



# **HOOD RIVER TO GOVERNMENT CAMP TRANSIT FEASIBILITY AND IMPLEMENTATION STUDY**

**Final Report**



**September 2019**



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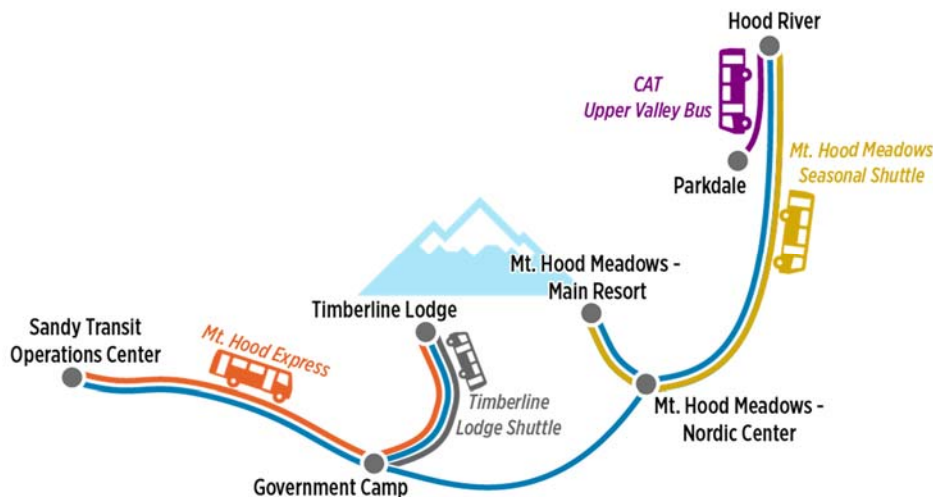
## EXECUTIVE SUMMARY

A connected public transit network around Mt. Hood—circling from Portland to Hood River via I-84, from Hood River to Mt. Hood via Highway 35, and from Mt. Hood to Portland via Highway 26—has long been a vision of many stakeholders in the region. Incrementally, transit providers have begun to realize this vision.

- Mt. Hood Express connects Sandy to Timberline Lodge via Highway 26 and transports more than 60,000 passengers per year. Passengers trying to board in Government Camp are turned away because buses are already full.
- Columbia Gorge Express started operating in Summer 2016 from Portland to Multnomah Falls via I-84, and carried 28,800 passengers in its first season, averaging 505 people every day.
- Mt. Hood Meadows began a weekend customer shuttle from Hood River in 2017. During 26 days of service it carried 9,384 people, or 360 people each service day.
- Timberline Lodge began a shuttle between Government Camp and the Lodge in 2018.

There is clear demand for transit to recreation destinations on Mt. Hood but there continues to be gaps in the network. This plan sets forth a path to fill one of those gaps with daily public transportation via Highway 35 connecting Hood River to Mt. Hood Meadows and eventually proceeding to Government Camp.

Transit Providers Accessing Mt. Hood Destinations as of 2019



## Why Public Transportation?

Public transportation has a wealth of benefits from environment to equity, supporting both local and regional communities:

**Mt. Hood and the Columbia River Gorge are major international destinations drawing millions of visitors.** According to the Hood River Chamber of Commerce, 1.4 million people visited Hood River County in 2018. Approximately 1.5 million people visit Mt. Hood skiing destinations each year.



**The bulk of visitors arrive from the Portland metro region.** A 2018 Travel Oregon survey found that 50% of Mt. Hood day visitors are from the Portland region. Anecdotally, 90% of Mt. Hood Meadows patrons live in the metro area. This benefits transit as there are many customers centered in one area.

**World-class cities offer visitors ways of accessing natural areas without a car.** Portland is a leader in environmental stewardship and is also growing as an international tourist attraction. Cities in other nations, such as Copenhagen and Tokyo, have robust transit networks not just in their downtown areas, but also to recreation areas.

**Public transportation supports equitable access to recreation.** A 2017 survey of Columbia Gorge Express riders found that 51% of riders boarding at Gateway Transit Center did not have access to a car. People deserve the opportunity to access recreation, and public transportation can equalize access options.

