



CITY AND BOROUGH OF JUNEAU

# COMPREHENSIVE OPERATIONS ANALYSIS

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IN ASSOCIATION WITH:  
SHEINBERG ASSOCIATES

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

**Table of Contents**

|          |   | <b>Page</b> |
|----------|---|-------------|
| <b>1</b> | <b>Introduction and Summary .....</b>                       | <b>1-1</b>  |
|          | Introduction.....   | 1-1         |
|          | Summary of Findings.....                                    | 1-2         |
|          | Needs and Priorities.....                                   | 1-11        |
| <b>2</b> | <b>Capital Transit System Overview .....</b>                | <b>2-1</b>  |
|          | Fixed Route System Overview .....                           | 2-1         |
| <b>3</b> | <b>Capital Transit Route by Route Evaluation .....</b>      | <b>3-1</b>  |
|          | Data Collection and Analysis .....                          | 3-1         |
|          | On-Time Performance.....                                    | 3-1         |
|          | Route Summaries.....  | 3-3         |
| <b>4</b> | <b>Care-A-Van Service Evaluation .....</b>                  | <b>4-1</b>  |
|          | Care-A-Van Service Overview .....                           | 4-1         |
|          | Operations and Productivity .....                           | 4-6         |
|          | Key Findings.....   | 4-11        |
| <b>5</b> | <b>Peer Review.....</b>                                     | <b>5-1</b>  |
|          | Methodology .....   | 5-1         |
|          | Peer Overview .....   | 5-1         |
|          | Revenue and Funding.....                                    | 5-3         |
|          | Fixed Route Performance Data and Indicators .....           | 5-3         |
|          | Demand Response Performance Data and Indicators.....        | 5-5         |
|          | Key Findings.....   | 5-6         |
| <b>6</b> | <b>Document Review.....</b>                                 | <b>6-1</b>  |
|          | CBJ Comprehensive Plan, 2008 and 2013 Proposed Update ..... | 6-2         |
|          | Juneau Climate Action & Implementation Plan, 2011 .....     | 6-4         |
|          | 2010 Juneau Senior Needs Survey .....                       | 6-4         |
|          | 2008 Transit Development Plan .....                         | 6-5         |
| <b>7</b> | <b>Demographic and Land Use Analysis.....</b>               | <b>7-1</b>  |
| <b>8</b> | <b>Community Engagement .....</b>                           | <b>8-1</b>  |
|          | On-Board Survey.....  | 8-2         |
|          | Online Community Survey .....                               | 8-17        |
|          | UAS Survey .....  | 8-21        |
|          | Stakeholder Interviews .....                                | 8-25        |
|          | Operations Staff & Driver Feedback.....                     | 8-31        |

**Appendix A: Document Review Supporting Documentation**

**Appendix B: Fixed Route Scorecards**

## Table of Figures

|           |  | <b>Page</b> |
|-----------|--|-------------|
| Figure 1  | Frequency and Span of Fixed Route Service.....   | 2-2         |
| Figure 2  | Existing Capital Transit Services and Major Activity Centers.....                        | 2-3         |
| Figure 3  | Performance Characteristics by Route and Day Type.....                                   | 2-4         |
| Figure 4  | Boardings per Service Hour by Route (FY 2012).....                                       | 2-5         |
| Figure 5  | Systemwide Performance Metrics (FY 2010 - FY 2012).....                                  | 2-5         |
| Figure 6  | System Ridership by Month (FY 2010 - FY 2012).....                                       | 2-6         |
| Figure 7  | On-Time Performance by Route and Day Type.....   | 3-2         |
| Figure 8  | On-Time Percentage by Route and Day Type.....  | 3-2         |
| Figure 9  | Weekday Daily Ridership: Valley Routes 3 and 4 Combined.....                             | 3-5         |
| Figure 10 | Saturday Daily Ridership: Valley Routes 3 and 4 Combined.....                            | 3-6         |
| Figure 11 | Weekday Daily Ridership: Express.....  | 3-8         |
| Figure 12 | Weekday Daily Ridership: Douglas.....  | 3-11        |
| Figure 13 | Saturday Daily Ridership: Douglas.....   | 3-12        |
| Figure 14 | Weekday Daily Boardings: North Douglas.....  | 3-14        |
| Figure 15 | Care-A-Van Service Area.....   | 4-3         |
| Figure 16 | Care-A-Van Annual Ridership including Wheelchair Trips (2003-2012).....                  | 4-7         |
| Figure 17 | Care-A-Van Ridership by Month (2009-2012).....   | 4-7         |
| Figure 18 | Care-A-Van Ridership by Day of the Week.....   | 4-8         |
| Figure 19 | Care-A-Van Origin and Destinations (Sample Day).....                                     | 4-9         |
| Figure 20 | Community and System Overview, 2011.....   | 5-2         |
| Figure 21 | Peer Operating Expenses and Revenue Sources (Fixed Route and Demand Response), 2011..... | 5-3         |
| Figure 22 | Performance Data and Indicators (Fixed Route), 2011.....                                 | 5-4         |
| Figure 23 | Performance Data and Indicators (Demand Response), 2011.....                             | 5-6         |
| Figure 24 | Population and Employment Density (2010).....  | 7-3         |
| Figure 25 | Density of Youth Age 10 to 17, 2010.....   | 7-4         |
| Figure 26 | Density of Seniors Aged 65 and Older, 2010.....  | 7-5         |
| Figure 27 | Households with Income below Federal Poverty Line, 2007 - 2011.....                      | 7-6         |
| Figure 28 | Households with No Vehicle, 2007 - 2011.....   | 7-7         |
| Figure 29 | Home-based Trip Purposes.....  | 8-2         |
| Figure 30 | Origin-Destination Pairs Reported by Survey Respondents.....                             | 8-4         |
| Figure 31 | Transit Access Mode.....   | 8-5         |
| Figure 32 | Bus stop Egress Mode.....  | 8-5         |
| Figure 33 | Transfer Matrix.....   | 8-6         |
| Figure 34 | Frequency of Transit Ridership.....  | 8-7         |
| Figure 35 | Tenure of Transit Ridership.....   | 8-7         |
| Figure 36 | Alternative Mode if Capital Transit was Unavailable.....                                 | 8-8         |
| Figure 37 | Transit Payment Means.....   | 8-9         |
| Figure 38 | Capital Transit Service Ratings.....   | 8-10        |
| Figure 39 | Identified Improvements for Increased Ridership (respondents chose top three).....       | 8-11        |
| Figure 40 | Top Three Responses (per choice).....  | 8-12        |
| Figure 41 | Most Important Improvement (respondents' identified top choice).....                     | 8-13        |

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

|           |  |      |
|-----------|--|------|
| Figure 42 | Age of Respondents .....   | 8-14 |
| Figure 43 | Total Household Income.....  | 8-14 |
| Figure 44 | Employment Status.....   | 8-15 |
| Figure 45 | Access to the Internet.....  | 8-16 |
| Figure 46 | Means of Accessing Information about Capital Transit Service .....           | 8-16 |
| Figure 47 | What are the reasons you use transit in Juneau?.....                         | 8-18 |
| Figure 48 | Respondents views on public transportation for the following statements..... | 8-19 |
| Figure 49 | Transit Tradeoffs.....   | 8-20 |
| Figure 50 | Open-Response Word Cloud.....  | 8-21 |
| Figure 51 | Respondent Groups.....   | 8-22 |
| Figure 52 | Mode of Travel to Campus.....  | 8-23 |
| Figure 53 | Capital Transit Routes Used.....   | 8-23 |
| Figure 54 | If Express Route Ran Later, Would Respondent Use It?.....                    | 8-24 |
| Figure 55 | Reasons for not using Capital Transit .....                                  | 8-24 |
| Figure 56 | Tradeoff Exercise Summary .....  | 8-29 |
| Figure 57 | Interviewed Stakeholders.....  | 8-30 |

# 1 INTRODUCTION AND SUMMARY

## INTRODUCTION

This Comprehensive Operations Analysis (COA) assesses demographic and community trends, transit system characteristics and performance, as well as feedback from key stakeholders, existing riders and the greater community. It also provides a summary of previous planning and policy documents pertinent to transit in Juneau, as well as a review of other peer transit systems and how they compare to Juneau. Through this initial documentation of existing conditions, a series of key findings, needs and priorities is provided at the end of this section. The key findings, needs and priorities will form the foundation for the service planning phase of the Transit Development Plan (TDP). The TDP will be the next phase of the study.

The COA consists of seven chapters in addition to this executive summary, which are summarized below.

### **Chapter 2: Capital Transit System Overview**

This chapter provides an overview of the fixed route system (Capital Transit), including recent operational data (ridership, revenue hours, operating costs, fares) and performance metrics.

### **Chapter 3: Capital Transit Route Summaries**

Based on data collected for the COA, a performance summary is provided for each Capital Transit route. This includes a description of the routing and service characteristics, analysis of ridership patterns by stop and time period, and an evaluation of on-time performance.

### **Chapter 4: Care-A-Van Service Evaluation**

An evaluation of the Care-A-Van program is also provided, including an overview of service and eligibility characteristics, ridership, and operational data. Care-A-Van's program evaluation system is also reviewed, as well as the City and Borough of Juneau's (CBJ) contract with Southeast Senior Services (SESS).

### **Chapter 5: Peer Review**

To better understand how Juneau compares to other transit systems (in Alaska and the rest of the country), Capital Transit and Care-A-Van were compared to systems in five other cities across the country. The peer cities include Fairbanks, Anchorage and Ketchikan in Alaska, as well as Clallam County, Washington and the Roaring Fork Transit Authority in Glenwood Springs/Aspen, Colorado. Transit services in Juneau were compared with the peers in terms of economic and demographic characteristics, revenues and funding, and performance data.

## **Chapter 6: Document Review**

To help better understand the planning context in Juneau, a review of several pertinent planning and policy documents was conducted. The focus of the document review was on the CBJ Comprehensive Plan (2008 and 2013 proposed updates), the Juneau Climate Action & Implementation Plan (2011), and the most recent Transit Development Plan (2008).

## **Chapter 7: Demographic and Land Use Analysis**

To better understand how the geographic areas in Juneau differ in terms of demographics and economic characteristics, a review was conducted of population and employment densities, youth and senior population density, low income density, and density of households without access to a vehicle. While population and employment density are the two greatest indicators of where transit demand will be the highest, the other demographic groups tend to use transit more frequently than the general public.

## **Chapter 8: Community Engagement**

This final chapter provides an overview of several community engagement activities that have been undertaken since the initiation of the project. This includes an online survey of University of Alaska Southeast (UAS) students, faculty, and staff, an online community survey, two community open house meetings held in mid June 2013, and stakeholder interviews. In addition, the study was announced throughout the community via a variety of media, including appearances on *A Juneau Afternoon* and *Capital Chat*. A project website has also been established: [JuneauTransitPlan.org](http://JuneauTransitPlan.org).

## **SUMMARY OF FINDINGS**

This section provides a summary of findings from the information presented in the Comprehensive Operations Analysis, as well as input received from the Project Management Team, Study Advisory Group, stakeholders and transit operators. Based on this evaluation of key findings, needs and priorities for Capital Transit and Care-A-Van are provided at the end of this section.

### **Juneau is a Unique Community**

It goes without saying that Juneau is unique compared to most other communities in the country. While the setting on the Gastineau Channel and Auke Bay is stunning, it also means that the amount of buildable land is relatively small. As such, residents, employment, and activity centers in Juneau are relatively spread out, while population and employment densities are very high in some areas. In addition, as Alaska's state capital and a major tourist destination, a significant number of people visit Juneau at certain times of the year. Key findings related to Juneau's unique setting and geography as they relate to transit service include:

- **High residential and employment density, but dispersed activity centers.** While Juneau has a relatively small population (31,244 in 2010), residential and employment densities in some areas are as high as 180 people per acre and 475 jobs per acre. This is on par with much larger communities. Because there are pockets of high density housing and employment that are connected by relatively few roadways, Juneau's built environment is well suited for transit.

- **Limited roads appropriate for transit.** The roads that transit can operate on in Juneau are relatively limited. With just three routes on the major corridors in the community, it is estimated that about 95% of the population in Juneau is within ¼ mile of an existing route.
- **Desire for infill and mixed use, transit-oriented development.** Based on the 2008 Comprehensive Plan (and proposed 2013 updates), there will be a strong focus on transit-oriented development (TOD) and infill development, especially along Capital Transit routes. Transit is viewed as playing an important, if not critical, role in achieving goals in the Comprehensive Plan.
- **Seniors, youth and low-income.** Seniors in Juneau (65 and over) tend to be more concentrated in the downtown area, while youth (10-17) are more concentrated in Mendenhall Valley and in Lemon Creek. Low-income families and households without a vehicle available to them are concentrated in downtown as well as in the Lemon Creek and lower Mendenhall Valley (between Stephen Richards and Glacier Highway). This is reflected in the ridership data, which is very high in all of these areas. The on-board passenger survey also revealed that about 30% of riders have an annual household income under \$10,000, while the US Census found that just 3% of all residents in Juneau have a household income under \$10,000. Thus, it is important to ensure that areas with higher concentrations of low-income residents are served well with transit.
- **Employment locations in Juneau are heavily concentrated downtown.** With the state capitol and other state and federal employment, as well as retail and tourist-related employment, downtown by far has the biggest concentration of employment in Juneau. Smaller but still significant concentrations of employment include the area around the Nugget Mall (including the mall itself), the Mendenhall Mall, Fred Meyer, Walmart, the businesses along Anka Street in Lemon Creek, and around Bartlett Hospital. Development on Douglas Island is largely residential, as is the northern part of the Mendenhall Valley (north of the Mendenhall Mall and Safeway). The University of Alaska Southeast (UAS) is also an important employment and activity center.
- **Seasonal demand.** Ridership in Juneau peaks in the summer months, which is not typical of many transit systems (when schools are out of session, more people take vacations, and other modes like walking and biking are more popular). However, Juneau's cruise ship and tourist season peaks in the summer months, generating higher ridership due to tourists and seasonal workers. In addition, the Alaska State Legislature meets from January to April annually, which also generates additional activity and demand during the winter.

## **Strong Approval of Transit Service, but Some Improvements are Desired**

Transit service in Juneau attracts a wide variety of riders, from riders with no other transportation option to choice riders commuting to and from work. Key findings related to existing transit services include:

- **High Ridership.** Total annual ridership on Capital Transit is among the highest in the country for a “rural” community (less than 50,000 residents), and perhaps the highest in terms of ridership per capita. Compared to the peers selected for this analysis (Ketchikan, Anchorage, Fairbanks, Clallam County, WA and Glenwood Springs/Aspen, CO), the number of transit trips per capita in Juneau is the highest.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

- **High Productivity.** Transit productivity (passengers per in-service hour) in Juneau is also very high. The fixed route system carries on average 27 passengers per hour when averaged throughout the year, and as many as 51 passengers per hour on weekdays on the Valley routes (based on the boarding and alighting study). Compared to the peers, transit productivity in Juneau is among the highest, which is notable considering the peers include much larger communities like Anchorage.
- **High Satisfaction.** Satisfaction among existing transit riders is very high on Capital Transit. When asked to rank their satisfaction of the overall bus service, more than 25% said “Very Good” and another 45% said “Good.” Less than 1% of existing riders gave an overall rating of “Poor.” In addition, not a single stakeholder interviewed had overly negative things to say about Capital Transit or Care-A-Van. In fact, many stakeholders praised the transit system and noted that transit in Juneau is part of the transportation infrastructure. And when asked to rate the benefits of transit in Juneau on the community survey, the majority gave a high rating (averaging 8 on a scale from 1 to 10, with 10 being significant benefit).
- **New transit riders.** While about 60% of riders have been using Capital Transit for more than 2 years, the system is still attracting new riders. About 25% of existing passengers said they have been using Capital Transit less than 1 year, and more than half of those passengers have been riding less than six months. These new riders could reflect seasonal workers coming to Juneau.
- **Strong Financial Investment.** The local investment in transit in Juneau is among the highest of any peer. This investment in Juneau pays off more than in other communities in terms of high ridership and efficiency. It was noted that state funding for transit in Alaska is very limited, which requires smaller rural communities like Juneau to rely on local support to maintain the high level of service.
- **Desire for Geographic Expansion.** While most passengers and stakeholders are very satisfied with the level of coverage provided by Capital Transit, there are a number of places where geographic expansion of transit is desired in Juneau (listed roughly in priority order):
  - **Auke Bay Ferry Terminal.** Primarily among stakeholders, and to some degree among existing riders, the Auke Bay Ferry Terminal (and Alaska Glacier Seafood) was the most desired new destination in Juneau. It was noted, however, that there is very little demand between where the existing service operates (on Glacier Highway and the Mendenhall Loop road) and the ferry terminal. It was also noted that ferry schedules change regularly, which would make it difficult to coordinate with a regular transit route.
  - **Riverside Drive.** There is also a significant amount of interest in providing service to Riverside Drive (even though some express trips already serve Riverside Drive). While a significant effort has gone into identifying ways to efficiently serve Riverside Drive, a number of stakeholders noted that this remains a significant gap in all-day service in the community.
  - **Costco/Home Depot.** Many stakeholders and existing riders also noted that service to the Costco and Home Depot (as well as the Alaskan Brewery and other businesses) via Anka Street is desired. Some riders and members of the public noted that the deviation to Lemon Creek to serve the jail is a remnant of historic routing and should be eliminated in favor of service to Anka Street.



- **Thane Road.** While the demand would be very low based on population and employment density, several members of the public desire service (even if very limited) on Thane Road.
- **Desire for Improved Service Levels.** While the frequency and span of service are very good in Juneau compared to the peer communities, there were a number of desired service improvements (roughly listed below in priority order based on stakeholder and passenger input):
  - Later evening Sunday service (which currently ends around 6:30 PM)
  - More frequent service in the early evening on the Valley routes 3 and 4 (when the Express Route ends and the Valley routes reduce frequency).
  - Service on holidays.
  - Later service hours on the Express Route (especially on Friday night since there are many events on the UAS campus).
- **Better Downtown Circulation.** A number of stakeholders are interested in improved circulation in downtown Juneau. A downtown circulator used to operate in Juneau (in the 1980s), and performance was noted as being very good. Renewed interest in downtown circulation today is about moving people but also about encouraging new development.
- **Improved Facilities.** Some stakeholders noted that existing passenger facilities in some areas are lacking in Juneau. While the Downtown Transportation Center was generally praised, the most commonly noted facility improvement was a better transfer location in the Valley (either by the Nugget Mall or a new location). It was also noted that park and ride facilities should be explored, especially along the Express Route in the Valley. One potential location to explore for a new transit/park and ride facility is on Vintage Boulevard just west of Riverside Drive. Finally, several people noted that stops and shelters should be better maintained, in particular the Federal Building stop.

## **Multimodal Connections to Transit and Transportation Options**

While not as significant of a need as improvements to the transit system itself, several stakeholders and other community members noted the need to better integrate transit with other modes – particularly pedestrian connections.

- **Improved sidewalks and crossings.** When stakeholders were asked about general transportation needs in the community, some mentioned the need for improved sidewalks and connectivity across major roadways. In particular, crossing Glacier Highway near the Alaska Job Center (Industrial Boulevard) was noted as an important opportunity for improvement.
- **Most people access the bus by walking.** Walking is by far the most common way people accessed the transit system. About 95% of existing passengers accessed the bus by walking (as opposed to being dropped off, driving and parking, or riding their bike). When asked how existing transit passengers would have made their trip if transit were not available, 23% said they would walk, indicating that safe and accessible sidewalks will remain a critical element for making public transit attractive.

## Service Design and Operational Evaluation

Based on the evaluation of boarding and alighting data, the on-board passenger survey, and meetings with transit operators, there are several challenges and opportunities related to service design and operation of transit in Juneau. A route-by-route evaluation of these issues is presented below.

### Valley Routes 3 and 4

- **Route Design and Ridership.** The two Valley routes (3 and 4) have a 120-minute round trip travel time and both routes operate on hourly headways for most of the weekday and on weekends. A maximum of four buses are required to operate the two routes. The schedules of the two routes are offset, which means that on the common segments (south of the Nugget Mall), service is provided every 30 minutes until 6:30 PM when each route operates every 2 hours and combined headways are every hour. A discussion of the route design and ridership patterns from north to south is provided below.
  - **Mendenhall Valley.** On the Mendenhall Valley Loop road, the two routes operate in opposite directions (Route 3 is counter-clockwise and Route 4 is clockwise). While this is an efficient way to serve the Mendenhall Valley Loop road – especially the back loop that has lower demand – and existing passengers understand how this works, the design was noted as somewhat confusing by several stakeholders (presumably not as familiar with the system). This design also means that service frequency on the Valley loop is every hour in each direction (though one route is traveling the loop every 30 minute in alternating directions). Ridership on the Valley loop is significantly stronger on the eastern side of the loop compared to the western side of the loop (it is estimated that between 2/3 and 3/4 of ridership activity on the loop occurs on the eastern side of the loop). This means that there is a disproportionate level of service on the western side of the loop compared to the eastern side in relation to the demand.
  - **Nugget Mall to Lemon Creek.** The route operates in both directions on Egan Drive and Glacier Highway along this segment. The major stops at Fred Meyer and Walmart are the highest along the route outside of the transfer locations (combined, about 700 inbound and outbound boardings and alightings on weekdays). While there are some issues with the inbound left turn at Egan Drive and Glacier Highway (see on-time performance section below), there are no viable alternative alignment options where transit could operate along this segment.
  - **Lemon Creek/Davis Avenue.** Routes 3 and 4 both deviate about ½ mile to serve Davis Avenue and Lemon Creek Road, which is a fairly narrow residential street. The Lemon Creek Correctional Center is at the end of this deviation, though the bus cannot enter this facility and turns around before the entrance. While ridership on this segment is respectable (about 100 inbound and 100 outbound boardings and alightings on weekdays), it was noted that in the inbound direction, the left turn from Davis Avenue to Glacier Highway is especially difficult to make. The Lemon Creek deviation is not served when there is significant snowfall.
  - **Lemon Creek to Downtown.** Both routes operate exclusively on Glacier Highway along this segment, with the exception of the deviation to serve SEARHC and Bartlett Hospital (which combined have about 130 inbound and 150 outbound boardings and

alightings on weekdays). There are no other viable alignments where transit could operate in this segment.

- **Downtown.** Both Valley routes operate by the Federal Building and the Willoughby District (via Willoughby Avenue) and then complete a one-way counter-clockwise loop via Franklin, Fourth, and Main Streets before terminating at the Downtown Transportation Center. The highest ridership stops along this segment are at Juneau-Douglas High School, the Federal Building, Foodland, and the Downtown Transportation Center. It should be noted that data on the Franklin/Fourth/Main Street loop was not collected due to road construction during the time of the data collection, but operators noted that this temporary route change did not have a significant impact on ridership or passenger satisfaction. It should also be noted that the downtown loop does not proceed north of Front Street when there is significant snowfall.
- **On-time performance.** Based on the data collection effort, there were more late arrivals on the Valley routes (3 and 4) than on any other routes. This was identified in the data collection and verified by operator and stakeholder input. Operators noted that missed connections to the Express and Douglas routes are common. Discussing this issue further with operators, and evaluating the data in more detail, several issues were noted (from north to south):
  - **Mendenhall Valley.** The bus travel time of the loop in the Mendenhall Valley (30 minutes to and from the Nugget Mall) takes about the same time in a personal vehicle (about 22 minutes without traffic). With extensive boarding activity on the eastern side of the valley, the timed transfers to the Express Route (at Nugget Mall) are difficult to make consistently, which then results in the routes being unable to make connections to the Douglas Route downtown. Given the limited roadways where transit can operate in the valley, this issue may be difficult to remedy without a significant route redesign. It should be noted that ridership activity on the western side of the Back Loop Road is significantly lower than on the eastern side of the loop, which could further justify a modification in the route design.
  - **Nugget Mall to Lemon Creek.** In the inbound direction, the left turn onto Glacier Highway by Fred Meyer can significantly slow down operations, especially during the PM peak period. Operators suggested that on some trips during the PM peak period, it might be faster to continue south on Egan Drive, turn around at the underpass by Walmart, and then return in the northbound direction. This would not require a change in the schedule as no stops would be skipped.
  - **Lemon Creek/Davis Avenue.** Travel time in and out of Lemon Creek was noted as slowing down the Valley routes, especially in the inbound direction, which requires an unassisted left turn from Davis Avenue onto Glacier Highway. This was noted as an issue throughout the day, not just at certain time periods.
  - **Lemon Creek to Downtown.** No significant issues were noted related to on-time performance along this segment. The deviation into Bartlett Hospital is slow, but as noted above, ridership along this segment is respectable and the hospital is not easily accessible via Glacier Highway.
  - **Downtown.** The on-time performance analysis indicates that travel times between the Downtown Transportation Center and the Federal Building are more than adequate and could potentially be adjusted to make time elsewhere in the route. The

downtown loop (via Franklin, 4<sup>th</sup>, and Main), however, was noted as being particularly slow, both in the summer when there are a lot of tourists, as well as in the winter when snow can narrow the roadways. While ridership and on-time performance were not recorded on this segment during the data collection (due to construction activity), operators and some stakeholders noted that the Downtown Transportation Center is a short walk to most destinations currently served by the downtown loop and that the loop may be more symbolic than necessary. Still, some stakeholders noted that while Fourth Street is about ¼ mile from the Downtown Transportation Center, it is up a steep hill, which would be difficult to navigate especially for seniors and people with disabilities.

- **Transfers.** Related to on-time performance is the need to ensure timed connections and transfers between routes. Currently, there are three primary transfer locations on the Valley routes: (1) at the Nugget Mall, (2) at the Federal Building and (3) at the Downtown Transportation Center (Main Street).
  - It was noted by operators that the transfer between the Valley routes and the Douglas Route is often missed. Based on the on-board passenger survey, these transfers represent at least 25% of all transfers on the system (though operators anecdotally estimated that as many as 80% of riders on the Douglas Route transfer to the Valley or Express routes).
  - Timed transfers at the Nugget Mall (to the Express Route) are also often missed (according to operators), which is a reflection of both the outbound Valley routes as well as the time it takes to complete the Valley loop.
- **Overloading.** The top complaint among existing passengers is overcrowding, especially on the Valley routes. The maximum load point on this route (in both directions) is at the AWARE shelter, just north of downtown on Glacier Highway. The maximum load point throughout the day (which is an indicator of where overcrowding may be happening) occurred on the evening trips (around 6:30 PM and again at 7:30 PM) in the outbound direction (after service frequencies were reduced). In the inbound direction, the maximum load point occurred in the morning around 7:00 AM. While overcrowding is a sign of success, it negatively affects on-time performance and makes the service less comfortable for all riders. There are two ways to manage overloading: more capacity or more frequency. More frequency requires more vehicles and additional operating costs, while more capacity can be managed with existing resources but would require additional capital purchases (and perhaps additional costs to maintain new vehicles). Opportunities that will be explored include extending the 30 minute service on the Valley routes until 7:00 or 8:00 PM, or offering longer Express service hours to help alleviate overcrowding on the Valley routes. Another opportunity might be to add additional capacity by purchasing articulated or even double-decker buses. This would more than double the capacity of each vehicle without requiring an additional vehicle and operator.

### **Douglas Route**

- **Service Design and Ridership.** The Douglas Route is a simple, bi-directional route that has a round-trip travel time of 60 minutes. Headways on the Douglas Route are every 30 minutes for most of the service day (from 8:00 AM until 6:30 PM), so a maximum of two in-service vehicles are needed on this route. Overall, ridership is more peak-oriented, with more inbound ridership in the morning, and outbound ridership in the evening. There are three primary segments on this route:

- **St. Anns to Cedar Park.** Ridership on this segment is the strongest between Crow Hill and the Douglas Library, where there are about 300 all-day boardings and alightings (inbound and outbound) on weekdays. The end of the route on St. Anns Avenue has relatively low ridership. St. Anns Avenue is also not served when there is significant snowfall. There are no other viable transit corridors along this segment of the route.
- **Cedar Park to the Federal Building.** This segment of the route has relatively low ridership with the exception of Cedar Park and the Breeze Inn stop, which combined has about 180 weekday boardings and alightings. There is one deviation on the route at Cordova Street, which is not served when there is significant snowfall. While the route does not need to serve Cordova Street, the terrain and ridership demand here warrants the deviation.
- **Downtown.** The Douglas Route mirrors the Valley routes from Twelfth Street and Glacier Avenue. The highest ridership stops are at the Federal Building and Main Street where transfers can be made to the Valley and Express routes. The Foodland stop also has good ridership activity (about 100 weekday boardings and alightings). There are options for how this route could serve the destinations in the downtown area, but the alignment via Glacier Highway and Willoughby serves the destinations very well.
- **On-time performance.** Based on limited data from the data collection effort, there do not appear to be issues with late arrivals on the Douglas Route, though early departures were noted on many trips (as many as 30% of trips between the St. Anns turnaround and Cedar Park). While Capital Transit’s policy is not to leave a stop or timepoint early, this issue should be examined to ensure that this was just an anomaly in the data collection and that early departures on these segments are not occurring consistently.
- **Transfers.** There are two transfers available from the Douglas Route: (1) to the Express Route at the Federal Building, and (2) to the Valley routes at either the Federal Building or Downtown Transportation Center. Transfers to the Valley routes are timed both at the Federal Building and the Downtown Transportation Center, whereas transfers to the Express Route at the Federal Building require about a 15 minute wait in both directions.
  - As noted above, operators indicate that the transfer between the Douglas Route and the Valley routes is often missed due to late arrivals on the Valley routes. This is a big issue for riders on the Douglas Route since a significant number of transfers occur to the Valley routes (a high percentage transfer according to the operators).
- **Overloading.** Some overloading is occurring on this route during the AM peak (inbound) and PM peak (outbound) periods, but this is not as big of an issue as the Valley routes since it is occurring on just one or two trips in each direction. Overloading outside of the peak periods is not an issue on this route.

## **Express Route**

- **Service Design and Ridership.** The Express Route is a limited stop, bi-directional route that has a round-trip travel time of 60 minutes. Headways on the Express Route are every 30 minutes throughout the day. A maximum of two in-service vehicles are required to operate this route. An analysis of ridership and routing design is provided for the two primary segments on this route:

- **UAS to Nugget Mall.** Ridership is strongest at the Nugget Mall, where there are timed transfers to both Valley routes in both directions (inbound and outbound). Boarding activity at UAS is respectable (about 70 all-day boardings and alightings), but much lower than at the Nugget Mall (about 330 all-day boardings and alightings). There are other viable routing options to connect UAS to the Nugget Mall, especially with the stop at the airport.
- **Nugget Mall to Downtown.** This route operates on the fastest, most direct connection between the Nugget Mall and downtown (Egan Drive). There are no stops between the Nugget Mall and the Archives Building (Willoughby Ave & Egan Dr) in the inbound direction, which has about 120 alightings all day. In the outbound direction between the Archives Building and the Federal Building, there are about 150 all day boardings and 150 alightings. This seems to indicate that express riders are equally using the Express Route to access the Federal Building and Willoughby District as they are the downtown core.
  - **On-time performance.** There are some minor issues with early and late trips on this route, but overall it has excellent on-time performance with 95% on-time arrivals/departures at timepoints along the route.
  - **Transfers.** Transfers to the Express Route are timed at the Nugget Mall (to the Valley routes), but not timed to the Douglas or Valley routes at the Federal Building (though transfers are possible with a 15 minute wait in either direction). The Express Route also does not serve the Downtown Transportation Center, for several reasons. First, the round-trip running time would make it difficult to keep the route as currently designed on-time, and second because of capacity constraints at the Downtown Transportation Center. Still, it should be evaluated whether the Express Route could make this connection to the Downtown Transportation Center.
  - **Overloading.** Overloading is not a significant issue on the Express Route, though the first two inbound trips in the morning (7:03 AM and 8:03 AM) are experiencing the highest loads. Note that this is occurring before the route begins service every 30 minutes. Peak passenger loads fluctuate then throughout the day, but there are generally no more than 20 passengers at a time.

## North Douglas

This route provides three round trips daily between North Douglas and Juneau. Ridership is very peak-oriented: all inbound boardings are in North Douglas and all outbound boardings are in Juneau, indicating that the route is used for travel between North Douglas and Juneau, and not for trips that stay on Douglas Island. The first inbound trip in the morning (7:25 AM) had a total of 16 boardings, which was the highest of any inbound or outbound trip. The outbound trip at 5:00 PM had 9 boardings. Timed transfers are available to the Valley and Douglas Routes both at the Federal Building and the Downtown Transportation Center. There do not appear to be any issues with on-time performance or overcrowding on this route.

## Care-A-Van

The evaluation of Care-A-Van operations and performance demonstrates that the program provides a high level of transportation to Juneau's most vulnerable population. The service is coordinated with other human and medical transportation programs, which helps create efficiencies in terms of management and operations and makes it easy for riders to understand

and use the system. The evaluation also reveals a handful of opportunities for Capital Transit to consider as it determines how best to meet future needs within available resources:

- Care-A-Van currently exceeds the ADA requirements on several service criteria, including the level of service, the time of day, service area, eligibility and fares. Some of the decisions help support coordination of service across funding programs, which benefit riders. At the same time, however, the costs and benefits associated with continuing or changing these practices - collectively and individually - are not well understood.
- ADA allows transit operators to create categories of eligibility that reflect travel conditions and/or allow for temporary or transitional conditions. Creating categories of eligibility means that for some trips, passengers may not be eligible for demand response service for some trips (depending on weather, bus stop location, etc.) but not all trips. Categorical eligibility can be difficult to implement but has produced significant cost savings for some transit systems. Capital Transit may explore the implications of establishing categorical eligibility as one of several strategies to reduce costs and more closely manage the program.
- Care-A-Van, as discussed, is a coordinated system and many riders use with travel supported by a variety of funding sources. To date, Care-A-Van does not have a clear system to track individual clients and trip. As a result, it is difficult for the program to share costs based on shared rides, or ensure costs are allocated to the most appropriate funding program. Technology exists to manage and track trips, including how rides are shared. However, systems can be expensive to purchase and complex to administer, but have potential to better share costs across programs and potentially make better use of federal resources.

## **NEEDS AND PRIORITIES**

Based on the summary of the Comprehensive Operations Analysis provided above, there are several issues currently facing Capital Transit and Care-A-Van that will be the primary focus of the service planning phase of the Transit Development Plan (TDP). Many of the issues listed below are interrelated, and thus all are a priority for this TDP and will be explored in the next phase of the project.

- **Reliability and service design of the Valley routes (3 and 4).** While these two routes do very well, there are a number of operational issues that need to be addressed in this TDP.
  - **On-time performance.** Perhaps the most pressing issue facing Capital Transit is the inability for the Valley routes to reliably make timed connections to the Express and Douglas routes (as noted above). While missed timed connections are not occurring on *every* trip, they are occurring on enough trips to justify a remedy as part of this TDP. The on-time performance issue is largely a function of the length of the route, which is then compounded by heavy boarding and alighting activity and time-consuming turning movements at several locations (e.g., Yandukin Drive/ Egan Drive and Davis Avenue/Glacier Highway).
  - **Service design and timed transfers.** To provide the fastest service between downtown and the Mendenhall Valley, timed connections occur between the Valley routes and the Express route at the Nugget Mall in both directions. While timed connections offer good connectivity throughout the system, they are not always

reliable. In addition, this service design also requires some riders to transfer, which is often a deterrent, especially for riders that have a choice in how they travel.

- **Low ridership and demand on back loop.** It is also clear that the level of service on the Valley loop is not proportional to demand – the east side of the loop has significantly higher demand than the back loop, though both areas receive the exact same level of service.
- **Overcrowding.** Existing riders and a number of stakeholders noted that overcrowding on the Valley routes was an issue that needed to be addressed. Either through capital improvements (i.e., vehicles with more capacity) or service design changes, this issue will be addressed as part of the service planning phase of the TDP.
- **Confusing service design in the Valley.** The alternating direction on the back loop road can be confusing to first-time and occasional riders. This also results in irregular frequencies around the loop (with service in one direction, all service would operate at consistent frequencies; with service in opposite directions, trips from individual locations could have headways that are much closer or further apart).
- **Maximizing use of the Express Route.** While the Express Route was praised by riders and stakeholders alike, the route has several issues, and options will be explored for making the most efficient use of this route.
  - **Running time.** This route does not have enough running time to get to the Downtown Transportation Center, and as a result only operates to and from the Archives Building near the corner of Willoughby Avenue and Egan Drive.
  - **Underutilized capacity.** While data collection and stakeholder interviews indicated that the Valley routes (3 and 4) were overloaded on many trips, the Express Route has excess capacity on many trips – even during peak periods.
  - **Too much service between the Nugget Mall and UAS.** Both the Valley routes (3 and 4) and the Express route operate between the Nugget Mall and UAS, effectively offering four buses per hour (though the Valley routes alternate direction). This segment represents the highest concentration of service in the system and is disproportionate to the level of demand.
  - **Low midday demand.** Ridership during the middle of the day on the Express route is lower than during the peak periods, which is in contrast to the Valley routes that maintain high ridership throughout the day.
- **Douglas and North Douglas routes.** In general, the Douglas route has good ridership and serves the community well. However, there does appear to be some issue with early arrivals at some stops, which could require minor adjustments to the schedules. The North Douglas route, on the other hand, has respectable ridership on the first trip and last trip of the day, but very low ridership on the other trips.
- **Desire for service expansion.** There are three primary areas that are not currently served by Capital Transit but where there is significant demand:
  - **Service to the Ferry Terminal.** More than any other location, stakeholders, riders, and other members of the community have requested new transit service to the Ferry Terminal. Identifying a way to provide *some* service to the Ferry Terminal, even if it is limited and requires additional resources, will be explored in the service planning phase of the TDP.



**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

- **Service to Riverside Drive.** Similar to the desire to serve the Ferry Terminal, stakeholders and the public noted that Riverside Drive north of Mendenhall Mall should be served more regularly by Capital Transit. Because this area has very high transit demand, this issue has been extensively evaluated in the past. While served on one commuter express trip in the morning, the TDP will explore options for serving this corridor all day.
- **Service in Lemon Creek.** Another potential area for service expansion, as expressed by a number of stakeholders and members of the public, is the Costco/Home Depot area along Anka Street. In addition, the existing deviation via Davis Avenue and Lemon Creek Road was noted by operators and some passengers as too time-consuming on Routes 3 and 4, which as noted above, is having difficulty making timed connections to the Express and Douglas routes. As such, service into and out of the Lemon Creek area will be explored in more detail as part of the service planning phase.
- **Later service hours.** There are several areas where longer service hours are desired, particularly on the Express route (service to UAS) and later Sunday service hours on the Valley and Douglas routes.
- **High cost of Care-A-Van.** Because Care-A-Van provides a door-to-door service for seniors and people with disabilities, the costs associated with providing this service are significantly higher than fixed route on a per-passenger basis. Based on the peer review, paratransit costs in Juneau are higher than all but one of the peer communities. Exploring options for lowering the costs of Care-A-Van so that the most vulnerable users can continue to have a high quality of service will be explored as part of the TDP.
- **Downtown Circulation.** A number of stakeholders noted that there is a continued focus on downtown circulation – especially as it relates to the core of downtown, connections to the Willoughby District, and economic development. In addition, the Comprehensive Plan identifies transit as playing an important role in fulfilling goals related to infill and mixed use development in downtown Juneau as well as along major corridors. The service planning phase of the TDP, therefore, will evaluate options for enhancing downtown circulation – either with a separate shuttle or with existing bus routes.

## 2 CAPITAL TRANSIT SYSTEM OVERVIEW

### FIXED ROUTE SYSTEM OVERVIEW

Capital Transit operates local fixed route service seven days a week with express service operating Monday through Friday. Two local routes, Route 3 and Route 4, operate between downtown Juneau and Mendenhall Valley every hour, with a combined thirty minute frequency between downtown and Nugget Mall. Local service also operates between Douglas Island and downtown Juneau every thirty minutes. The local services operate Monday through Saturday from 7:00 AM to 11:30 PM and on Sunday from 9:00 AM to 6:30 PM. The Express Route operates between 7:00 AM and 7:00 PM Monday through Friday from Auke Bay / UAS Campus, providing limited stop service to and from downtown Juneau. North Douglas is served with three round trips in the, morning, midday, and afternoon, Monday through Friday. The North Douglas Route also operates as flag stop service. Additional express service from Mendenhall Valley is provided in the morning and afternoon peak hour, as outlined below:

- The Mendenhall Valley Commuter Morning Run departs Auke Bay at 6:45 AM and runs clockwise along Mendenhall Loop road before deviating into neighborhood streets where it operates flag stop service on Taku Boulevard, Riverside Drive, and Radcliffe Street. The route then travels to the Nugget Mall and operates express service directly to downtown Juneau via Egan Drive.
- The Lemon Creek Express leaves the bus garage in-service, travels inbound to Lemon Creek at 7:10 AM, and then operates express service directly to downtown Juneau.
- The Mendenhall Valley Express Morning Run departs Auke Bay at 7:10 AM, operates the same alignment as Route 4 to the Nugget Mall, and then operates express service directly to downtown Juneau. In addition, the Capital Transit timetable shows a Mendenhall Valley Express trip leaving at 6:50. This is not an actual trip, but represents a route combination that riders can take – Route 4 to Nugget Mall, and then a transfer to the Mendenhall Valley Commuter.
- In the outbound direction extra trips operate from Main Street at 7:15 AM, 2:35 PM, 3:05 PM, 4:05 PM, and 4:35 PM. These trips operate limited stop express service between downtown Juneau and the Nugget Mall and then operate the same alignment as Route 3 to Auke Bay.

Service span and frequency of each route are shown in Figure 1. A map of all routes is shown in Figure 2.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

**Figure 1 Frequency and Span of Fixed Route Service**

| Route            | Service Span       |                 | Service Frequency |                   |               |                  |      |
|------------------|--------------------|-----------------|-------------------|-------------------|---------------|------------------|------|
|                  | Mon. - Sat.        | Sun.            | AM<br>6AM-9AM     | Midday<br>9AM-3PM | PM<br>3PM-6PM | Eve.<br>6PM-12AM | Sun. |
| Valley Route 3*  | 7:05AM - 11:20PM   | 8:48AM - 6:15PM | 60                | 60                | 60            | 120              | 60   |
| Valley Route 4*  | 6:50AM - 11:45PM   | 9:22AM - 6:45PM | 60                | 60                | 60            | 120              | 60   |
| Valley Express** | 7:15AM - 5:36PM    | --              | 10B***,3IB        | 10B***            | 30B           | --               | --   |
| Express**        | 7:03AM - 6:55PM    | --              | 30                | 30                | 30            | --               | --   |
| Douglas          | 6:56AM** - 11:30PM | 9:00AM - 6:30PM | 30                | 30                | 30            | 60               | 30   |
| North Douglas**  | 7:00AM - 5:55PM    | --              | 10B,1IB           | 10B,1IB           | 10B,1IB       | --               | --   |

\*Routes 3 and 4 have a combined 30 minute frequency between the Downtown Transportation Center and Nugget Mall.

\*\*Monday through Friday Only

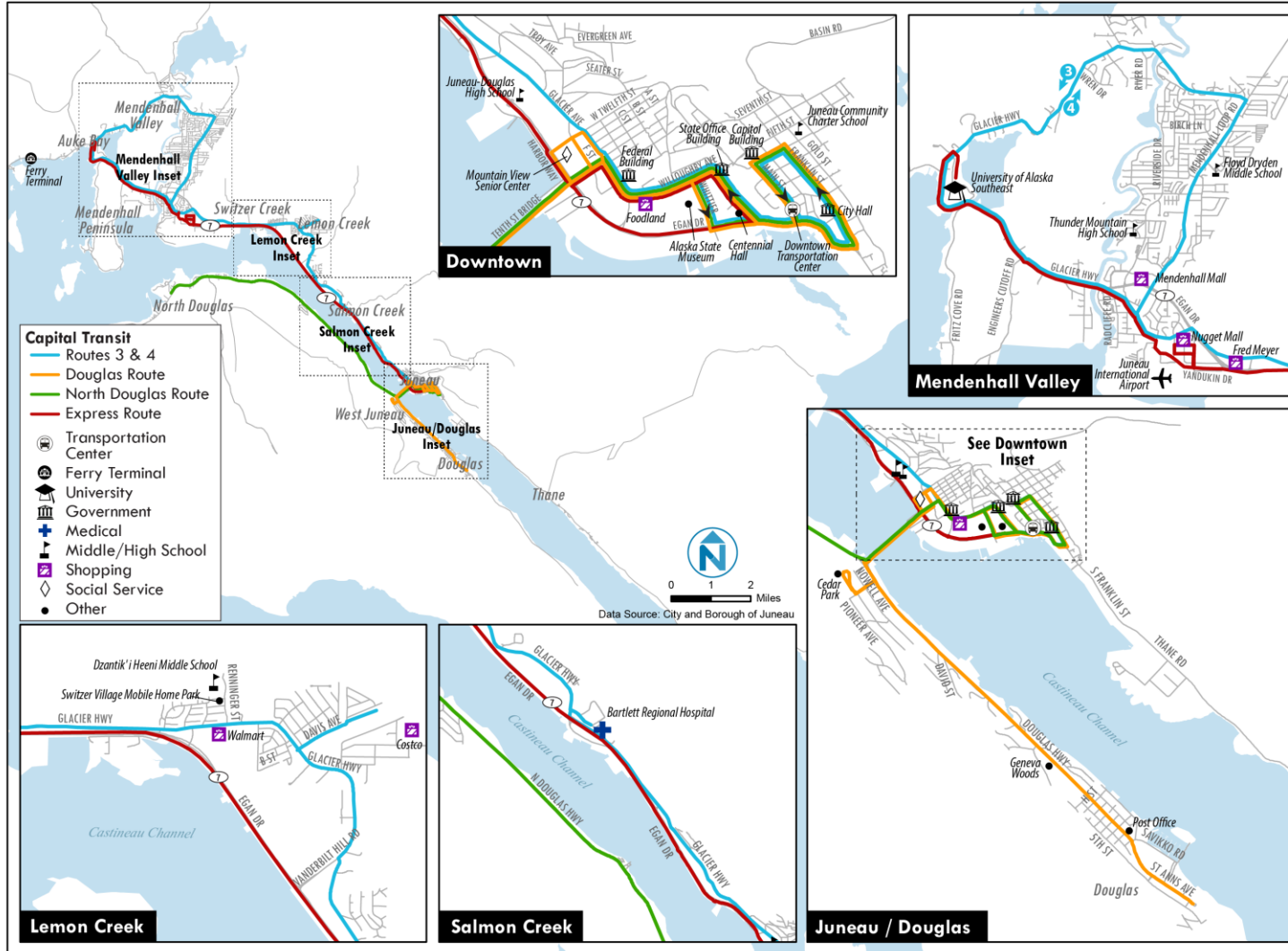
\*\*\*Some trips not shown on public schedule: 7:15 AM and 2:35 PM Outbound Valley Express, 6:56 AM Inbound Douglas, 7:15 AM and 8:09 AM Outbound Douglas Express. These trips are not operated on Saturday.

**Capital Transit Fares**

The fare for a one-way trip on Capital Transit is \$2.00 for adults. \$1.00 for youth ages 6-18, and free for those under 6 accompanied by an adult. Youth and Adult tokens and monthly passes are available at a discounted price and can be purchased at a number of locations including the Valley Library, Fred Meyer, Foodland, Juneau – Douglas High School, and City Hall. Seniors and disabled persons ride free. Seniors present a sales tax exemption card upon boarding and disabled persons are issued a “VIP Pass” through Capital Transit on a permanent or temporary basis depending on the nature of the disability.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

**Figure 2 Existing Capital Transit Services and Major Activity Centers**



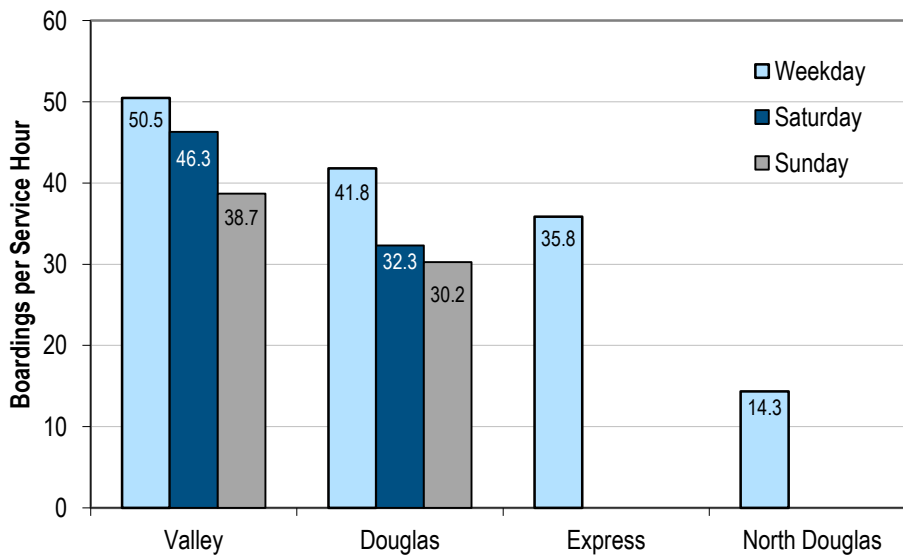
## Fixed Route Ridership Performance

Ridership performance for all Capital Transit routes is shown in Figure 3. There are on average 4,154 daily riders on weekday, 2,678 riders on Saturdays, and 1,610 on Sundays based on FY 2012 data. Weekday productivity averages 44.7 boardings per service hour, ranging from 50.5 boardings per service hour on the Valley routes (3 and 4) to 14.3 boardings per service hour on the North Douglas Route, shown in Figure 4.

**Figure 3 Performance Characteristics by Route and Day Type**

| Route                   | Daily Boardings (FY 2012) | Service Hours | Boardings per Service Hour |
|-------------------------|---------------------------|---------------|----------------------------|
| <b>Weekday</b>          |                           |               |                            |
| Valley                  | 2,615                     | 51.8          | 50.5                       |
| Douglas                 | 807                       | 19.3          | 41.8                       |
| Express                 | 699                       | 19.5          | 35.8                       |
| North Douglas           | 33                        | 2.3           | 14.3                       |
| <i>Weekday Average</i>  | <i>4,154</i>              | <i>92.9</i>   | <i>44.7</i>                |
| <b>Saturday</b>         |                           |               |                            |
| Valley                  | 2,093                     | 45.2          | 46.3                       |
| Douglas                 | 585                       | 18.1          | 32.3                       |
| <i>Saturday Average</i> | <i>2,678</i>              | <i>63.3</i>   | <i>42.3</i>                |
| <b>Sunday</b>           |                           |               |                            |
| Valley                  | 1,238                     | 32            | 38.7                       |
| Douglas                 | 372                       | 12.3          | 30.2                       |
| <i>Sunday Average</i>   | <i>1,610</i>              | <i>44.3</i>   | <i>36.3</i>                |

**Figure 4 Boardings per Service Hour by Route (FY 2012)**



## Recent Trends

Systemwide performance data for FY 2010 through FY 2012 is shown in Figure 5. Overall, ridership has increased (though it decreased slightly in FY 2011) while the number of service hours has remained constant, leading to an increase in overall productivity. Additionally, fare revenue has increased but not at the same rate as the increase in passengers, leading to a decrease in average fare per passenger.

