION J**

### Memo 5C: Service Concepts



# MEMO #5C: SERVICE CONCEPTS

**Memo #5A – Service Opportunities** provides an initial list of service opportunities and an evaluation of the opportunities, including input from the TPAC. This memo was first presented at TPAC Meeting #3 (October 2015).

**Memo #5B – Community Input on Service Opportunities** provides results from community outreach, including rider and general public surveys. This memo was first presented at TPAC Meeting #4 (January 2016).

**Memo #5C – Service Concepts** develops the service opportunities that received community support to a greater level of detail. This memo will be presented at TPAC Meeting #4 (January 2016). It should be noted that these are preliminary concepts that will also be discussed and refined with input from SETD operations staff.

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**Long-Range Comprehensive Transportation Plan | Memo #5C – Service Opportunities - DRAFT**  
Sunset Empire Transportation District

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### 3 DRAFT SERVICE CONCEPTS

Based on input from the TPAC and the rider and community surveys (see Memo #5B), the following options were moved forward for more detailed concept development. This memo focuses upon where and when routes run, how routes are branded, transfers, passenger amenities, and major capital facilities. Organizational projects and programs will be discussed in a separate memo.

#### PLANNING TIME FRAMES

Service concepts are provided for the following general time frames. It is assumed that service improvements in the immediate/near-term (next two years) would need to be cost-neutral, but that additional resources could be available for transit in the longer-term.

- **Immediate/Near-Term** (Cost-Neutral): 0 to 1 years (2016 – 2017)
- **Short-Term**: 2 – 4 Years (2018 – 2020)
- **Mid-Term**: 5-10 Years (2021 – 2026)
- **Long-Term**: 11-20 Years (2027 – 2036)

#### WEEKDAY YEAR-ROUND SERVICE

##### Columbia Corridor: Route 30 / Lower Columbia Connector

SETD Route 30 (Lower Columbia Connector or LCC) currently meets CC Rider services twice per day in Rainier, seven days a week, a one-way travel time of 1:10 between Astoria and Rainier. This connection facilitates (1) connections with CC Rider Route 7 (Lower Columbia Connector) to St. Helens and Portland in both directions; and (2) a morning connection for SETD riders to Longview/Kelso for medical services or Amtrak connections, and a return connection in the afternoon (however, there is no morning connection possible from Kelso to Astoria). Since the SETD bus that operates the LCC also serves Route 15, the scheduling of the LCC is related to local SETD service in the Warrenton area.

Figure 3-1 SETD – CC Rider Connections in Rainier, OR

	SETD Route 30 (LCC) Arrival in Rainier	CC Rider Arrivals in Rainier		CC Rider Departures from Rainier		SETD Route 30 (LCC) Departure from Rainier
		Route 7: From St. Helens / Portland	Route 5: From Kelso	Route 7: To St. Helens / Portland	Route 5: To Kelso	
AM	7:55 AM	7:30 AM	None	8:30 AM	8:03 AM	8:30 AM
Midday	None	None	None	None	None	None
PM	3:55 PM	4:30 PM	4:00 PM	4:30 PM	None	4:30 PM
Evening	None	None	None	None	None	None

This schedule allows for one round trip per day between the Astoria-Portland corridor along U.S. 30 and between Astoria-Kelso/Longview. For example, a passenger from Astoria to Portland would have to follow this schedule, with about a 3.25 hour one-way travel time and a one-way fare of \$15 (\$29 for a round trip). (By comparison, a round trip between Astoria and Portland on NorthWest Point along the US 26 corridor is about 2.5 hours in each direction and costs \$10 one-way).

Astoria-Portland day trip:

- Depart Astoria 6:45 am via LCC → Arrive in Rainier 7:55 am
  - o Transfer time: 35 minutes. Note that this schedule allows a transfer to the CC Rider Route 5 departure to Kelso at 8:03 am.
- Depart Rainier 8:30 am on Route 7 → Arrive in St. Helens at 9 am and at Portland Union Station at 10:15 am
  - o End-to-end travel time: 3.5 hours
  - o Time in Portland: 4.25 hours
- Depart Portland Union Station 2:30 pm on Route 7 → Arrive in St. Helens 3:30 pm and in Rainier 4:30 pm
  - o Note: Route 5 from Kelso arrives in Rainier at 4:00 pm.
- Depart Rainier 4:30 pm via LCC → Arrive in Astoria at 5:40 pm
  - o End-to-end travel time: 3.25 hours

### Cost-Neutral Changes

- **Schedule/Passenger Information**
  - **Rename as Route 30: Lower Columbia Connector.** This is similar to how CC Rider brands its Lower Columbia Connector (Route 7) and to how TCTD brands its Connector routes.
  - **Make the schedule more legible and easier to understand.** Include the actual transfer times to CC Rider and the potential end-to-end connections with arrival times. For example, the CC Rider schedule for its Route 7 includes the end-end travel times between Astoria TC and Downtown Portland (see Figure 3-2).
  - **Coordinate with CC Rider to reduce travel time.** Consider tightening the northbound layover time in Rainier (currently 35 minutes) to improve end-to-end travel times, as it does not appear to be needed to facilitate connections. This could also allow better spacing of Route 15 in Warrenton.

### Short-Term (Additional Resources)

- **Introduce Shopper Shuttle.** Consider a shopper shuttle to Svensen/Knappa– 1 R/T per week, potentially by using current dial-a-ride resources

### Mid-Term (Additional Resources)

- **Consider Short Trips to MERTS/Svensen/Knappa.** Consider 2 additional “short” round trips to Svensen/Knappa, including MERTS (meaning 4 total round trips per day including the two existing Route 30 / Lower Columbia Connector trips)

### Long-Term (Additional Resources)

- **Expand service to 3 daily round trips to Rainier (1 additional).** The current service levels do not appear to be attracting sufficient passengers. For the service to be useful, additional

trips may be needed. Boarding data from 2014 shows 664 boardings per month on Route 30, with 2.9 boardings per service hour. On average, 60 passengers per month transferred to CC Rider from Route 30.

Figure 3-2 Sample CC Rider Schedule, Route 7

<div style="background-color: #0070C0; color: white; padding: 5px; font-size: 24px; font-weight: bold; display: inline-block;">7</div> <span style="font-size: 24px; font-weight: bold; display: inline-block; vertical-align: middle;">Lower Columbia Connector</span>						
Line 7 - Lower Columbia Connector SERVICE 7-DAYS A WEEK						
DEPARTURE TIMES TO ASTORIA TRANSIT CENTER						
SW Salmon St/SW 6th Ave	Portland Union Station	Scappoose-NE 1st/Prairie	St Helens TC	Rainier TC	Clatskanie Safeway	Arrive Astoria TC
6:00	6:30	7:05	7:30	8:30	9:00	9:45
2:00	2:30	3:05	3:30	4:30	5:00	5:45

DEPARTURE TIMES TO PORTLAND UNION STATION/SW SALMON ST. and SW 6th AV.						
Astoria TC	Clatskanie	Rainier TC	St Helens TC	Scappoose-NE 1st/Prairie	Portland Union Station	SW Salmon St/SW 6th Ave
6:45	7:35	8:30	9:00	9:25	10:15	10:30 <sup>  </sup>
2:45	3:35	4:30	5:00 <sup>*</sup>	5:20 <sup>*</sup>	6:15 <sup>‡</sup>	6:00 <sup>*‡</sup>

## Astoria/Warrenton Local Service: Routes 10 and 15

### Route 10 Weekday

#### Cost-Neutral Changes

- **Break into two routes, remaining on overall hourly cycle, East and West.** Ridership data shows that a large number of riders board and alight at Clatsop Community College (CCC), Tongue Point, Emerald Heights, and the Astoria Transit Center; however, the long routing means that a passenger boarding at the transit center but headed to CCC must ride all the way through eastern Astoria to Tongue Point/Emerald Heights and back. Shorter routes anchored at the transit center will reduce travel time for riders.
  - **East Route** should be timed with Route 101. See Figure 3-5 for a conceptual route map.
  - **West Route** demands include direct connections to CCC as well as serving the interior of Astoria; however, given the length of the East Route, serving all these destinations requires tradeoffs. The importance of (a) running the full length of Nimitz Drive in Emerald Heights (b) directly serving CCC from the Transit Center (c) bringing East Route passengers to the Transit Center for transfers and (d) providing service in Astoria’s interior – need to be weighed. Route 10 West Option A does not include service to CCC to ensure that both east and west routes can be run in one hour with time to spare. Assuming Route 101 can provide a trip to CCC after serving the TC (see next bullet), this maintains hourly service to CCC. However, many CCC boardings arrive via the 10 today. Route 10 West Option B includes service to the college and some increase in service to Astoria’s interior, but may encounter on-time performance issues (timing would need to be verified). Route 10 West Option C is a longer-term option that serves CCC and provides circulation through Astoria’s interior, but it would not be possible in the short-term without additional vehicles. See Figure 3-5 for conceptual route maps.
  - **Route 101** is assumed to serve northern W. Marine Drive in the western portion of Astoria and is also assumed to serve CCC, via downtown Astoria.
- The current Route 10 is branded as serving Warrenton/Hammond in addition to Astoria; however, only five out of 12 daily trips per day cross over to Warrenton/Hammond. Any Route 10 service on the Route 15 loop in Warrenton-Hammond should be branded as Route 15 by changing head signs. These trips should be added to the Route 15 schedule.

#### Short-Term (Additional Resources)

- Eliminate Route 10’s 7:14 trip serving Route 15 in Warrenton-Hammond when possible (the trips that would otherwise deadhead to Astoria should be maintained) in combination with changes to Route 15 (see below).

#### Medium-Term (Additional Resources)

#### Longer-Term (Additional Resources)

- **Increase frequency and/or coverage.** Increase frequency and/or consider designating Route 10 east and west as flex routes, meaning buses can deviate off the fixed route to pick up passengers. This increases travel time overall, and may require additional vehicles, but could serve those who cannot walk to the fixed route, and would also cover SETD’s ADA requirement in Astoria. This is assumed as a long-term option due to the cost.

Specific timing, schedule, and routing details would require further refinement.

**Route 10 East/West Conceptual Schedules**

Key considerations in designing schedules for the proposed Route 10 East and West routes would include:

- Timed transfer from the east route to Route 101 (departs top of the hour); destinations served by Route 10 West are likely to have more local travel demand.
- It is assumed that Route 101 would still provide a connection to CCC on weekdays
- Although not included in Option A, a connection to CCC would likely still be needed on Route 10 in order to accommodate local riders from eastern Astoria.

Figure 3-3 Route 10 East and Route 10 West (Option A) Conceptual Schedules (Details to be Refined)

East						West				
TC	Safeway	Emerald Heights (Mitscher)	Job Corps	Safeway	TC	TC	Lexington & Denver	Astoria H.S.	Peter Pan	TC
6:25	6:30	6:40	6:45	6:52	6:59	7:01	7:06	7:10	7:14	7:18
7:25	7:30	7:40	7:45	7:52	7:59	8:01	8:06	8:10	8:14	8:18
8:25	8:30	8:40	8:45	8:52	8:59	9:01	9:06	9:10	9:14	9:18
9:25	9:30	9:40	9:45	9:52	9:59	10:01	10:06	10:10	10:14	10:18
10:25	10:30	10:40	10:45	10:52	10:59	11:01	11:06	11:10	11:14	11:18
11:25	11:30	11:40	11:45	11:52	11:59	12:01	12:06	12:10	12:14	12:18
12:25	12:30	12:40	12:45	12:52	12:59	13:01	13:06	13:10	13:14	13:18
13:25	13:30	13:40	13:45	13:52	13:59	14:01	14:06	14:10	14:14	14:18
14:25	14:30	14:40	14:45	14:52	14:59	15:01	15:06	15:10	15:14	15:18
15:25	15:30	15:40	15:45	15:52	15:59	16:01	16:06	16:10	16:14	16:18
16:25	16:30	16:40	16:45	16:52	16:59	17:01	17:06	17:10	17:14	17:18
17:25	17:30	17:40	17:45	17:52	17:59	18:01	18:06	18:10	18:14	18:18
18:25	18:30	18:40	18:45	18:52	18:59	19:01	19:06	19:10	19:14	19:18
19:25	19:30	19:40	19:45	19:52	19:59	20:01	20:06	20:10	20:14	20:18

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Figure 3-4 Western Astoria: 10 West Options A, B, and C

Short-term option without service to CCC: 10 West Option A



Note: Specific routing details to be refined, particularly feasibility of connections to transit center based on grade.

Short-term option with service to CCC: 10 West Option B



Note: Specific routing details to be refined. Timing required to confirm route is feasible within an hour cycle with eastern Astoria route.

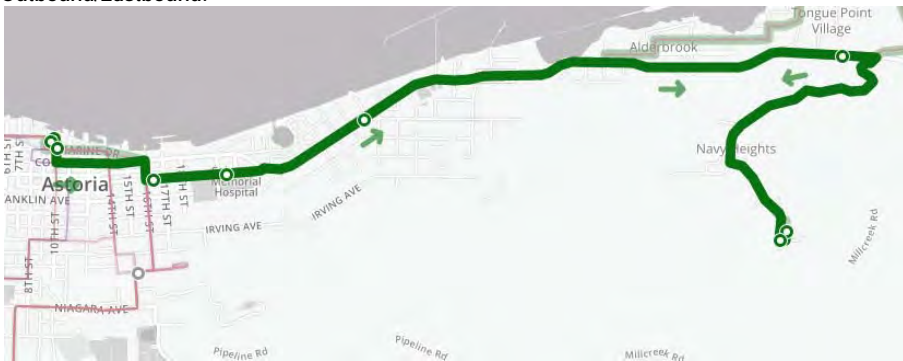
Potential longer-term option serving CCC and interior of Astoria: 10 West Option C



Note: Specific routing details to be refined. Could be implemented in the longer-term with additional resources and/or in conjunction with a flex-route concept.

Figure 3-5 Eastern Astoria: 10 East

Outbound/Eastbound:



Inbound/Westbound:



## Route 15

Route 15 service is interlined with the Route 30/Lower Columbia Connector. The introduction of Route 15 assisted passengers in realizing that Route 30 (which has always served Warrenton/Hammond) is specifically targeted to the Warrenton/Hammond market. Yet Route 30’s schedule is tied to meeting CC Rider in Rainier and serving the Northwest Connector mission; this means Route 15’s headways vary widely throughout the day, from as short as 30 minutes in the morning to 3 hours and 40 minutes during the time when the bus is operating as Route 30. This irregular frequency is confusing to riders and makes planning a trip difficult – 30 minutes at Fred Meyer is too short, while 220 minutes is likely far too long.

Figure 3-6 Warrenton Service Existing Schedule

Route / Driver Shift	Pullout	TC	Fred Meyer	Mini-Mart	4-Way / Hammond	Mini-Mart	Fred Meyer	Costco	TC	Notes
10 AM	5:30	-	-	5:45	5:51	5:59	6:03	-	6:15	Route 10 AM
15/LCC AM	5:45	-	6:10	6:15	6:20	6:27	6:30	6:35	6:45	15; From LCC AM
10 AM		7:04	7:14	7:19	7:25	7:31	7:35	-	7:51	Route 10 AM
15/LCC AM		9:40	9:50	9:55	10:00	10:07	10:10	10:15	-	15; From LCC AM
15/LCC AM		-	10:20	10:25	10:30	10:37	10:40	10:45	-	15; To 101AM Lunch Relief
10 PM		13:10	13:10	13:10	13:16	13:29	13:28	13:40	-	Route 10 PM
10 AM		13:44	14:04	14:09	14:14	14:19	-	-	-	Route 10 AM; Out of Service
15/LCC PM	13:25	13:40	13:40	13:45	13:50	14:00	14:05	14:05	14:05	Route 15 PM
15/LCC PM		14:10	14:10	14:15	14:20	14:30	14:35	14:45	14:45	To LCC PM
15/LCC PM		17:40	17:50	17:55	18:00	18:10	18:15	18:15	18:15	From LCC PM
10 PM		20:44	21:04	21:09	21:14	21:19	-	-	-	Route 10 PM

Note: Shaded trips operated by Route 10 bus.

Several options were considered to provide more consistent service in the Warrenton/Hammond area, but were ruled out:

- Shorten loop by turning Route 15 around at 4-Way: only saves 5 minutes; not recommended.
- Use Route 15 to serve Business 101; not recommended at this time but could be considered in the future. However, an extension could allow Route 15 to serve a portion of U.S. 101 Business. The potential for service on Business 101 is provided in a sidebar below.

**Recommendation:**

- Extend Route 15 to serve 19<sup>th</sup>/Huckleberry (+10 minutes) to allow this deviation to be removed from Route 101
- Timed transfer with 101 for service to Astoria
  - Break Route 15 into two routes
  - A (NW): Serves entire Warrenton-Hammond loop. Figure 3-7 illustrates the routing.
  - B (SW): Serves the loop formed by Costco, Walmart, Fred Meyer, the Mini-Mart, and Ensign/19th/Huckleberry via Harbor Street, Neptune Lane (to access Fred Meyer), Marlin Avenue, Ensign Lane, 19th Street, Business 101. It would be possible to simply return to Fred Meyer after serving the Costco/Home Depot stop; however, Route 15 could also continue across U.S. on Ensign Lane and the Fort Stevens Highway Spur road to provide a stop in proximity to Warrenton High School and serve residences/employment along S. Main Avenue. Route 15 could then serve the Mini-Mart and return to Fred Meyer. Figure 3-8 illustrates the routing.

- Figure 3-9 provides a conceptual schedule for both routes which could be combined in various ways to accommodate important transfers. The schedule assumes that Route 15 operates independently of Route 10 and the LCC, although in the interim a hybrid approach could be achieved based on available resources. As illustrated in Figure 3-9, one run of the Warrenton-Hammond (NW) loop could be completed followed by clockwise and counter-clockwise runs of the SW loop serving Costco and the SE Huckleberry area.

Figure 3-7 Route 15A Warrenton-Hammond Northwest Loop

Outbound:



Inbound:

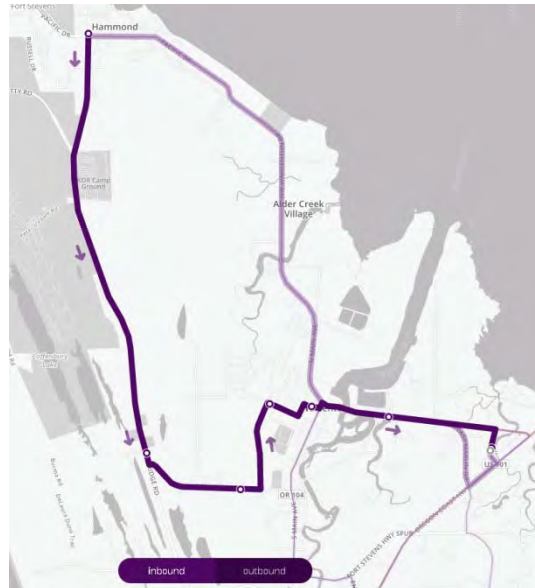
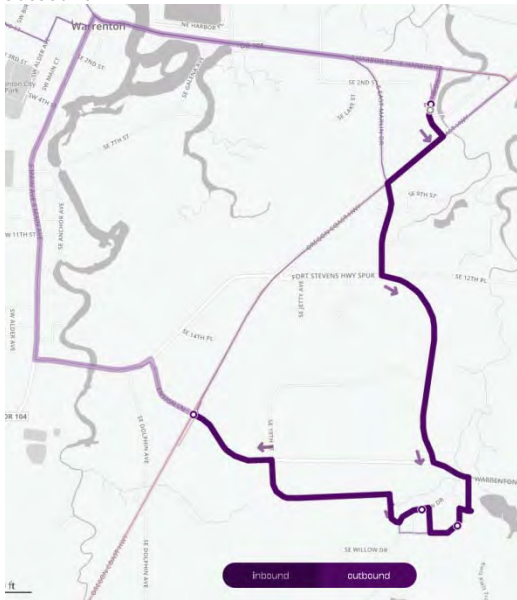
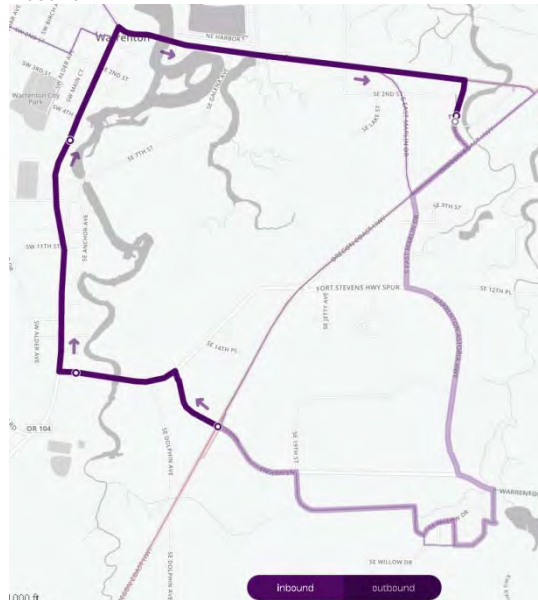


Figure 3-8 Route 15B Costco/Walmart Southeast Loop

Outbound:



Inbound:





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**Figure 3-9 Warrenton Service Conceptual Schedule (Long-Term Vision)**

101 NB To Astoria *	101 SB To Seaside *	Rt 15 Warrenton-Hammond (NW)					Rt 15 Costco-SE Huckleberry (SW) – Clockwise					Rt 15 Costco-SE Huckleberry (SW) – Counter-Clockwise					
Fred Meyer	Fred Meyer	Fred Meyer	Mini-Mart	4-Way	Mini-Mart	Fred Meyer	Fred Meyer	SE Huckleberry	Costco	104S / Main	Mini-Mart	Fred Meyer	Mini-Mart	104S / Main	Costco	SE Huckleberry	Fred Meyer
-	-	5:50	5:55	6:00	6:07	6:10	6:10	6:15	6:17	6:19	6:22	6:25	6:28	6:31	6:33	6:35	6:40
7:19	6:10	6:50	6:55	7:00	7:07	7:10	7:10	7:15	7:17	7:19	7:22	7:25	7:28	7:31	7:33	7:35	7:40
8:19	7:10	7:50	7:55	8:00	8:07	8:10	8:10	8:15	8:17	8:19	8:22	8:25	8:28	8:31	8:33	8:35	8:40
9:19	8:10	8:50	8:55	9:00	9:07	9:10	9:10	9:15	9:17	9:19	9:22	9:25	9:28	9:31	9:33	9:35	9:40
10:19	9:10	9:50	9:55	10:00	10:07	10:10	10:10	10:15	10:17	10:19	10:22	10:25	10:28	10:31	10:33	10:35	10:40
-	-	10:50	10:55	11:00	11:07	11:10	11:10	11:15	11:17	11:19	11:22	11:25	11:28	11:31	11:33	11:35	11:40
12:19	11:10	11:50	11:55	12:00	12:07	12:10	12:10	12:15	12:17	12:19	12:22	12:25	12:28	12:31	12:33	12:35	12:40
-	-	12:50	12:55	13:00	13:07	13:10	13:10	13:15	13:17	13:19	13:22	13:25	13:28	13:31	13:33	13:35	13:40
14:19	13:10	13:50	13:55	14:00	14:07	14:10	14:10	14:15	14:17	14:19	14:22	14:25	14:28	14:31	14:33	14:35	14:40
15:19	14:10	14:50	14:55	15:00	15:07	15:10	15:10	15:15	15:17	15:19	15:22	15:25	15:28	15:31	15:33	15:35	15:40
16:19	15:10	15:50	15:55	16:00	16:07	16:10	16:10	16:15	16:17	16:19	16:22	16:25	16:28	16:31	16:33	16:35	16:40
17:19	16:10	16:50	16:55	17:00	17:07	17:10	17:10	17:15	17:17	17:19	17:22	17:25	17:28	17:31	17:33	17:35	17:40
18:19	17:10	17:50	17:55	18:00	18:07	18:10	18:10	18:15	18:17	18:19	18:22	18:25	18:28	18:31	18:33	18:35	18:40
19:19	18:10	18:50	18:55	19:00	19:07	19:10	19:10	19:15	19:17	19:19	19:22	19:25	19:28	19:31	19:33	19:35	19:40
-	-	19:50	19:55	20:00	20:07	20:10	20:10	20:15	20:17	20:19	20:22	20:25	20:28	20:31	20:33	20:35	20:40
21:19	20:10	20:50	20:55	21:00	21:07	21:10	21:10	21:15	21:17	21:19	21:22	21:25	-	-	-	-	-

Notes: \* Assumes new conceptual schedule for Route 101 removing Ensign Lane / SE Huckleberry deviation.

Suggested phasing for Route 15 changes is described below.

**Cost-Neutral Changes:**

- **Marketing/Branding.** Integrate Route 10's five trips per day to Warrenton/Hammond into the Route 15 schedule. Have Route 10's driver change head signs while operating the Warrenton/Hammond loop.

**Short-Term (Additional Resources)**

- **Consistent Headways, Phase 1.** Fill in the 3 hour and 40 minute gaps in service in the morning (6:10-9:50 am) and afternoon (2:10-5:50 pm). This would likely require another vehicle/operator, however the LCC vehicle/operator could be used to provide driver breaks midday. Following TPAC and SETD staff input on the long-term concept, the team can develop a more detailed concept for transitioning to that vision in the short-term time frame.

**Medium-Term (Additional Resources)**

- **Consistent Headways, Phase 2.** Continue short-term recommendation to fill in the 3 hour and 40 minute gaps in service in the morning (6:10-9:50 am) and afternoon (2:10-5:50 pm).
- **Flex Routes.** Consider designating Route 15 Northwest and Southwest as flex routes, meaning buses can deviate off the fixed route to pick up passengers. This increases travel time overall, and may require additional vehicles, but could serve those who cannot walk to the fixed route, and would also cover SETD's ADA requirement in Warrenton/Hammond.

**Long-Term (Additional Resources)**

- **Business 101.** Route 15 could be expanded to provide a connection to Astoria via Business 101.

**Business 101 Service**

- Planned development in the Miles Crossing area would increase demand for transit in this area and could justify service that could potentially be served using an extension of Route 15.
- Such an extension would provide a second route serving Walmart, Costco, and Home Depot and services in the 19<sup>th</sup>/Huckleberry from Astoria directly.
- Business 101 could also provide a seasonal bypass for Route 101 to use for congestion relief.

**Pacific Corridor: Routes 101 and 20**

Routes 101 and 20 provide service along the U.S. 101 corridor, between Astoria and Cannon Beach (or Manzanita), on weekdays.

**Route 101 (Astoria – Seaside Weekday Service)**

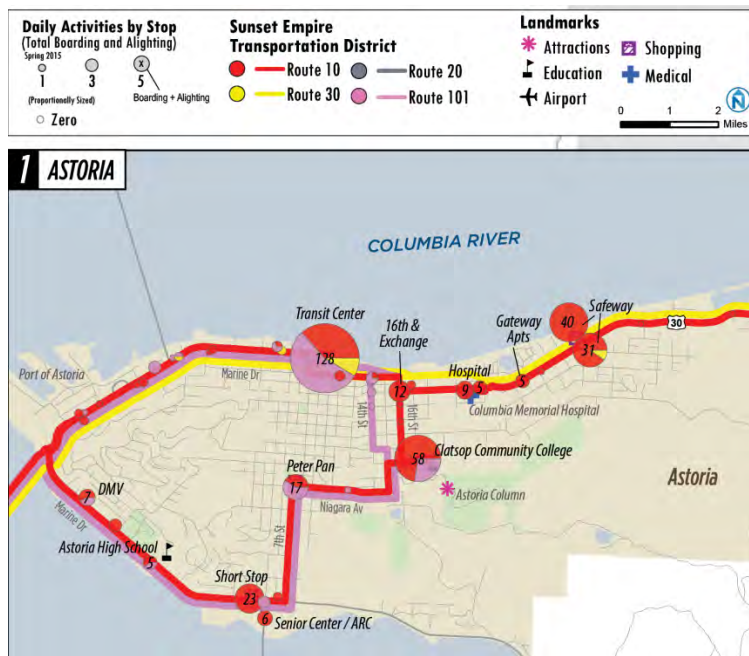
**Cost-Neutral Changes:**

- **Seaside Routing**
  - Currently runs on Necanicum (SB) and Wahanna (NB)
  - Recommended routing: stay on U.S. 101 in Seaside (bidirectional service)
  - Extend to Avenue V in Seaside (Truckee's)

**Short-Term (Additional Resources)**

- **Minimize deviations.** Eliminate deviation to Ensign Lane in both directions (paired with modifications to Route 15 to ensure continued service to this area; see Astoria/Warrenton Local Service section above).
- **Astoria Routing**
  - Currently operates a counter-clockwise pattern with Route 10 (use the southern W. Marine Drive / Business 101 eastbound and northern W. Marine Drive / U.S. 101 westbound). This routing allows Route 101 to serve the Community College.
  - Recommended routing is bidirectional travel on northern W. Marine Drive / U.S. 101. As shown in Figure 3-10, most boardings and alightings at CCC and along southern W. Marine Drive / Business 101 are served by Route 10. Eliminating Route 101 stops on southern W. Marine Drive change would also allow 101 the option of using Business 101 during summer months if U.S. 101 experiences severe congestion. Route 10 would continue to serve most stops along southern W. Marine Drive and in the interior of Astoria.
  - Route 101 could provide direct service to CCC after serving the transit center (approximately 10 minute round trip). This would also provide regional passengers with stops closer to downtown Astoria destinations and within about four blocks of Columbia Memorial Hospital.
- **Driver Breaks.** Routing changes should provide approximately 20 minutes of slack time at the end of Route 101 in Astoria. This could be considered for the Route 101 driver break. LCC/Route 15 currently provides the driver break, but these service hours could be reallocated to provide other service in Warrenton/Hammond, Svensen/Knapka, etc.

Figure 3-10 Boardings and Alightings by Route and Stop in Astoria, Spring 2015



**Medium-Term (Additional Resources)**

- **Hourly All-Day Service.** Additional bus from 10 am – 2 pm to provide all-day hourly headways

**Long-Term (Additional Resources)**

- **Peak Frequency Improvements.** Consider improving peak frequency to up to every 30 minutes, conditional on land use conditions, service standards, and available resources.

**Advantages and Disadvantages of Combining Routes 20 and 101**

A service opportunity presented to the PTAC was to combine Routes 20 and 101, as SETD currently does on weekends with the Connector Pacific route. There are advantages and disadvantages to doing so, but overall consensus was to leave the routes separate, however this could be reevaluated comparing the weekday (separate routes) and weekend (combined routes) conceptual schedules for Routes 20 and 101.

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>▪ No transfer required between Astoria – Cannon Beach</li> <li>▪ Small efficiency gain; no need to time 20 and 101 to facilitate transfers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Data indicates limited demand for Cannon Beach – Astoria travel</li> <li>▪ Potential seasonal reliability issues due to U.S. 101 congestion</li> <li>▪ Need for schedule coordination at various points, including with TCTD, adds complication.</li> </ul>

**Route 20 (Seaside – Cannon Beach Weekday Service) and Local Seaside Service**

**Cost-Neutral Changes**

- **Schedule/Passenger Information:**
  - Use common names for stops in both directions in Cannon Beach, e.g., Family Market (SB) and Midtown (NB), and add numbers to the route map and schedules so passengers can easily understand routing
  - Use consistent weekday and weekend timepoints
  - For the daily trip that SETD operates to Manzanita, show Manzanita arrival and departure times in schedule. Redesign schedules to also show Manzanita arrival times for connections operated by TCTD. For example, the Route 20 schedule currently shows that a passenger can transfer at 9:20 at Midtown to TCTD; however, 9:20 am is the time that TCTD arrives from Manzanita. The bus does not actually depart southbound until 9:40 am.
- **Routing on U.S. 101 between Cinema and Avenue V.** Eliminate Necanicum and Wahanna routing; this implies no service to Seaside Hospital, which has low ridership currently (see Figure 3-13) but is only served by Route 20 in one direction (see additional resources item to develop a local circulator service). See illustration in Figure 3-11.
- **Park & Ride.** Work with local businesses to designate some parking spaces as secure for park and ride passengers.
- **Pedestrian Accessibility and Safety.** US 101 between Avenue S (where Route 101 currently turns) and Avenue V (where Route 101 is proposed to run) has no sidewalks and while the distance is short, the walk is intimidating. With revised routing to Avenue V on both Route 101 and Route 20, Seaside residents would have a high level of service along US 101. Promote the use of SETD for in-town local trips and provide a fare category on Route 101 of \$1 or less (given the small service area) for in-town Seaside trips. Match to Route 20 fares.

### Short-Term (Additional Resources)

- None

### Medium-Term (Additional Resources)

- **Local Circulator.** Develop a local circulator service in Seaside, focused on meeting resident/employee transportation needs year-round (See Figure 3-12). Consider designating the circulator route(s) as a flex service, meaning buses can deviate off the fixed route to pick up passengers. This increases travel time overall, and could require additional vehicles, but could serve those who cannot walk to the fixed route, and would also cover SETD's ADA requirement in Seaside.
- **Tillamook County Connections.** Renegotiate agreement with Tillamook County Transportation District (TCTD) to operate inter-county service consistently, e.g., TCTD operates all three trips to Cannon Beach. This would allow the service to be more easily understood by customers. (See also Route 20 weekend service.)

### Longer-Term (Additional Resources)

- **Future Growth in Seaside.** Seaside is set to grow eastward and upland. The grade difference is steep and people living east of Wahanna Road will have difficulty walking to buses. East-west service extending beyond the existing Seaside core may be needed.
- **Peak Frequency Improvements.** Consider improving peak frequency to up to every 30 minutes, conditional on land use conditions, service standards, and available resources.

Figure 3-11 Minimize Deviations on Inter-Community Services (Routes 20 and 101)



Figure 3-12 Seaside Local Circulator Concept



Figure 3-13 Fixed-Route Ridership in Seaside



Figure 3-14 RideAssist (Paratransit) Ridership in Seaside



Figure 3-15 SETD – TCTD Connections in Cannon Beach or Manzanita

	SETD Seaside - Cannon Beach Arrival *	TCTD or SETD Cannon Beach - Manzanita				SETD Cannon Beach – Seaside Departure
		Depart Manzanita	Arrive Cannon Beach	Depart Cannon Beach	Arrive Manzanita	
<b>Weekday: SETD Route 20 (Seaside – Cannon Beach)</b>						
AM	9:20 AM	8:56	9:20 [1]	9:40	10:04	9:34 *
Midday	10:20	N/A	N/A	10:20 [2]	10:40 [3]	N/A
	N/A	11:10 [2]	11:34	N/A	N/A	11:34 *
PM	4:20 PM	4:06	4:30 [1]	4:50	5:14	4:34 *
<b>Weekend: SETD Connector Pacific (Astoria – Cannon Beach)</b>						
AM	9:20 AM	8:56	9:20 [1]	9:40	10:04	9:30 **
Midday	11:35	N/A	N/A	11:35 [2]	12:00	N/A
	N/A	12:00 [2]	12:30 **	N/A	N/A	12:30 **
PM	4:20 PM	4:06	4:30 [1]	4:50	5:14	4:30 **

Notes: \* Family Market stop southbound, Midtown stop northbound. \*\* Wayside Inn (approximately 3 minutes south of Midtown).  
[1] Operated by TCTD. [2] Operated by SETD. [3] Listed in SETD schedule as 11:10 AM.

## Route 101 and Route 20 Weekday Service Conceptual Schedules

- Transfers between Routes 20 and 101 would occur at a single location in Seaside, currently the Seaside Cinema, but potentially at a central Transit Center if one is developed in the future. Assuming it departs from Astoria TC on the hour, SB Route 101 arrives at Seaside Cinema at about 33 minutes after the hour, and NB Route 101 would need to depart Seaside Cinema at about 50-55 minutes after the hour, after circulating through Seaside,
- Transfers between Route 20 and TCTD:
  - The 9:00 am Route 20 trip needs to meet TCTD Route 3 at Midtown between 9:20 am (NB Route 3 arrives) and 9:40 am (SB Route 3 departs)
  - The 10:00 am Route 20 trip needs to meet TCTD in Manzanita between 11:10 – 11:31 am:
    - NB Route 3 arrives in Manzanita at 11:10 am
    - SB Route 3 departs Manzanita by 11:31 am
  - The 4:00 pm Route 20 trip needs to meet TCTD Route 3 at Midtown between 4:30 pm (NB Route 3 arrives) and 4:50 pm (SB Route 3 departs)
- Three possible schedule design strategies for Routes 101 and 20 are to:
  - **Balance transfer time between Cannon Beach – Seaside and Seaside – Astoria routes** so that the wait time is balanced between directions. A Route 20 departure at about 45 minutes after the hour favors this strategy, however this compromises transfers to/from TCTD services. With the current departures on the hour, the northbound transfer has no slack in the schedule while the southbound transfer requires a nearly 30 minute wait. Currently, southbound passengers have a 20-minute transfer time and northbound, transfer time is 5 minutes.
  - **Facilitate transfers between SETD and TCTD services.** The current schedule allows for each connection to occur, although with little slack in the schedule on some trips.
  - **Stagger Route 101 and 20 trips in Seaside so that there is an approximately 30 minute local headway** within Seaside. The current schedule allows each trip to be about 30 minutes apart.

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**Figure 3-16 Route 101 Conceptual Schedule, Weekday**

Pullout	Southbound						Northbound							
	TC	Fred Meyer	Home Depot	Sunset Beach	Seaside Cinema	Avenue V	Avenue V	Seaside Cinema [1]	Sunset Beach	Home Depot	Fred Meyer	TC	CCC	TC
5:30	6:00	6:10	6:13	6:21	6:33	6:40	6:45	6:53	7:07	7:14	7:19	7:29	7:34	7:39
6:30	7:00	7:10	7:13	7:21	7:33	7:40	7:45	7:53	8:07	8:14	8:19	8:29	8:34	8:39
	8:00	8:10	8:13	8:21	8:33	8:40	8:45	8:53	9:07	9:14	9:19	9:29	9:34	9:39
	9:00	9:10	9:13	9:21	9:33	9:40	9:45	9:53	10:07	10:14	10:19	10:29	10:34	10:39
	10:00	10:10	10:13	10:21	10:33	10:40	10:45	10:53	11:07	11:14	11:19	11:29	11:34	11:39
	12:00	12:10	12:13	12:21	12:33	12:40	12:45	12:53	13:07	13:14	13:19	13:29	13:34	13:39
13:45	14:00	14:10	14:13	14:21	14:33	14:40	14:45	14:53	15:07	15:14	15:19	15:29	15:34	15:39
14:00	15:00	15:10	15:13	15:21	15:33	15:40	15:45	15:53	16:07	16:14	16:19	16:29	16:34	16:39
	16:00	16:10	16:13	16:21	16:33	16:40	16:45	16:53	17:07	17:14	17:19	17:29	17:34	17:39
	17:00	17:10	17:13	17:21	17:33	17:40	17:45	17:53	18:07	18:14	18:19	18:29	18:34	18:39
	18:00	18:10	18:13	18:21	18:33	18:40	18:45	18:53	19:07	19:14	19:19	19:29	19:34	19:39
	20:00	20:10	20:13	20:21	20:33	20:40	20:45	20:53	21:07	21:14	21:19	21:29	21:34	21:39

Notes: [1] Would preferably have a longer time window for transfers from Route 20.

**Figure 3-17 Route 20 Conceptual Schedule, Weekday**

Pullout	Southbound						Northbound					
	Seaside Cinema	Avenue V (Via 101)	Candy Kitchen	Family Market / Midtown	Maier & Hemlock	5th St Park, Manzanita	5th St Park, Manzanita	Maier & Hemlock	Family Market / Midtown	Visitor's Center	Avenue V (Via 101)	Seaside Cinema
5:30	6:00	6:08	6:18	6:22	6:31			6:31	6:36	6:40	6:50	6:52
	7:00	7:08	7:18	7:22	7:31			7:31	7:36	7:40	7:50	7:52
	8:00	8:08	8:18	8:22	8:31			8:31	8:36	8:40	8:50	8:52
	9:00	9:08	9:18	9:22	9:31	[1]	[1]	9:31	9:36	9:40	9:50	9:52
	10:00	10:08	10:18	10:22	10:31	10:52 [2]	11:12 [2]	11:31	11:36	11:40	11:50	11:52
	12:00	12:08	12:18	12:22	12:31			12:31	12:36	12:40	12:50	11:52
12:30	13:00	13:08	13:18	13:22	13:31			13:31	13:36	13:40	13:50	13:52
	14:00	14:08	14:18	14:22	14:31			14:31	14:36	14:40	14:50	14:52
	15:00	15:08	15:18	15:22	15:31			15:31	15:36	15:40	15:50	15:52
	16:00	16:08	16:18	16:22	16:31	[3]	[3]	16:31	16:36	16:40	16:50	16:52
16:30	17:00	17:08	17:18	17:22	17:31			17:31	17:36	17:40	17:50	17:52
	18:00	18:08	18:18	18:22	18:31			18:31	18:36	18:40	18:50	18:52
	19:00	19:08	19:18	19:22	19:31			19:31	19:36	19:40	19:50	19:52
	20:00	20:08	20:18	20:22	20:31			20:31	20:36	20:40	20:50	20:52
	21:00	21:08	21:18	21:22	21:31			21:31	21:36	21:40	21:50	21:52

Notes: [1] TCTD Route 3 arrives Cannon Beach Midtown at 9:20, departs at 9:40, arrives in Manzanita at 10:04. [2] Meets TCTD Route 3 in Manzanita; Route 3 arrives at 11:11 and departs at 11:31, therefore Route 20 can leave Manzanita no earlier than the current 11:12 am time. [3] TCTD Route 3 arrives Cannon Beach Midtown at 4:30 pm, departs at 4:50 pm, arrives in Manzanita at 5:14 pm.