**Congestion continues to erode the visitor experience.** Anecdotally, congestion (particularly on Highway 26) is known to be very bad on winter weekends, to the point that some people choose not to go to Mt. Hood at all. In winter, the parking lot at Timberline Lodge is full by 8 a.m. Mt. Hood Meadows owns 2,600 parking spaces but is building a new parking lot to keep up with demand. The resort draws 7,000-8,000 visitors per day in winter. Automatic Traffic Recorders along Highways 26 and 35 recorded average traffic growth of 6-6.5% per year since 2014. Congestion hurts employees, businesses, and erodes the visitor experience.

**Safety is a primary concern.** Patrons do not always heed chain-up requirements nor drive safely in snow conditions. Anecdotally, a crash on Highway 26 can snarl traffic for hours. Public transportation means people do not have to drive in snow conditions.

**Preserving the Mt. Hood National Forest is critical.** Visitors flock to Mt. Hood for its beauty. There are numerous trailheads along Highway 35, but many of these places are being “loved to death” with demand surpassing transportation capacity. Public transportation can ultimately reduce driving trips to the mountain and reduce the negative externalities (such as pollution and congestion) caused by cars.

**Mt. Hood destinations are major employers.** During the peak season, Mt. Hood Meadows alone employs 1,200 people. Providing affordable transportation to opportunities on the mountain furthers livability, equity, and supports the local economy.

**Affordability crisis means more people live outside of population centers.** As housing costs in Hood River rise, more people are moving outside the city. Public transportation on Highway 35 will serve not just Hood River, but provide options for people living in Mount Hood, Parkdale, and Odell. The service will complement Columbia Area Transit’s (CAT) existing Upper Valley route and will provide a new option for accessing downtown Hood River as well as means to access employment and recreation on Mt. Hood.

## **Why Now?**

The timing is ripe to create a new transit option on Highway 35:

**Build upon success of Columbia Gorge Express.** In 2018, Columbia Gorge Express (CGE) added service between Multnomah Falls and Hood River, closing another gap in the transit network. Service was marketed jointly with CAT, which also provides service from Portland to Hood River. Starting in fall 2019, CAT will take on operation of CGE intercity service from Portland to Hood River. This will present an opportunity to link passengers on one provider from Portland to Hood River via CGE and from Hood River to Mt. Hood Meadows via the new Highway 35 service.



**Coordinate with planning projects in Clackamas County.** Clackamas County has undertaken a Transit Development Plan, electronic fare study, and a transit hubs location project—all of which will affect transit design and operations in Government Camp. Highway 35 service can connect to and coordinate with planned changes.

**Align extension to Government Camp with area redevelopments.** The Summit Ski area redevelopment will also affect transit demand and potential transit center locations in Government Camp.

**Undertake systems view through the Vision Around the Mountain project.** In Fall 2019, ODOT and its partners will embark on a project seeking to create a unified vision and implementation plan for the connected transit network around Mt. Hood that has long been imagined.

**Build upon other regional recreation initiatives.** Services such as the Dog Mountain shuttle in Skamania County have been successful in reducing congestion and improving safety at this popular destination. King County's Trailhead Direct service, which began in 2017, continued adding new routes in 2019 to keep up with demand. The service connects hikers from light rail and park and ride locations to trailheads. These models provide momentum for similar recreation-focused service on Highway 35.

## **Community Input**

Public transportation is a community service. As such, community input is foundational to creating a service model. Methods involved in collecting input included:

- Five stakeholder interviews, including the Forest Service, ski resorts, and ODOT
- Tabling at three community spaces—engaging a total of 82 people
- A focus group specifically targeting the Spanish-speaking community—12 people attended
- A community survey promoted online and available in hard copy—380 completed responses, 39 of which were in Spanish

Chapter 2 details community outreach findings. In terms of service design, outreach revealed:

- Strong support for direct service from Hood River to Mt. Hood Meadows operating a few times a day.
- Winter weekends are the most popular time to visit Mt. Hood, closely followed by summer weekends.
- The typical visitor spends a half to a whole day in the Mt. Hood area. Just over one-third of visitors go to one destination, while nearly half visit two or more destinations.
- Interest in taking the bus for commuting. Shift times start around 7-8 a.m. and end at 4-5 p.m.