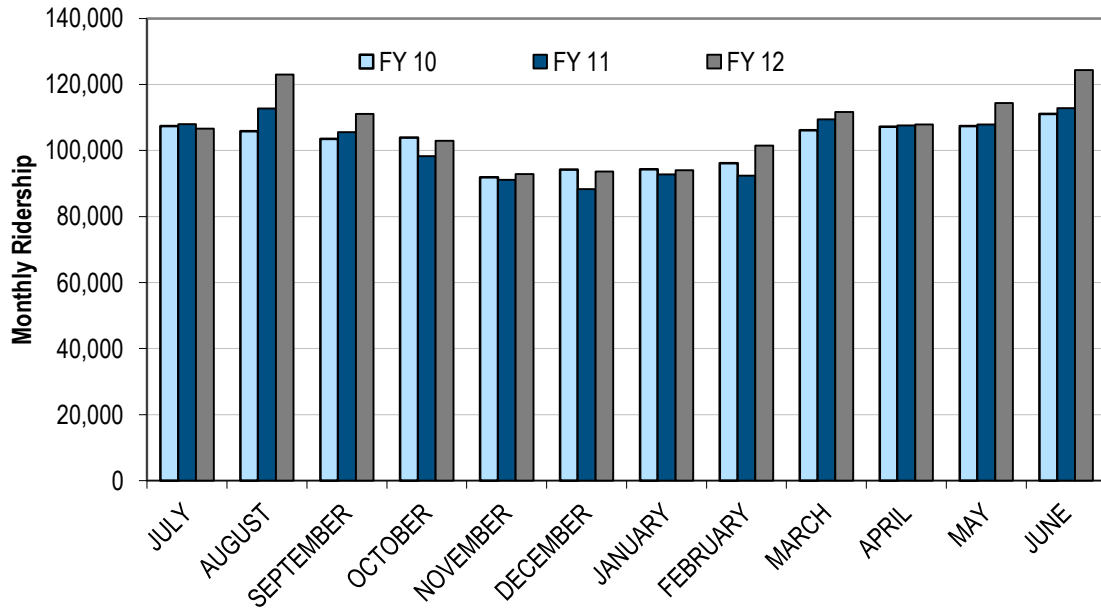
**Figure 5 Systemwide Performance Metrics (FY 2010 - FY 2012)**

| Performance Metric         | FY 2010      | FY 2011      | FY 2012      | % Change |
|----------------------------|--------------|--------------|--------------|----------|
| Boardings                  | 1,229,061    | 1,226,894    | 1,283,971    | 4.5%     |
| Service Hours              | 29,285       | 29,285       | 29,285       | 0.0%     |
| Boardings per Service Hour | 42.0         | 41.9         | 43.8         | 4.5%     |
| Fare Revenue               | \$762,391.40 | \$763,002.20 | \$789,719.40 | 3.6%     |
| Fare per Passenger         | \$0.62       | \$0.62       | \$0.62       | 0%       |

Figure 6 shows systemwide ridership by month for FY 2010 through FY 2012. In general, ridership is somewhat higher in the summer month than in the winter months due to increased tourism and seasonal workers.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

**Figure 6 System Ridership by Month (FY 2010 - FY 2012)**



## 3 CAPITAL TRANSIT ROUTE BY ROUTE EVALUATION

### DATA COLLECTION AND ANALYSIS

A significant component of the Comprehensive Operations Analysis project was collecting data on boardings, alightings, and running times for each scheduled trip on each route for a typical weekday and Saturday. Weekday data was collected on Tuesday, April 30, 2013 and Wednesday, May 1, 2013, and Saturday data was collected on May 4, 2013. Sunday service was not observed.

During the data collection, routes were not serving Franklin Street or 4<sup>th</sup> Street due to detours in downtown. Due to the detour, and because there are no scheduled arrival times at the last inbound stop (the Downtown Transportation Center), on-time performance calculations did not include this timepoint in the inbound direction, only in the outbound direction. For the running time calculations (shown in the scorecards in the Appendix), the segment between the Federal Building and the Downtown Transportation Center was excluded in the inbound direction but included in the outbound direction.

### ON-TIME PERFORMANCE

A bus is considered early if it departs a scheduled timepoint 1 or more minutes early, and it is considered late if it departs 6 or more minutes late; otherwise, it is considered on-time. It should be noted that the dataset only includes one day's worth of observations, and additional observations may be necessary to confirm potential on-time issues.

Overall, on-time performance is very good. The Douglas Route, however, only operates on time for 79% of trips on weekdays; most of these trips are running early. This may indicate that there is too much time in the schedule, causing operators to arrive at and depart timepoints early. The Valley routes have the highest level of late running trips: 4% of trips run late on weekdays and 5% of trips run late on Saturday. The late running on the Valley routes is largely a function of the length of the routes, which is then compounded by heavy boarding and alighting activity and time-consuming turning movements at several locations. An additional factor is the need to serve the Federal Building and Nugget Mall every 30 minutes to facilitate transfers to the Douglas and Express routes, which limits how much running time can be scheduled..

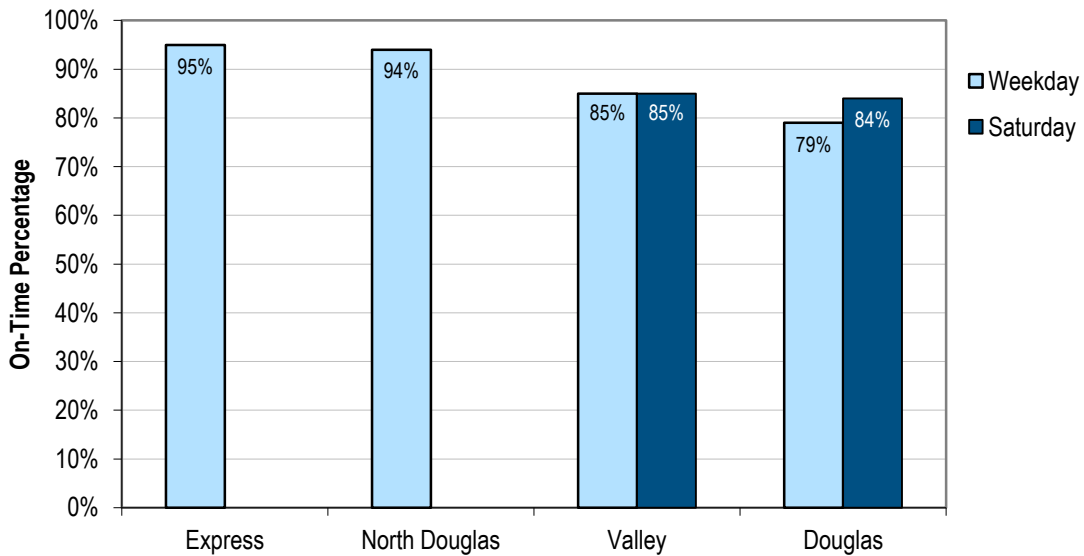


**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

**Figure 7 On-Time Performance by Route and Day Type**

| Route                   | On-Time    | Early      | Late      |
|-------------------------|------------|------------|-----------|
| <b>Weekday</b>          |            |            |           |
| Valley                  | 85%        | 11%        | 4%        |
| Douglas                 | 79%        | 21%        | 1%        |
| Express                 | 95%        | 3%         | 2%        |
| North Douglas           | 94%        | 6%         | 0%        |
| <i>Weekday Average</i>  | <i>90%</i> | <i>9%</i>  | <i>2%</i> |
| <b>Saturday</b>         |            |            |           |
| Valley                  | 85%        | 10%        | 5%        |
| Douglas                 | 84%        | 16%        | 0%        |
| <i>Saturday Average</i> | <i>85%</i> | <i>13%</i> | <i>3%</i> |
| <b>Sunday</b>           |            |            |           |
| Valley                  | --         | --         | --        |
| Douglas                 | --         | --         | --        |
| <i>Sunday Average</i>   | <i>--</i>  | <i>--</i>  | <i>--</i> |

**Figure 8 On-Time Percentage by Route and Day Type**



## **ROUTE SUMMARIES**

The following are summaries of each Capital Transit route accompanied by a table detailing ridership, productivity, on time performance, frequency, and service span. Route level productivity was calculated using FY 2012 ridership and in service hours derived from the published Capital Transit timetables. Stop level figures are based on data collected during the April/May 2013 boarding/alighting count conducted as part of this project.

## Valley Routes 3 & 4

### Description

Routes 3 and 4 operate local service between downtown Juneau and the Mendenhall Valley. Both routes operate an identical alignment between the Downtown Transportation Center and the Nugget Mall, in the outbound direction via Egan Drive, Willoughby Avenue, and Glacier Highway, deviating to serve Bartlett Regional Hospital and Lemon Creek before reaching the Nugget Mall. In the inbound direction the route turns off of Willoughby at Whittier, serving Egan Drive and then operating in a counter-clockwise loop via Franklin Street, Fourth Street, and Main Street. From the Nugget Mall, Route 3 operates in the counter-clockwise direction via Mendenhall Loop Road and then continues inbound on Glacier Highway. Route 4 operates the same alignment in the clockwise direction. Together the routes provide 30 minute average service, though the direction of the Mendenhall Loop segment alternates every trip. Monday through Saturday service operates between 6:50 AM and 11:45 PM. Sunday service operates between 8:48 AM and 6:45 PM. On Weekdays there are five outbound and four inbound additional commuter service / express trips operated at peak times.

| At a Glance                 |         |                  |
|-----------------------------|---------|------------------|
| Weekday Boardings           |         | 2,615            |
| Weekday In Service Hours    |         | 51.8             |
| Weekday Boardings per Hour  |         | 50.5             |
| Saturday Boardings          |         | 2,093            |
| Saturday In Service Hours   |         | 45.2             |
| Saturday Boardings per Hour |         | 46.3             |
| Sunday Boardings            |         | 1,238            |
| Sunday In Service Hours     |         | 32.0             |
| Sunday Boardings per Hour   |         | 38.7             |
| Weekday Schedule Adherence  | On Time | 85%              |
|                             | Early   | 11%              |
|                             | Late    | 4%               |
| Saturday Schedule Adherence | On Time | 85%              |
|                             | Early   | 10%              |
|                             | Late    | 5%               |
| Frequency (minutes)         | Mon-Fri | 30               |
|                             | Sat     | 30               |
|                             | Sun     | 30               |
| Span                        | Mon-Fri | 6:50AM - 11:45PM |
|                             | Sat     | 6:50AM - 11:45PM |
|                             | Sun     | 8:48 AM - 6:45PM |

### Ridership by Stop and Trip

Valley routes are the most productive of all Capital Transit routes, averaging 50.5 boardings per service hour on weekdays. Transfers between the Express and Routes 3 & 4 occur at the Nugget Mall, which has the most ridership activity of all stops (480 daily boardings and alightings on Weekdays), followed closely by the Downtown Transportation Center (with 476 daily boardings and alightings on Weekdays). Other major stops include Walmart, Fred Meyer, Mendenhall Mall, and the Federal Building. The first outbound trip of the day on weekdays has 60 boardings per day, while the second and third trips have 22 and 46 boardings per day, respectively; this indicates some latent demand for earlier service. Outbound trips in the late evening (6:39 PM and 7:39 PM) have max loads of 43 and 41, respectively, exceeding seated capacity, which is when service is reduced from every 30 minutes to hourly. Notably, the segment between Auke Bay and Nugget Mall via Glacier Highway has significantly fewer boardings and alightings than the Mendenhall Loop Road segment.

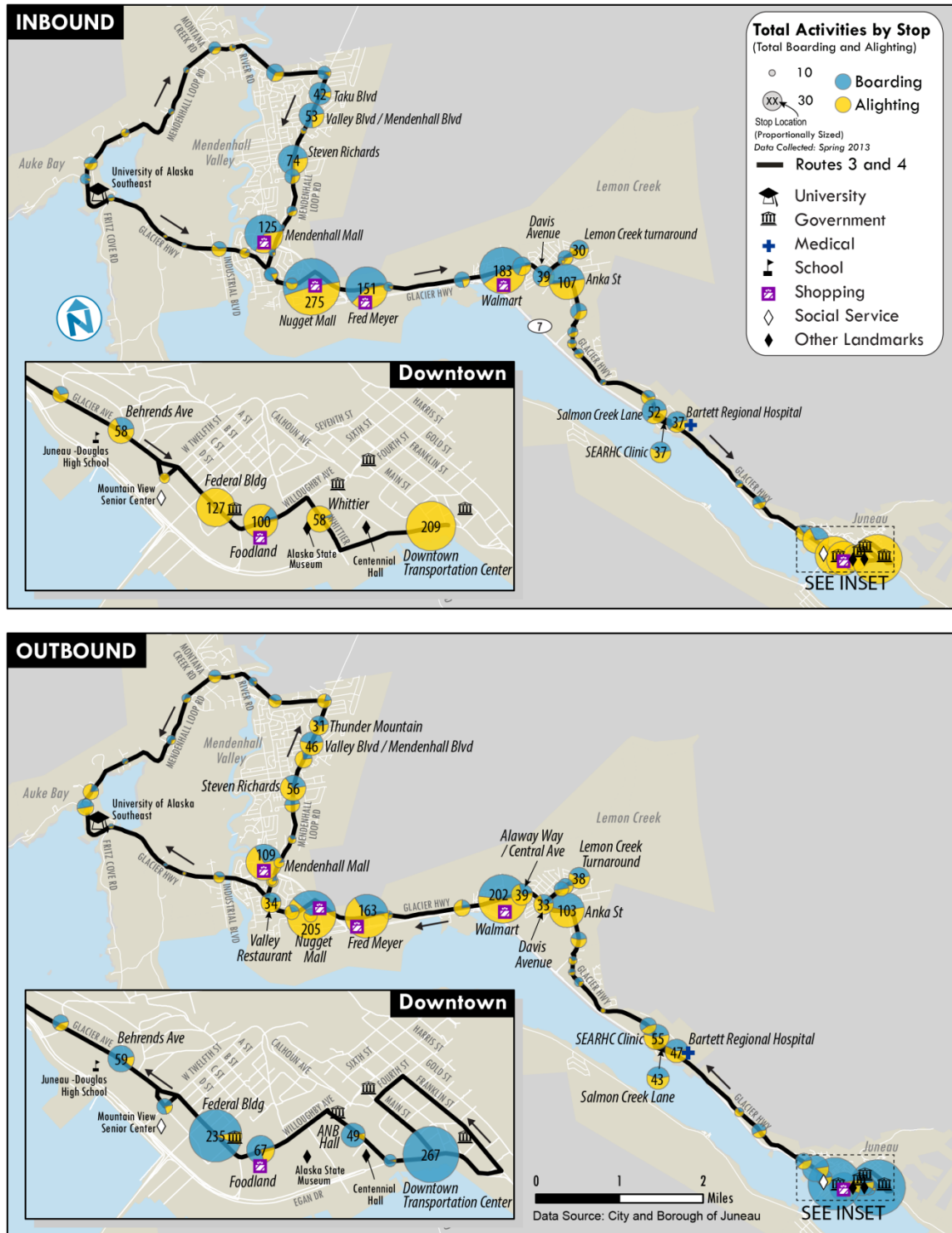
### On-Time Performance

Valley routes operate on time 85% percent of the time on weekdays with early running at 11% of time points and late running at 4% of time points. Saturday on time performance is almost identical with 10% of trips operating early and 5% operating late. Most early running occurs at

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

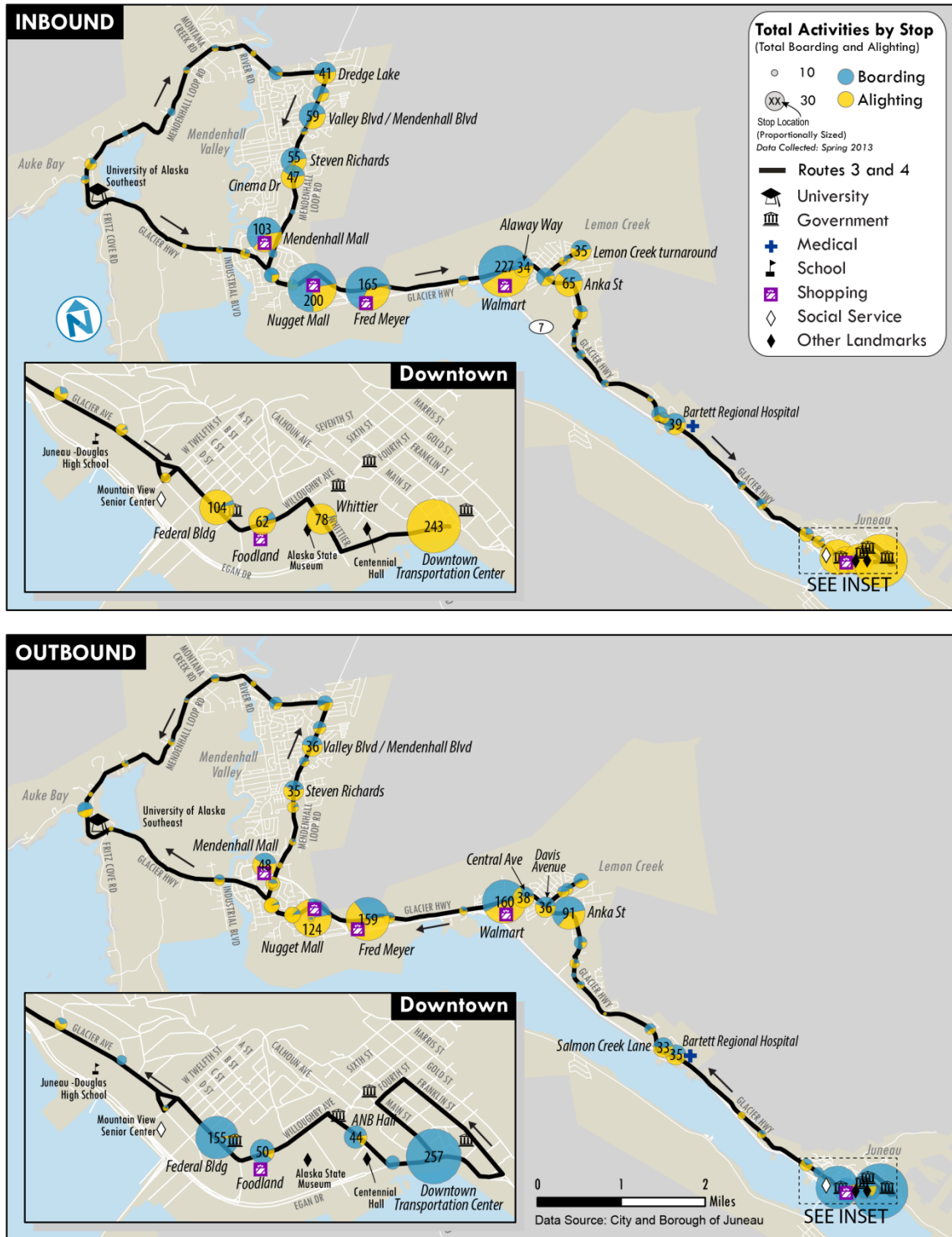
Lemon Creek and the hospital in the inbound direction. In the outbound direction early arrivals occur at Auke Bay on all but one of the extra service/express trips. This is the last stop of the route, indicating that few riders are affected.

**Figure 9 Weekday Daily Ridership: Valley Routes 3 and 4 Combined**



**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

**Figure 10 Saturday Daily Ridership: Valley Routes 3 and 4 Combined**



## Express

### Description

The Express operates limited stop express service between downtown Juneau and the University of Alaska Southeast (UAS) Campus at Auke Bay. Trips originate from the Archives Building near the corner of Willoughby Avenue and Egan Drive in downtown, and travel via Willoughby Avenue, Tenth Street, and Egan Drive directly to the Nugget Mall. The Express then serves the Airport and stops on Glacier Highway before terminating at the UAS campus. Arrival times at the Nugget Mall are timed to meet Valley routes 3 and 4 so that riders traveling on the Express from downtown can access local service to Mendenhall Valley and vice versa. Service operates every 30 minutes between 7:03 AM and 6:55 PM on weekdays only.

| At a Glance                |         |                 |
|----------------------------|---------|-----------------|
| Weekday Boardings          |         | 699             |
| Weekday Revenue Hours      |         | 19.5            |
| Weekday Boardings per Hour |         | 35.8            |
| Weekday Schedule Adherence | On Time | 95%             |
|                            | Early   | 3%              |
|                            | Late    | 2%              |
| Frequency (minutes)        | Mon-Fri | 30              |
| Span                       | Mon-Fri | 7:03AM - 6:55PM |

### Ridership by Stop and Trip

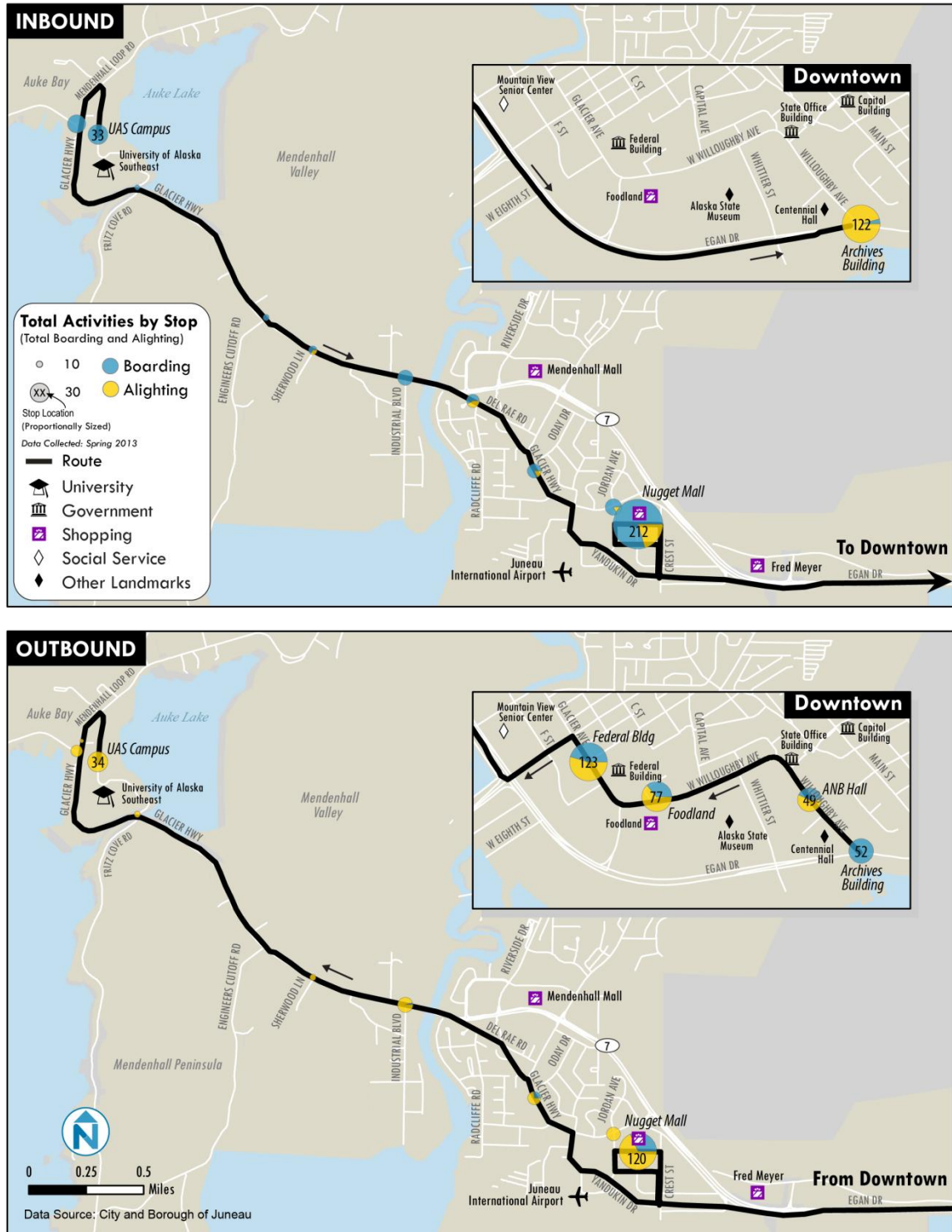
The Express has on average 35.8 boardings per service hour. The highest ridership stop is the Nugget Mall, likely due to transfer activity between the Express and Valley routes 3 and 4. The Archives Building and the Federal Building are other high ridership stops. Outside of downtown Juneau, the UAS Campus has the highest ridership besides the Nugget Mall with 67 boardings and alightings per day. Ridership is peak oriented with early morning and evening trips having higher ridership than midday trips. The last two outbound trips (5:27 PM and 6:27 PM) have only four and five boardings per day, respectively.

### On-Time Performance

Ninety-five percent of trips operate on time with 3% operating early and 2% operating late.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

**Figure 11 Weekday Daily Ridership: Express**



## Douglas

### Description

The Douglas Route operates between downtown Juneau and the St Anns Avenue turnaround on Douglas Island. The route alignment follows the same routing in Downtown Juneau as the Valley routes 3 and 4, starting at the Downtown Transportation Center and operating via Willoughby Avenue in the outbound direction and in the inbound direction turning off Willoughby onto Whittier Street, Egan Drive, Franklin Street, and Fourth Street before serving the Downtown Transportation Center. The Douglas Route turns onto Twelfth Street to access the bridge, passing the Mountain View Senior Center, and then from the bridge turns onto Douglas Highway, deviating onto Cordova Street to serve Cedar Park, and then continuing on Douglas Highway which turns into 3<sup>rd</sup> Street and then St. Ann’s Avenue where the route turns around. The Douglas Route operates every 30 minutes between 6:56 AM and 11:30 PM on weekdays, 7:00 AM and 11:30 PM on Saturdays, and 9:00 AM and 6:30 PM on Sundays. The 6:56 AM inbound, 7:15 outbound, and 8:09 outbound trips that operate on weekdays do not appear on the printed schedule. In the inbound direction, the 7:00 AM trip and the 7:30 AM trip (which only operates on weekdays and is listed as Douglas Express) do not serve Cordova Street, providing a slightly shorter travel time to downtown Juneau.

| At a Glance                 |         |                  |
|-----------------------------|---------|------------------|
| Weekday Boardings           |         | 807              |
| Weekday In Service Hours    |         | 19.3             |
| Weekday Boardings per Hour  |         | 41.8             |
| Saturday Boardings          |         | 585              |
| Saturday In Service Hours   |         | 18.1             |
| Saturday Boardings per Hour |         | 32.3             |
| Sunday Boardings            |         | 372              |
| Sunday In Service Hours     |         | 12.3             |
| Sunday Boardings per Hour   |         | 30.2             |
| Weekday Schedule Adherence  | On Time | 79%              |
|                             | Early   | 21%              |
|                             | Late    | 1%               |
| Saturday Schedule Adherence | On Time | 84%              |
|                             | Early   | 16%              |
|                             | Late    | 0%               |
| Frequency (minutes)         | Mon-Fri | 30               |
|                             | Sat     | 30               |
|                             | Sun     | 30               |
| Span                        | Mon-Fri | 6:56AM - 11:30PM |
|                             | Sat     | 7:00AM - 11:30PM |
|                             | Sun     | 9:00 AM - 6:30PM |

### Ridership by Stop and Trip

The Douglas Route is Capital Transit’s second most productive route with 41.8 boardings per service hour on weekdays. Ridership is highly directional with the majority of boardings on inbound trips occurring in Douglas and the majority of boardings on outbound trips occurring in downtown Juneau. Few trips start and end within Douglas. The Federal Building and Downtown Transportation Center are the two highest ridership stops with 263 daily boardings and alightings and 242 daily boardings and alightings, respectively on weekdays. Outside of downtown Juneau, Cedar Park is the highest ridership stop with 131 boardings and alightings per day on weekdays. Inbound trips have more boardings in the morning and outbound trips have more boardings in the evening, suggesting that people use this route to access jobs or school in downtown Juneau (or transfer to the Valley or Express routes).

### On-Time Performance

The Douglas Route has the worst on time performance of all routes, with 79% of weekday trips operating on time. Almost all other trips run early (21%) with only 1% operating late. This may be

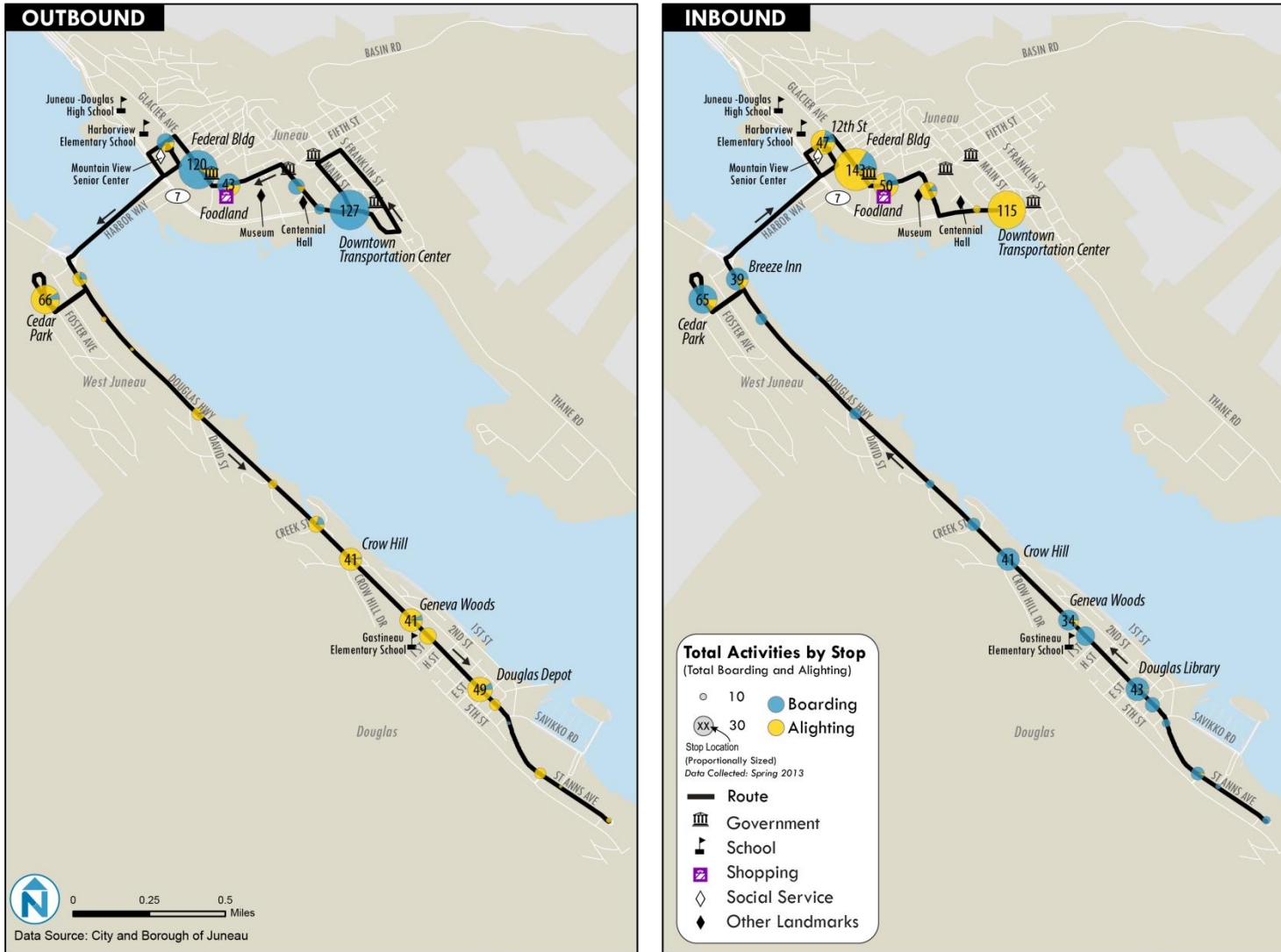


**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

caused by excess time in the schedule, which leads to operators arriving at and departing timepoints early. Early running occurs throughout the route, particularly at the Douglas Post Office in the inbound direction. Early departures may cause riders to miss a bus that departs before he or she arrives at the bus stop.

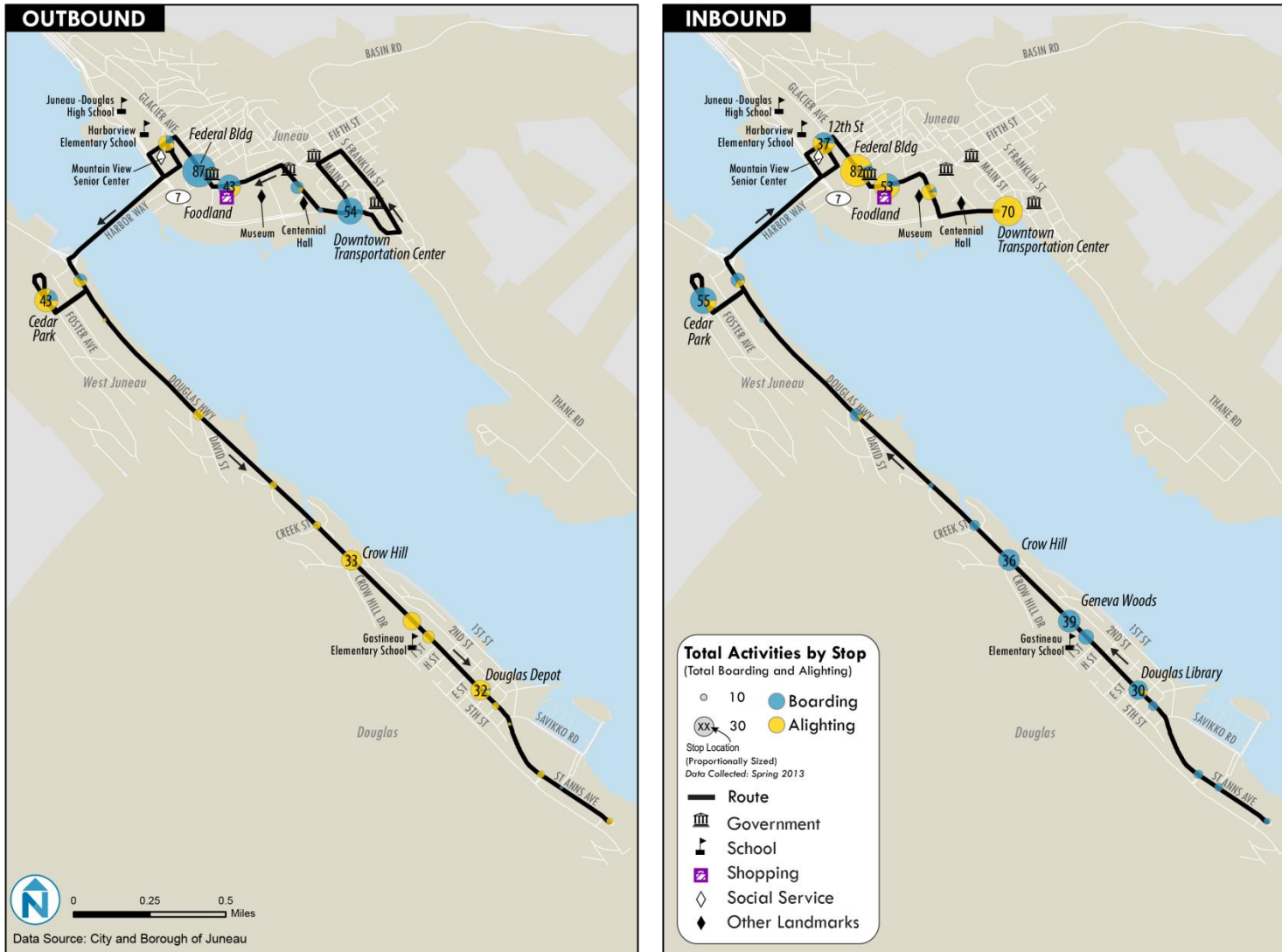
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City and Borough of Juneau, Capital Transit

**Figure 12 Weekday Daily Ridership: Douglas**



**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

**Figure 13 Saturday Daily Ridership: Douglas**



## North Douglas

### Description

The North Douglas Route operates three round trips on weekdays between downtown Juneau and Sundown Drive in North Douglas. Trips originate from the Downtown Transportation Center at 7:00 AM, 12:00 PM, and 5:00 PM and from Sundown Drive at 7:25 AM, 12:25 PM, and 5:25 PM. The route follows the same alignment as the Douglas Route in downtown, starting at Franklin Street, serving the Downtown Transportation Center, and accessing the bridge via Willoughby Avenue, Glacier Avenue, Twelfth Street, and F Street. Once across the bridge on Douglas Island, the route travels on North Douglas Highway, operating approximately 7 miles of flag stop service to Sundown drive and then returns via the same route, accessing downtown via 12<sup>th</sup> Street, Glacier Avenue, Willoughby Avenue, Whittier Street, and Egan Drive.

| At a Glance                |         |                |
|----------------------------|---------|----------------|
| Weekday Boardings          |         | 33             |
| Weekday In Service Hours   |         | 2.3            |
| Weekday Boardings per Hour |         | 14.1           |
| Weekday Schedule Adherence | On Time | 94%            |
|                            | Early   | 6%             |
|                            | Late    | 0%             |
| Frequency (minutes)        | Mon-Fri | 3 Roundtrips   |
| Span                       | Mon-Fri | 7:00AM -5:55PM |

### Ridership by Stop and Trip

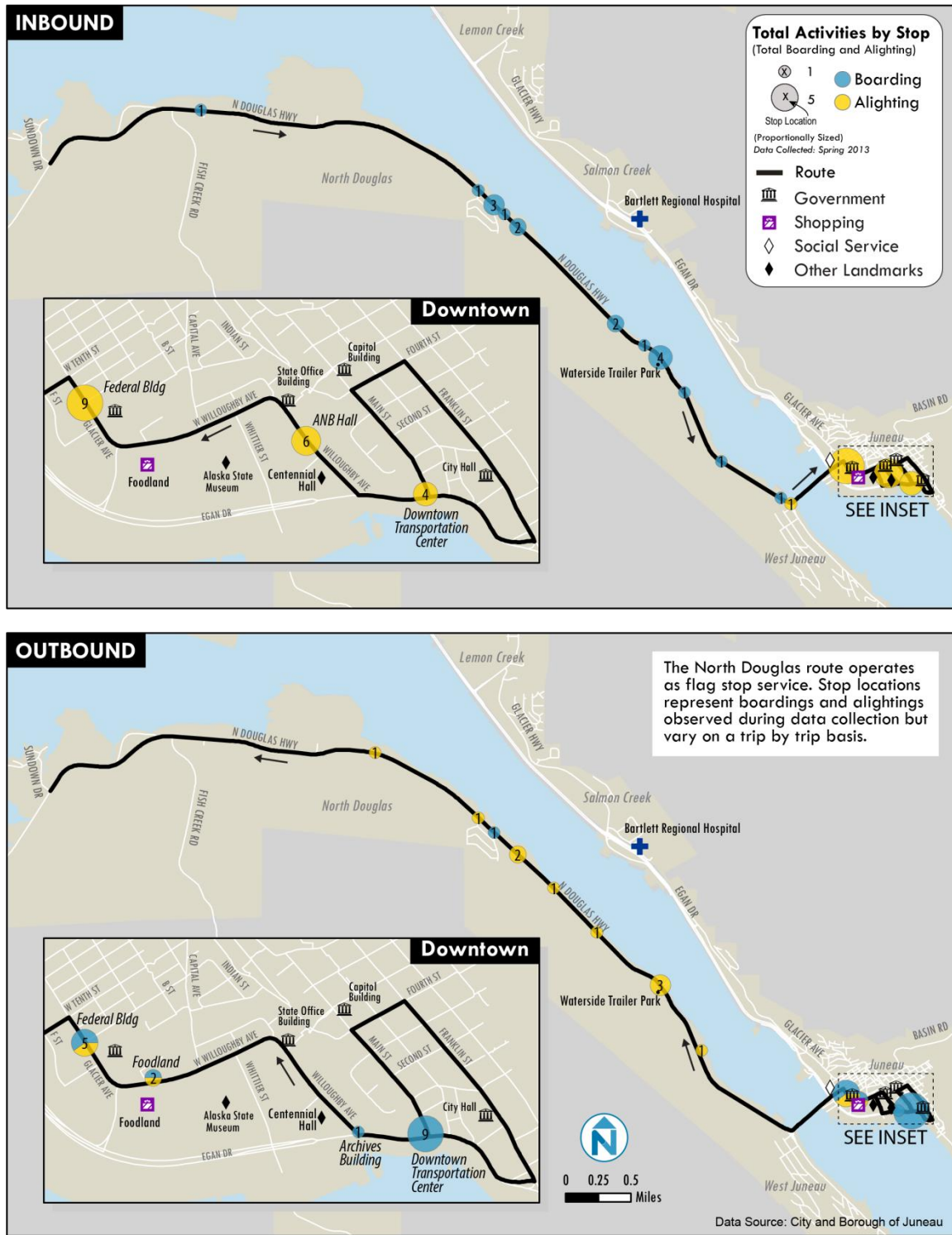
The North Douglas Route is Capital Transit’s lowest ridership route with 33 boardings per day. Ridership is highly directional on the North Douglas Route with all boardings occurring in North Douglas on inbound trips and all alightings occurring in North Douglas on outbound trips. Only one boarding was observed in North Douglas on an outbound trip, indicating the few people use the route for trips that start and end within North Douglas. The overwhelming majority of ridership activity occurs between downtown Juneau and Bonnie Doon Drive. Only one boarding and one alighting were observed beyond this point although the route continues on North Douglas Highway for almost four more miles.

### On-Time Performance

The North Douglas Route has timepoints scheduled at Franklin Street, Main Street, the Federal Building, Bonnie Doon Drive, and Sundown Drive. The North Douglas Route has no on time performance issues with all trips departing on time from scheduled time points with the exception of one early departure observed at the Federal Building in the inbound direction on the 12:25 PM trip.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

**Figure 14 Weekday Daily Boardings: North Douglas**



## 4 CARE-A-VAN SERVICE EVALUATION

Complementary paratransit service in Juneau is provided in accordance with the Americans with Disabilities (ADA) Act. The ADA requires that fixed-route public transportation operators provide complementary paratransit service to individuals who have a disability that prevents them from using the fixed-route service. The ADA sets very specific standards and regulations for how paratransit services must be provided. These regulations tie the paratransit service to the fixed-route service with a direct relationship between the services in terms of the service area, service span (days and hours), service levels, and fares (see Appendix A for an overview of ADA paratransit requirements). ADA sets regulations as minimums that must be provided; transit agencies are permitted to go above and beyond these regulations as they see fit.

This evaluation of Care-A-Van focuses on overall performance and productivity as well as eligibility and reporting. This is not intended as a compliance audit. Rather, this analysis identifies ADA requirements and distinguishes what *must* be done from what *may* be done.

### CARE-A-VAN SERVICE OVERVIEW

Unlike the fixed-route service, Capital Transit does not directly operate paratransit service. Instead it contracts out operations of Care-A-Van to Southeast Senior Services (SESS), a program of the Catholic Community Services of Juneau. SESS has been operating the Care-A-Van program since 1982 and, as of this year (2013) was awarded another five-year contract.

SESS manages and operates a coordinated transportation program that provides demand response transportation in support of a variety of human and health services programs including Medicaid and Senior Nutrition programs. The coordinated service delivery offers several advantages for Capital Transit, including that because SESS has been in the human and health services industry for many years, the organization is familiar with individual clients and understands their particular needs. Thus, they are able to provide Care-A-Van riders a high level of service tailored to riders' needs.

### Service Characteristics

Care-A-Van provides door-to-door, prescheduled transportation for people who have a disability that prevents them from riding regular fixed-route transit. According to the rider guide, Care-A-Van drivers will assist passengers between the vehicle and the front door of their trip origin and destination. In practice, Care-A-Van drivers are also permitted to go into buildings to pick-up and drop-off passengers as needed. For the most part, drivers are only allowed to go to a building's first floor, unless there is a special request. Drivers are also allowed to assist with packages, provided assistance does not require an additional trip between the vehicle and the destination. Passengers are permitted to bring up to three packages of a reasonable size.

As a demand response, or scheduled service, passengers must plan for travel ahead of time. ADA rules allow passengers to schedule a trip at least 24-hours and not more than 14 days in advance

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

of travel. Subscription trips for regular travel are also allowed and they currently account for about 43% of all Care-A-Van trips. There are no limits on the number of trips requested or the reason of travel. Trip requests and cancellations can be made by phone or email.

## **Fares**

Travel on Care-A-Van is available free of charge, but a donation of \$4.00 per one-way trip is suggested. Ticket books are also sold and offer a discounted rate off of the suggested donation of \$30.00 for 10 tickets. Consistent with ADA, the suggested donation is twice the fare of the fixed-route service (the fare for Capital Transit bus service is \$2.00).

In an effort to encourage people with disabilities to use fixed-route transit, Capital Transit also offers individuals with a disability<sup>1</sup> free access to the fixed-route services through a program known as the VIP Bus Pass. People may apply for a VIP Bus Pass directly with Capital Transit. Depending on an individual's disability, VIP passes may be valid permanently or be issued for a set period of time.

## **Service Area**

Care-A-Van currently provides service throughout the Juneau urban area, including all public roads north to the Auke Bay Ferry Terminal (see Figure 15). The service area is fairly large and linear and spans the residential areas north of Juneau in Mendenhall Valley to downtown Juneau, some 15 miles south.

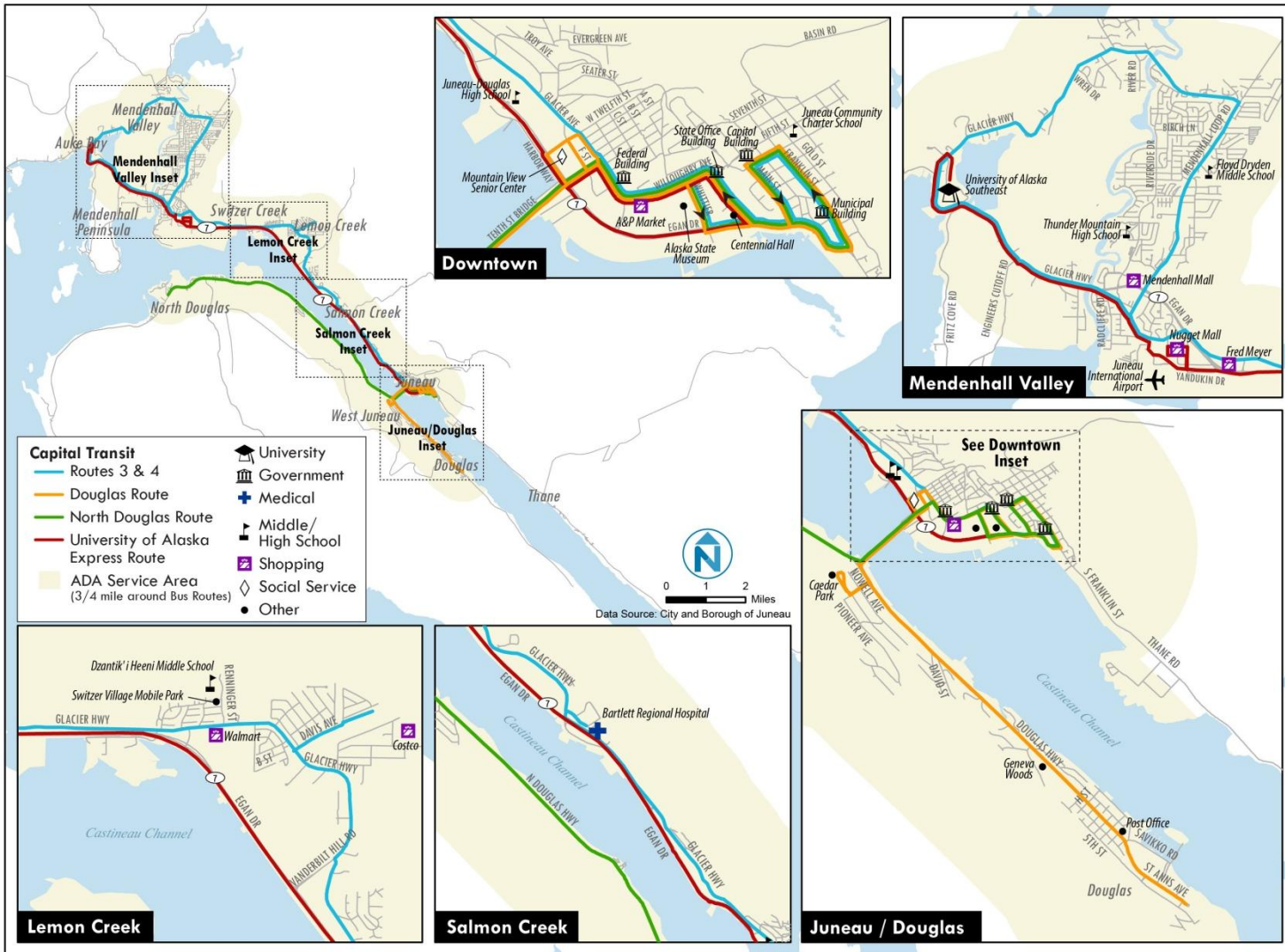
The Care-A-Van service area also includes West Juneau on Douglas Island, as well as other residential areas located along the northern parts of Douglas Island. Douglas Island is very close to the Juneau mainland and is separated by only a quarter mile at its narrowest point. However, the island is only accessible by a single bridge in downtown Juneau, thus travel from the Mendenhall Valley to the northern section of Douglas Island can require 30 miles of travel. The northern parts of Douglas Island are served by Capital Transit, with three trips a day (one in AM, one midday and one PM).

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<sup>1</sup> Criteria for qualifying for the VIP Bus Pass include individuals eligible for Social Security Disability Benefits or receive Supplemental Security Income Benefits (SSI), certified by the Veteran's Administration at a 40 percent or greater disability level, valid Medicare Card or certification by a licensed physician.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

**Figure 15 Care-A-Van Service Area**





## **Operations**

Care-A-Van service is available the same hours and days as the fixed-route service, or between the hours of 7:00 AM and 11:30 PM Monday through Saturday and from 9:00 AM to 6:00 PM on Sundays. There is no service on holidays (New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas).

There are currently 12 full time licensed drivers staffing the Care-A-Van, plus six to seven part-time or substitute drivers. Full time drivers and vehicles are dedicated to Care-A-Van and generally scheduled with single eight-hour shifts. On weekdays, there are five drivers dedicated to the ADA service between 9:00 AM and 3:00 PM, with four drivers assigned to the service between 7:00 AM and 9:00 AM and between 3:00 PM and 5:00 PM. Outside of these high demand periods, there are fewer drivers assigned to the service, but there is at least one vehicle and one driver assigned to Care-A-Van service at all times service is available.

Care-A-Van is operated with a fleet of 13 "cutaway" vehicles that can be configured in different ways to accommodate one or two wheelchair passengers plus up to ten passengers. With the exception of one or two vehicles, the fleet is owned by Capital Transit but shared across the transportation programs managed and operated by SESS. Capital Transit is responsible for the maintenance on all vehicles and SESS pays for the gas and tires on all vehicles.

During peak periods, Care-A-Van will assign a minimum of five drivers to the ADA service, suggesting five vehicles are deployed during peak periods, while as many as six Capital Transit paratransit vehicles are "spares". This means that, technically speaking, Care-A-Van's fleet is larger than needed for the ADA service; however, given that SESS operates a coordinated service the vehicles are not idle as spares but instead are supporting other human and medical service programs.

## **Eligibility**

To be eligible for Care-A-Van, individuals must obtain an application and have a doctor certify that they have a disability. Applications are available upon request at Capital Transit's office or the Care-A-Van office, on-line, or by phone. Completed applications must be submitted in person to the Capital Transit offices. Once a completed application is submitted, SESS will issue an ADA card to the applicant and individuals are immediately eligible for Care-A-Van service.

The main criteria for determining eligibility are a completed application and a doctor's certification of eligibility. As listed in the Rider's Guide, to qualify for Care-A-Van, individuals must have at least one of the following conditions:

- Require a wheelchair to perform normal daily tasks
- Unable to get on/off a Capital Transit bus
- Unable to walk to/from a bus stop
- Physically unable to wait outside without support for more than 10 minutes
- Unable to understand and follow directions, or understand information signs for reasons other than language or literacy
- Have a significant visual disability
- be 60 years of age or older

Individuals traveling with a personal care attendant (PCA) are requested to note this on their application. PCAs are eligible to travel for free.

## **Comparison with ADA regulations**

Care-A-Van meets all ADA requirements. In addition, it goes above and beyond the ADA regulations in several critical ways:

- **Providing door-to-door service for all passengers.** Care-A-Van escorts riders from the front door of their origin to the front door of their destination. ADA is specified as an origin to destination service. Many transit agencies have defined that to mean curb-to-curb service, so that passengers are picked up at the curb for their paratransit trip. Even in curb-to-curb service, however, drivers are required to help passengers in and out of the vehicle. FTA guidance also suggests that even if curb-to-curb service is the advertised service level, in some cases drivers must provide door-to-door service to meet passenger needs.<sup>2</sup>
- **Time of Day.** ADA requires that paratransit service be provided in an area that includes  $\frac{3}{4}$  of a mile from the fixed-route service during the same times that fixed-route service operates. For the most part, Capital Transit operates regular service throughout the operating schedule. The only exception is the northern end of Douglas Island which only has three trips a day. However, Care-A-Van provides service to the northern end of Douglas Island at all times of the day. Under ADA, Care-A-Van is only required to provide ADA service at the same time as the transit service is operating, which in this case would be between 7:00 AM and 8:00 AM; 12:00 PM to 1:00 PM and 5:00 PM to 6:00 PM.
- **Fares.** ADA allows transit operators to charge passengers a fare up to twice the fixed-route service. Care-A-Van does not require passengers pay a fare, and instead suggests a donation. The donation level is set to twice the fixed-route, consistent with ADA but passengers are not required to pay.
- **Eligibility.** Eligibility for Care-A-Van service is based on an individual's inability to use fixed-route transit according to a variety of conditions, or by being aged 60 or older. Eligibility is certified by a physician and once awarded is unconditional (i.e. the rider may use ADA for any trips at any time) and permanent (i.e. there is no end date when an individual is no longer eligible). These criteria are different from the ADA in two main ways: 1) ADA requires paratransit be available for individuals unable to use fixed-route transit because of a disability but does not automatically grant eligibility based on age; and 2) ADA allows transit operators to create categories of eligibility that reflect travel conditions and/or allow for temporary or transitional conditions.
- **Service Area.** As discussed, ADA requires that paratransit service be provided in an area that includes  $\frac{3}{4}$  of a mile from the fixed-route service during the same times that fixed-route service operates. There are exceptions to this rule for commuter services that provide limited services to an area. Given these requirements, Care-A-Van exceeds the ADA standards by providing service to/from the Auke Bay Ferry Terminal, Dane Road, and North Douglas Island.