## WEEKEND/SEASONAL SERVICE

The overall service recommendations for weekend/seasonal service is to operate routes as similar to weekday service as possible, to make the system easier for customers to understand and for SETD to operate. The recommended changes aim to address the following observed issues with regional weekend service:

- Astoria/Seaside/Cannon Beach:
  - Routes are different between weekdays and weekends
  - Likely there is demand for additional service between Seaside and Astoria (only 3 current round trips)
  - Possible confusion between Route 20 and 21
  - Route 21 does not operate consistently between summer weekdays and year-round weekends service
  - Route 21 seasonal weekday service, while it has a consistent schedule, has low ridership
  - Schedule duplication between the Connector Pacific and Route 21. For example. Both Route 21 and the Connector Pacific operate southbound from Seaside at 9:00 am, at 11:15 and 11:25 am, 3:00 and 3:20 pm.
  - There is a long midday service gap on weekends.
  - Cannon Beach has a large service industry but most employees live in Astoria or Seaside. The first buses arrive in Midtown at 9:18 am – too late for an employee who needs to report at 8 or 9 am.

## Regional Services

### Connector Pacific (Astoria – Seaside – Cannon Beach Weekend Service) and Route 21 Weekend Service

#### Cost-Neutral Changes

- **Schedule/Passenger Information:**
  - Use “Connector Pacific” as part of the route name/description (in conjunction with the numbered route), e.g., Route 20 Seaside-Cannon Beach (Connector Pacific), Route 101 Astoria-Seaside (Connector Pacific).
  - Rebrand the Connector Pacific as the 101 and the 20 – consistent with the weekday routes. The 101 and the 20 can be “interlined” in some cases — bus changes signs in Seaside – but for operational reasons rather than customer convenience. See further discussion of this change under Route 21 below.
  - Route 21 should ideally operate only local service in Cannon Beach, such as is provided on summer weekdays; trips to Seaside should be served by Route 20, consistent with weekday service.
- **Restructure the weekend Route 20 to provide approximately hourly service between Cannon Beach and Seaside in combination with the weekend Route 101.** A set of conceptual schedules is provided in Figure 3-18. The cost is close to neutral but provides a nearly equivalent number of trips within Cannon Beach, and slightly more trips between Cannon Beach and Seaside and between Astoria and Seaside. In Cannon Beach, the trips operate hourly and on a mostly consistent schedule, but without a long midday gap in service. There is no 1:00 pm Route 20 departure from Seaside in order to facilitate a driver break.

- **Congestion Route.** Reroute Route 101 via Business 101 during peak summer weekends or weekdays.

#### **Short-Term (Additional Resources)**

- None

#### **Mid-Term (Additional Resources)**

- **Cannon Beach – Manzanita.** Renegotiate agreement with Tillamook County Transportation District (TCTD) to operate inter-county service consistently, e.g., TCTD operates all three trips to Cannon Beach. (See also Route 20 weekend service.)

#### **Longer-Term (Additional Resources)**

- **Astoria – Seaside.** Consider increasing service between Astoria and Seaside to 60 to 120 minute regular headways on weekends (could vary seasonally), as warranted by passenger demand and conditioned on meeting service standards. Consider expanding evening service hours.

## **Local Services**

#### **Cost-Neutral Changes**

- **Cannon Beach**
  - **Route 21 (Seaside – Cannon Beach Seasonal Weekday Service).** As described above, Route 21 should only refer to supplemental weekday seasonal service that provides local service every 30 minutes in Cannon Beach, between 11:00 am and 6:00 pm. While this service is clear and easy-to-understand, it is duplicative (overlaps with Route 20 on one of its trips) and has low ridership. A more efficient use for the vehicle and operator could be to provide additional service on Route 20, which would provide 30 minute headways within Cannon Beach and between Cannon Beach and Seaside between 11:00 and 6:00 pm. (Note: Since this service is funded by the City of Cannon Beach, any changes would need to be agreed upon with the City.)

#### **Short-Term (Additional Resources)**

- **Astoria Eastern Route.**
  - **Route 10.** Operate the Astoria East and West routes on weekends, coordinated with regional services (see weekday service concepts).
- **Warrenton**
  - **Route 15.** Provide more regular headways on service in Warrenton (see weekday service concepts).

#### **Mid-Term (Additional Resources)**

- None

#### **Longer-Term (Additional Resources)**

- Provide earlier morning service on Astoria – Seaside – Cannon Beach service.
- Provide earlier evening service on Astoria – Seaside – Cannon Beach service.
- Consider expanding evening service hours.

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Figure 3-18 Route 21 / Connector Pacific Existing Weekend Schedules and Conceptual Route 20/101 Weekend Schedules

Existing		Astoria - Seaside		Seaside - Cannon Beach		Cannon Beach - Manzanita			Manzanita - Cannon Beach		Cannon Beach - Seaside		Astoria - Seaside		Notes
21 / CP		Leave	Arrive	Leave	Arrive	Arrive	Leave	Arrive	Leave	Arrive	Arrive / Leave	Arrive	Leave	Arrive	
Vehicle	Driver	Astoria TC	Seaside	Seaside [1]	Cannon Beach [2]	Cannon Beach	Cannon Beach	Manzanita	Manzanita	Cannon Beach [2]	Cannon Beach [2]	Seaside [1]	Seaside	Astoria	
CP	1	8:30	9:00	9:00	9:20	9:20 *	9:40 *	10:04 *	-	-	9:33	9:53	9:53	10:30	**
21	2	-	-	9:00	9:18	-	-	-	-	-	9:35	9:55	-	-	
21	2	-	-	9:55	10:18	-	-	-	-	-	10:35 (local)	-	-	-	3
21	2	-	-	-	10:48 (local)	-	-	-	-	-	11:05	11:25	-	-	4
CP	1	10:40	11:15	11:15	11:35	-	11:35	12:00	12:00	12:33	12:33	12:53	12:53	13:30	**
21	2	-	-	11:25	11:48	-	-	-	-	-	12:03	12:20	-	-	5
21	2	-	-	15:00	15:18	-	-	-	-	-	15:35	15:55	-	-	
21	2	-	-	15:55	16:18	-	-	-	-	-	16:35 (local)	-	-	-	3
CP	1	15:20	16:00	16:00	16:20	16:30 *	16:50 *	17:14 *	-	-	16:33	16:53	16:53	17:30	
21	2	-	-	-	16:48 (local)	-	-	-	-	-	17:05	17:25	-	-	4
21	2	-	-	17:25	17:48	-	-	-	-	-	18:05	18:20	-	-	5

Conceptual		Astoria - Seaside (101)		Seaside - Cannon Beach (20)		Cannon Beach - Manzanita			Manzanita - Cannon Beach		Cannon Beach - Seaside (20)		Astoria - Seaside (101)		Notes
20 / 101		Leave	Arrive	Leave	Arrive / Start Local	Arrive	Leave	Arrive	Leave	Arrive	End Local / Leave	Arrive	Leave	Arrive	
Vehicle	Driver	Astoria TC	Seaside	Seaside [1]	Cannon Beach [2]	Cannon Beach	Cannon Beach	Manzanita	Manzanita	Cannon Beach [2]	Cannon Beach [2]	Seaside [1]	Seaside	Astoria	
CP -> 101 / 20	1	8:30	9:00	9:00	9:20	9:20 *	9:40 *	10:04 *	-	-	9:33	9:53	9:53	10:30	
21 -> 101 / 20	2	9:30	10:00	10:00	10:23	-	-	-	-	-	10:40	11:00			
21 -> 101 / 20	2	-	-	11:00	11:23	-	-	-	-	-	11:40	12:00			
CP -> 101 / 20	1 -> 2	10:40	11:15	11:15	11:35	-	11:35	12:00	12:00	12:33	12:40	13:00	13:00	13:37	6
21 -> 101 / 20	2 -> 1	-	-	12:00	12:23	-	-	-	-	-	12:40 / Driver Break	-			6
21 -> 101 / 20	1	-	-	-	13:23 (local only)	-	-	-	-	-	13:40	14:00			6
21 -> 101 / 20	1	-	-	14:00	14:23	-	-	-	-	-	14:40	15:00			
21 -> 101 / 20	1	-	-	15:00	15:23	-	-	-	-	-	15:40	16:00	16:00	16:37	7
CP -> 101 / 20	2	15:20	16:00	16:00	16:20	16:30 *	16:40 *	17:14 *	-	-	16:40	17:00	-	-	8
21 -> 101B	2	-	-	17:00	17:23	-	-	-	-	-	17:40	18:00	18:00	18:37	9

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Notes:

\* Operated by TCTD

\*\* Current Connector Pacific schedule shows transfer to Lower Columbia Connector, however this is not feasible at 10:30 am. 1:30 pm arrival in Astoria would allow a transfer to 2:45 pm LCC departure.

1. Seaside Cinema
2. SB: Family Market / NB: Midtown. Note: For Connector Pacific, Midtown timepoint assumed to be 3 minutes after Wayside Inn (based on weekday Route 20 schedule).
3. Provides local service in Cannon Beach; no northbound service to Seaside
4. Provides local service in Cannon Beach; no southbound service from Seaside to Cannon Beach
5. Existing SETD Route 21 goes out of service in Seaside (McDonalds) at 12:20, resumes operation at 3:00 pm at Seaside Cinema. Midday, driver break on split shift. Evening, driver returns to base.
6. Driver 1 (Route 101) can transition to Route 20 at this point to facilitate a driver break. Driver 2 (Route 20) transitions to Route 101 and takes a break after reaching the Transit Center in Astoria. Route 101 has a 2.5 hour gap in Astoria, which can facilitate both the driver break and potentially local service in Astoria/Warrenton.
7. Driver 1 returns to base at the conclusion of the 3:00 pm Route 20 departure from Seaside. As shown, this trip can serve the Astoria TC and/or provide limited local circulation in Astoria/Warrenton.
8. It is assumed that the Route 101 trip that originates in Astoria at 3:20 pm completes a Seaside-Cannon Beach round trip as Route 20 prior to returning to Astoria.
9. Driver 2 returns to base at the conclusion of the 5:00 pm Route 20 departure. As shown, this trip can serve the Astoria TC and/or provide limited local circulation in Astoria/Warrenton.

## SERVICE SUMMARY

### Summary of Long-Term Service Recommendations

- **Lower Columbia Connector:** Rebrand as Route 30 Lower Columbia Connector. Provide 2 additional short trips to MERTS, Svensen, and Knappa. Develop once per week shopper shuttle serving Svensen/Knappa. In the long-term consider increasing the service level to 3 daily trips to Rainier.
- **Route 101:** Eliminate the deviation to Ensign Lane/SE Huckleberry and along Wahanna Road and operate bidirectionally on U.S. 101 through Seaside and along northern W. Marine Drive in Astoria. Eliminating the deviation to Ensign Lane/SE Huckleberry would be contingent on identifying some level of additional resources to serve this area with Route 15, which requires operating Route 15 independently of the Lower Columbia Connector and this is assumed to not be possible until the short-term time frame. Continue to provide service to CCC on weekdays, via downtown Astoria after serving the Astoria Transit Center. Increase service levels in the mid- to long-term to hourly all-day. Use Business 101 in summer to avoid congestion as needed after serving Fred Meyer – this will not skip any stops since the regular 101 runs along northern Marine Drive.
- **Route 10:** Break up into two shorter, focused routes, east and west, including more service in the interior of Astoria and service on weekends. In the long-term, increase frequency and/or coverage including potential flex-route service.
- **Route 15:** Brand all service in Warrenton-Hammond as Route 15 and over time separate service from the Lower Columbia Connector, to provide regular headways in Warrenton/Hammond. Introduce a separate portion of the Route serving Costco/Walmart/SE Huckleberry area (Route 101 would no longer serve SE Huckleberry). Connections to Astoria would be provided through well-timed transfers to Route 101.**Route 20:** Operate bidirectionally on U.S. 101 through Seaside (no service on Necanicum or Wahanna). Implement pedestrian improvements in the short-term to facilitate this change (sidewalk infill and pedestrian crossings of U.S. 101). Develop Park & Ride facilities in the north and south parts of Seaside (Seaside Cinema or Outlet center near SETD kiosk in the north side and Truckee's in the south side). Improve consistency of schedule/passenger information.
- **New Seaside Local Circulator.** In the mid- to long-term, develop a local circulator focused on resident and employee needs. This would help accommodate growth that is expected to occur on the east side of the city.
- **Seasonal Weekday Route 21:** Would operate on weekdays only, but consider operating as more frequent Route 20 service, since one of the two trips each hour duplicates Route 20.
- **Weekend Connector Pacific (including weekend Route 21):** Brand and operate the Astoria-Seaside and Seaside-Cannon Beach portions of the Connector Pacific as Route 101 and Route 20, respectively, similar to weekdays. Negotiate with TCTD to operate the Manzanita – Cannon Beach portion of the route consistently (one provider serves all trips; also applies to weekday service). Route 21 would be rebranded as Route 20.
- **New Route/Service on Business 101.** Consider a new route in the mid- to long-term to serve planned development in the Miles Crossing area and provide a more direct connection between Astoria and the Walmart/Costco area. This could be an extension/redesign of Route 15.

## Summary of Service Recommendations by Time Frame

Figure 3-19 summarizes the additional service hours and costs of the service recommendations for each of the planning time frames identified above. Costs would be in addition to the planned level of service with service changes effective February 2016 (including later evening service on Route 20 and 101). SETD’s fixed-route operating cost was \$868,893 in 2014.

Figure 3-19 Proposed Additional Annual Service Hours and Cost Summary

	Weekday		Weekend		Total Additional Cost	
	Service Hours	Annual Cost	Service Hours	Annual Cost	Annual	Cumulative
Near-Term	0	\$0	100	\$5,700	\$5,700	\$5,700
Short-Term	1,540	\$84,400	1,040	\$56,800	\$141,200	\$146,900
Mid-Term	4,720	\$258,100	2,520	\$137,900	\$396,000	\$542,900
Long-Term	14,170	\$774,700	2,910	\$159,200	\$933,900	\$1,476,800
<b>Total</b>	<b>20,430</b>	<b>\$1,117,200</b>	<b>6,570</b>	<b>\$359,600</b>	<b>\$1,476,800</b>	<b>--</b>

Note: Based on a cost of \$55 per hour (SETD cost from 2014 performance data).

Figure 3-20 and Figure 3-21 provide a map and table summarizing the service recommendations by time frame.

Recommended improvements and phasing of improvements will be revised based on input from the TPAC and SETD staff, and an assessment of the resources anticipated to be available in each time frame. Improvements in the long-term time frame are not fiscally-constrained and these improvements can be considered to be a flexible service plan that can be implemented based on land use conditions and available resources.

Figure 3-20 Existing and Proposed Service Overview by Time Frame



Figure 3-21 Existing and Proposed Service Summary by Time Frame (Table)

Time Frame:	Existing	Near-Term: 0-1 Years	Short-Term: 2-4 Years	Mid-Term: 5-10 Years	Long-Term: 11-20 Years
<b>Weekday Year-Round Service</b>					
Weekday Hours	6:00 AM – 10:00 PM [1]	Fill in gaps in coverage	Fill in gaps in coverage	Fill in gaps in coverage	6:00 AM – 10:00 PM
Weekday Routes	5 – 10, 15, 20, 30, 101	5 – 10, 15, 20, 30, 101	5 – 10, 15, 20, 30, 101	6 – 10, 15, 20, 30, 101, <b>Seaside Circulator</b>	8 – 10, 15, 20, 30, 101, <b>101 Business</b> , Seaside Circulator
Weekday Peak Buses	5 – 15/30 (1 bus), 101 (2 buses), 20 (1 bus), 10 (1 bus)	6	6 – Separate 15 and 30	7 - Seaside Circulator	11 – 101 Business, Additional Astoria local or flex service, Additional peak frequency Astoria-Seaside, Seaside-Cannon Beach
<b>Weekend Year-Round Service</b>					
Weekend Hours	8:30 AM – 6:30 PM [1]	Fill in gaps in coverage	Fill in gaps in coverage	Earlier service, e.g., 7:30 AM – 6:30 PM	7:00 AM – 6:00 PM; Option for service until 10:00 PM
Weekend Routes	4 – 15, 30, 21, CP	4 – 15, <b>20</b> , 30, <b>101</b>	5 – <b>10</b> , 15, 20, 30, 101	6 – 10, 15, 20, 30, 101, <b>Seaside Circulator</b>	6 – 10, 15, 20, 30, 101, Seaside Circulator
Weekend Peak Buses	3 – 15/30 (1 bus), 21 (1 bus), CP (1 bus)	3	5 – Separate 15 and 30	6	7 – Additional 101 corridor service
<b>Seasonal Services</b>					
Weekday Routes	3: 11, 12, 21	3: 11, 12, 21	3: 11, 12, 21	3: 11, 12, 21	3: 11, 12, 21
Weekday Peak Buses	3	3	3	3	3
Weekend Routes	1: Seaside Trolley	1: Seaside Trolley	1: Seaside Trolley	1: Seaside Trolley	1: Seaside Trolley
Weekend Peak Buses	1	1	1	1	1
<b>Regional</b>					
<b>Lower Columbia:</b> Route 30 / LCC	▪ 2 trips / day Astoria-Rainier	▪ Brand LCC as Route 30 LCC	▪ Consider shopper shuttle to Svensen/Knappa	▪ Consider 2 daily short trips to MERTS, Svensen/Knappa	▪ 3 trips / day Astoria-Rainier
<b>Astoria – Seaside:</b> Route 101 weekday, CP weekend	▪ 60–120 min weekday ▪ 3 weekend trips	▪ Brand weekend CP as Route 101 (CP) ▪ Reduce travel time by eliminating deviations		▪ 60 min weekday all-day ▪ Earlier weekend service	▪ Consider more frequent weekday peak service ▪ Consider more frequent weekend service ▪ Consider later weekend service
<b>Seaside – Cannon Beach:</b> Routes 20 weekday, CP/21 weekend	▪ 60 min weekday ▪ 60 min weekend (2½ hour midday gap)	▪ Brand as Route 20 (CP) on weekends ▪ 60 min weekday ▪ 60 min weekend (all-day)		▪ Earlier weekend service	▪ Consider more frequent weekday peak service ▪ Consider later weekend service
<b>Cannon Beach – Manzanita:</b> Route 20 weekday, CP weekend	▪ 3 trips / day (1 by SETD, 2 by TCTD)	▪ 3 trips / day (1 by SETD, 2 by TCTD)	▪ 3 trips / day; renegotiate to have all trips served by either TCTD or SETD	▪ 3 trips / day	▪ 3 trips / day
<b>Local</b>					
<b>Astoria:</b> Route 10	▪ 60 min, 1 route	▪ 60 min, break Route 10 into 2 shorter routes	▪ Weekend local service, including eastern Astoria	▪ Additional evening service	▪ Additional frequency or coverage (flex-route) ▪ Additional evening service
<b>Warrenton:</b> Route 15	▪ 11 trips, part of Routes 10 and 15	▪ Brand as Route 15	▪ Separate from Route 30 Phase 1	▪ Separate from Route 30 Phase 2 ▪ Additional evening service	▪ Additional evening service
<b>Seaside:</b> Route 20/21/101/CP	▪ Weekday Routes 20 (13 trips), 101 (11 trips) ▪ Weekend Route 21 (6 trips)	▪ Routes 20 and 101 operate on U.S. 101, staggered to provide approx. 30 minute service on weekdays.		▪ More frequency on Route 101 through Seaside ▪ Implement Seaside Circulator	▪ More peak frequency on Route 20/101 through Seaside ▪ Expand Seaside Circulator weekday evening hours
<b>Cannon Beach:</b> Route 20/21/101/CP	▪ 60 min weekday, 30-60 min weekend with 2½ hour midday gap	▪ Consider redesigning seasonal Route 21 to provide Seaside-Cannon Beach service (30 min)			▪ More peak frequency on Route 20

Notes: CP = Connector Pacific. [1] As of February 2016.



**Figure 3-22 Order-of-Magnitude Additional Service Hours and Operating Costs for Individual Improvements**

Time Frame	Day of Week	Route	Description	Daily Hours	Days / Year	Annual Hours	Annual Cost
Near-Term	Weekday	10	Restructure into two shorter routes, east and west. Cost-neutral.	0:00	255	-	\$0
Near-Term	Weekday	20/101	Redesign Routes 20/101 to operate along U.S. 101 in Seaside. Cost Neutral.	0:00	255	-	\$0
Near-Term	Weekend	PC/20/101	Restructure Route 21/Connector Pacific as Route 20/101. 1 additional service hour per day.	1:00	104	104	\$5,700
Short-Term	Weekday	15	Separate bus to operate Route 15 service when Route 30 goes to Rainier (9:40 am - 2:45 pm)	5:50	255	1,487	\$81,300
Short-Term	Weekday	20/101	Eliminate SE Huckleberry deviation; cost-neutral but requires additional resources for Route 15	0:00	255	-	\$0
Short-Term	Weekday	LCC	Shopper Shuttle Svensen/Knappa - 1 round trip per week.	1:05	52	56	\$3,100
Short-Term	Weekend	10	Operate Astoria weekend service, separate Warrenton service from Route 30 Phase 1. Assume 1 bus, 10 hours	10:00	104	1,040	\$56,800
Mid-Term	Weekday	20	Renegotiate weekday service to Manzanita with TCTD.	2:16	255	578	\$31,600
Mid-Term	Weekday	101	Additional Route 101 midday trips (hourly all-day headways); 2 round trips.	4:15	255	1,084	\$59,200
Mid-Term	Weekday	Seaside Circulator	Implement Seaside Circulator, assume 1 bus, 12 hours initially, 60 minute headways	12:00	255	3,060	\$167,300
Mid-Term	Weekend	15	Operate Astoria weekend service, separate Warrenton weekend service from Route 30, Phase 2. Assume 1 bus, 10 hours.	10:00	104	1,040	\$56,800
Mid-Term	Weekend	20	Renegotiate weekend service to Manzanita with TCTD.	2:16	104	236	\$12,900
Mid-Term	Weekend	20/101	Earlier Weekend Service on 101, 1 hour per day.	1:00	104	104	\$5,700
Mid-Term	Weekend	20/101	Earlier Weekend Service on 20, 1 hour per day.	1:00	104	104	\$5,700
Mid-Term	Weekend	Seaside Circulator	Implement Seaside Circulator, assume 1 bus, 10 hours, 60 minutes.	10:00	104	1,040	\$56,800
Long-Term	Weekday	10	Route 10 evening service - 2 additional service hours	2:00	255	510	\$27,900
Long-Term	Weekday	10	Additional Astoria frequency and/or coverage (flex-route). 1 additional bus assumed, 12 hours daily. Does not include potential cost savings due to reduced ADA Paratransit demand.	12:00	255	3,060	\$167,300

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Time Frame	Day of Week	Route	Description	Daily Hours	Days / Year	Annual Hours	Annual Cost
Long-Term	Weekday	15	Route 15 evening service - 2 additional service hours	3:00	255	765	\$41,800
Long-Term	Weekday	15	Separate Route 15 fully from Route 30 and Route 10. Does not include potential savings from using Route 30 to do driver breaks and enables 3rd trip to Rainier.	5:50	255	1,488	\$81,300
Long-Term	Weekday	20	Additional peak frequency Seaside - Cannon Beach	6:00	255	1,530	\$83,600
Long-Term	Weekday	101	Additional peak frequency Astoria - Seaside Peak	6:00	255	1,530	\$83,600
Long-Term	Weekday	101B	Implement Business 101 Route - assume 1 bus, 14 hours, up to 60 minute headways.	14:00	255	3,570	\$195,100
Long-Term	Weekday	LCC	2 additional daily short round trips to MERTS/Svensen/Knappa	0:50	255	213	\$11,600
Long-Term	Weekday	LCC	1 additional daily round trip to Rainier (3 total)	2:55	255	744	\$40,700
Long-Term	Weekday	Seaside Circulator	Expand Seaside Circulator, additional weekday evening hours	3:00	255	765	\$41,800
Long-Term	Weekend	20/101	Additional Astoria - Cannon Beach weekend service. Assume 1 additional bus/operator shift.	8:00	104	832	\$45,500
Long-Term	Weekend		Later evening weekend service: 20, 101, 10, 15, Seaside Circulator	20:00	104	2,080	\$113,700

Note: Based on a cost of \$55 per hour (SETD cost from 2014 performance data).

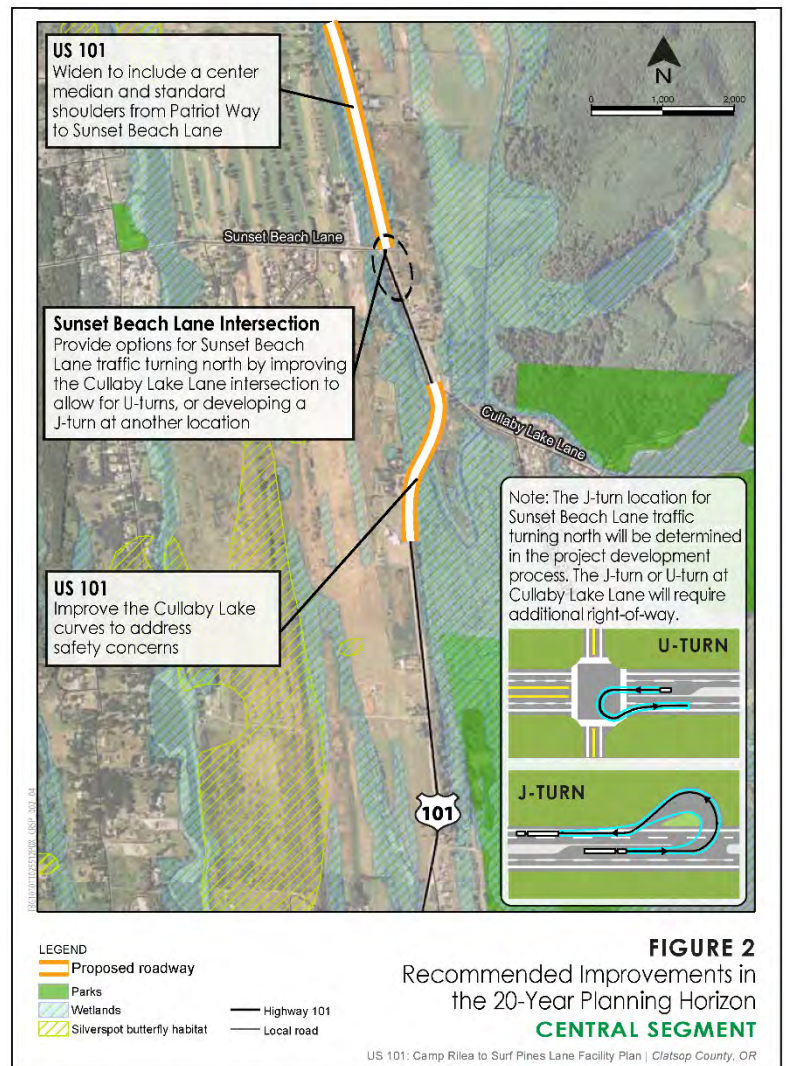
## CAPITAL FACILITIES

### Roadway/Signal Improvements

The following improvements, illustrated in Figure 3-25, are recommended to improve transit safety and on-time performance at several roadways/intersections served by current SETD routes. SETD would need to coordinate with the applicable agencies/jurisdictions to identify and secure funding for specific improvements. In most cases, the other agencies or jurisdictions would be responsible for constructing the improvements. Figure 3-24 summarizes both the high priority improvements identified below and shown on the map, and other planned improvements that could benefit transit operations and safety.

- **Sunset Beach Lane at U.S. 101.** Making the left-turn from Sunset Beach Lane onto northbound U.S. 101 after serving the stop at Sunset Beach can take several minutes, especially during summer. ODOT plans to install a J or “jughandle” turn south of this location by Cullaby Lake Lane, where the bus would turn southbound to access the jughandle turn that would allow it to proceed northbound. (See Figure 3-23)
- **U.S. 30 at Nimitz Drive / Maritime Road.** Some form of signalized crossing or flashing warning signal at this location, which is on the edge of Astoria city limits, would help the bus cross U.S. 30 from Emerald Heights into Tongue Point. The Astoria TSP includes other improvements to this intersection.
- **Marine Drive at Exchange Street.** Some form of signal or bus priority treatment would facilitate westbound Route 10 making a left-turn onto Exchange Street.
- **Marlin Avenue (Business U.S. 101) at E. Harbor Drive in Warrenton.** Potential improvements at this intersection have been discussed. Improvements would benefit both pedestrian safety and transit on-time performance.
- **Spot U.S. 101 Improvements (Queue Jumps).** Congestion along U.S. 101 is a significant issue for SETD schedule reliability, particularly in summer months. The ability for the bus to bypass bottlenecks, whether through targeted use of the shoulders or signal treatments, would benefit on-time performance. Coordinate with the design of planned improvements to identify opportunities to improve facilities to improve transit travel times.

Figure 3-23 Sunset Beach Jughandle Turn



Source: ODOT, US 101 Camp Rilea to Surf Pines Facility Plan, 2014. Executive Summary, Figure 2, p. 7.

**Figure 3-24 Summary of Recommended Roadway/Signal Improvements**

Improvement Location	Relationship to SETD / Coordination Needs	Priority for SETD	Existing TSP / Project Number / Priority
<b>High Priority Improvements for Transit (Mapped)</b>			
Sunset Beach Lane at U.S. 101 Jughandle Turn	Reduce delay, improve safety for NB left-turn onto U.S. 101. Turn should be designed to accommodate transit vehicles.	High	Clatsop County, D20: US 101/Sunset Beach Road (Financially-constrained short-term - Funded)
U.S. 30 at Nimitz Drive / Maritime Road, Astoria	Reduce delay, improve safety for southbound transit vehicles needing to cross U.S. 30. Astoria TSP includes other improvements to this intersection (e.g., realignment/turn lanes).	High	Astoria TSP, D9: US 30/Nimitz-Maritime Road Safety Enhancement (Long-Term Phase 2 Aspirational)
Marine Drive at Exchange Street, Astoria	Reduce delay, improve safety for westbound transit vehicles needing to make this left-turn.	Medium	Astoria TSP, D6: US 30/ Exchange Street / 23 <sup>rd</sup> Street Safety Enhancement (Long-Term Phase 4 Aspirational)
Marlin Avenue (Business U.S. 101) at E. Harbor Drive, Warrenton	Reduce delay and improve pedestrian safety.	Medium	-
<b>Other Improvements with Potential Relationship to Transit (Not Mapped)</b>			
US 30 / 16 <sup>th</sup> Street Capacity Enhancement, Astoria	Reduce delay and improve safety for existing inbound Route 101, and/or future westbound east Astoria route.	Medium	Astoria TSP, D6: US 30/ Exchange Street / 23 <sup>rd</sup> Street Safety Enhancement (Long-Term Phase 4 Aspirational)
Irving Ave. Extension to connect with Nimitz Drive, Astoria	Could enable service to be provided south of U.S. 30 and provide a more efficient means of serving Emerald Heights. Design to accommodate transit vehicles and stops.	Low	Clatsop County, D08: Irving Ave, East Terminus – Nimitz Drive. (Financially-constrained short-term). Astoria TSP, D30 (Long-Term Phase 4 Aspirational)
U.S. 30 / Liberty Lane Intersection Realignment / SB Left-Turn Pocket, Astoria	Accommodations for transit could enable future service to MERTS.	Low	Clatsop County, D07: (Aspirational Long-Term Ph 4). Astoria TSP, D10 (Long-Term Phase 2 Aspirational)
Spot U.S. 101 Improvements, Astoria-Seaside	Providing transit vehicles with the ability to bypass bottlenecks improves on-time performance and coordination between routes.	Medium	Clatsop County, D21: US 101, Patriot Way – Sunset Beach Road (Aspirational Ph 2) Clatsop County, D30: US 101, South of Seaside, MP 22.6 - 23.17 (Aspirational Ph 2)
U.S. 101 Business Improvements, Miles Crossing / Warrenton	Accommodations for transit could benefit future service on Business 101.	Medium	Clatsop County, D11-D13: (Financially-Constrained Short-Term / Aspirational Long-Term Ph 4). Astoria TSP, D33 (Long-Term Phase 3 Aspirational)
19 <sup>th</sup> St. Extension to Dolphin Rd. at Rainbows End Lane, Warrenton	Could provide an alternative route if U.S. 101 is congested and/or a means for Route 101 to efficiently serve the Walmart/Huckleberry area.	Medium	Clatsop County, D14: (Financially-Constrained Short-Term) – Coordinated with Warrenton

## Pedestrian Crossings/Safety Enhancements

### Seaside

Assuming Routes 20/101 operate service along U.S. 101 in Seaside, instead of along Necanicum and Wahanna, pedestrian improvements would be particularly needed to ensure safe and convenient access to bus stops and other facilities. (A local circulator is a longer-term recommendation.)

- Pedestrian crossings in Seaside at approximately half-mile minimum spacing, particularly between 12<sup>th</sup> Avenue and Avenue U (existing signals are at 12<sup>th</sup> Avenue, Avenue U, and Broadway). A particular need would be to provide access to/from the south-end Park & Ride. These recommendations are generally consistent with the Seaside TSP, which calls for new traffic signals at U.S. 101 and Lewis & Clark Road, at a realigned Avenue F/G intersection (just south of Safeway), and at Holladay Drive, and for improvements at the existing signal at Avenue U. The TSP also calls for high-visibility crosswalks at a variety of locations along U.S. 101 in Seaside. Figure 3-25 illustrates key locations for pedestrian crossings along U.S. 101 in Seaside.
- Sidewalk infill and pedestrian/bicycle network improvements along U.S. 101 in Seaside. The Seaside TSP calls for a variety of bicycle and pedestrian improvements (e.g., Figure 3.27 in the TSP).

## Bus Stops/Park & Rides/Secondary Transit Centers

The LRTCP will include guidelines for prioritizing improvements and amenities at individual stops, based on boarding activity and other thresholds. An overarching recommendation is to set a minimum level of stop amenities. In particular, each stop should have a stop sign and pole. Figure 3-25 illustrates existing fixed stop locations; recommendations for eliminating stops that are too closely spaced, new fixed stop locations, and priorities for stop amenities will be included in the LRTCP.

The following are specific, significant stop facility needs.

### Astoria/Warrenton Area

- Relocate stop serving CCC so that bus does not need to circulate through the campus. This would save several minutes on Route 101 and help address potential safety issues for vehicles and riders. A potential location would be outside Patriot Hall at the northeast corner of 16<sup>th</sup> Street and Lexington Avenue.

### Seaside

The following recommendations are all consistent with the Seaside TSP:

- **South-end Park & Ride.** Develop a south-end Park & Ride (in vicinity of Avenue V). Work with Truckee's to determine the location for a bus turnaround and customer parking. Install signage for Park & Ride so customers feel secure parking for the day.
- **North-end Park & Ride.** Identify space for a north-end Park & Ride, ideally in proximity to the SETD transit kiosk at the outlet center. Alternately, work with Seaside Cinema to allocate a portion of spaces as permissible for use by Park & Ride users.
- **Secondary Transit Center.** Consider developing a secondary Transit Center at a central location in Seaside, or possibly in coordination with a north-end Park & Ride opportunity.

### **Gearhart**

- **Shelters.** Consider opportunities to provide shelters with passenger information and beacons to alert drivers to waiting passengers.

### **Svensen/Knappa**

- **Shelters.** Consider opportunities to provide shelters with passenger information and beacons to alert drivers to waiting passengers.

### **Westport**

- **New Transit Stop.** The Clatsop County TSP identifies a stop near the planned County park adjacent to the ferry landing, as detailed in the Westport Corridor and Community Plan (Project T01; Aspirational Long-Term Ph4).

### **Cannon Beach**

- **Shelters.** Work with the City of Cannon Beach to develop design standards for shelters. Implement shelters as required, particularly at the Visitors Center, to improve the visibility of transit in Cannon Beach.

### **Arch Cape**

- **New Transit Stop.** The Clatsop County TSP identifies a stop, location to be determined (Project T02; Aspirational Long-Term Ph2).

### **General**

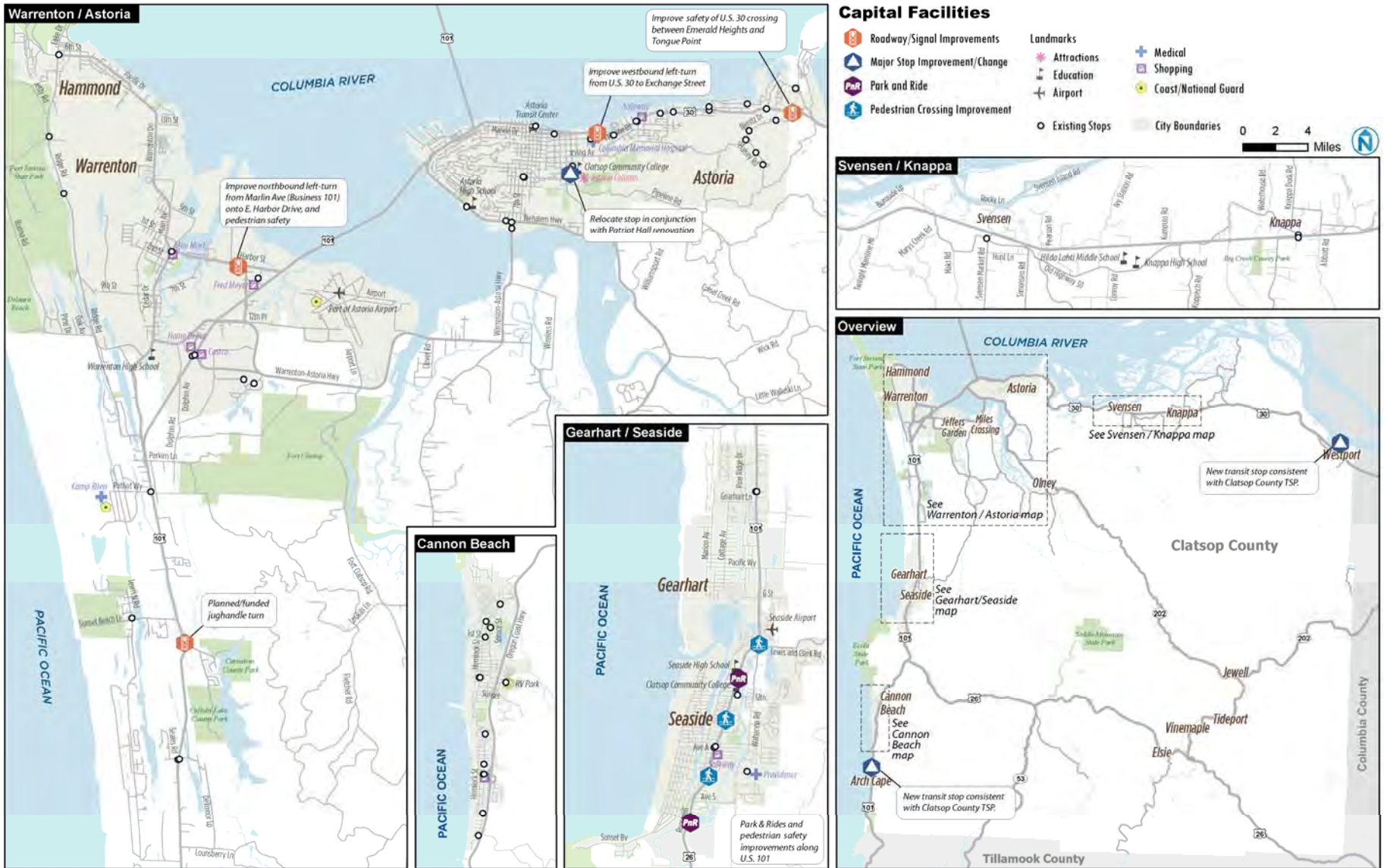
- **High-Capacity Shelters.** The shelters purchased by SETD are fairly small, which works fine in many locations; however, at major stops larger shelters or multiple shelters are needed. The current shelters are large enough for one person, but uncomfortably close for two people waiting together.

### **Fleet**

- **Transition the fleet to low-floor buses with electronic head signs.** Current vehicles require rear or side loading of people with mobility limitations, which adds to travel time. Some vehicles currently use paper signs to indicate their route. All vehicles require the passenger to step up, similar to a school bus model, which is difficult for anyone with mobility constraints. A couple of the newer buses also place the passengers much higher than the driver, making it impossible to see out of the front of the bus to look for the stop. Over time, replace the vehicle fleet with low-floor buses equipped with technology to support real-time information. Several vendors offer low-floor cutaways for the routes that do not need a full-size vehicle.

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Figure 3-25 Recommended Capital Facility Improvements







## **SECTION K**

### Memo 6: Goals



# MEMO #6: GOALS

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# MEMO #6 – GOALS

## INTRODUCTION

Each community has different goals that affect the provision of transit and other public services. Running every type of transit service throughout Clatsop County is neither financially possible nor desired. Instead, the priorities of the community must be used to decide how important public transit stands in relation to other services and what neighborhoods and markets transit should serve.