## **Recommended Service Design**

Based on community input, a list of potential stops and three service options were explored and are described in Chapter 3 – Alternatives Development.

Conversations with stakeholders and partners revealed strong support for piloting service from Hood River to Mt. Hood Meadows during the 2019 winter season. Numerous projects happening around Timberline Lodge and in Clackamas County will affect transit circulation and access in Government Camp, therefore it makes sense for CAT to extend Highway 35 service to Government Camp in a phased approach. This will allow CAT to close the gap in transit services between Hood River and



Government Camp by first focusing on the highest demand connection—between Hood River and Mt. Hood Meadows during winter. Stakeholders agreed that service should begin now, but begin in a moderate fashion, with opportunities to quickly grow.

The recommended alternative connects the highest priority stop locations that can be served in the immediate term from Hood River to Mt. Hood Meadows. Connections to Highway 35 communities at Mount Hood and Odell support local circulation and access while also providing efficient regional links to Mt. Hood Meadows.

### Recommended Alternative Routing





### Proposed Schedules

Base Schedule			Peak Day Schedule (added trips in green)		
HR	MHM	HR	HR	MHM	HR
5:45	7:00	8:15	5:45	7:00	8:15
6:15	7:30	8:45	6:15	7:30	8:45
7:30	8:45	10:00	7:30	8:45	10:00
8:30	9:45	11:00	7:45	9:00	10:15
9:00	10:15	11:30	8:30	9:45	11:00
14:00	15:15	16:30	9:30	10:45	12:00
15:00	16:15	17:30	10:15	11:30	12:45
15:30	16:45	18:00	14:00	15:15	16:30
			14:45	16:00	17:15
			15:00	16:15	17:30
			15:30	16:45	18:00

### Service Hours and Miles Totals

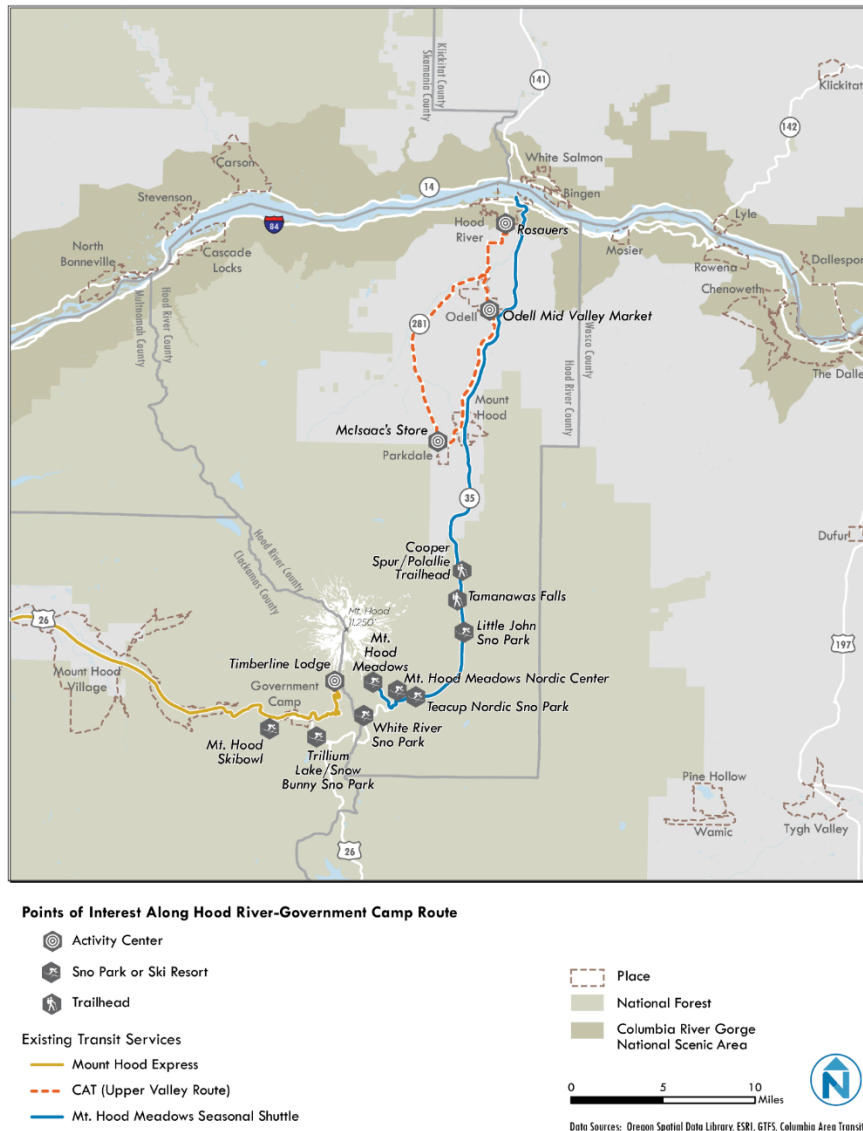
Day Type	Daily Service Hours	Daily Service Miles	Annual Service Days	Annual Hours	Annual Miles
Normal Service Days	20	600	90	1,800	54,000
Peak Service Days	27.5	825	30	825	24,750
Total Service Days			120	2,625	78,750