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<sup>2</sup> Topic Guides in ADA Paratransit, Disability Rights Education and Defense Fund, June 2010.

## OPERATIONS AND PRODUCTIVITY

### Ridership

For the past several years, ridership on the Care-A-Van has grown, increasing from around 25,000 annual trips in 2006 to its currently level (2012) of about 34,000 annual trips (see Figure 16). Ridership growth has largely been steady with the exception of 2008, when ridership grew dramatically; however, by 2009 demand returned to 2007 levels and has been growing slowly but steadily since 2009. The spike in demand may reflect a change in contracting or how trips and rides were recorded.

Of the nearly 34,000 Care-A-Van trips provided in 2012, nearly 8,900 or 26% were made by people using wheelchairs. This level of wheelchair trips has been fairly consistent over time. In the early years of the service, the portion of wheelchair trips was closer to the 30%, but since 2006, wheelchair trips have accounted for between 24% and 27% of all trips.

The annual demand distribution is fairly constant throughout the year, with the spring and autumn months showing slightly higher ridership and July and November showing slightly lower ridership (see Figure 17). The distribution is somewhat counter-intuitive because demand does not appear to be correlated with weather. In many northern climates demand for paratransit service will increase when the travel conditions are more difficult due to snow, ice and freezing rain.

Data also shows that demand is heavily concentrated on weekdays, with approximately 144 ADA<sup>3</sup> trips per weekday compared to an average of 30 and 20 trips per Saturday and Sunday, respectively (see Figure 18). In terms of time of day, demand is largely concentrated during the mid-day between 9:00 AM and 2:00 PM. After 2:00 PM, demand declines steadily until around 7:00 PM, when it only a handful of riders need service.

In terms of travel destinations, based on a sample of trips provided by Care-A-Van, the strongest origin and destination trips occur:

- Within downtown Juneau
- Between downtown Juneau and the Adult Day Center
- Between Mendenhall Valley and the Salmon Creek/Bartlett Regional Hospital area
- Between downtown Juneau and the Salmon Creek/Bartlett Regional Hospital area

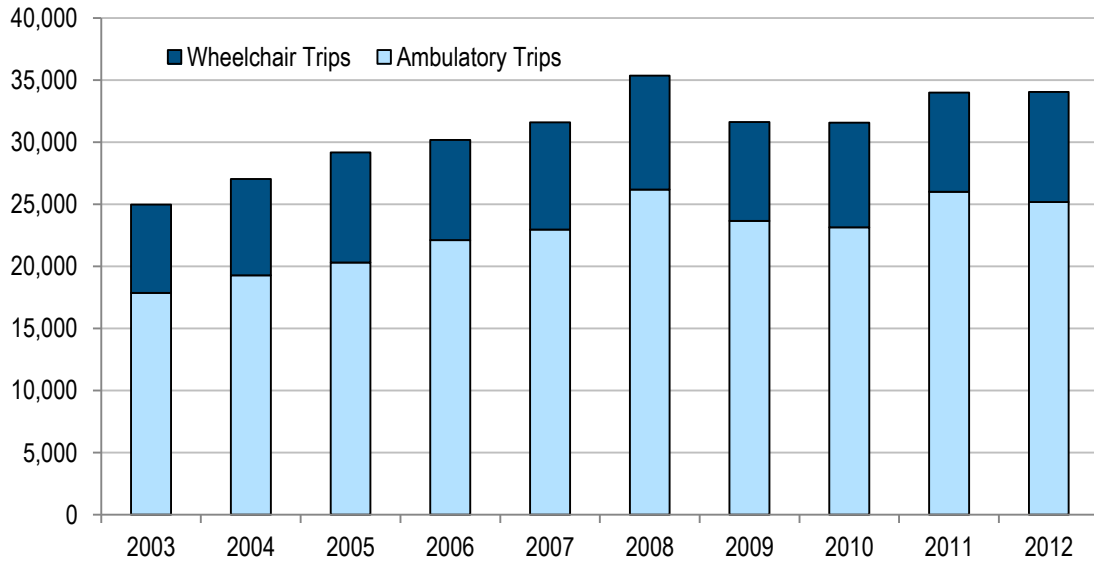
In addition, there are a lot of trips between Mendenhall Valley and downtown Juneau. Many of these trips depart from individual residences in Mendenhall Valley and thus do not show as a clustered trip origin or destination, but nearly all trips travel to/from the hospital or downtown Juneau (see Figure 19).

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<sup>3</sup> Includes all ADA eligible individuals, which in the case of Care-A-Van includes persons aged 60 or older.

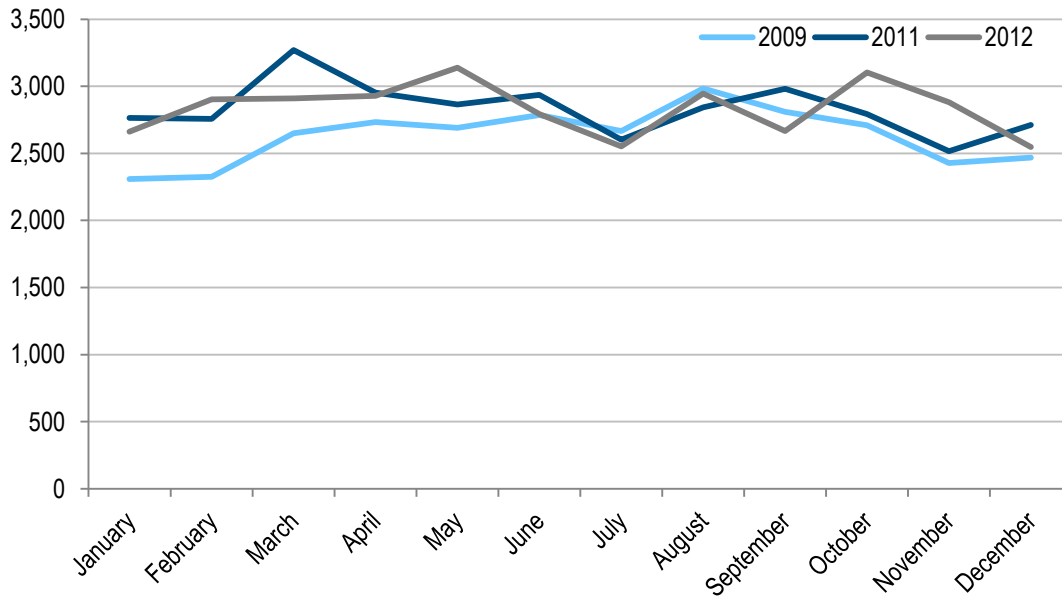
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City and Borough of Juneau, Capital Transit

**Figure 16 Care-A-Van Annual Ridership including Wheelchair Trips (2003-2012)**



Source: SESS adapted by Nelson\Nygaard.

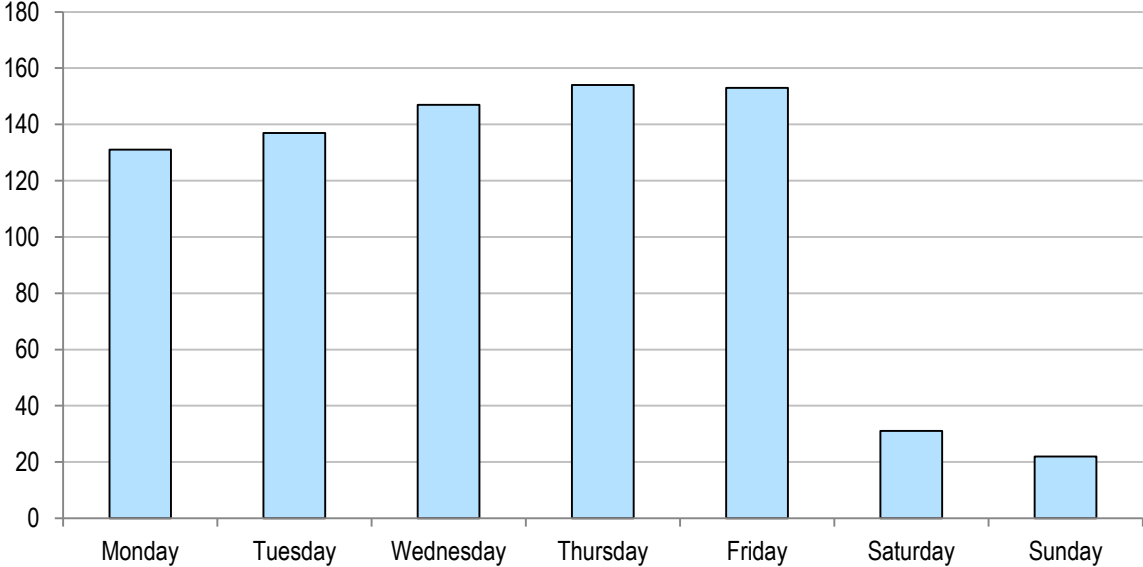
**Figure 17 Care-A-Van Ridership by Month (2009-2012)**



Source: SESS adapted by Nelson\Nygaard.

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City and Borough of Juneau, Capital Transit

**Figure 18 Care-A-Van Ridership by Day of the Week**



Source: SESS adapted by NelsonNygaard. Reflects reporting period between May 1, 2013 and May 15, 2013.



## **Performance Measurement and Service Costs**

### **Existing Performance Measures**

In its proposal to Capital Transit to continue service operation, SESS laid out a program evaluation system that includes ten objectives, many of which are performance targets or guidelines for the Care-A-Van service. They include:

1. Provide a minimum of 34,000 rides annually
2. Provide rides to at least 500 eligible individuals
3. Prevent all injuries to riders as a result of driver action or inaction
4. Prevent vehicle accidents to less than one per 100,000 miles
5. Maintain a zero “turn-down rate” (turn-downs are trip denials to persons making ride requests at least the day before).
6. Maintain an on-time pick-up rate based on the national standard of 15 minutes on each side of the scheduled pick-up time of 95 percent or better.
7. Achieve and maintain an on-time drop-off rate (also based on the national standard of 15 minutes on either side of the scheduled drop-off time) of 95 percent or better.
8. Maintain fewer than five no-shows per month.
9. Provide rides at a cost to the City and Borough of no more than \$28.65 per ride.

SESS also monitors service quality through a combination of random telephone interviews with clients and annual customer satisfaction surveys. In addition, SESS and Capital Transit track client complaints. There have been very few complaints and survey results have been overwhelmingly positive. Thus, the indicators support Care-A-Van’s reputation of providing high quality service.

### **Contracting**

Capital Transit’s contract with SESS is structured as a lump sum, performance based contract (see above). The contract does not include maintenance or capital costs, which are included in the Capital Transit budget. In the most recent contract, Capital Transit agreed to pay SESS \$975,000 annually to provide 34,000 trips. The average cost per trip, therefore, is \$28.25, not including any donations collected from riders. This cost is consistent with previous contracts which had average per trip costs of between \$22.47 (FY 09) to \$25.57 (FY11).

The rates overall are lower than the national average for paratransit costs of \$28.94<sup>4</sup>. The rates are estimated based on total service levels and it is unclear if they reflect fully allocated service costs. Thus in the event that Capital Transit would like to purchase more or less service, there is not a clear mechanism for understanding the financial implications. In addition, if Capital Transit wanted to implement cost reduction strategies, it is more challenging for the agency to understand how to influence the overall service budget.

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<sup>4</sup> Per General Accounting Office (GOA) ADA Paratransit Service Report 13-17, published November 2012. Average cost of all paratransit trips is \$29.30; after removing the 10 largest systems, the average cost is \$28.94.

## KEY FINDINGS

The evaluation of Care-A-Van operations and performance demonstrate that the program provides a high level of transportation to Juneau's most vulnerable population. The service is coordinated with other human and medical transportation programs, which helps create efficiencies in terms of management and operations and makes it easy for riders to understand and use the system. The evaluation also reveals a handful of opportunities for Capital Transit to consider as it determines how best to meet future needs within available resources:

- Care-A-Van currently exceeds the ADA requirements on several service criteria, including the level of service, the time of day, service area, eligibility and fares. Some of the decisions help support coordination of service across funding programs, which benefit riders. At the same time, however, the costs and benefits associated with continuing or changing these practices - collectively and individually - are not well understood.
- ADA allows transit operators to create categories of eligibility that reflect travel conditions and/or allow for temporary or transitional conditions. Creating categories of eligibility means that for some trips, passengers may not be eligible for demand response service for some trips (depending on weather, bus stop location, etc.) but not all trips. Categorical eligibility can be difficult to implement but has produced significant cost savings for some transit systems. Capital Transit may explore the implications of establishing categorical eligibility as one of several strategies to reduce costs and more closely manage the program.
- Care-A-Van, as discussed, is a coordinated system and many riders use with travel supported by a variety of funding sources. To date, Care-A-Van does not have a clear system to track individual clients and trip. As a result, it is difficult for the program to share costs based on shared rides, or ensure costs are allocated to the most appropriate funding program. Technology exists to manage and track trips, including how rides are shared. However, systems can be expensive to purchase and complex to administer, but have potential to better share costs across programs and potentially make better use of federal resources.



## 5 PEER REVIEW

This chapter provides a comparative analysis of transit operations between Capital Transit and the following five transit systems:

- Ketchikan Gateway Borough – Ketchikan, AK
- Metropolitan Area Commuter System (MACS) – Fairbanks, AK
- People Mover – Anchorage, AK
- Clallam Transit System – Clallam County (Port Angeles), WA
- Roaring Fork Transit Authority – Roaring Fork Valley (Aspen), CO

These five peers were selected because they are similar to Juneau in several ways, including population size, land use and development patterns, the geographic environment, number of annual passenger trips, level of transit dependency, and seasonal influx of population due to tourism.

### METHODOLOGY

Data for the peer review were assembled from a number of sources, including the National Transit Database, Rural National Transit Database, American Community Survey 2011 5 year estimates, and the individual transit agencies. Data were collected on performance characteristics and operational costing data from the most recent full year available, the 2011 fiscal year (July 1, 2010 – June 30, 2011).

### PEER OVERVIEW

Key population and service characteristics of the transit agencies that serve each peer community are summarized below and presented in Figure 20.

- **Population.** Juneau's service area population (31,244) is smaller than all of the peers except Ketchikan, which has just over 8,000 residents. Clallam County and Fairbanks have service area populations of 71,077 and 97,581, respectively. Anchorage is a much larger city, with a service area population of 218,145, and Roaring Fork Valley is comprised of multiple cities and counties with a population of about 146,000. Except for Anchorage, each of these communities has smaller pockets of population concentrated within larger geographic areas, which makes for a low overall population density. The service area populations were determined in multiple ways. Anchorage and Fairbanks are both considered to be urbanized areas by the Federal Transit Administration based on their population sizes, and their service area populations are included in their National Transit Database profiles. The other systems are categorized as "rural" systems, and their service area populations were estimated based on the size of the communities they serve and the extent of their route networks.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

- **Transit Commute Mode Share.** At 5.4%, Juneau’s transit commute mode share is about twice that of the peer communities, with the exception of Roaring Fork Valley, which has an 11.3% mode share. Anchorage has the lowest transit commute mode share, at 1.7%, while the share of transit commuters in both Ketchikan and Fairbanks is 2.3%. This indicates that Capital Transit is successfully attracting commuters who are traveling to work.
- **Transit Dependency.** Of those who commute using transit in Juneau, about 14% do not have access to a vehicle in their household, a good proxy for transit dependency. Each of the Alaska peer communities has a much higher percentage of transit commuters without access to vehicles, ranging from 29.7% (Anchorage) to 46.1% (Ketchikan). This indicates that transit in Juneau is successful at attracting riders who have vehicles available to them and thus may have a choice in how they commute to work.
- **Transit Rider Income.** The median income of commuters who use transit to get to work was compared to the median income for all commuters in each city. The ratio of median income of transit commuters compared to the all commuter median income was between 51% and 65% in Juneau, Ketchikan, Fairbanks, Anchorage, and Roaring Fork Valley. This indicates that workers who commute by transit have, on average, lower incomes than those who commute by other means. Breaking this trend, those who use transit in Clallam County earn 10% higher incomes than the community at large.
- **Fare Structure.** Except for Roaring Fork Valley, Juneau’s fares are the highest of all the peers, at \$2.00. Due to the exceptionally large service area in Roaring Fork Valley, each additional travel zone adds \$1, up to a total of \$10. Anchorage has the next highest fare per trip, at \$1.75. Ketchikan and Clallam County each only charge \$1.00 per trip. Similar to Juneau, the demand response service is free in Ketchikan and Roaring Fork Valley. Demand response fares are \$2.00 or \$3.00 in the other three peer communities.

**Figure 20 Community and System Overview, 2011**

|  | Juneau (AK)                     | Ketchikan (AK)            | Fairbanks (AK)                           | Anchorage (AK) | Clallam County (WA)          | Roaring Fork Valley (CO)                           |
|--|---------------------------------|---------------------------|--|----------------|------------------------------|--|
|  | Capital Transit                 | Ketchikan Gateway Borough | Metropolitan Area Commuter System (MACS) | People Mover   | Clallam Transit System (CTS) | Roaring Fork Transit Authority (RFTA) <sup>d</sup> |
| Service Area Population <sup>a,b</sup>   | 31,244                          | 8,008                     | 97,581                                   | 218,145        | 71,077                       | 145,632  |
| Transit Commute Mode Share <sup>a</sup>  | 5.4%                            | 2.3%                      | 2.3%                                     | 1.7%           | 2.0%                         | 11.3%  |
| % Transit Users Without Access to a Vehicle <sup>a</sup>                               | 14.2%                           | 46.1%                     | 34.0%                                    | 29.7%          | 16.9%                        | 3.1%   |
| Ratio of Transit Commuter Median Income to Overall Commuter Median Income <sup>a</sup> | 61%                             | 62%                       | 65%                                      | 51%            | 110%                         | 59%  |
| Fixed Route Fare (General Public) <sup>c</sup>   | \$2.00                          | \$1.00                    | \$1.50                                   | \$1.75         | \$1.00                       | \$1.00-\$10.00                                     |
| Demand Response Fare <sup>c</sup>  | Free; Suggested donation \$4.00 | Free                      | \$2.00                                   | \$3.00         | \$2.00                       | Free   |

Source: <sup>a</sup> American Community Survey 2011 5-Year Estimates Table S0802; <sup>b</sup> National Transit Database (2011); <sup>c</sup> Agency website

Note: <sup>d</sup> Population data is for 2010 and comes from RFTA 2013 Budget

## REVENUE AND FUNDING

Figure 21 provides data on operating expenses and revenue sources for Juneau and each of the peers. These data include both fixed route and demand response services. The annual operating expenses of this group of transit systems range from a low of \$1.9 million (Ketchikan) to a high of \$29.4 million (Anchorage). Due to its small size, Juneau is on the low end of this spectrum, with an annual operating budget of \$6.4 million.

All of the peer transit agencies receive a significant share of their annual operating funds from dedicated local sources. Clallam County receives the largest percentage of its operating expenses from local sources, at 81%. On the other end of the spectrum, Ketchikan receives just over one-third of its operating costs from local resources. Fairbanks, Anchorage, and Juneau each receive relatively similar percentages of local dedicated revenue at 65%, 61%, and 57%, respectively.

The last row in Figure 21 presents the Cost of Living Index for each city, except Ketchikan and Clallam County, where data are not available. An index value of 100 is the national average; the fact that each city's index is well above 100 indicates that the cities are significantly more expensive than the national average. Juneau's cost of living (136.5) is slightly less than Fairbanks (137.4), but is more expensive than Anchorage and Roaring Fork Valley (Glenwood Springs), with index values of 128.4 and 124, respectively. The differences in cost of living should be considered when comparing the operating expenses of different transit systems, as a higher cost of living can lead to higher operating expenses because of higher wages.

**Figure 21 Peer Operating Expenses and Revenue Sources (Fixed Route and Demand Response), 2011**

|  | Juneau (AK)                | Ketchikan (AK)            | Fairbanks (AK)                           | Anchorage (AK) | Clallam County (WA)          | Roaring Fork Valley (CO)              |
|--|----------------------------|---------------------------|--|----------------|------------------------------|---------------------------------------|
|  | Capital Transit/Care-A-Van | Ketchikan Gateway Borough | Metropolitan Area Commuter System (MACS) | People Mover   | Clallam Transit System (CTS) | Roaring Fork Transit Authority (RFTA) |
| Operating Expenses                                       | \$6,378,812                | \$1,907,104               | \$4,699,448                              | \$29,408,168   | \$7,312,961 <sup>a</sup>     | \$19,825,808                          |
| Farebox Revenues   | \$799,236                  | \$186,467                 | \$381,075                                | \$5,851,781    | \$761,949                    | \$3,784,641                           |
| Dedicated Local Revenues                                 | \$3,636,018                | \$680,210                 | \$3,073,261                              | \$17,908,624   | \$5,915,787                  | \$8,263,404                           |
| Dedicated Local Revenue as % of Total Operating Expenses | 57.0%                      | 35.7%                     | 65.4%                                    | 60.9%          | 80.9%                        | 41.7%                                 |
| Cost of Living Index                                     | 136.5                      | N/A                       | 137.4                                    | 128.4          | N/A                          | 124.0                                 |

Data source: Rural National Transit Database (2011), Clallam Transit System, U.S. Census Bureau, Statistical Abstract of the United States: 2012.

Note: <sup>a</sup> Includes \$236,977 for vanpool.

## FIXED ROUTE PERFORMANCE DATA AND INDICATORS

Figure 22 summarizes peer operating and performance data for fixed route service. These performance measures are standard measures used to evaluate cost efficiency, cost effectiveness, and service effectiveness of a transit system. Below, these measures are briefly defined and an assessment of how Juneau compares to peers is provided.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

**Figure 22 Performance Data and Indicators (Fixed Route), 2011**

|   | Juneau (AK)     | Ketchikan (AK)            | Fairbanks (AK)                           | Anchorage (AK) | Clallam County (WA)          | Roaring Fork Valley (CO)                           |
|---|-----------------|---------------------------|--|----------------|------------------------------|--|
| Transit Agency                                | Capital Transit | Ketchikan Gateway Borough | Metropolitan Area Commuter System (MACS) | People Mover   | Clallam Transit System (CTS) | Roaring Fork Transit Authority (RFTA) <sup>a</sup> |
| Population                                    | 31,244          | 8,008                     | 97,581                                   | 218,145        | 71,077                       | 145,632  |
| Passenger Trips                               | 1,226,894       | 313,110                   | 391,799                                  | 4,148,501      | 845,598                      | 1,660,034  |
| Revenue Hours                                 | 45,300          | 15,802                    | 23,975                                   | 153,155        | 43,569                       | 53,292   |
| Operating Expenses                            | \$5,281,688     | \$1,542,626               | \$2,974,623                              | \$22,247,133   | \$5,560,082                  | N/A  |
| Fare Revenues                                 | \$766,500       | \$182,898                 | \$342,376                                | \$4,115,324    | \$729,508                    | N/A  |
| Ridership (Trips/Capita)                      | 39.3            | 39.1                      | 4.0                                      | 19.0           | 11.9                         | 11.4   |
| Productivity (Trips/Revenue Hour)             | 27.1            | 19.8                      | 16.3                                     | 27.1           | 19.4                         | 31.1   |
| Cost Efficiency (Operating Cost/Revenue Hour) | \$116.59        | \$97.62                   | \$124.07                                 | \$145.26       | \$127.62                     | N/A  |
| Cost Effectiveness (Operating Cost/Trip)      | \$4.30          | \$4.93                    | \$7.59                                   | \$5.36         | \$6.58                       | N/A  |
| Operating Cost per Capita                     | \$169.05        | \$192.64                  | \$30.48                                  | \$101.98       | \$78.23                      | N/A  |
| Average Fare per Passenger                    | \$0.62          | \$0.58                    | \$0.87                                   | \$0.99         | \$0.86                       | N/A  |
| Subsidy per Passenger                         | \$3.68          | \$4.34                    | \$6.72                                   | \$4.37         | \$5.71                       | N/A  |
| Farebox Recovery (Fares/Operating Cost)       | 15%             | 12%                       | 12%                                      | 18%            | 13%                          | N/A  |

Data source: Rural National Transit Database (2011)

Note: <sup>a</sup> Population data is for 2010. RFTA operating expense and fare revenue data not available.

## Cost Efficiency

- **Operating Cost per Revenue Hour:** This is defined as the annual operating costs divided by annual vehicle revenue hours. This measure indicates an agency's cost efficiency by normalizing operating costs by the number of hours service is provided, which allows for a comparison across transit agencies. Cost efficiency amongst the peers ranges from a low of \$97.62 per revenue hour for Ketchikan to a high of \$145.26 for Anchorage. Juneau has the second lowest operating expenses with a cost of \$116.59 per hour, indicating that it is operating more efficiently than most of the peers.

## Cost Effectiveness

These indicators are the ratio of service inputs to service consumption and measure how well the service is utilized by the community.

- **Operating Cost per Trip:** This is defined as annual operating costs divided by annual ridership. This measures cost effectiveness of a system by revealing the cost per passenger trip. Juneau is the most cost effective system in the group, with a cost per trip of \$4.30. This also indicates that Juneau is getting more trips per dollar spent than the other communities.
- **Farebox Recovery Ratio:** This is defined as the ratio of fare revenue to total operating costs, and measures to what extent fare revenues contribute to operating costs. Farebox

recovery ratios among these peers range from a low of 12% (Ketchikan/Fairbanks) to a high of 18% (Anchorage). Juneau is in the middle of this range, with a recovery ratio of 15%.

## Service Effectiveness

These indicators are the ratio of service consumption to service outputs and measure how well the capacity of service is being utilized by the consumer in relation to the amount of service available.

- **Ridership:** This is defined by passenger trips per capita. Juneau supports the highest ridership by far compared to all the peers, at 39.3 trips per capita. The next highest ridership, in Ketchikan, is 39.1 trips per capita. With 11.4 trips per capita, Roaring Fork has the lowest.
- **Trips per Revenue Hour:** This is defined as annual boardings divided by annual vehicle revenue hours. This measure is one of the best ways to gauge productivity of the system. Juneau performs well with regard to productivity, with 27.1 trips per revenue hour (the same as Anchorage's much larger People Mover system). Roaring Fork has the highest productivity, at 31.1 trips per revenue hour. The rest of the peer systems are less productive, ranging from 16.3 (Fairbanks) to 19.8 (Ketchikan) trips per revenue hour.
- **Operating Cost per Capita:** This is defined as the annual operating cost divided by the total service area population. This measure quantifies the investment in transit in each of the peer communities. With an annual operating cost per capita of \$169.05, service provided in Juneau by Capital Transit is in the upper part of the range of cost per capita out of the group of peers, indicating that the community is putting significant resources into transit. Ketchikan spends more per capita, at \$192.64, but the remainder of the peers range from \$30.48 (Fairbanks) to \$101.98 (Anchorage).

## DEMAND RESPONSE PERFORMANCE DATA AND INDICATORS

Figure 23 provides performance data and indicators for demand response services provided or contracted out by each of these transit agencies.

Capital Transit and Ketchikan Gateway Borough both provide demand response service within their respective communities by contracting with Catholic Community Services to operate the service. MACS in Fairbanks operates its own Van Tran service for elderly or disabled riders, Anchorage People Mover's ADA Paratransit service is called AnchorRIDES, and Clallam Transit System operates Clallam Paratransit. In the Roaring Fork Valley, ADA Paratransit service is made available by four different operators within the jurisdictional boundaries of Aspen, Glenwood Springs, Pitkin County, and Garfield County.

Overall, the demand response metrics for Juneau tend to be in the middle of the peer set, although it has the lowest trips per revenue hour and the second highest operating cost per trip. This indicates that paratransit is more expensive to operate in Juneau than in majority of the peer cities.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

**Figure 23 Performance Data and Indicators (Demand Response), 2011**

|   | Juneau (AK)     | Ketchikan (AK)            | Fairbanks (AK)                           | Anchorage (AK) | Clallam County (WA)          | Roaring Fork Valley (CO)                           |
|---|-----------------|---------------------------|--|----------------|------------------------------|--|
| Transit Agency                                | Capital Transit | Ketchikan Gateway Borough | Metropolitan Area Commuter System (MACS) | People Mover   | Clallam Transit System (CTS) | Roaring Fork Transit Authority (RFTA) <sup>a</sup> |
| Population                                    | 31,244          | 8,008                     | 97,581                                   | 218,145        | 71,077                       | 145,632  |
| Passenger Trips                               | 23,127          | 15,434                    | 20,479                                   | 198,510        | 66,533                       | 20,203   |
| Revenue Hours                                 | 18,600          | 7,536                     | 12,515                                   | 99,867         | 28,971                       | 6,355  |
| Operating Expenses                            | \$1,097,124     | \$364,478                 | \$1,724,825                              | \$6,131,038    | \$1,515,902                  | N/A  |
| Fare Revenues                                 | \$32,736        | \$3,569                   | \$38,699                                 | \$1,736,457    | \$32,441                     | N/A  |
| Ridership (Trips/Capita)                      | 0.7             | 1.9                       | 0.2                                      | 0.9            | 0.9                          | 0.1  |
| Productivity (Trips/Revenue Hour)             | 1.2             | 2.0                       | 1.6                                      | 2.0            | 2.3                          | 3.2  |
| Cost Efficiency (Operating Cost/Revenue Hour) | \$58.99         | \$48.36                   | \$137.82                                 | \$61.39        | \$52.32                      | N/A  |
| Cost Effectiveness (Operating Cost/Trip)      | \$47.44         | \$23.62                   | \$84.22                                  | \$30.89        | \$22.78                      | N/A  |
| Operating Cost per Capita                     | \$35.11         | \$45.51                   | \$17.68                                  | \$28.11        | \$21.33                      | N/A  |
| Average Fare per Passenger                    | \$1.42          | \$0.23                    | \$1.89                                   | \$8.75         | \$0.49                       | N/A  |
| Subsidy per Passenger                         | \$46.02         | \$23.38                   | \$82.33                                  | \$22.14        | \$22.30                      | N/A  |

Data source: Rural National Transit Database (2011)

Note: <sup>a</sup> Population data is for 2010. RFTA operating expense and fare revenue data not available.

## KEY FINDINGS

The following are key findings from the peer review:

- **Juneau residents are more likely to take transit than most peers.** Juneau has the second highest transit mode share for commute trips, at 5.4%. While this may not appear significant, the share of commute trips in Juneau is on par with the national average (5.0%) and significantly higher than the Alaska average (1.5%).
- **Investment in transit in Juneau is significant compared to peers, but the service is cost-effective.** Juneau’s investment in transit is very high, with the second highest fixed-route operating cost per capita among the systems. But, this significant investment is paying off in terms of the most cost-effective fixed route service of any peer (as measured as operating cost per passenger).
- **High service effectiveness.** The fixed route system has very strong productivity, with 27.1 trips per revenue hour. This is significant given all but one peer city has a significantly higher service area population than Juneau. Juneau’s fixed-route ridership per capita is also the highest among the peers, which indicates that Juneau residents are far more likely to use transit than any of the peer communities.
- **High paratransit costs.** Compared to the peers, Juneau has the second highest operating cost per passenger on Care-A-Van.

## **6 DOCUMENT REVIEW**

The COA and TDP update will consider relevant direction from adopted City and Borough of Juneau and State of Alaska plans, including:

### **CBJ POLICY**

- City and Borough of Juneau Comprehensive Plan, 2008 (and proposed 2013 updates)
- Downtown Parking Use Survey, December 2012
- Willoughby District Land Use Plan, 2012
- Juneau Climate Action & Implementation Plan, November 2011
- Downtown Juneau Parking Management Plan, 2010
- Juneau Non-Motorized Transportation Plan, 2009
- Capital Transit Development Plan, 2008
- Long Range Waterfront Plan, 2004
- Downtown Tourism Transportation Study, 2003
- Area Wide Transportation Plan, 2001
- Riverside Drive Corridor Study, 2001
- Capital City Vision Project – 20/20 Vision Plan for Downtown, 1998

### **EXPECTED RESIDENTIAL DEVELOPMENT/FUTURE TRANSIT DEMAND**

- CBJ Switzer Lands Residential Development Study, May 2012
- Juneau Senior Needs Survey, 2010
- Pederson Hill Access Study, July 2010
- Land Management Plan, 1999
- Other

### **ADOT&PF PLANS POTENTIALLY AFFECTING TRANSIT**

- Auke Bay Corridor Study (ongoing)
- Glacier Highway Bike & Pedestrian Improvement Project, June 2012
- Juneau – Egan Drive Resurfacing Tenth Street To Main Street (ongoing )
- Mendenhall Loop Road Improvements (starting June 2012)

Relevant excerpts from each plan are summarized in the Appendix.

The most relevant and important information to use while preparing the Capital Transit Development Plan comes from three documents: the CBJ Comprehensive Plan (2008 and

proposed 2013 update), the 2011 Juneau Climate Action Plan, and the current Transit Development Plan (2008) – each of which are summarized below.

## **CBJ COMPREHENSIVE PLAN, 2008 AND 2013 PROPOSED UPDATE**

The adopted 2008 CBJ Comprehensive Plan and its 2013 proposed update strongly focus on transit oriented development (TOD), including increasing allowed housing density along Capital Transit routes, promoting use of travel demand management incentives that include encouraging transit use, and other complimentary development principles to foster compact, walkable neighborhoods with local commercial and mixed-use developments and connected pedestrian and bicycle routes.

The 2013 proposed update (page 102) very clearly reviews the benefit of this TOD focus which would increase development where services, roads and transit already exist. Similar language exists in the 2008 plan. Increased walking and biking, shortened auto trips, and increased transit use will improve health, will reduce household spending on gas, is an efficient use of limited public resources because infill avoids investments in new roads, sewer, and water utilities, and will reduce greenhouse gas emissions. However, there is a public cost - adequate transit service must be provided in order to realize these benefits of denser development. Without a higher level of transit service, that includes 30 minutes maximum between buses during the service day and extended service hours<sup>5</sup> transit cannot be considered a viable transportation alternative by most choice riders. And without high levels of ridership, regulatory changes such as lower parking requirements cannot be justified for new developments near transit routes. Accordingly, investment in the transit system, and its expansion in terms of service frequency, service day duration, and geographic scope will be required in order to realize the intended savings in other infrastructure.

An identified problem (page 109) is: A shortage of buses. Additional Capital Transit bus vehicles are needed and, particularly, the longer “articulated” buses are needed to adequately provide convenient express bus service for commuters traveling to major employment centers. Additional drivers and maintenance staff will also be required as the fleet grows.

Two relevant Implementing Actions (8.5 IA3, page 110 and 8.5 IA6, page 111) are to:

Update, adopt and implement the Capital Transit Development Plan. Elements of an updated plan may include, but are not limited to the following:

- Providing all day express bus service to facilitate the movement of people between downtown Juneau and other major destinations in the Urban Service Area;
- Expanding Capital Transit to provide service on all holidays;
- Providing additional bus capacity to reduce overcrowding on buses;
- Providing bus pullout areas at bus stops to avoid impeding the roadway travel lanes with requirements for motorists to immediately allow buses to reenter the roadway upon their signaling to reenter;

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<sup>5</sup> Currently, only four buses travel from the Mendenhall Valley to downtown Juneau early enough to arrive before 8:00 AM, and two of these are Express routes with limited stops.



**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

- Exploring the feasibility of a Mendenhall Valley shuttle service and/or park and ride linked to downtown by express buses;
- Exploring the use of buses powered by non-fossil fuels, hybrid technology, or other systems consistent with the community’s commitment to sustainability;
- Providing a downtown circulating shuttle service, serving the Central Business District. Evaluate the feasibility of serving the Federal Building, the Rock Dump, and other popular trip destinations and origins in the downtown area with this shuttle service;
- Evaluating the best locations and size for Park & Ride facilities and purchase of the land or easements on the land for future improvements. When residential densities warrant, develop the Park & Ride facilities where they can serve commuter traffic from residential areas. These facilities would be in the form of satellite parking areas served directly by transit routes that would provide convenient access and express service to downtown Juneau for residents living significant distances (more than a quarter mile) from existing transit routes. Likely areas that could be served by Park & Ride facilities would be the Mendenhall Valley north of Egan Drive, and areas north or northwest of the University of Alaska Southeast if significant population increases occur in that area; and
- Providing a mix of transit vehicle sizes powered by non-fossil fuels or hybrid fuels to promote cost efficiency and to provide flexibility in service.

To reduce the demand for land consuming parking spaces, reduce use of fossil fuels, and encourage the use of public transit, the CBJ government and community should urge downtown federal, state, and local government agencies, as well as private sector employers to participate in a Coordinated Downtown Transportation Management Program managed by CBJ staff or a third party. The program could include, but would not be limited to, the following features (Implementing Action 8.5 – IA6, page 111):

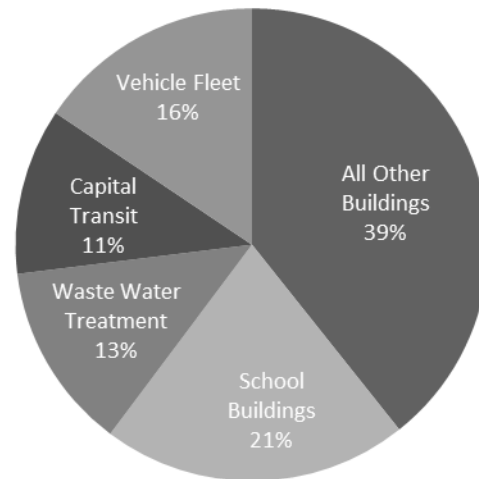
- Free or heavily discounted transit passes to area employees;
- Improved bus service, including a downtown circulator shuttle;
- Organized vanpools and carpools;
- Convenient and free parking for car and van pool vehicles, preferential parking for car sharing, electric, hybrid and other alternate fuel-powered or multiple-user vehicles;
- Instituting residential parking programs to discourage commuting motorists from long term on street parking in residential neighborhoods;
- Satellite parking within shuttle distance to major destinations in downtown Juneau.
- Working with the State of Alaska to allow off-hour parking in state employee parking facilities and lots to ease evening and weekend event parking congestion;
- Increasing parking enforcement, as nearly all of these parking related actions require enforcement or they will be of minimal utility;
- Coordinated, perhaps mandatory, staggered or flexible work hours for area employees to avoid peak hour traffic;
- Provision of safe pedestrian and bicycle routes throughout downtown; and,
- Provision of secure, dry bicycle storage as well as shower and locker facilities for commuting cyclists.

In addition, the Land Use chapter has an implementing action (10.8 – IA1, p. 136) that states “Implement public transit service to and from the Alaska Marine Highway System ferry terminal.”

## JUNEAU CLIMATE ACTION & IMPLEMENTATION PLAN, 2011

The objective of the Juneau Climate Action Plan is to lower Juneau's greenhouse gas (GHG) emissions by decreasing area wide consumption of energy in general and fossil fuels in particular. This Plan, which includes a 2010 inventory of local energy use and GHG emissions, sets new emissions reduction targets and suggests actions that government, businesses, and the community can take to meet these targets. Every individual in Juneau stands to benefit from cost savings that flow from energy conservation and reductions in fossil fuel consumption. The Plan provides a menu of many actions, each with estimated greenhouse gas emission reductions, to help meet the adopted CBJ goal to reduce community-wide emissions by 25% by 2032.

Figure 3. **GREENHOUSE GAS EMISSIONS** for CBJ Buildings and Operations by Sector, 2010



A 2010 greenhouse gas (GHG) emission inventory of CBJ Buildings and operations finds that 11% of all emissions are from Capital Transit.

Therefore, one of several Top Actions this plan recommends is to:

- Evaluate the assembly-adopted 2008 Transit Development Plan to determine which actions will garner the greatest reductions in GHG emissions and energy use. The plan recommends that CBJ consider limiting future fleet purchases to alternative fuel vehicles such as hybrid-electric vehicles. Consider, for example, adding a hybrid-electric bus for the downtown circular loop. (page 26)

In the Transportation sectors, the 2010 Juneau GHG emissions are 219,400 million metric tons CO<sub>2</sub> equivalent (MTCO<sub>2</sub>e). The goal is to reduce emissions from this sector by 2032 by 100,000 MTCO<sub>2</sub>e. There are 8 goals listed with examples of how to accomplish this. They are all relevant, but one especially so:

- Goal T-2: Increase Capital Transit ridership. (Estimate: 40% increase in ridership.) This would potentially decrease GHG emissions by 4,300 MTCO<sub>2</sub>e.

## 2010 JUNEAU SENIOR NEEDS SURVEY

Beginning in the spring of 2010, the Juneau Commission on Aging conducted a survey of Juneau residents aged 55 and older. There were 5,000 copies of the survey distributed and the response rate was 1,218. Comments on the Capital Transit bus system and Care-A-Van demonstrated

overwhelming support among this population. This support and positive opinion extended even to those not using the systems at present. Many framed their positive comments in terms of what they will likely need and use in the future. Suggestions centered mainly on geographic expansion and schedules for the bus system and scheduling issues for Care-A-Van.

## **2008 TRANSIT DEVELOPMENT PLAN**

The City and Borough of Juneau Assembly adopted the Transit Development Plan and Coordinated Human Services Transportation Plan in 2008. While this document is now being updated, it is important to review the 2008 plan's key recommendations and assess what has and has not been accomplished, and what is and is not still relevant. The recommendations are provided below:

- **Fleet Mix recommendation:** a tiered approach should be developed with different vehicle types for different service characteristics.
- **Vehicle Power Source recommendation:** CBJ should limit future fleet purchases to alternative fuel vehicles and explore the acquisition of advanced diesel, compressed natural gas (CNG), and hybrid-electric vehicles.
- **Fleet Replacement Strategy recommendation:** Capital Transit should adopt a 12-year transit bus replacement schedule; and purchase expansion vehicles if additional routes are added, or when increasing frequency of service on existing routes.
- **Bus Stop Element recommendation:** CBJ should purchase prefabricated shelters with integrated lighting as well as larger shelters at high-volume stops. New shelters should feature improved service information. All stops with sign posts should include up-to-date information specific to the route(s) they serve.
- **Right of Way recommendation:** CBJ should address issues of Capital Transit stops located on State Rights-of-Way (ROW) that do not meet safety standards established by the State Department of Transportation and Public Facilities.
- **Facilities Element recommendation:** CBJ should re-pave the deteriorating Capital Transit headquarters parking lot and vehicle storage areas.
- **Park & Ride Locations recommendation:** Capital Transit should develop park and ride facilities at key stops along the Express Route's alignment.
- **Service scenarios recommendations:**
  - **Baseline:** No alignment changes and some minor schedule changes to reflect current transit demand and external influencing factors.
  - **Intermediate:** Service extension to the Alaska Marine Highway System (AMHS) Terminal and Lena Cove, introduction of service along Riverside Drive, and scheduling amended to reflect proposed alignments.
  - **Optimum:** Complete revamping of Capital Transit's routing and operating schedule between Juneau's downtown area and the Mendenhall Valley.
- **Scheduling recommendation:** The service day should start at 6:00 a.m. to accommodate transit patrons with "early-start" schedules and the last bus depart Main Street at 12:35 a.m. to accommodate persons working late-night schedules.
- **Introduce Limited Holiday Service recommendation:** Introduce limited service on all holidays currently observed by Capital Transit on a six-month trial basis, employing a Sunday service level.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

- **Enhance North Douglas Service recommendation:** Introduce hourly weekday service on this route between 7:00 a.m. and 7:00 p.m. on a six-month trial basis.
- **Saturday Express Service recommendation:** Run the Express Route on Saturday to support weekend travel between the Valley and the downtown area.
- **Increase Express Service Frequency recommendation:** Implement half-hour headways on the Express Route; this was implemented in 2009.
- **Extend Express Service Day recommendation:** Extend express service on a six-month trial basis.
- **Service to Thane recommendation:** Implement a 90-day trial service along Thane Road using cutaway-type vehicles with one morning trip, one midday trip, and one evening trip every weekday.
- **Fare recommendation:** Capital Transit should market its non-cash fare options. It should also consider allowing patrons to pro-rate monthly passes, the introduction of smart cards and/or annual passes, as well as the possibility of a “fare-free” system.
- **Staffing recommendation:** CBJ should hire at least one planner/analyst to assist the Transit Manager with near-term projects as well as day-to-day administrative functions.
- **Data Collection and Reporting recommendation:** Capital Transit should begin a formal process for data collection and reporting and include it within monthly reports alongside ridership and revenue.
- **Complaint Resolution recommendation:** The Transit Manager should consider convening periodic community meetings to solicit feedback and update the community on Capital Transit’s performance and service development.
- **Snow Day Alerts recommendation:** Establish a more effective notification/communication process to alert riders who may be inconvenienced by temporary changes to the service.



be operated efficiently and effectively. Route the fare-free downtown circulator along both Willoughby Avenue and Calhoun Avenue for a 2.8-mile route improving mobility for residents northeast of the Federal Building and northwest of the State Capitol. (Developing an electricity-

dependent transit service, even for a single route, such as a downtown shuttle was deemed not feasible at this time.)

- **Additional recommendations by the Community Development Department staff:** Add feeder lines to the Mendenhall Valley; introduce service along Riverside Drive; and offer large employers monthly passes.
- **Coordinated Human Services recommendations:** 1) Hire a Mobility Manager; 2) implement a central call center for all CBJ transportation services under the control of a dedicated Mobility Manager; 3) Begin an outreach campaign aimed at educating the target populations about the benefits of utilizing Capital Transit’s fixed-route program versus demand-response or paratransit programs.
- **Care-A-Van recommendations:** Contract with a licensed physician to perform all ADA certifications; encourage mode shift whenever practical; SESS should increase staffing; consider either implementing a policy wherein customers pay the requested (full) donation at the time of service, or adopt a fare policy based on the customer

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

income/affordability index; staff should review the policy handbook and update its content to reflect current policies, practices, and procedures; CBJ should consider lifting its ban on servicing non-CBJ vehicles to include the CCS-owned vehicles in the Care-A-Van fleet.

In 2009 a Coordinated Human Services addendum was also prepared. Key service recommendations from this addendum include:

1. **More snow removal** (including adequate plowing of sidewalks to allow use of wheelchairs/assistive devices);
2. **Expanded bus service** (and Care-A-Van service) to include the ferry terminal and Lemon Creek commercial area.

## 7 DEMOGRAPHIC AND LAND USE ANALYSIS

This chapter focuses on a series of maps that help better understand how the geographic areas in Juneau differ in terms of characteristics that affect transit usage. The evaluation includes:

- Population and employment densities
- Youth population (ages 10-17)
- Senior population (65 and over)
- Low income population
- Households without access to a vehicle

The number of persons and jobs per acre by census block is based on 2010 Census data (population) and 2010 Longitudinal Employer-Household Dynamics (LEHD) data. It is important to note that high **population and employment densities** *combined* is perhaps the best indicator of where transit demand is expected to be the highest. Areas with high population or employment density alone can indicate areas of higher transit demand, but when they are not combined, that demand is often peak-oriented rather than all-day demand.

As shown in Figure 24, population density in the Capital Transit service area is as high as 180 persons per acre and employment density reaches 474 jobs per acre. The highest concentrations of jobs and persons combined exist primarily in downtown Juneau. The Mendenhall Valley has more population density than employment density though there are areas of high employment density near the Nugget Mall, the Mendenhall Mall and around the University of Alaska Southeast campus. Bartlett Hospital, Costco, Fred Meyer and Walmart also have large numbers of employees. On Douglas Island there are small pockets of high population and employment density in the downtown area near the post office. Capital Transit's existing route network directly serves the majority of the areas that have high levels of employment and population density. In the Mendenhall Valley, however, several areas with moderate levels of employment density exist inside the Mendenhall Loop Road that are not served directly by the Valley routes.

The concentration of youth between ages 10 and 17 are shown in Figure 25. Youth densities are important to understand because younger people tend to not have a vehicle available to them and they generate higher demand when schools are in session or for shopping and social purposes. High levels of youth population density (exceeding 2 per acre) exist throughout the Capital Transit service area. However, Capital Transit routes do not travel through the areas of downtown north of the Federal Building which contain several pockets of high youth density (most of these areas are within walking distance of bus stops). In the Mendenhall Valley, the areas with the highest concentrations of youth also are not directly adjacent to Capital Transit routes, but are mostly within the loop road.

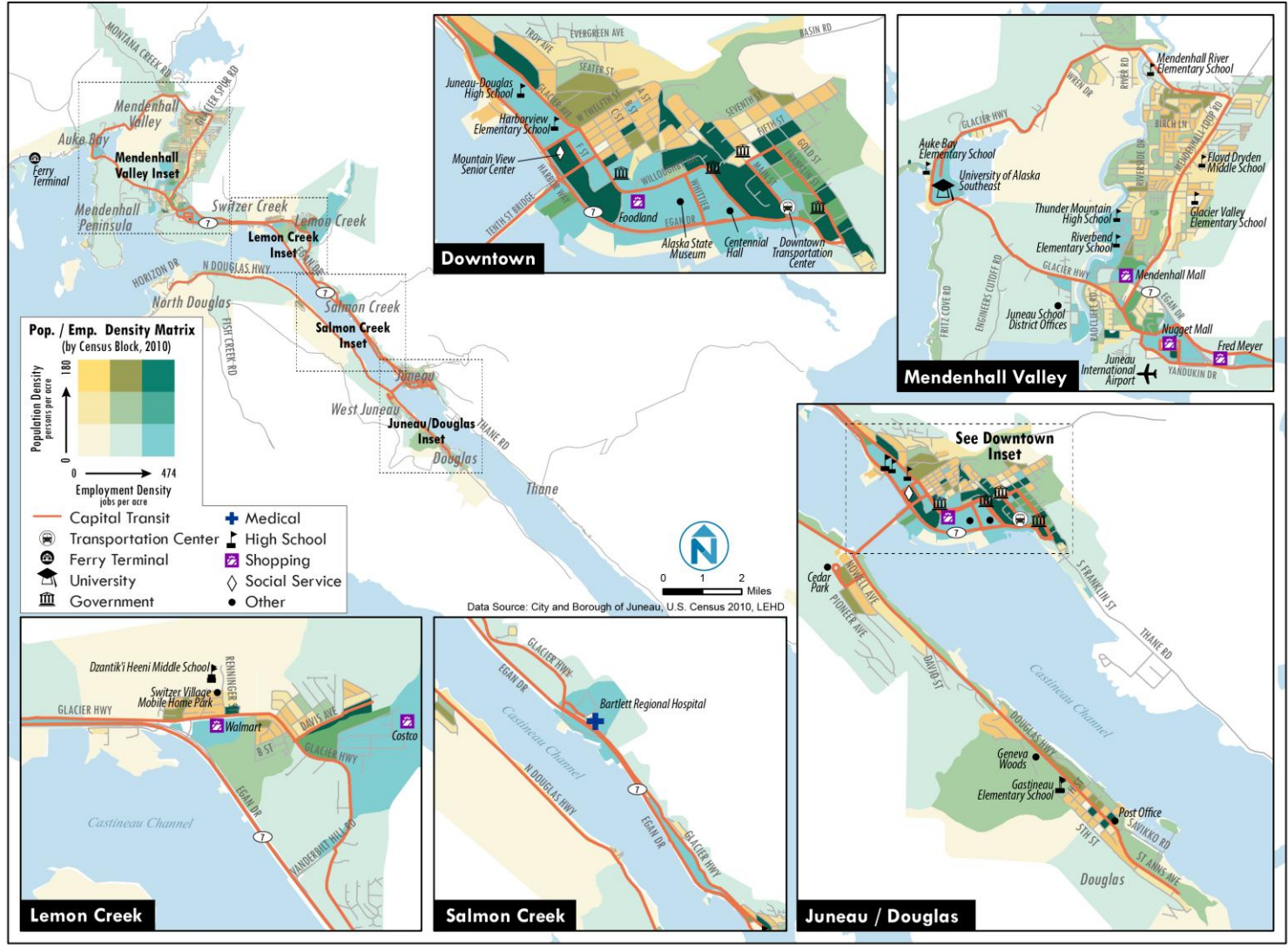
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Figure 26 shows the density of persons ages 65 and older by census block. Seniors tend to have a slightly higher propensity to ride transit, especially those who are unable or do not want to drive themselves. Seniors are mostly concentrated in downtown Juneau. The residential areas in Mendenhall Valley only show mainly low to moderate concentrations of seniors. Facilities such as the Mountain View Senior Center contribute to the density of seniors in downtown Juneau. Most census blocks with high concentrations of seniors are currently well-served by transit.