## Definitions

Goals and objectives are defined as follows:

- **Goals** establish the overall policy direction and organizational philosophy. These are typically value statements.
- **Objectives** offer a means to meeting a goal. They are typically action-oriented strategy statements and should be understandable, specific, attainable, and measurable. Objectives can be met through a variety of actions. For example an objective to reduce transit travel time can be achieved by eliminating route deviations, providing more direct service, traveling on higher speed roads, investing in traffic congestion relief solutions, and/or giving transit a priority at congested intersections.

## Memo Overview and Goal Refinement Process

This memo formalizes the goals and objectives for Sunset Empire Transportation District (SETD). The updated goals were first proposed in TM #4 – Evaluation Framework – in October 2015 along with draft performance measures tied to the goals. Input from the TPAC (Advisory Committee) will be incorporated into the final goals and objectives.

Following input from the TPAC, Memo #8 will build upon the finalized goals and objectives by:

- Identifying potential amendments to local Comprehensive Plans or development policies in support of these goals, to help ensure that transit is provided as part of future development and land use permitting processes and that SETD is provided with the opportunity to review and participate in these processes.
- Evaluating both existing and proposed additional benchmarks for measuring progress on the SETD goals as well as Oregon Transportation Planning Rule (TPR)-related transit requirements.

## CURRENT GOALS AND OBJECTIVES

### Current SETD Goals and Objectives

The current transit goals and objectives for SETD are set forth in Chapter 5 of the SETD Comprehensive Transportation Plan (2001). These goals were an update of the 1995 SETD goals, which were documented in Appendix B of the 2001 Plan. The 2001 SETD goals and objectives focused on improving the efficiency, promotion, and pedestrian accessibility of SETD services.

### Current SETD Goals

- **Goal 1:** Provide cost-effective and safe public transportation throughout Clatsop County

- **Goal 2:** Ensure the full range of mobility needs of Clatsop County citizens are met within SETD budgetary constraints
- **Goal 3:** Promote and educate Clatsop County about SETD services and community benefits
- **Goal 4:** Strengthen access to public transportation
- **Goal 5:** Increase ridership

### Current SETD Objectives

- Improve efficiency of dial-a-ride
- Improve efficiency of fixed-route service
- Coordinate with social service agencies to meet client needs, utilizing the Call Center where appropriate
- Build the Intermodal Center and develop a business plan to support it
- Improve marketing of SETD services
- Develop and update five-year capital plan
- Develop partnerships with other jurisdictions to strengthen access to SETD services
- Examine feasibility and cost effectiveness of connections to SETD services
- Explore vanpool, car-pool and park-and ride options within the region
- Plan and maximize opportunities for special events

## Clatsop County Comprehensive Plan (2015)

The transportation chapter of the Clatsop County Comprehensive Plan, adopted in 1980 and amended in 2003, has nine goals that address Statewide Planning Goal 19 (Transportation).

**Goal 1 - Mobility:** Develop a multimodal transportation system that serves the travel needs of Clatsop County residents, businesses, visitors, and freight transport.

**Goal 2 - Livability:** Provide a transportation system that balances transportation system needs with the desire to maintain pleasant, economically viable communities.

**Goal 3 - Coordination:** Maintain a transportation system plan that is consistent with the goals and objectives of local communities, the county, and the state.

**Goal 4 - Public Transportation:** Work to improve cost-effective and safer public transportation throughout Clatsop County.

**Goal 5 - Pedestrian and Bicycle Facilities:** Provide for an interconnected system of pedestrian and bicycle facilities throughout Clatsop County to serve commuter and recreational users.

**Goal 6 - Accessibility:** Provide a transportation system that serves the needs of all members of the community.

**Goal 7 - Environment:** Provide a transportation system that balances transportation services with the need to protect the environment and significant natural features.

**Goal 8 - System Preservation:** Work to ensure that development does not preclude the construction of identified future transportation improvements and that development mitigates the transportation impacts it generates.

**Goal 9 - Capacity:** Provide a transportation system that has sufficient capacity to serve the needs of all users.

## Clatsop County TSP Goals

The Clatsop County Transportation System Plan (TSP) (2015) defines eight transportation goals that were used to prioritize transportation solutions.

**Goal 1:** Provide for efficient motor vehicle travel to and through the county.

**Goal 2:** Increase the convenience and availability of pedestrian and bicycle modes.

**Goal 3:** Provide transit service and amenities that encourage a higher level of ridership.

**Goal 4:** Provide an equitable, balanced and connected multimodal transportation system.

**Goal 5:** Enhance the health and safety of residents.

**Goal 6:** Foster a sustainable transportation system.

**Goal 7:** Ensure that the transportation system supports a prosperous and competitive economy.

**Goal 8:** Coordinate with local and state agencies and transportation plans.

## Astoria Comprehensive Plan (2010)

The Astoria Comprehensive Plan includes a transportation chapter outlining nine transportation goals:

1. The maintenance of a safe and efficient transportation system
2. The provision of several types of transportation, including public transit, bicycle and pedestrian systems
3. The implementation of the 'Murase Plan' for waterfront revitalization
4. The reduction of traffic congestion on Marine Drive and in the downtown area
5. The conservation of energy in transportation by encouraging forms other than private vehicles
6. The continued support of transportation for disadvantaged persons, such as wheelchair ramps in the downtown area and the senior citizen bus
7. The coordination of transportation with land use designations, especially along the Columbia River shoreline
8. The support of economic development activities through the improvement of the transportation system
9. Cooperation with other agencies involved in transportation, including the Port of Astoria, the Oregon Department of Transportation, the State Highway Division, Clatsop County, and the Public Utility Commission

## Astoria Transportation System Plan (2013)

The Astoria TSP is guided by the following goals:

- **Goal 1:** Be well-connected and offer travel choices, reduce travel distance, improve reliability, and manage congestion for all modes.

- **Goal 2:** Include solutions to suit the local context while providing a system that supports active transportation, promotes public health, facilitates access to daily needs and services, and enhances the livability of the Astoria neighborhoods and business community.
- **Goal 3:** Maintain and improve individual health and safety by maximizing active transportation options, public safety and service access, and safe and smooth connections for all modes.
- **Goal 4:** Support the development and revitalization efforts of the city, region, and state economies and create a climate that encourages growth of existing and new businesses.
- **Goal 5:** Protect and improve existing transportation assets while cost-effectively enhancing the total system and pursue additional transportation funding.
- **Goal 6:** Be sustainable and meet the needs of present and future generations in a way that is environmentally, fiscally, and socially sustainable.
- **Goal 7:** Be consistent with the City's Comprehensive Plan, and coordinate with county, state, and regional plans.

## Seaside Transportation System Plan (2010)

The goals guiding the Seaside TSP include:

1. **Safety for all modes:** Provide a transportation system that maintains adequate levels of safety for all users.
2. **Access for all modes:** Provide a transportation system that allows all users to access destinations throughout Seaside.
3. **Mobility:** Provide a viable transportation system that meets the needs of local residents, visitors, and the freight industry. The transportation system should allow different users of the network with reliable means of getting from origins to destinations.
4. **Connectivity:** Provide an interconnected transportation system that provides route choices for users.
5. **Cost:** Provide a list of transportation improvements that are “reasonably likely” to be funded within the 20-year planning horizon.
6. **Livability:** Provide a transportation system that allows the city to maintain livability.
7. **Environmental Resources:** Provide a transportation system that balances transportation services with the need to protect environmental and natural features.

## North by Northwest CONNECTOR Plan (2013)

The goals guiding the work of North by Northwest CONNECTOR include:

- Improve transit connections between communities
- Brand and market transit service in all five counties as a single seamless service
- Improve inter-agency coordination
- Promote environmentally-conscious travel
- Develop transit as an asset for economic development
- Develop a solid base of local and regional support

### Additional Relevant Plans and Goals

These and other State, County, regional, or local city plans (summarized in Chapter 1 of Memo #2A: Existing Systems – Community Overview) provide additional policy direction. Relevant plans in addition to those identified above include:

- Oregon Transportation Planning Rule (TPR)
- Sunset Empire Transportation District Coordinated Human Services Plan (2011)
- Sunset Empire Public Involvement Plan, LEP, Title VI (2014)
- Sunset Empire Strategic Prioritization Plan (2015)

## PROPOSED GOALS AND OBJECTIVES

A hierarchy of proposed SETD goals and objectives, performance measures, and standards, are shown in tabular form in Figure 1. From left to right, the table includes:

- **Recommended goals**, at far left, based on those established in the the prior SETD transit plan, the Clatsop County Comprehensive Plan, TSP, and stakeholder feedback.
- **Recommended objectives**, to the right of each goal, that support the overarching goal.
- **Performance measures**, to the right of the objectives, are used to measure achievement of each objective.
- **Standards**, to the right of the performance measures, identify the targeted level that should be achieved in each performance measure.

The goals and objectives are organized into two categories:

- **Service-related**. These goals and objectives pertain to the actual service SETD runs – where the routes operates, when, and until what time.
- **Organizational/Programmatic**. These goals and objectives point to transit-supportive programs (marketing, training, physical plant, etc.) as well as staffing objectives.



## Recommended Changes to Current SETD Goals

Recommended changes to the current 2001 SETD goals are summarized below, along with the rationale for the change where applicable. Deletions are indicated in strikethrough text and additions are indicated with italics. Figure 1 includes additional goals that are recommended for SETD.

### Original Goal 1: Provide cost-effective and safe public transportation throughout Clatsop County

→ **Service Goal 1: Efficiency.** Provide cost-effective and safe public transportation in ~~throughout~~ Clatsop County. (Rationale for change: It is not possible for SETD to *cost-effectively* provide services *throughout* the County.)

→ **Organizational/Programs Goal 8: Safety and Comfort.** Provide safe and comfortable public transportation.

### Original Goal 2: Ensure the full range of mobility needs of Clatsop County citizens are met within SETD budgetary constraints

→ **Service Goal 2: Mobility.** ~~Ensure the full~~ Serve a wide range of mobility needs of Clatsop County citizens are met within SETD budgetary constraints. (Rationale for change: It is not possible for SETD to cost-effectively meet the full range of needs of all residents.)

### Original Goal 3: Promote and educate Clatsop County about SETD services and community benefits

→ **Organizational/Programs Goal 9:** Promote and educate Clatsop County about SETD services and community benefits (unmodified Goal 3).

### Original Goal 4: Strengthen access to public transportation

→ **Service Goal 3: Accessibility.** Ensure service accessibility

→ **Organizational/Programs Goal 7: Access to Transit.** Strengthen access to public transportation (unmodified Goal 4).

### Original Goal 5: Increase ridership

→ **Service Goal 4: Sustainability.** ~~Increase ridership.~~ *Compete with SOV travel and reduce vehicle miles traveled per capita.* (Rationale for change: The revised goal articulates the underlying value and policy direction. The supporting objectives for the goal including increasing ridership and improving travel time and frequency, which will help attract riders to the system. Objective 5B clarifies that the goal is to increase ridership on the primary route network, where it will be most cost-effective to make the improvements needed to attract new riders to the system.)

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Figure 1 Goals and Objectives

Goal	Objective	Performance Measure	Performance Metric /Standard <sup>1</sup>
<b>Service-Related Goals</b>			
<b>1. Efficiency:</b> Provide cost-effective public transportation <sup>2</sup>	A. Match service types to appropriate land use densities	Density thresholds by service type	FR (Fixed Route): XX pop/acre Demand-Response (DR): XX pop/acre
	B. Increase efficiency of transit services	Riders per revenue hour	FR: 10 passengers per revenue hour DR: 2 passengers per revenue hour
	C. Maintain efficient cost per service hour	Cost per revenue hour	Within X% of peer cost
<b>2. Mobility:</b> Serve a wide range of mobility needs within budget constraints <sup>2,4</sup>	A. Provide service all day covering peak times for multiple job sectors.	Service hours	Weekday 6 am-9 or 10 pm
	B. Increase service on corridor segments serving local businesses	Percent of commercial parcels within walking distance of service	XX% of parcels
	C. Accommodate seasonal demand with increased hours to serve nighttime travel	Seasonal service hours	Operate until 11 pm or 12 am during summer
	D. Provide weekend service covering major trip generators	Weekend service hours	% of trip generators served on weekends
	E. Coordinate services with intercity providers	Transfers to CC Rider and TCTD; Northwest Point Astoria ridership	X monthly transfers X Point riders Minimize transfer times for intercity connections
<b>3. Accessibility:</b> Ensure Service Accessibility <sup>4</sup>	A. Increase access to transit for Clatsop County residents	% of population within walking distance of bus route <sup>3</sup>	XX%
	B. Maintain lifeline service to rural areas of county	Revenue hours dedicated toward service	XX% of total service hours in areas between XX and XX pop/acre
<b>4. Reliability:</b> Provide reliable transportation <sup>6</sup>	A. Adhere to scheduled run times	On-time performance <sup>3</sup>	Fixed-Route: XX% of scheduled stops on-time based on past performance and industry norms. Dial-a-Ride: Trips shall arrive at pick-up points no earlier than XX minutes before and no later than XX minutes after the scheduled pick up time, 95% of the time.

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Goal	Objective	Performance Measure	Performance Metric /Standard <sup>1</sup>
<b>5. Sustainability:</b> Compete with SOV travel and reduce vehicle miles traveled per capita <sup>5</sup>	A. Reduce travel time on high-ridership routes	Travel time	Bus travel times no more than X% of car travel times
	B. Increase ridership on Primary Transit Network <sup>7</sup>	Riders per revenue hour	10 riders per revenue hour on fixed-route
	C. Operate service on all primary transit networks with enough frequency to make transit a convenient option	Service frequencies <sup>3</sup>	60 minutes or better
<b>6. Capacity:</b> Ensure sufficient system capacity <sup>4</sup>	A. Provide adequate seating capacity	Peak vehicle loads <sup>3</sup>	Loading no more than 150% of seated capacity
	B. Ensure adequate on-board bicycle capacity	Unmet bicycle demand <sup>6</sup>	Demand met on X% of trips
	C. Provide adequate ADA Paratransit capacity	Trip denials	100% of ADA-eligible trips should be accommodated <sup>9</sup>
<b>Organizational/Program Goals</b>			
<b>7. Access to transit:</b> Strengthen access to public transportation <sup>2</sup>	A. Strive to install safe pedestrian crossings at all signed bus stops in urban areas	% of stops with crossings within 300 (TBD) feet	% of stops; X stops improved per year
	B. Make transit routes and stops legible to the public	Bus stop signs	Signs at all bus stops listed on schedule
	C. Provide secure bicycle parking at high-ridership locations	% of stops with bicycle parking	Performance to SETD policy for bike parking
<b>8. Safety and Comfort:</b> Provide safe and comfortable public transportation <sup>2</sup>	A. Create safe and pleasant bus stops	% of stops with shelters	Shelter at all stops with more than 20 riders per day; Number of shelters installed per year
	B. Create safe and pleasant bus stops	Number of shelters with pedestrian-scale lighting	Performance to SETD policy for lighting
	C. Increase comfort and ease of access on buses	Number of low-floor vehicles with good visibility out the front window and electronic head signs	Percent of fleet with adopted specifications
<b>9. Marketing &amp; Education:</b> Promote and educate Clatsop County about SETD services and community benefits <sup>2</sup>	A. Prepare and distribute service information that is accessible and easy to understand	System map and route maps	Current availability of information (Y/N)
	B. Enhance travel training and marketing efforts	Number of groups presented to; Number of people travel trained; Coordination with Northwest Transportation Options	Targets based on marketing plan
	C. Ensure that transit services are accessible to all regardless of ethnicity or language	Bilingual materials	All schedules and maps available and up-to-date in other languages as determined based on SETD Title VI analysis and Limited English Proficiency (LEP) plan

**Long-Range Comprehensive Transportation Plan | Memo #6: Goals**  
Sunset Empire Transportation District

Goal	Objective	Performance Measure	Performance Metric /Standard <sup>1</sup>
<b>10. Partnerships:</b> Continue to build support for transit <sup>4</sup>	A. Seek continued partnerships with employers and institutions	Number of agreements in place	Targets based on plan
<b>11. Preservation:</b> Preserve condition of capital equipment <sup>4</sup>	A. Assure all investments are in a state of good repair	Conformance with asset management plan	Performance to plan
<b>12. Customer Satisfaction</b>	A. Minimize passenger complaints	Passenger complaints	No more than 25 legitimate complaints per 100,000 boardings

Notes:

<sup>1</sup> Standards presented in the performance metric column are preliminary thresholds of acceptable performance based on peer systems and industry norms. (To be refined in Memo #8)

<sup>2</sup> Represents a current SETD goal

<sup>3</sup> Represents a Title VI required measure (system-wide service standard per FTA Circular 4702.1B)

<sup>4</sup> Represents a Comp Plan/TSP goal

<sup>5</sup> Represents the goal associated with the Transportation Planning Rule (TPR) benchmark and SETD desire to increase ridership

<sup>6</sup> Represents a stakeholder goal / SETD concern

<sup>7</sup> Primary Transit Network, as defined in Memo #3, are the most densely developed corridors or have the highest future potential population/employment density, and/or connect the most significant transit demand generators. They have the highest potential to warrant investments in higher levels of transit service (e.g., more frequent or more direct service).

<sup>8</sup> Service cancellations can be eliminated or minimized through increased reliability and sufficient spare vehicles.

<sup>9</sup> A trip is considered "denied" if the trip cannot be accommodated one hour before or one hour after the desired time. Denials are not permitted under the ADA.

## Results from Input on Goals and Objectives To-Date

Input on the draft goals and objectives was solicited by means of the following:

- TPAC Meeting #3 on October 26, 2015
- Public outreach events held at 4 locations in December 2015
- An online survey made available in December 2015 and publicized using flyers and advertisements in the Daily Astorian.

### Initial TPAC Input

TPAC input provided at the October 26, 2015 meeting included:

- Capacity goal – add “ensure adequate bicycle capacity”
- Access to transit goal – add “in urban areas” to the objective on safe pedestrian crossings

### Public Input

Based on public input received on the service-related goals through the online survey (see Memo #5B for the results), objectives representing five of the six goal categories (except for capacity) were identified by 40% or more of respondents as the most important to them. The top six choices were:

- 2A – Mobility: All-day service to job locations
- 4A – Reliability: Buses arrive and depart at their scheduled times
- 5C – Sustainability: Frequency of buses is every 60 minutes or better
- 3A – Accessibility: Transit available within short walk for most Clatsop County residents
- 2D – Mobility: Provide weekend service covering major trip generators
- 1B – Efficiency: Increase efficiency of transit services

Input received at outreach events included support for efficiency, mobility, and reliability goals, but for the mobility goal also included the objective of improving connections to intercity services.



## **SECTION L**

### Memo 7: Future Service Opportunities Evaluation





# MEMO #7: FUTURE SERVICE OPPORTUNITIES EVALUATION AND PRIORITIZATION AND MONITORING PROGRAM

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# FUTURE SERVICE OPPORTUNITIES EVALUATION AND PRIORITIZATION

## Introduction

The structure of a transit system – where routes run, when they operate, at what frequency, etc. – derives from the overarching goals adopted by the community. For example, questions of whether to focus a large percent of transit resources on trunk routes such as arterials versus circulating through neighborhoods can only be answered by determining what types of service matter most to Clatsop County residents, employees, and visitors. As part of SETD's LRCTP update, the project team worked with a technical committee, ODOT, SETD staff, stakeholders, and the public to create a distinct set of goals and objectives for public transportation. A series of service ideas were vetted through the committee using evaluation criteria, which led into creation of service options at the route and system level.

Successful transit agencies must continue to evolve service as land uses, travel patterns, customer needs, and industry standards change. The service options described in this memo lead SETD toward a transit vision that builds upon existing ridership and creates a robust network connecting the small urban clusters where SETD service is concentrated while also providing important regional connections to smaller, rural communities and adjacent counties. Like all public agencies, SETD faces financial constraints, therefore this memo prioritizes each option based on cost and benefit to the community to provide a long-term roadmap for SETD.

This memo is organized as follows:

- Outlines the long-term service vision for SETD and reviews the SETD goals and planning time frames for this plan
- Describes cost-neutral/near-term changes
- Analyzes remaining recommendations based on the goals and recommends priorities
- Prioritizes investments based upon agreed-upon goals
- Slots service changes into a phasing plan

This memo focuses on service recommendations. A capital plan and transit-supportive programs component will be part of final plan.

## Service Design Opportunities

### Long-Term System Vision

Figure 1 illustrates the long-term vision for SETD services on weekdays and weekends, which the bullets below summarize for each route or market:

- **Route 30 / Lower Columbia Connector:** Rebrand service as Route 30 Lower Columbia Connector. Provide 2 additional short trips to MERTS, Svensen, and Knappa and develop once per week shopper shuttle serving Svensen/Knappa. In the long-term consider increasing the service level to four daily trips to Rainier.
- **Route 101 (Astoria-Seaside):** Eliminate the deviation to Ensign Lane/SE 19<sup>th</sup> Street/SE Huckleberry in Warrenton. Operate bidirectionally on U.S. 101 in Seaside, removing the loop along Wahanna Road. Extend service beyond Avenue S in Seaside to a southern turnaround in the vicinity of Avenue U and Beach Drive (or a future, centrally-located transit center in Seaside). In Astoria, operate Route 101 along northern W. Marine Drive. After serving the Transit Center, continue Route 101 to Clatsop Community College and back to the Transit Center before starting its next trip to Seaside. Run Route 101 at hourly headways all day (currently, headways are 2 hours midday).
  - Eliminating the deviation to Ensign Lane/SE 19<sup>th</sup> Street/SE Huckleberry would be contingent upon finding additional resources to decouple Route 15 from Route 30. Route 15 would serve the Warrenton retail area (including the future Walmart store) independently of Route 30. Service levels would increase to hourly all-day service.
  - The new routing on northern W. Marine Drive in Astoria would allow Route 101 to utilize an alternate routing on Business 101 and the Lewis and Clark River and Old Youngs Bay Bridges when needed in the summer to avoid congestion on the Youngs Bay Bridge between Fred Meyer and Astoria – with the rerouting, this will not skip any stops since Route 101 would no longer serve stops along the southern W. Marine Drive.
- **Route 20 (Seaside-Cannon Beach):** Operate bidirectionally on U.S. 101 through Seaside (no service on Necanicum Drive or Wahanna Road). Implement pedestrian improvements (sidewalk infill and pedestrian crossings of U.S. 101) to facilitate this change. A Seaside Circulator local route (see below) would be developed to provide local circulation, including along Wahanna Road. Develop Park & Ride facilities in the north and south parts of Seaside. (Seaside Cinema in the north side and a to-be-determined location in the south), with an eventual goal of identifying a single, more central transit center location. Improve consistency of schedule/passenger information and transfers to Manzanita.
- **Cannon Beach – Manzanita:** Negotiate with Tillamook County Transportation District (TCTD) to operate the Manzanita – Cannon Beach portion of weekday Route 20 and the weekend Pacific Connector consistently. One provider, preferably TCTD, would serve all trips on the Manzanita connection on both weekends and weekdays. This would enable re-timing of weekday Routes 20 and 101 to provide shorter transfers between these routes in Seaside. There would be four trips per day between Manzanita and Cannon Beach.

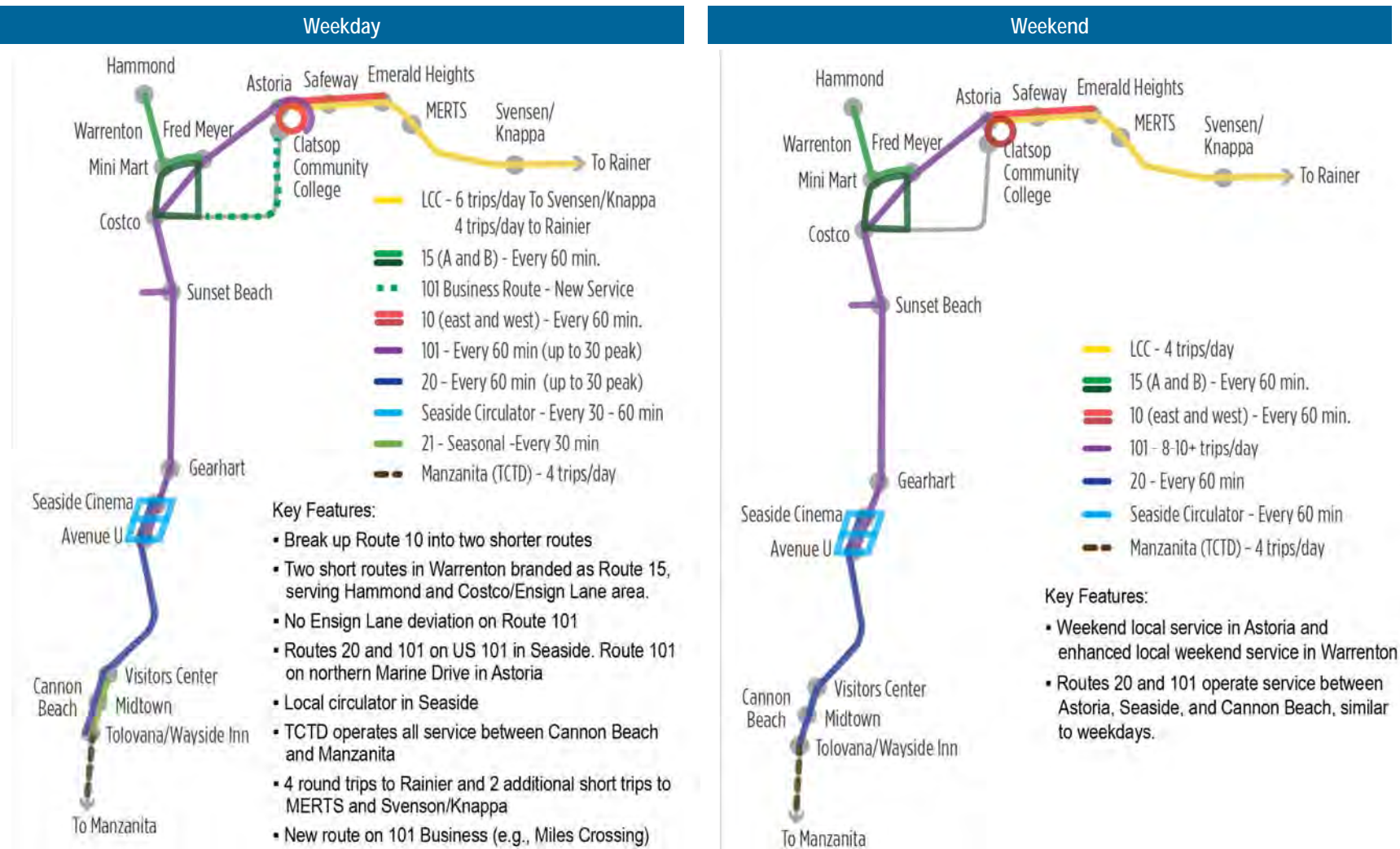
Long-Range Comprehensive Transportation Plan | Memo #7 Future Service Opportunities Evaluation & Prioritization

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- **Route 10 (Astoria Local):** Break up into two shorter, focused routes, east and west, with service on weekends. Provide more service in the interior of Astoria; this would need to be done in conjunction with a new route, e.g., Route 101 Business below. In the long-term, potential flex-route service that allows deviations from the route could be considered.
- **Route 15 (Warrenton Local):** Brand all service in Warrenton-Hammond as Route 15 and over time separate service from Route 30 to provide regular headways in Warrenton/Hammond. Introduce a separate portion of Route 15 (15E) serving the Ensign Lane/SE 19<sup>th</sup> Street/SE Huckleberry area including Costco/Walmart (Route 101 would no longer deviate to serve this area). Connections to Astoria would be provided through well-timed transfers to Route 101 at Fred Meyer.
- **New Seaside Local Circulator.** Develop a local circulator focused on resident and employee needs, with timed connections to regional routes running along US 101. This route would help accommodate growth that is expected to occur on the east side of the city.
- **Seasonal Weekday Route 21:** Operate seasonal Route 21 on weekdays only, but consider operating as more frequent Route 20 service, since one of the two trips each hour duplicates Route 20.
- **Weekend Pacific Connector (including weekend Route 21):** Brand and operate the Astoria-Seaside and Seaside-Cannon Beach portions of the Pacific Connector as Route 101 (Pacific Connector) and Route 20 (Pacific Connector), respectively, using similar routing and stops on weekends as on weekdays. Weekend Route 21 would be rebranded as Route 20.
- **New Route/Service on Business 101.** Consider a new route to serve planned development in the Miles Crossing area and provide a more direct connection between Astoria and the Walmart/Costco area. This could be an extension/redesign of Route 15.

This memo will prioritize the implementation of these concepts, based on the SETD goals and objectives from Technical Memo #6 (also summarized below).

Figure 1 Long-Term Service Vision



## Planning Time Frames

The prioritized service plan provided in this memo will identify phasing for identified service improvements within the following general time frames, based on priority, anticipated needs, and assumptions for SETD’s available financial resources. It is assumed that service improvements in the immediate/near-term (next two years) would need to be close to cost-neutral, but that additional resources could be available for transit in the longer-term.

Figure 2 Planning Time Frames and Funding Targets

Time Frame	Years	Funding Level Target
Immediate/Near-Term	0 to 1 years: 2016 – 2017	Cost-Neutral / Near Cost-Neutral
Short-Term	2 – 4 Years: 2018 – 2020	Low Growth: \$200,000 - \$300,000
Mid-Term	5-10 Years: 2021 – 2026	Moderate Growth: \$400,000 - \$500,000
Long-Term	11-20 Years: 2027 – 2036	Flexible Service Plan - Not Financially Constrained

## SETD Goals

Figure 3 provides the recommended, updated service-related goals and objectives for SETD. These goals were refined as part of Technical Memos #4 and #6. Public input was solicited on the goals in December 2015 through community outreach events and an online survey. The table identifies the top priority goals and objectives based on the input received from the communities that SETD serves.

The long-term service vision for SETD, described above, will be evaluated and prioritized into the planning time frames based on the service-related goals and objectives (1-6).

Figure 3 Service-Related Goals and Objectives

Goal	Objective	Highest Priority (Public Input)
<b>1. Efficiency:</b> Provide cost-effective public transportation <sup>2</sup>	A. Match service types to appropriate land use densities	
	B. Increase efficiency of transit services	#6
	C. Maintain efficient cost per service hour	
<b>2. Mobility:</b> Serve a wide range of mobility needs within budget constraints <sup>2,4</sup>	A. Provide service all day covering peak times for multiple job sectors.	#1
	B. Increase service on corridor segments serving local businesses	
	C. Accommodate seasonal demand with increased hours to serve nighttime travel	
	D. Provide weekend service covering major trip generators	#5
	E. Coordinate services with intercity providers	
<b>3. Accessibility:</b> Ensure Service Accessibility <sup>4</sup>	A. Increase access to transit for Clatsop County residents	#4
	B. Maintain lifeline service to rural areas of county	
<b>4. Reliability:</b> Provide reliable transportation <sup>6</sup>	A. Adhere to scheduled run times	#2
<b>5. Sustainability:</b> Compete with SOV travel and reduce vehicle miles traveled per capita <sup>5</sup>	A. Reduce travel time on high-ridership routes	
	B. Increase ridership on Primary Transit Network <sup>7</sup>	
	C. Operate service on all primary transit networks with enough frequency to make transit a convenient option	#3
<b>6. Capacity:</b> Ensure sufficient system capacity <sup>4</sup>	A. Provide adequate seating capacity	
	B. Ensure adequate on-board bicycle capacity	
	C. Provide adequate ADA Paratransit capacity	

Notes:

<sup>1</sup> Standards presented in the performance metric column are preliminary thresholds of acceptable performance based on peer systems and industry norms. (To be refined in Memo #8)

<sup>2</sup> Represents a current SETD goal

<sup>3</sup> Represents a Title VI required measure (system-wide service standard per FTA Circular 4702.1B)

<sup>4</sup> Represents a Comp Plan/TSP goal

<sup>5</sup> Represents the goal associated with the Transportation Planning Rule (TPR) benchmark and SETD desire to increase ridership

<sup>6</sup> Represents a stakeholder goal / SETD concern

<sup>7</sup> Primary Transit Network, as defined in Memo #3, are the most densely developed corridors or have the highest future potential population/employment density, and/or connect the most significant transit demand generators. They have the highest potential to warrant investments in higher levels of transit service (e.g., more frequent or more direct service).

<sup>8</sup> Service cancellations can be eliminated or minimized through increased reliability and sufficient spare vehicles.

<sup>9</sup> A trip is considered "denied" if the trip cannot be accommodated one hour before or one hour after the desired time. Denials are not permitted under the ADA.



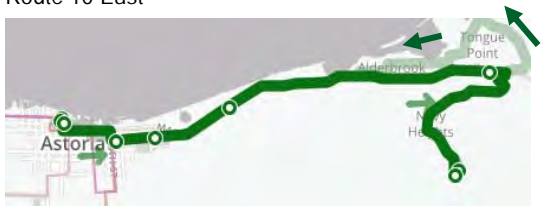


## Near-Term / Cost-Neutral Route Recommendations

A number of cost-neutral (or relatively low-cost) service opportunities were already evaluated against the SETD goals (Technical Memos #4 and 5C) and were shown to meet the goals. It is therefore assumed that these options will be implemented in the immediate/near-term time frames. Figure 4 summarizes these service recommendations by route. These include:




- **#1 & 2 Astoria:** Modify Routes 10 and 101 so that:
  - **Route 10** would be restructured into two shorter routes, one serving east Astoria (10E) and the other west Astoria (10W), both starting and ending at the transit center. Route 10W would serve Clatsop Community College (CCC) then travel via southern/northern W. Marine Drive back to the Transit Center. Four times per day, the route would deviate off Marine Drive to serve Head Start on Alameda Avenue.
  - **Route 101** operates bidirectionally on northern W. Marine Drive, providing more direct service to downtown Astoria; Route 101 would then make a short round trip to Clatsop Community College for CCC-bound passengers. In turn this enables the above changes to Route 10. This change would also enable an alternative Business 101 routing to avoid summer congestion on the Youngs Bay Bridge, without missing stops.
- **#3 & 4 Warrenton and Columbia Corridor: Route 15 and Route 30** would have more legible marketing and communication.
- **#5 & 6 Seaside, Cannon Beach, Manzanita:**
  - Modify Route 20 to eliminate routing on Necanicum Drive so that Routes 20 and 101 provide bidirectional service on US 101 and Wahanna Road between Seaside Cinema and Avenue S.
  - In conjunction with the above change, improve marketing and work with Seaside Hospital to try to increase ridership.
  - Modify Route 21 to provide consistent weekday and weekend service branded as Route 20.
  - Make transfer between Cannon Beach and Manzanita service easier to understand on schedules and maps.
  - Restructure scheduling of Route 21 and Pacific Connector shifts to provide one more trip between Astoria and Seaside.

Additional cost-neutral or low-cost recommendations that can be implemented in the immediate/near-term time frames include enhancing transit marketing and customer information. These will be addressed as “transit-supportive programs” in the draft plan.

Figure 4 Near-Term Route Recommendations

Rec. #	Transit Market	Route	Weekday	Weekend	Issues	Near-Term Actions	Benefits	Map (If applicable) *
1	Astoria Local	10	X		<ul style="list-style-type: none"> <li>Long round trip travel time (nearly 60 minutes)</li> <li>Long loop requires out-of-direction travel</li> <li>The Head Start in Astoria has requested service to its program near the intersection of Alameda Avenue and Glasgow Way</li> </ul>	<ul style="list-style-type: none"> <li>Remove Warrenton trips from schedule (should be branded as Route 15)</li> <li>Break into two routes, east and west</li> <li>Route 10E would return to the transit center after completing its trip.</li> <li>Route 10W would start from the transit center, serve CCC, and return to the transit center using northern W. Marine Dr. (Note: options were evaluated that would use this route to better serve the interior of Astoria, but these options were not feasible within the available time for the route.)</li> <li>On approximately four trips per day (to be determined based on discussions with the Head Start), Route 10W would deviate to serve the Head Start facility. There would be no service on a portion of south W. Marine Drive on these trips, however walking distance is reasonable to stops that would be served; wayfinding signage would need to prominently communicate this to riders.</li> </ul>	<ul style="list-style-type: none"> <li>Shorter travel time to Warrenton destinations for eastern Astoria riders</li> <li>More service through Astoria business district</li> <li>Provide service to Head Start and interior of Astoria</li> </ul>	<p>Route 10 East</p>  <p>Route 10 West – Clockwise Loop: Typical:</p>  <p>Deviations to Head Start – approximately 4 times per day:</p> 

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Rec. #	Transit Market	Route	Weekday	Weekend	Issues	Near-Term Actions	Benefits	Map (If applicable) *
2	Astoria-Seaside	101	X		<ul style="list-style-type: none"> <li>Does not operate bidirectionally in Astoria (less legible for passengers)</li> <li>Severe summer congestion causes delays and missed trips trying to cross the Youngs Bay Bridge between Fred Meyer and Astoria</li> <li>Route 101 runs on a clockwise loop in Seaside and Route 20 runs counter-clockwise. Ridership at the Hospital on Wahanna Road is very low, even though hospitals typically exhibit high ridership.</li> </ul>	<ul style="list-style-type: none"> <li>Run along northern W. Marine Drive in Astoria</li> <li>After serving Transit Center in Astoria, circulate through downtown Astoria to CCC, then return to the Transit Center</li> <li>Integrate summer alternate route via Business 101. This will not skip any stops since Route 101 will operate only on northern W. Marine Drive.</li> <li>Maintain Route 101 routing on Wahanna – Avenue S – US 101 in a clockwise direction. Work with hospital to determine if better marketing or scheduling could attract more riders.</li> </ul>	<ul style="list-style-type: none"> <li>Improve legibility of local service in Astoria</li> <li>More direct service to downtown Astoria</li> <li>Maintains connection to CCC</li> <li>Buses can bypass congestion on Youngs Bay Bridge without skipping stops</li> <li>Improve legibility of local service in Seaside (in coordination with #5)</li> </ul>	<p>Astoria:</p>  <p>Seaside:</p> <p>Northbound</p>  <p>Southbound</p> 
3	Warrenton Local & Astoria-Warrenton	15	X	X	<ul style="list-style-type: none"> <li>Route 10 and Route 15 provide service in Warrenton-Hammond; passengers need to understand that both routes provide service without consulting multiple schedules</li> </ul>	<ul style="list-style-type: none"> <li>When Route 10 is in Warrenton, have driver switch signs to Route 15</li> <li>Create a combined schedule showing Route 10/15 trips - all branded as Route 15</li> </ul>	<ul style="list-style-type: none"> <li>More legible marketing and communication</li> </ul>	
4	Columbia / US 30 Corridor	30	X	X	<ul style="list-style-type: none"> <li>Passengers need to consult multiple schedules to determine possible connections and transfers</li> </ul>	<ul style="list-style-type: none"> <li>Rebrand as Route 30 LCC</li> <li>Integrate transfers to Columbia County Rider into schedule</li> <li>Coordinate with Columbia County Rider to explore why there is a long layover during one trip</li> </ul>	<ul style="list-style-type: none"> <li>More legible marketing and communication</li> </ul>	

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Rec. #	Transit Market	Route	Weekday	Weekend	Issues	Near-Term Actions	Benefits	Map (If applicable) *
5	Seaside-Cannon Beach-Manzanita	20	X		<ul style="list-style-type: none"> <li>Passengers need to consult multiple schedules to determine possible connections and transfers to intercity service</li> <li>Confusing service design with loops and different routing on 20 and 101; ridership on Wahanna Road and Necanicum Drive is low. (See also #2.)</li> </ul>	<ul style="list-style-type: none"> <li>Improve passenger information – show TCTD arrivals and departures on schedules</li> <li>Establish P&amp;R at Cinema. Add as P&amp;R to system map</li> <li>Remove Necanicum Drive routing; operate southbound on US 101</li> <li>Work with hospital to determine if better marketing or scheduling could attract more riders on Route 20.</li> </ul>	<ul style="list-style-type: none"> <li>Simpler information on transfers</li> <li>Focus service on primary transit corridors with highest ridership potential</li> <li>Simplify service design</li> </ul>	
6	Seaside-Cannon Beach-Manzanita	PC/21		X	<ul style="list-style-type: none"> <li>Service operates differently on weekdays and weekends.</li> </ul>	<ul style="list-style-type: none"> <li>Rebrand weekend US 101 service as Route 101 / Pacific Connector and Route 20 / Pacific Connector</li> <li>Restructure existing Route 21 and Pacific Connector to provide one additional trip during weekends</li> </ul>	<ul style="list-style-type: none"> <li>More legible to customers</li> <li>More trips between Cannon Beach and Seaside</li> <li>One more trip between Astoria and Seaside</li> <li>No midday long break (peak time for Cannon Beach)</li> </ul>	

Note: \* Full route maps and conceptual schedules are provided as an appendix

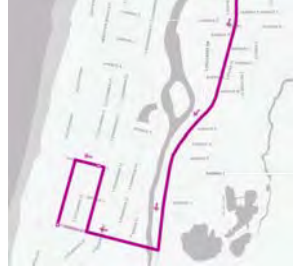

## Future Options for Evaluation

It is assumed that the cost-neutral service opportunities identified above will be implemented in the immediate/near-term time frame. Figure 5 describes the remaining service opportunities that lead to the long-term vision illustrated in Figure 1 above. Most of these recommendations have an operating and/or capital cost. SETD needs to understand the relative benefits of these options so that, when funding is available, it can determine which recommendations to implement. Recommendations that are interdependent are grouped into packages that require coordinated implementation. Note that each recommended package or item is meant to be a stand-alone action. The service elements with interdependent parts include:

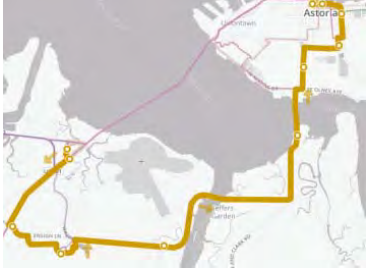
- **#7:** This package of recommendations #7A-C accomplishes several key changes to Seaside-Astoria service and local service in Warrenton that require coordination.
  - **Route 101 (#7A):** Removing the Ensign Lane / SE Huckleberry Avenue deviation in Warrenton from Route 101 reduces travel time between Seaside-Astoria and should improve schedule reliability on this route. This change enables Route 101 to operate further south in Seaside to a turnaround at Avenue U & Beach Drive.
  - **Route 15 (#7B):** Removing the Ensign Lane deviation from Route 101 requires additional service in this area, which would logically be provided by Route 15. Route 15 is operated by the same bus as Route 30, however, which makes a three-hour round trip to Rainier in the morning and again in the afternoon. Changes to Route 30 are thus also required (see below). Providing a separate bus for Route 15 enables a more consistent schedule in Warrenton/Hammond, improved service to the Warrenton business district and Costco/future Walmart area, and service to activity centers such as Warrenton High School.
  - **Route 30 (#7C):** Removing Route 15 service from Route 30 can be used to provide short-turn trips to Svensen/Knappa, which currently lack midday service, as well as to MERTS. This change provides SETD with more flexibility to use the Route 30 bus to provide lunch relief on other routes and would enable a third potential trip to be added on Route 30 in the long-term.
- **#8:** This package of recommendations #8A/B implements the same decoupling of Route 15 and Route 30 as recommendations #7B and 7C accomplish on weekdays. This enables weekend service to be provided in East Astoria (Route 10E).
- **#12:** This package of recommendations #12A/B enhances weekend local service in Astoria and Warrenton. By providing a second bus, it enables more frequency and service on the western portion of Route 10 to be provided on weekends.
- **#13:** This package of recommendations #13A/B requires that SETD renegotiate the Manzanita connection with Tillamook County Transit District (TCTD), which enables redesign of SETD route schedules to provide shorter transfers between Route 20 and 101 in both directions.