# 1 EXISTING CONDITIONS

## STUDY AREA

This project focused upon public transportation feasibility between Hood River and Government Camp. The study area is shown in Figure 1.

Figure 1 Highway 35 Study Area



## PLANNING CONTEXT

Numerous studies have examined transportation needs in the Mt. Hood area during the past 10 years, as listed in Figure 2.

Figure 2 Planning Document Overview

Year Complete	Document
2018	Mt. Hood Area Visitor Survey Final Results
2017	Hood River County Transportation District Transit Master Plan
2016	Mount Hood Transit Implementation Plan
2014	Mt. Hood Multimodal Transportation Plan
2012	Alternative Transit Opportunities and Transportation Demand Management within the Mt. Hood National Forest Pilot Program
2009	Transportation Solutions Mt. Hood National Forest

## Key Recommendations from Previous Plans

### Mt. Hood Area Visitor Survey (2018):

- The majority of visitors to the region (96%) are traveling by personal motor vehicle. Only 4% of respondents used the bus, though the frequency of bus usage was higher among visitors to ski resorts (7%) and other Highway 26 locations (13%). Bus usage was also higher in the winter.
- Awareness of public transportation options is low. Respondents were more likely to be unaware of regional public transit options than they were 'somewhat' or 'very' familiar. Respondents were asked about their awareness of TriMet, Mt. Hood Express, Sandy Area Metro, and Columbia Gorge Express. Awareness was higher for TriMet and Mt. Hood Express.
- To increase public transportation usage, transit options must be more competitive with driving. Sixty percent of respondents said they would consider taking public transit if some factors were addressed, including travel time, information, fewer transfers, service frequency, and seat reservation.
- Some visitor segments are more open to taking public transportation than others. Namely, single respondents without kids, day visitors from a nearby area, wintertime visitors, and Oregon residents were more likely than the respondent pool at large to be open to public transit.
- Gear storage is a key consideration for potential transit riders. The most popular reason for not taking public transit was having too much gear (44%). As outdoor recreation (e.g., skiing, mountain biking) is overwhelmingly why people visit the area (87%), visitors are likely to have a lot of gear.
- Traveling with pets is a key consideration for potential transit riders. Eight percent of all visitors were traveling with pets, and this number was higher among springtime respondents.
- Approximately half of all respondents visited more than one location during their trip. Improving connections between multiple popular destinations could help increase transit ridership.

### Hood River County Transportation District Transit Master Plan (2017):

The plan included recommendations for a Hood River–Government Camp service, including service characteristics (Figure 3).