The final two maps in this chapter - households with income below the federal poverty line (Figure 27) and households without access to a vehicle (Figure 28) – are good indicators of households that are more likely to need transit services. This data has some limitations, however, due to the large size of the geographic areas at which data is reported (census block group). Significant concentrations of households below the federal poverty line and no-vehicle households are in downtown Juneau, Lemon Creek, portions of Mendenhall Valley, and Douglas Island.

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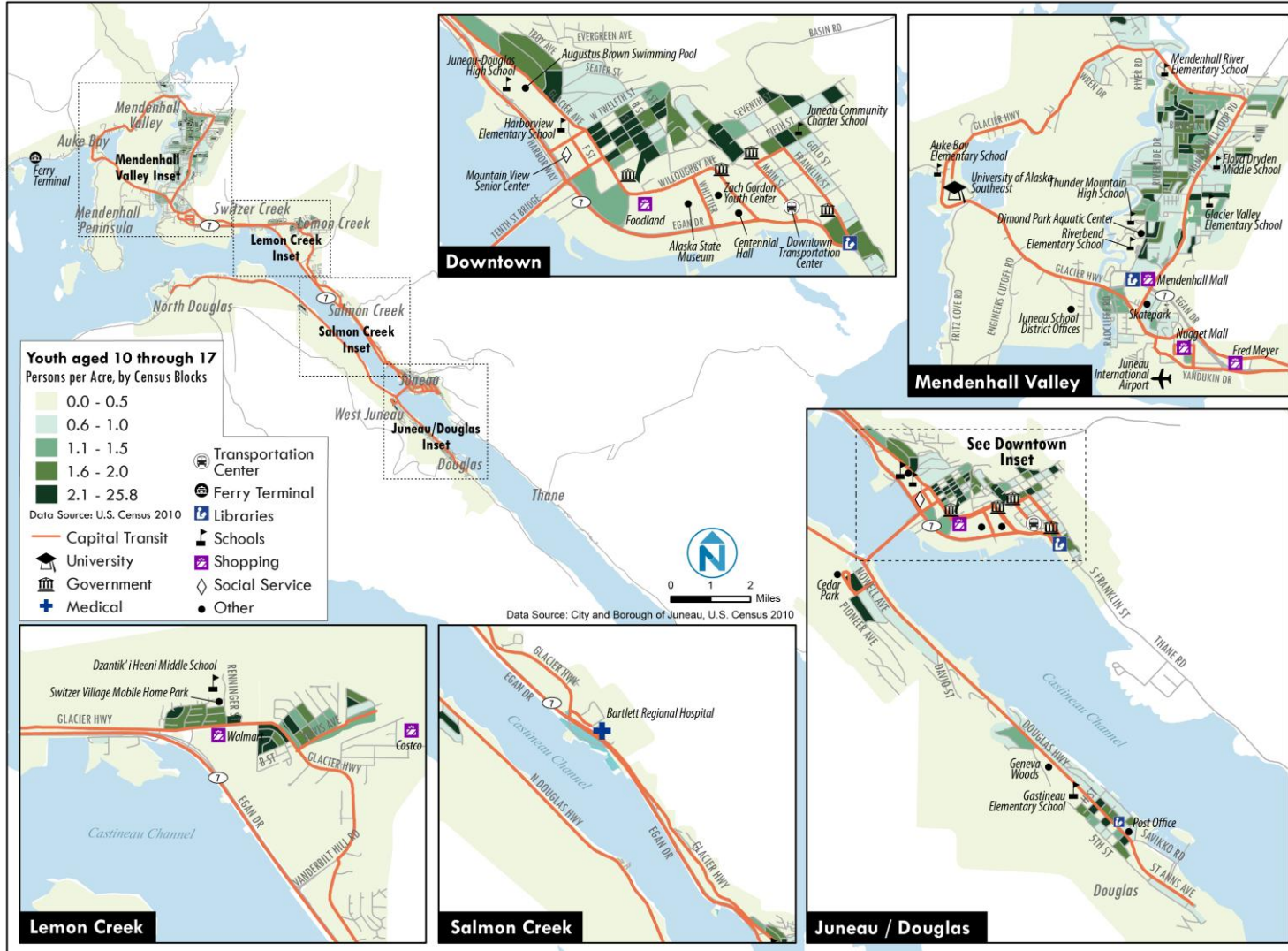
**Figure 24 Population and Employment Density (2010)**





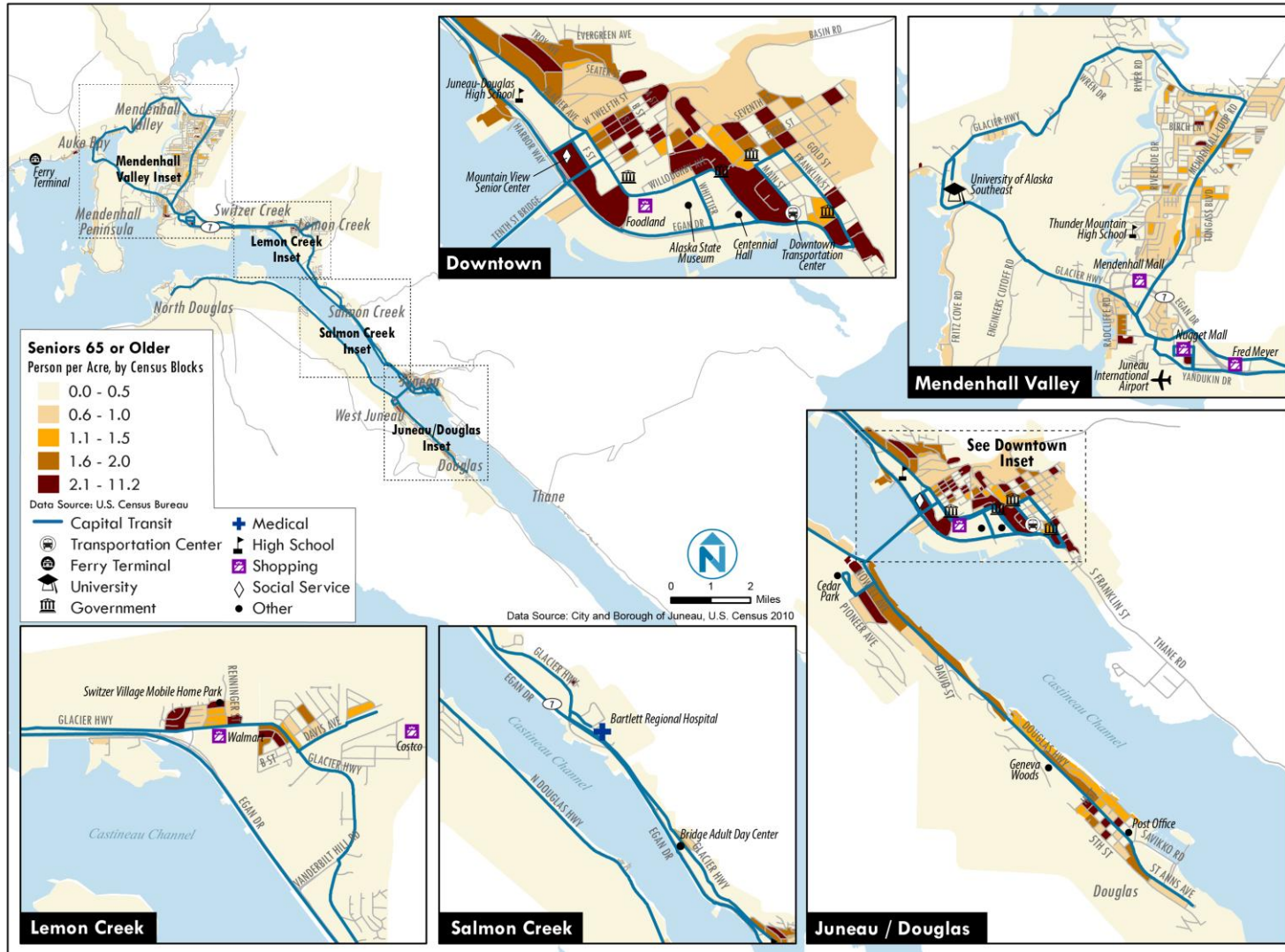
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**Figure 25 Density of Youth Age 10 to 17, 2010**



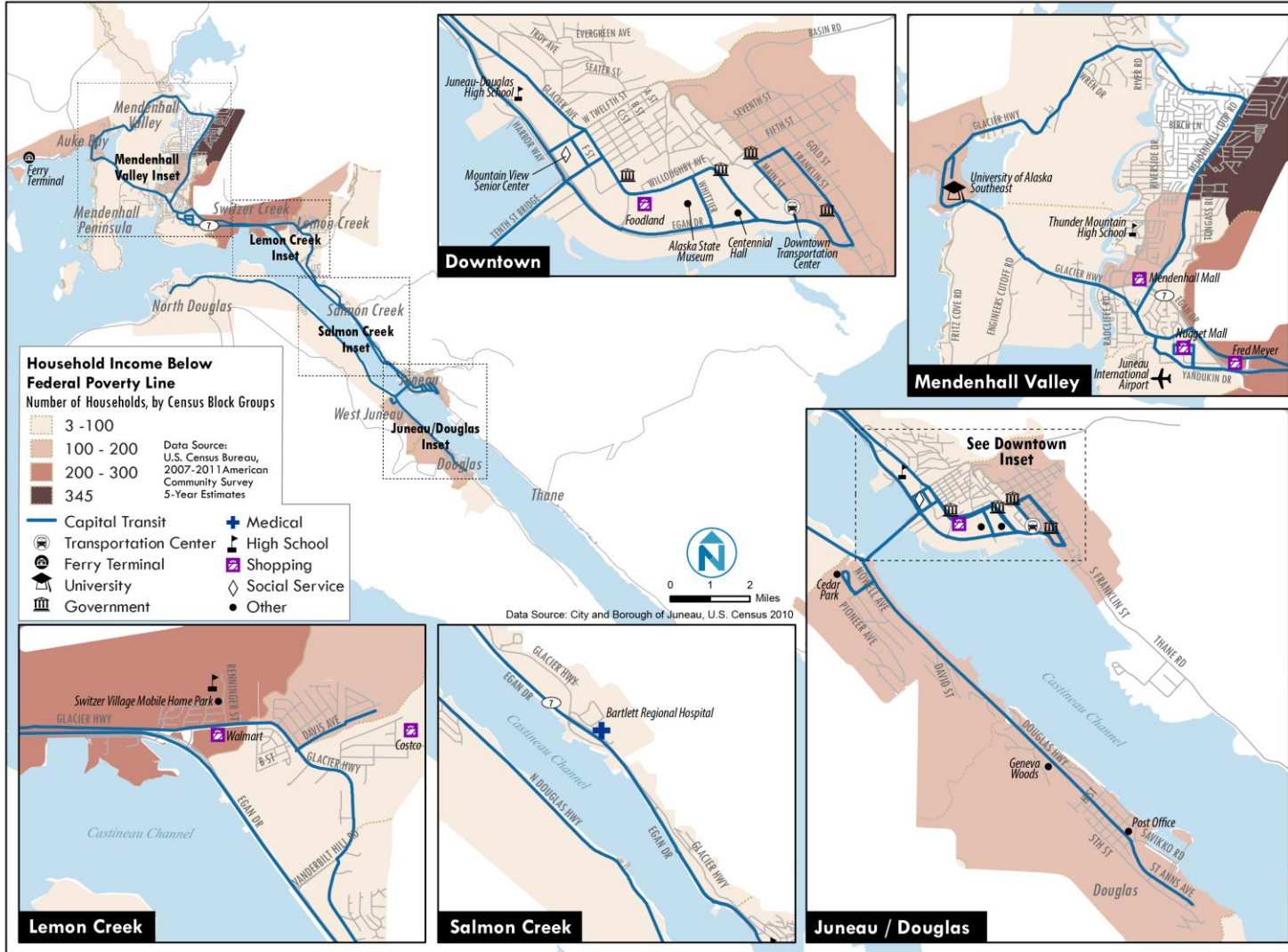
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**Figure 26 Density of Seniors Aged 65 and Older, 2010**



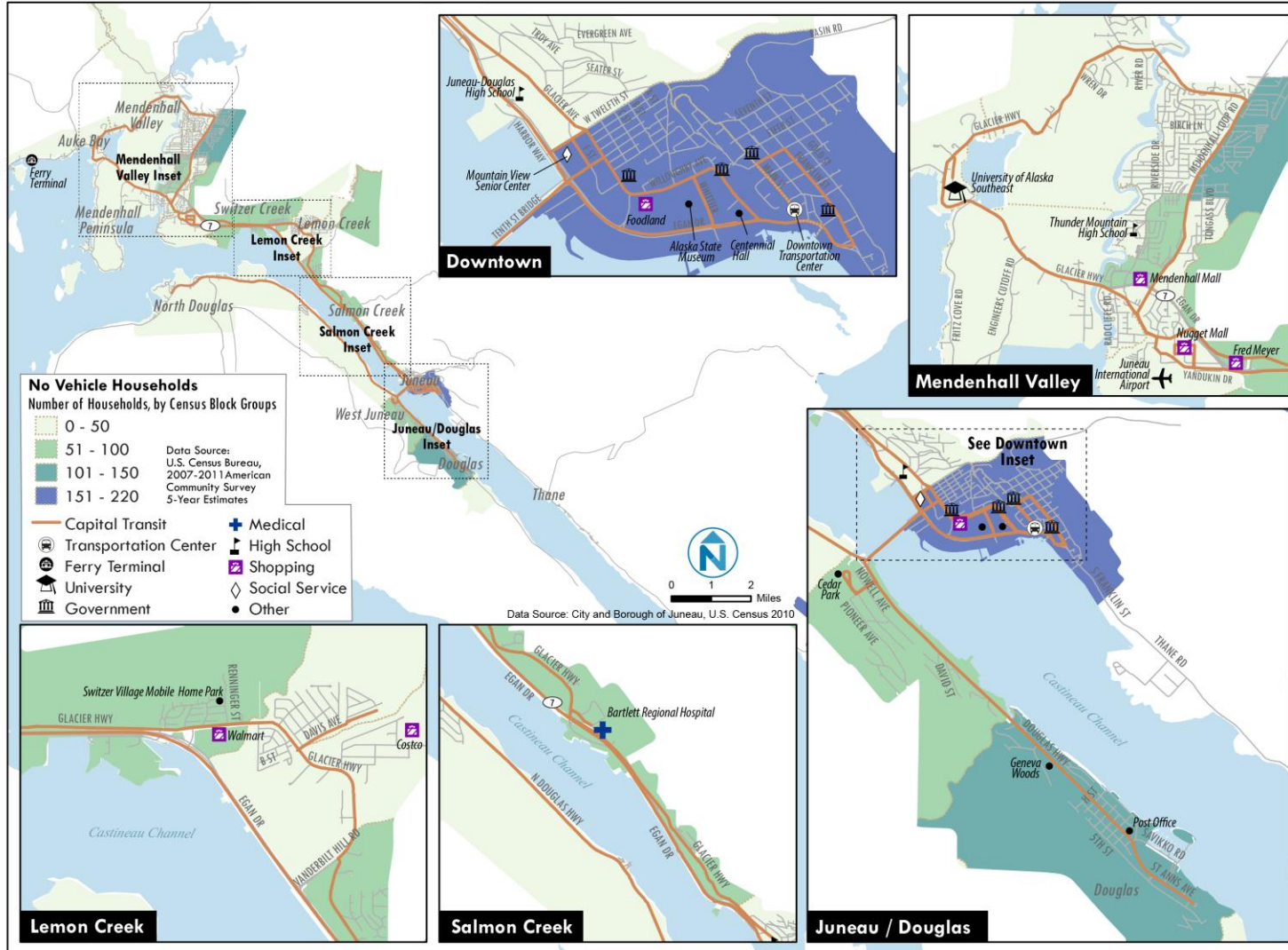
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**Figure 27** Households with Income below Federal Poverty Line, 2007 - 2011



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**Figure 28 Households with No Vehicle, 2007 - 2011**



## 8 COMMUNITY ENGAGEMENT

This chapter provides an overview of several community engagement activities that have been undertaken since the initiation of the project. The activities that have been completed thus far include an on-board survey (on Capital Transit), an online survey of UAS students, faculty, and staff, stakeholder interviews, a drive-around meeting with Capital Transit drivers, and a survey of Capital Transit drivers. Key findings from each of these activities are provided below. In addition, preliminary findings from an online community survey are presented in this section.

This study also includes a number of other community outreach activities that will be influencing the recommendations in this project, but they have not all been completed at the time of this draft report. The other activities include:

- **An online community survey.** This survey has been developed and was distributed throughout the community. It is expected that the survey will remain active throughout the summer. Preliminary findings are presented in this report, and complete findings will be summarized at a later date.
- **Project website.** A project website has been developed (JuneauTransitPlan.org) and will remain active throughout the project. The project website allows people to find out about the study, provide general comments, find out about upcoming events, or complete an online survey.
- **Community open house meetings.** Two open house meetings were held on June 11<sup>th</sup> and 12<sup>th</sup> at the Mendenhall Library and Downtown Library, respectively.
- **Community announcements.** A variety of announcements about the study occurred prior to the community open house meetings, including posting flyers on the bus, posting flyers around town, displaying an ad in the Juneau Empire, and being discussed on *Capital Chat* and *A Juneau Afternoon*.

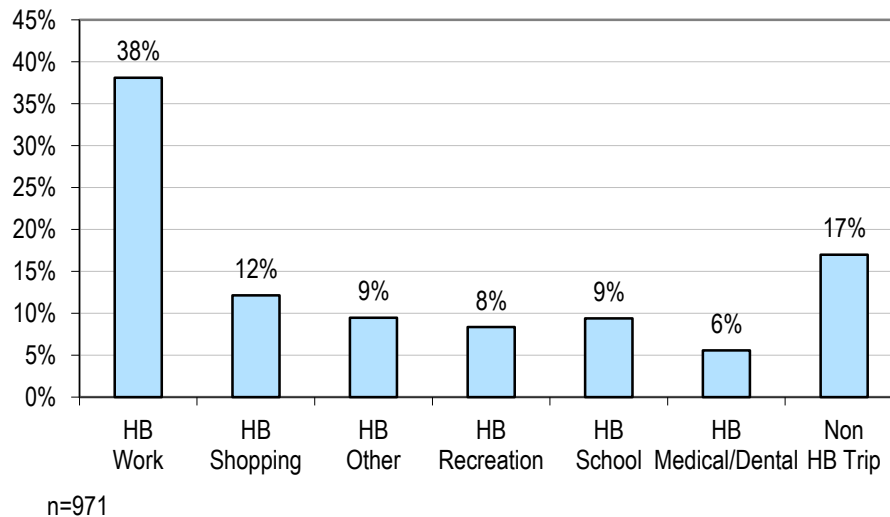
## ON-BOARD SURVEY

On Tuesday, April 30, 2013, Wednesday, May 1, 2013, and Saturday, May 4, 2013 an on-board survey was administered to passengers riding Capital Transit buses. A total of 1,061 passengers completed surveys. It is estimated that 53% of the Capital Transit rider population was surveyed. The 29 question survey asked passengers to share information about the one-way trip they were currently making regarding their origins and destinations, mode to and from the bus stop, frequency of ridership, how long they have been riding transit, alternative modes available, and form of payment. A series of questions prompted passengers to rate Capital Transit on a five-level rating scale to assess users' perceptions of service from Poor to Very Good. Demographic data were collected to assess rider profiles and characterize the survey sample.

### On-Board Survey Findings

The majority of passengers' trips (83%) originated from home or were connecting to home. These "home-based" passengers' principle non-home trip origin or destination was work (38%) followed by shopping (12%). Nine-percent of passengers responded that their transit trip was for or from an "other" location. Those that responded to "other" were asked where they were coming from or connecting to; the most common responses were "friends," "hotel" or "motel," "airport," and "downtown/town." Most respondents were making a round trip (63%) on transit, with 37% not making a round trip.

**Figure 29 Home-based Trip Purposes**



Of the 17% of trips that were non-home-based, the most popular starting or ending location was work. "Work to other" (28%), "work to work" (23%), and "work to shopping" (18%) were the leading responses for non-home-based trips connected to work.

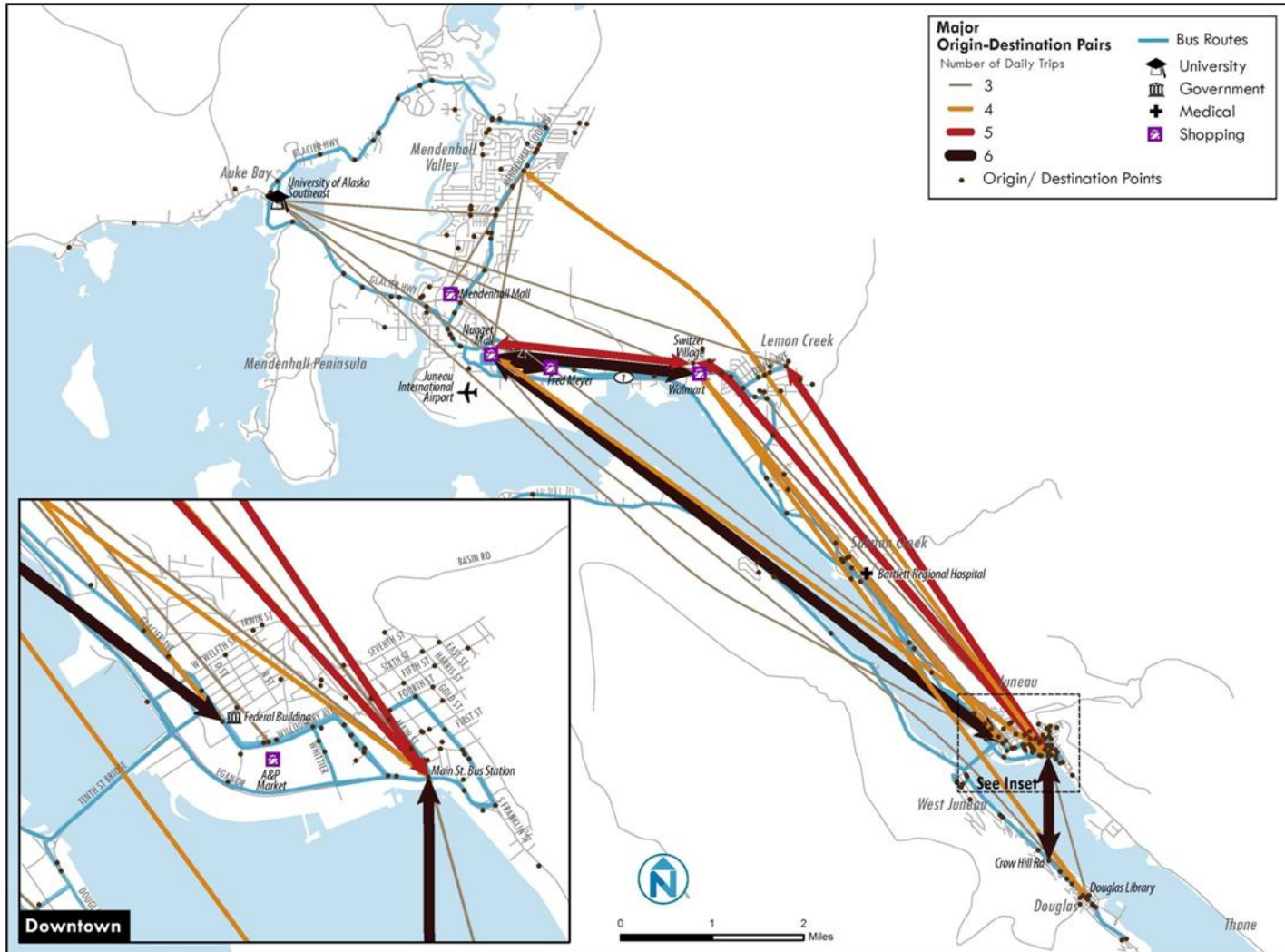
Figure 30 shows origins and destination trip patterns reported by survey respondents. Six hundred origin-destination pairs were collected. In cases that respondents stated that an origin or destination was "downtown", coordinates for the Downtown Transportation Center were assigned. The most commonly reported trip patterns are between downtown Douglas and

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City and Borough of Juneau, Capital Transit

downtown Juneau, downtown Juneau and the Nugget Mall, the Nugget Mall and Walmart, and the Nugget Mall and Fred Meyer. A few respondents cited origins or destinations as far as the ferry terminal, a 1¾ mile walk from the nearest bus stop.

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**Figure 30** Origin-Destination Pairs Reported by Survey Respondents

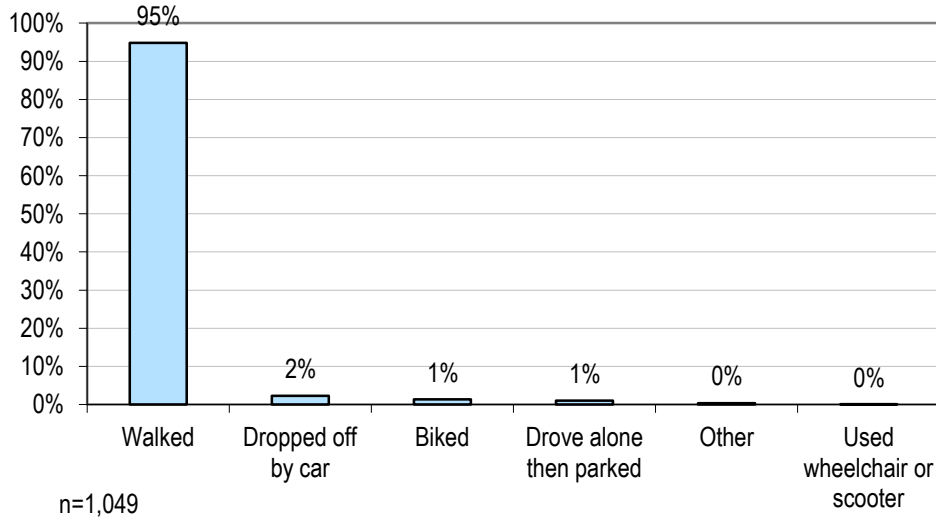




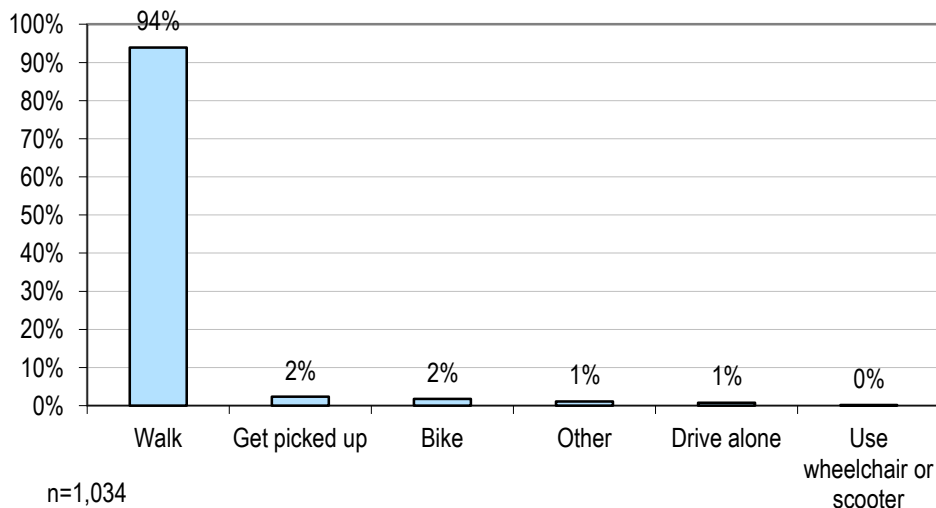
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Almost all respondents (95%) traveled to the bus stop by walking (Figure 31). Two-percent were dropped off by a car, 1% biked, and 1% drove alone then parked. Similarly, 94% of respondents intended to walk from the bus stop to their destinations while 2% intend to be picked up or ride a bike from the bus stop (Figure 32).

**Figure 31 Transit Access Mode**



**Figure 32 Bus stop Egress Mode**



The average walking time from the respondent’s origin to the bus stop was less than 4 minutes with the shortest walk taking less than a minute and the longest walking reported at 60 minutes (the median walk time was 5 minutes). Traveling from the bus stop to the destination, the average

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City and Borough of Juneau, Capital Transit

walk time was 6 minutes, the shortest was less than a minute, and the longest was a 90-minute walk.

In total, most respondents (77%) did not transfer during their transit journey. Eighteen-percent transferred once and 5% transferred twice. Respondents were asked to state which route they were transferring from and/or to in order to complete their trip. Figure 33, below, shows a matrix of transfer patterns reported by survey respondents. Transfers occur most frequently between the Douglas Route and routes serving Mendenhall Valley (3 and 4). The second most common transfer pattern is between the Valley routes and the Express. These routes are scheduled to meet at the Nugget Mall so that riders from the valley destined for downtown can transfer to the express service from the Route 3 or Route 4. The Douglas Route and the Express both serve the Federal Building, although they arrive 15 minutes apart, which helps explain the low transfer rate between the two routes.

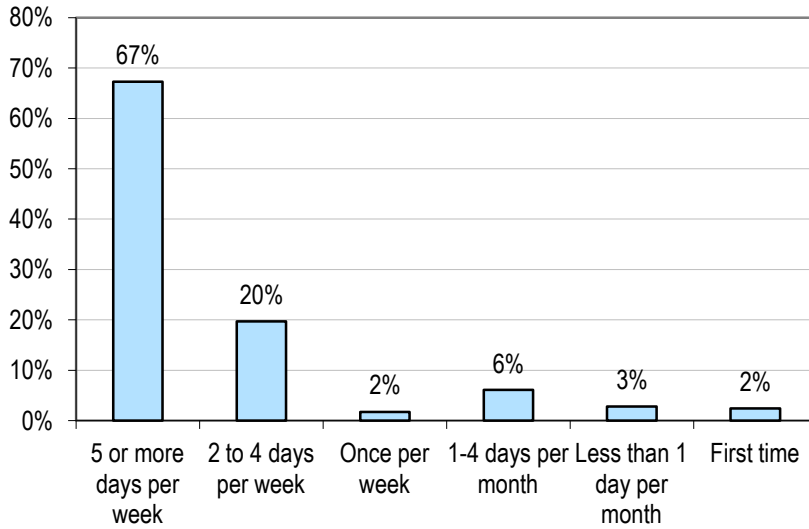
**Figure 33 Transfer Matrix**

| Transfer From | Transfer To |         |         |       |
|---------------|-------------|---------|---------|-------|
|               | Valley      | Express | Douglas | Total |
| Valley        | 24          | 47      | 39      | 110   |
| Express       | 31          | 3       | 4       | 38    |
| Douglas       | 56          | 3       | 15      | 74    |
| Total         | 111         | 53      | 58      | 222   |

The most used route among survey respondents was the Lemon Creek/ Mendenhall Valley route (69%) followed by Douglas (18%), the Express (11%), and North Douglas (2%).

The majority of survey respondents (67%) were frequent transit riders, using transit five or more days per week (Figure 34). Twenty-percent of respondents rode transit two to four days per week and 6% used transit one to four days per month.

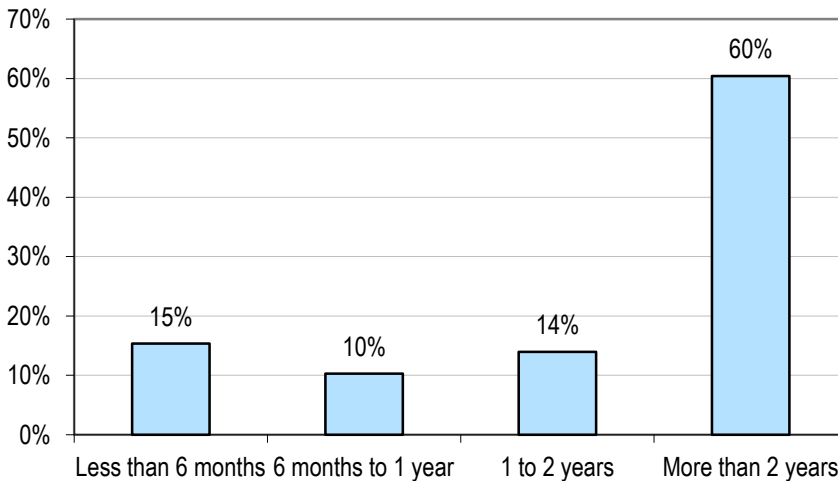
**Figure 34 Frequency of Transit Ridership**



n=1,036

Survey respondents were generally experienced transit riders (Figure 35). Sixty-percent of respondents have been riding Capital Transit for more the two years. Fifteen-percent have been riding for less than six months and 14% for one to two years.

**Figure 35 Tenure of Transit Ridership**



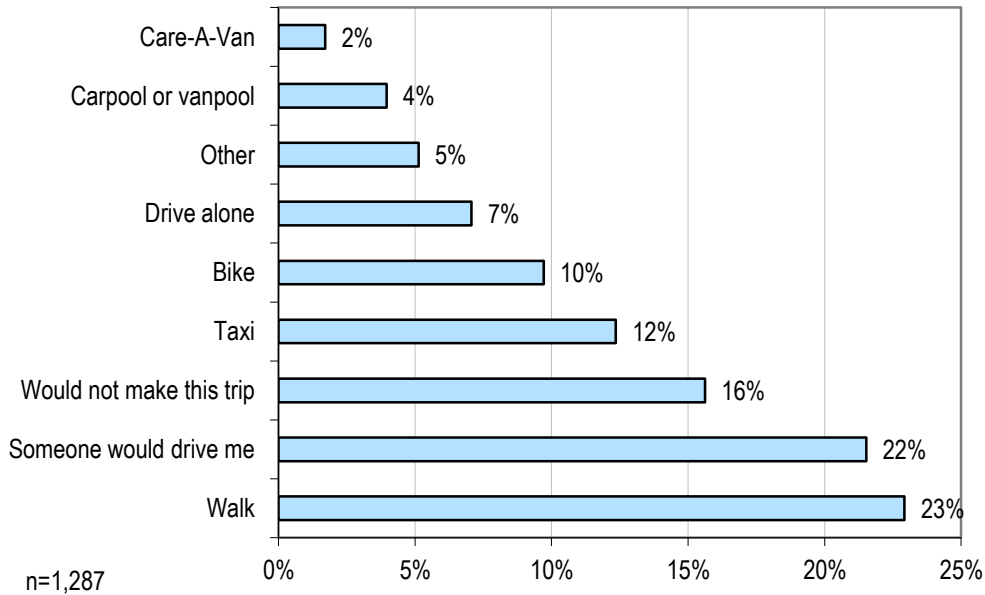
n=1,023

If Capital Transit was not available respondents would have made the trip in a variety of ways (Figure 36). Nearly a quarter of respondents (23%) would have walked, 22% would have someone drive them, and 16% would not make the trip. The most common “other” response was hitch hiking with 14 total responses. For 72% of respondents a car was not available to them for the

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City and Borough of Juneau, Capital Transit

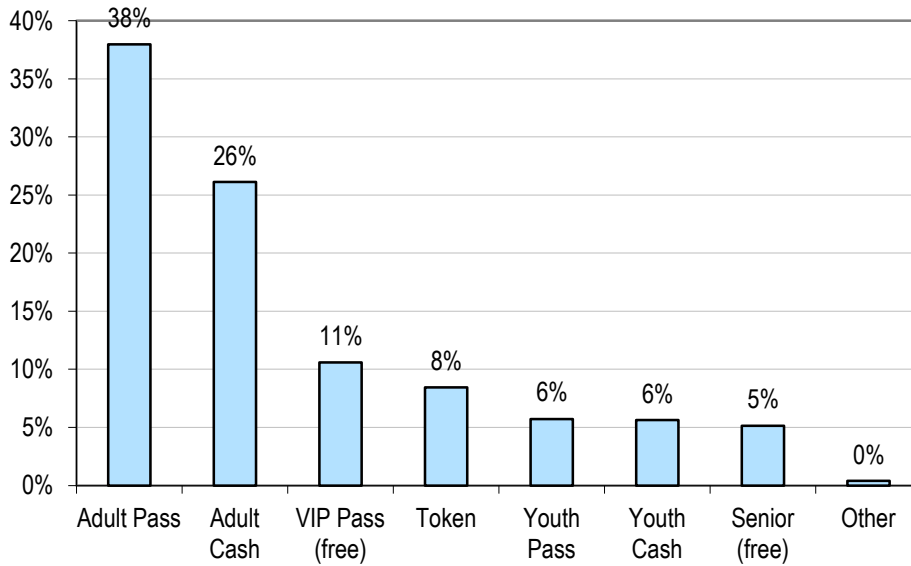
particular trip illustrating users' reliance on the transit service. Fifteen-percent had a car available but with inconvenience to others and 13% had a car available without noted inconvenience (which is a good indicator of the "choice" market using Capital Transit). Survey respondents were split between those with and without valid driver's licenses. Fifty-four-percent of riders did not have a driver's license, while 46% did have a driver's license.

**Figure 36 Alternative Mode if Capital Transit was Unavailable**



Adult passes were the most commonly used form of payment among survey respondents, with 38% of riders using this payment method (Figure 37). About a quarter of respondents (26%) paid the full adult fare with cash. Eleven-percent used VIP Passes which are free fares for disabled persons.

Figure 37 Transit Payment Means



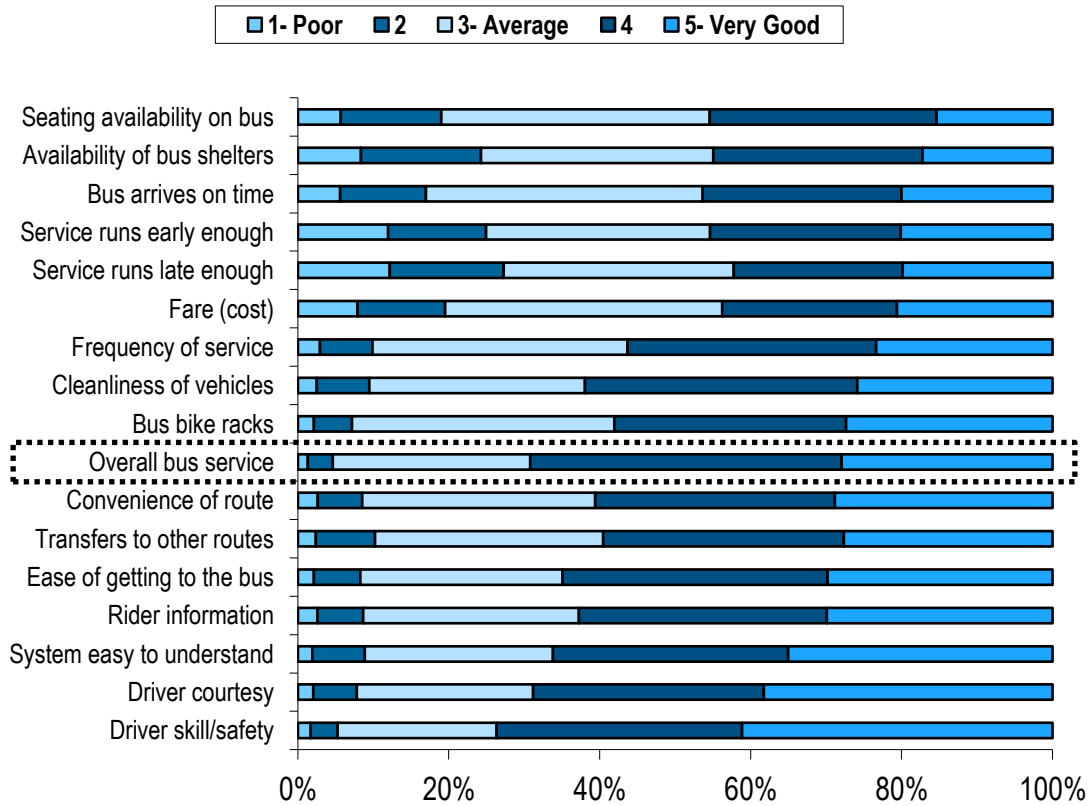
n=1,030

Respondents were asked to rate Capital Transit’s performance in 17 categories on a scale of 1 to 5, with 1 being Poor and 5 being Very Good (Figure 38). Driver skill and safety, driver courtesy, and system understandability were the top rated (rated a 5) performance elements. Seventy-four-percent of respondents rated driver skill and safety as a 4 or a 5. Sixty-nine-percent of respondents rated driver courtesy as a 4 or a 5 and 69% rated overall bus service as a 4 or 5.

The lowest rated elements (rated a 1, Poor) were how early (12%) and how late (12%) the service runs. Similarly, 25% of respondents rated how early service runs as a 1 or 2 and 27% rated how late service runs as a 1 or a 2. Other low ranking elements include the availability of bus shelters (24% rated availability a 1 or 2), the cost of fares (20% rated cost of fares a 1 or 2) and seating availability (19% rated a 1 or 2).

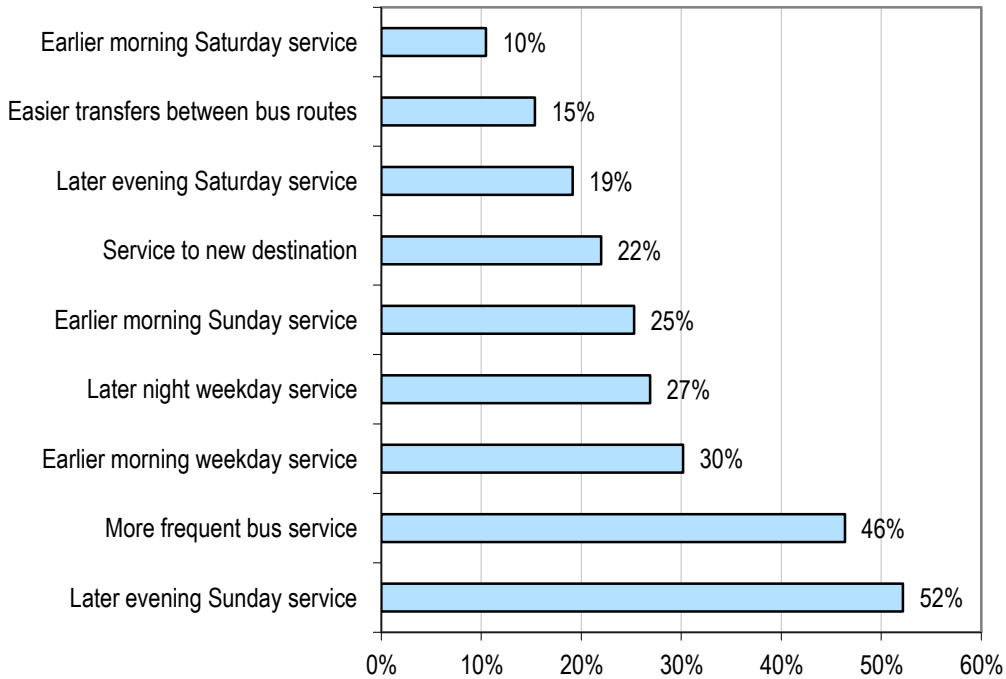
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City and Borough of Juneau, Capital Transit

**Figure 38 Capital Transit Service Ratings**



Respondents were asked to identify up to three improvements that would help them ride the bus more often (Figure 39). The most common response was later evening Sunday service with 52% followed by requests for more frequent bus service (46%).

Figure 39 Identified Improvements for Increased Ridership (respondents chose top three)



n=878

For improvements related to time or location, the respondents were asked to list their preferences; Figure 40 highlights the most common responses. For respondents who selected earlier morning weekday and Saturday service, 6:00 AM was the most popular write-in with 54% and 38% of write-in responses, respectively. A 7:00 AM service start was favored on Sundays by 43% of respondents who wrote in a time. Those who wanted extended hours on weekdays and Saturdays most commonly wrote in 12:00 AM as the preferred service end time. Twenty-three-percent of write-in responses indicated that 10:00 PM was the preferred service end time on Sunday, closely followed by 9:00 PM and 8:00 PM with 19% and 18% of write-in responses, respectively. Fifty-four-percent of respondents that wrote-in destinations needing new service identified the Ferry/Cruise terminal and 33% identified Costco.

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City and Borough of Juneau, Capital Transit

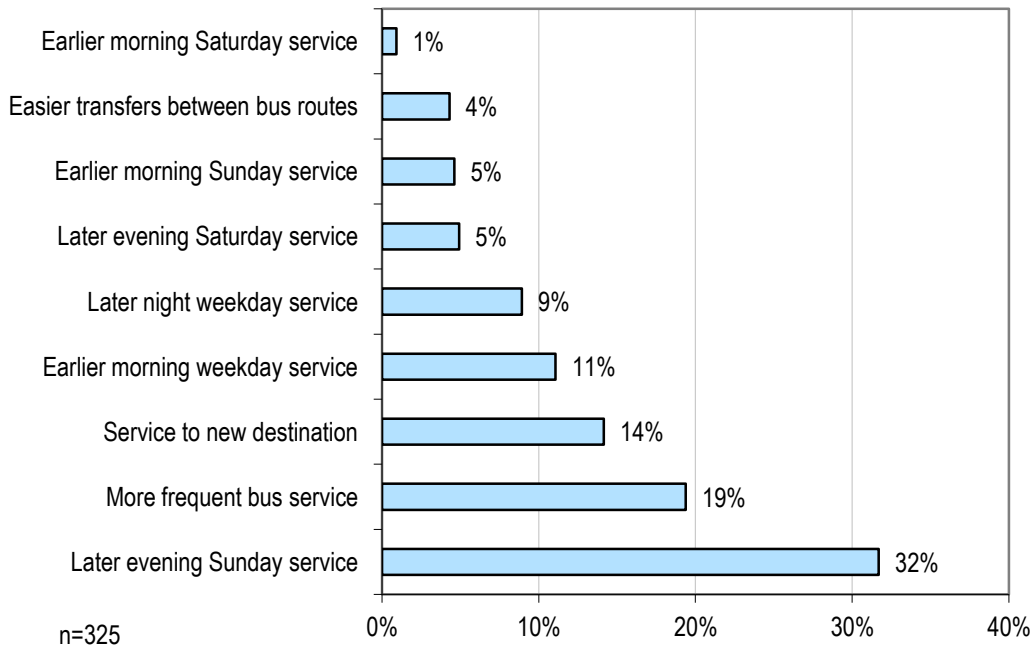
**Figure 40 Top Three Responses (per choice)**

|  | #1<br>Response               | %   | #2<br>Response | %   | #3<br>Response | %   |
|--|------------------------------|-----|----------------|-----|----------------|-----|
| Preferred earlier morning weekday service start time:  | 6:00 AM                      | 54% | 5:00 AM        | 12% | 6:30 AM        | 9%  |
| Preferred later night weekday service end time:        | 12:00 AM                     | 51% | 1:00 AM        | 9%  | 2:00 AM        | 6%  |
| Preferred earlier morning Saturday service start time: | 6:00 AM                      | 38% | 7:00 AM        | 29% | 5:00 AM        | 13% |
| Preferred later night Saturday service end time:       | 12:00 AM                     | 38% | 1:00 AM        | 14% | 11:00 PM       | 14% |
| Preferred earlier morning Sunday service start time:   | 7:00 AM                      | 43% | 8:00 AM        | 31% | 6:00 AM        | 15% |
| Preferred later night Sunday service end time:         | 10:00 PM                     | 23% | 9:00 PM        | 19% | 8:00 PM        | 18% |
| Preferred service destination:                         | Ferry/<br>Cruise<br>Terminal | 54% | Costco         | 33% | Riverside      | 13% |

Respondents were then asked to circle the one improvement they thought most important (Figure 41). While only 31% of total respondent circled a choice, about a third (32%) of those that did chose “later evening Sunday service” as the most important, matching its place in the top-three rankings.



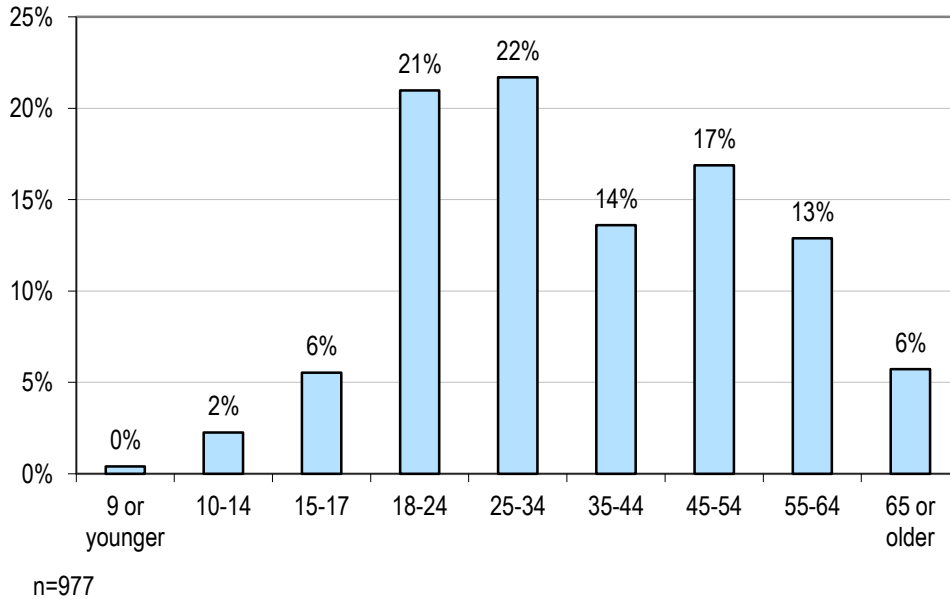
Figure 41 Most Important Improvement (respondents' indentified top choice)



## On-board Survey Respondent Demographics

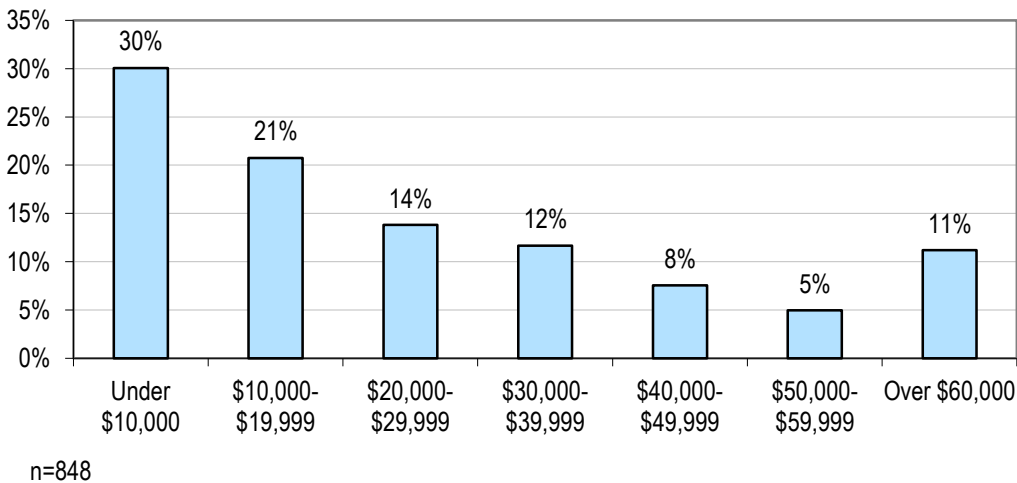
Survey respondents were spread across a broad age range (Figure 42). The largest groups are 18-24 year olds and 25-34 year olds, together representing 43% of the total respondents. 35-44 and 45-54 year olds together represent 31% of respondents. Respondents were almost evenly split between women and men with 48% of respondents identifying as female and 52% identifying as male.