Note: The costs below do not take into account potential increases in service cost needed for any additional ADA Paratransit service. The service changes propose no new fixed-routes in the near, short, or medium term, that would trigger additional ADA service. Similarly, there is relatively limited expansion of service hours beyond current hours, with the exception of weekend evening hours, and the  $\frac{3}{4}$  mile buffer where ADA service is required based on the routes that are operated on weekday evenings. The proposed 101 Business route is a long-term element that could trigger a requirement for additional ADA service. Order-of-magnitude costs will be included in the final service plan.

Figure 5 Future Route Recommendations

Pkg. #	Rec. #	Transit Market	Route	Service Change Summary	Weekday	Weekend	Issues	Package of Actions	Benefits	Annual Cost (Operating)	Capital Cost (# Buses)	Maps (if applicable) **
7	7A	Astoria-Seaside Service	101	Remove deviations and implement more direct routing in Astoria, Warrenton, and Seaside	X		<ul style="list-style-type: none"> <li>Deviations increase travel time on primary corridor</li> <li>High ridership demand in south part of Seaside.</li> </ul>	<ul style="list-style-type: none"> <li>Remove Ensign Lane deviation; will be served by Route 15 (see #7B)</li> <li>Serve south turnaround at Avenue U &amp; Beach Drive in Seaside</li> </ul>	<ul style="list-style-type: none"> <li>Shorter travel time between Seaside and Astoria, and more recovery time in schedule from seasonal congestion</li> <li>Improve local service along US 101 through Seaside and coverage in the south part of Seaside</li> <li>Requires coordinated transfers with Route 15 in Warrenton</li> </ul>	\$0	-	Seaside Routing 
	7B	Warrenton Local Service	15	Decouple from Route 30; Split into two shorter routes. Can be implemented in phases (see #22).	X		<ul style="list-style-type: none"> <li>Irregular, inconsistent schedule in Warrenton-Hammond when Route 30 bus runs to Rainier</li> </ul>	<ul style="list-style-type: none"> <li>Split into two routes</li> <li>Long turn –existing Hammond loop routing (counter-clockwise)</li> <li>Short turn –counterclockwise loop to downtown Warrenton, Warrenton High School, Ensign Lane retail area (Home Depot, Walmart, Costco), and 19<sup>th</sup> Street/Huckleberry Avenue</li> <li>Consider routing into Costco parking lot</li> </ul>	<ul style="list-style-type: none"> <li>High level of service to major destinations</li> <li>Increases service between Fred Meyer, downtown Warrenton, and Costco area</li> <li>Consistent headways on Hammond loop</li> <li>Enhances service/connections to future Walmart</li> <li>Requires coordinated transfers with Route 101</li> </ul>	\$181,000 (This option could also be implemented in phases; first phase would cost \$98,000; see #22)	1	15 – Hammond (CCW)      15 – Costco (CCW) 
	7C	Columbia / US 30 Corridor	30	Decouple from Route 15; Add 1-2 short-turn trips to Svensen/Knappa/MERTS.	X		<ul style="list-style-type: none"> <li>Route 30 bus also serves Route 15; this leads to gaps and inconsistent service in Warrenton</li> <li>No midday service in Svensen/Knappa</li> </ul>	<ul style="list-style-type: none"> <li>Route 30 bus no longer serves Warrenton-Hammond loop</li> <li>Extra time in schedule can be used to add short turns in Svensen/Knappa/MERTS in between long turns to Rainier. Can also provide lunch relief, as it does today.</li> </ul>	<ul style="list-style-type: none"> <li>Enables Route 15 changes (see 7B)</li> <li>Provides additional midday trips to Svensen/Knappa and MERTS</li> </ul>	\$12,000	-	
8	8A	Warrenton Local Service	15	Decouple from Route 30; operate two shorter routes.		X	<ul style="list-style-type: none"> <li>Similar to 7B for weekend service in Warrenton</li> </ul>	<ul style="list-style-type: none"> <li>Provides 10 hours of local weekend service in Astoria and Warrenton between 8 am – 6 pm, split between Routes 15 and 10E (see #8B) – about 6 Route 15 trips per day.</li> </ul>	<ul style="list-style-type: none"> <li>Provides consistent weekend service in Warrenton</li> </ul>	\$28,000	-	Same as weekday Route 15
	8B	Astoria Local	10E	Operate East Astoria service on weekends; served by Route 15 weekend bus.		X	<ul style="list-style-type: none"> <li>No weekend service in East Astoria</li> </ul>	<ul style="list-style-type: none"> <li>See #8A; provides weekend service on Route 10E (Emerald Heights, Tongue Point, Safeway) between 8 am – 6 pm – about 6 trips per day.</li> </ul>	<ul style="list-style-type: none"> <li>Provides weekend service in East Astoria</li> </ul>	\$28,000	-	Same as weekday Route 10E
9	Astoria-Seaside	101	All-day hourly headways (fill midday service gap)	X		<ul style="list-style-type: none"> <li>Two-hour midday headways</li> </ul>	<ul style="list-style-type: none"> <li>All-day hourly headways (no change to existing routing)</li> </ul>	<ul style="list-style-type: none"> <li>Hourly service is provided all-day</li> </ul>	\$59,000	-		
										\$56,000	-	

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Pkg. #	Rec. #	Transit Market	Route	Service Change Summary	Weekday	Weekend	Issues	Package of Actions	Benefits	Annual Cost (Operating)	Capital Cost (# Buses)	Maps (if applicable) **
	10	Astoria-Seaside, Seaside-Cannon Beach	20, 101	Increase service frequency to every 30 minutes in peak periods (conditioned on service standards)	X		<ul style="list-style-type: none"> <li>Frequent service to attract choice riders / commuters</li> </ul>	<ul style="list-style-type: none"> <li>Increase service frequency during peak hours</li> </ul>	<ul style="list-style-type: none"> <li>More frequent peak service to attract riders and meet future demand on the core routes of the system</li> </ul>	\$167,000	3	
	11	Seaside Local	New Route	Create Seaside circulator	X	X	<ul style="list-style-type: none"> <li>No year-round local circulation service in Seaside</li> <li>Routes 20 and 101 do not operate bidirectionally on U.S. 101, which is less legible for riders.</li> </ul>	<ul style="list-style-type: none"> <li>Create Seaside Circulator, focused on resident/employee market</li> <li>Eliminate Route 20 and 101 routing on Wahanna and operate on US 101 in both directions (Wahanna could be served by circulator route)</li> </ul>	<ul style="list-style-type: none"> <li>Expands local coverage</li> <li>Allows core routes (20 and 101) to focus on serving primary US 101 corridor with direct service and faster travel times</li> </ul>	\$224,000	1	
										\$56,000	-	
12	12A	Warrenton Local	15	Expand Warrenton weekend service		X	<ul style="list-style-type: none"> <li>Route 30 bus also serves Route 15; this leads to gaps and inconsistent service in Warrenton</li> </ul>	<ul style="list-style-type: none"> <li>Increase service levels for Route 15 weekend service (builds on #8A)</li> </ul>	<ul style="list-style-type: none"> <li>More frequent service, including to future Walmart</li> </ul>	\$28,000	-	
	12B	Astoria Local	10E,10W	Expand Astoria weekend service, including West Astoria		X	<ul style="list-style-type: none"> <li>No weekend service in interior of Astoria</li> </ul>	<ul style="list-style-type: none"> <li>Increase service levels for Route 10 weekend service, including operating Route 10W (builds on #8B)</li> </ul>	<ul style="list-style-type: none"> <li>Greater coverage and more frequent service</li> </ul>	\$28,000	-	
										\$44,000	-	
13	13A	Seaside-Cannon Beach-Manzanita	20	Renegotiate TCTD Agreement; four trips per day with all Manzanita connections in Cannon Beach. Restore 11 am Seaside-Cannon Beach trip.	X	X	<ul style="list-style-type: none"> <li>Inconsistent schedules</li> </ul>	<ul style="list-style-type: none"> <li>Renegotiate agreement with TCTD – have all Manzanita connections occur in Cannon Beach</li> </ul>	<ul style="list-style-type: none"> <li>Enables more consistent service design and schedules that is easier for passengers to understand</li> <li>Four trips per day between Cannon Beach and Manzanita</li> <li>11 am Seaside-Cannon Beach trip can be restored</li> </ul>	\$44,000	-	
	13B	Seaside-Cannon Beach	20/101	Retime for shorter NB and SB transfers in Seaside; depends on 13A	X		<ul style="list-style-type: none"> <li>Long transfer time between Routes 20 and 101 in one direction</li> </ul>	<ul style="list-style-type: none"> <li>Retime 101/20 for short transfers (9 min or less) NB AND SB in Seaside between Astoria / Warrenton and Cannon Beach</li> </ul>	<ul style="list-style-type: none"> <li>Reduces overall travel times between Astoria and Cannon Beach</li> </ul>	\$0	-	
	14	Svensen / Knappa	DAR	Shopper shuttle pilot project	X		<ul style="list-style-type: none"> <li>No regular/midday service to Svensen/Knappa</li> </ul>	<ul style="list-style-type: none"> <li>Operate a Svensen Knappa shopper shuttle as a pilot project</li> </ul>	<ul style="list-style-type: none"> <li>Provides one day per week dial-a-ride service to retail sites</li> </ul>	\$3,000	-	
	15	Warrenton / Miles Crossing	New Route	Business 101 service	X		<ul style="list-style-type: none"> <li>Proposed future development in Miles Crossing</li> <li>Business 101 provides a potential alternate route to US 101 given seasonal congestion</li> </ul>	<ul style="list-style-type: none"> <li>Operate a new route on Business 101 (could also be a redesign of Route 15)</li> </ul>	<ul style="list-style-type: none"> <li>Expand transit coverage</li> <li>Provide an alternate route between Warrenton and Astoria</li> </ul>	\$195,000	1	

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Pkg. #	Rec. #	Transit Market	Route	Service Change Summary	Weekday	Weekend	Issues	Package of Actions	Benefits	Annual Cost (Operating)	Capital Cost (# Buses)	Maps (if applicable) **
	16	Weekend Hours	10, 15, 20, 101, Seaside Circulator	Expand early morning and early evening hours to 7 am to 8 pm		X	<ul style="list-style-type: none"> <li>Weekend service doesn't meet needs of many retail workers</li> <li>Weekend service doesn't serve social/recreational trips later in the day</li> </ul>	<ul style="list-style-type: none"> <li>Expand weekend service hours to 7 am-10 pm</li> <li>1 hour earlier on Route 20, 101</li> <li>4 hours later on Routes 10, 15, 20, 101, Seaside Circulator</li> </ul>	<ul style="list-style-type: none"> <li>Makes transit a viable option for more weekend work and recreation/entertainment trips</li> </ul>	\$68,000	-	
	17	Weekend Hours	10, 15, 20, 101, Seaside Circulator	Expand later evening hours to 8 pm to 10 pm		X	<ul style="list-style-type: none"> <li>Weekend service doesn't meet needs of retail workers with later shifts</li> <li>Weekend service doesn't serve later evening entertainment trips</li> </ul>	<ul style="list-style-type: none"> <li>Expand later evening weekend service hours from 8 pm -10 pm</li> </ul>	<ul style="list-style-type: none"> <li>Makes transit a viable option for additional weekend work trips and entertainment trips</li> </ul>	\$57,000	-	
	18	Columbia / US 30 Corridor	30	Add 3 <sup>rd</sup> and 4th trips to Rainier	X	X	<ul style="list-style-type: none"> <li>Only two trips per day limits utility of Astoria-Rainier service</li> </ul>	<ul style="list-style-type: none"> <li>Add third and fourth daily trips to/from Rainier</li> </ul>	<ul style="list-style-type: none"> <li>Improves inter-county connections, including to Portland and Longview/Kelso (longer-distance intercity service)</li> </ul>	\$73,000	-	
	19	Astoria Local	10E/10W	Evaluate feasibility of flex service	X		<ul style="list-style-type: none"> <li>Steep grades limit transit access</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate feasibility to operate Route 10 as flex service (deviations) – requires more running time and more vehicles. This could include only select times, e.g., later evenings.</li> </ul>	<ul style="list-style-type: none"> <li>Improves transit coverage beyond fixed-route walking distance</li> <li>Can reduce ADA Paratransit costs</li> </ul>	\$167,000	1	
	20	Weekday Evening Hours	10, 15, Seaside Circulator	Expand weekday evening service on local routes	X		<ul style="list-style-type: none"> <li>Local routes stop running earlier than regional routes</li> </ul>	<ul style="list-style-type: none"> <li>Add two hours of evening service to Routes 10 and 15, and Seaside Circulator (Rec. #11) – to 10 PM</li> </ul>	<ul style="list-style-type: none"> <li>Improves coordination between local and regional routes</li> </ul>	\$112,000	-	
	21	Astoria – Seaside	101 / PC	More frequent weekend service		X	<ul style="list-style-type: none"> <li>Limited weekend trips between Seaside-Warrenton-Astoria</li> </ul>	<ul style="list-style-type: none"> <li>Add a bus to 101 / Pacific Connector weekend service</li> </ul>	<ul style="list-style-type: none"> <li>Provides more frequent, regular headways on weekends</li> </ul>	\$45,000	-	
	22	Warrenton Local Service	15	Operate Route 15 when Route 30 bus serves Rainier. This is a phased implementation of #7B, if package #7 is not implemented.	X		<ul style="list-style-type: none"> <li>Irregular, inconsistent schedule in Warrenton-Hammond when Route 30 bus runs to Rainier</li> </ul>	<ul style="list-style-type: none"> <li>Operate Route 15 independently of Route 30, when Route 30 bus serves Rainier: 3 morning trips (7 am, 8 am, 9 am) and 4 afternoon trips (</li> </ul>	<ul style="list-style-type: none"> <li>Enhances service/connections to future Walmart, which will be a major destination</li> <li>Consistent headways on Hammond loop</li> <li>Step towards full benefits of #7B</li> </ul>	\$98,000	1	See #7B
	<b>TOTAL *</b>									<b>\$1,617,000 *</b>	<b>8 *</b>	

Notes:

\* Since recommendations can stand alone, there is some overlap in the total operating costs and capital requirements. Actual operating and capital requirements to implement all line items would be slightly lower. Costs assume an average hourly cost of \$55 per service hour.

\*\* Full route maps and conceptual schedules will be provided as an appendix to the service plan.



## Evaluation of Future Service Options

To determine phasing, the project team evaluated the above future route recommendations (those that are not cost-neutral) and assigned an overall rating based on both the benefits (based on SETD goals) and estimated costs. Benefits tallied include:

- The number of goals supported
- The number of objectives within each goal that are supported
- The number of high-priority (based on public input; see Figure 3) objectives supported

Benefits were weighed against negative impacts and costs:

- The number of objectives with negative impacts, (e.g., reduced efficiency)
- Annual operating costs
- Capital costs (number of additional buses)

Figure 7 provides a summary of the evaluation.

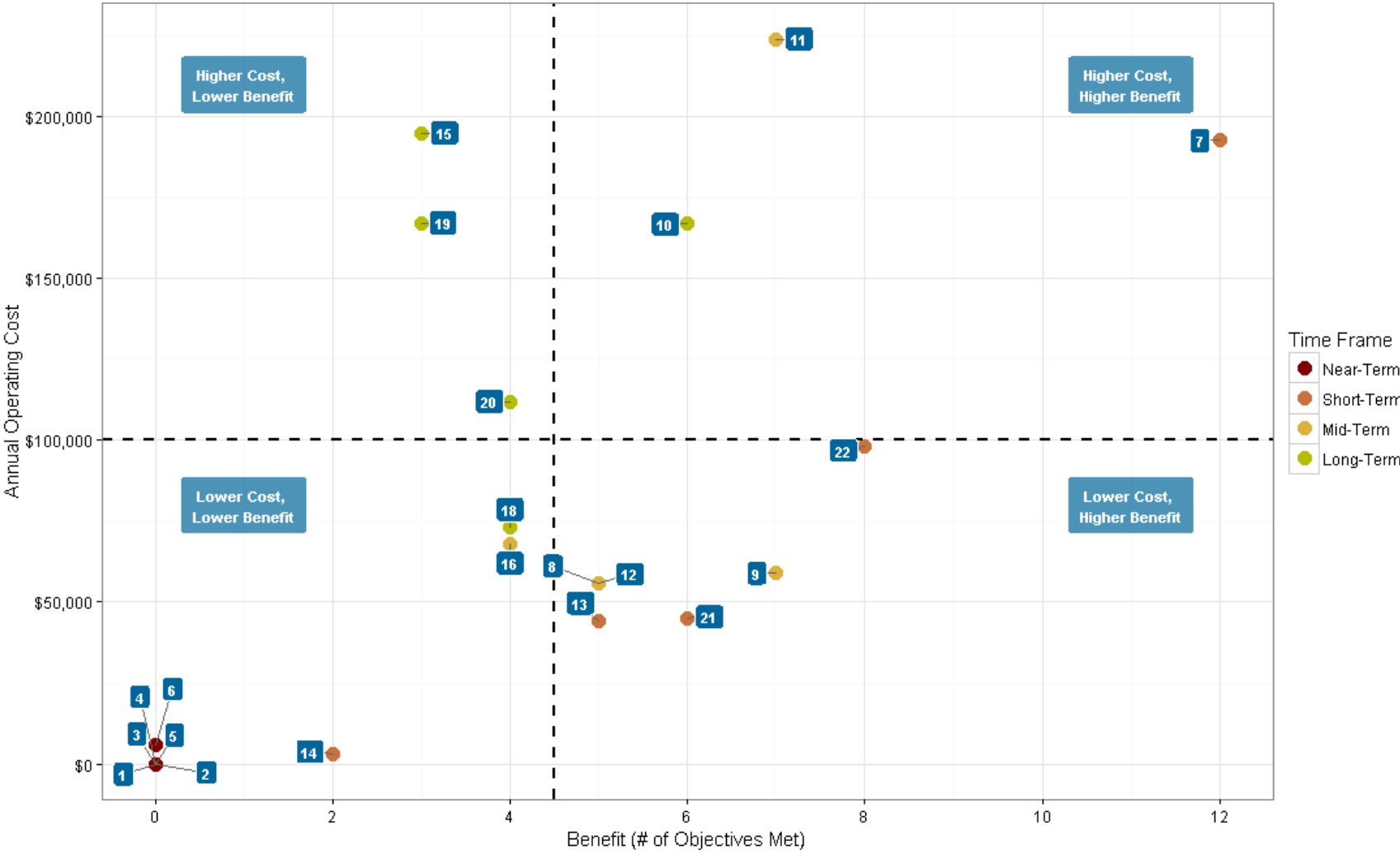
The recommendations were then prioritized for implementation in the short-term, mid-term, or long-term time frame. Phasing was assigned qualitatively, weighing the benefits, potential negative impacts to SETD goals, operating and capital costs, overall system design considerations, and a high-level estimate of resources that may be available to SETD in the future.

Figure 6 plots the annual operating cost of each package of recommendations against the benefits (number of objectives supported).

- Recommendations in the upper right quadrant are higher cost but also higher benefit. This includes #7, which comprises a core set of recommendations.
- The lower right quadrant includes lower cost but still high benefit recommendations.
- The lower left quadrant includes lower cost and lower benefit recommendations, including all of the cost-neutral changes suggested for implementation in the near-term time frame.
- Finally, the upper left quadrant has high cost and lower benefit recommendations, which all fall into the long-term time frame.

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Figure 6 Recommendations, Cost – Benefit Comparison



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Figure 7 Evaluation of Future Service Options

Rec #	Transit Market	Routes	Summary Description	SETD Goals						Benefits				Costs		Evaluation / Phasing	
				1. Efficiency: Provide cost-effective public transportation	2. Mobility: Serve a wide range of mobility needs	3. Availability: Ensure service availability	4. Reliability: Provide reliable service	5. Sustainability: Compete with SOV travel times and reduce VMT	6. Capacity: Ensure sufficient system capacity	# of Goals Supported	# of Objectives Supported	# of High Priority Objectives Supported	# of Objectives with Negative Impacts	Operating Cost	Capital Cost (# of Buses)	Overall Rating: (Benefit & Cost)	Phase Assigned
7	Astoria Local, Warrenton Local, Astoria-Seaside, Columbia/US 30	101, 15, 30	Improve travel times on Route 101, consistent headways and enhanced coverage in Warrenton, enhanced coverage in Seaside, and midday service to Svensen/Knappa	+	+	+	+	+	+	6	12	5	0	\$\$\$	1	High	Short-Term
8	Warrenton and Astoria Local	15, 10E	Enhanced weekend service in Warrenton and local weekend service in East Astoria	+	+	N	N	+	N	3	5	2	0	\$\$	0	High	Short-Term
9	Astoria-Seaside	101	All-day hourly headways (fill midday service gap)	+	+	N	N	+	+	4	7	2	0	\$\$	-	High	Mid-Term
10	Astoria-Seaside, Seaside-Cannon Beach	20, 101	Increase service frequency to every 30 minutes in peak periods (conditioned on service standards)	-	+	N	N	+	+	3	6	1	1	\$\$\$	3	Low-Medium	Long-Term
11	Seaside Local	New Route	Create Seaside circulator	+	+	+	N	+	+	5	7	2	0	\$\$\$	1	High	Mid-Term
12	Warrenton and Astoria Local	15, 10E, 10W	Enhanced weekend service in Warrenton and Astoria, local weekend service in interior of West Astoria	+	+	N	N	+	N	3	5	2	0	\$\$	0	High	Mid-Term
13	Astoria-Cannon Beach, Manzanita	20, 101	Consistent connections to Manzanita and shorter transfers in Seaside	+	+	N	N	+	N	3	5	2	0	\$	0	High	Short-Term
14	Svensen/Knappa	DAR	Shopper shuttle pilot project	+	N	+	N	N	N	2	2	0	0		0	Medium	Short-Term
15	Warrenton/Miles Crossing	New Route	Business 101 service	-	N	+	N	N	N	1	3	1	1	\$\$\$	1	Low	Long-Term
16	Weekend Hours	10, 15, 20, 101	Expand early morning and early evening hours to 7 am to 8 pm	N	+	+	N	N	N	2	4	2	0	\$\$\$	0	Medium	Mid-Term
17	Weekend Hours	10, 15, 20, 101	Expand later evening hours to 8 pm to 10 pm	-	+	+	N	N	N	2	4	2	1	\$\$\$	0	Low-Medium	Long-Term
18	Columbia / US 30 Corridor	30	Add 3 <sup>rd</sup> and 4 <sup>th</sup> trips to Rainier	-	+	+	N	N	N	2	4	2	1	\$\$	0	Low-Medium	Long-Term
19	Astoria Local	10E/10W	Evaluate feasibility of flex route service	+	N	+	N	-	N	2	3	1	1	\$\$\$	1	Low	Long-Term
20	Weekday Evening Hours		Expand weekday evening service on local routes	N	+	N	N	+	N	2	4	1	0	\$\$\$	0	Medium	Long-Term
21	Astoria - Seaside	101 / PC	More frequent weekend service	N	+	N	+	+	N	3	6	3	0	\$	0	High	Short-Term
22	Warrenton Local	15	Consistent headways and enhanced coverage (partial implementation of 7B)	+	+	+	N	+	+	5	8	4	0	\$\$	1	High	N/A [1]

**Cost**

\$\$\$ = Most expensive needed

\$\$ = Medium expensive

\$ = Low expense

[blank] = Cost neutral

**Evaluation**

+ = Supports / helps achieve goal

N = Neutral – neither hurts nor helps goal

- = May degrade progress toward goal

Notes:

1. Package #7 (including Recommendation #7B) is recommended. Recommendation #22 would only be implemented if #7 is not moved forward.

## Summary

This section summarizes the prioritized, phased service plan, based on available resources and the evaluation of the long-term service elements using the SETD Goals and Objectives.

## Cost Summary

Figure 8 summarizes the additional and cumulative service hours and costs of the service recommendations for each of the planning time frames identified above. Existing costs are based on SETD’s fixed-route service hours and operating cost as of 2014. Actual total costs would be in addition to the planned level of service with service changes effective February 2016 (including later evening service on Route 20 and 101).

The table also calculates fixed-route service hours and operating costs for each time frame on a per capita basis (relative to Clatsop County population), as a basis for comparison to other similar transit providers.. In terms of service hours per capita, 0.76 hours by the end of the mid-term time frame would put SETD closer to the middle of the current peer group (today Tillamook County has the highest number of hours at 1.06 per capita, inclusive of fixed-route and demand-responsive services). At the same time, SETD’s costs per capita would remain quite low given county population growth second lowest among the current peer group, showing cost-effective investment. Investment at the full level of the long-term time frame would bring SETD service hours per capita to a similar level as Tillamook County. See Memo #8: Benchmarking and Monitoring, for additional details on how SETD performs against peers and industry standards.

Figure 8 Proposed Additional Annual Fixed-Route Service Hours and Operating Cost Summary

	Service Hours		Operating Cost		Approx. Impl. Year	County Population [1]	Per Capita Metrics	
	Additional	Cumulative	Additional	Cumulative			Service Hours	Operating Cost
Existing (2014)	16,224	16,224	\$869,000	\$869,000	2014	37,750	0.43	\$23
Near-Term	100	16,324	\$6,000	\$875,000	2017	37,750	0.43	\$23
Short-Term	6,270	22,594	\$341,000	\$1,216,000	2020	38,461	0.59	\$32
Mid-Term	7,470	30,064	\$407,000	\$1,623,000	2026	39,358	0.76	\$41
Long-Term *	14,110	44,174	\$771,000	\$2,394,000	2036	40,521	1.09	\$59

Notes: \* Long-term is considered a flexible service plan to be implemented based on future needs and service standards. [1] 2015-2035 population in 5-year increments from Technical Memo #3. Source: Portland State University, Population Research Center, Certified Population Estimates, 2015, and Oregon Office of Economic Analysis, Released 3/28/2013.

## Service Phasing Summary

Figure 9 and Figure 10 summarize and illustrate the short-, mid-, and long-term service recommendations. The final plan will provide a detailed summary of recommendations by time frame.

Capital and Transit-Supportive Programs elements will be included in the final plan.

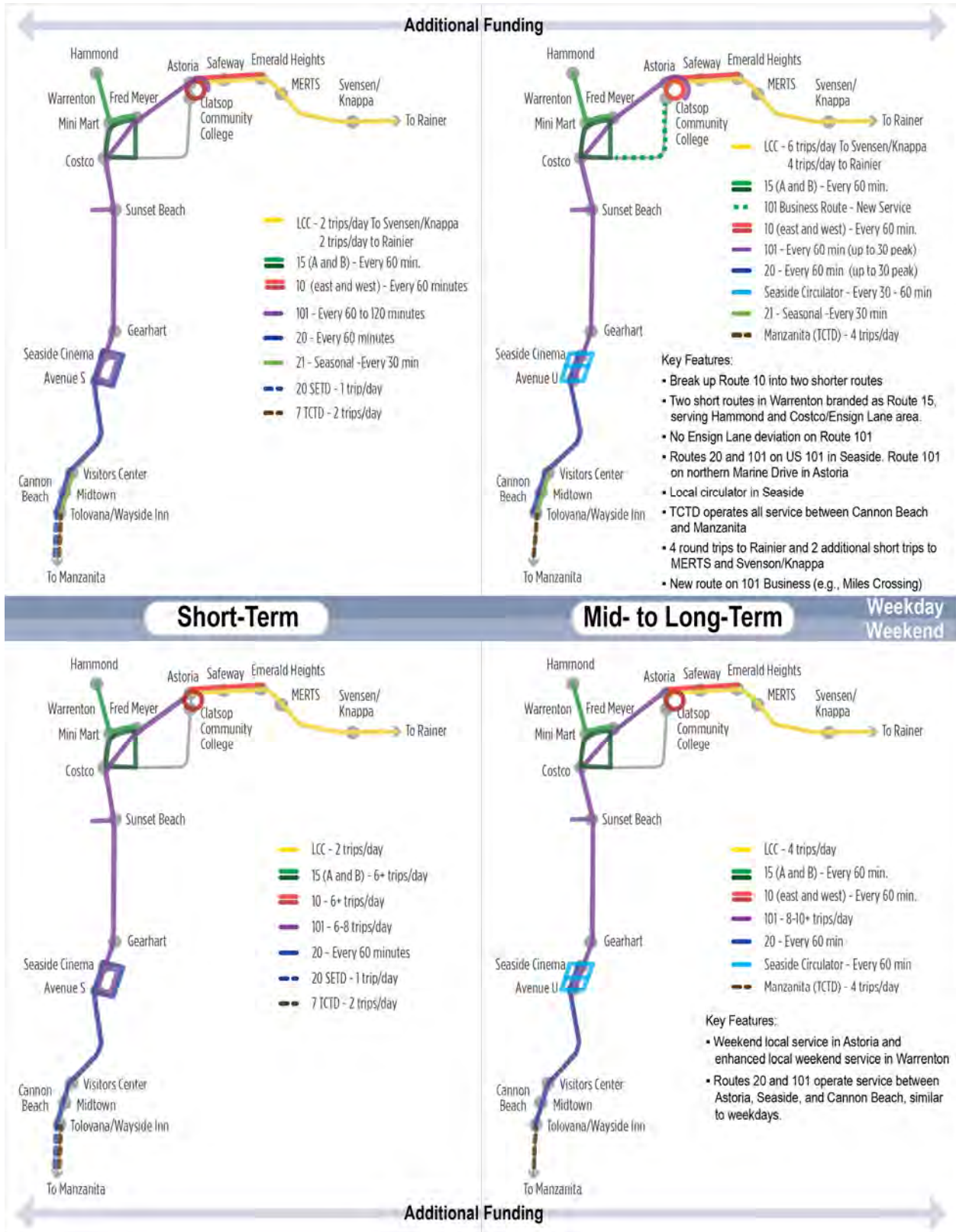
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Figure 9 Existing and Proposed Service Summary by Time Frame

Time Frame:	Existing	Near-Term: 0-1 Years	Short-Term: 2-4 Years	Mid-Term: 5-10 Years	Long-Term: 11-20 Years
<b>Regional</b>					
<b>Lower Columbia: Route 30 / LCC</b>	<ul style="list-style-type: none"> <li>2 trips / day Astoria-Rainier</li> </ul>	<ul style="list-style-type: none"> <li>Brand LCC as Route 30 LCC</li> </ul>	<ul style="list-style-type: none"> <li>2 daily short trips to MERTS, Svensen / Knappa</li> </ul>	<ul style="list-style-type: none"> <li>Consider shopper shuttle to Svensen/Knappa</li> </ul>	<ul style="list-style-type: none"> <li>4 trips / day Astoria-Rainier</li> <li>2 short-turn trips per day</li> </ul>
<b>Astoria – Seaside: Route 101</b>	<ul style="list-style-type: none"> <li>60–120 min weekday</li> <li>3 weekend trips</li> </ul>	<ul style="list-style-type: none"> <li>Reroute to stay on northern W. Marine Drive in Astoria with jog up to CCC</li> <li>Brand weekend PC as Route 101 (PC)</li> <li>Add fourth weekend trip</li> </ul>	<ul style="list-style-type: none"> <li>Reduce travel time by eliminating deviations to Ensign Lane</li> <li>Extend to Avenue U &amp; Beach Drive in Seaside</li> <li>Improve transfers w/Rt. 20</li> <li>Re-evaluate Wahanna Rd service</li> <li>More frequent weekend service</li> </ul>	<ul style="list-style-type: none"> <li>60 min weekday all-day</li> <li>Earlier weekend and early evening service</li> <li>Bidirectional routing on US 101 in Seaside</li> <li>Remove Wahanna service (see Seaside Circulator)</li> </ul>	<ul style="list-style-type: none"> <li>Consider more frequent weekday peak service</li> <li>Consider later evening weekend service</li> </ul>
<b>Seaside – Cannon Beach: Route 20 and 21</b>	<ul style="list-style-type: none"> <li>60 min weekday</li> <li>60 min weekend (2½ hour midday gap)</li> </ul>	<ul style="list-style-type: none"> <li>Brand as Route 20 (PC) on weekends</li> <li>60 min weekday</li> <li>60 min weekend (all-day)</li> <li>Remove Necanicum Drive routing</li> </ul>	<ul style="list-style-type: none"> <li>Improve transfers with Route 101</li> </ul>	<ul style="list-style-type: none"> <li>Earlier weekend and early evening service</li> <li>Bidirectional routing on US 101 in Seaside (see Seaside Circulator)</li> </ul>	<ul style="list-style-type: none"> <li>Consider more frequent weekday peak service</li> <li>Consider later weekend service</li> </ul>
<b>Cannon Beach - Manzanita: Routes 20 and 21</b>	<ul style="list-style-type: none"> <li>3 trips / day (1 by SETD, 2 by TCTD)</li> </ul>	<ul style="list-style-type: none"> <li>3 trips / day (1 by SETD, 2 by TCTD)</li> </ul>	<ul style="list-style-type: none"> <li>4 trips / day; renegotiate to have all trips served by either TCTD or SETD (TCTD assumed)</li> </ul>	<ul style="list-style-type: none"> <li>4 trips / day</li> </ul>	<ul style="list-style-type: none"> <li>4 trips / day</li> </ul>
<b>Local</b>					
<b>Astoria: Route 10</b>	<ul style="list-style-type: none"> <li>60 min, 1 route</li> <li>No local weekend service</li> </ul>	<ul style="list-style-type: none"> <li>60 min, break Route 10 into 2 shorter routes</li> <li>Service to interior of Astoria and Head Start (four trips)</li> </ul>	<ul style="list-style-type: none"> <li>Weekend local service, including eastern Astoria</li> </ul>	<ul style="list-style-type: none"> <li>Additional weekend service</li> <li>Additional weekday evening service</li> </ul>	<ul style="list-style-type: none"> <li>Additional frequency or coverage (flex-route)</li> <li>Consider later evening weekend service</li> </ul>
<b>Warrenton: Route 15</b>	<ul style="list-style-type: none"> <li>11 trips, part of Routes 10 and 15</li> </ul>	<ul style="list-style-type: none"> <li>Brand all trips as Route 15</li> </ul>	<ul style="list-style-type: none"> <li>Separate from Route 30</li> <li>Split into two routes: long turn to Hammond, short-turn to Costco/Walmart area</li> </ul>	<ul style="list-style-type: none"> <li>Additional weekend service</li> <li>Additional weekday evening service</li> </ul>	<ul style="list-style-type: none"> <li>Consider later evening weekend service</li> </ul>
<b>Seaside:</b>				<ul style="list-style-type: none"> <li>Implement Seaside Circulator</li> </ul>	<ul style="list-style-type: none"> <li>Consider later evening weekend service on circulator</li> </ul>

Notes: PC = Pacific Connector.

Figure 10 Short, Mid, and Long-Term Service Recommendations







## **SECTION M**

### Memo 8: Benchmarks



# MEMO #8: BENCHMARKS AND MONITORING PROGRAM

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# BENCHMARKS AND MONITORING PROGRAM

## INTRODUCTION

Technical Memorandum #7 describes all the ways SETD can modify its routes to better serve the community over the immediate and long-term time frames. This analysis uses an evaluation framework created in partnership with the project's Technical Project Advisory Committee to ensure service changes meet agency and community goals.

An ongoing program of performance evaluation with benchmarks ensures that service performs to industry standards and continues meeting Clatsop County needs. Technical Memorandum #8 lays out a series of benchmarks to help SETD assess progress and evaluate service. Note that there is no national standard for what defines success; benchmarks must be based upon community goals, data availability, organizational capacity, and service limitations. The metrics presented here are based on SETD goals, with the aim of providing ongoing monitoring.

## VALUE OF BENCHMARKING

The use of measures and standards in service planning helps avoid potentially inequitable and/or inefficient allocations of service. Without such standards, there is little rationale for telling constituents “yes” or “no” when necessary. As decision-makers reach conclusions about various aspects of growth in their communities, benchmarking provides a frame of reference to know how transit services will respond to those changes. When asked whether a particular development will be served, service standards provide a policy basis for SETD's response. Standards can also provide insight on how to focus investments, reductions, or reallocations of service as demographics shift, services underperform, or available funding changes.

These standards are intended as general guidelines to help staff implement different types of services and identify how services are performing relative to typical thresholds. Based on these standards, SETD can continually monitor overall performance, and hone in on a particular route or program if it falls below standards for closer inspection.

Two key terms are used throughout this document, and are defined below.

- **Performance measures** are metrics that can be measured about a transit operation. A measure is a basis for comparison – to a desired goal, to peer systems, or to past performance. The most useful measures for transit planning and operations are typically ratios of one attribute to another. Productivity (ridership/revenue hour), for example, is a near-universal measure in the industry.

- **Performance standards** are target values for specific performance measures. They set the expectations for acceptable levels of performance. A route performing below the threshold warrants additional attention.

Successful performance measures minimize data collection and provide meaningful information, as summarized in Figure 1.

Figure 1 Performance Measure Characteristics

Characteristic	Description
Consistent	Comparable data should be collected year after year. Data needs to be collected and reported the same way each time on the same geography.
Readily Available	Data should be drawn from existing data sets whenever possible.
Useful	Data should meaningfully reflect how policies are performing and what adjustments are prudent to make.
Timely	Data should be available for collection on a regular basis.
Reported	Data and findings must be recorded and transmitted to agency partners and the public.

Source: Nelson\Nygaard

## EXISTING BENCHMARKS

SETD collects a number of useful operational data pieces, but does not currently have benchmarks related to performance measures. SETD staff create a detailed monthly spreadsheet for the management team that includes information such as:

- Ridership – per month, per day, vs. previous month and year, per route
- Productivity – passengers per mile, per hour, per day
- Percent of elderly/disabled riders
- ADA/DAR services – trip denials, cancellations, no-shows
- Fare medium used (passes, cash, etc.)
- Fuel report (miles driven, fuel efficiency)
- Complaints, compliments
- Safety issues or incidents

A simplified version is created every month for the Board of Directors. This Rider Report includes overall ridership, trends compared to the previous month, and trends compared to the same month a year prior.

## PEER PERFORMANCE

A good reference point for service standards entails looking at how systems similar to SETD perform. Peers were identified by selecting from among agencies with similar geographies, populations, and service levels to SETD, as shown in Figure 2.

Appendix A includes more detailed visualizations of all of these metrics among SETD and its peers for comparison; service metrics are also broken out by service type (fixed-route and demand-response).