**Figure 3 Hood River – Government Camp Proposed Service Characteristics (from HRCTD TMP)**

Characteristic	Description/Metric
Span	7 a.m. to 7 p.m.
Service Days	Daily
Daily Service Hours	12 hours
Cycle Time	201 minutes
Proposed Frequency	240 minutes (4 hours) or 3 trips per day
Number of Vehicles	1
Est. Annual Service Days	365
Est. Annual Service Hours	4,380
Est. Annual Operating Cost (FY 2018)	\$276,000

#### **Mount Hood Transit Implementation Plan (2016)**

The plan recommends continuing the Mt. Hood Express and the Villages Shuttle, and recommends three additional services:

- Bus service from Hood River to Government Camp, serving Hood River, Odell, Mount Hood Village, Parkdale, Mt. Hood Meadows, and Government Camp. The new service would operate two round trips per day (one in the morning and one in the evening) on weekends and holidays throughout the year. The route is approximately 46 miles one-way and takes 90 minutes to complete a one-way trip.
- Circulator shuttle service between Government Camp, Mt. Hood Meadows, and Timberline Lodge. The new circulator service would operate year-round, seven days per week, with ten trips per day. The last two runs of the day would circulate only between Government Camp and Timberline Lodge. The route measures 32 miles round-trip and has a cycle time of 65 minutes. A satellite parking facility should be constructed at Government Camp so people can park and take the shuttle.
- Pilot commuter service between Warm Springs and Timberline Lodge. This service would include three round trips per day—two trips in the morning and one in the evening—seven days per week throughout the year, except for on holidays. The route is approximately 45 miles (one-way) and takes 105 minutes to complete.



Figure 4 Mt. Hood Transit Implementation Plan (Proposed Map)



**Mount Hood Transit Implementation Plan Proposed Transit Services**

- Villages Shuttle
- Mt. Hood Express
- Timberline-Gov. Camp-Mt. Hood Meadows Circulator (*proposed*)
- Government Camp-Warm Springs (*proposed*)
- Hood River-Government Camp (*proposed*)
- Transit Node

- Place
- National Forest
- Columbia River Gorge National Scenic Area

0 5 10 Miles



Data Sources: Oregon Spatial Data Library, ESRI, GTFS



### **Mt. Hood Multimodal Transportation Plan (2014)**

The Mt. Hood Multimodal Transportation Plan recommended projects pertinent to this study included:

- High Priority Projects
  - Transportation Management Association (TMA) formation
  - Traveler webpage clearinghouse
  - Expansion and development of park-and-rides
- Medium Priority Projects
  - CAT service expansion to ski areas in the Mount Hood National Forest
  - Develop a transit portal staging concept supported by mass transit
  - Improve intra-forest service on Mt. Hood with transit hub on the mountain
- Low Priority Projects
  - Government Camp Intermodal Hub for automobiles and alternative transportation connections
  - Aerial transportation link (ATL) project between Skibowl, Government Camp, and Timberline

### **Alternative Transit Opportunities and Transportation Demand Management within the Mt. Hood National Forest Pilot Program (2012)**

This plan identified the following strategies:

- High Priority
  - Develop a Transportation Management Association or other organization to coordinate transit and transportation demand management programs
  - Transportation System Management and Intelligent Transportation Systems
  - Increase and extend existing public transit
  - Create a “one stop” Mt. Hood traveler webpage with dynamic information on parking, weather, road conditions, travel time, and available transit
  - Increase cell phone coverage on the mountain
- Medium Priority
  - Increase and extend existing private transit
  - Advertise and improve carpooling information sites

### **Transportation Solutions Mt. Hood National Forest (2009)**

This report had the following recommendations relevant to this project:

- Short Term
  - Create an inventory of all relevant transportation resources
- Medium Term
  - Improve inter-forest transit service to the Mount Hood National Forest
  - Improve intra-forest transit service in the Mount Hood National Forest
- Long Term
  - Reconcile and plan for parking in the long-term
  - Develop a portal staging concept supported by mass transit

## EXISTING TRANSIT SERVICES

Today, transit service accessing the Mt. Hood area is provided by Mt. Hood Express, Timberline Lodge, CAT, and Mt. Hood Meadows (Figure 5). There is no transit service between Mt. Hood Meadows and Government Camp. For this study focused on Highway 35, CAT and Mt. Hood Meadows were the two primary transit providers examined in detail. From Hood River and Government Camp, numerous other public transit providers connect to the Portland region and Washington, as summarized in Figure 6.