Figure 42 Age of Respondents



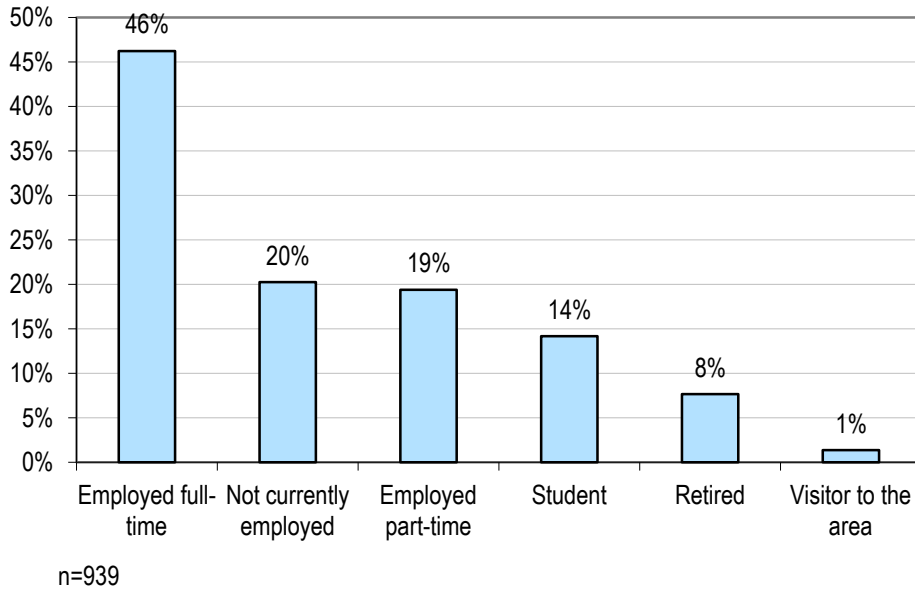
The largest share of survey respondents (30%) live in households earning under \$10,000 per year (Figure 43). Fifty-one-percent of respondents reported living in households making \$19,999 or less. Eleven-percent of respondents report living in households making over \$60,000 per year.

Figure 43 Total Household Income



The largest share of respondents were employed full-time (46%) followed by those not currently employed (20%) (Figure 44).

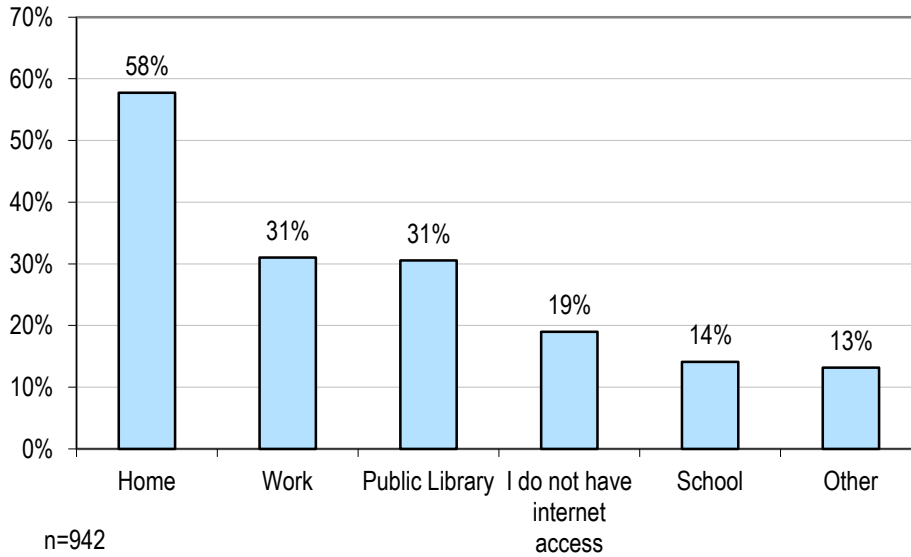
Figure 44 Employment Status



While the majority (86%) of respondents did not report a disability that impacts their mobility, 14% of respondents did state that they have a mobility disability.

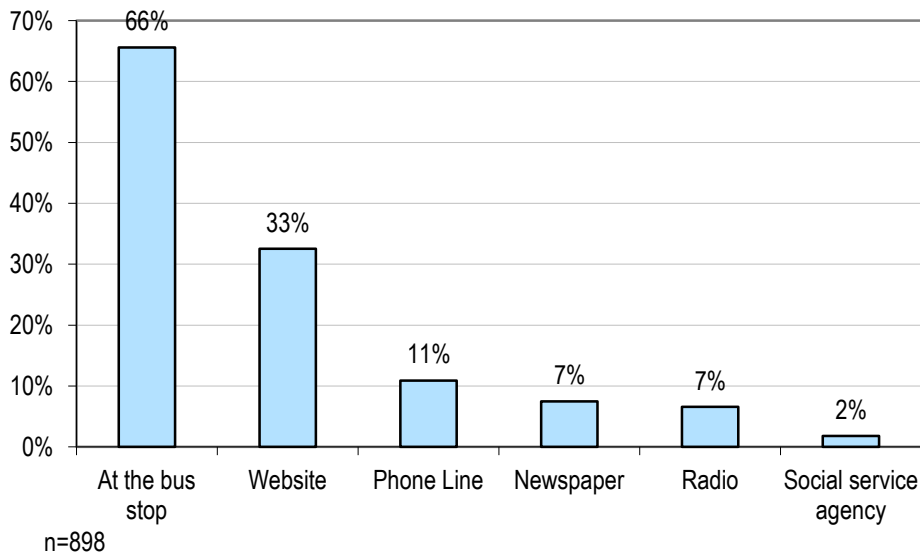
A series of questions were asked about internet access in order to query respondents' readiness to utilize online transit tools. Respondents were asked where they have access to the internet (Figure 45). Fifty-eight-percent of respondents have access at home. Fifty-two-percent responded that they have access at two or more locations. Nineteen-percent reported they do not have access at all. The majority of respondents had not visited Capital Transit's website (58%). Additionally, a majority of respondents (55%) were not interested in purchasing a bus pass online.

Figure 45 Access to the Internet



Respondents were asked how they typically access information about Capital Transit services (Figure 46). The majority of respondents (66%) accessed information at the bus stop and 33% used a website. Smaller portions used the phone line (11%), newspaper (7%), and radio (7%). KINY and KTOO were the most referenced radio stations.

Figure 46 Means of Accessing Information about Capital Transit Service



## ONLINE COMMUNITY SURVEY

The following analysis of the City and Borough of Juneau's Transit Development Plan Community Survey provides a snapshot of preliminary survey results, six weeks after the survey opened to the public. The survey instrument is an online questionnaire that takes about 10 minutes to complete, asking residents and visitors to identify ways to improve the quality and effectiveness of transit services in the city. The community-wide survey is being conducted to assess potential needs and desires related to transit.

The survey was advertised throughout the community including an announcement in the *Juneau Empire*, links on Capital Transit's and the City's websites, advertising on buses, and distribution of the survey link by stakeholders. To date, there have been 229 survey respondents. The survey will remain open through August 2013 for residents and visitors to share their thoughts about transit in Juneau.

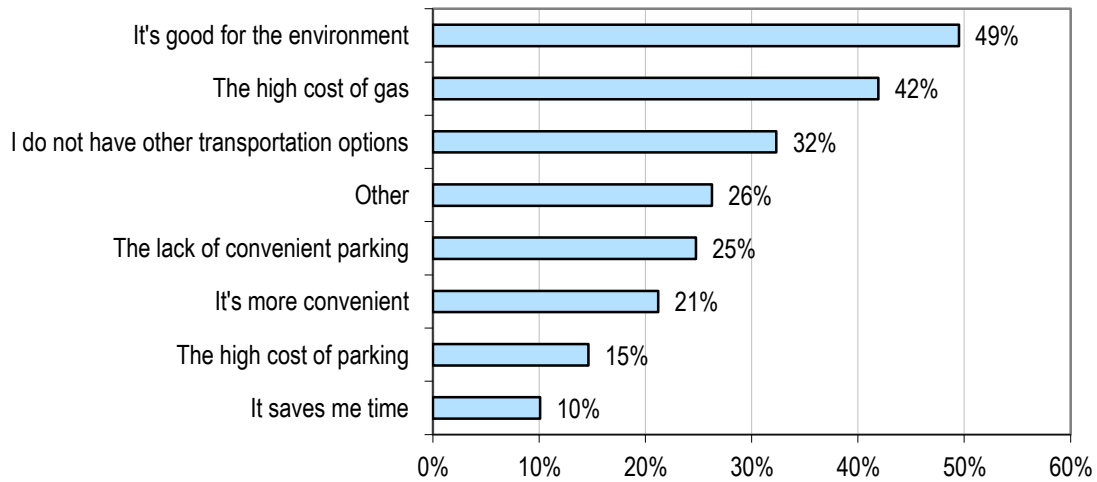
### Survey Analysis

#### Transit Usage and Commute Information

Survey respondents were asked a range of questions to solicit input about the effectiveness of the transit system for users. An initial series of questions asked respondents to share some basic information including if they are residents of Juneau, what part of the city they live in, and basic familiarity with Capital Transit and Care-A-Van service. Overall, survey respondents were also transit users. Sixty-eight-percent of respondents used Capital Transit or Care-A-Van service in the previous six months while just 9% of respondents live in households where no one has ever used transit service. The most common reasons for people using transit are for work trips (68%), social/recreational trips (49%), and shopping trips (38%).

Respondents stated their reasons for using transit in Juneau, choosing all that applied to them (Figure 47). The most common reason for using transit is that it is good for the environment (49%), followed by the high cost of gas (42%) and lack of other transportation options (32%). Twenty-six-percent of people answered "Other" with the most common responses being that transit is safer or more convenient in the snow than driving; the high cost of having a car; and that they have one shared vehicle. Those that have not ever used transit were asked to identify reasons that they do not use transit. While there were only 16 respondents, the most common reasons given were that travel times are too long (31%) and that using personal transportation is preferable (31%).

Figure 47 What are the reasons you use transit in Juneau?

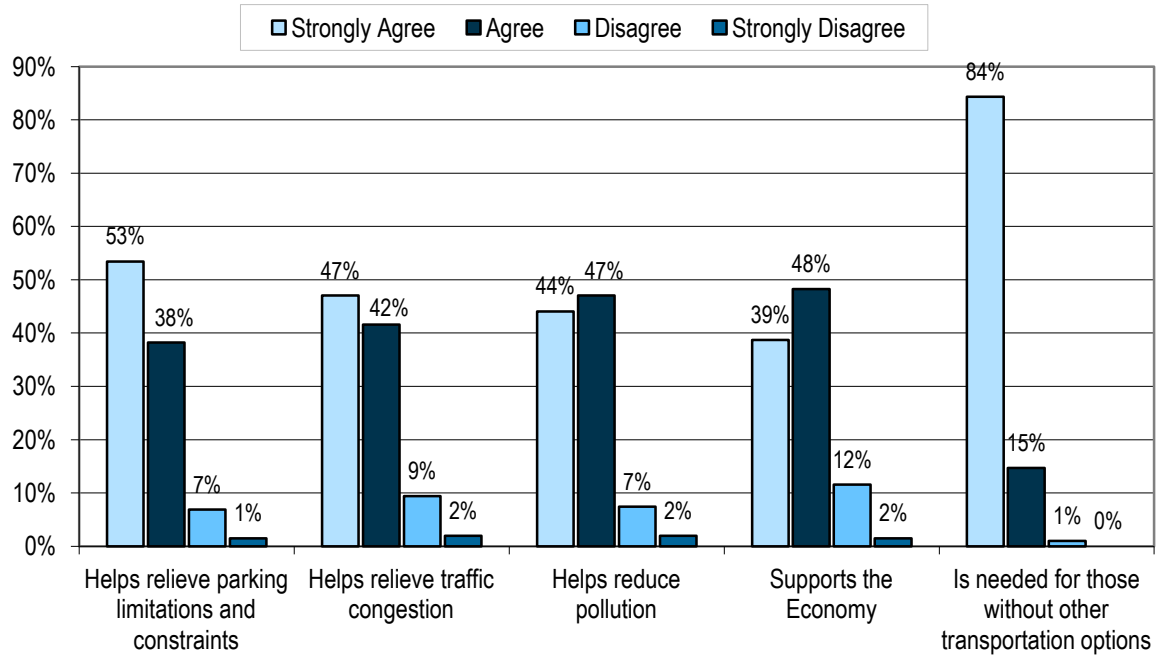


Seasonality of transportation mode was assessed by asking respondents to identify their primary mode of travel during the winter months and summer months. The rate of primary automobile commuters was static (57.2% during winter, 57.6% during summer) while primary transit commuters dropped from 29% in the winter to 24% in the summer. This change can be explained by the primary bike commuter rate going from 0% in the winter to 8% during the summer.

### Transit Options

Survey respondents were asked to share their views on public transportation by strongly agreeing, agreeing, disagreeing, and strongly disagreeing with a number of statements (Figure 49). Overall, respondents agree that transit helps relieve parking limitations and constraints (91% agree or strongly agree); helps relieve traffic congestion (89% agree or strongly agree); helps reduce pollution (91% agree or strongly agree); and supports the economy (87% agree or strongly agree). However, when asked if transit is necessary for those without other transportation options, the overwhelming majority strongly agree (84%) another 15% agree. Just 1% of respondents disagreed and nobody strongly disagreed that transit was necessary for those without other transportation options. The responses to these questions indicate that survey respondents clearly see the value of transit in Juneau, which is notable since about 60% of respondents have a household income over \$60,000 and just 10% of respondents live in households without access to a car ..

**Figure 48 Respondents views on public transportation for the following statements**

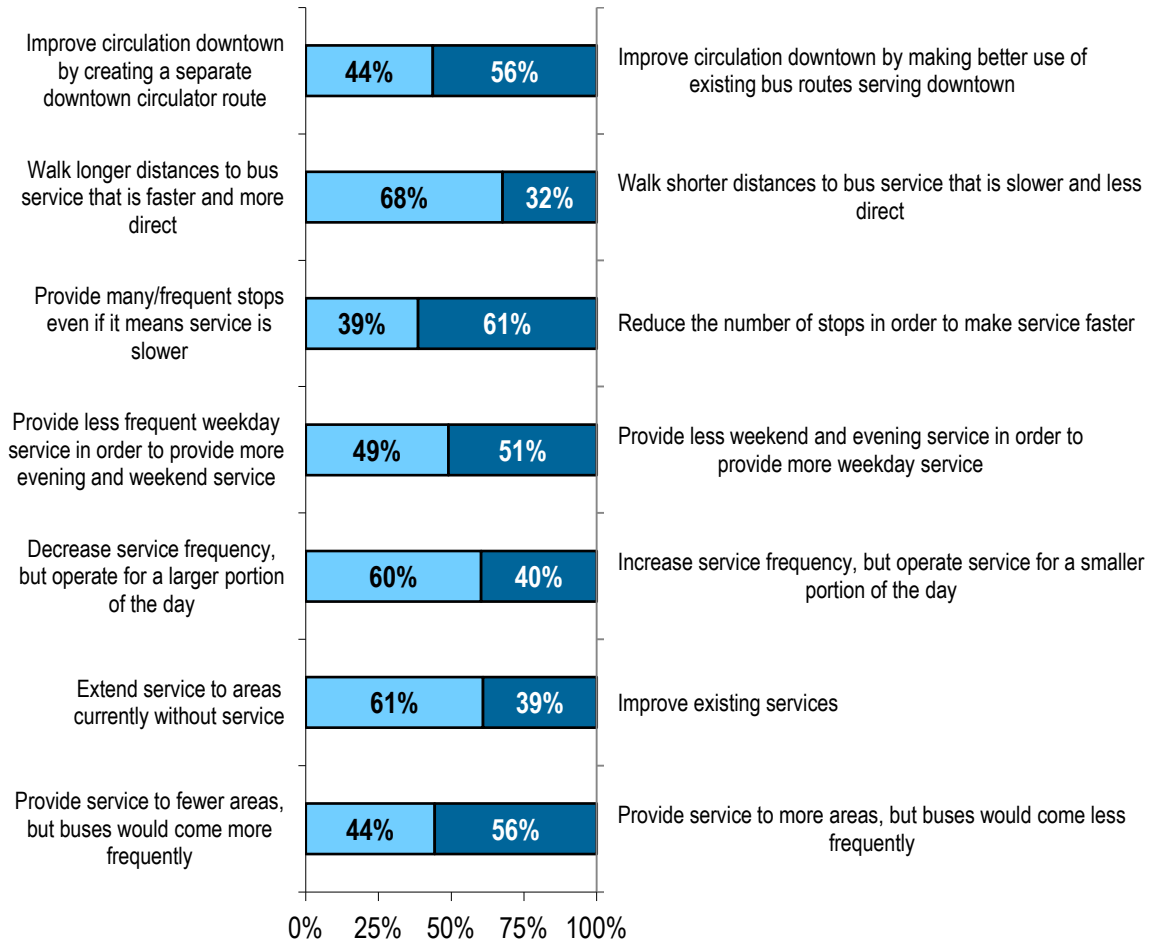


The following question explored the benefits of transit in Juneau for respondents, their friends, family, and the community in general. Respondents rated the benefits on a scale of 1 (no benefit) to 10 (significant benefit). Transit is clearly assessed as a community benefit with a median response of 8 out of 10. Only 4% of respondents rate transit’s benefit as 3 or below (no benefit to limited benefit). Seventy-two-percent of question respondents rate transit’s benefit as an 8 or above (significant benefit) indicating that transit is overwhelmingly seen as a community benefit.

**Transit Tradeoffs**

A series of choices were given to survey takers to poll their attitudes toward transit tradeoffs (Figure 49). These questions matched an exercise performed during stakeholder meetings to assess people’s preferences given choices of balance. Many of the tradeoffs were split fairly evenly such as improving circulation downtown by a circulator or with better use of existing service (44% to 56%, respectively), less frequent service on weekdays to provide more evening and weekend service or less weekend and evening service for more weekday service (49% to 51%, respectively), and provide service to fewer areas, more frequently or provide service to more areas, less frequently (44% to 56%, respectively). Showing additional support for service to more areas, 61% of respondents would trade improved existing services for an extended service area. Sixty-eight-percent of respondents preferred walking a longer distance for a faster and more direct bus compared to 32% who would choose a shorter walk with a slower and less direct bus. Sixty-percent of respondents preferred decreased frequency operating for a larger portion of the day over more frequent service for a smaller portion of the day.

**Figure 49 Transit Tradeoffs**



These responses may be compared to responses collected during April 2013 stakeholder meetings when the same tradeoffs were presented. The two groups varied on many responses. Notably, stakeholder meeting participants preferred a downtown circulator and to increase service frequency but operate service for a smaller portion of the day.

**Demographics**

Survey respondents were asked a series of demographic questions to help develop an image of the cohort. The questions included basic information such as age, gender, household income, number of vehicles in the household, home ownership, and tenure. These numbers were then contrasted with the US Census Bureau’s 2007-2011 American Community Survey (ACS) 5-Year Estimates to determine comparability.

- **Age.** The most common age groups were 25-34 year olds (24%) and 55-64 year olds (25%), which are over representative compared to ACS data where 20-24 year olds represent 8% of the population and 55-64 year olds represent 12%.
- **Gender.** Over 55% of respondents are female, while ACS data finds that overall 48% of the city’s population is female.
- **Income.** Respondents have a similar income to the population as a whole. Almost 57% of survey respondents report living in households making more than \$60,000 per year

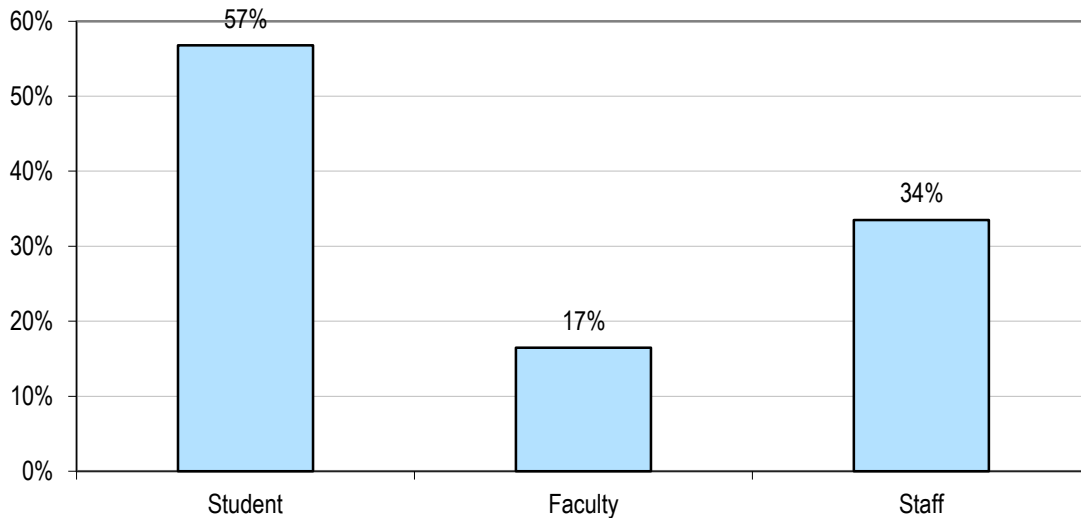




**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

- A total of 238 people took the survey. Of those people, 57% were students, 17% were faculty, and 33% were staff. The sum of the percentages is greater than 100% because some respondents count in multiple categories, such as students working on campus. Among the student respondents, 28% live on campus, with the remainder living off campus.
- The most common mode of travel to campus, as shown in Figure 52, is driving alone, with 59% of the total. The second and third most common are Capital Transit bus (13%) and walking (12%).
- Among respondents who travel regularly by bus to campus, the Express and Valley routes are both used extensively (Figure 53), and some respondents transfer between the two. Zero respondents indicated that they use the Douglas route.
- About one-third of respondents stated that they would use the Express route if it ran later, 51% said they would not, and 18% said maybe (Figure 54).
- As shown in Figure 55, the most common reasons that respondents do not or rarely use transit in Juneau include:
  - Hours of service do not fit my schedule (37% of respondents)
  - Doesn't go where I need to go (31%)
  - Travel time is too long (29%)

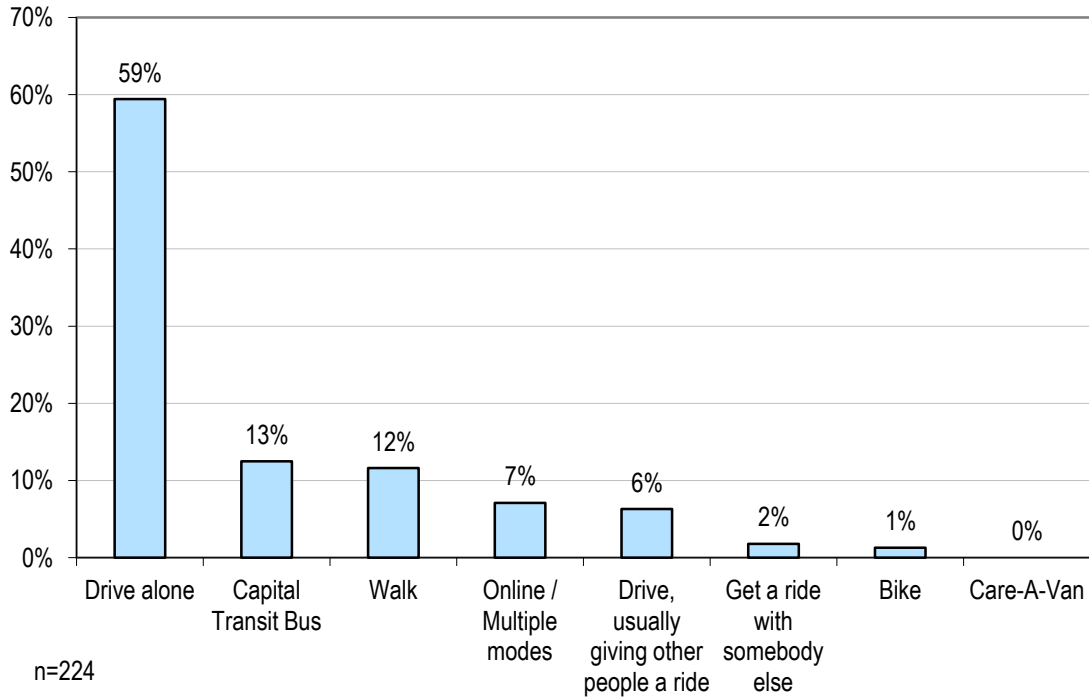
**Figure 51 Respondent Groups**



n=236

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

**Figure 52 Mode of Travel to Campus**



**Figure 53 Capital Transit Routes Used**

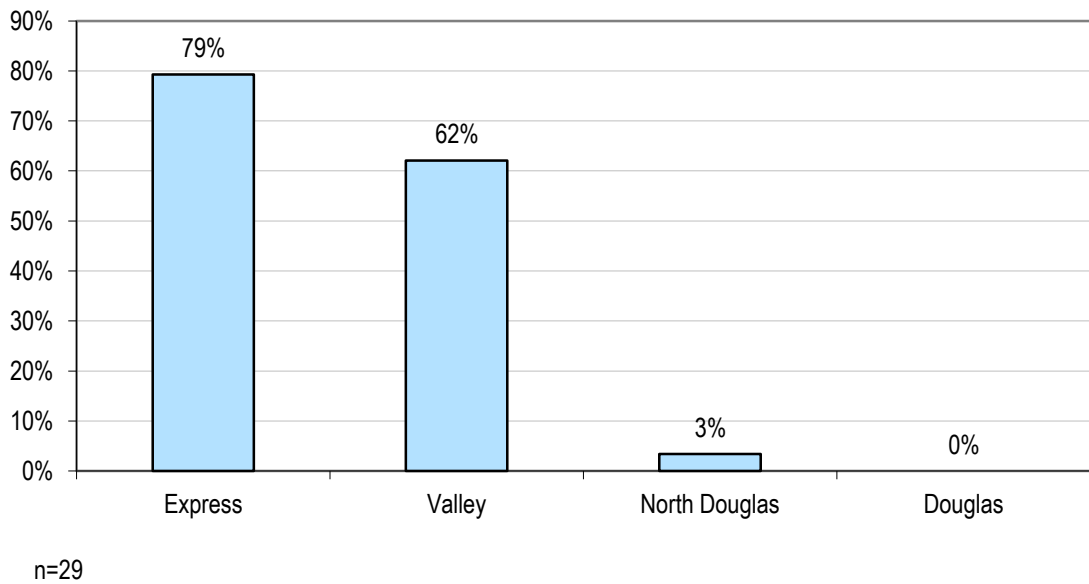
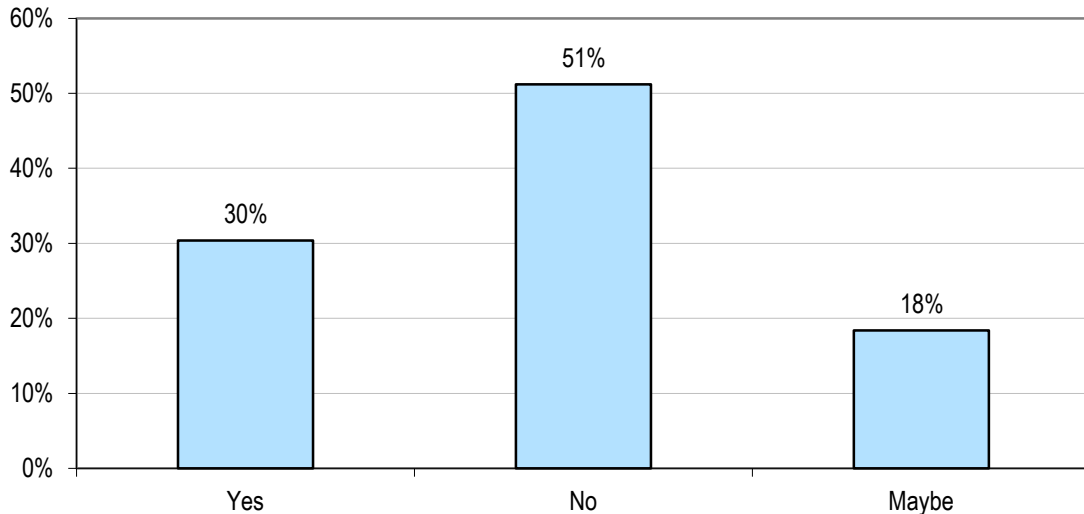
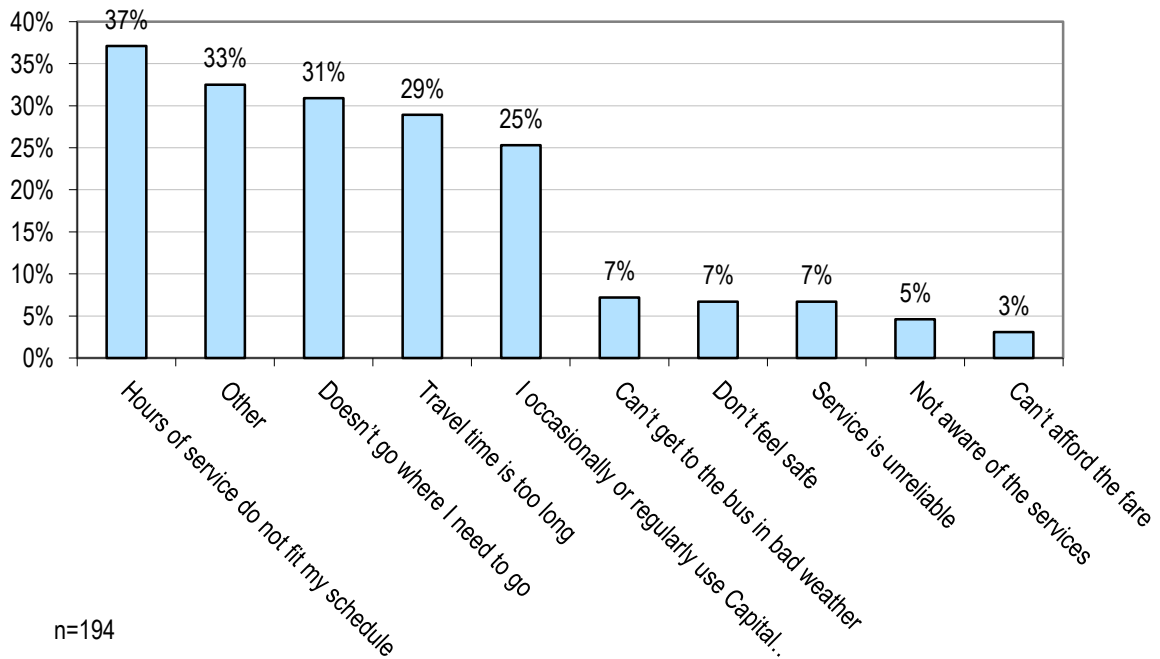


Figure 54 If Express Route Ran Later, Would Respondent Use It?



n=207

Figure 55 Reasons for not using Capital Transit



n=194

## **STAKEHOLDER INTERVIEWS**

To better understand community perceptions, needs, and priorities related to public transit, a series of stakeholder interviews were conducted between April 22<sup>nd</sup> and 24<sup>th</sup> with individuals who have a direct stake in the transit services provided in Juneau.

A total of 29 individuals representing a wide variety of organizations participated in the stakeholder meetings. Several different segments of the community were encouraged to participate in the interviews, including organizations that serve seniors and people with disabilities, the educational community, the medical community, the State of Alaska, the business community, and other community organizations such as the Tlingit-Haida Regional Housing Authority. The following organizations were represented in the stakeholder interviews:

- Association for the Education of Young Children – Southeast Alaska
- Bartlett Nurses
- Costco/Warehouse Demo Services
- Juneau Arts & Humanities Council
- Juneau Commission on Aging
- Juneau Coordinated Transportation Commission
- Juneau Economic Development Council
- Perseverance Theater
- REACH
- Southeast Senior Services / Catholic Community Services
- State of Alaska
- Tlingit-Haida Regional Housing Authority
- University of Alaska Fairbanks – Lena Point Facility
- University of Alaska Southeast
- Federal Government

At the start of each stakeholder interview, participants were given a brief overview of the study, its goals, and the purpose of the stakeholder meeting. Participants were asked to describe the services offered by their business, organization, or agency, and to discuss what they viewed as the top transportation issues or challenges in Juneau. They were then asked to discuss their views on local transit services in Juneau, its strengths and weaknesses, key transit needs, and what would need to be included in the Comprehensive Operations Analysis and Transit Development Plan for them to support it. Finally, stakeholders were asked about demographic, land use, and transportation trends that they have observed in their work and were asked for input on data and studies that could be relevant to this planning effort. The questionnaire that was used to guide the meetings and a list of participants are provided at the end of this memo.

### **Major Themes**

A number of major themes emerged during the stakeholder interviews. Rather than attribute comments to an individual or a stakeholder group in isolation, the major themes have been summarized below.

## **Perception of Transit**

- Overall, stakeholders have a very favorable perception of Capital Transit and Care-A-Van, and transit is seen as an important community service.
- Capital Transit is generally on schedule, though several stakeholders noted that there are on-time performance issues at certain times of the day.
- Some stakeholders perceive the system as clean and safe, while others say the bus and bus stops can feel unsafe, particularly late in the evening. The bus stop near the Federal Building was perceived as unsafe and in need of better maintenance.
- The employees of Capital Transit and Care-A-Van are seen as doing a good job and the system is managed well. Drivers are praised for their job performance, but there are criticisms as well. There are complaints that some drivers can be rude and insensitive at times, particularly with people who may require extra time and attention, such as people with disabilities, seniors, and families with young children.
- Several stakeholders positively noted that there is a broad cross section of the community that rides transit, including professionals, college students, K-12 students, seniors, and people with disabilities.
- Some stakeholders noted that there is a stigma associated with transit and feel that it is only in place for those with no other option. Making transit more attractive to “choice riders” may reduce this stigma.

## **Service Improvements**

- While stakeholders said that transit covers the area well, transit service is desired in several additional locations. The most commonly mentioned areas included Auke Bay (Ferry Terminal, Alaska Glacier Seafoods), Riverside Drive in Mendenhall Valley (including Dimond Park), other areas in Mendenhall Valley, including the Kanata Deyi subdivision, the Costco/Home Depot area, and University of Alaska Southeast student housing. The NOAA/University of Alaska Fairbanks complex at Lena Point was also mentioned as a desired location to serve, but it was also acknowledged that these facilities may not justify the same level of service as other areas.
- It can be difficult to get around on the bus within subareas of Juneau, such as Mendenhall Valley or Lemon Creek. Several stakeholders noted that circulators in these areas could make it easier.
- Stakeholders would like more service early and late in the day and on weekends.
  - This is especially true on the Express Route, which has its last trip leave the UAS campus around 6:00 PM. A number of stakeholders (not just those associated with UAS) noted that there are Friday evening programs at the UAS campus on a frequent basis that are not accessible by transit because the Express service does not run in the evening. Although service is available on Mendenhall Loop Road, stakeholders say that it can be dangerous to walk to those bus stops at night, particularly in the winter.
  - In addition, better frequency is desired on the Mendenhall Valley and Douglas Routes in the evening. Currently, service runs once an hour, which creates long wait and transfer times.
  - It can be hard to get places early in the morning or late in the evening on weekends due to a lack of service.

- Some people feel that the bus should run until 2:00 AM or later to provide transportation for those heading home from bars.
- Some stakeholders would like to have more flexible schedules. One example is to add service during the busy season, similar to what Alaska Airlines does when it adds flights during the summer. Another example is to time service to the Airport and Ferry Terminal to meet flights and ferries when they arrive. In addition, there could be extra service for special events in the community, such as on the 4<sup>th</sup> of July.
- There is currently no service on holidays, which can have an isolating effect on people who are transit dependent who want to visit family or friends.
- The system does not currently have any park & rides. Stakeholders suggested that park & rides could be explored at the UAS campus, Nugget Mall, Fred Meyer, and Walmart.

### **Passenger Information and Amenities**

- Bus stop improvements are desired to help mitigate the effects of the weather on people waiting for the bus. These include more shelters, better lighting, and landing pads at bus stops.
- The printed bus schedules can be difficult for some people to read and understand, especially seniors. Creating a large type schedule would help with this.
- Some stakeholders would like to see Capital Transit implement more technology, such as smartphone-friendly schedules, integration with Google Maps, Wi-Fi on buses, and a way to use a smartphone to pay fares.
- Bus overcrowding is an issue, particularly during the tourist season. This makes it difficult for some riders, especially seniors, to use the bus and can make it difficult for commuters to get to work on time.

### **Senior/Disabled Transportation Issues**

- There is some confusion about the Care-A-Van service area. Many people are unclear if it goes to the Ferry Terminal, and some were surprised to hear that it does.
- It was noted that in Kodiak, there is a small bus that takes people from the Senior Center to locations where they want to go. This could be done in Juneau, such as taking people from the Senior Center to the food bank.
- Juneau's senior population is projected to double in the next ten years, which will put pressure on Capital Transit and Care-A-Van. Seniors should be encouraged to use the bus if they are able to.

### **Downtown Circulator**

- Some stakeholders are very enthusiastic about a downtown circulator, which could either be a streetcar or a bus. Juneau had a free downtown circulator for a few years in the 1980s that was very successful, and stakeholders would like to bring something like that back. Benefits would include moving people from the cruise ship docks into town and the Willoughby District, stimulating infill development, and helping locals get around.
- Supporters believe that the cruise ship head tax could be used to fund the circulator. This funding can go to docks and improvements that move passengers who come off the docks.

There are questions about who would operate it and manage it and how it would integrate into the existing Capital Transit system.

- Other stakeholders feel that a circulator is unnecessary because downtown is compact, and that Juneau should focus on transit improvements for the existing system.

### **Other Transportation Needs**

In addition to needs directly related to transit, stakeholders expressed opinions about other transportation issues in Juneau:

- Stakeholders said that because Juneau is so spread out for its size, it can be time consuming to travel from one end of the city to the other, even with a car. Traffic congestion is generally not an issue, although certain locations can be very busy at times, including traveling from Douglas across the bridge during the AM peak period.
- Many stakeholders spoke about the poor walkability and pedestrian conditions in many parts of the community, which can make it difficult or unsafe to walk to bus stops. Many roads with bus service do not have sidewalks or safe crossings. Examples of this include portions of Mendenhall Loop Road or Glacier Highway near the State of Alaska Job Center. The bus stops near the Job Center are proposed to be modified as part of the Brotherhood Bridge replacement project. The southbound stop would be moved approximately 40 feet to the east from its present location, and the northbound stop would be moved approximately 400 feet to the east. An underpass would be provided below Brotherhood Bridge for pedestrian crossings, which would provide a safer option for those who use it. However, this route would require pedestrians to go far out of their way, so many are expected to continue to cross the street as they do today. A related future project is the proposed Industrial Blvd intersection relocation that would link it to Wildmeadow Lane and create a signalized intersection, providing a safe, direct option for pedestrians to cross Glacier Highway. This project is not currently on the State Transportation Improvement Program (STIP), but the CBJ Planning Commission has asked that it be moved to the STIP and funded as soon as practical as a condition of local concurrence of the Brotherhood Bridge replacement project.
- Walkability conditions are particularly poor during the fall, winter, and spring months due to less daylight, snow, and ice. Many streets with transit service do not have streetlights, so transit users must walk to and wait at the bus stop in the dark. Ice can make conditions slippery, and snowplows often create snow berms on the side of the road, forcing people to walk on the road rather than on the sidewalk or shoulder. Some people stop riding the bus in the winter because it is difficult to get to the stop.



## Tradeoff Exercise

At the end of each stakeholder interview, all 29 participants were asked to participate in a short tradeoff exercise. Participants were given a sheet with a series of tradeoff statements and asked to mark their preference for each tradeoff. The results, included in Figure 56, highlight stakeholders' values about certain transit issues.

**Figure 56 Tradeoff Exercise Summary**

| Tradeoff                               | Choices   | % of Responses |
|--|---|----------------|
| Service Area                           | Provide service to more areas, but buses would come less frequently                               | 46%            |
|  | <b>Provide service to fewer areas, but buses would come more frequently</b>                       | <b>54%</b>     |
| Improve Bus Service                    | Improve existing services   | 44%            |
|  | <b>Extend service to areas currently without service</b>  | <b>56%</b>     |
| Service Frequency/<br>Hours of Service | Increase service frequency, but operate service for a smaller portion of the day                  | 33%            |
|  | <b>Decrease service frequency, but operate for a larger portion of the day</b>                    | <b>67%</b>     |
| Days of Service                        | <b>Provide less frequent weekday service in order to provide more evening and weekend service</b> | <b>63%</b>     |
|  | Provide less weekend and evening service in order to provide more weekday service                 | 37%            |
| Bus Stops                              | <b>Provide many/frequent stops even if it means service is slower</b>                             | <b>59%</b>     |
|  | Reduce the number of stops in order to make service faster  | 41%            |
| Directness of Service                  | <b>Walk shorter distances to bus service that is slower and less direct</b>                       | <b>71%</b>     |
|  | Walk longer distances to bus service that is faster and more direct                               | 29%            |
| Downtown Circulation                   | <b>Improve circulation downtown by creating a separate downtown circulator route</b>              | <b>75%</b>     |
|  | Improve circulation downtown by making better use of existing bus routes serving downtown         | 25%            |

The exercise was only conducted with participants in the stakeholder interviews, making the sample size small, so the results should not be viewed as representative of the entire community. However, the results do provide some information about the preferences of individuals and organizations in Juneau.

The results were close for the majority of the tradeoff categories. The two tradeoffs that had the most consensus were directness of transit service and downtown circulation. On the directness of service question, 71% selected walking shorter distances to bus service that is slower and less direct, while 29% selected walking longer distances to faster and more direct bus service. On the downtown circulation question, 75% chose to improve circulation downtown by creating a separate downtown circulator route, while just 25% chose to improve circulation downtown by making better use of existing bus routes.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

**Figure 57 Interviewed Stakeholders**

| Name                | Organization   |
|---------------------|--|
| John Pugh           | Chancellor, University of Alaska Southeast                         |
| Jarmyn Kramlich     | Student Government, University of Alaska Southeast                 |
| Taylor Murph        | Student, University of Alaska Southeast                            |
| Claire Andrews      | Student, University of Alaska Southeast                            |
| Keith Criddle       | Professor, University of Alaska Fairbanks                          |
| Christy Morehouse   | Costco   |
| Andrea Thomas       | Warehouse Demo Services  |
| MaryAnn VandeCastle | Juneau Commission on Aging   |
| Loretta Bevegni     | Juneau Commission on Aging   |
| Elizabeth Cole      | Juneau Commission on Aging   |
| Clifford Cole       | Juneau Commission on Aging   |
| Carol Comolli       | Catholic Community Service, Juneau Senior Center                   |
| Joy Lyon            | Association for the Education of Young Children – Southeast Alaska |
| Bob Banghart        | State of Alaska  |
| James Bibb          | NorthWind Architects   |
| Kim Mahoney         | State of Alaska  |
| Nancy DeCherney     | Juneau Arts & Humanities Council                                   |
| Greg Fisk           | Seafisk Consulting   |
| Brian Holst         | Juneau Economic Development Council                                |
| Art Rotch           | Perseverance Theater   |
| Kim Champney        | REACH/Juneau Coordinated Transportation Commission (JCTC)          |
| Marianne Mills      | Southeast Senior Services/Catholic Community Service, JCTC         |
| Marsha Partlow      | Southeast Senior Services/Catholic Community Service, JCTC         |
| L. Dale Morris      | Southeast Senior Services/Catholic Community Service, JCTC         |
| Aaron Ferguson      | Juneau Economic Development Council                                |
| Michael Hutcherson  | State of Alaska Juneau Job Center                                  |
| Ricardo Worl        | Tlingit-Haida Regional Housing Authority                           |
| Norton Gregory      | Tlingit-Haida Regional Housing Authority                           |
| Charlee Gibbon      | Bartlett Nurses  |

## OPERATIONS STAFF & DRIVER FEEDBACK

### Drive-Around

To help the consulting team better understand the operating environment, Capital Transit operations staff and drivers graciously agreed to do a drive-around of all Capital Transit routes, as well as several possible new service areas (such as Riverside Drive). The drive-around lasted about two hours. During this time, several key observations were made:

- **Lemon Creek/Davis.** Drivers noted that there is little boarding and alighting activity along Davis Ave and Lemon Creek Rd and that the pavement is in poor condition. On southbound trips, the left turn entering the neighborhood from Glacier Hwy to Davis Ave and the left turn exiting from Davis onto Glacier Hwy can be difficult due to heavy traffic volumes, and significant delays can result. In addition, drivers mentioned that there have been studies on alternative alignments in Lemon Creek and a pedestrian bridge connecting the commercial area to the residential area. Drivers also noted that when the system is running on winter routes, the Lemon Creek deviation is not served and passengers walk out to the stop on Glacier Hwy. Passengers often make the walk between Glacier Hwy and Costco/Home Depot.
- **Riverside Drive.** There is significant interest in transit service on this street and it was included in the drive-around. The street could accommodate buses, but there are school zones along the street as well as speed bumps at the northern end of Riverside Drive and along Tournure Street, which would make operations slower. In addition, the turn from Mint Way onto Mendenhall Loop Road could be difficult to make when road conditions are slippery due to the incline of the road. Drivers stated that if Riverside is served, it may make sense to only operate between Mendenhall Mall and Stephen Richards Memorial Drive. However, when there is heavy snow in winter, snow plows create a snow berm in the middle of Riverside Drive, which can prevent left turns.
- **Mendenhall Loop Road.** Drivers said that there are a number of stops along the “Back” Loop Road (the portion of Mendenhall Loop Road between Glacier Spur and Glacier Hwy in Auke Bay) with low usage. They wondered if there could be a stop closer to the youth home. Drivers also commented that many stops get significant usage and that the stop closest to Mendenhall Glacier gets significant usage from tourists, which would not be accounted for in the April/May boarding and alighting counts.
- **Downtown.** Service through downtown is very slow and mostly consists of dropping people off. It is especially difficult in the winter when there is snow and in the summer when there are tourists. Drivers said that delays of 10 minutes or more through downtown are common in the summer.
- **Douglas.** St. Anns Avenue is very narrow and drivers said that it can be difficult to operate that part of the route, particularly when there is snow on the sides of the road. In addition, parked cars sometimes make it difficult to complete the turnaround at the end of the route. Turning left into and out of Cordova Street can cause delays when there is heavy traffic, and it was noted that this street is not on the winter route.
- **On-time performance.** Drivers noted that routes 3 and 4 occasionally run behind schedule and miss the connection with the Douglas Route downtown. There are several left turns when traveling in the southbound direction that can be difficult to make, which cause delays when there is heavy traffic, including the turns at Davis Ave, Fred Meyer,

and 2.5 mile. Drivers said that on-time performance is generally not an issue on the Douglas Route.

## **Driver Questionnaire**

Capital Transit drivers were asked to complete a short questionnaire that included questions on the drivers' experiences driving Capital Transit buses as well as their suggestions for how to improve the system. Out of 34 full-time and part-time drivers working at Capital Transit, 14 filled out the survey, a response rate of 41%. Responses came from drivers of all Capital Transit routes, including the Valley routes (3/4), Express, Douglas, and North Douglas. The following sections summarize responses from drivers on the topics of unmet needs, overcrowding, and on-time performance

### **Unmet Needs**

Drivers were asked if passengers request service to locations that are not currently served. The most common response, by a wide margin, was the Auke Bay Ferry Terminal, which was mentioned by eight drivers. Other locations that were mentioned include the Airport (Valley routes), Mendenhall Glacier, James Boulevard, and Costco.

Drivers were also asked if passengers request service during times that service is not operating. Drivers stated that passengers have requested the following changes:

- Valley routes:
  - Service before 7:00 AM
  - Extend service later in the evening by 30 minutes
- Douglas Route:
  - Extend service later in the evening by 30 minutes
- Express
  - Extend service later in the evening by 30 minutes
- North Douglas
  - Weekend service
- Commuter Express
  - Inbound trip at 6:00 AM
  - Outbound trips from Federal Building at 2:15 PM and 3:45 PM

### **Overcrowding**

Drivers were asked if there were parts of routes where buses are regularly overcrowded. Drivers named a number of locations on the Valley routes, indicating that the bus is frequently overcrowded along many segments of the route.

- Outbound from the Transit Center (in summer)
- Outbound from the Federal Building
- Juneau-Douglas High School
- Glacier Highway & Anka Street
- Walmart

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

- Fred Meyer
- Nugget Mall
- Mendenhall Mall
- Loop Road & Stephen Richards Memorial Drive
- Loop Road & Mendenhall Boulevard/Valley Boulevard

One driver noted that the Express bus is overcrowded serving Nugget Mall at 7:15 AM.

**On-Time Performance**

Drivers stated that it is difficult to stay on schedule on both the Valley and Express routes at times throughout the day, which can cause poor on-time performance. One driver stated that it can be difficult to stay on schedule on the Douglas Route during the morning peak period between 7:30 AM and 8:30 AM.

# **APPENDIX A**

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## **Document Review Supporting Documentation**

## CBJ POLICY

### City and Borough of Juneau Comprehensive Plan, 2008

#### Portions from proposed 2013 Update in blue

The Comprehensive Plan is the CBJ's primary policy document governing growth and development in Juneau. Proposed development is reviewed against them, and must be compatible with this Plan.

#### Vision and Guiding Principles

One of eight overarching CBJ Vision and Guiding Principles concerns mobility:

Mobility. Provide an accessible, convenient and affordable transportation system that integrates vehicle, vessel, rail and aircraft transport with sustainable and innovative transportation options—including convenient and fast public transit service, particularly for commuters to work, and bicycle and pedestrian networks throughout the community.

#### Community Form Chapter

For new development in the Urban Service Area Boundary (USAB):

“...Land within the USAB should be efficiently developed before its boundaries are extended to properties outside of the USAB. An efficient development would build to the maximum density allowed by the zoning district within which the property lies, provided that road and intersections serving the new development have adequate capacity and levels of service to accommodate the proposed intensity of development. Buildable lands should be developed as medium to high density affordable housing or mixed residential and commercial developments wherever possible and practicable. This is particularly true for lands located within walking distance (approximately one quarter mile) of public transit service.”

Where Level of Service on roads is poor, new development must favor public transit use or off-peak vehicle use.

In places where roadways or intersections have a Level of Service of D or worse, the CBJ Comprehensive Plan states that development generally only be allowed that generate traffic during off-peak periods, or that would assure that new patrons or occupants would use public transit services, should be accommodated.

The Community Form chapter has a section devoted entirely to Transit Oriented Development, as follows:

There are over 100 vacant parcels, ranging in size from one to 113 acres and totaling about 600 acres of land that are located within one quarter mile of an express bus route and are served by municipal water and sewer service. Some of these parcels contain wetlands. At a minimum, about 30 privately owned vacant or underutilized parcels are located within walking distance, or one quarter mile, of existing and proposed public transit routes and should be designated for medium to high density residential or mixed use development. The 2008 Capital Transit Development Plan proposes a trunk line bus

service from Auke Bay to downtown Juneau to move riders quickly between major transit nodes, with local circulator routes serving the Mendenhall Valley, Lemon Creek, downtown, and Douglas. Vacant [and underutilized](#) lands within walking distance of new routes with short headways and transfer points can be designated for high density residential or mixed use Transit Oriented Development (TOD) district [within the area shown in the Bonus Eligible Area Overlay District map](#).

Transit Oriented Development consists of dynamic, livable developments and/or neighborhoods focusing on compact, walkable communities centered on convenient express public transit systems. Depending on the location of the property, a dynamic mixed use development or higher density wholly residential development would be appropriate. Typical elements of transit oriented development are then described as are principles for creating Livable Mixed Use Communities.

CBJ owned and privately owned parcels that are within walking distance of public transit service are identified in this chapter of the Comprehensive Plan.

## **Housing Chapter**

Chapter 4 on Housing has several Policies, Standard Operating Procedures, and Implementing Actions promoting Transit Oriented Development, transit use, and that ensure buildable land is designated along transit corridors.

## **Economic Development Chapter**

Chapter 5 on Economic Development has a section on Downtown Juneau where it is noted that:

It is important that new development positively address community objectives for downtown, including [providing goods and services to local residents](#), strengthening public access to the waterfront, enhancing the Capitol Complex, preserving historic structures and neighborhoods, creating new housing downtown, accommodating summer tourism, providing adequate parking and transit facilities, and preserving scenic vistas and view corridors. Careful planning for public facilities and development of an urban design concept and development standards for downtown are necessary.

A related Development Guideline is: 5.5 DG2 Consider the policies, guidelines and development recommendations of plans like the CBJ Long Range Waterfront Plan, [the Willoughby District Land Use Plan](#), and the Capital Transit Development Plan when reviewing capital improvement programs and development permits for, or applicable to, the downtown Juneau area.

A new section in the proposed 2013 Comprehensive Plan discusses ways to, “Reduce Housing, Health Care and Transportation Costs.” (pages 60-62) Here, two paragraphs call out the importance of Transit Service, with a critical conclusion:

[Another benefit of focusing future growth and development along existing services is that efficient transit service can be provided to more residences and destinations, and nationwide research shows that most transit riders walk or bicycle at least one end of their transit ride – again improving their health through active and largely free transportation choices. With an estimated annual cost of \\$8,946 to own and operate an average sedan, finding housing in a location where an automobile is an option and not a necessity, or where one automobile will suffice for a family instead of two, has the](#)



**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

potential to save Juneau households considerable money that can then be spent on other expenses and discretionary purchases.