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**Figure 2 Peer Service Description**

Agency / Provider	Service Area Pop	Service Area Size (square miles)	Pop. Density (persons per square mile)	Total Annual Vehicle Revenue Hours	Total Annual Vehicle Revenue Miles	Maximum Vehicles in Service	Annual Ridership	Annual Operating Cost	Farebox Recovery
<b>Sunset Empire Transportation District</b>	<b>37,236</b>	<b>829</b>	<b>44.9</b>	<b>19,763</b>	<b>414,140</b>	<b>17</b>	<b>182,253</b>	<b>\$1,687,084</b>	<b>15.2%</b>
Lincoln County Transportation Service District (OR)	46,138	980	47.1	31,134	563,181	13	319,418	\$1,756,061	12.2%
Tillamook County Transportation District (OR)	25,334	1,103	23.0	26,782	636,247	14	239,661	\$1,976,245	13.2%
Columbia County (OR)	49,325	657	75.1	18,829	462,609	24	87,160	\$1,577,381	22.2%
Pacific Transit (WA)	20,561	1,223	16.8	21,126	434,724	16	127,964	\$1,526,545	2.4%
Jefferson Transit (WA)	30,228	1,804	16.8	27,144	711,545	21	288,316	\$3,868,186	5.5%
Redwood Coast Transit Authority (CA)	27,212	1,006	27.0	19,279	403,448	9	131,548	\$1,121,300	17.8%
Grays Harbor Transit (WA)	70,818	1,902	37.2	67,199	1,585,949	52	810,671	\$8,365,690	8.6%
<b>Peer Average</b>	<b>38,517</b>	<b>1,239</b>	<b>34.7</b>	<b>30,213</b>	<b>685,386</b>	<b>21</b>	<b>286,391</b>	<b>\$2,884,487</b>	<b>12%</b>

Source: American Community Survey 2014 5-Year Estimates, 2014 Rural National Transit Database

## Service Description Comparison

SETD's service area, level of service provision, and financial metrics relative to its peers are described below.

### Service Area Size

SETD is in the middle of the group in terms of population (37,000 residents), and among the lowest in terms of service area size (829 square miles), making it one of the denser transportation districts examined (45 persons per square mile).

### Service Provision

SETD provides nearly 20,000 revenue hours of service and more than 400,000 revenue miles of service, placing it in the low end of service provision among the peers selected. The low hours and miles may be due to the fact that it serves a dense area, and can yield many riders with less service compared to peers. SETD provides among the lowest levels of demand-response service, providing 54,400 revenue miles and 3,800 revenue hours per year.

SETD uses a maximum of 17 service vehicles (3 for demand-response and 14 for fixed-route). The agency runs more fixed-route vehicles than most of the peers (with the exception of Grays Harbor Transit and Jefferson Transit) and less demand-response service vehicles than most of the peers (with the exception of Redwood Coast Transit Authority and Jefferson Transit).

SETD carried 182,000 trips during 2014 (176,000 fixed-route and 6,000 demand-response). Fixed-route ridership ranked in the middle of the peer group, while demand-response trips was lowest among the peers.

### Finance

SETD's annual operating cost was approximately \$1.7 million, which is similar to peers (with the exception of Grays Harbor Transit and Jefferson Transit, which have substantially higher funding). SETD's farebox recovery rate was 15.2%, which is the third highest rate among the peers reviewed.

## Service Efficiency/Productivity Comparison

Figure 3 provides a comparison of relative service provision and productivity. Figure 4 visually summarizes the rankings of SETD relative to its peers across all service metrics. SETD's service efficiency and productivity relative to its peers are described below; these metrics can help distinguish relative differences between service provision, efficiency, and productivity among transit providers.

### Service Provided per Capita

Service provided per capita illustrates how much transit service an agency provides relative to its service area's population. SETD provides a total of 11.1 annual revenue miles and 0.5 annual revenue hours of service per capita. This service level ranks low among its peers, with revenue miles per capita ranging from 9.38 (Columbia County) to 25.1 (Tillamook County) and revenue hours per capita ranging from 0.4 (Columbia County) to 1.1 (Tillamook County). SETD's



operating cost per capita ranks in the middle of its peers at \$56 per capita; peer operating costs ranged from \$40 (Lincoln County) to \$219 (Grays Harbor).

### **Per Capita Service Consumption**

Transit ridership per capita describes consumption of services provided. SETD's ridership per capita totaled 1.6 unlinked passenger trips per Clatsop County resident, ranking among the lower end of its peers. Ridership per capita among peers ranges from 0.6 (Columbia County) to 5.1 (Grays Harbor).

### **Service Cost Efficiency**

Service cost efficiency measures demonstrate the cost of providing each unit of service. SETD's operating cost per unlinked passenger trip is among the middle of its peers at \$9.26 per trip. Operating costs per trip among peers range from \$5.50 (Lincoln County) to \$18.10 (Columbia County). SETD's operating cost per revenue mile is also among the middle of its peers at \$4.07 per revenue mile. Operating costs per revenue mile among the peers range from \$3.12 (Lincoln County) to \$5.44 (Jefferson Transit). SETD's operating cost per revenue hour (for all services) is also among the middle of its peers at \$85.37 per revenue hour. Operating costs per revenue hour range from \$56.40 (Lincoln County) to \$142.51 (Jefferson Transit). Therefore although per capita rates of investment are low, SETD's cost efficiency ranks medium.

### **Service Productivity**

Service productivity measures illustrate the effectiveness of transit service in terms of how many trips are delivered relative to service provision levels. SETD delivered 9.2 unlinked passenger trips per revenue hour of service, which ranks it among the middle of its peers on this metric. The fixed-route network ranked just above average, with 17 passenger trips per hour. SETD delivered 0.44 passenger trips per revenue mile of service, which ranks it among the middle of its peers on this metric. Trips per revenue mile among peers ranged from 0.19 (Columbia County) to 0.58 (Grays Harbor).

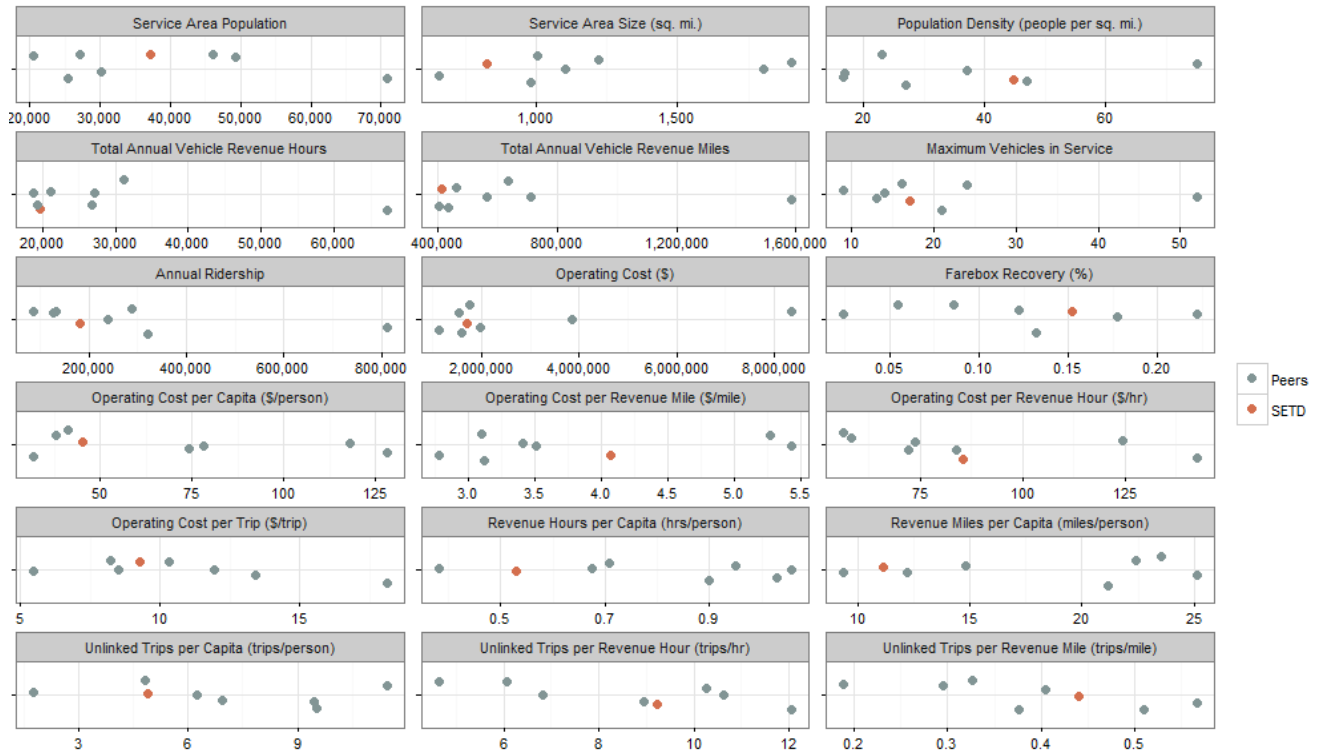
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**Figure 3 Peer Service Efficiency and Productivity Comparison**

Agency / Provider	Relative Service Provision			Service Consumption	Service Cost Efficiency			Service Productivity Measures	
	Revenue Hours per Capita	Revenue Miles per Capita	Operating Spending per Capita	Unlinked Trips per Capita	Operating Cost per Revenue Mile	Operating Cost per Revenue Hour	Operating Cost per Unlinked Trip	Unlinked Trips per Revenue Mile	Unlinked Trips per Revenue Hour
<b>Sunset Empire Transportation District</b>	0.53	11.1	\$45	4.9	\$4.07	\$85	\$9.26	0.44	9.2
Lincoln County Transportation Service District	0.67	12.2	\$38	6.9	\$3.12	\$56	\$5.50	0.57	10.3
Tillamook County Transportation District	1.06	25.1	\$78	9.5	\$3.11	\$74	\$8.25	0.38	8.9
Columbia County	0.38	9.4	\$32	1.8	\$3.41	\$84	\$18.10	0.19	4.6
Pacific Transit	1.03	21.1	\$74	6.2	\$3.51	\$72	\$11.93	0.29	6.1
Jefferson Transit	0.90	23.5	\$128	9.5	\$5.44	\$143	\$13.42	0.41	10.6
Redwood Coast Transit Authority	0.71	14.8	\$41	4.8	\$2.78	\$58	\$8.52	0.33	6.8
Grays Harbor Transit	0.95	22.4	\$118	11.4	\$5.27	\$124	\$10.32	0.51	12.1
<b>Peer Average</b>	<b>0.81</b>	<b>17.79</b>	<b>\$73</b>	<b>7.2</b>	<b>\$4.21</b>	<b>\$95</b>	<b>\$10.07</b>	<b>0.42</b>	<b>9.5</b>

Source: American Community Survey 2014 5-Year Estimates, 2014 Rural National Transit Database

Figure 4 Service Metric Visual Summary (read across; x-axis data only)



## How does SETD compare to peers?

- **SETD provides lower levels of demand-response service than many of its peers across several metrics.** In accordance with this low level of demand-response service, the demand response service available is less productive than that of SETD’s peers. SETD’s Dial-a-Ride zone is confined to a few neighborhoods, whereas other providers who operate in much more rural areas may provide more DAR to make up for the lack of density.
- **SETD provides less service than many of its peers, but this service is also more productive than several of those same peers.** This trend is apparent when comparing the rankings of service provision (e.g., annual revenue hours provided) with the rankings of service productivity (e.g., unlinked passenger trips per revenue hour delivered). This may point to efficient service provision that yields SETD more trips per mile or per hour of service than its peers. This trend could also point to a higher demand for transit than other service areas, which would support the provision of more service.

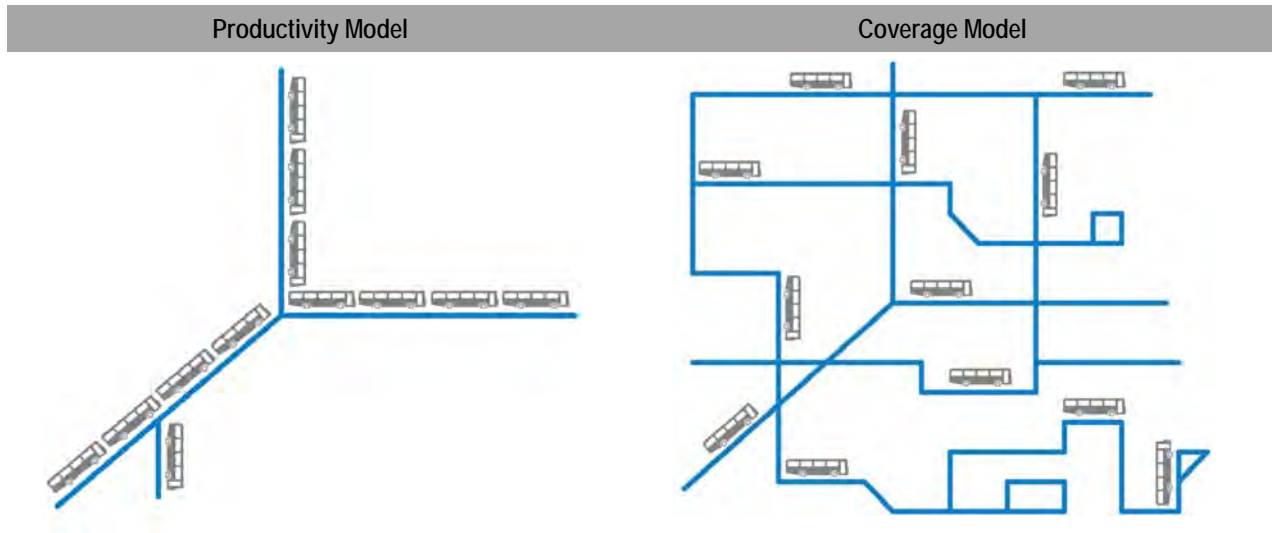
## PROPOSED BENCHMARKING & EVALUATION SYSTEM

### Service Allocation

Transit agencies continually try to maintain a balance between productivity-focused services versus coverage services. Productivity places service on a few streets with the highest densities of people and destinations, providing fast and direct service. Coverage service spreads service out on many streets. This makes sure more people can easily walk to the bus, but also means that

travel time between destinations is longer than productivity routes. The percentage of transit resources devoted to each model depends on the community. For example, in places with large number of older adults, or with extreme topographic challenges, a coverage-oriented service model may yield the most riders.




Figure 5 Productivity vs. Coverage Service Models



## Service Types

SETD generally provides three types of service as shown in Figure 6. Performance measures vary based upon types, because each one serves a different purpose and market. Some services are a hybrid of these service types, such as Route 20, which operates as a local fixed-route in Cannon Beach and Seaside, but provides intercity service between these communities.

Figure 6 SETD Service Types

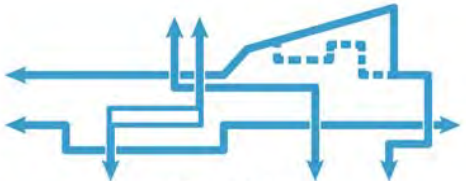
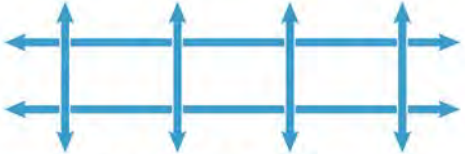
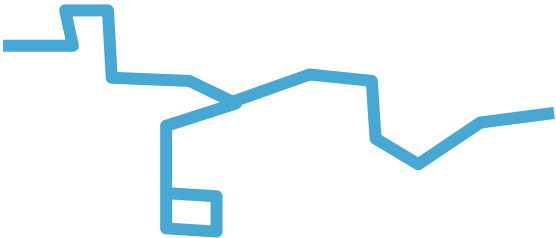



Service Type	Characteristics
<p><b>Intercity Routes</b></p> 	<p>Intercity routes operate along primary arterials. They offer relatively frequent, simple, and direct service. Intercity routes include Route 30, Route 101, portions of Route 20, and the Pacific Connector, which provides weekend service on Routes 20 and 101.</p>
<p><b>Local Routes</b></p> 	<p>Local routes serve major destinations but also run along local streets. Local routes often act as feeders, bringing people to hubs where they can transfer to Intercity routes. Productivity is usually lower than Intercity routes. Local service includes Route 10, Route 15, portions of Route 20, Route 21, and the Seaside Trolley.</p>
<p><b>Demand-Response Services</b></p> 	<p>Demand response service (Dial-a-Ride, ADA Paratransit) offers curb-to-curb service upon request. Demand response service operates within a geographically limited area, require advance reservations, and will pick up and drop off passengers anywhere within the defined zone.</p>

Constituents continually ask for service changes or justification for where routes run and when they operate. Creating a policy framework including service types and determining the coverage and productivity balance allow the transit agency to defend decisions and justify service design. This memo categorizes performance measures by service type as a way of defining different expectations of each type of service.


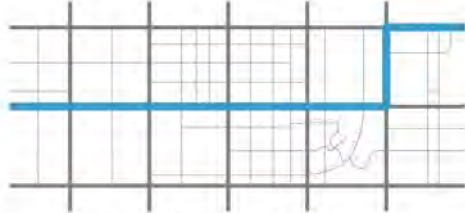
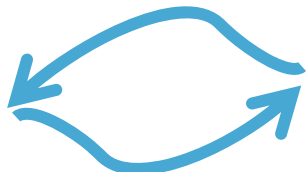



## Service Design Principles

Service design principles can be either quantitative or qualitative. Their value is to provide an approach to structuring and evaluating services. In many cases, transit agencies find that over the years, land use decisions such as building a hospital or mall far from the center of town, or various requests from riders, cause a direct and simple route to become long and circuitous. When services underperform and a particular route warrants closer inspection, comparing the route design against these principles often helps pinpoint the reason why performance is suffering. These principles are summarized in Figure 7.




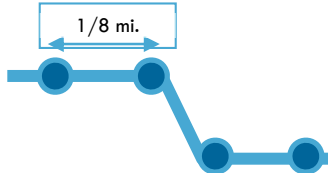
**Figure 7 Service Design Principles**

Principle	Benefit	Discouraged	Recommended
Service should be simple	Passengers can quickly and easily understand the service, where it goes, and the travel time.	 <p align="center">Complex</p>	 <p align="center">Simple and intuitive</p>
Routes operate along a direct path	Routes are easier to understand and navigate when they follow a direct line.	 <p align="center">Circuitous, complicated</p>	 <p align="center">Direct, easy to understand</p>
Minimize route deviations	Fewer directional changes make the route easy to understand and remember. It also reduces overall travel time.	 <p align="center">Out of direction travel, with longer travel time</p>	 <p align="center">Direct route, shorter travel time</p>

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Principle	Benefit	Discouraged	Recommended
Operate major routes on arterials	Passengers have a good knowledge of major roads and use them for reference.	 <p align="center">Travels slowly on local streets</p>	 <p align="center">Travels on main roads with many destinations</p>
Routes should be symmetrical	A route that operates on the same street in both directions makes it easy for riders to return to their starting point.	 <p align="center">One-way service</p>	 <p align="center">Two-way service</p>
Routes should serve well-defined markets	Routes need major destinations to anchor them and attract riders.	 <p align="center">Serves areas with little demand</p>	 <p align="center">Serves major destinations</p>

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Principle	Benefit	Discouraged	Recommended												
Service should be well-coordinated	Coordination between different services minimizes redundancy, balances passenger loads, and ensures short transfers.	 <p align="center"><b>Lack of coordination</b></p>	 <p align="center"><b>Service operates as a system</b></p>												
Service should be consistent	People can easily remember repeating patterns. Consistent schedules allow passengers to know when to catch a bus, without needing to remember the times for each trip.	<table border="1"> <tr> <td>10:21</td> <td>10:36</td> </tr> <tr> <td>10:54</td> <td>11:09</td> </tr> <tr> <td>11:28</td> <td>11:43</td> </tr> </table> <p align="center"><b>Irregular schedule</b></p>	10:21	10:36	10:54	11:09	11:28	11:43	<table border="1"> <tr> <td>10:30</td> <td>10:45</td> </tr> <tr> <td>11:00</td> <td>11:15</td> </tr> <tr> <td>11:30</td> <td>11:45</td> </tr> </table> <p align="center"><b>Consistent schedule</b></p>	10:30	10:45	11:00	11:15	11:30	11:45
10:21	10:36														
10:54	11:09														
11:28	11:43														
10:30	10:45														
11:00	11:15														
11:30	11:45														
Space stops appropriately	Stop spacing needs to balance the needs of convenient access and reducing travel times. Stop spacing should be consistent and support the type of service being offered.	 <p align="center"><b>Inconsistent stop spacing</b></p>	 <p align="center"><b>Consistent stop spacing</b></p>												



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Principle	Benefit	Discouraged	Recommended
Service design should maximize service	Cycle time <sup>1</sup> and frequency must be matched to make the most efficient use of revenue hours.	 <p align="center">Inefficient use of time</p>	 <p align="center">Route maximizes service</p>
Match vehicle type to service type	Size vehicles according to ridership. Smaller vehicles may be better suited to operate on local streets.	 <p align="center">Vehicles not matched to service</p>	 <p align="center">Vehicles matched to service</p>

Notes: [1] Cycle time is the amount of time required for a bus to complete a full round trip on a route, including layover and recovery time, and be able to start another round trip.

## **Service Level Benchmarks**

A route's hours of operation and frequency, along with other service level characteristics, play a major role in attracting riders. Passengers value convenience and reliability. Service every three hours or service that ends at 6 pm does not provide a convenient option. Service hours and frequencies have a major impact on cost; however, too little investment in service levels results in empty buses. Many agencies set targets for service levels based on types of transit markets, and aim to get existing routes up to desired levels before developing new routes.

Figure 8 displays performance measures for this category, a brief definition, where to collect the data, how SETD currently performs on the measures, and guidance on metrics for each service type. In some cases benchmarks are the same for each service type, while in other cases the performance measure is the same but the metrics are different, e.g., for fixed-route versus demand-response service.

**Figure 8 Service Level Benchmarks**

Performance Measure	Definition	Data Source	SETD Performance (Route No.)	Guideline <sup>1</sup>		
				Intercity Fixed-Route <sup>2</sup>	Local Fixed-Route	DAR or ADA Paratransit
Service coverage	Higher population and employment densities support higher levels of transit.	Census	Intercity: 0.7 people and 0.6 jobs per acre Local: 0.9 people and 0.9 jobs per acre	8-12 people or jobs per acre within ¼ mile of route in urban clusters	6-8 people or jobs per acre within ¼ mile of route	>0.5 people or jobs per acre
Minimum span of service – Weekday	Route start and end times determine how many people will use service.	Service schedules	Intercity: 6 am-10 pm Local: 6 am-7 pm	6 am-10 pm	7 am-7 pm	Same as fixed route
Minimum span of service – Weekend	Route start and end times determine how many people will use service.	Service schedules	Intercity: 8:30 am-5:30 pm (PC), 7:30 am-5:30 pm (30) Local: 6 am-6 pm (15); 9 am-6 pm (21)	8 am-8 pm	8 am-6 pm	Same as fixed route
Service frequencies – Weekday <sup>3</sup>	Service frequency is a key characteristic for attracting riders, but also has a major impact on operating cost.	Service schedules	60 minutes (10, 20, 101); 30-220 minutes (15); 2 trips (30)	60-45 minutes	60-120 minutes	NA
Service frequencies – Weekend <sup>3</sup>	Service frequency is a key characteristic for attracting riders, but also has a major impact on operating cost.	Service schedules	30-220 minutes (15); 3 trips (PC); 30-160 minutes (21)	60-120 minutes	60-120 minutes	NA
Vehicle loading <sup>3</sup>	To ensure passenger comfort, agencies set standards for how many standees are acceptable on a route. On long-haul trips, it is more important to provide a seat for comfort.	Ridecheck or APC data	Not tracked	100%	120%	NA
Service hours per capita	This metric shows how much service is provided to the community.	Rural NTD	Intercity and Local Fixed Route: 0.43 DAR/ADA: 0.1	0.45 - 0.64		0.12 - 0.28
Ridership per capita	This metric shows how much service is consumed by the community.	Rural NTD	Intercity and Local Fixed Route: 4.73 DAR/ADA: 0.17	4.73 – 8.61		0.39 - 0.61

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Performance Measure	Definition	Data Source	SETD Performance (Route No.)	Guideline <sup>1</sup>		
				Intercity Fixed-Route <sup>2</sup>	Local Fixed-Route	DAR or ADA Paratransit
Service Availability <sup>3</sup>	Service availability is required in Title VI analysis, and the FTA often cites percent of population as a way of measuring availability.	Census	58.3% within a ¼ mile of transit	Set by each community. FTA does not require a certain standard, but does require tracking progress.		

Notes: PC = Pacific Connector

<sup>1</sup> Standards presented in the performance metric column are preliminary thresholds of acceptable performance based on peer systems and industry norms.

<sup>2</sup> Includes main intercity routes such as Connector routes or Route 101.

<sup>3</sup> Represents a Title VI required measure (system-wide service standard per FTA Circular 4702.1B). FTA does not prescribe the benchmark itself, but the tracking of such metrics.

## Service Efficiency Benchmarks

Transit services utilize public dollars and are responsible to operate in an efficient manner. Figure 9 lists metrics that speak to a system’s efficient use of resources.

**Figure 9 Service Efficiency**

Performance Measure	Definition	Data Source	SETD Performance	Guideline <sup>1</sup>		
				Intercity Fixed-Route <sup>2</sup>	Local Fixed-Route	DAR or ADA Paratransit
Passengers per revenue hour	The average number of passengers a bus carries for each hour in service.	Rural NTD; SETD ridership reports	Intercity and Local Fixed Route: 17.39 DAR/ADA: 1.67	16-20	6-12	2-4
Passengers per revenue mile	The average number of passengers a bus carries for each mile in service.	Rural NTD; SETD ridership reports	Intercity and Local Fixed Route: 0.78 DAR/ADA: 0.12	1.2	0.25-0.5	0.2
Stop spacing	Close stops provide more access but increase travel times. Balance the need to ensure short walking distances to and from stops with efficient travel time.	SETD GIS data	No existing standard	>1/8-1 mile	>1/8 mile	NA
Travel time ratio (bus to auto)	Provide competitive travel times to attract transit riders. If the bus travel time far outweighs driving time, those with a choice will drive.	Schedules for bus times between major destinations; Google maps for auto times	Intercity Examples: - Transit Center to Cinema: 1.6 - McDonald's Seaside to Cannon Beach: 2.3 Local Example: - Emerald Heights to Fred Meyer: 3.1	1.3	3.0	2.0-4.0
Total vehicle hours to revenue hours ratio	A high ratio of total hours to revenue hours reveals unproductive time, such as deadhead hours.	Already collected by SETD	Fixed route: 1.08 <sup>4</sup>	1.2	1.3	NA
Farebox recovery ratio	This measures the percent of operating expenses covered by farebox revenue.	Rural NTD	System-Wide: 15.2%	9.9-12.3% (metric reported at system level for all agencies)		
Transit mode share	The % of trips taken via transit shows transit's role in achieving Transportation Planning Rule goals of reduced VMT	American Community Survey ACS 5-Year Estimates (Table S0801)	Clatsop County: 1.6% (2010-14)	Peer average: 1.26% <sup>5</sup>		

Notes:

<sup>1</sup> Standards presented in the performance metric column are preliminary thresholds of acceptable performance based on peer systems and industry norms.

<sup>2</sup> Includes main intercity routes such as Connector routes or Route 101.

<sup>3</sup> Represents a Title VI required measure (system-wide service standard per FTA Circular 4702.1B). FTA does not prescribe the benchmark itself, but the tracking of such metrics.

<sup>4</sup> Data source: March 2015-February 2016, provided by SETD

<sup>5</sup> Peer ACS data: Redwood (Del Norte Co, CA): 0.8%; Columbia Co, WA: 0.9%; Lincoln Co, OR: 1.7%; Tillamook Co, OR: 0.9%; Grays Harbor Co, WA: 1.7%; Jefferson Co, WA: 1.9%; Pacific Co, WA: 0.6%

## Cost Efficiency Benchmarks

Cost efficiency points to how well SETD’s level of output (service hours and miles) matches against the cost to operate such service.

Figure 10 Cost Efficiency

Performance Measure	Definition	Data Source	SETD Performance	Guideline <sup>1</sup>		
				Intercity Fixed-Route <sup>2</sup>	Local Fixed-Route	DAR or ADA Paratransit
Operating cost per revenue hour	This metric is reported at system level as it is influenced by fuel, labor, insurance, and other system-wide costs.	Rural NTD; SETD annual report	\$85.37 <sup>4</sup>	\$80-\$130		
Operating cost per trip	Defined as the cost to provide a specific trip, allocating operating cost on a per-passenger basis.	Rural NTD; SETD annual report	Fixed-Route: \$4.74 DAR/ADA: N/A	< \$5	\$6-\$12	<\$25

Notes:

<sup>1</sup> Standards presented in the performance metric column are preliminary thresholds of acceptable performance based on peer systems and industry norms.

<sup>2</sup> Includes main intercity routes such as Connector routes or Route 101.

<sup>3</sup> Represents a Title VI required measure (system-wide service standard per FTA Circular 4702.1B). FTA does not prescribe the benchmark itself, but the tracking of such metrics.

<sup>4</sup> Based on Rural National Transit Database reporting, for all services. The 2014 SETD cost for fixed-route service was \$53.56. The cost used in Technical Memorandum #7 to estimate the operating cost of service opportunities is \$55 per hour.

## Passenger Comfort/Safety Benchmarks

This set of benchmarks is mostly already tracked by SETD, and speaks to customer satisfaction beyond simply when and where service operates. The key metric not currently tracked by SETD on a regular basis is on-time performance, or schedule adherence. Given known summer congestion problems and the problems it causes for SETD riders, tracking on-time performance is crucial to pinpointing exactly when and how often buses are excessively late or trips are missed.

**Figure 11 Passenger Comfort and Safety Benchmarks**

Performance Measure	Definition	Data Source	SETD Performance	Guideline <sup>1</sup>		
				Intercity Fixed-Route <sup>2</sup>	Local Fixed-Route	DAR or ADA Paratransit
On-Time Performance	This measures service reliability by comparing how often a vehicle leaves early or late. Most agencies set a target stating that 1-3 minutes early or 5 minutes late counts as "on time."	Ridecheck	NA	80-95%		90-96%
Passenger complaints	Track complaints to gauge customer satisfaction.	SETD reports	17 driver or system complaints per 100,000 boardings <sup>4</sup>	No more than 25 legitimate complaints per 100,000 boardings		
Road calls / maintenance	Road calls are the number of times a vehicle must be taken out of service.	SETD reports	NA	No more than 10 per 100,000 revenue miles.		
Safety	Bus accidents disrupt service and indicate operator training needs or street design problems.	SETD reports	1.3 Safety Issues or Incident Reports per 100,000 revenue miles <sup>4</sup>	No more than: 1 preventable accident per 100,000 miles; 2 accidents per 100,000 revenue miles; 2 major accidents per 1,000,000 revenue miles		
No show / late cancellation rate	This tracks the percent of scheduled trips where the passenger is a no-show or failed to provide adequate notice to cancel a trip. It indicates unproductive vehicle time.	SETD reports	27% no-show or cancellation for ADA, DAR, March 2015-Feb 2016 <sup>4</sup>	NA	NA	No-Show / cancellations > 5%
Trip denials	Trip denials show capacity to provide requested rides within 1 hour of the time requested by the passenger. No ADA trips should be denied.	SETD reports	Data Incomplete <sup>4</sup>	NA	NA	No patterns of denied service allowed per ADA

Notes:

<sup>1</sup> Standards presented in the performance metric column are preliminary thresholds of acceptable performance based on peer systems and industry norms.

<sup>2</sup> Includes main intercity routes such as Connector routes or Route 101.

<sup>3</sup> Represents a Title VI required measure (system-wide service standard per FTA Circular 4702.1B). FTA does not prescribe the benchmark itself, but the tracking of such metrics.

<sup>4</sup> Data source: March 2015-February 2016, SETD is currently correcting how this data was originally classified.



## Passenger Amenity Benchmarks

Every transit trip involves waiting at the stop for a certain amount of time. Passenger amenity standards and benchmarks address making that wait feel safe and comfortable as possible, given limited resources. To help SETD determine where to invest in stop amenities, standards based on ridership levels can be created. This will help the agency handle requests and justify actions. Based upon the spring and summer ridechecks, the general thresholds for high, medium, and lower ridership stops is shown in Figure 12 and Figure 13. Based upon these thresholds, three tiers of bus stops are outlined in Figure 14.

Figure 12 Spring Ridecheck Results Highlighting Shelter and Flag Stops

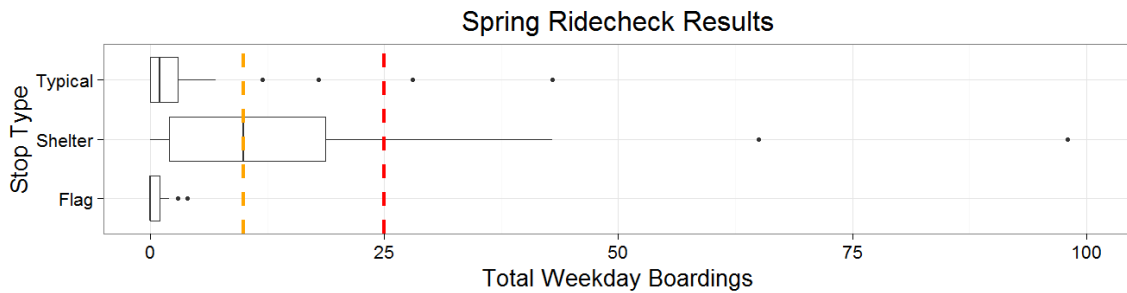
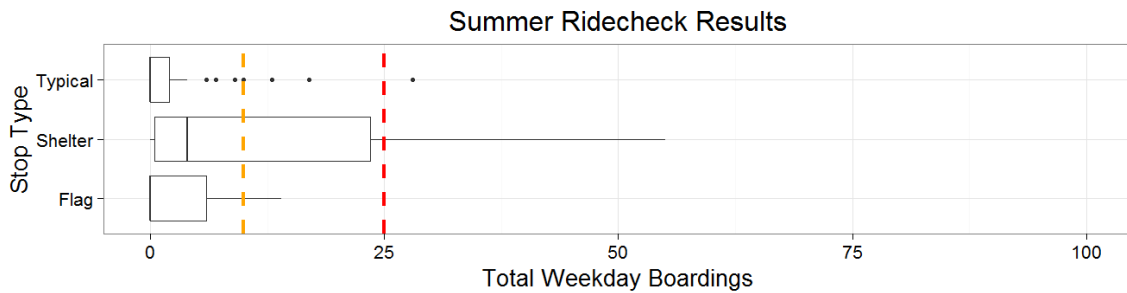





Figure 13 Summer Ridecheck Results Highlighting Shelter and Flag Stops



Note that shelters are already planned and funded for the new Walmart site, and SETD is also undertaking a process with Northwest Connector to fund additional stop amenities.

**Figure 14 Amenity Standards and Benchmarks**

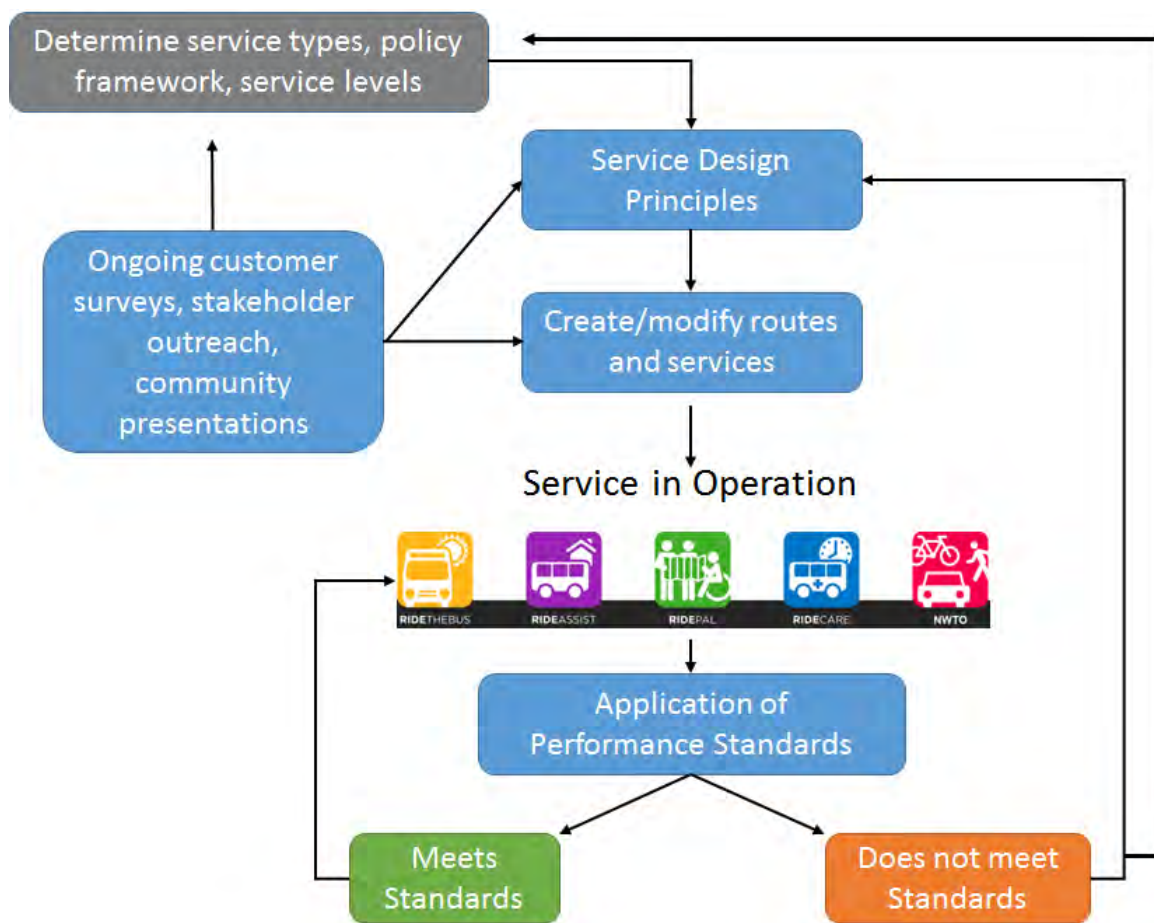
	Tier 1: Basic Bus Stop	Tier 2: Major Bus Stop with Shelter	Tier 3: Enhanced Bus Stop
Examples of Uses	Typical stop with a concrete pad, route sign, map/schedule, and information in Braille	High Use Stops, Transfer Point	Transit Centers, Highest ridership location, Park-and-Ride
Example Location	Geno's, Crest Motel	Midtown Cannon Beach; Rainier; Sunset Beach; Emerald Heights; Tongue Point	Transit Center in Astoria; Seaside Cinema; Fred Meyer hub; Clatsop Community College
Ridership	Low = <10 Daily Boardings	Medium = 10-25 Daily Boardings	High = >25 Daily Boardings
Required / Preferred Elements <sup>1</sup>	<ul style="list-style-type: none"> <li>▪ Concrete landing pad</li> <li>▪ Route sign</li> <li>▪ Schedule</li> <li>▪ Lighting</li> <li>▪ Continuous pedestrian access</li> <li>▪ Well-maintained pull-off location (if stop is a pull-off)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Concrete landing pad</li> <li>▪ Route sign</li> <li>▪ Schedule</li> <li>▪ Lighting</li> <li>▪ Continuous pedestrian access</li> <li>▪ Well-maintained pull-off location (if stop is a pull-off)</li> <li>▪ Shelter / seating</li> </ul>	<ul style="list-style-type: none"> <li>▪ Concrete landing pad</li> <li>▪ Route sign</li> <li>▪ System map / Schedule</li> <li>▪ Lighting</li> <li>▪ Continuous pedestrian access</li> <li>▪ Well-maintained pull-off location (if stop is a pull-off)</li> <li>▪ High-capacity shelter(s)</li> <li>▪ Trash can</li> <li>▪ Designated park and ride spaces</li> </ul>
Optional Elements	<ul style="list-style-type: none"> <li>▪ System map / schedules</li> <li>▪ Bench</li> </ul>	<ul style="list-style-type: none"> <li>▪ System map / schedules</li> <li>▪ Secure bicycle parking</li> <li>▪ Trash can</li> </ul>	<ul style="list-style-type: none"> <li>▪ Real-time information</li> <li>▪ Secure bicycle parking</li> <li>▪ Placemaking / art</li> <li>▪ Solar shelters</li> <li>▪ Solar lighting</li> </ul>
Photo Examples			

<sup>1</sup> Represents a Title VI required measure (system-wide service standard per FTA Circular 4702.1B). FTA does not prescribe the benchmark itself, but the tracking of such metrics.

## BENCHMARKING PROCESS

System goals, objectives, performance measures, public input, and actual operation of service are all part of an ongoing process to continually evaluate and improve service. SETD can determine the right level and frequency of service evaluation that is meaningful without being overly burdensome on staff. The overall service policy framework guides how routes are structured and operated. On an annual basis, for example, SETD could evaluate each route against the performance standards. Those routes that do not meet the standard must be evaluated more closely. The first step is simply to compare the route to the design principles. Next might come more in-depth analysis such as a survey of riders on that particular route, a ridecheck, or stakeholder outreach to determine why the route is underperforming.

Figure 15 Process for Ongoing Benchmarking and Modification of Service to Meet Customer Needs



## CONCLUSION

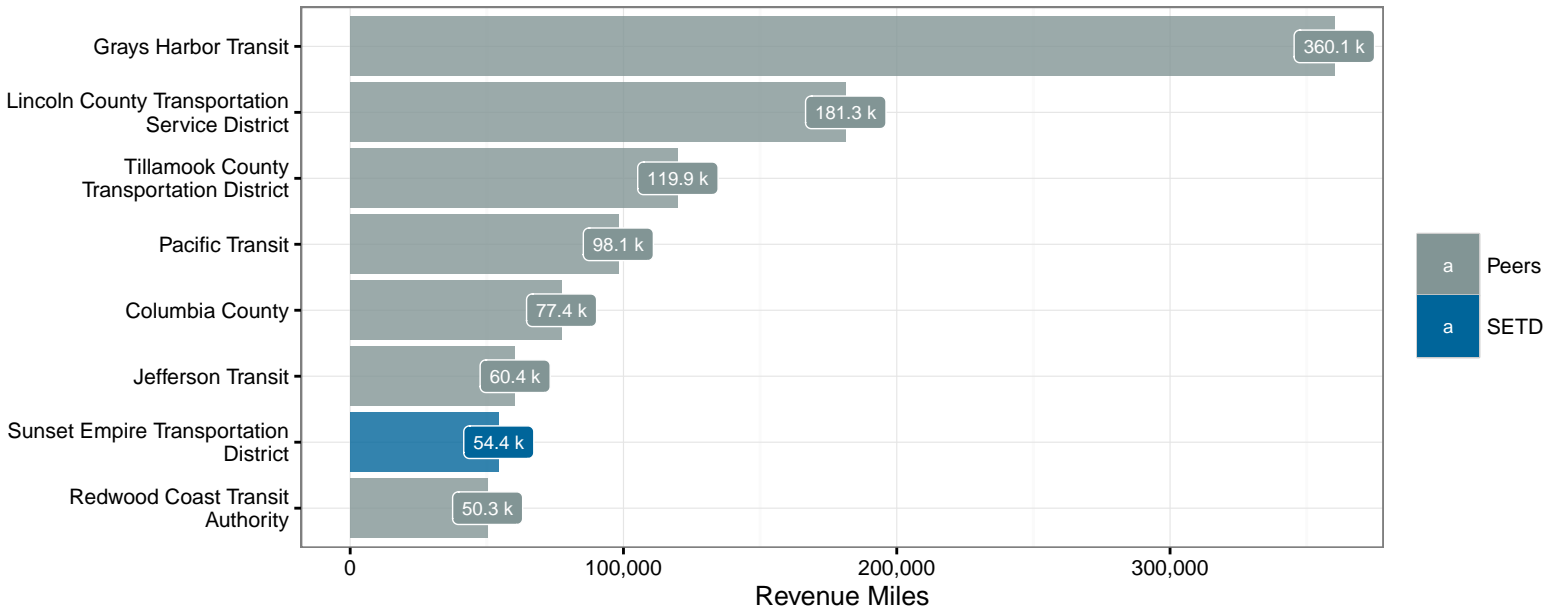
Overall, SETD performs moderately well compared to peers and industry standards at many of the benchmarks outlined. Today the agency produces a good deal of information on a monthly basis, but has no standards associated with performance measures.

# Appendix A Peer Review Outputs

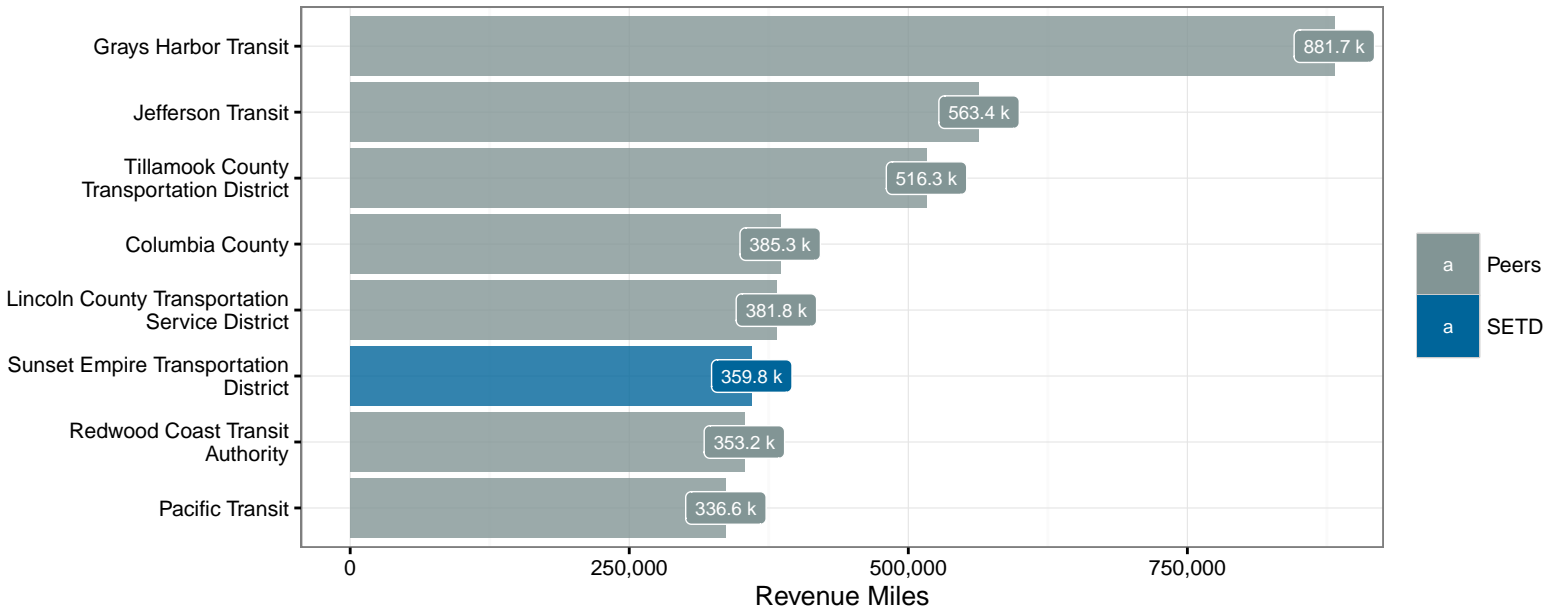
Peer review plots attached with full details on SETD and peer performance.