Transit already plays a critical role in getting employees to jobs. According to data compiled by the JEDC and Capital Transit, in FY11 over 150,000 trips to reach jobs were made on Capital Transit by riders who could not have gotten to those jobs without Capital Transit. Including those ride-dependent trips, over 300,000 trips to work would have been difficult or impossible for the worker without Capital Transit. Simple assumptions that ride-dependent trips had to be roundtrip and that workers are scheduled for five shifts each week let us estimate that the equivalent of 323 fulltime (FTE) jobs in Juneau can only be filled because of Capital Transit, and that it would be difficult for 610 FTE jobs to be filled without Capital Transit. Without Capital Transit's services, Juneau employers would be unable to fill a number of FTE jobs almost equivalent to the U.S. Coast Guard (363 employees), or more jobs than all of those at Tlingit Haida (250) or in the entire Manufacturing sector (279). The 610 jobs that would be difficult if not impossible to fill if Capital Transit were to cease operations are roughly equivalent in number to the entire Financial Activities employment sector (608 employees).

When the ride dependent trips to school and shopping are also considered, it is clear that Capital Transit has a far reaching impact on economic development in Juneau.

**POLICY 5.16.**

**TO CONSIDER THE ECONOMIC IMPACTS OF MUNICIPAL INVESTMENT AND TO  
PRIORITIZE PROJECTS THAT WILL RESULT IN A DECREASE IN THE COST OF  
LIVING FOR JUNEAU RESIDENTS OR THAT WILL CREATE A GREATER NUMBER  
OF JOBS IN THE COMMUNITY OR REGION.**

A related Standard Operating Procedure is to:

5.16 – SOP3. Support and fund expansion of Capital Transit within the Urban Service Area and emerging destinations that are not within the Urban Service Area as needed to provide convenient transit service as called for in the Transit First Policy of Chapter 8 of this Plan.

## **Energy Chapter**

Chapter 6 of the Comprehensive Plan focuses on Energy. One section of this chapter emphasizes Maximize Use of Local Energy Resources. Related Policy 6.6 is: **TO MAXIMIZE THE RATIO OF LOCAL, RENEWABLE SOURCE ENERGY TO IMPORTED FOSSIL SOURCE ENERGY IN JUNEAU'S INTERNAL ENERGY ECONOMY.**

The Implementing Action 6.6 IA1 is to: "Seek federal and state funding to convert the CBJ fleet and, particularly, public transit vehicles, to dual fuel, hybrid, or other fuel technologies with reduced carbon footprints and enhanced sustainability over fossil fuel burning vehicles.

## **Natural Resources and Hazards Chapter**

In Chapter 7 on Natural Resources and Hazards, there is a section on Air Quality with a relevant Implementing Action 7.9 IA1 to:

7.9 IA1. Undertake public transit improvements to reduce congestion and encourage residents to utilize non fossil fuel dependent forms of transportation. This would include

replacing public and private bus fleets with vehicles that operate on non-fossil fuels, such as batteries that can be recharged with renewable energy sources.

## **Transportation Chapter**

Much of Chapter 8 on Transportation is relevant to transit and emphasizing transit oriented development.

Six overarching policies from the 2001 Areawide Transportation Plan are repeated here, three of which are about transit service:

1. Establish and implement Transportation Demand Management Policies throughout the [borough](#) focusing on reducing single occupant vehicle (SOV) trips and promoting alternative modes of travel such as transit, carpooling, car-sharing, bicycling and walking. These policies should also focus on encouraging telecommuting, flexible work schedules, and be presented as regulations, conditions of approval of use permits, and as incentives;
2. Increase frequency of transit service throughout the urban and suburban areas with express bus service provided from Auke Bay to downtown Juneau with a link to downtown Douglas;
6. Seek federal funds for local transportation needs such as trails, pedestrian safety facilities, bike lanes, scenic enhancements and local transit improvements as well as roads and other vehicle transport and parking related improvements; all of these elements should comprise a coordinated transportation system and program. Federal funding of local improvements must be identified in the ADOT&PF Needs List in order to be included in the Statewide Transportation Improvement Program (STIP); the STIP identifies local improvements also funded and implemented by the ADOT&PF.

An important trade-off that emphasizes transit funding is called out in the proposed 2013 Comprehensive Plan amendments (page 102).

[Although the CBJ Comprehensive Plan has placed an emphasis on transit oriented development, with denser, mixed use areas near transit routes and major stops in order to promote the efficient use of limited public resources, this emphasis does come at a cost. Investments in infrastructure such as new roads, sewer, and water utilities can be avoided by promoting infill development, but adequate transit service must be provided in order to realize the benefits of denser development. Without high levels of transit service, including features such as 30 minutes maximum between buses during the service day and extended service hours \(currently, only four buses travel from the Mendenhall Valley to downtown Juneau early enough to arrive before 8:00 AM, and two of these are Express Routes with limited stops\), transit cannot be considered a viable transportation alternative by most choice riders. And without high levels of ridership, regulatory changes such as lower parking requirements cannot be justified for new developments near transit routes. Accordingly, investment in the transit system, and its expansion in terms of service frequency, service day duration, and geographic scope will be required in order to realize the intended savings in other infrastructure.](#)

In the section on Local Transportation System, five transportation problems are identified, one of which is:

2. A shortage of buses. Additional Capital Transit bus vehicles are needed and, particularly, the longer “articulated” buses are needed to adequately provide convenient

express bus service for commuters traveling to major employment centers. **Additional drivers and maintenance staff will also be required as the fleet grows.** (page 109)

Under the Vehicle Transport section, relevant Standard Operating Procedures are to:

8.5 SOP1. Provide a safe, convenient, reliable and low cost public transit and rapid transit system within the Urban Service Area to ensure that **within that area**, everyone has the ability to access work, school, services, shopping and leisure activities by public transit, **with stops located so as to be within ½ mile of each other along routes.**

8.5 SOP3. Provide public transit services to low and moderate income neighborhoods and support supplementary transit service for the elderly, handicapped and homeless residents seeking work or medical or social services.

Important Implementing Actions in this section are to:

8.5 IA2. Consider the concept of Bus Rapid Transit (BRT) or other dedicated express bus service throughout the Urban Service Area in future Transit Development Plans and related plans and studies in order to provide faster service between major trip origins and destinations.

8.5 IA3. Update, adopt and implement the Capital Transit Development Plan. Elements of an updated plan may include, but are not limited to the following:

- A. Providing all day express bus service to facilitate the movement of people between downtown Juneau and other major destinations in the **Urban Service Area**;
- B. Expanding Capital Transit to provide service on all holidays;
- C. Providing additional bus **capacity** to reduce overcrowding on buses;
- D. Providing bus pullout areas at bus stops to avoid impeding the roadway travel lanes with requirements for motorists to immediately allow buses to reenter the roadway upon their signaling to reenter;
- E. Exploring the feasibility of a Mendenhall Valley shuttle service **and/or park and ride** linked to downtown by express buses;
- F. **Exploring the use of buses** powered by non-fossil fuels, hybrid technology, or other systems consistent with the **community's** commitment to sustainability;
- G. Providing a downtown circulating shuttle service, serving the Central Business District. Evaluate the feasibility of serving the Federal Building, the Rock Dump, and other popular trip destinations and origins in the downtown area with this shuttle service;
- H. Evaluating the best locations and size for Park & Ride facilities and purchase of the land or easements on the land for future improvements. When residential densities warrant, develop the Park & Ride facilities where they can serve commuter traffic from residential areas. These facilities would be in the form of satellite parking areas served directly by transit routes that would provide convenient access and express service to downtown Juneau for residents living significant distances (more than a quarter mile) from existing transit routes.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

Likely areas that could be served by Park & Ride facilities would be the Mendenhall Valley north of Egan Drive, and areas **north or northwest** of the University of Alaska Southeast if significant population increases occur in that area; and

- I. Providing a mix of transit vehicle sizes powered by non-fossil fuels or hybrid fuels to promote cost efficiency and to provide flexibility in service.

8.5 IA5. Along the identified **Transit Corridor** for the **borough**, identify potential transit and transfer stops or nodes and rezone land around those nodes for high density residential and/or mixed use and employment centers to facilitate the convenient and efficient use of the transit system. The transit system would, ideally, link the Ferry and Airport transport systems to a “chain” of transit nodes representing major destinations such as shopping centers, transit oriented residential or mixed use developments, schools and the University, the hospital, major recreation or cultural destinations, major employment centers, and downtown Juneau.

8.5 IA6. To reduce the demand for land consuming parking spaces, reduce use of fossil fuels, and encourage the use of public transit, the CBJ **government and community** should urge downtown federal, state, and local government agencies, as well as private sector employers to participate in a Coordinated Downtown Transportation Management Program managed by CBJ staff or a third party. The program could include, but would not be limited to, the following features:

- A. Free or heavily discounted transit passes to area employees;
- B. Improved bus service, including a downtown circulator shuttle;
- C. Organized vanpools and carpools;
- D. Convenient and free parking for car and van pool vehicles, preferential parking for car sharing, electric, hybrid and other alternate fuel-powered or multiple-user vehicles;
- E. Instituting residential parking programs to discourage commuting motorists from long term on street parking in residential neighborhoods;
- F. Satellite parking within shuttle distance to major destinations in downtown Juneau.
- G. Working with the State of Alaska to allow off-hour parking in state **employee** parking facilities and lots to ease evening and weekend event parking congestion;
- H. Increasing parking enforcement, as nearly all of these parking related actions require enforcement or they will be of minimal utility;
- I. Coordinated, perhaps mandatory, staggered or flexible work hours for area employees to avoid peak hour traffic;
- J. Provision of safe pedestrian and bicycle routes throughout downtown; and,
- K. Provision of secure, dry bicycle storage as well as shower and locker facilities for commuting cyclists.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

8.5 IA7. The CBJ **government** should investigate the feasibility of providing light or heavy rail public transit service, powered by renewable energy sources, linking existing and new neighborhoods of Douglas Island with the mainland and, in the future, to the Alaskan **and Canadian** interior. The analysis of the feasibility of such a Borough-wide rail transport system should consider the lifecycle costs of design, construction, environmental mitigation and monitoring, as well as operation, maintenance costs.

**8.5 – IA9 Priority for improvements should be given to improve transit corridors, transit Park and Ride facilities, and to roads, bridges and intersections within the Urban Service Area where vacant lands can accommodate higher density affordable housing if and when such improvements are made to accommodate this development and to improve Levels Of Service to D or better.**

A section of this chapter specifically addresses Transit, reproduced in its entirety here due to its relevance.

Transit First Policy

The CBJ's Capital Transit public transit system provides transport services to about 43,000 riders on a typical weekday. About 1.2 million times a year a passenger boards a Capital Transit bus. In May 2001, Capital Transit implemented a 30-minute service (headway) on many of its routes, which resulted in an 18% increase in ridership over the previous year. The system is patronized heavily by government office workers commuting between downtown **Juneau** and Douglas Island, Lemon Creek and the Mendenhall Valley. The system accommodates approximately 8 to 10 percent of the commuter work force in the downtown area and, with some fleet, route and station improvements, has the potential of displacing a substantial portion of the total vehicular trips made in the **borough**. A number of recommendations in the 2008 Transit Development Plan, Transit Improvement Plan, Downtown Circulator Shuttle Feasibility Study, and Coordinated Human Services Transportation Plan would improve the convenience and quality of transit service. This would: increase **transit** ridership, reduce fossil fuel consumption by Single Occupancy Vehicles (SOV); **reduce SOV** related air pollution; lessen overall congestion **and surface wear** of CBJ roads, intersections, bridges, **and parking facilities**; **and ultimately** reduce commute times **for those who still drive SOVs**.

Increased numbers of transit vehicles are needed to accommodate commuter ridership to downtown Juneau. Implementation of improved express bus service (over 2008 levels) or other improved transit service along Glacier Highway and Egan Drive should be followed by zoning amendments to accommodate higher residential and employment densities along these transit corridors—**the initiation of 30-minute express bus headways in October 2009 warrants consideration of such zoning amendments**. Higher residential and nonresidential densities along transit corridors will improve the efficiency and reduce the cost per passenger of the transit service therein. Typically, 25 to 30 residential units per acre or more would adequately support a **Bus Rapid Transit (BRT)** or other **substantially** increased **level of** transit service.

**In 2012, residential density limits and height restrictions were increased in three commercial and mixed use zoning districts in order to allow the higher residential densities called for in this Plan; the community was able to support these changes with minimal discussion, and additional modifications to land use regulations will be necessary in order to realize the goal of increasing residential densities and the diversity**

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

and mixture of uses in these areas. As residential and mixed use projects are developed at higher densities along transit routes, transit service will need to grow to keep pace with demand; the strategy of clustering denser development along transit lines may backfire if adequate transit services are not available to meet the induced demand.

As questions of system capacity and funding are raised, which they will inevitably be, it is important to remember that the public's investment in Capital Transit reduces the financial burden of extending water, sewer, road, fire, police, and other services to newly developed areas of the borough. Although the relationship between transit, residential density, housing affordability, and access to jobs is reiterated throughout this Plan, there is another even more direct relationship between funds allocated for projects for different transportation modes (i.e. transit, biking, single occupant vehicle).

Care-A-Van, the paratransit partner agency to Capital Transit, is currently operated under contract by Catholic Community Services. Other Human Services Transportation Provider agencies, including REACH, Inc., Southeast Alaska Independent Living (SAIL) and the Juneau Alliance for Mental Health, Inc. (JAMHI) work with the Juneau Coordinated Transportation Coalition (JCTC) to ensure that services are coordinated and that projects are prioritized for funding by the various member agencies. As the “silver tsunami” of baby boomers reaches retirement age (at a rate of 10,000 per day, nationwide), a growing proportion of Juneau's aging population will qualify for, and may require, the services provided by these agencies. Convenient fixed route service by Capital Transit is far less expensive to provide, per ride, than Demand responsive rides provided by JCTC members and Care-A-Van, so ensuring that fixed route buses are accessible and convenient to these new riders has the potential to avert unsustainable increases in funding requirements for demand responsive services.

Other transportation options, such as carpooling and formal car-sharing programs should be investigated for feasibility within the Urban Service Area.

The 2008 Transit Development Plan, Coordinated Human Services Transportation Plan, and the related plans and studies in that document make numerous recommendations for improving transit service in the CBJ, including extending the regular and express service day, adding express service to Sundays and Holidays, and serving emerging residential and commercial areas as well as the Alaska Marine Highway ferry terminal at Auke Bay and the Juneau International Airport. Notwithstanding these valuable upgrades of the system, a successful transportation system depending on a public transit system includes a number of private and public sector sponsored travel options, including:

- Park & ride facilities at transfer station locations;
- “Dial-a-ride” paratransit programs (such as the Care-A-Van program);
- Residential parking permit programs in the neighborhoods around downtown Juneau;
- Higher parking rates for daylong parking in the downtown Juneau area;
- Private taxi service;
- Secure storage for bicycles at transit stops and major destinations; and
- Residential densities of 25 units per acre or greater **along around** express bus route **stops** to support convenient bus service.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

The 1996 Capital Transit Development Plan offers policy statements that are excerpted below for reference, as they were also the guiding statements in developing the 2008 Transit Development Plan:

- Provide an attractive alternative to the private vehicle to reduce their presence in the community and especially in the downtown Juneau area;
- Provide safe, reliable, low cost transportation to ensure that everyone has the ability to access and participate in community life;
- Implement service in a manner consistent with the promotion of efficient use of urbanized lands;
- Make special efforts to meet the transportation needs of the elderly and persons with disabilities;
- Work to ensure that the need for transportation services at the Juneau International Airport and the Auke Bay Ferry Terminal are met; and
- Explore, and implement when feasible, innovative transportation systems including the potential for future fixed guideway applications, such as electric powered trolleys.

Roadways that serve as bus routes have unique needs that can best be determined for a particular area through a context sensitive, Complete Streets approach to roadway design, but there are some features that make buses better “neighbors,” both to other users of the roadway and to Adjacent land uses. Some of those features include:

- Adequate lane width, shoulder width, or other separation between the travel lane and adjacent sidewalk;
- Pullouts for transit vehicles to leave the travel lane while boarding and alighting passengers;
- Safe locations to cross roadways to and from bus stops; and,
- Adequate lane width, lighting, and intersection dimensions for safe operations

**POLICY 8.7**

TO ENCOURAGE THE TRANSPORTATION OF JUNEAU RESIDENTS, VISITORS,  
FREIGHT AND MAIL BY RENEWABLE ENERGY SOURCES ON BOTH PRIVATE AND  
PUBLIC TRANSPORTATION.

A relevant Standard Operating Procedure is: 8.7 SOP1. Promote the use of public transportation and car-pooling to reduce the reliance of Juneau residents and visitors on single occupant vehicles.

Relevant Implementing Actions are:

8.7 IA1. Use a mix of vehicle sizes and fuels for CBJ provided public transport to promote fuel and cost efficiency, and to keep frequency of service such that it will encourage use of public transportation systems.

8.7 IA2. Seek to convert fossil-fueled CBJ buses to renewable energy fueled or hybrid vehicles. Hybrid or other dual fuel buses that can run on fuel other than electricity are preferable to electric only buses, especially in light of the effect of the 2008 and 2009 Snettisham avalanches and their effect on the provision of electricity to Juneau.

From the part of the chapter on the Lemon Creek, Switzer, and Salmon Creek Area:

Davis Avenue and its intersection with Glacier Highway pose particular problems for pedestrian safety, as well as negatively impacting Capital Transit's on time performance for southbound buses. This corridor and intersection should be carefully evaluated and redesigned so as to improve safety and to facilitate turning movements; Capital Transit bus routes in this area may need to be redesigned as part of this effort, and service to some areas may need to be reduced so as to improve safety at problematic intersections. A new vehicular bridge over Lemon Creek could allow transit to serve the area more efficiently.

For North Douglas:

8.8 – IA27 Investigate providing improved transit service to North Douglas.

## **Chapter 10, Land Use**

Narrative in this chapter focuses on transit oriented development and transit service among other land use topics, including the implementation of public transit service to and from the Alaska Marine Highway System ferry terminal (10.8 – IA1). Bonus-eligible areas are proposed in the 2013 update, including Transit Oriented Development overlay districts.

### **Downtown Juneau Parking: Usage Patterns, February 2013**

This report summarizes parking use data collected. This Parking Use Survey includes 14 survey blocks and two off-street parking lots. Data was also collected on use of the CBJ's two parking structures, the Marine Park Garage, the Downtown Transportation Center, and the North Franklin Lot. Implementation of paid on-street parking, which occurred on Monday, May 23, 2011, affected parking behavior in downtown Juneau, along with the Downtown Transportation Center, which added 270 parking spaces.

The study found that many downtown core streets that were often parked near or at capacity are now fully utilized only at peak periods or outside of enforcement hours. A secondary goal of the study was to determine if the goals adopted with the Downtown Juneau Parking Management Plan of 2010 are being met, and if not, what changes can staff recommend for implementation to meet those goals. Parking management in downtown Juneau has not yet achieved all goals of the 2010 Downtown Juneau Parking Management Plan.

The data show that changes to pricing and time limits for parking can have a direct impact on parking behavior; but unfortunately, those impacts can be unpredictable, and even counter-intuitive at times. In order for changes in parking regulations to be effective, enforcement must be consistent or significant portions of the parking public will ignore the regulations and thus fail to be managed by them.

### **Willoughby District Land Use Plan, April 2012**

This plan pertains to the area of town between Egan Expressway on the south and just north of Willoughby Avenue, and Capital Ave on the west and the area just east of Willoughby Avenue on the east. The new State Library Archives and Museum is here, and the Downtown Transit Center is just to the east. This Plan establishes a development vision for this area and has design guidelines, recommended Juneau code changes, and policies adopted into the Comprehensive Plan. Some recommended code changes, such as reduced required parking and increased building heights, have already been adopted. Direction relevant to transit includes the following:



- Providing incentives to use public transportation to and from the Willoughby District are one of the ways this Plan will be implemented. Transit-oriented development encourages walking and biking; carpools; car-sharing programs; providing covered, secure bicycle storage; priority parking for carpools and car-sharing. (page 22)
- The [Willoughby District] area is small enough that it can be crossed on foot in five minutes, which is good for transit oriented development and related incentives. Transit viability will be increased primarily through added density, improved access, traffic calming, community-serving facilities, compactness, mixed use and pedestrian amenities. These are the features that define the Willoughby District. Locating transit stops in front of the new State Library, Archives and Museum on Whittier will provide a central location with ample space to shelter patrons from the wind and rain. Bus pull-outs should be provided at all stops so traffic circulation is not disrupted. (page 28)

Several recommended design or development principles are related to transit such as increased density, reduced parking requirements, increased commercial activity in the area especially on 1<sup>st</sup> floors, and proposed bonuses for developers that offer travel demand reductions such as bus passes.

One of 15 adopted Design Guidelines is: (14) The use of public transportation to and from the District is encouraged and promoted.

## **Juneau Climate Action & Implementation Plan, November 2011**

The Juneau Climate Action Plan was adopted by the CBJ Assembly on November 14, 2011 by resolution 2593. The objective of the Juneau Climate Action Plan is to lower Juneau's greenhouse gas (GHG) emissions by decreasing area wide consumption of energy in general and fossil fuels in particular. This Plan, which includes a 2010 inventory of local energy use and GHG emissions, sets new emissions reduction targets and suggests actions that government, businesses, and the community can take to meet these targets. Every individual in Juneau stands to benefit from cost savings that flow from energy conservation and reductions in fossil fuel consumption. The Plan provides a menu of many actions, each with estimated greenhouse gas emission reductions, to help meet the adopted CBJ goal to reduce community-wide emissions by 25% by 2032.

The introduction notes that several studies have found that the implementation of strategies to conserve energy use, such as increasing public transit ridership, weatherizing homes, and upgrading to more efficient appliances and heating systems, has a positive impact on local economies. Making appliances and buildings more energy efficient has saved California businesses and residents an estimated \$56 billion over the past 30 years, and the California Energy Commission projects an additional \$23 billion will be saved by 2013 (California Green Innovation Index, 2008). Expanded public transit and updated land use policies have resulted in 20% fewer miles traveled by car each day in Portland, Oregon's metro region and approximately \$2.6 billion in savings per year (Portland's Green Dividend, 2007). (page 3)

A 2010 greenhouse gas (GHG) emission inventory of CBJ Buildings and operations finds that 11% of all emissions are from Capital Transit.

Therefore, one of several Top Action this plan recommends is to:

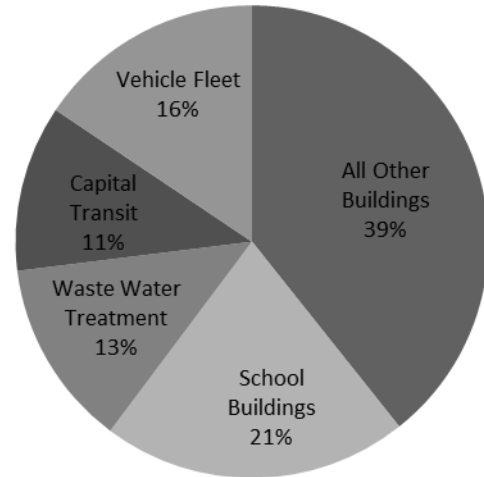
- Evaluate the assembly-adopted 2008 Transit Development Plan to determine which actions will garner the greatest reductions in GHG emissions and energy use. The plan recommends that CBJ consider limiting future fleet purchases to alternative fuel vehicles such as hybrid-electric vehicles. Consider, for example, adding a hybrid-electric bus for the downtown circular loop. (page 26)

GHG emissions from highway transportation can be reduced through two main means. One is to reduce dependence on personal motor vehicles by encouraging use of alternate modes of transportation, such as public transit, car-pooling, cycling, and walking. A second way is to increase government, commercial, and individual use of fuel efficient vehicles that release fewer GHGs, including higher mileage gas-only vehicles, and hybrids and vehicles that run on renewable fuels. Expanded use of more efficient and alternative modes of transportation promises to decrease travel costs for individuals, businesses, and government fleets, while lowering the amounts local and state governments pay for road construction and maintenance.

In the Transportation sectors, the 2010 Juneau GHG emissions are 219,4000 MTCO<sub>2</sub>e. The goal is to reduce emissions from this sector by 2032 by 100,000 MTCO<sub>2</sub>e. There are 8 goals listed with examples of how to accomplish this. They are all relevant, but one especially so:

- Goal T-2: Increase Capital Transit ridership. (Estimate: 40% increase in ridership.) This would potentially decrease GHG emissions by 4,300 MTCO<sub>2</sub>e. Details on this goal now follow:

Figure 3. **GREENHOUSE GAS EMISSIONS** for CBJ Buildings and Operations by Sector, 2010



**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

Capital Transit operates 16 buses, eight paratransit vans, and four utility vans. Annually, the vehicles provide 1.27 million rides and drive over 880,000 miles. Many of the fleet’s buses have been replaced with low floor accessible models and all buses are equipped with bike racks.

In 2008, a CBJ Transit Development Plan was completed that sets out an “Optimum Scenario” in which CBJ would make significant changes to the Capital Transit route structure. This was developed based on input from the community and staff and involved a trunk system combined with several local circulators. The optimum scenario would provide more frequent service throughout much of the core area, reduced travel time from Auke Bay to downtown, add service to Lena Point and the AMHS terminal, and reduce travel time for most trips. It would also require more vehicles and cost more to run than the current system. Implementation of these recommended improvements should be phased in as money and vehicles become available.

GHG emissions from the Capital Transit fleet in 2010 increased 2% over 2007. This increase was due to a 33% increase in express bus frequency between Downtown and the Valley.

| Strategy T2-A. Expand transit service using most energy efficient vehicles practical   |                                    |
|--|------------------------------------|
| Short-Term Actions   | Responsible Party                  |
| <ul style="list-style-type: none"> <li>Update and work to secure funding needed to implement the “optimum scenario” in the Transit Development Plan. Focus on the actions that will have the biggest impact on reducing GHG emissions and energy use.</li> </ul> | CBJ government                     |
| Long-Term Actions  |                                    |
| <ul style="list-style-type: none"> <li>Purchase only alternative/renewable fuel or hybrid transit vehicles in the future.</li> </ul>   | CBJ government                     |
| <ul style="list-style-type: none"> <li>Implement all recommendations for the “optimum scenario” in the Transit Development Plan.</li> </ul>  | CBJ government                     |
| <ul style="list-style-type: none"> <li>Build a new maintenance facility to house expanding hybrid/electrical fleet.</li> </ul>   | CBJ government                     |
| Strategy T2-B. Increase public education and provide incentives to increase transit ridership  |                                    |
| Short-Term Actions   | Responsible Party                  |
| <ul style="list-style-type: none"> <li>Increase public education about the benefits of public transit.</li> </ul>  | CBJ government/<br>Community       |
| <ul style="list-style-type: none"> <li>Offer incentives for CBJ employees to use Capital Transit. Could include discounted bus passes, prizes for individuals or departments with highest rate of transit use, etc.</li> </ul>                                   | CBJ government                     |
| <ul style="list-style-type: none"> <li>Encourage employers to offer incentives for employees to use transit (e.g., discount on bus pass, etc.).</li> </ul>   | Community/Federal<br>State/UAS/CBJ |
| <ul style="list-style-type: none"> <li>Work with large employers to set flexible and/or staggered work hours to coordinate with transit schedule and/or reduce crowding on buses.</li> </ul>   | Community/Federal<br>State/UAS/CBJ |

## **Downtown Juneau Parking Management Plan, 2010**

This plan was adopted as an addendum to the Comprehensive Plan of the City and Borough of Juneau. The purpose of this plan is to determine how parking can best be managed in the downtown area so that convenient parking is always available, and to encourage stored vehicles to be kept in areas where demand is lower.

The plan sets forth the following goals for the Parking Management planning process: 1. Reduce the number of vehicles that are parked all day (long-term) in hourly (short-term) spaces; 2. Ensure that both the Marine Park Parking Garage and the Downtown Transportation Center Parking Garage are utilized at or near capacity year-round; and 3. Ensure that on-street parking spaces are available near all destinations at all times of the day for use by visitors who only need short-term parking. One of the policies established to meet these goals is to manage parking as a component of a multi-modal transportation system, and use of shuttles/buses is part of the solution.

## **Juneau Non-Motorized Transportation Plan, 2009**

The purpose of the Juneau Non-Motorized Transportation Plan is to promote active transportation by guiding development of a community-wide bicycle and walking network that can be used by all Juneau residents for all types of trips. To accomplish this, a series of specific non-motorized infrastructure improvements are recommended and 12 policies with implementing actions are identified.

Two of the five plan goals mention transit service.

- Use new approaches to street design that focus on working together early in project design to plan and build transportation projects that address the needs of all users: pedestrians, cyclists, public transit riders and motorists.
- Develop a year-round maintenance program for Juneau's non-motorized facilities with a focus on sweeping and snow removal along the cross-Juneau bikeway and snow removal on sidewalks near schools, transit stops and in busy pedestrian areas.

Relevant development guidelines (DG) or implementing actions (IA) are:


- (DG) Provide secure, weatherproof bike parking and storage facilities at public buildings and in private developments, particularly developments located along transit corridors. (page 31)
- (DG) All Capital Transit buses now have front-mounted bicycle racks for transporting bikes. All buses purchased in the future will also have these bicycle racks. (page 33)
- (IA) Snow removal for main pedestrian routes should be a CBJ and state priority. Both the CBJ and the State should invest in sidewalk snow clearing equipment. Areas near schools and transit stops should be a priority. Egan Drive downtown, the Douglas Bridge, Douglas Highway south of the bridge, Mendenhall Loop Road, Glacier Highway between Vanderbilt Hill Road and Fred Meyers, and Egan Drive between McNugget Intersection and the Brotherhood Bridge are all priorities.(page 71)
- (IA) Continue to fund and install bicycle racks on Capital Transit buses. (page 73)

## City and Borough of Juneau 2008 Transit Development Plan

The City and Borough of Juneau Assembly adopted the Transit Development Plan and Coordinated Human Services Transportation Plan in 2008. This plan guides improvements to the Capital Transit and Care-A-Van systems and is used to coordinate the efforts of independent Human Services Transportation providers. The Transit Development Plan offers a comprehensive assessment of public transit services along with recommendations. A summary of the recommendations is presented below.

- **Fleet Mix recommendation:** a tiered approach should be developed with different vehicle types for different service characteristics.
- **Vehicle Power Source recommendation:** CBJ should limit future fleet purchases to alternative fuel vehicles and explore the acquisition of advanced diesel, compressed natural gas (CNG), and hybrid-electric vehicles.
- **Fleet Replacement Strategy recommendation:** Capital Transit should adopt a 12-year transit bus replacement schedule; and purchase expansion vehicles if additional routes are added, or when increasing frequency of service on existing routes.
- **Bus Stop Element recommendation:** CBJ should purchase prefabricated shelters with integrated lighting as well as larger shelters at high-volume stops. New shelters should feature improved service information. All stops with sign posts should include up-to-date information specific to the route(s) they serve.
- **Right of Way recommendation:** CBJ should address issues of Capital Transit stops located on State Rights of Way (ROW) that do not meet safety standards established by the State Department of Transportation and Public Facilities.
- **Facilities Element recommendation:** CBJ should re-pave the deteriorating Capital Transit headquarters parking lot and vehicle storage areas.
- **Park & Ride Locations recommendation:** Capital Transit should develop park and ride facilities at key stops along the Express Route's alignment.
- Service scenarios recommendations:
  - **Baseline:** No alignment changes and some minor schedule changes to reflect current transit demand and external influencing factors.
  - **Intermediate:** Service extension to the Alaska Marine Highway System (AMHS) Terminal and Lena Cove, introduction of service along Riverside Drive, and scheduling amended to reflect proposed alignments.
  - **Optimum:** Complete revamping of Capital Transit's routing and operating schedule between Juneau's downtown area and the Mendenhall Valley.
- **Scheduling recommendation:** The service day should start at 6:00 a.m. to accommodate transit patrons with "early-start" schedules and the last bus depart Main Street at 12:35 a.m. to accommodate persons working late-night schedules.
- **Introduce Limited Holiday Service recommendation:** Introduce limited service on all holidays currently observed by Capital Transit on a six-month trial basis, employing a Sunday service level.
- **Enhance North Douglas Service recommendation:** Introduce hourly weekday service on this route between 7:00 a.m. and 7:00 p.m. on a six-month trial basis.

**COMPREHENSIVE OPERATIONS ANALYSIS**  
City and Borough of Juneau, Capital Transit

- **Saturday Express Service recommendation:** Run the Express Route on Saturday to support weekend travel between the Valley and the downtown area.
- **Increase Express Service Frequency recommendation:** Implement half-hour headways on the Express Route.
- **Extend Express Service Day recommendation:** Extend express service on a six-month trial basis.
- **Service to Thane recommendation:** Implement a 90-day trial service along Thane Road using cutaway-type vehicles with one morning trip, one midday trip, and one evening trip every weekday.
- **Fare recommendation:** Capital Transit should market its non-cash fare options. It should also consider allowing patrons to pre-rate monthly passes, the introduction of smart cards and/or annual passes, as well as the possibility of a “fare-free” system.
- **Staffing recommendation:** CBJ should hire at least one planner/analyst to assist the Transit Manager with near-term projects as well as day-to-day administrative functions.
- **Data Collection and Reporting recommendation:** Capital Transit should begin a formal process for data collection and reporting and include it within monthly reports alongside ridership and revenue.
- **Complaint Resolution recommendation:** The Transit Manager should consider convening periodic community meetings to solicit feedback and update the community on Capital Transit’s performance and service development.
- **Snow Day Alerts recommendation:** Establish a more effective notification/communication process to alert riders who may be inconvenienced by temporary changes to the service.
- **Downtown Shuttle recommendation:** A downtown shuttle service is viable and can be operated efficiently and effectively. Route the fare-free downtown circulator along both Willoughby Avenue and Calhoun Avenue for a 2.8-mile route improving mobility for residents northeast of the Federal Building and northwest of the State Capitol. (Developing an electricity-dependent transit service, even for a single route, such as a downtown shuttle was deemed not feasible at this time.)  

- **Additional recommendations by the Community Development Department staff:** Add feeder lines to the Mendenhall Valley; introduce service along Riverside Drive; and offer large employers monthly passes.
- **Coordinated Human Services recommendations:** 1) Hire a Mobility Manager; 2) implement a central call center for all CBJ transportation services under the control of a dedicated Mobility Manager; 3) Begin an outreach campaign aimed at educating the target populations about the benefits of utilizing Capital Transit’s fixed-route program versus demand-response or paratransit programs.
- **Care-A-Van recommendations:** Contract with a licensed physician to perform all ADA certifications; encourage mode shift whenever practical; SESS should increase staffing; consider either implementing a policy wherein customers pay the requested (full) donation at the time of service, or adopt a fare policy based on the customer income/affordability index; staff should review the policy handbook and update its

content to reflect current policies, practices, and procedures; CBJ should consider lifting its ban on servicing non-CBJ vehicles to include the Care-A-Van fleet.

*Coordinated Human Services Plan addendum recommendations:* In 2009 a Coordinated Human Services addendum was prepared. Key service recommendations included:

1. **More snow removal** (including adequate plowing of sidewalks to allow use of wheelchairs/assistive devices);
2. **Expanded bus service** (and Care-A-Van service) to include the ferry terminal and Lemon Creek commercial area.

The addendum also included a summary of executive interviews with Juneau's larger private employers with employees using the bus system. The business operations of these establishments, along with the work schedules of their employees, are highly impacted by public transit schedules and bus stop locations. The key requests of these employers are extended evening bus service, extended morning bus service, and extended Sunday bus service so that their employees could more easily get to work. Businesses located in the Lemon Creek commercial area requested bus service to that area. The addendum also developed a single Juneau transportation rider screening form – intended to replace the multiple registration forms for Juneau's coordinated transportation riders.

## **Long Range Waterfront Plan for the City and Borough of Juneau, 2004**

The Long Range Waterfront Plan for the City and Borough of Juneau is a plan to manage and focus waterfront change along four overarching goals: 1) Enhance community quality of life; 2) Strengthen tourism product offerings as well as downtown retail, entertainment, residential and service activities; 3) Improve Juneau's image and attractiveness for investment; and, 4) Recognize all current waterfront uses.

While the plan is mostly about a water-side walk-able area, the plan proposes a bus shuttle system connecting cruise ship docks to downtown consolidating bus shuttles to a single, efficient and reliable system, thereby reducing pedestrian and vehicle congestion on South Franklin. The plan also proposes development of a privately operated water taxi/shuttle system along the Downtown waterfront to provide a new mobility option for area residents and visitors during the summer.

## **Downtown Juneau Tourism Transportation Study, 2003**

The Downtown Juneau Tourism Transportation Study was a planning effort aimed at identifying alternatives to meet the future vehicular and pedestrian needs for downtown Juneau during the peak tourism season. The study area included the South Franklin St. waterfront district and the downtown core. The study culminated in a series of recommendations addressing vehicular and pedestrian needs in the downtown area. The recommendation package lists re-routing pedestrians to and from cruise vessels, alternate traffic configurations for adjacent streets, and a succinct plan for heavy vehicle and transit movement that will maintain a vibrant downtown and enhance future development. Key transit related recommendations include: 1) Maximize the effective capacity of the existing transportation system and increase capacity; and 2) Provide redundancy in the transportation system where capacity cannot be increased. These recommendations were mostly related to non-motorized transportation.

## **Area Wide Transportation Plan Transportation Plan, 2001**

The Juneau Area Wide Transportation Plan defined the framework for transportation projects in the CBJ for 20 years. The plan's specific transit-related recommendations include:

- Double bus service frequency, to a bus every 30 minutes, along existing local routes during peak hours Monday through Sunday.
- Extend Care-A-Van service from 6 PM to 9 PM on Sundays.
- Maintain bicycle lanes, pathways, sidewalks and bus stops with regular re-stripping, re-surfacing, street sweeping and snow removal.
- Provide additional transit support including: bus stop signs/schedules, transit center at Nugget Mall and Downtown, maintenance program for transit facilities, additional vehicle storage and an ongoing marketing program.
- Install bike racks and/or lockers at activity areas and bus stops.
- Between Downtown and the Mendenhall Valley, preserve the existing Egan Drive median for the future development of a dedicated mass transit route for buses, high occupancy vehicles, light rail or a fixed-guide way system.

## **Riverside Drive Corridor Study, 2001**

The primary purpose of this study was to identify deficiencies and develop recommendations for improving safety and maintaining the Riverside Drive as a multimodal transportation corridor. One deficiency noted was inadequate transit service to the area.

## **Capital City Vision Project – 20/20 Vision Plan for Downtown, 1998**

This planning exercise asked community leaders and residents to catalogue their longer term goals and visions for downtown Juneau.

The vision statement developed for transit in 2020 is: *“Downtown Juneau is part of a community-wide, integrated transportation system which includes forms of mass transit, such as light rail, designed to minimize automobile dependence. This expandable transit system will accommodate all types of local travel needs between home, work, schools, shopping, and other activities. The public will be engaged in developing creative yet feasible solutions for an integrated public transportation system.”*

The following transit related comments were made: Driving in downtown is difficult. The downtown area lacks an intra-core shuttle and transit. There should be more trolleys for moving tourists around. Without convenient public transit or parking, it is hard to go downtown. The buses that run are crowded and the buses are unpredictable in the winter. Some feel that Juneau has terrible public transit and that the transit link between downtown and the airport is disappointing. Among others, the following recommendations are documented:

- Study feasibility of combining existing bus system for tourists, locals, school children.
- Incentives for government employees to use public transit (i.e., free bus passes, financial rewards).
- Better bus system desired in terms of scheduling, shelters, routes, frequency, purchasing buses with bike racks



- Develop revenue plan for maintaining this improved bus system.
- Purchase more buses, including smaller buses.
- Establish community transit authority and implement an integrated transit system.

## **EXPECTED RESIDENTIAL DEVELOPMENT/FUTURE TRANSIT DEMAND**

### **CBJ Switzer Lands Residential Development Study, May 2012**

This study analyzes the development potential of 127 acres of CBJ owned land near Dzanik'i Heeni Middle School within the Urban Service Area Boundary. It recommends 3-4 phases of residential development to assist in filling Juneau's significant affordable and middle income housing needs.

The first phase is in progress and will provide 32-48 housing units. When all phases are completed, approximately 446 housing units and a new elementary school would be in this area, significantly increasing demand for public transportation along Glacier Highway.

### **Juneau Senior Needs Survey, 2010**

Beginning in the spring of 2010, the Juneau Commission on Aging conducted a survey of Juneau residents aged 55 and older. This survey was the third in a series of similar surveys conducted at approximately ten-year intervals beginning in 1989. Like prior surveys, the general intent of this survey was to help inform the planning process for service and infrastructure changes in the coming years. There were 5,000 copies of the survey distributed in 2010 and the response rate was 1,218.

#### **Transit Relevant Trends: 1989 – 2010.**

- A greater percentage of respondents are driving themselves (possibly associated with surveying younger (age 55 and older for 2010 survey) respondents) and an increased percentage reporting utilization of the city bus system.

#### **Transit Relevant - Key Issues for Seniors**

- Comments on the bus system and Care-A-Van demonstrated overwhelming support among this population. This support and positive opinion extended even to those not using the systems at present. Many framed their positive comments in terms of what they will likely need and use in the future. Suggestions centered mainly on geographic expansion and schedules for the bus system and scheduling issues for Care-A-Van.

#### **One question asked, "Would you like to comment on the City bus?"**

There were 541 comments provided by respondents. Since this was an open-ended comment question, responses varied. There were, however, some very definite patterns in the responses. Of the 541 responses, 150 were directed at issues of geographic coverage and scheduling. Of these, the common complaints/observations/suggestions were (1) need coverage further "out the road" with the typical identification of the ferry terminal as a need and (2) the desire to have the bus system run on holidays. There were a scattering of other comments including more frequent runs,

earlier and/or later service, and situations where respondents felt that the bus stops were too far from their residence to walk, especially in winter.

Another 65 respondents described either bad experiences on the bus or bus/system characteristics that they would like to see changed. The common comment was related to overcrowding on the buses, especially at peak hours. Another common complaint was the condition of bus stop shelters and, less frequently, unruly riders.

A total of 88 respondents reported that they had not used the bus or used it so infrequently that they could not comment. At this point, we might also consider that the number of comments totaled less than half of the total surveys submitted. While we cannot quantify the reasons for non-response to this question, it is likely that a substantial number of respondents who chose not to respond to this question did so because they do not use the bus system.

Finally, the remainder of the comments were more general observations and opinions about the bus system overall. The vast majority were highly positive comments. We might add here that even among those who indicated that they did not use the system personally, there was a strong positive attitude and a sense of gratitude

### **One question asked, “Would you like to comment on the Care-A-Van?”**

There were 448 responses to this open-ended question. By far, the largest grouping of responses (266) consisted of generalized, highly positive comments. The next largest group consisted of those who reported not using the service (106). Of note here is that within this group, there was a substantial number who expressed very positive attitudes and opinions about the service. Many of these were based on information conveyed to them by friends, family, or acquaintances. The largest set of responses that offered either complaints or suggestions for improvement (58) focused on scheduling and coverage with the primary concerns being the need to schedule in advance and occasions where scheduling arrangements were not met. A very small group of respondents (10) identified cost as an issue and an even smaller group (8) conveyed some unpleasant experience or expressed a more generalized negative opinion.

### **Willoughby District Land Use Plan, April 2012**

The elements of this plan that encourage transit service to and from the Willoughby District were reviewed earlier. It is mentioned here again to highlight the fact that the Plan calls for 350 to 400 more housing units to be developed in this area over the next 20 years. They are to be a mixture of affordable, moderate and higher end housing, and are anticipated primarily in either multi-unit townhouses or multi-story, mixed-use apartment and condo style buildings.

### **Pederson Hill Access Study, July 2010**

The CBJ and University of Alaska (UA) own several parcels of land on Hill 560 (referred to generally as Pederson Hill) between Auke Lake and the Mendenhall Valley in Juneau. This access study was performed to evaluate potential development areas, potential development densities, and transportation access for future residential development of the area. Sixty-one acres in three specific areas are addressed in this study along the southern boundary of the hill, north of Glacier Highway and west of Montana Creek and the Mendenhall River.

It is recommended that the CBJ consider multiple access routes and/or phased development starting with the development areas to the east that are the closest to existing infrastructure.

When all phases of development were completed, approximately 270 housing units would be added to the area, increasing demand for public transportation along Glacier Highway between the Mendenhall River and Auke Bay.

## **City and Borough of Juneau Land Management Plan, 1999**

This document plans for long-term community growth and use of CBJ lands in accomplishing this. The plan directs which CBJ parcels should be sold to enable community expansion, and which should be preserved in public ownership. It establishes a land disposal program to place CBJ land into private ownership. Lena Point was identified at the CBJ's top priority for land disposal; this was subsequently accomplished. CBJ land in the Switzer and Pederson Hill areas, just reviewed in summaries above, are also slated for development in the Juneau Land Management Plan.

## **Other**

While there are no official plans documenting the following private sector developments, CCTHITA and THRHA are in the design phase for a 22 unit housing complex that will be across from Western Auto on Coogan Drive, and, over the next 20-25 years it is likely that a bypass road and another phase of Mountainside Estates with 450+ housing units could be developed.

## **ADOT&PF PLANS POTENTIALLY AFFECTING TRANSIT**

### **ADOT&PF Auke Bay Corridor Study (construction starts 2013)**

The purpose of this project is to improve the pedestrian and vehicle safety on Glacier Highway from Seaview Avenue to Fritz Cove Road and on Back Loop Road to the northern UAS access. The study has been split into two projects: the Back Loop Road and Glacier Highway intersection and improvements for the rest of the corridor. The plan for the Back Loop Road intersection improvements is to construct a roundabout and improve the approaches to the intersection. Project construction will begin summer of 2013. The project proposes moving the paired transit stop on Back Loop Road near Caroline Street to Glacier Highway just south of its intersection with Harbor Drive.

The Seaview to Fritz Cove improvements does not propose any big changes to transit stops, but will add sidewalks to both sides of the road along the entire project area and will improve pedestrian and bicycle facilities. This project is scheduled for construction and completion in FY14.

### **ADOT&PF Glacier Highway Bicycle & Pedestrian Improvement Project (ongoing)**

The purpose of this project is to improve the pedestrian and bicycle facilities as well as street crossing along Glacier Highway from Walmart to Vanderbilt Hill Rd. This project is in the design phase and a preferred alternative has not yet been selected. It is likely that relocation of some bus stops, as well as the addition of bus pullouts and shelters, will be recommended. Construction will begin in late 2014 or 2015.

## **ADOT&PF Juneau-Egan Drive Resurfacing Tenth St to Main St (ongoing)**

The proposed project would resurface Egan Drive and enhance pedestrian and bicycle facilities from Tenth Street to Main Street within the City and Borough of Juneau. The purpose is to improve transportation safety on Egan Drive for motorized and non-motorized traffic and to prevent failure of the retaining wall on Egan Drive near Merchants Wharf.

The proposed improvements were developed in coordination with the City and Borough of Juneau (CBJ) to be consistent with the CBJ's Long Range Waterfront Plan and other land use plans. Planners with CBJ anticipate increased pedestrian traffic on the downtown waterfront and along Egan Drive as a result of several planned projects that include:

- a new cruise ship dock
- the new State Library and Archives Museum near Whittier Street
- expansion of the sea-walk between the Juneau-Douglas Bridge and the Rock Dump (including in front of the Merchants Wharf),
- a life-size humpback whale sculpture and a park near the Juneau-Douglas Bridge

This project will reduce vehicle travel speeds along this portion of Egan Drive, including to and from the Downtown Transit Center at Main and Egan. It will not reduce speed limits, which are already low but not followed.

## **ADOT&PF Mendenhall Loop Road Improvements (ongoing)**

This project is along Mendenhall Loop Road, from Nancy Street to Back Loop, which is along the Capital Transit route. This is the major commute route to and from Egan Drive and the shopping areas along Glacier Highway and Mendenhall Mall Road. In addition, many of the residents in the Mendenhall Valley use or cross Mendenhall Loop Road by bicycle or on foot to go to school or access public transit service. As traffic volumes on Mendenhall Loop Road have grown, drivers have experienced increasing difficulty accessing the road from the side streets during the directional peak traffic flows. Vehicle volumes are forecast to increase, exacerbating these issues and necessitating additional roadway and intersection capacity. The goals of this project are to provide adequate vehicle capacity and improve bicycle and pedestrian facilities in the study area. Project objectives are to:


- Add roadway and intersection capacity where appropriate to accommodate traffic volume growth.
- Minimize and manage conflict areas within the corridor for all modes.
- Provide safe and effective pedestrian crossings at logical locations.
- Identify improvements that are cost effective.
- Identify improvements that have the highest likelihood of community acceptance from affected agencies, residents, and businesses.

This project is just beginning (June 2013).