# Revenue Miles

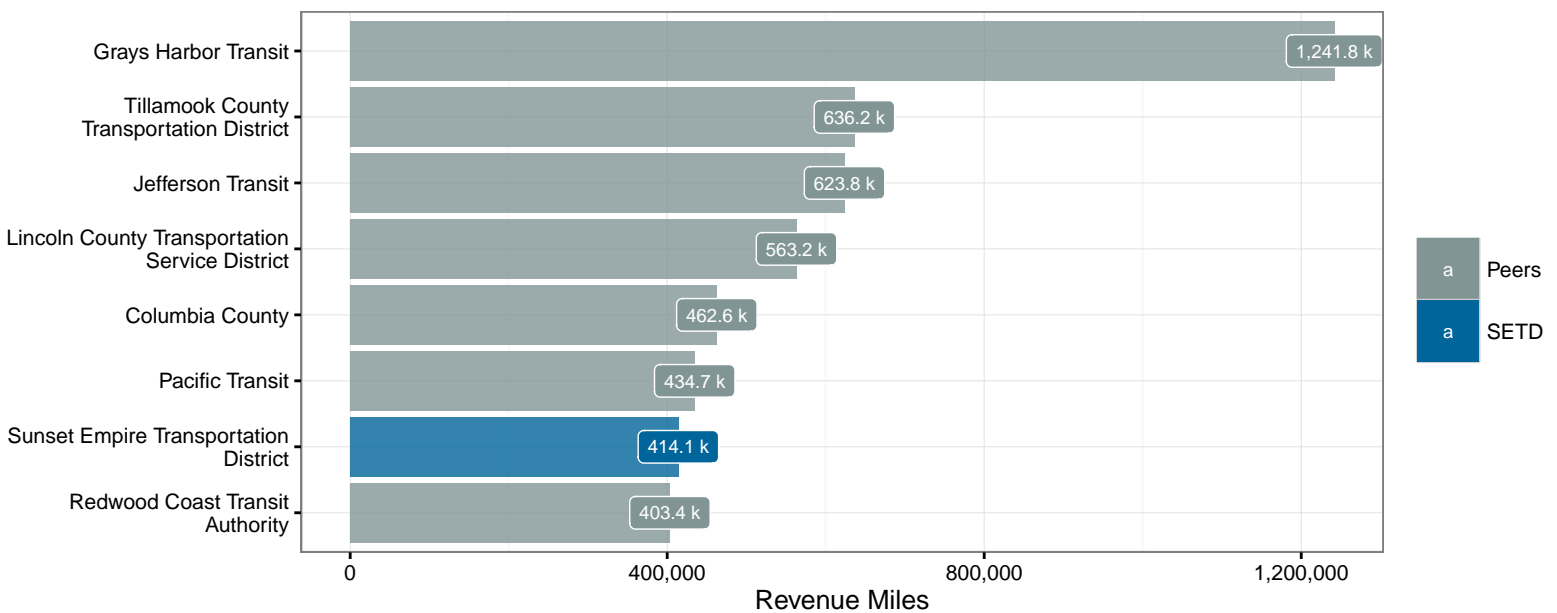
## Demand Response



## Fixed-Route Bus

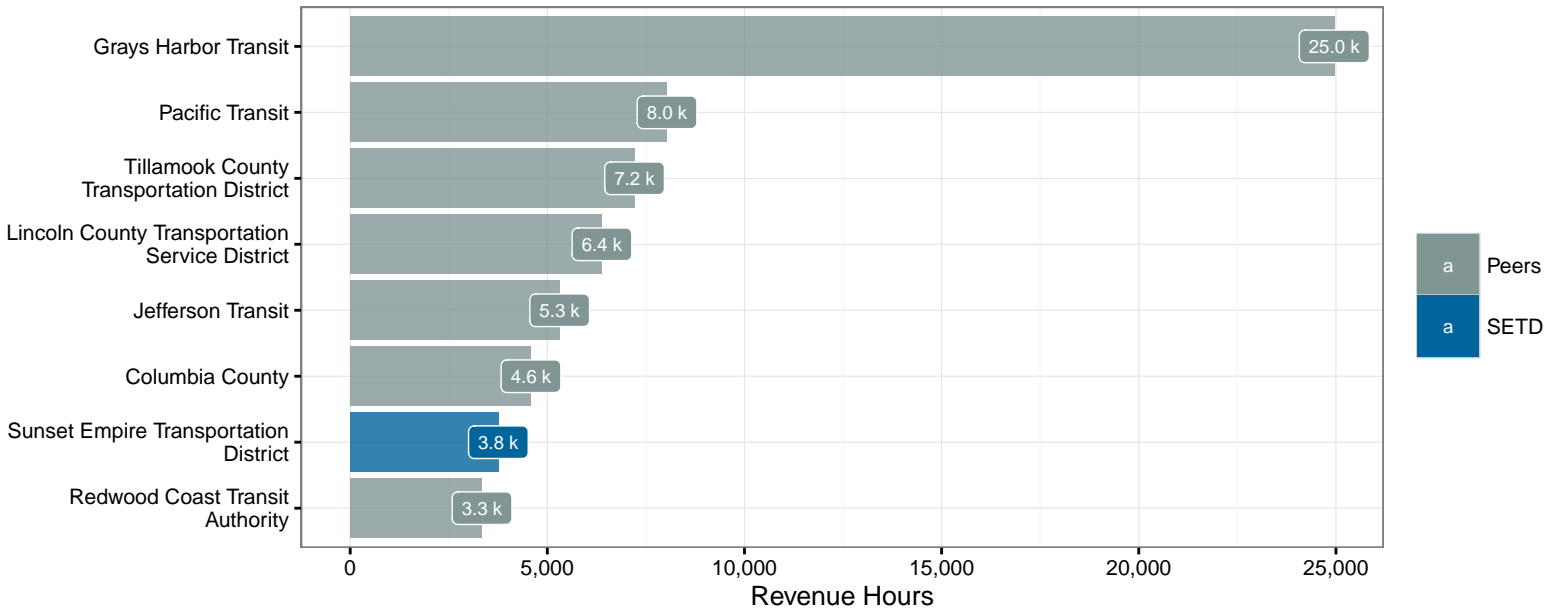


## Total

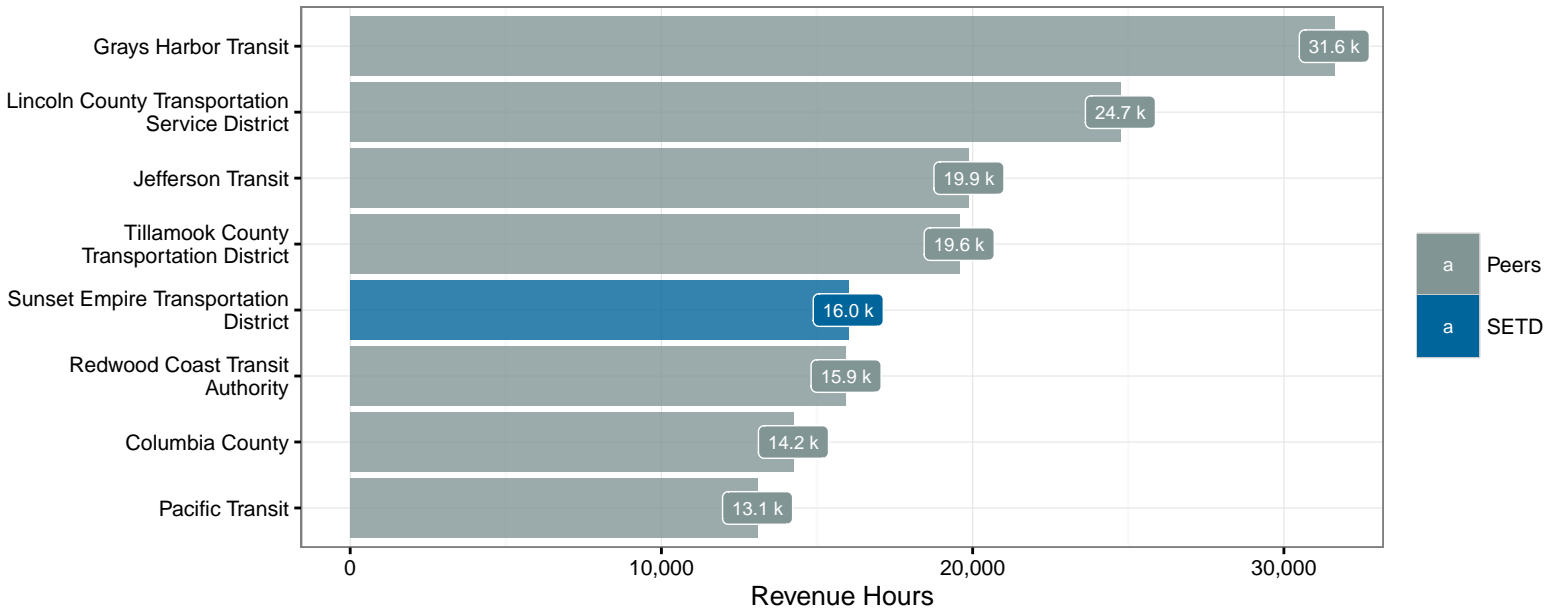


# Revenue Hours

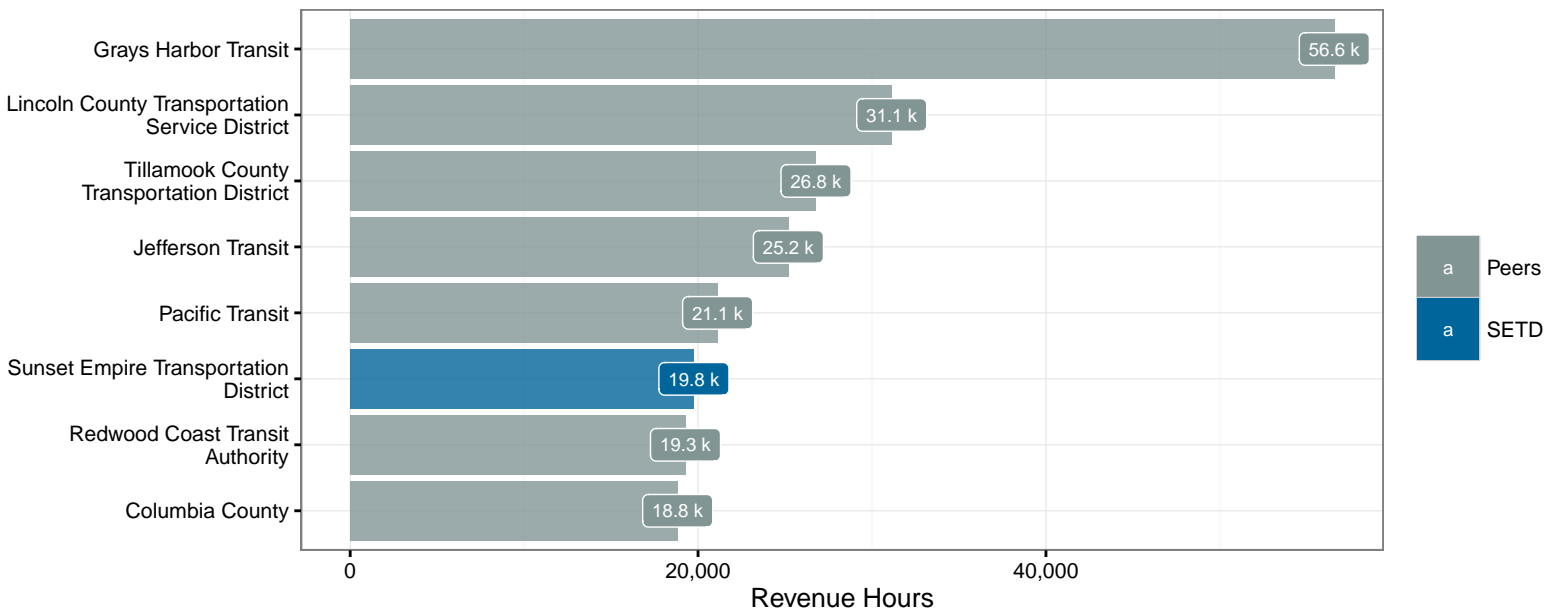
## Demand Response



## Fixed-Route Bus

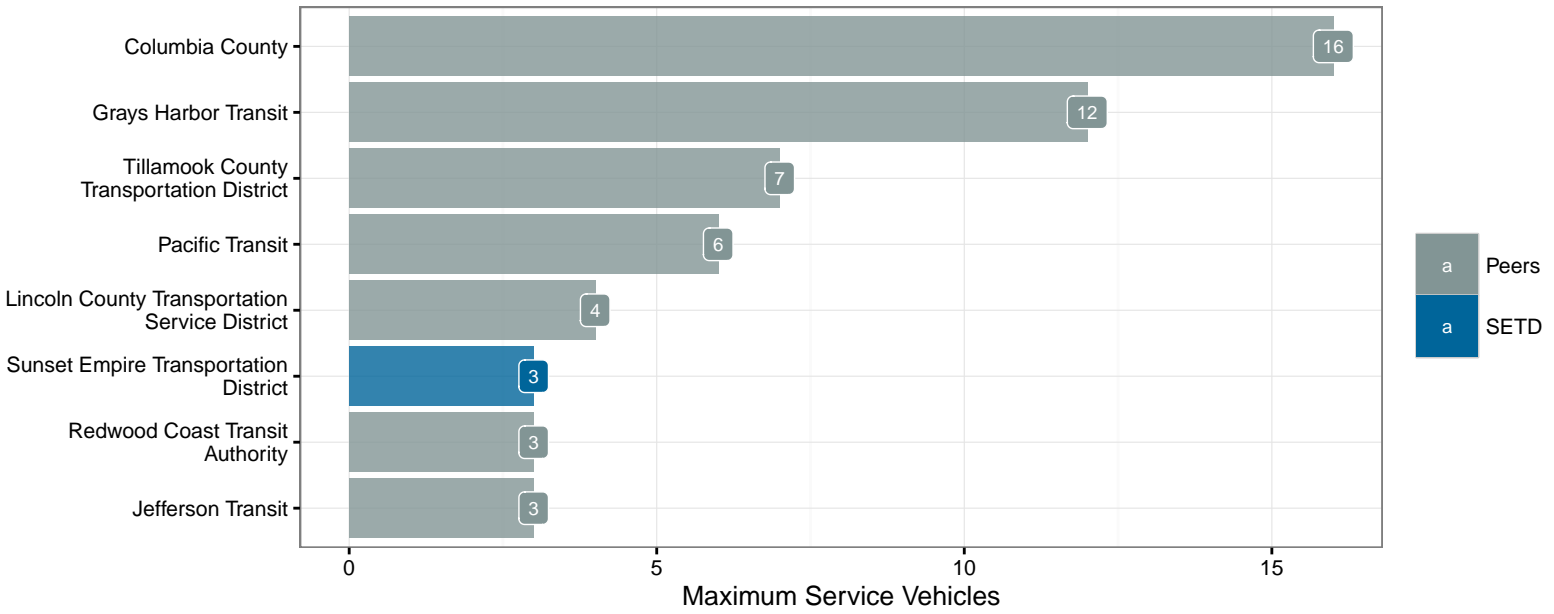


## Total

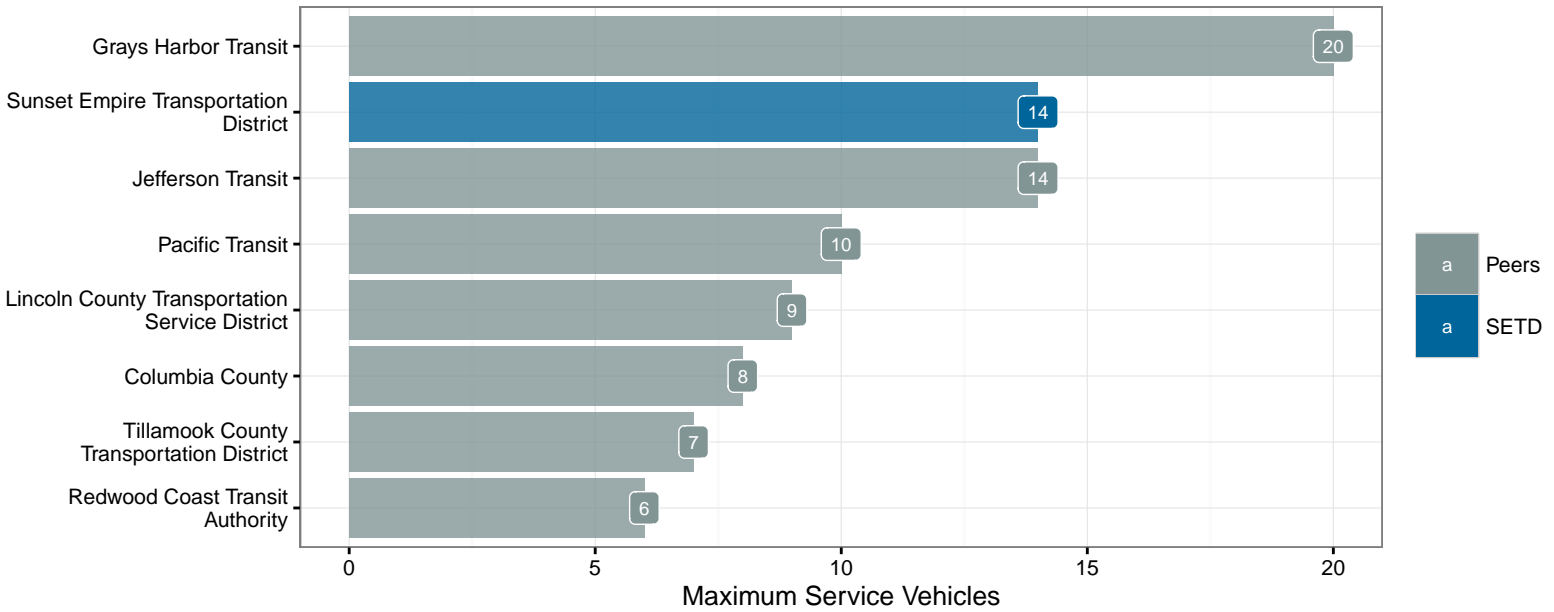


# Maximum Service Vehicles

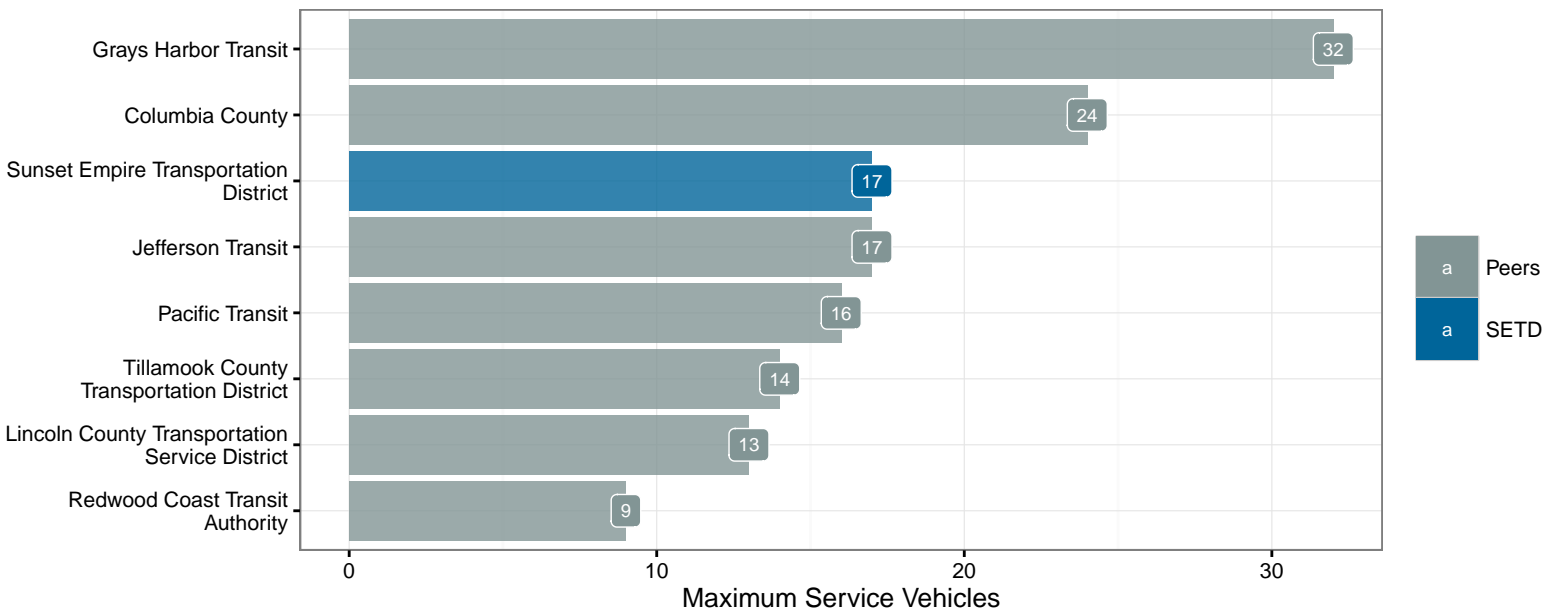
## Demand Response



## Fixed-Route Bus

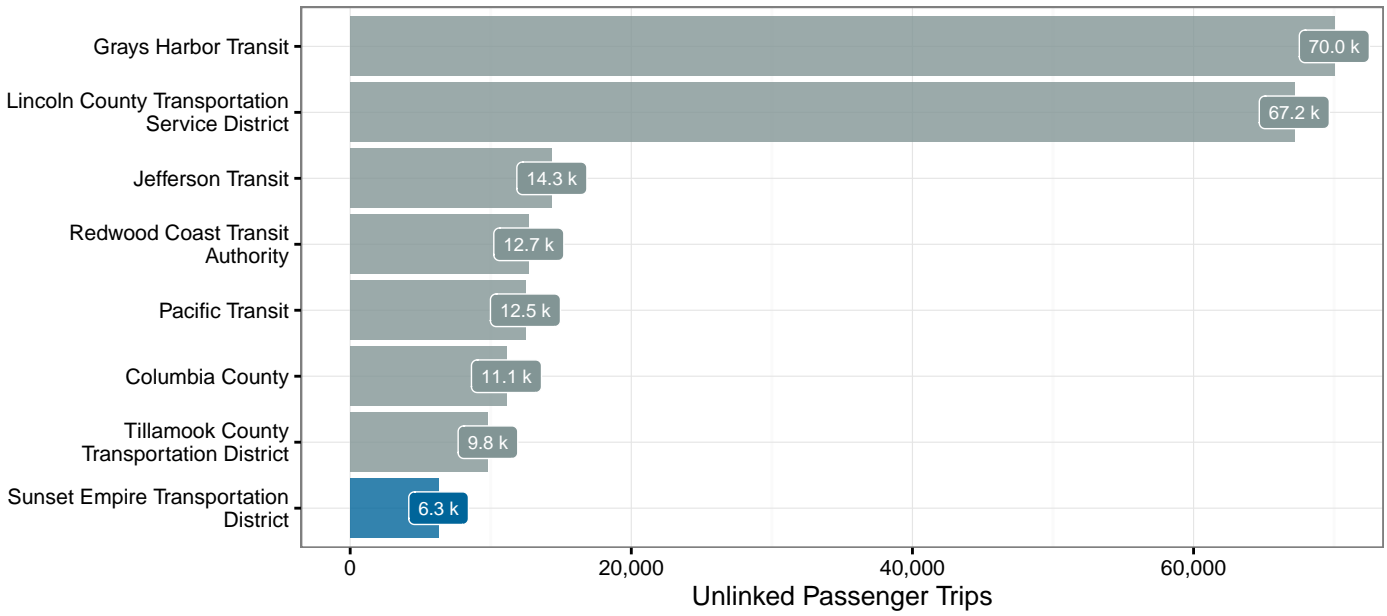


## Total

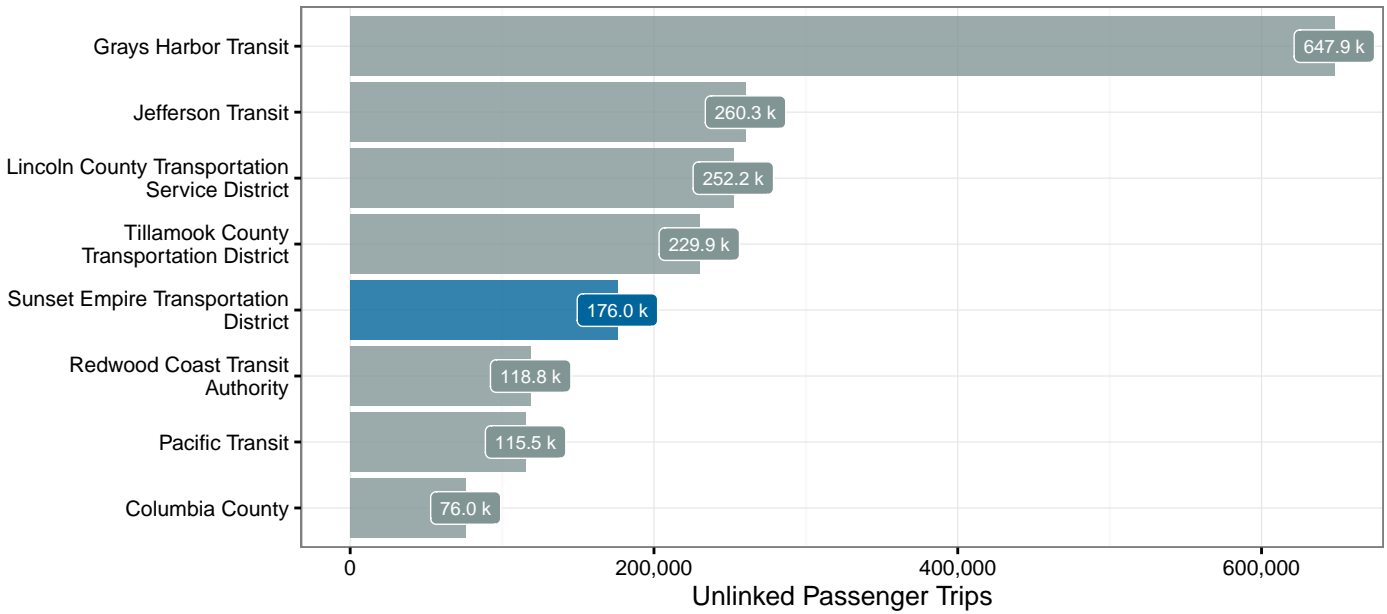


# Ridership

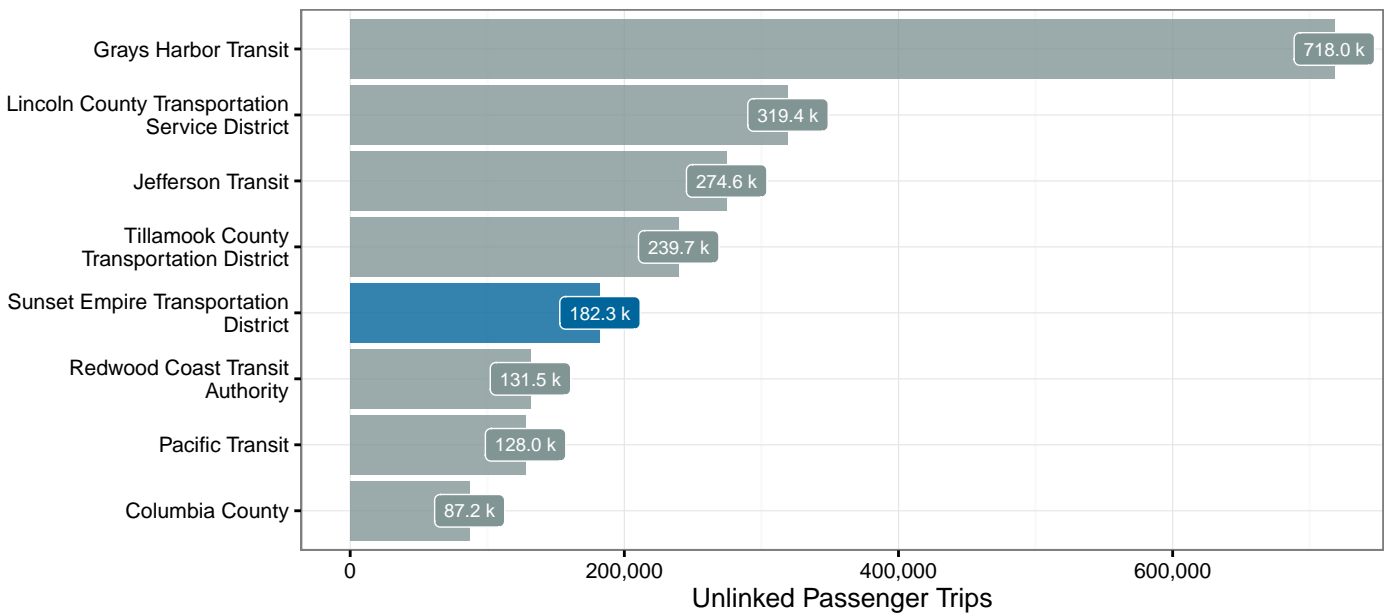
## Demand Response



## Fixed-Route Bus



## Total



a Peers  
a SETD

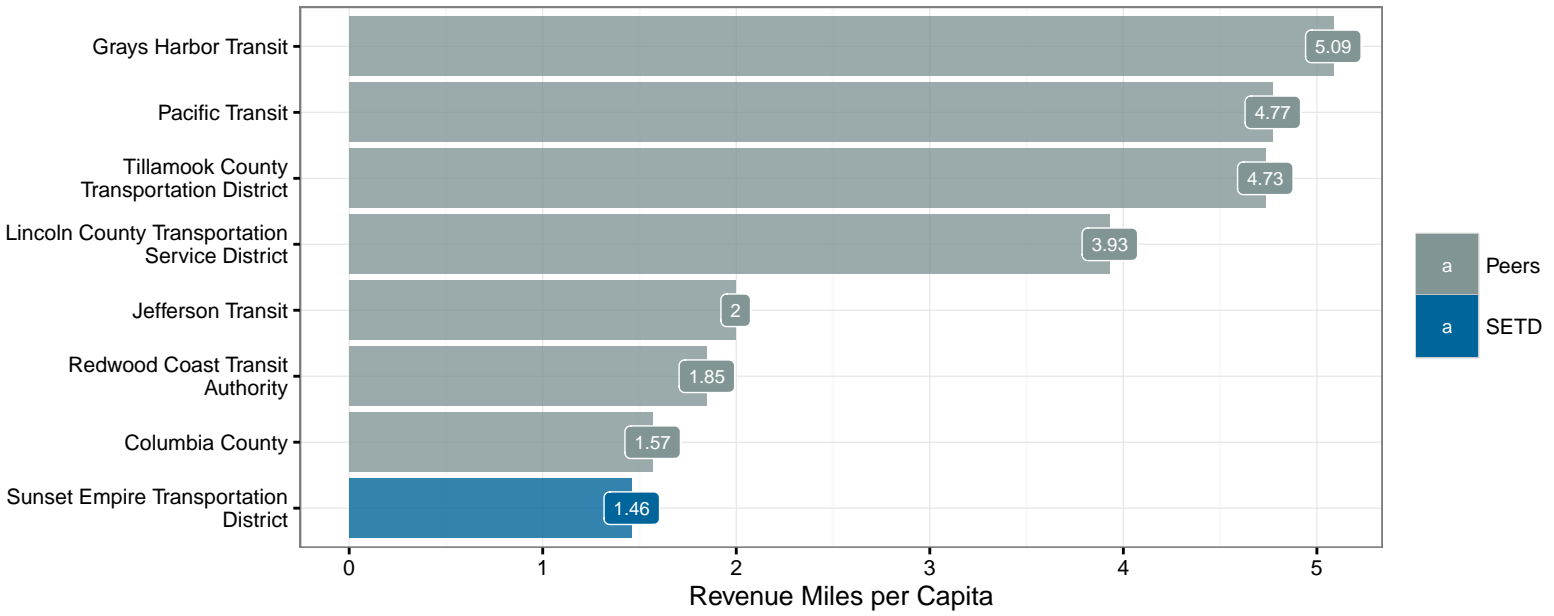
a Peers  
a SETD

a Peers  
a SETD

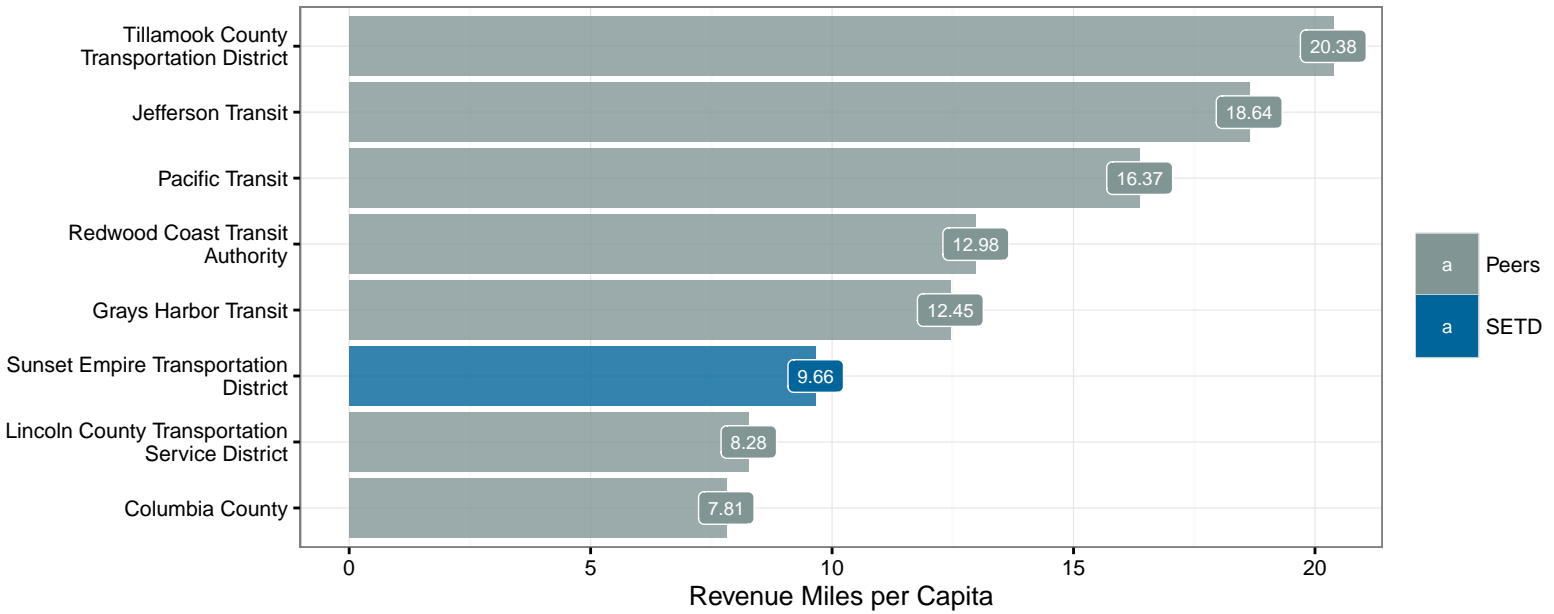


# Revenue Miles per Capita

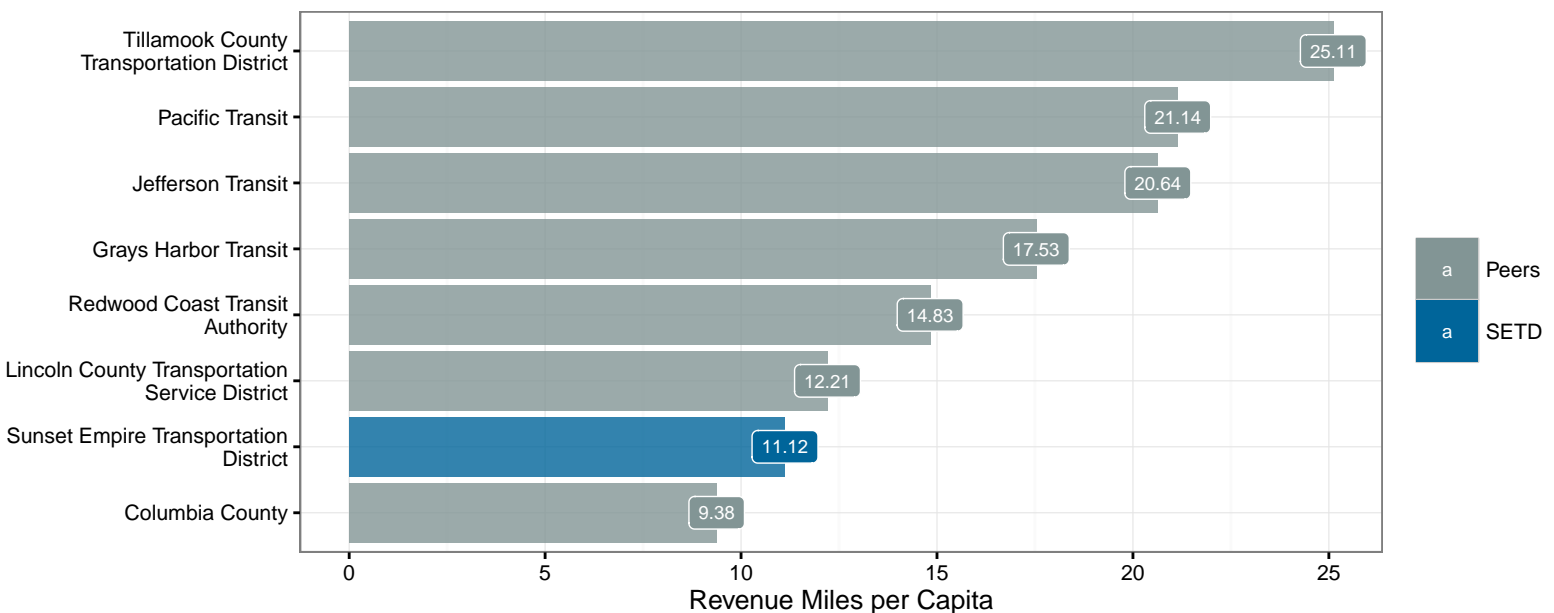
## Demand Response



## Fixed-Route Bus

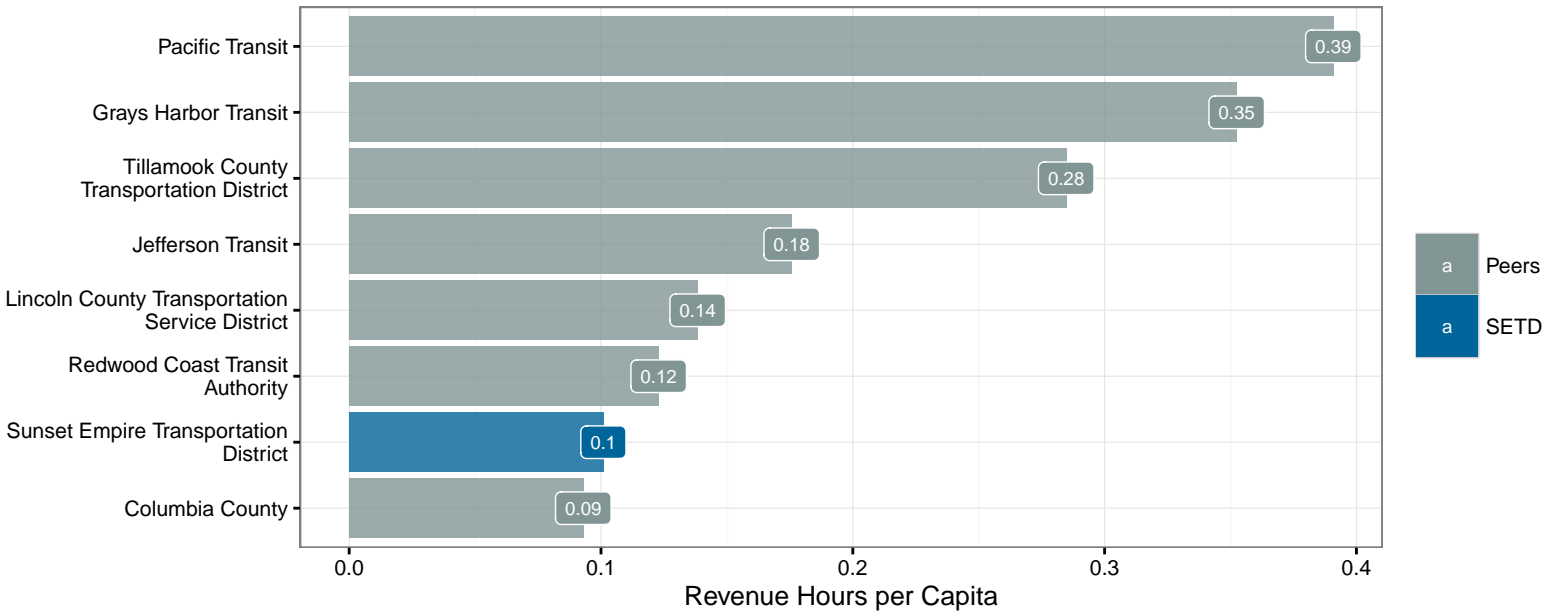


## Total

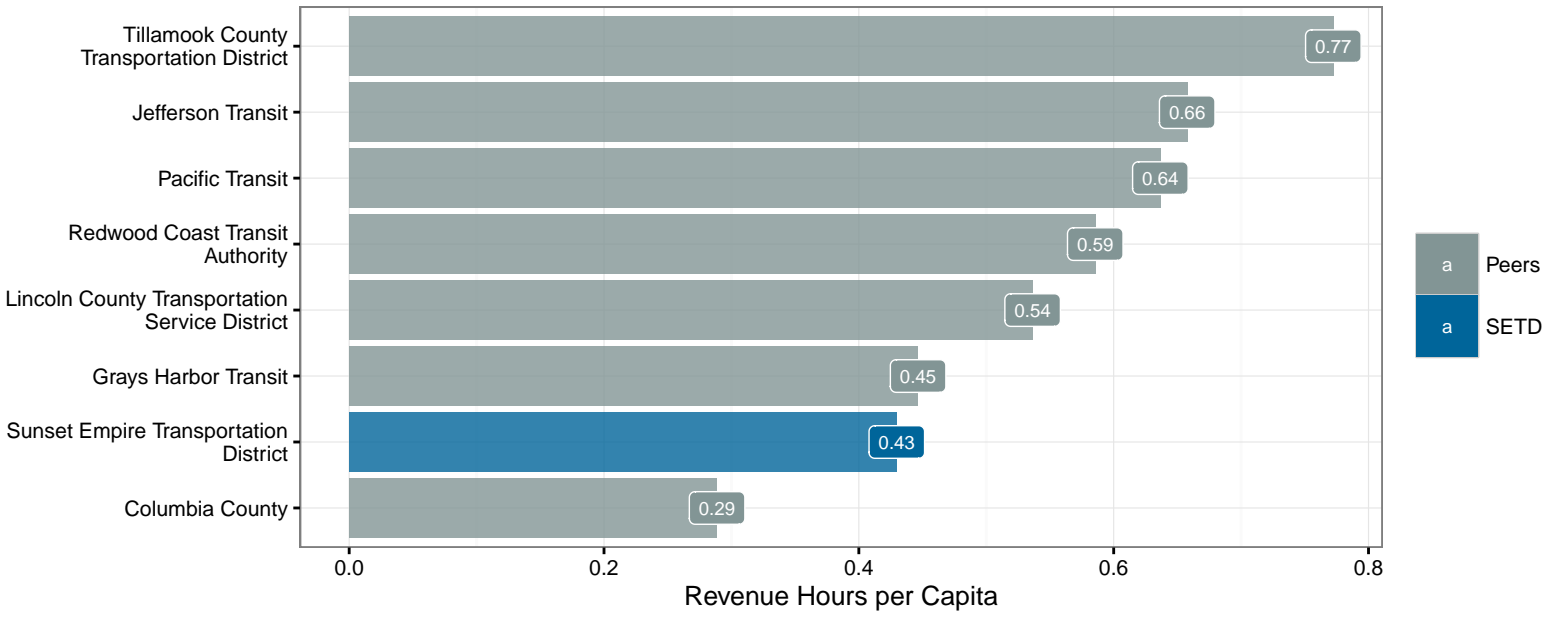


# Revenue Hours per Capita

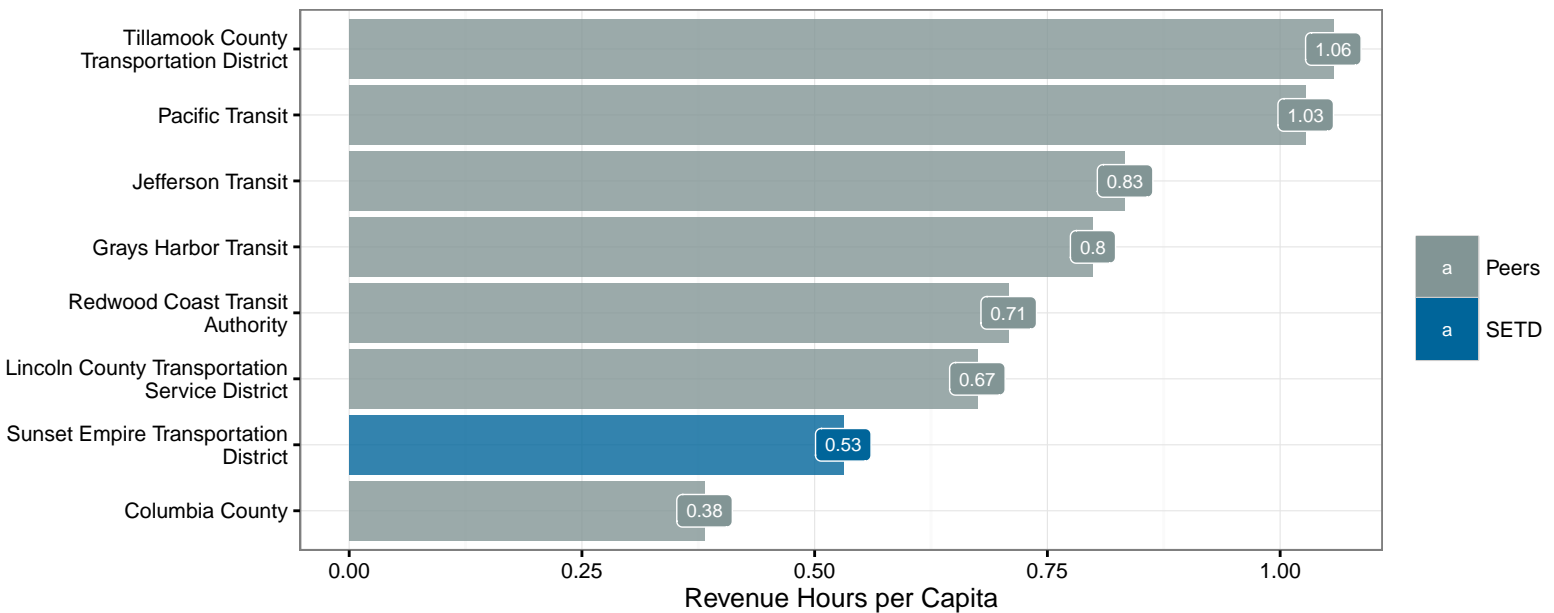
## Demand Response



## Fixed-Route Bus

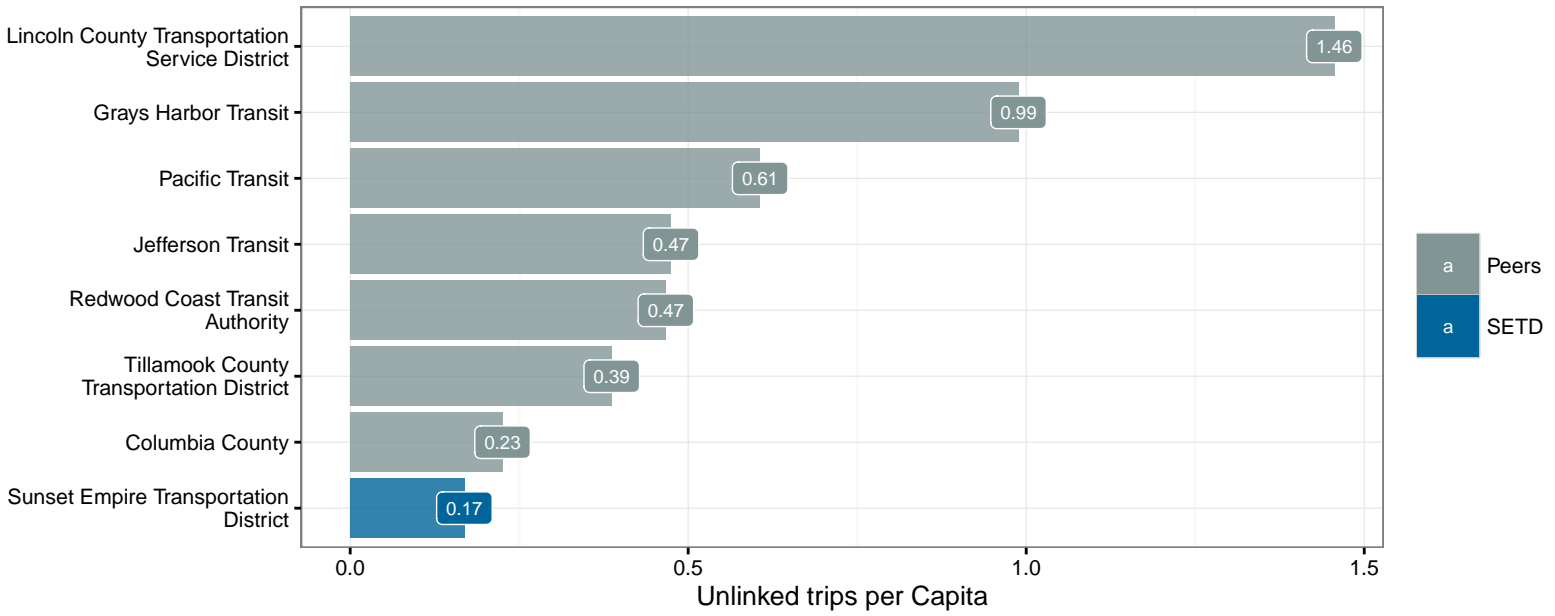


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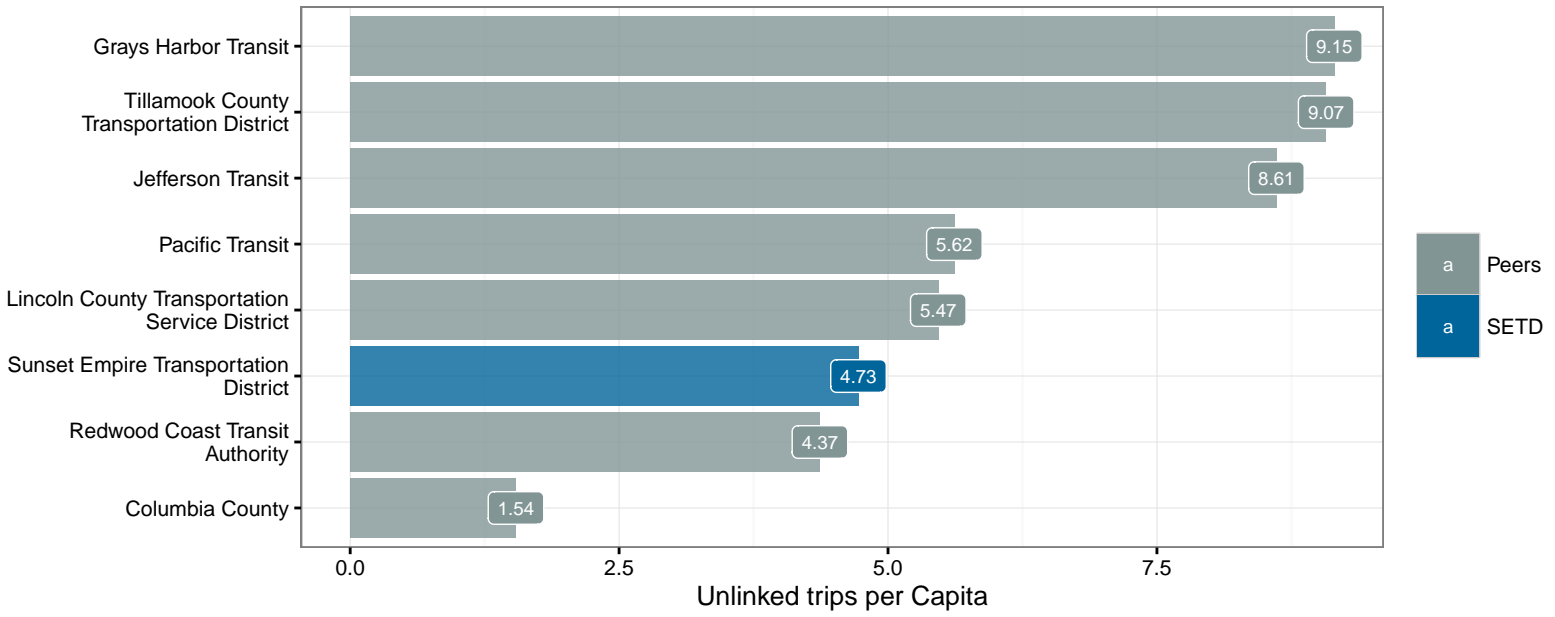


# Ridership per Capita

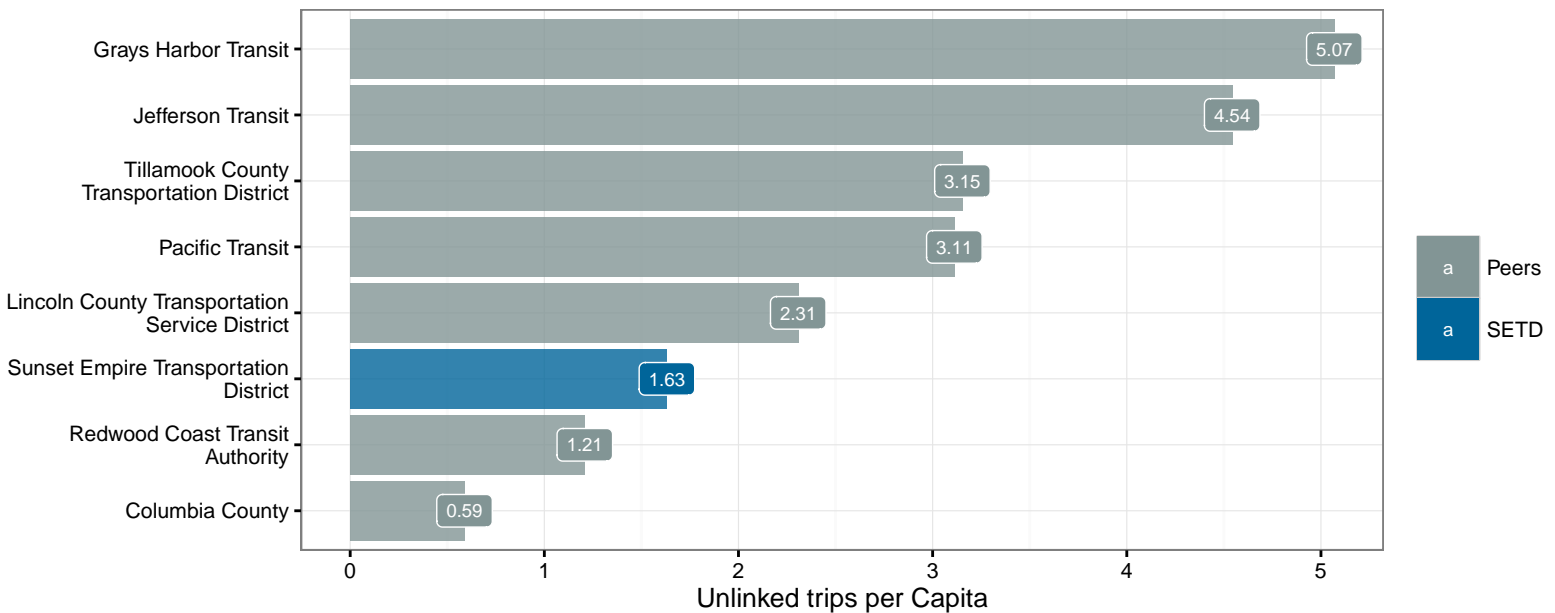
## Demand Response



## Fixed-Route Bus

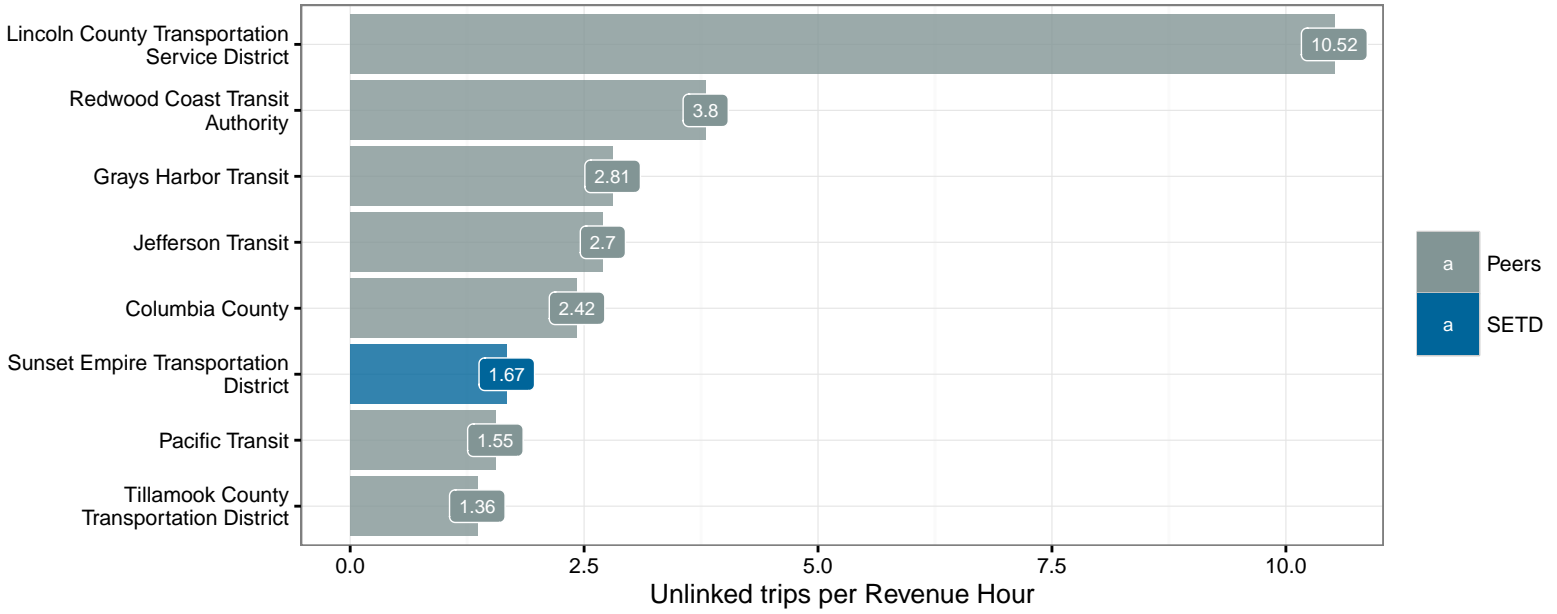


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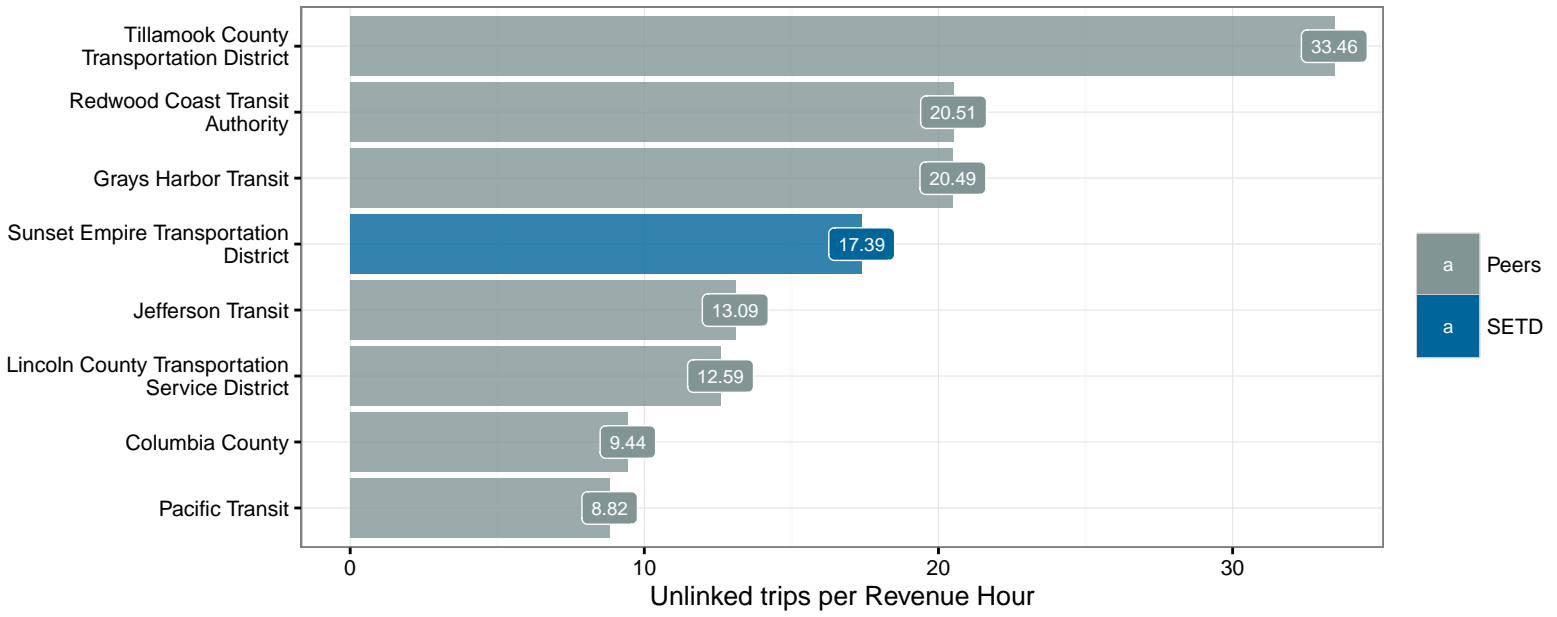


# Ridership per Revenue Hour

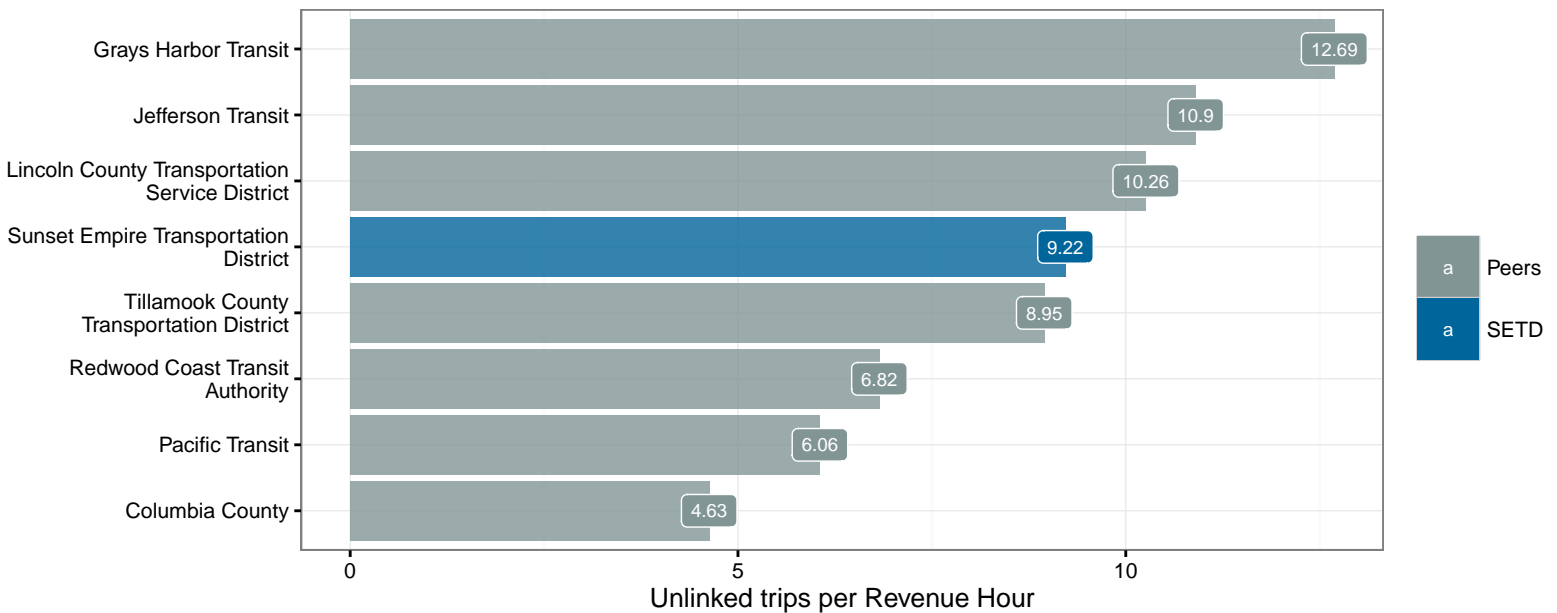
## Demand Response



## Fixed-Route Bus

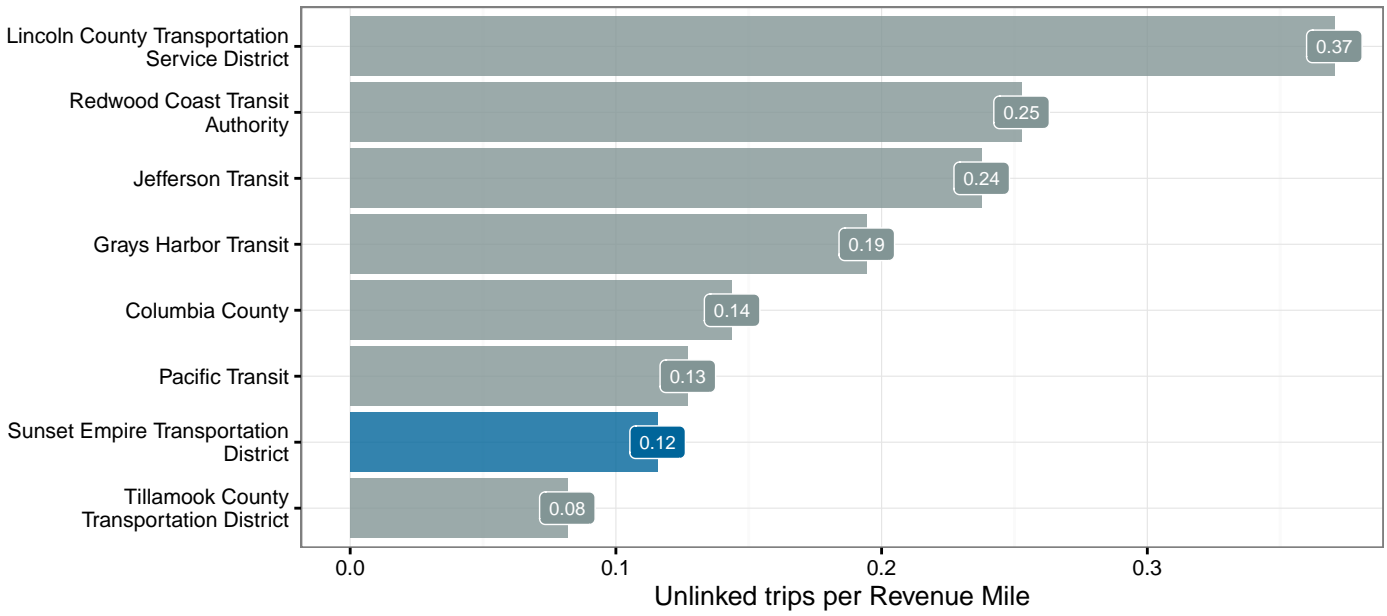


## Total

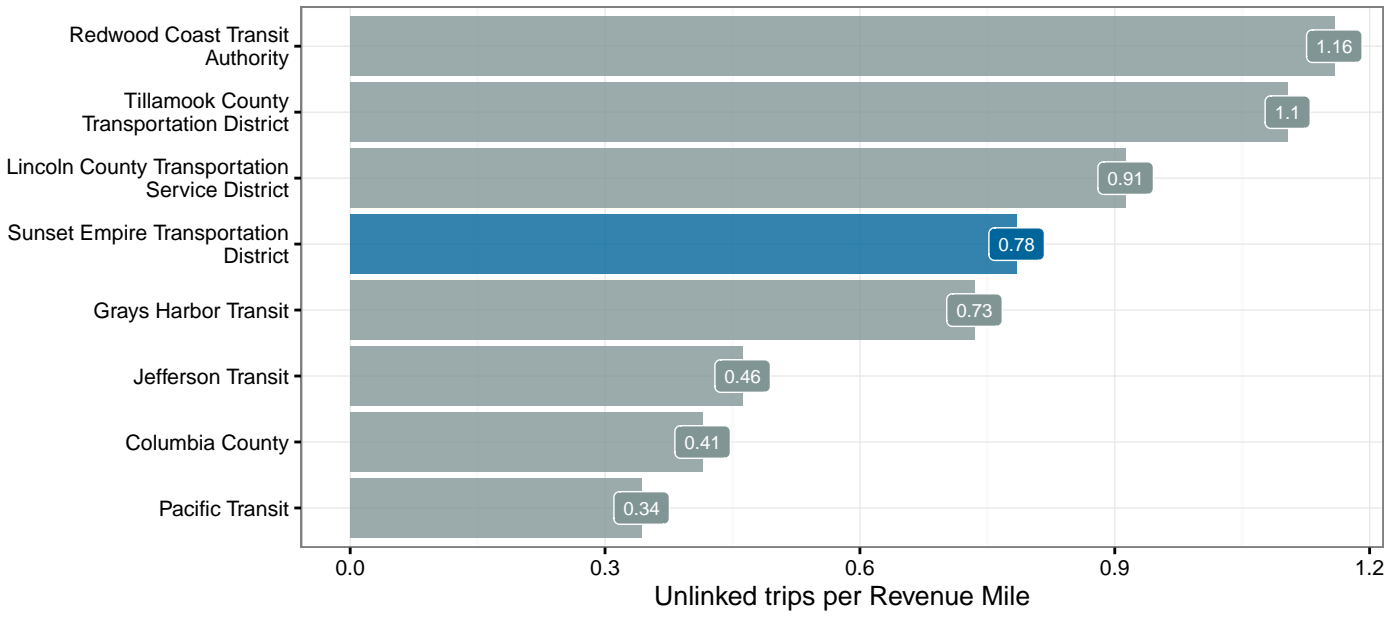


# Ridership per Revenue Mile

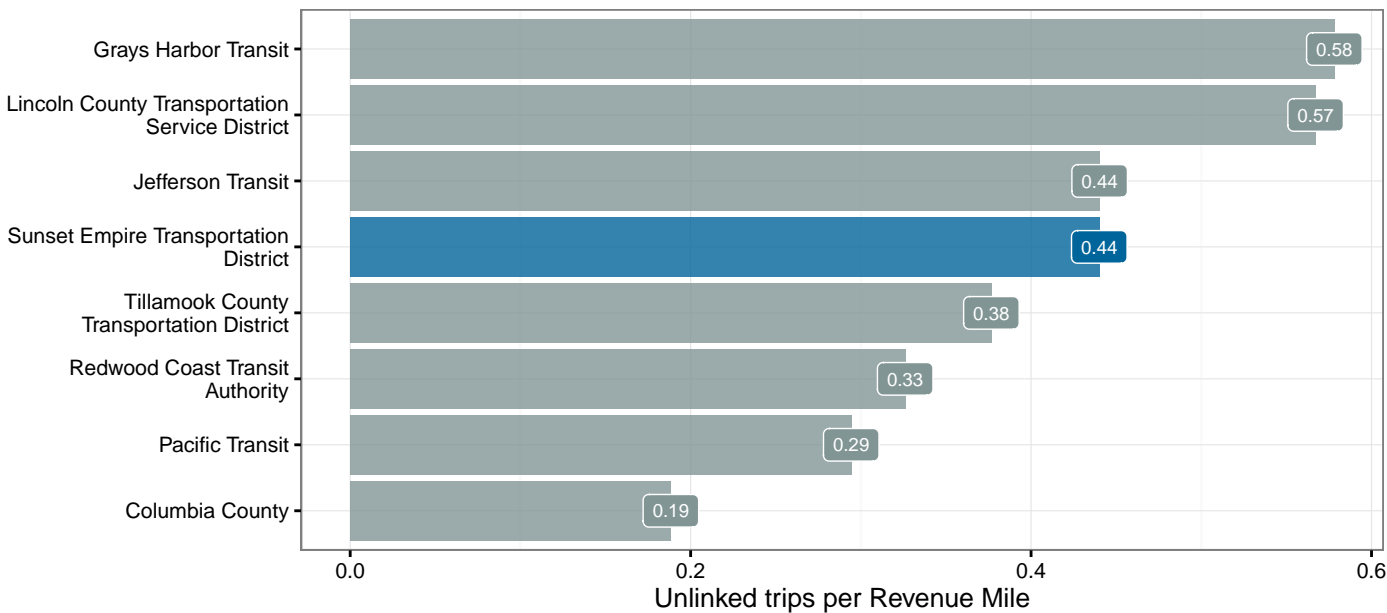
## Demand Response



## Fixed-Route Bus

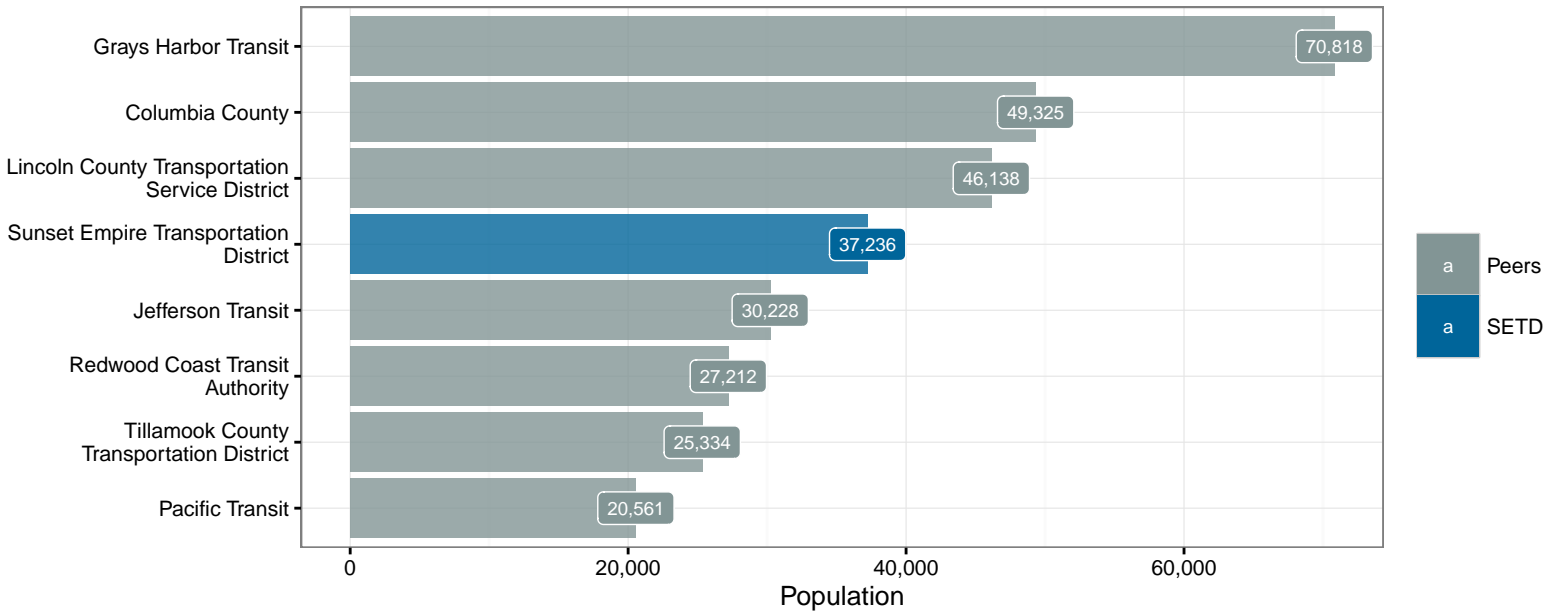


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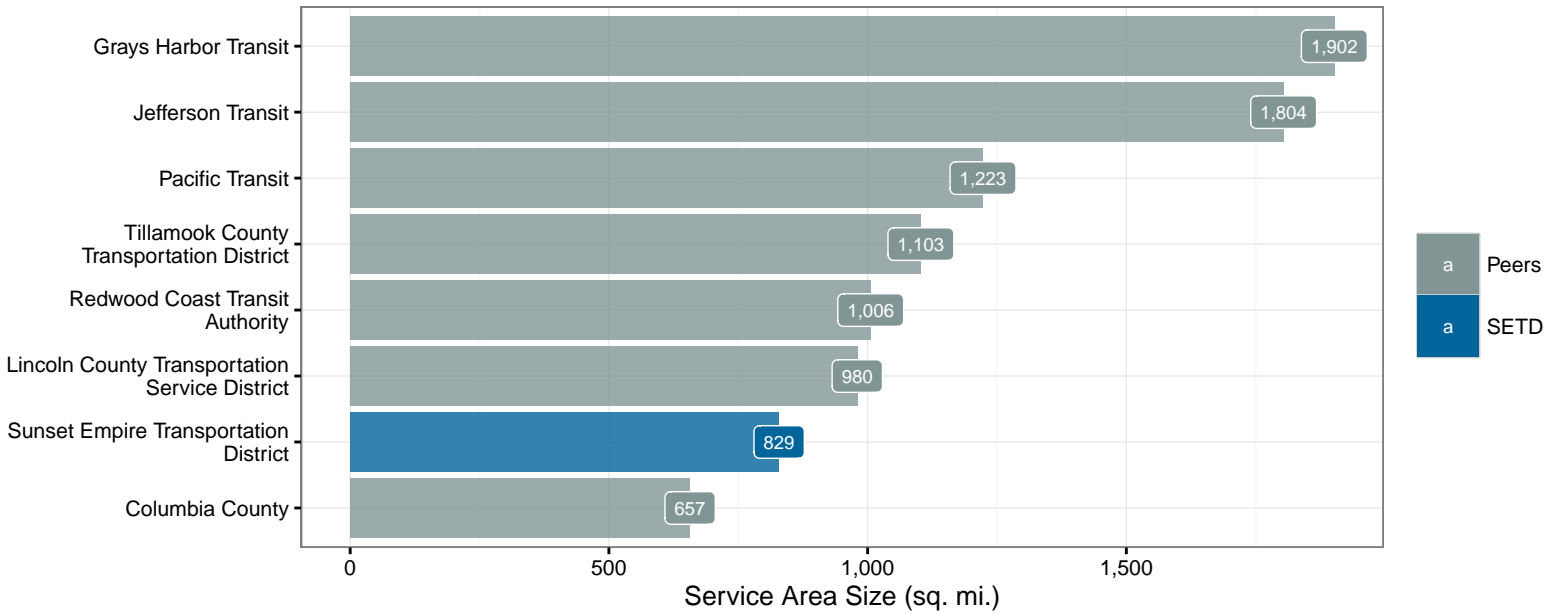


# Service Area Description

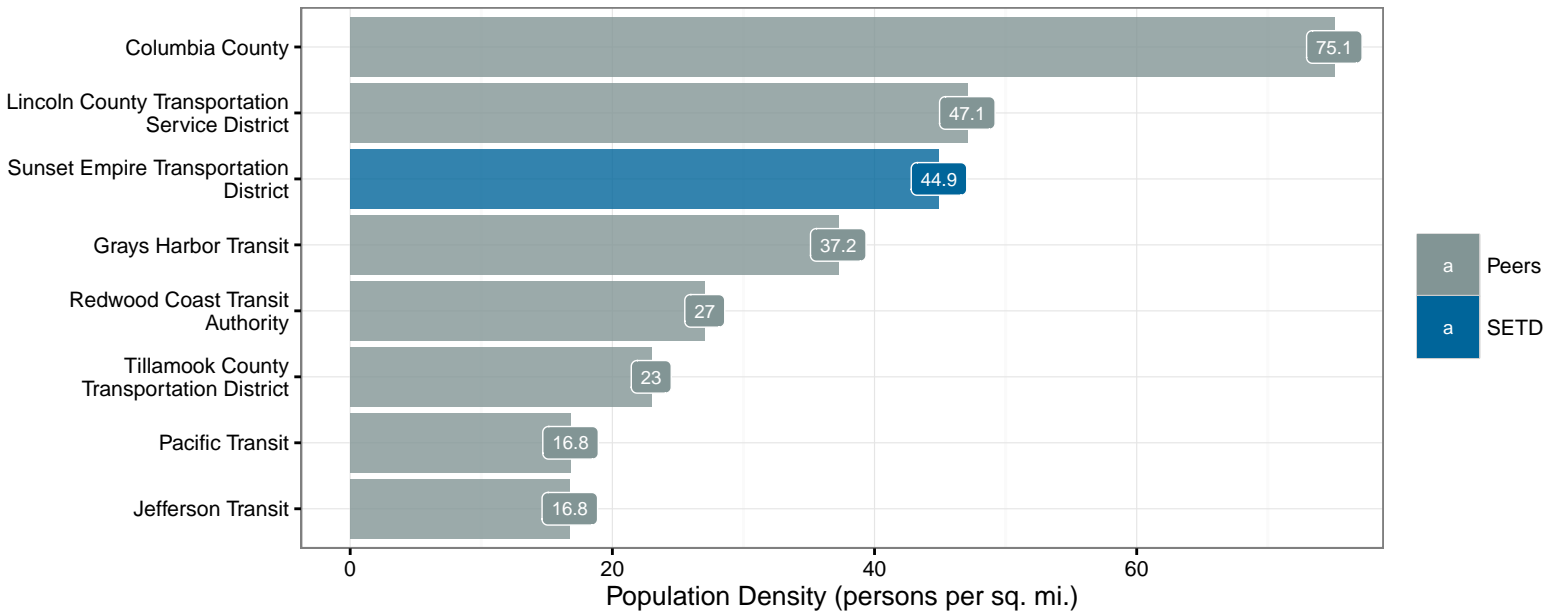
## Service Area Population by Agency



## Service Area Size by Agency

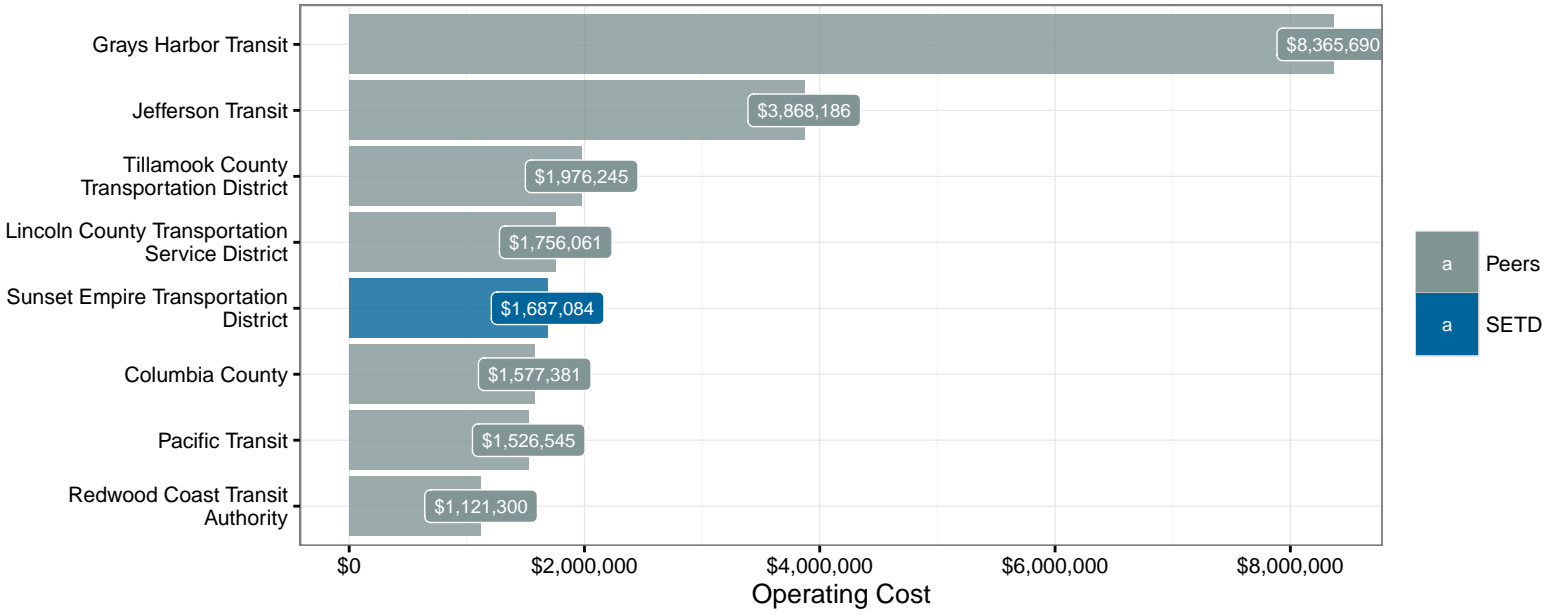


## Population Density by Agency

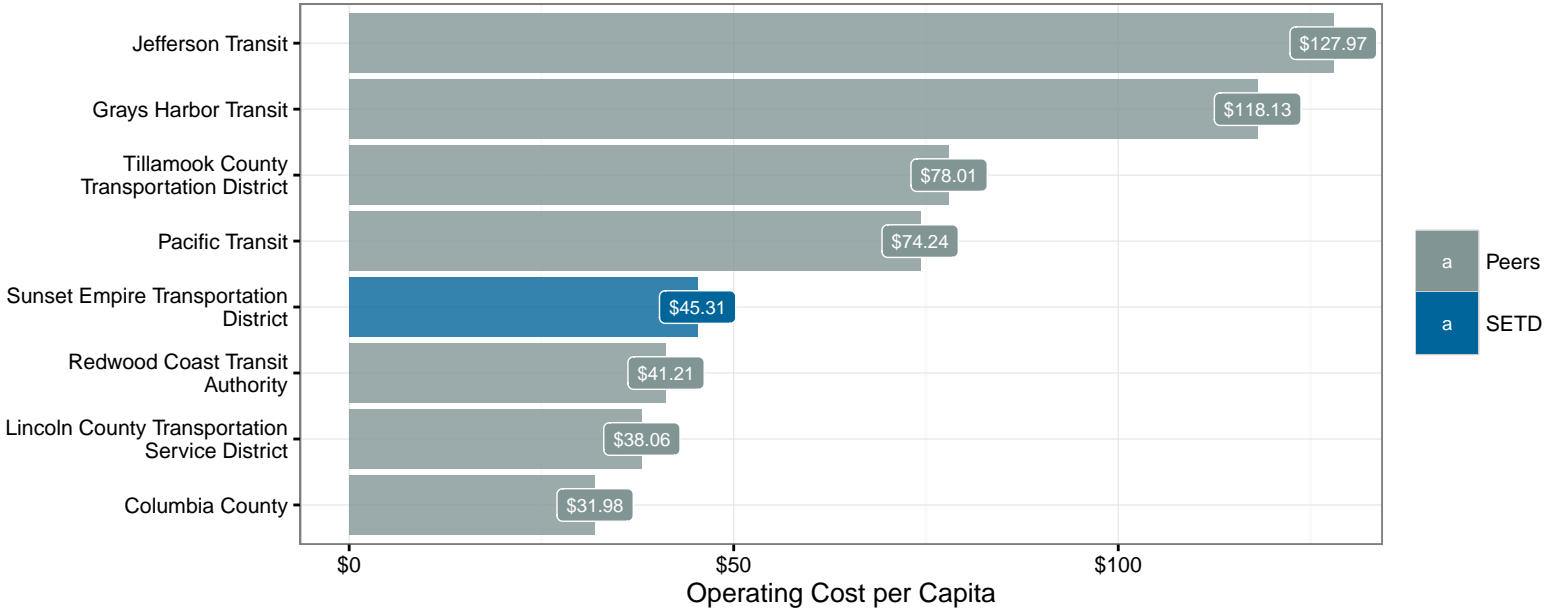


# Finance

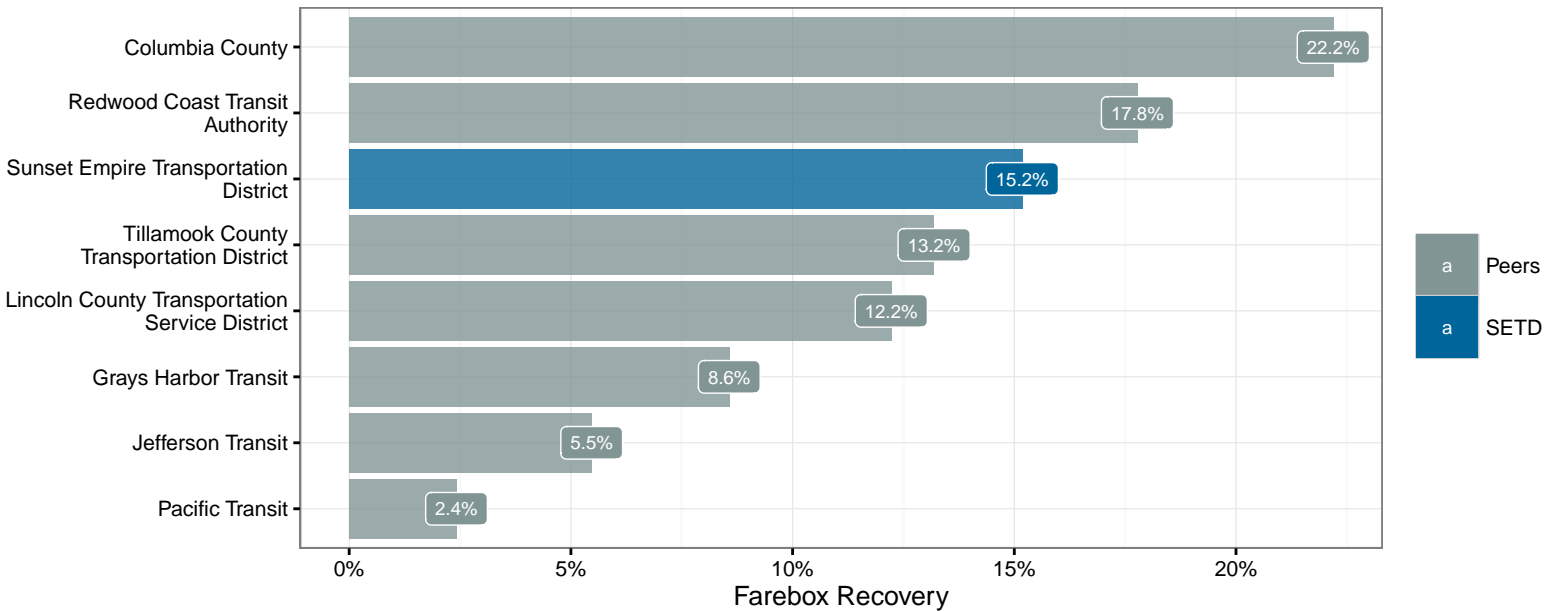
## Operating Cost by Agency



## Operating Cost per Capita by Agency

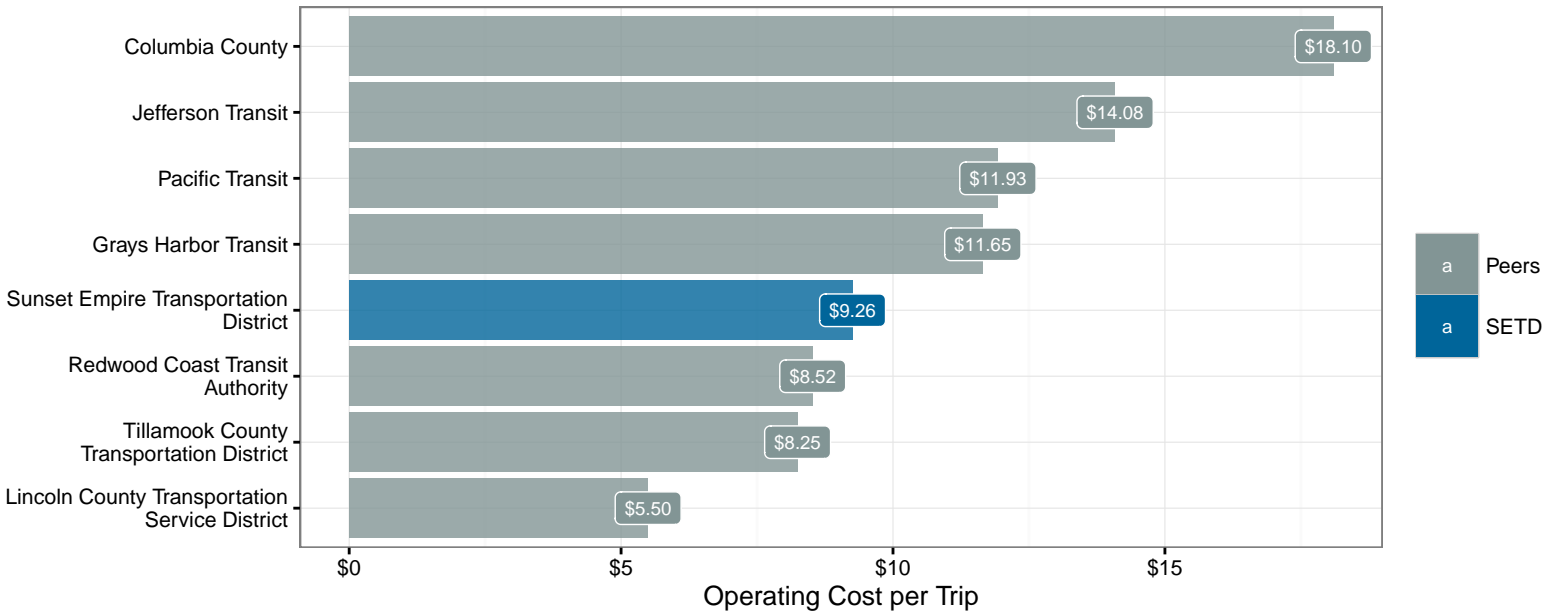


## Farebox Recovery by Agency

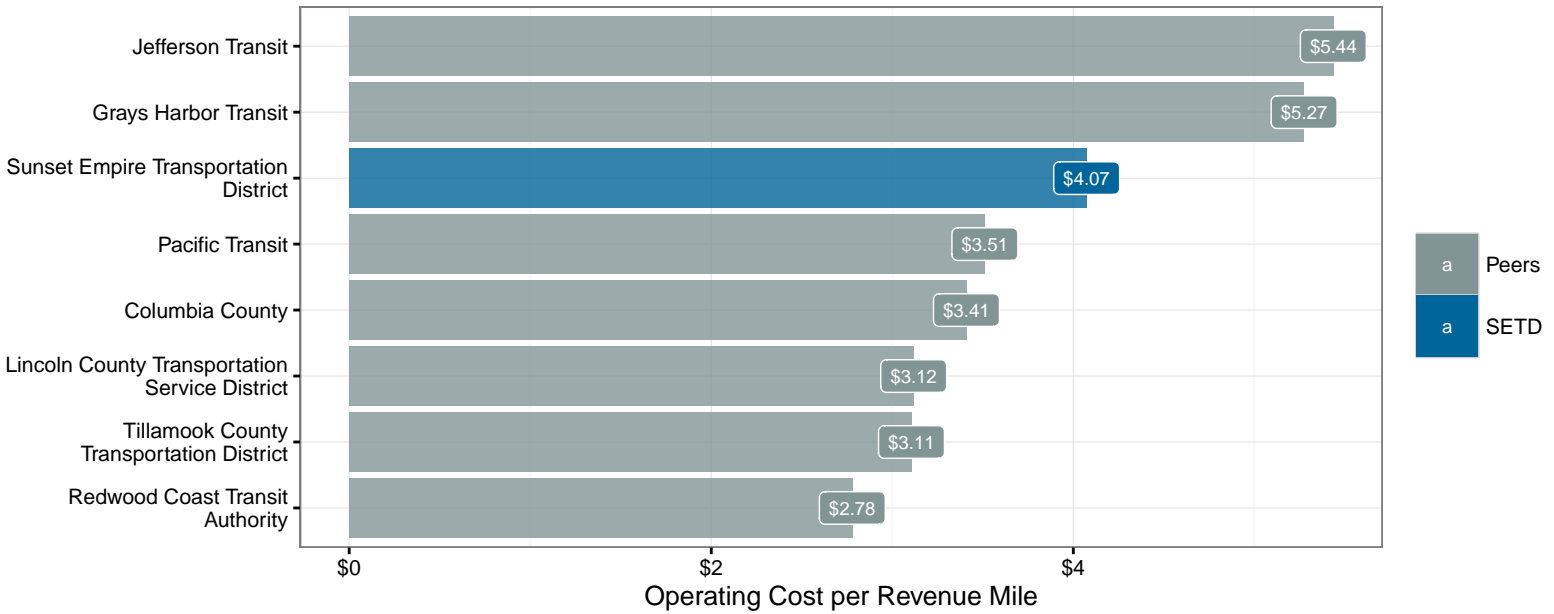


# Finance

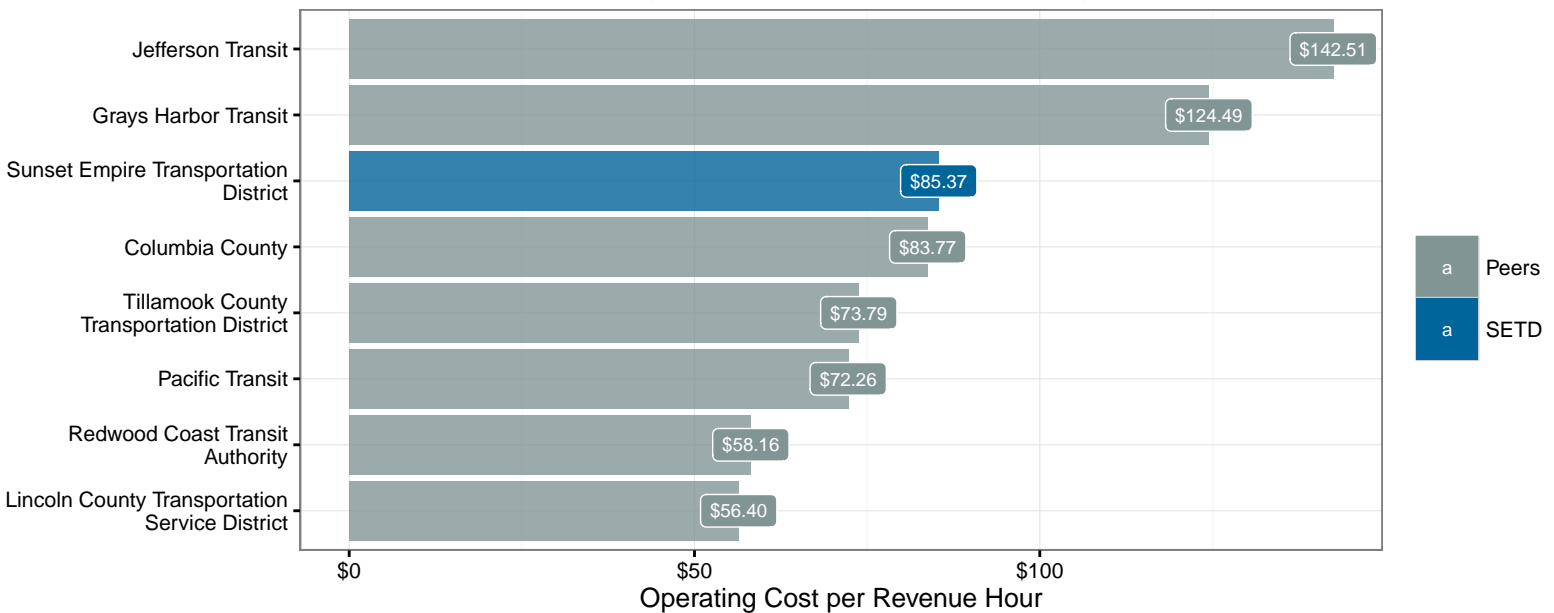
## Operating Cost per Trip by Agency



## Operating Cost per Revenue Mile by Agency



## Operating Cost per Revenue Hour by Agency





## **SECTION N**

### Route Phasing Graphics



## ROUTE 30

### Proposed Route (Near-Term, Short-Term, Mid-Term and Long-Term)

#### Long route to Rainier



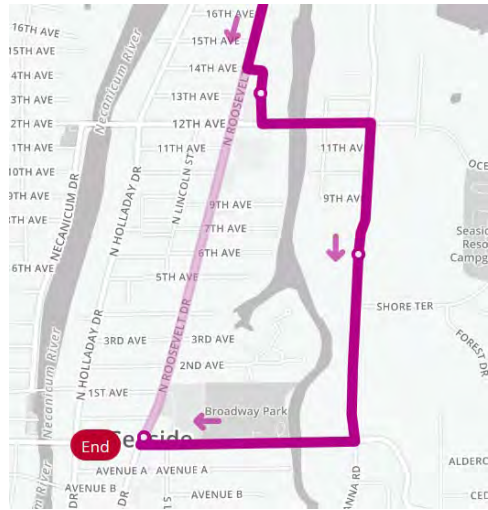
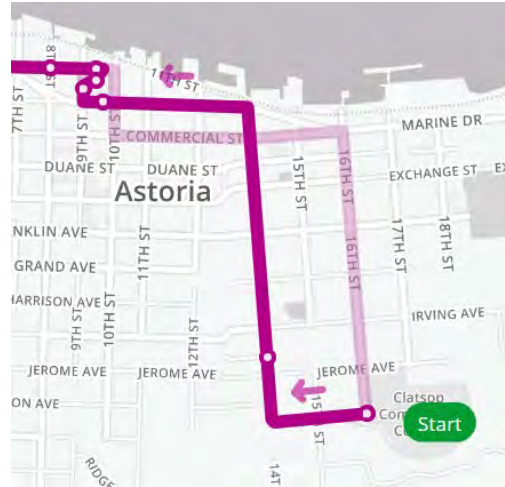
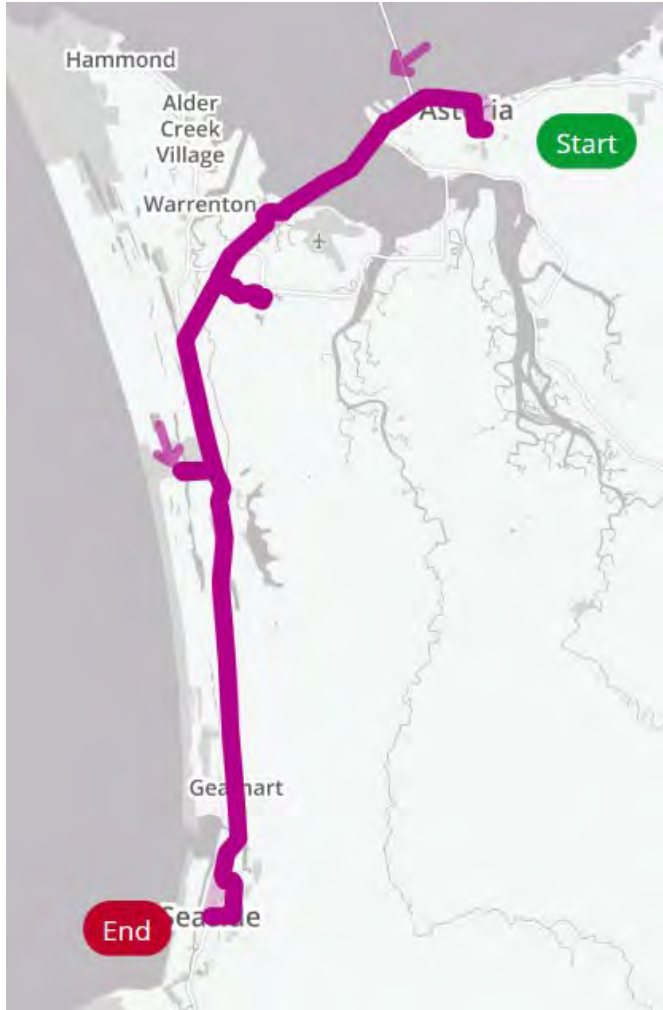
#### Short route To Svensen / Knappa



# ROUTE 101

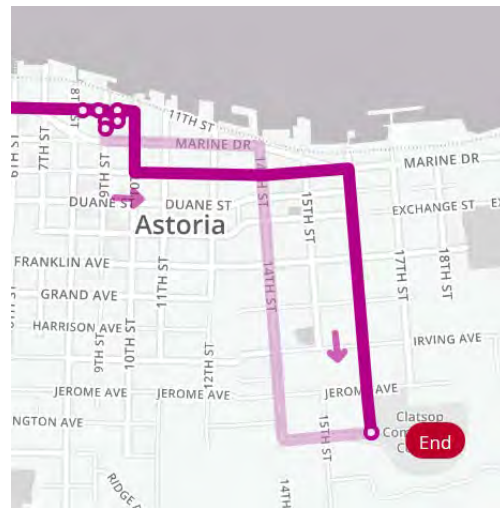
## Proposed Route (Near-Term)

### Outbound



# SUNSET EMPIRE TRANSPORTATION DISTRICT

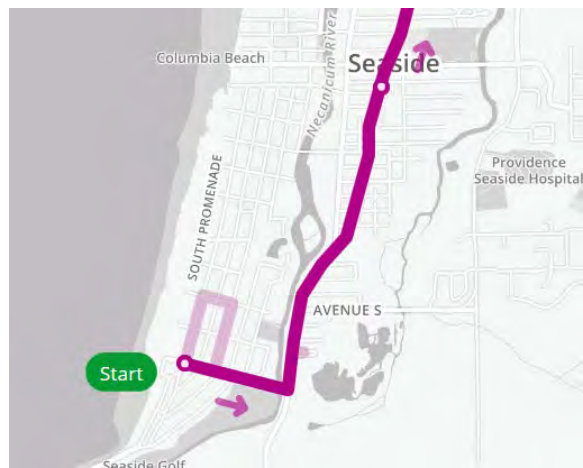
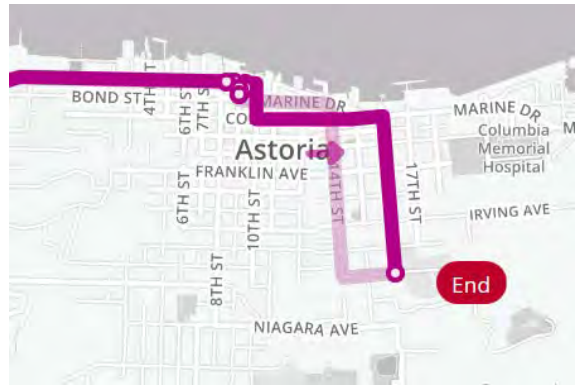
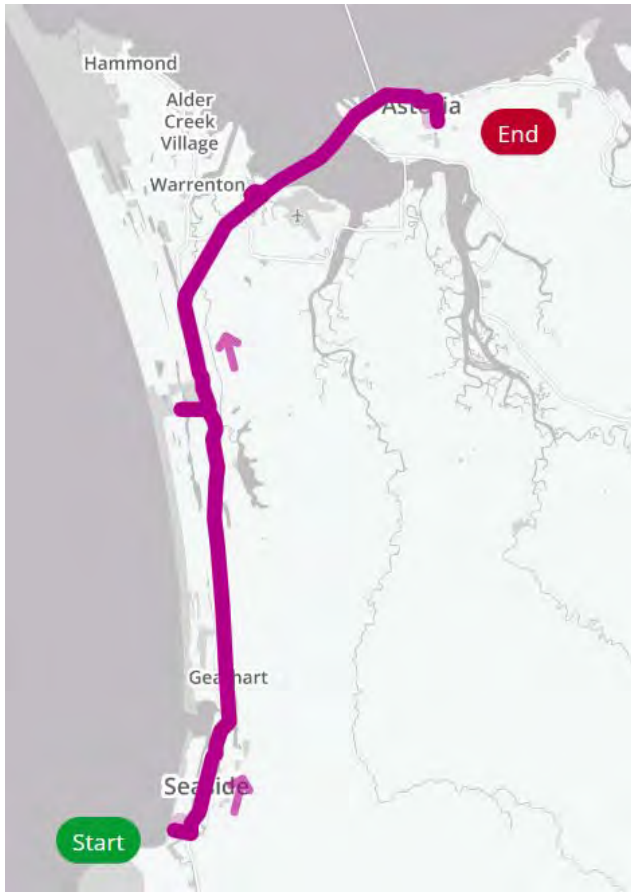
## Inbound





# SUNSET EMPIRE TRANSPORTATION DISTRICT

## Route 101: Inbound



## ROUTE 10 WEST

### Proposed Route (Near-Term, Short-Term, Mid-Term and Long-Term)

#### Loop - Regular Route





SUNSET EMPIRE TRANSPORTATION DISTRICT

**Loop - Head Start Route (4 times per weekday)**



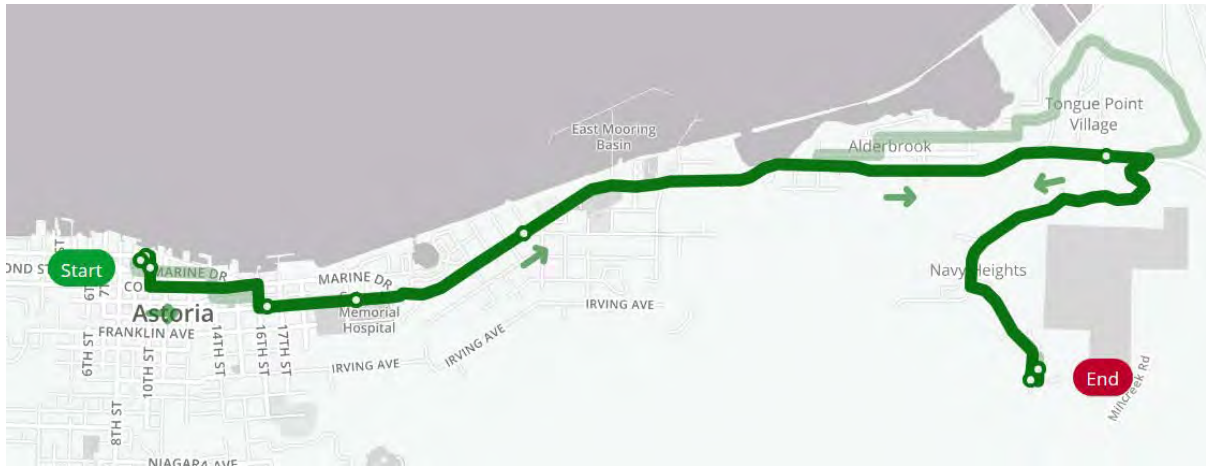
## ROUTE 10 EAST

### Proposed Route (Near-Term, Short-Term, Mid-Term and Long-Term)

#### Inbound



#### Outbound



## ROUTE 15

### Proposed Route (Short-Term, Mid-Term and Long-Term)

#### Inbound



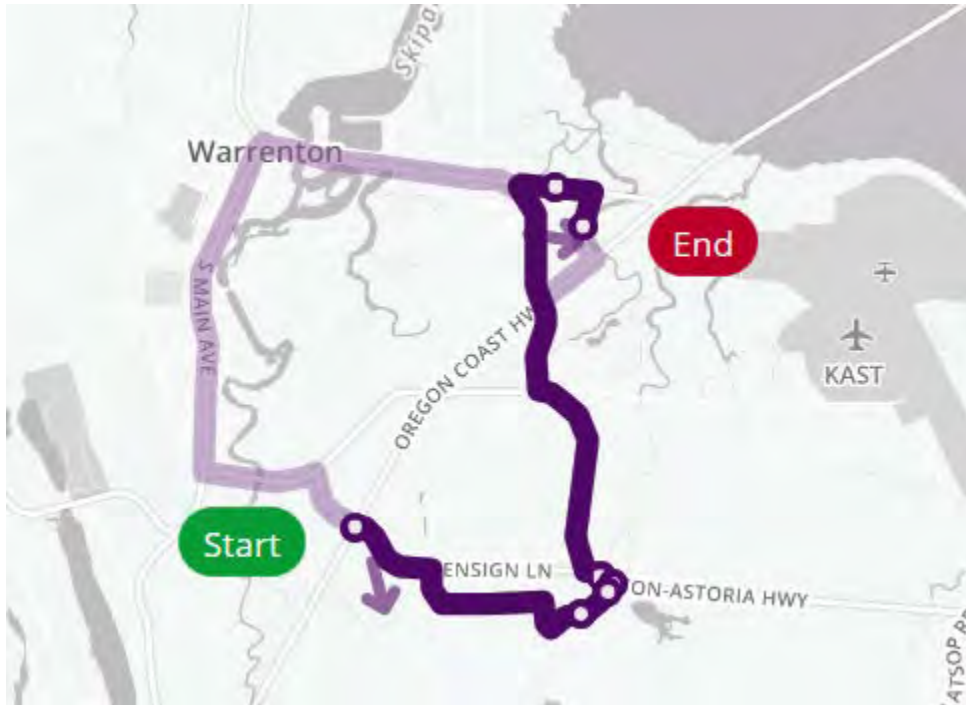
#### Outbound



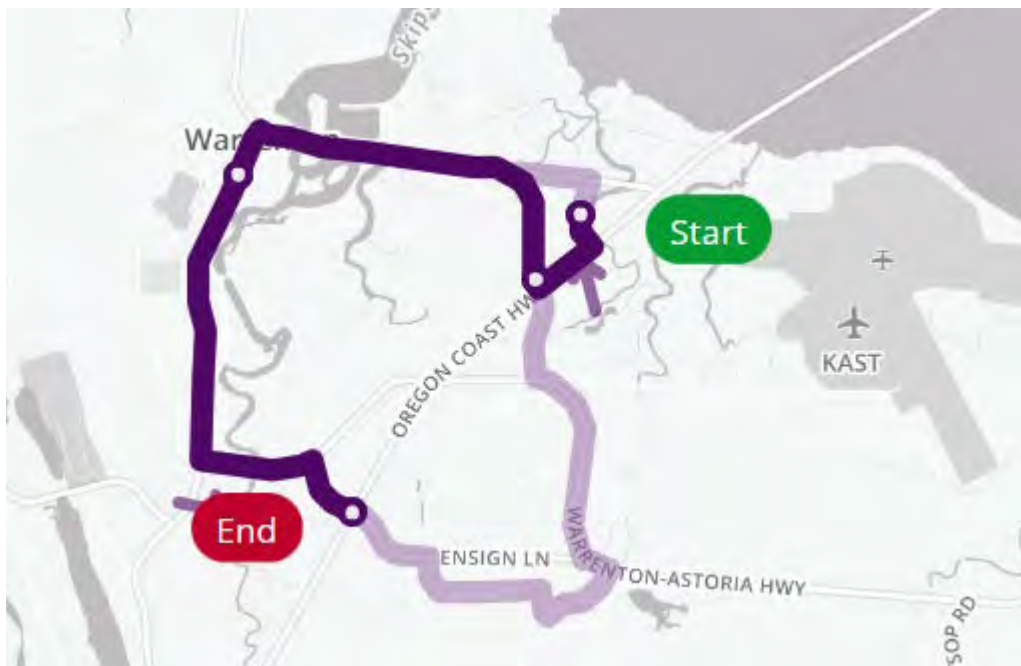
## ROUTE 15E

### Proposed Route (Short-Term, Mid-Term and Long-Term)

#### Inbound

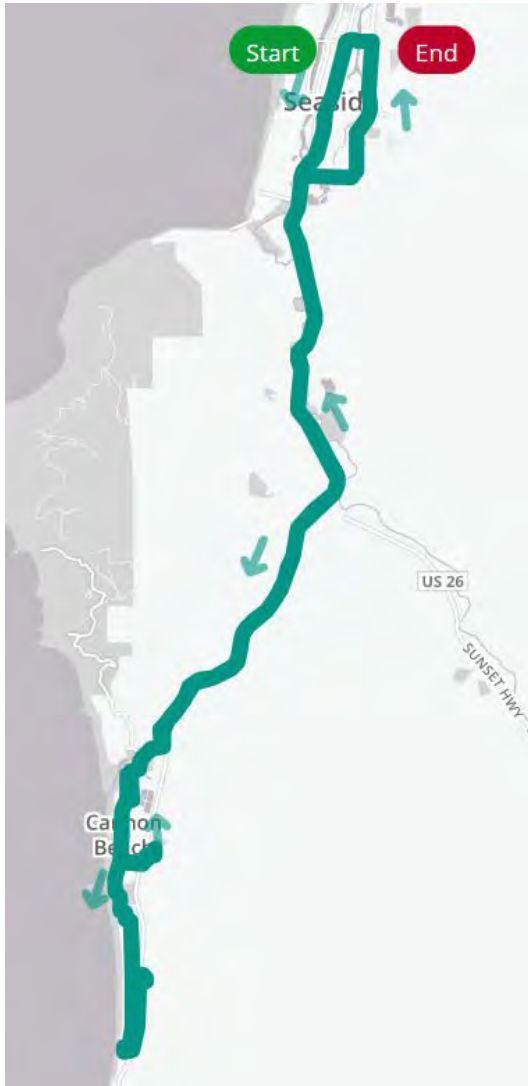


#### Outbound



## ROUTE 20

**Proposed Route (Near-Term)**



**Proposed Route (Short Term, Mid-Term, and Long-Term)**