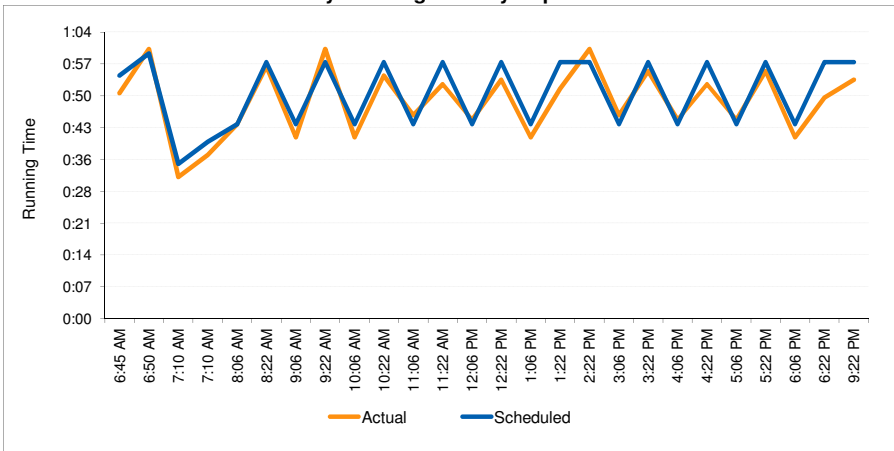
# **APPENDIX B**

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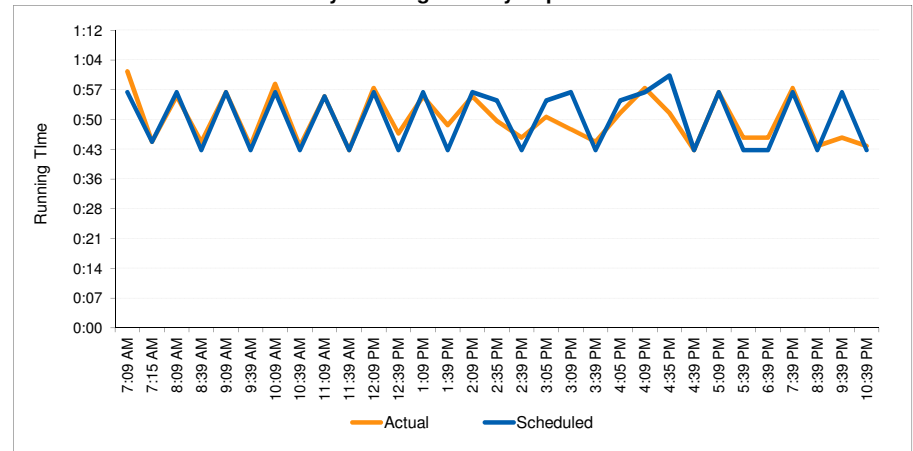
## **Fixed Route Scorecards**

| Route 3/4 Weekday   |  | Route Productivity Summary |            |               |               |                     |                 |                            | Route Operations Summary   |                     |         |        |                         |                   |           |
|---|--|----------------------------|------------|---------------|---------------|---------------------|-----------------|----------------------------|----------------------------|---------------------|---------|--------|-------------------------|-------------------|-----------|
|   |  | Activity                   |            | Service       |               | Utilization         |                 | Productivity               |                            | On-Time Performance |         |        | On-Board Load           |                   |           |
|  |  | Boardings                  | Alightings | Service Hours | Revenue Miles | Average Trip Length | Passenger Miles | Boardings per Service Hour | Boardings per Revenue Mile | % On-Time           | % Early | % Late | Max Passengers On Board | Max Load Location | Direction |
|   |  |                            |            |               |               |                     |                 |                            |                            |                     |         |        |                         |                   |           |
| <b>Total</b>  |  | 2,268                      | 2,276      | 51.8          |               |                     |                 | 43.8                       |                            | 85%                 | 11%     | 4%     | 623                     | AWARE Shelter     | O         |
| Inbound   |  | 978                        | 1,197      | 25.7          |               |                     |                 | 38.1                       |                            | 81%                 | 12%     | 7%     | 512                     | AWARE Shelter     | I         |
| Outbound  |  | 1,290                      | 1,079      | 26.2          |               |                     |                 | 49.3                       |                            | 89%                 | 9%      | 2%     | 623                     | AWARE Shelter     | O         |
| <b>By Segment</b>   |  |                            |            |               |               |                     |                 |                            |                            |                     |         |        |                         |                   |           |
| 1   | Auke Bay/Deharts to Nugget Mall (via Glacier Hwy)        | 211                        | 353        | 8.4           |               |                     |                 | 25.3                       |                            | 74%                 | 23%     | 3%     |                         |                   |           |
| 2   | Auke Bay/Deharts to Nugget Mall (via Mendenhall Loop Rd) | 398                        | 309        | 7.8           |               |                     |                 | 51.0                       |                            | 93%                 | 2%      | 5%     |                         |                   |           |
| 3   | Nugget Mall to Walmart                                   | 404                        | 444        | 6.7           |               |                     |                 | 60.6                       |                            | 86%                 | 7%      | 7%     |                         |                   |           |
| 4   | Walmart to Lemon Creek turnaround                        | 179                        | 182        | 4.9           |               |                     |                 | 36.3                       |                            | 82%                 | 16%     | 2%     |                         |                   |           |
| 5   | Lemon Creek turnaround to Hospital                       | 276                        | 301        | 8.5           |               |                     |                 | 32.3                       |                            | 83%                 | 13%     | 4%     |                         |                   |           |
| 6   | Hospital to Federal Bldg                                 | 411                        | 186        | 8.8           |               |                     |                 | 47.0                       |                            | 88%                 | 5%      | 7%     |                         |                   |           |
| 7   | Federal Bldg to Main St parking lot                      | 389                        | 501        | 6.8           |               |                     |                 | 57.5                       |                            | 87%                 | 13%     |        |                         |                   |           |
| <b>By Time Period</b>   |  |                            |            |               |               |                     |                 |                            |                            |                     |         |        |                         |                   |           |
| AM  |  | 328                        | 333        | 7.5           |               |                     |                 | 43.6                       |                            |                     |         |        | 132                     | Hospital          | I         |
| Midday  |  | 875                        | 870        | 20.2          |               |                     |                 | 43.3                       |                            |                     |         |        | 217                     | Behrends Ave      | O         |
| PM  |  | 647                        | 646        | 13.9          |               |                     |                 | 46.7                       |                            |                     |         |        | 209                     | Wire St           | O         |
| Eve   |  | 294                        | 304        | 5.8           |               |                     |                 | 50.8                       |                            |                     |         |        | 113                     | Anka St           | O         |
| Night   |  | 124                        | 123        | 4.5           |               |                     |                 | 28                         |                            |                     |         |        | 51                      | Behrends Ave      | O         |

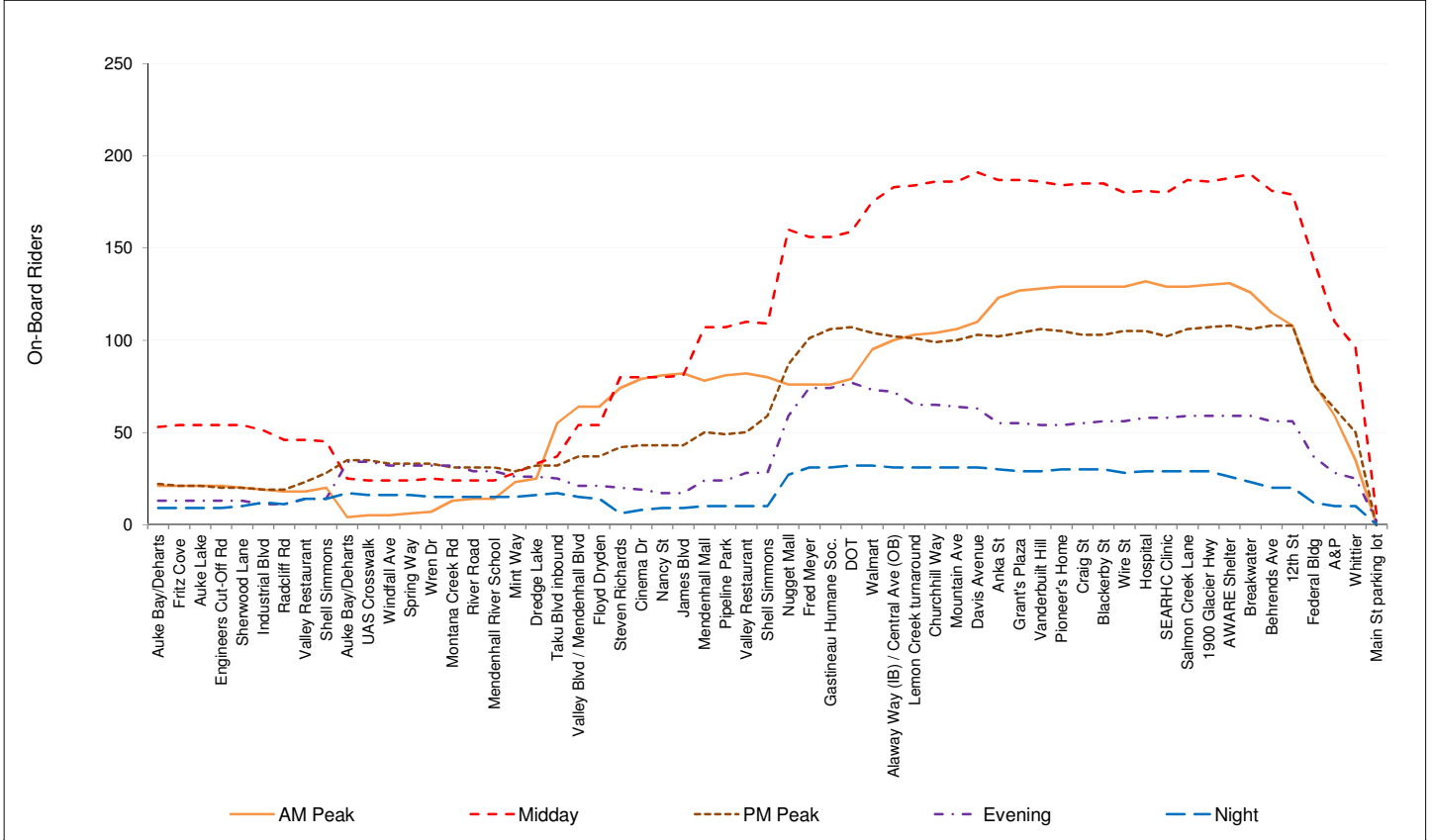
Weekday Running Time by Trip - Inbound



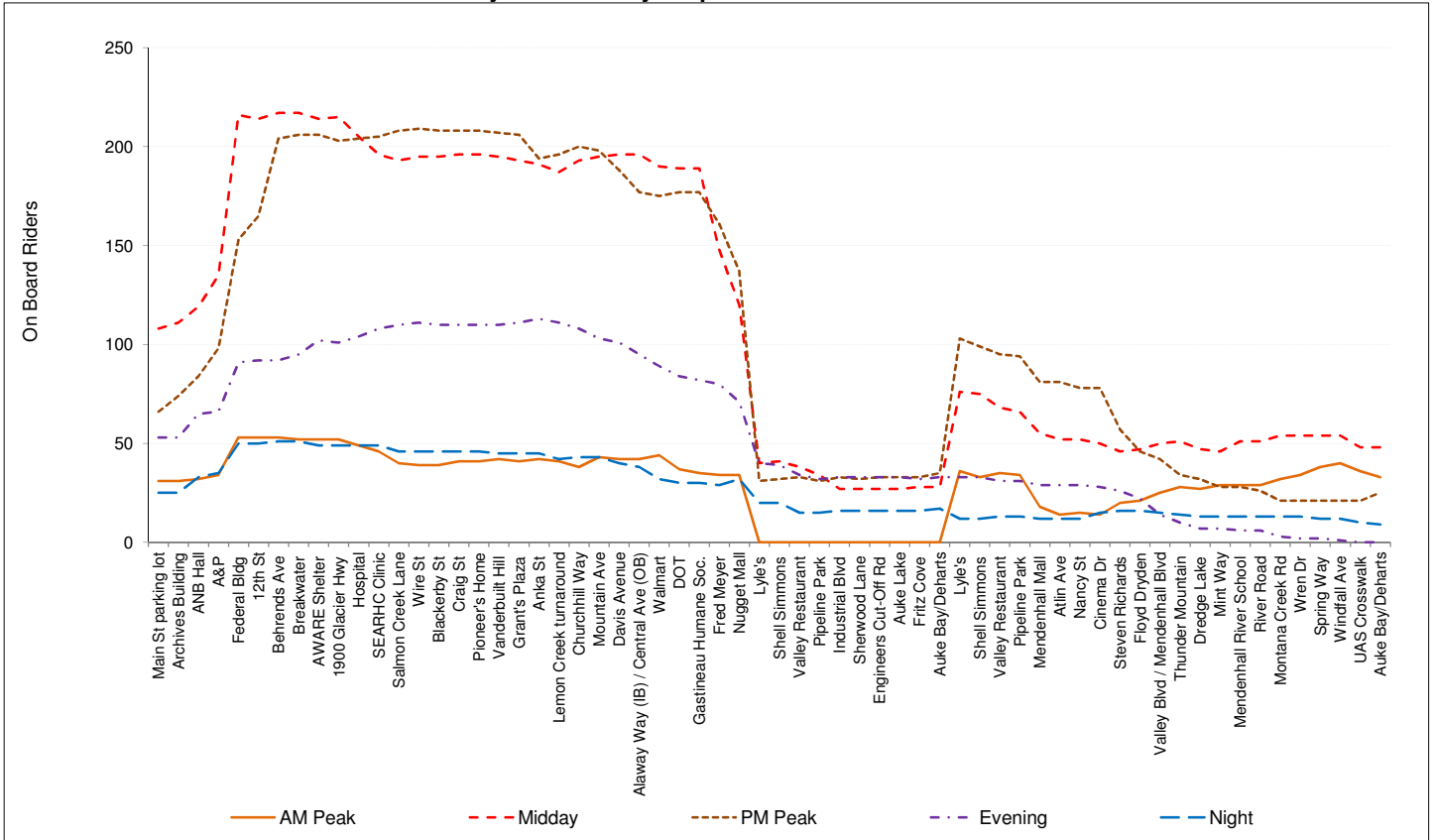
Weekday Running Time by Trip - Outbound



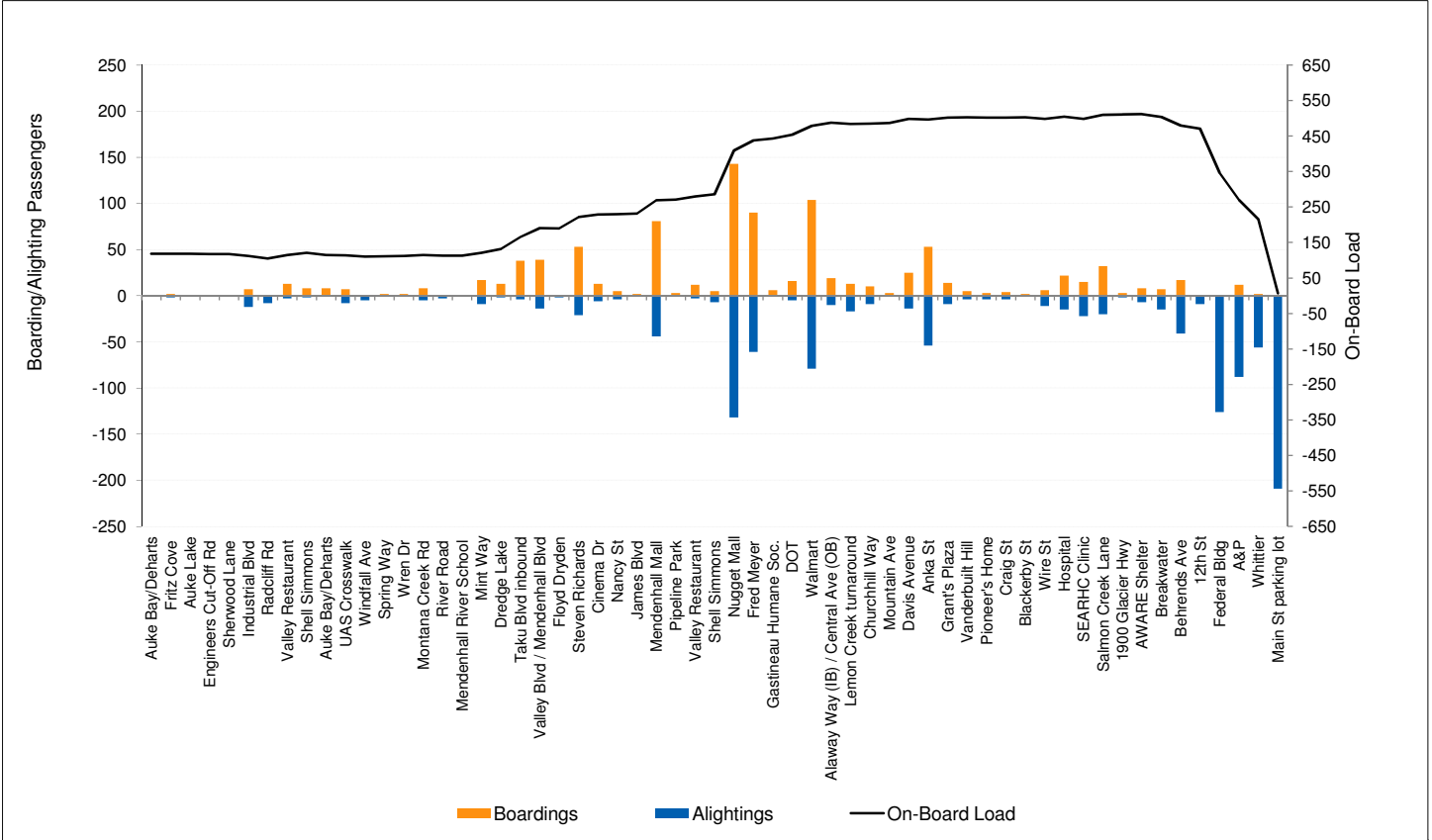
**Weekday On-Board by Stop and Time Period - Inbound**



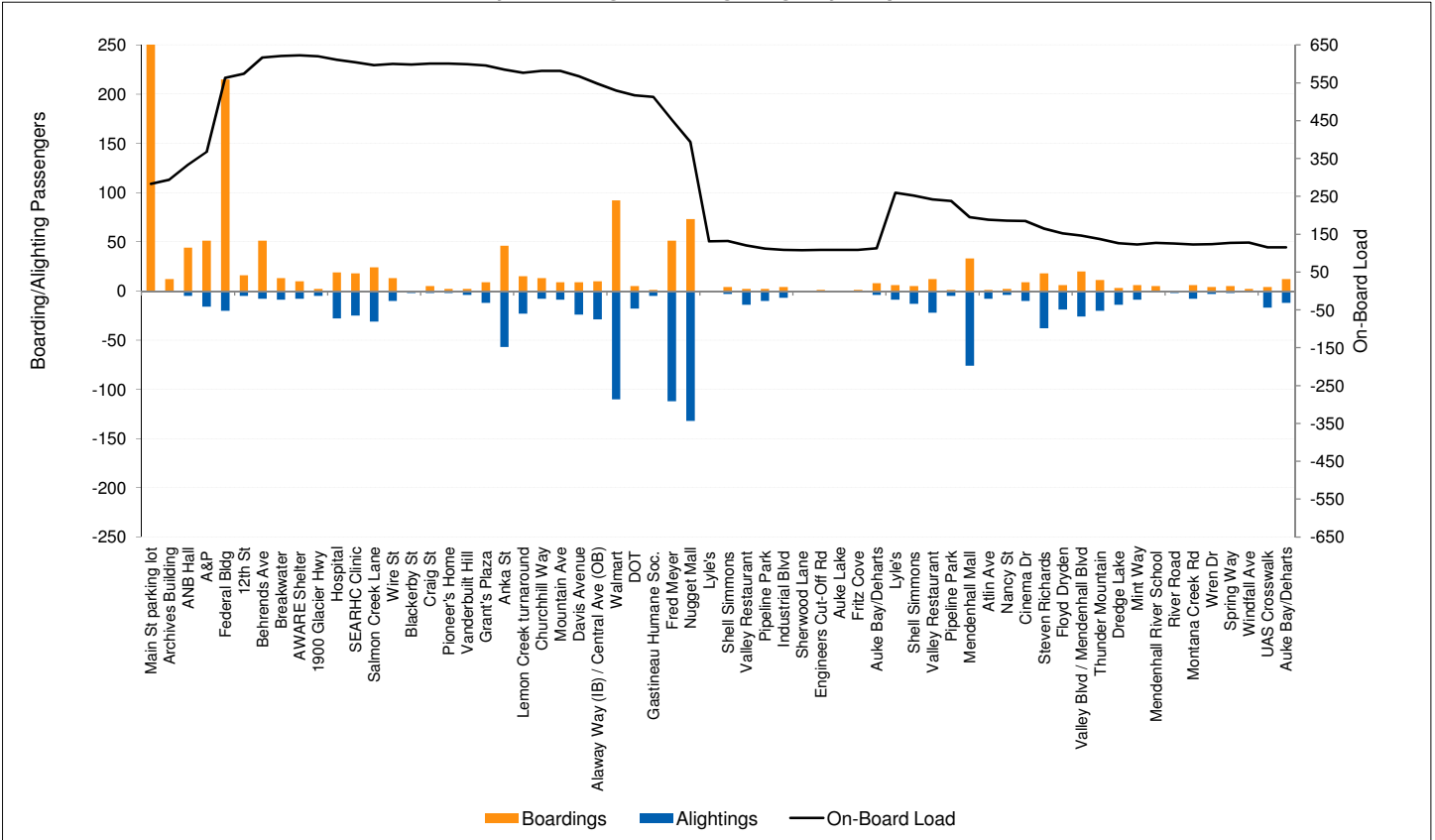
**Weekday On-Board by Stop and Time Period - Outbound**



### Weekday Boardings and Alightings by Stop - Inbound

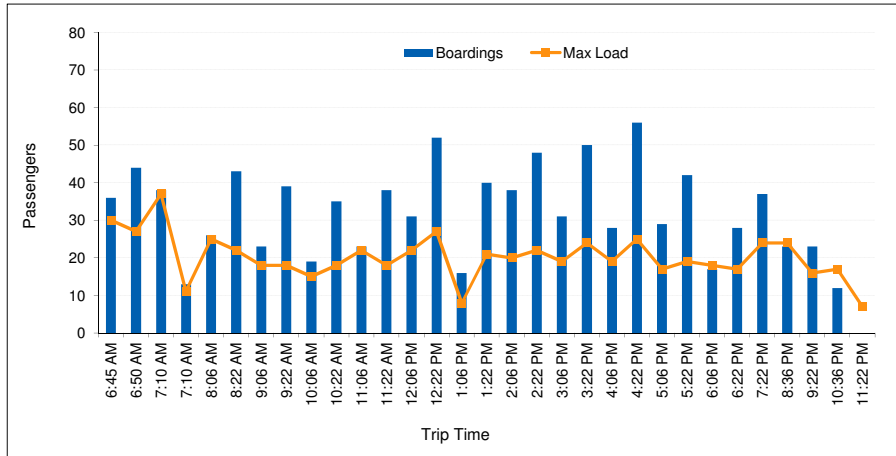


### Weekday Boardings and Alightings by Stop - Outbound

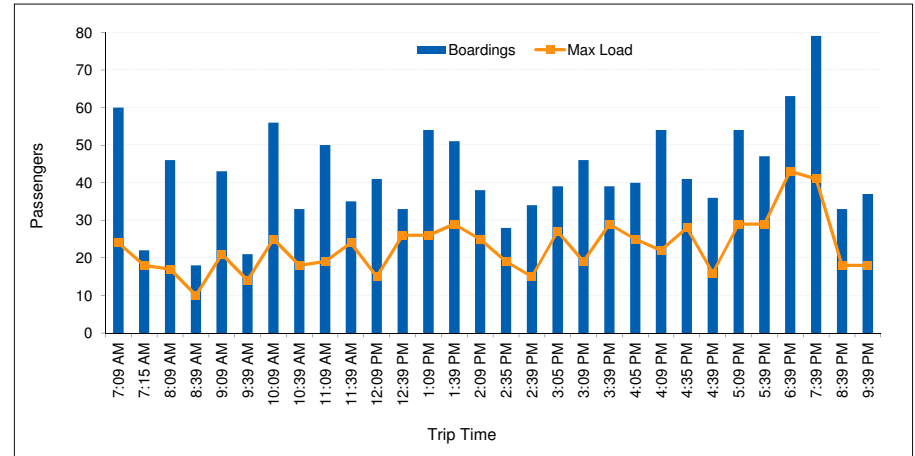





**Weekday Ridership by Trip - Inbound**

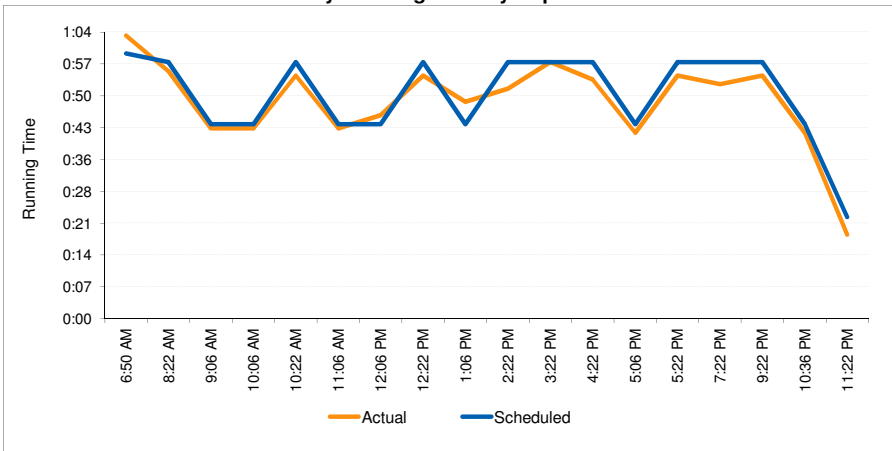


**Weekday Running Time by Trip - Outbound**

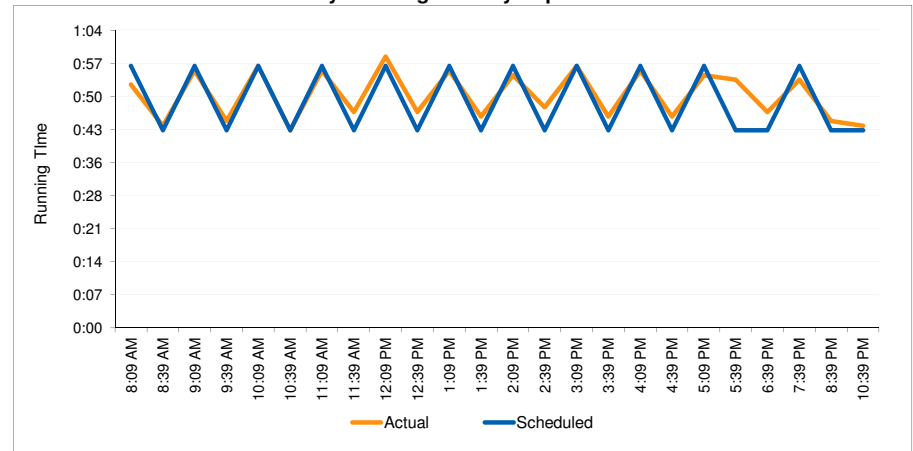


| Route 3/4 Saturday  |  | Route Productivity Summary |            |               |               |                     |                 |                            | Route Operations Summary   |                     |         |        |                         |                          |           |
|---|--|----------------------------|------------|---------------|---------------|---------------------|-----------------|----------------------------|----------------------------|---------------------|---------|--------|-------------------------|--------------------------|-----------|
|   |  | Activity                   |            | Service       |               | Utilization         |                 | Productivity               |                            | On-Time Performance |         |        | On-Board Load           |                          |           |
|  |  | Boardings                  | Alightings | Service Hours | Revenue Miles | Average Trip Length | Passenger Miles | Boardings per Service Hour | Boardings per Revenue Mile | % On-Time           | % Early | % Late | Max Passengers On Board | Max Load Location        | Direction |
|   |  |                            |            |               |               |                     |                 |                            |                            |                     |         |        |                         |                          |           |
| <b>Total</b>  |  | 1,799                      | 1,794      | 45.2          |               |                     |                 | 39.8                       |                            | 85%                 | 10%     | 5%     | 505                     | Churchhill Way           | O         |
| Inbound   |  | 818                        | 1,068      | 23.5          |               |                     |                 | 34.8                       |                            | 78%                 | 14%     | 8%     | 492                     | Alaway Way / Central Ave | I         |
| Outbound  |  | 981                        | 726        | 21.7          |               |                     |                 | 45.3                       |                            | 92%                 | 5%      | 2%     | 505                     | Churchhill Way           | O         |
| <b>By Segment</b>   |  |                            |            |               |               |                     |                 |                            |                            |                     |         |        |                         |                          |           |
| 1   | Auke Bay/Deharts to Nugget Mall (via Glacier Hwy)        | 138                        | 203        | 6.5           |               |                     |                 | 21.2                       |                            | 67%                 | 26%     | 7%     |                         |                          |           |
| 2   | Auke Bay/Deharts to Nugget Mall (via Mendenhall Loop Rd) | 287                        | 328        | 7.3           |               |                     |                 | 39.3                       |                            | 88%                 | 5%      | 8%     |                         |                          |           |
| 3   | Nugget Mall to Walmart                                   | 403                        | 307        | 6.1           |               |                     |                 | 65.5                       |                            | 96%                 |         | 4%     |                         |                          |           |
| 4   | Walmart to Lemon Creek turnaround                        | 193                        | 183        | 4.4           |               |                     |                 | 43.5                       |                            | 76%                 | 16%     | 8%     |                         |                          |           |
| 5   | Lemon Creek turnaround to Hospital                       | 196                        | 188        | 8.4           |               |                     |                 | 23.4                       |                            | 84%                 | 12%     | 4%     |                         |                          |           |
| 6   | Hospital to Federal Bldg                                 | 219                        | 94         | 6.6           |               |                     |                 | 33.0                       |                            | 90%                 | 2%      | 8%     |                         |                          |           |
| 7   | Federal Bldg to Main St parking lot                      | 363                        | 491        | 5.8           |               |                     |                 | 63.1                       |                            | 88%                 | 13%     |        |                         |                          |           |
| <b>By Time Period</b>   |  |                            |            |               |               |                     |                 |                            |                            |                     |         |        |                         |                          |           |
| AM  |  | 150                        | 142        | 4.6           |               |                     |                 | 32.6                       |                            |                     |         |        | 49                      | Breakwater               | I         |
| Midday  |  | 776                        | 770        | 20.2          |               |                     |                 | 38.4                       |                            |                     |         |        | 220                     | Davis Avenue             | I         |
| PM  |  | 432                        | 422        | 10.1          |               |                     |                 | 42.8                       |                            |                     |         |        | 148                     | Gastineau Humane Soc.    | I         |
| Eve   |  | 276                        | 292        | 5.8           |               |                     |                 | 47.7                       |                            |                     |         |        | 90                      | Lemon Creek turnaround   | O         |
| Night   |  | 165                        | 168        | 4.5           |               |                     |                 | 37                         |                            |                     |         |        | 84                      | Federal Bldg             | O         |

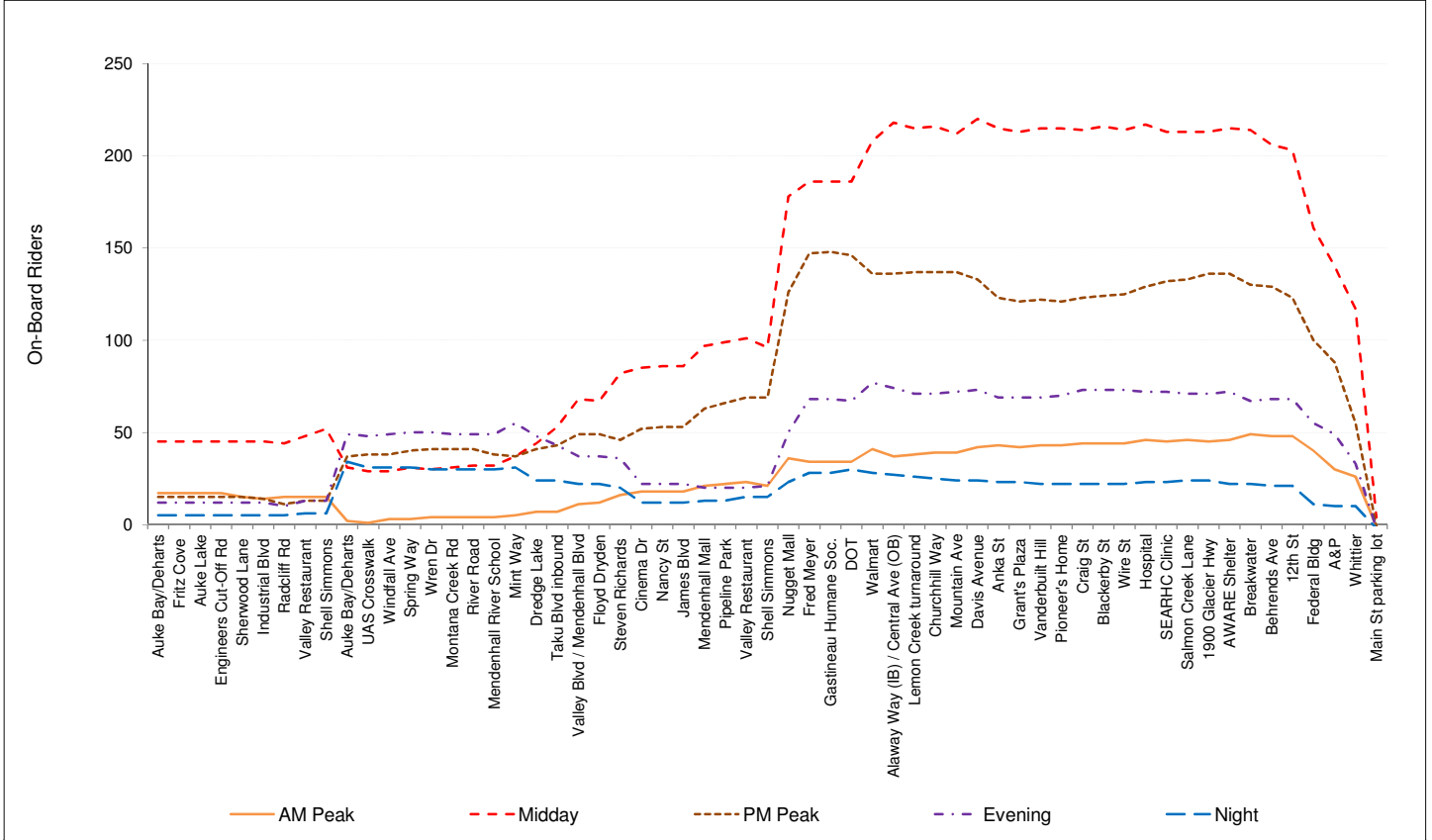
Saturday Running Time by Trip - Inbound



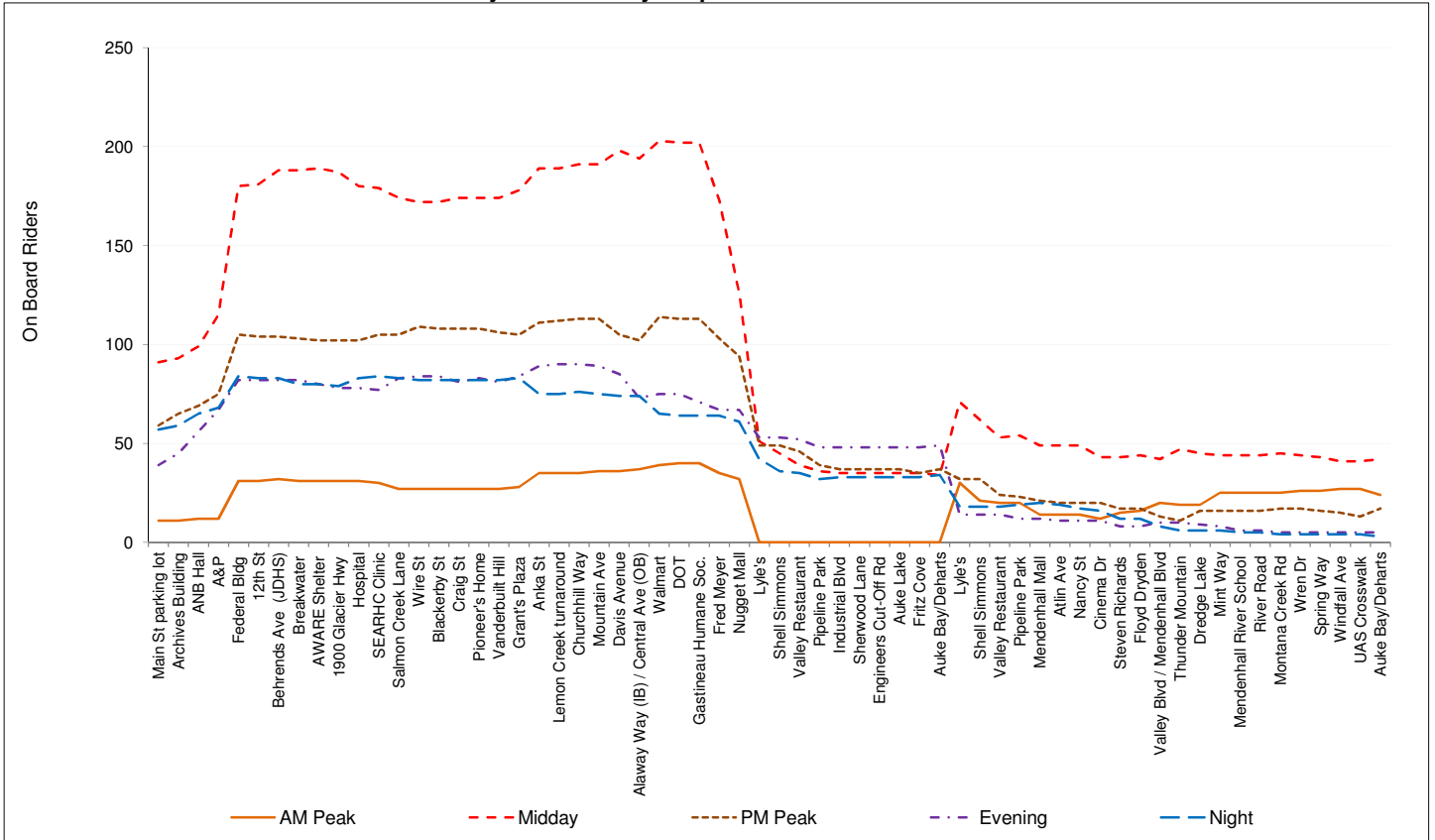
Saturday Running Time by Trip - Outbound



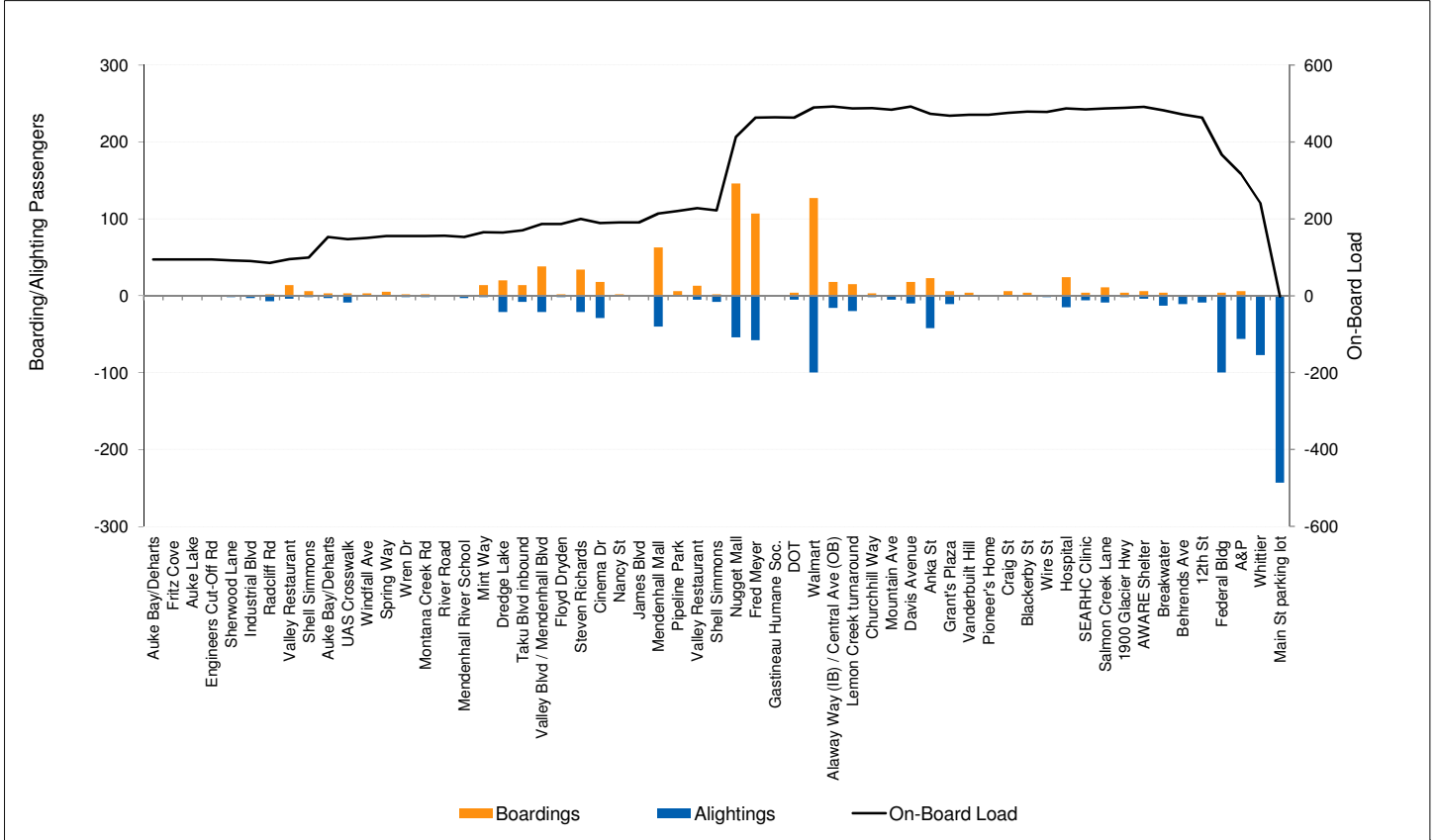
Saturday On-Board by Stop and Time Period - Inbound



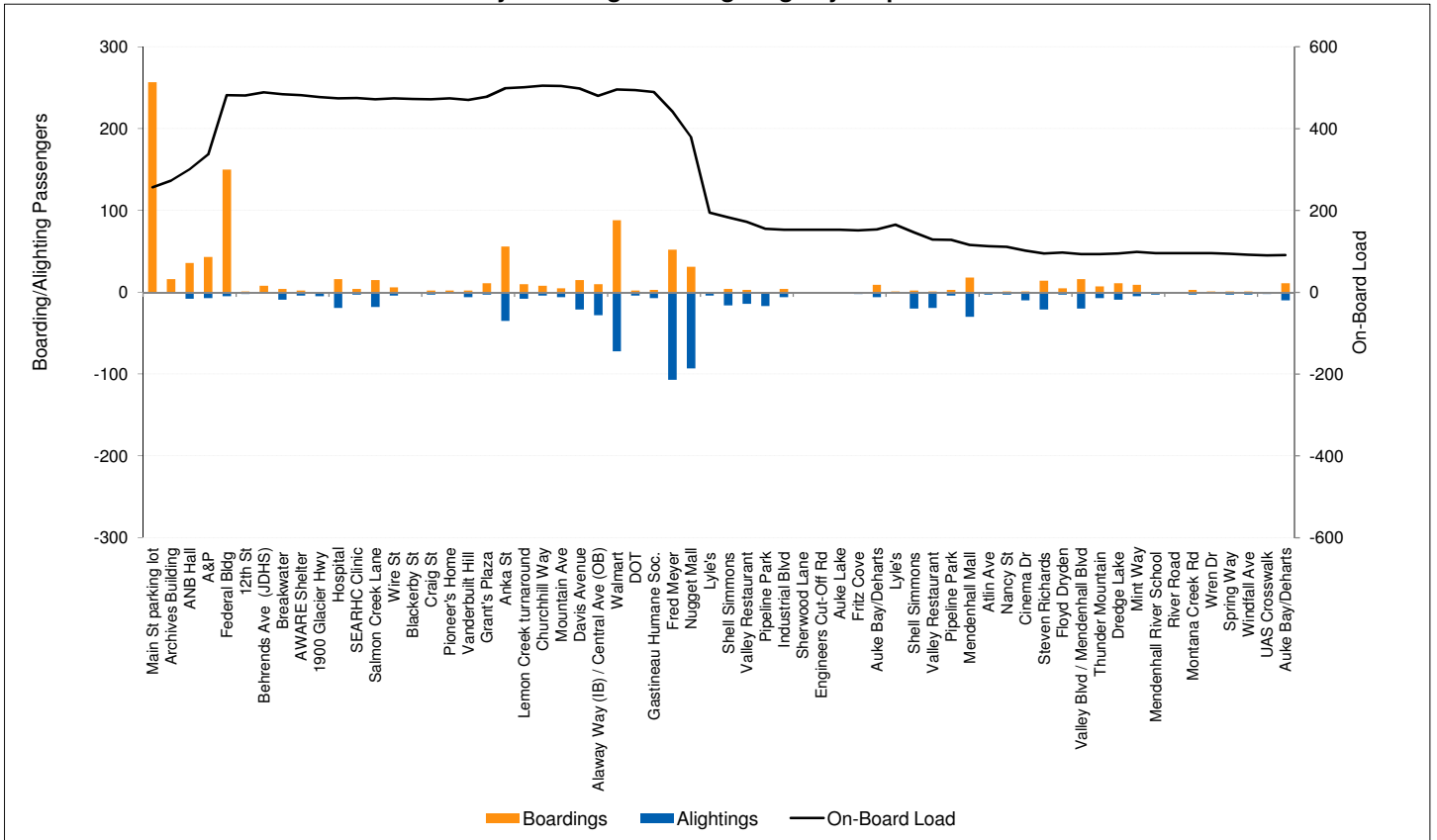
Saturday On-Board by Stop and Time Period - Outbound



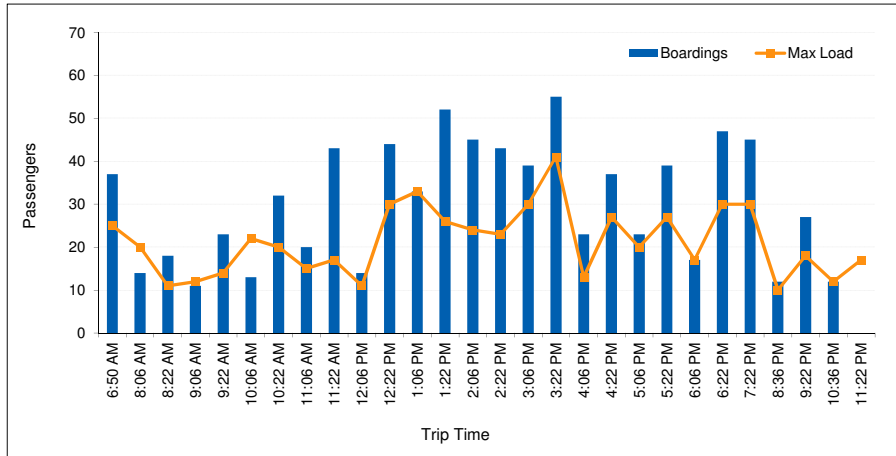
### Saturday Boardings and Alightings by Stop - Inbound



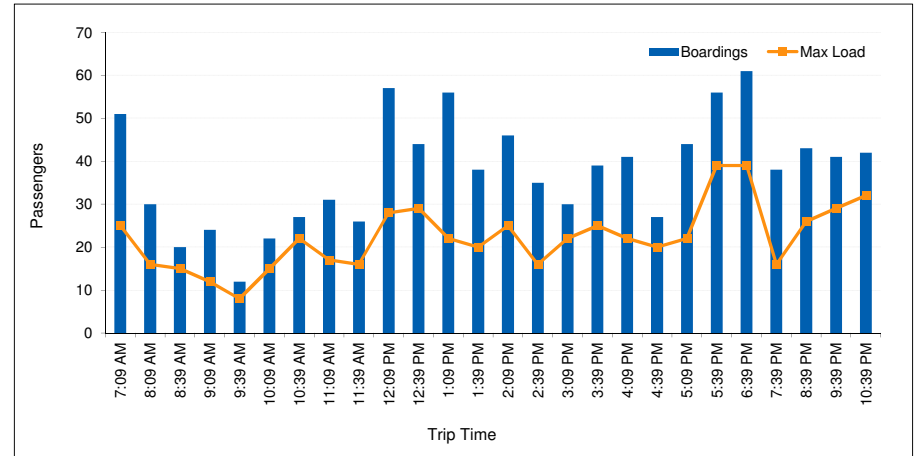
### Saturday Boardings and Alightings by Stop - Outbound

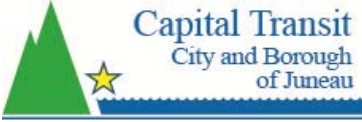


**Saturday Ridership by Trip - Inbound**

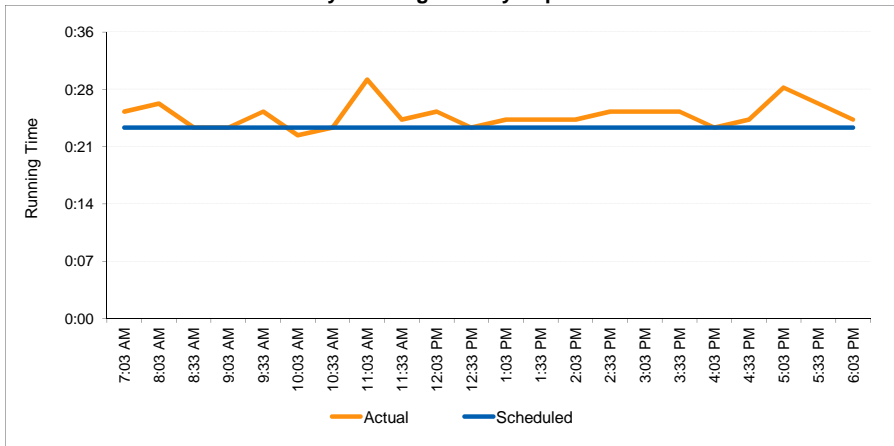


**Saturday Running Time by Trip - Outbound**

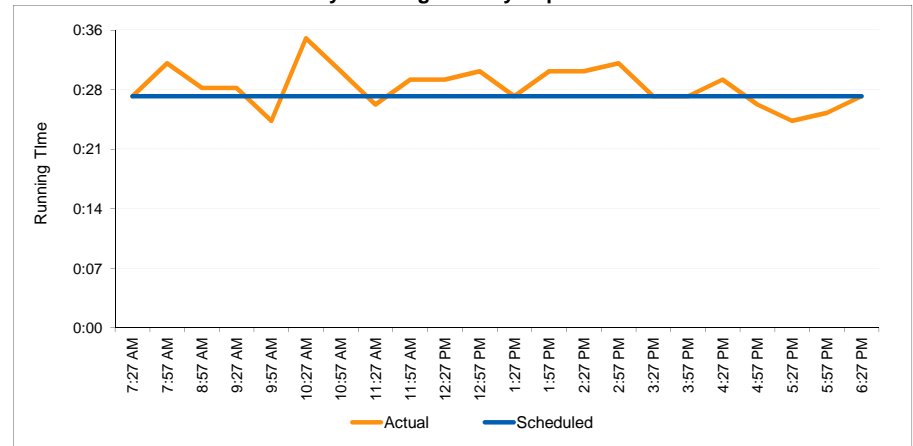


| Express Route Weekday   |                                  | Route Productivity Summary |            |               |               |                     |                 | Route Operations Summary   |                            |           |         |               |                         |                   |           |
|---|----------------------------------|----------------------------|------------|---------------|---------------|---------------------|-----------------|----------------------------|----------------------------|-----------|---------|---------------|-------------------------|-------------------|-----------|
|   |                                  | Activity                   |            | Service       | Utilization   |                     | Productivity    |                            | On-Time Performance        |           |         | On-Board Load |                         |                   |           |
|  |                                  | Boardings                  | Alightings | Service Hours | Revenue Miles | Average Trip Length | Passenger Miles | Boardings per Service Hour | Boardings per Revenue Mile | % On-Time | % Early | % Late        | Max Passengers On Board | Max Load Location | Direction |
|   |                                  |                            |            |               |               |                     |                 |                            |                            |           |         |               |                         |                   |           |
| <b>Total</b>  |                                  | 505                        | 499        | 19.5          |               |                     |                 | 25.9                       |                            | 95%       | 3%      | 2%            | 245                     | Nugget Mall       | I         |
| Inbound   |                                  | 305                        | 175        | 8.8           |               |                     |                 | 34.7                       |                            | 95%       | 5%      | 0%            | 245                     | Nugget Mall       | I         |
| Outbound  |                                  | 200                        | 324        | 10.7          |               |                     |                 | 18.6                       |                            | 96%       | 1%      | 4%            | 185                     | Archives Building | O         |
| <b>By Segment</b>   |                                  |                            |            |               |               |                     |                 |                            |                            |           |         |               |                         |                   |           |
| 1   | UAS Campus to Auke Bay/Deharts   | 33                         | 45         | 1.1           |               |                     |                 | 29.1                       |                            | 95%       | 2%      | 2%            |                         |                   |           |
| 2   | Auke Bay/Deharts to Airport      | 84                         | 64         | 5.2           |               |                     |                 | 16.0                       |                            | 96%       |         | 4%            |                         |                   |           |
| 3   | Airport to Nugget Mall           | 57                         | 86         | 1.9           |               |                     |                 | 30.8                       |                            | 96%       | 2%      | 2%            |                         |                   |           |
| 4   | Nugget Mall to Archives Building | 331                        | 304        | 11.3          |               |                     |                 | 29.3                       |                            | 98%       | 2%      |               |                         |                   |           |
| <b>By Time Period</b>   |                                  |                            |            |               |               |                     |                 |                            |                            |           |         |               |                         |                   |           |
|   | AM                               | 108                        | 104        | 2.6           |               |                     |                 | 41.5                       |                            |           |         |               | 67                      | Nugget Mall       | I         |
|   | Midday                           | 213                        | 210        | 10.4          |               |                     |                 | 20.5                       |                            |           |         |               | 93                      | Nugget Mall       | I         |
|   | PM                               | 159                        | 152        | 5.2           |               |                     |                 | 30.6                       |                            |           |         |               | 71                      | ANB Hall          | I         |
|   | Eve                              | 25                         | 33         | 1.3           |               |                     |                 | 18.8                       |                            |           |         |               | 22                      | Archives Building | O         |

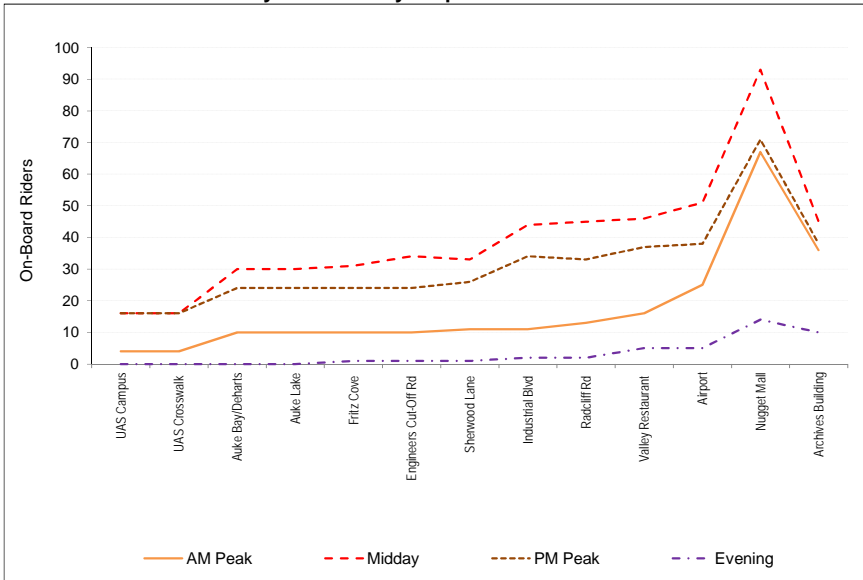
Weekday Running Time by Trip - Inbound



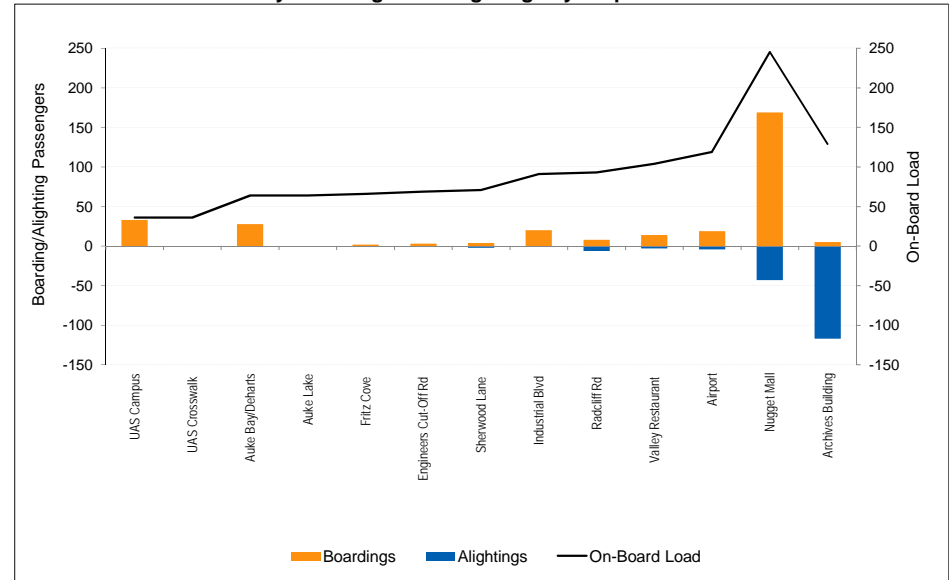
Weekday Running Time by Trip - Outbound



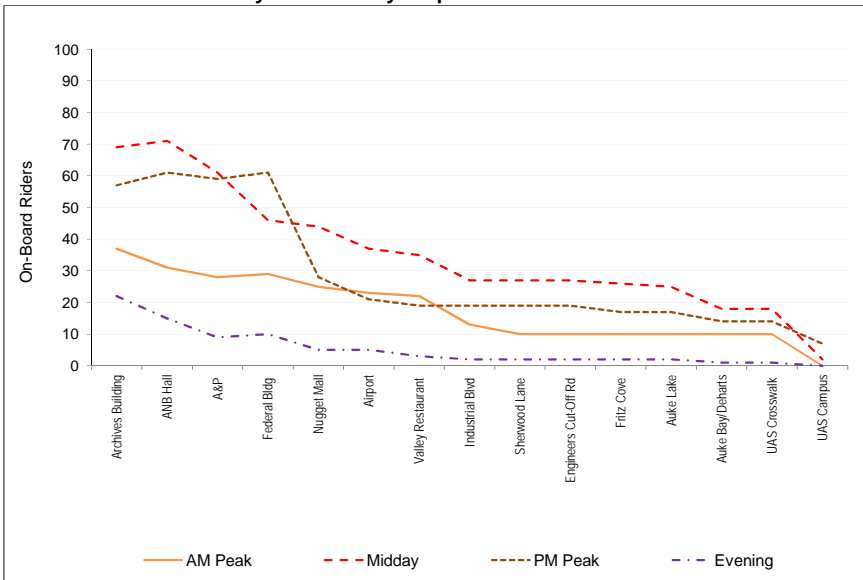
**Weekday On-Board by Stop and Time Period - Inbound**



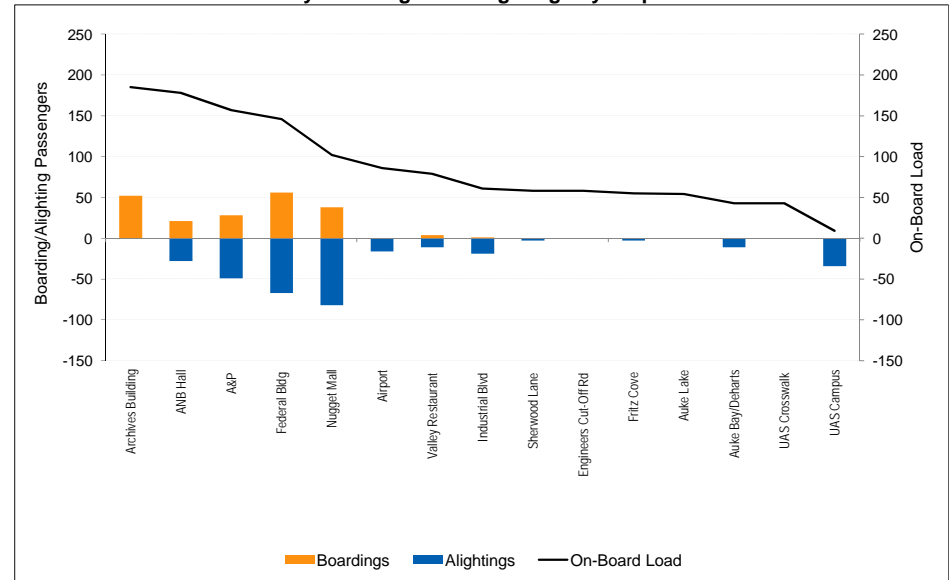
**Weekday Boardings and Alightings by Stop - Inbound**



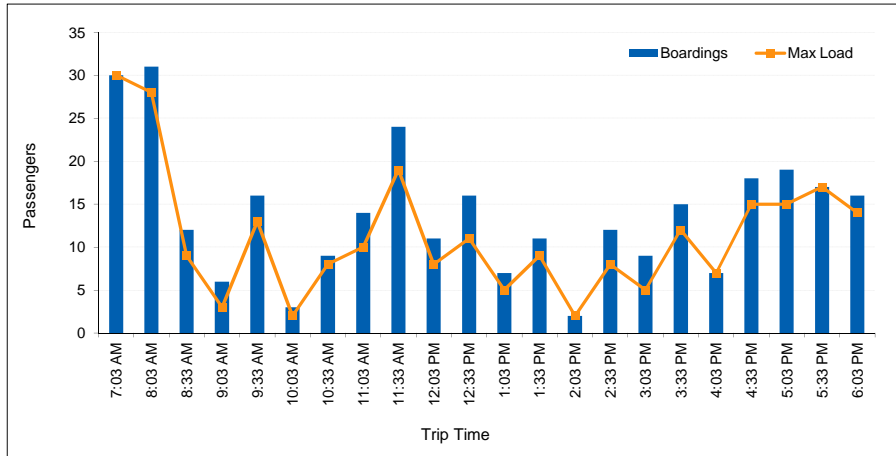
**Weekday On-Board by Stop and Time Period - Outbound**



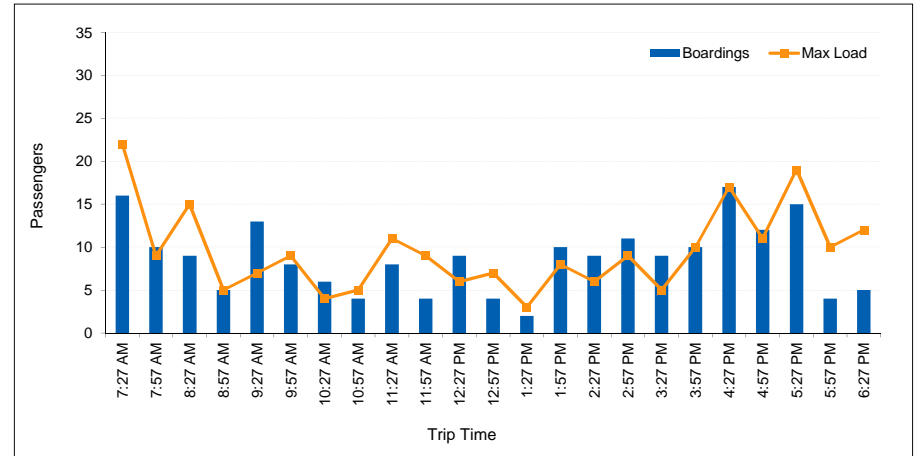
**Weekday Boardings and Alightings by Stop - Outbound**



**Weekday Ridership by Trip - Inbound**



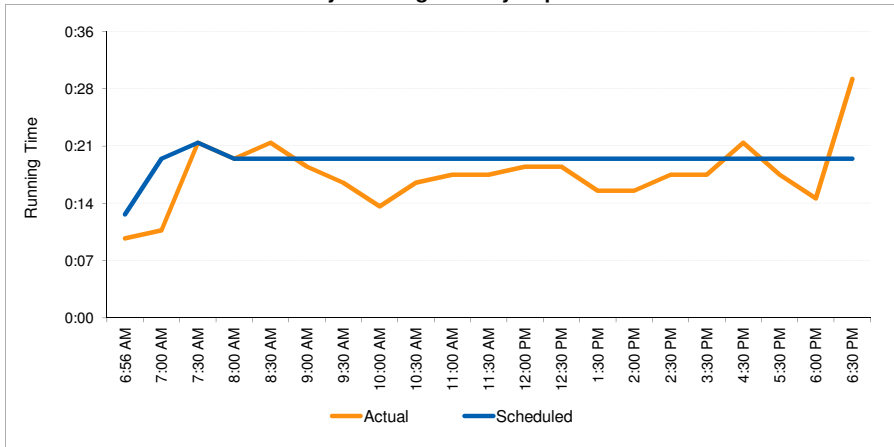
**Weekday Running Time by Trip - Outbound**



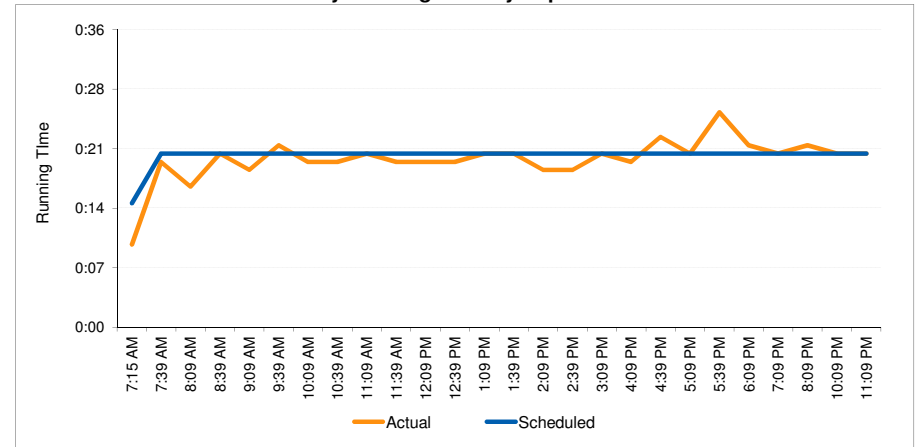


| Route Douglas Weekday |  | Route Productivity Summary |            |               |               |                     |                 |                            | Route Operations Summary   |                     |         |        |                         |                   |           |
|-----------------------|--|----------------------------|------------|---------------|---------------|---------------------|-----------------|----------------------------|----------------------------|---------------------|---------|--------|-------------------------|-------------------|-----------|
|                       |  | Activity                   |            | Service       |               | Utilization         |                 | Productivity               |                            | On-Time Performance |         |        | On-Board Load           |                   |           |
|                       |  | Boardings                  | Alightings | Service Hours | Revenue Miles | Average Trip Length | Passenger Miles | Boardings per Service Hour | Boardings per Revenue Mile | % On-Time           | % Early | % Late | Max Passengers On Board | Max Load Location | Direction |
| <b>Total</b>          |  | 689                        | 671        | 19.3          |               |                     |                 | 35.7                       |                            | 79%                 | 21%     | 1%     | 288                     | Breeze Inn        | I         |
| Inbound               |  | 361                        | 356        | 9.6           |               |                     |                 | 37.7                       |                            | 75%                 | 24%     | 1%     | 288                     | Breeze Inn        | I         |
| Outbound              |  | 328                        | 315        | 9.7           |               |                     |                 | 33.8                       |                            | 82%                 | 17%     | 1%     | 268                     | 12th St           | O         |
| <b>By Segment</b>     |  |                            |            |               |               |                     |                 |                            |                            |                     |         |        |                         |                   |           |
| 1                     | St. Ann's Ave Turnaround to Post Office/C St @ 3rd | 26                         | 24         | 2.9           |               |                     |                 | 9.0                        |                            | 66%                 | 32%     | 2%     |                         |                   |           |
| 2                     | Post Office/C St @ 3rd to Cedar Park               | 218                        | 247        | 5.3           |               |                     |                 | 41.1                       |                            | 77%                 | 23%     |        |                         |                   |           |
| 3                     | Cedar Park to Federal Bldg                         | 227                        | 84         | 5.1           |               |                     |                 | 44.4                       |                            | 90%                 | 10%     |        |                         |                   |           |
| 4                     | Federal Bldg to Main St parking lot                | 218                        | 316        | 6.0           |               |                     |                 | 36.4                       |                            | 82%                 | 18%     |        |                         |                   |           |
| <b>By Time Period</b> |  |                            |            |               |               |                     |                 |                            |                            |                     |         |        |                         |                   |           |
| AM                    |  | 121                        | 107        | 2.9           |               |                     |                 | 42.0                       |                            |                     |         |        | 83                      | Breeze Inn        | I         |
| Midday                |  | 253                        | 250        | 8.2           |               |                     |                 | 30.9                       |                            |                     |         |        | 121                     | Breeze Inn        | I         |
| PM                    |  | 197                        | 195        | 4.1           |               |                     |                 | 48.0                       |                            |                     |         |        | 113                     | 12th St           | O         |
| Eve                   |  | 73                         | 73         | 2.4           |               |                     |                 | 30.6                       |                            |                     |         |        | 36                      | Federal Bldg      | O         |
| Night                 |  | 45                         | 46         | 1.7           |               |                     |                 | 26                         |                            |                     |         |        | 29                      | 12th St           | O         |

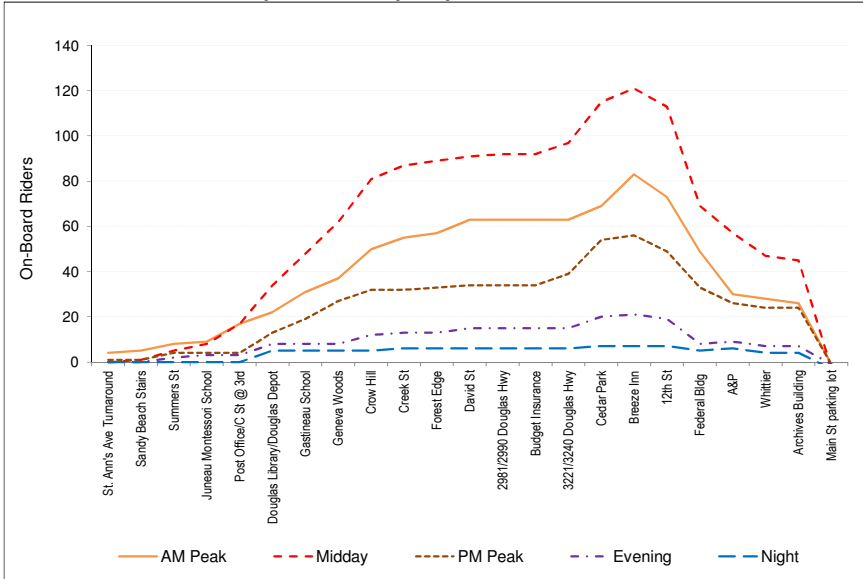
Weekday Running Time by Trip - Inbound



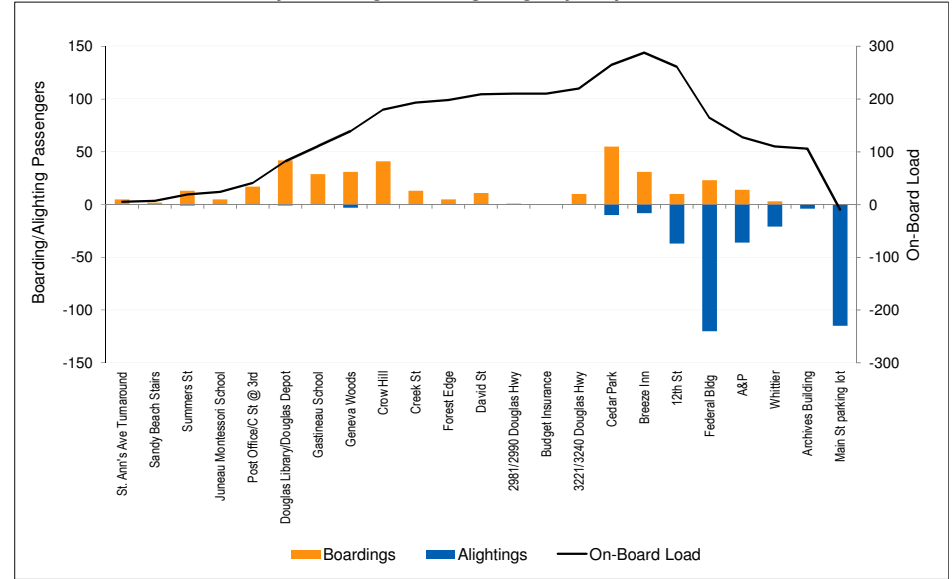
Weekday Running Time by Trip - Outbound



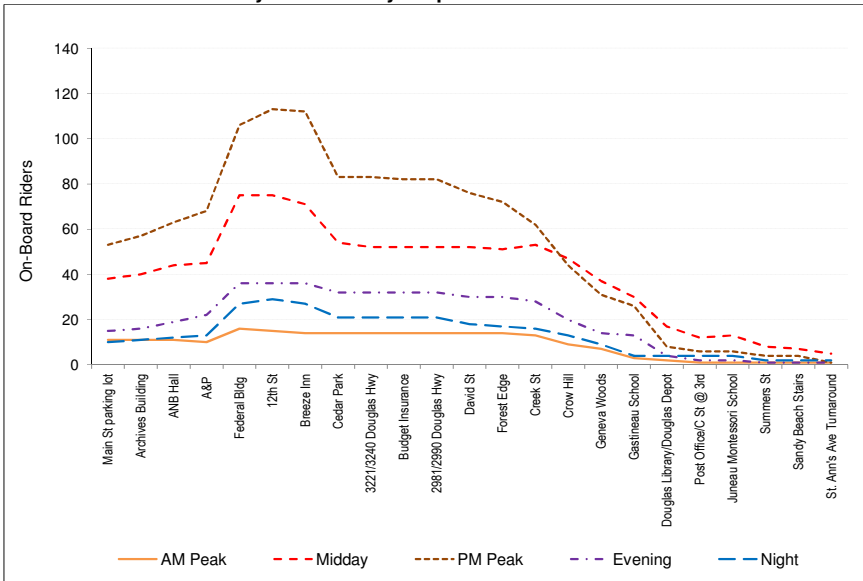
**Weekday On-Board by Stop and Time Period - Inbound**



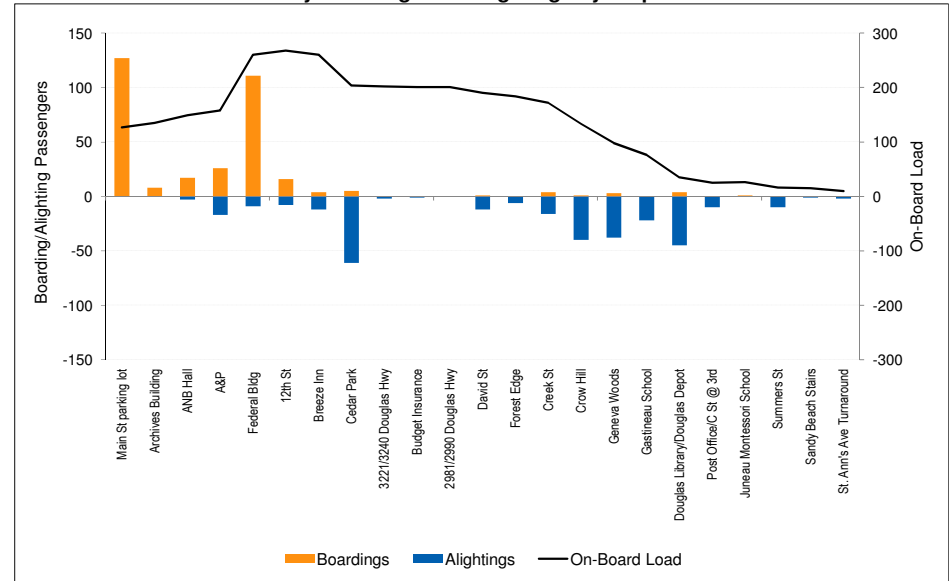
**Weekday Boardings and Alightings by Stop - Inbound**



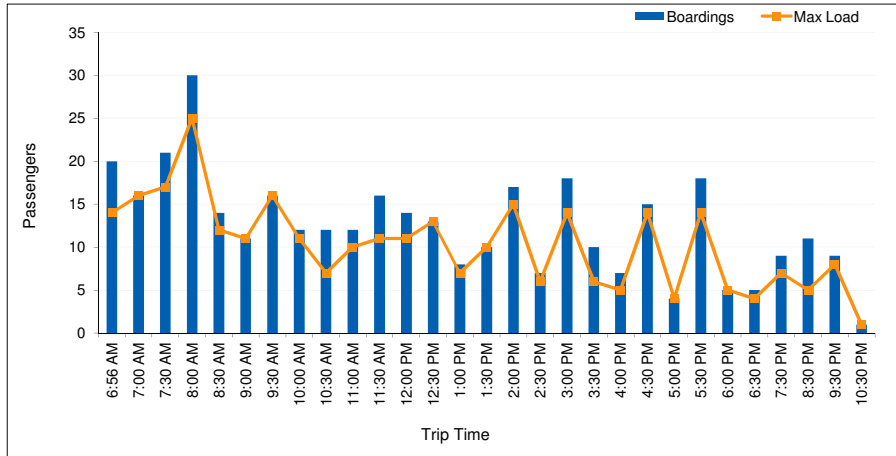
**Weekday On-Board by Stop and Time Period - Outbound**



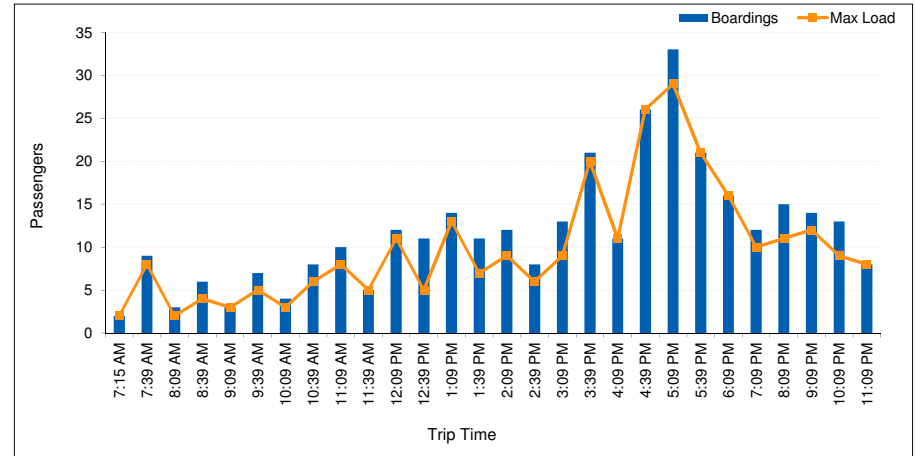
**Weekday Boardings and Alightings by Stop - Outbound**



**Weekday Ridership by Trip - Inbound**

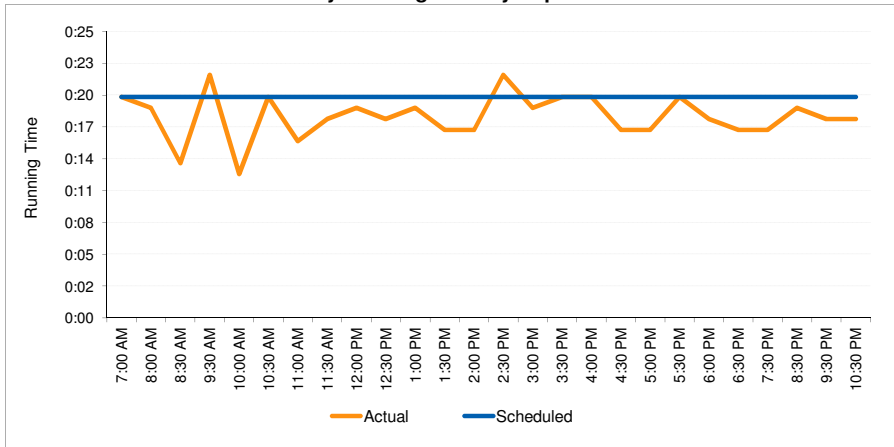


**Weekday Running Time by Trip - Outbound**

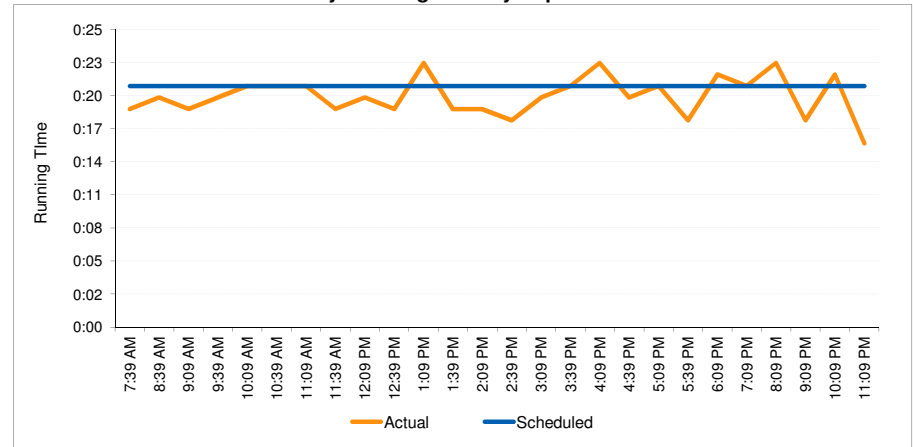


| Route Douglas Saturday |  | Route Productivity Summary |            |               |               |                     |                 |                            | Route Operations Summary   |                     |         |        |                         |                   |           |
|------------------------|--|----------------------------|------------|---------------|---------------|---------------------|-----------------|----------------------------|----------------------------|---------------------|---------|--------|-------------------------|-------------------|-----------|
|                        |  | Activity                   |            | Service       |               | Utilization         |                 | Productivity               |                            | On-Time Performance |         |        | On-Board Load           |                   |           |
|                        |  | Boardings                  | Alightings | Service Hours | Revenue Miles | Average Trip Length | Passenger Miles | Boardings per Service Hour | Boardings per Revenue Mile | % On-Time           | % Early | % Late | Max Passengers On Board | Max Load Location | Direction |
| <b>Total</b>           |  | 462                        | 448        | 18.1          |               |                     |                 | 25.5                       |                            | 84%                 | 16%     | 0%     | 202                     | Breeze Inn        | I         |
| Inbound                |  | 255                        | 245        | 9.0           |               |                     |                 | 28.3                       |                            | 84%                 | 15%     | 1%     | 202                     | Breeze Inn        | I         |
| Outbound               |  | 207                        | 203        | 9.1           |               |                     |                 | 22.7                       |                            | 84%                 | 16%     | 0%     | 175                     | Federal Bldg      | O         |
| <b>By Segment</b>      |  |                            |            |               |               |                     |                 |                            |                            |                     |         |        |                         |                   |           |
| 1                      | St. Ann's Ave Turnaround to Post Office/C St @ 3rd | 15                         | 12         | 2.7           |               |                     |                 | 5.6                        |                            | 83%                 | 17%     |        |                         |                   |           |
| 2                      | Post Office/C St @ 3rd to Cedar Park               | 159                        | 161        | 5.0           |               |                     |                 | 31.7                       |                            | 75%                 | 23%     | 2%     |                         |                   |           |
| 3                      | Cedar Park to Federal Bldg                         | 166                        | 62         | 4.7           |               |                     |                 | 35.4                       |                            | 82%                 | 18%     |        |                         |                   |           |
| 4                      | Federal Bldg to Main St parking lot                | 122                        | 213        | 5.7           |               |                     |                 | 21.3                       |                            | 88%                 | 12%     |        |                         |                   |           |
| <b>By Time Period</b>  |  |                            |            |               |               |                     |                 |                            |                            |                     |         |        |                         |                   |           |
| AM                     |  | 31                         | 31         | 1.7           |               |                     |                 | 18.2                       |                            |                     |         |        | 24                      | Cedar Park        | I         |
| Midday                 |  | 206                        | 201        | 8.2           |               |                     |                 | 25.1                       |                            |                     |         |        | 97                      | 12th St           | I         |
| PM                     |  | 124                        | 122        | 4.1           |               |                     |                 | 30.2                       |                            |                     |         |        | 54                      | Breeze Inn        | I         |
| Eve                    |  | 70                         | 63         | 2.4           |               |                     |                 | 29.4                       |                            |                     |         |        | 37                      | Federal Bldg      | O         |
| Night                  |  | 31                         | 31         | 1.7           |               |                     |                 | 18                         |                            |                     |         |        | 20                      | Federal Bldg      | O         |

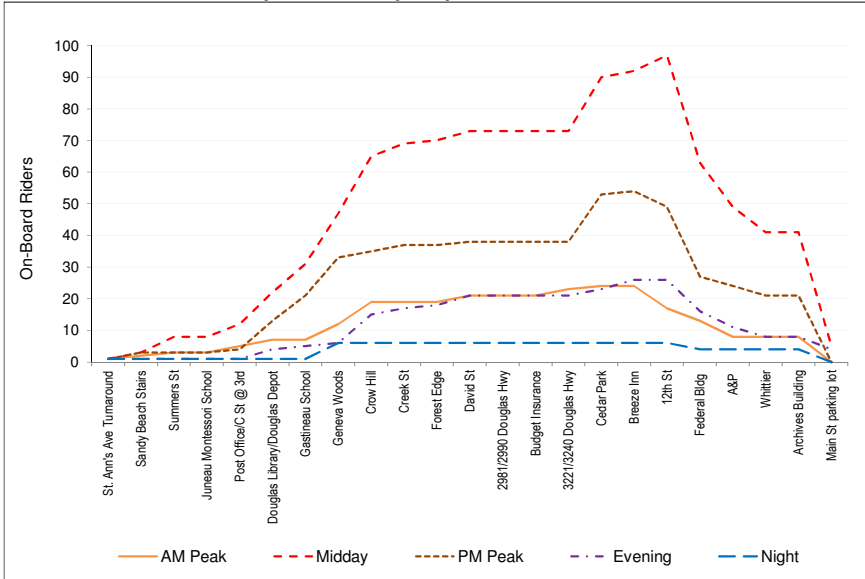
Saturday Running Time by Trip - Inbound



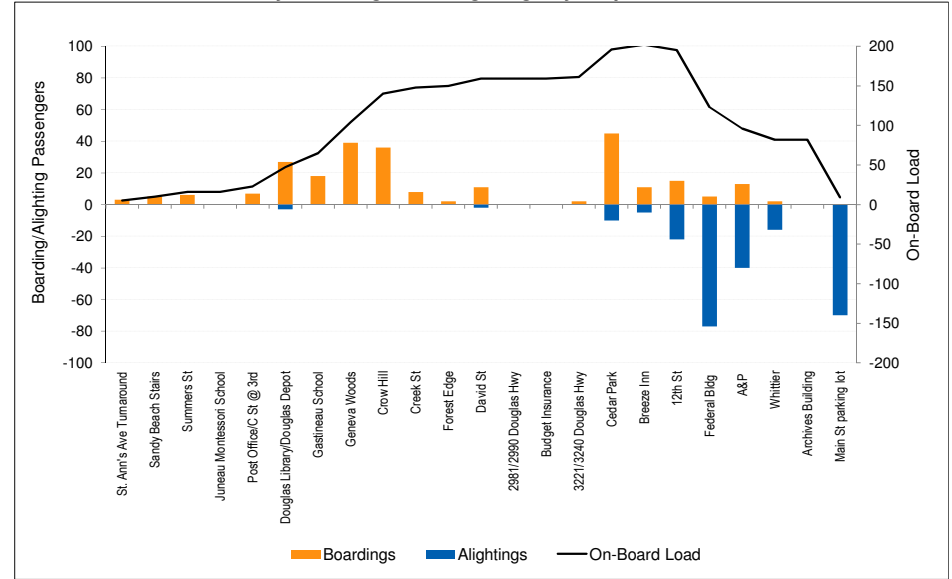
Saturday Running Time by Trip - Outbound



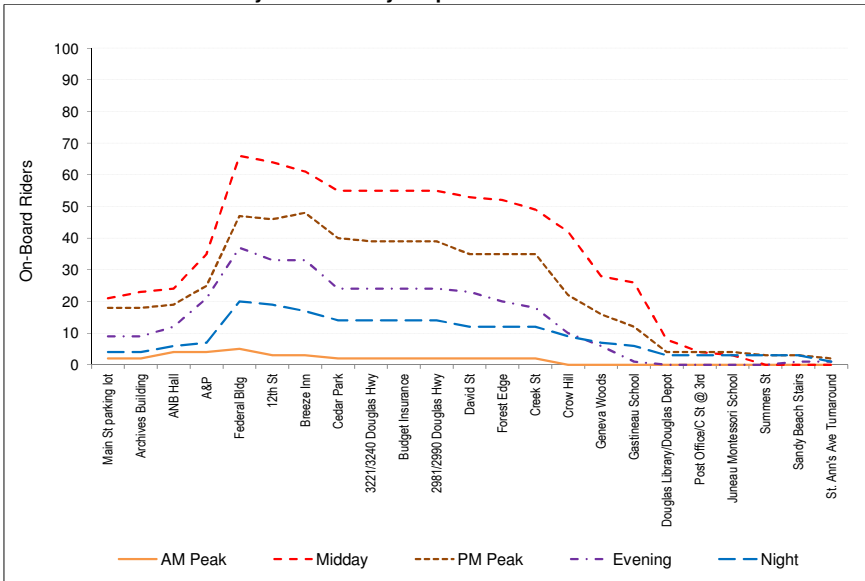
**Saturday On-Board by Stop and Time Period - Inbound**



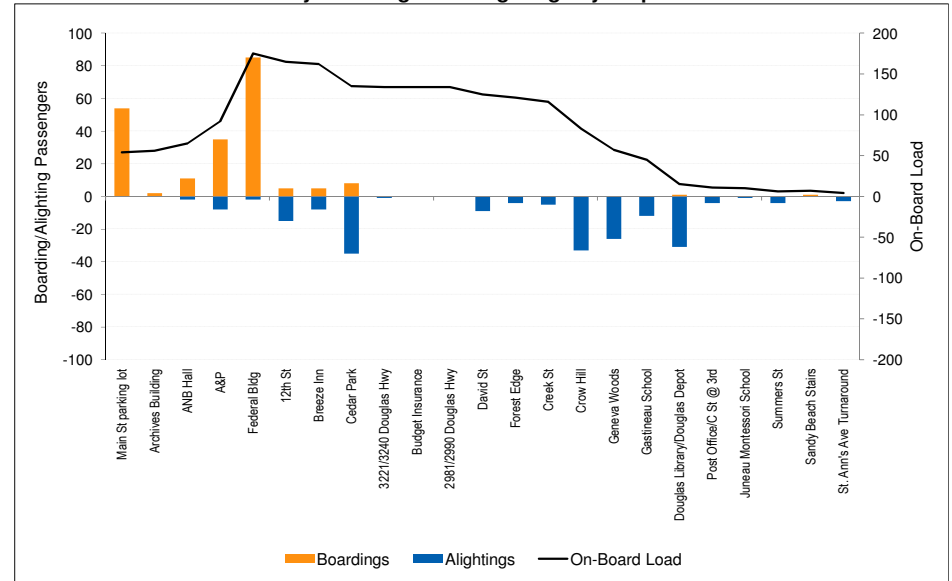
**Saturday Boardings and Alightings by Stop - Inbound**



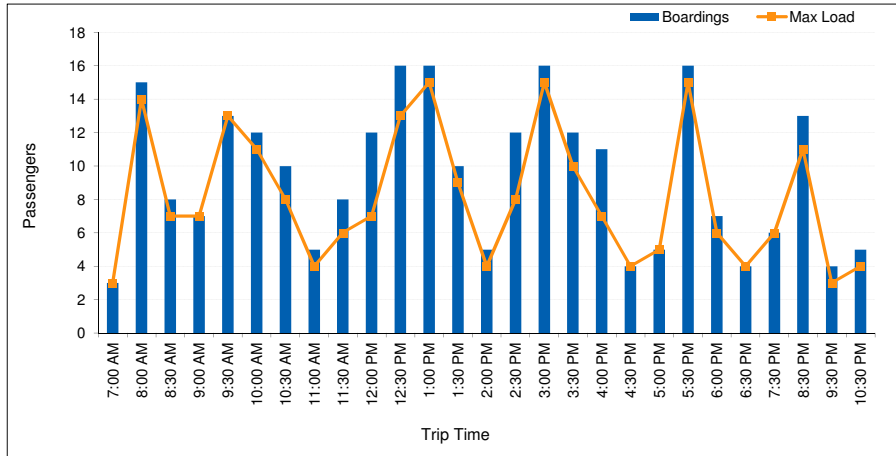
**Saturday On-Board by Stop and Time Period - Outbound**



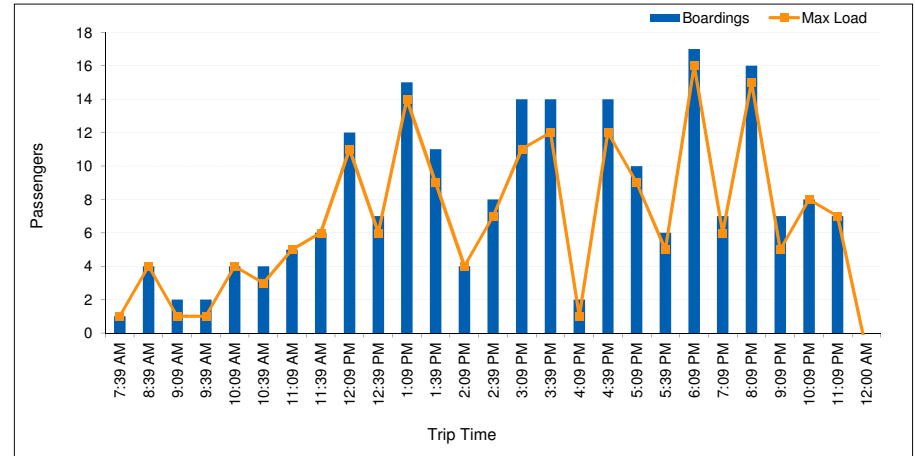
**Saturday Boardings and Alightings by Stop - Outbound**




**Saturday Ridership by Trip - Inbound**

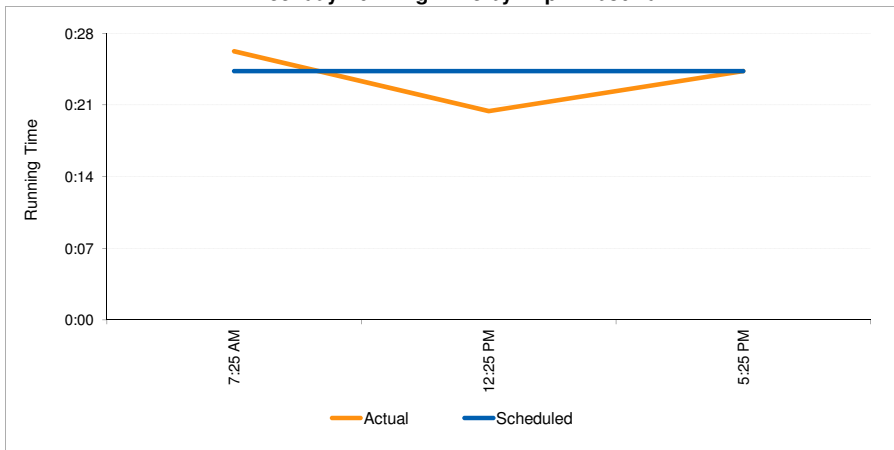


**Saturday Running Time by Trip - Outbound**

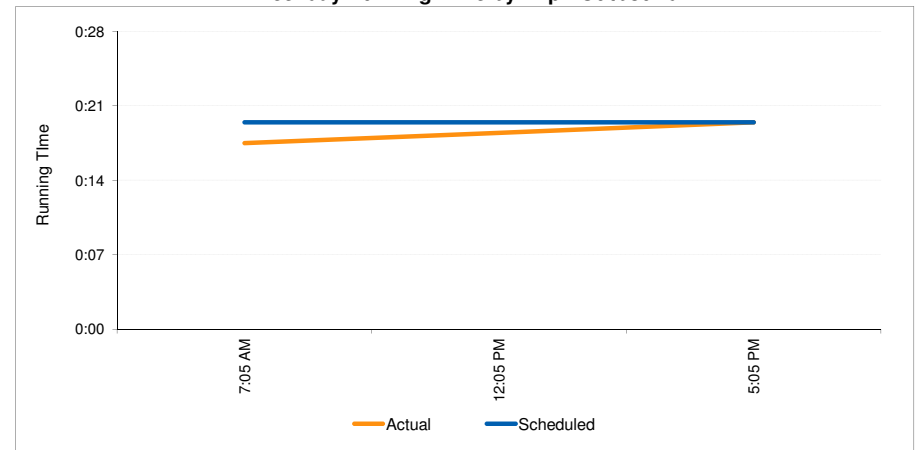


| Route North Douglas Weekday   |   | Route Productivity Summary |            |               |               |                     |                 |                            | Route Operations Summary   |           |                     |        |                         |                              |           |
|---|---|----------------------------|------------|---------------|---------------|---------------------|-----------------|----------------------------|----------------------------|-----------|---------------------|--------|-------------------------|------------------------------|-----------|
|   |   | Activity                   |            | Service       |               | Utilization         |                 | Productivity               |                            |           | On-Time Performance |        |                         | On-Board Load                |           |
|  |   | Boardings                  | Alightings | Service Hours | Revenue Miles | Average Trip Length | Passenger Miles | Boardings per Service Hour | Boardings per Revenue Mile | % On-Time | % Early             | % Late | Max Passengers On Board | Max Load Location            | Direction |
|   |   |                            |            |               |               |                     |                 |                            |                            |           |                     |        |                         |                              |           |
| <b>Total</b>  |   | 33                         | 33         | 2.3           |               |                     |                 | 14.7                       |                            | 94%       | 6%                  | 0%     | 20                      | Kowee Creek                  | I         |
| Inbound   |   | 18                         | 20         | 1.3           |               |                     |                 | 14.4                       |                            | 89%       | 11%                 | 0%     | 20                      | Kowee Creek                  | I         |
| Outbound  |   | 15                         | 13         | 1.0           |               |                     |                 | 15.0                       |                            | 100%      | 0%                  | 0%     | 11                      | Federal Bldg (9th & Glacier) | O         |
| <b>By Segment</b>   |   |                            |            |               |               |                     |                 |                            |                            |           |                     |        |                         |                              |           |
| 1   | Sundown Drive to N Douglas Hwy @ Bonnie Doon Dr | 3                          | 2          | 0.9           |               |                     |                 | 3.3                        |                            | 100%      |                     |        |                         |                              |           |
| 2   | N Douglas Hwy @ Bonnie Doon Dr to Federal Bldg  | 19                         | 11         | 0.9           |               |                     |                 | 21.1                       |                            | 80%       | 20%                 |        |                         |                              |           |
| 3   | Federal Bldg to Main St parking lot             | 11                         | 20         | 0.4           |               |                     |                 | 24.4                       |                            | 100%      |                     |        |                         |                              |           |
| <b>By Time Period</b>   |   |                            |            |               |               |                     |                 |                            |                            |           |                     |        |                         |                              |           |
|   | AM  | 20                         | 20         | 0.8           |               |                     |                 | 26.7                       |                            |           |                     |        | 16                      | 4150 N Douglas Hwy           | I         |
|   | Midday  | 4                          | 4          | 0.8           |               |                     |                 | 5.3                        |                            |           |                     |        | 4                       | Kowee Creek                  | I         |
|   | PM  | 9                          | 9          | 0.8           |               |                     |                 | 12.0                       |                            |           |                     |        | 9                       | Federal Bldg (9th & Glacier) | O         |

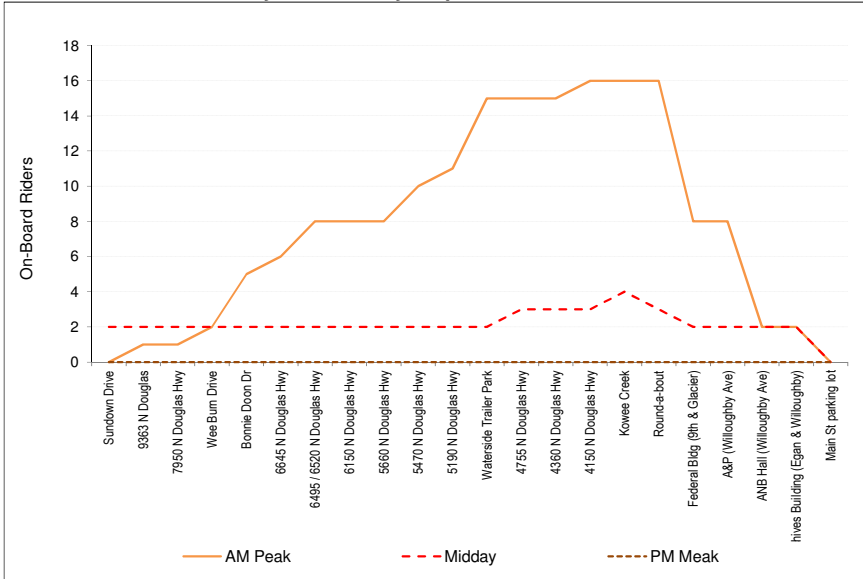
Weekday Running Time by Trip - Inbound



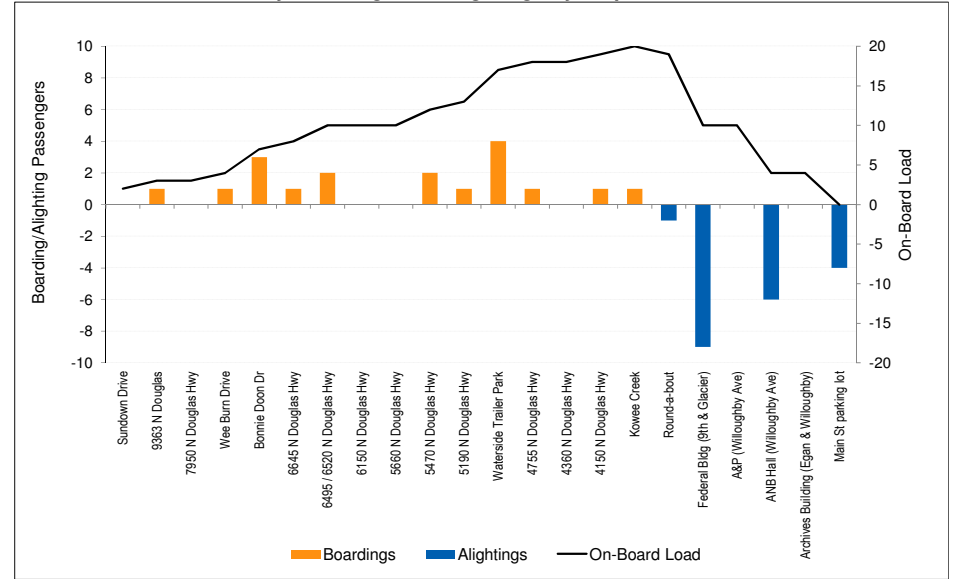
Weekday Running Time by Trip - Outbound



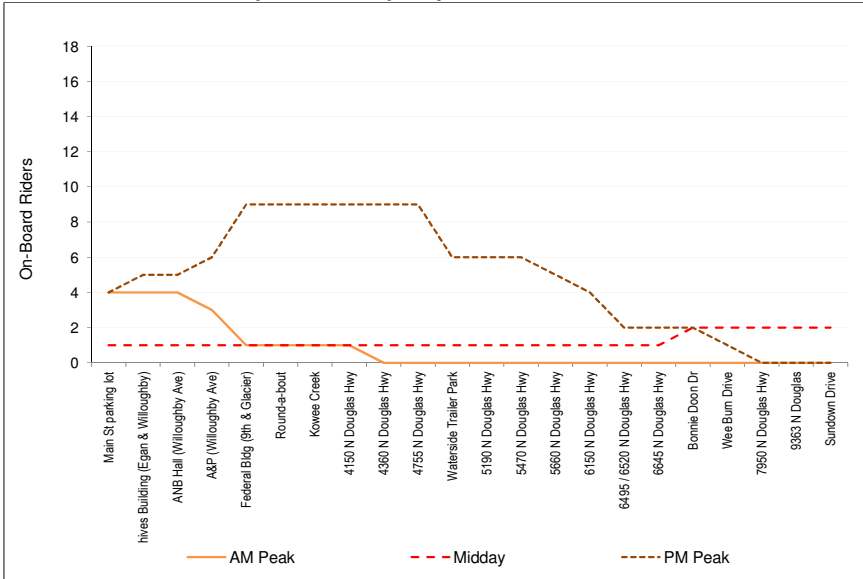
**Weekday On-Board by Stop and Time Period - Inbound**



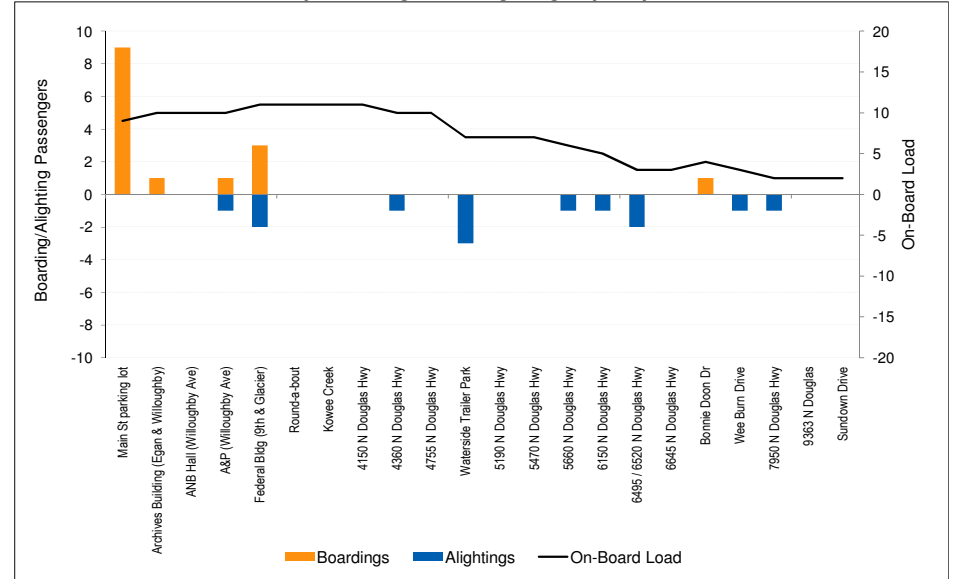
**Weekday Boardings and Alightings by Stop - Inbound**



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

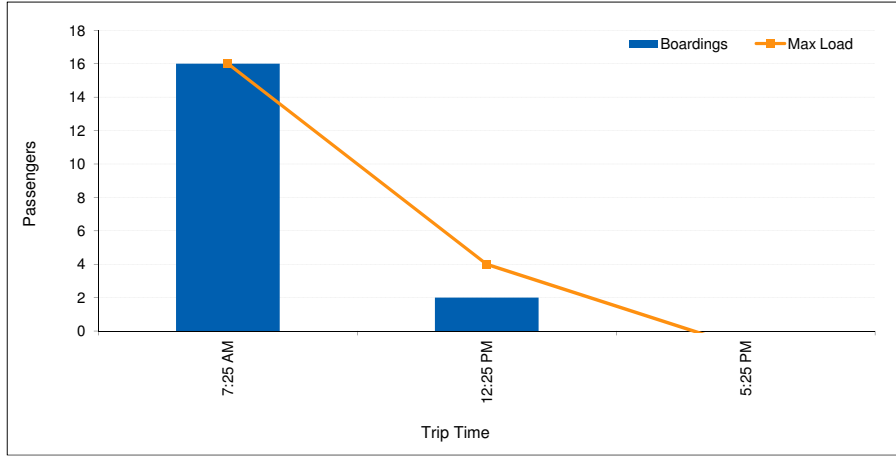


**Weekday Boardings and Alightings by Stop - Outbound**





Weekday Ridership by Trip - Inbound



Weekday Running Time by Trip - Outbound