Figure 5 Existing Service Providers in the Mt. Hood area

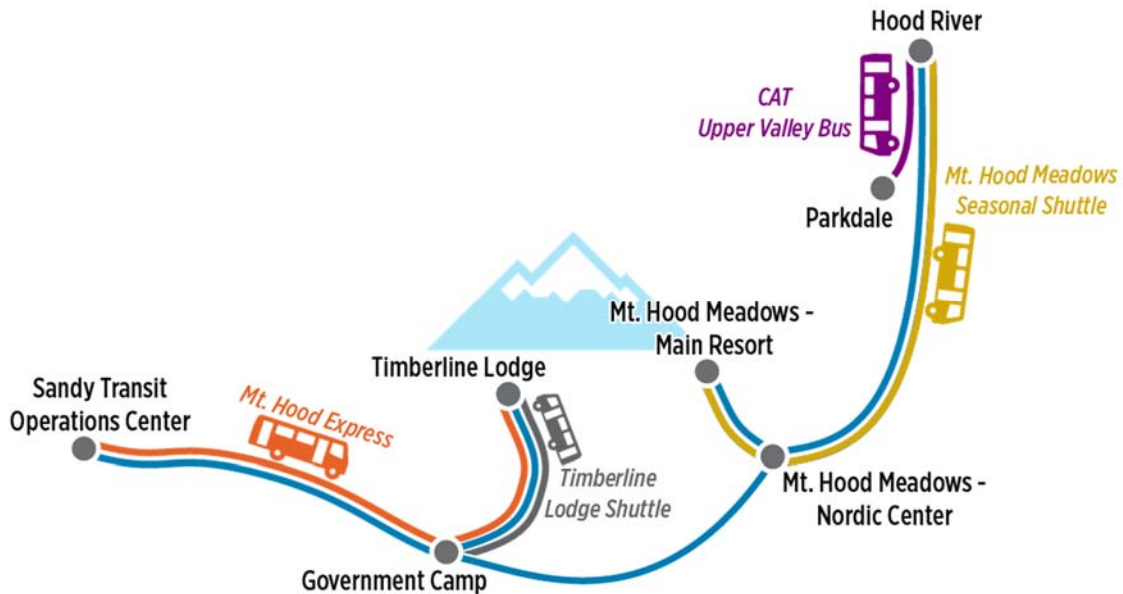




Figure 6 Provider Overview

Service/Provider	Public / Private	Service Area	Service Type	Summary Statistics					Source
				Boardings	Service Hours	Total Expenses	Boardings per Hour	Cost per Hour	
Primary Transit Services									
Columbia Area Transit	Public	Hood River County, with connections to The Dalles and Portland	Fixed-route, deviated fixed point, demand-response	26,368	8,427	\$731,559	3.1	\$86.81	2017 NTD
Mt. Hood Meadows Employee and Visitor Shuttles	Private	Mt. Hood Meadows – Hood River Mt. Hood Meadows – Sandy	Fixed-route	22,292	1,245	NA	17.9	NA	2017-2018 season (Mt. Hood Meadows)
Connecting Transit Services									
Mt. Hood Express	Public	Sandy–Government Camp–Timberline Lodge	Fixed-route	61,525	6,375	\$454,516	9.7	\$71.30	2017 NTD
Timberline Lodge Shuttle	Private	Government Camp–Timberline Lodge	Circulator shuttle	NA	NA	NA	NA	NA	
Columbia Gorge Express	Public	Portland–Hood River	Fixed-route	92,475	7,448	\$866,258	13.3	\$104.64	2018-2019 season (ODOT)
Mount Adams Transportation Service	Public	Klickitat County (with connection to Hood River)	Fixed-route, demand-response	15,764	17,959	\$863,871	0.9	\$48.10	2017 NTD
Sandy Area Metro	Public	Sandy with connections to Gresham and Estacada	Fixed-route, demand-response	121,227	15,919	\$1,113,823	7.6	\$69.67	2017 NTD
LINK (provided by Mid-Columbia Economic Development District)	Public	Wasco County, The Dalles–Hood River	Fixed-route, demand-response	20,937	6,354	\$492,666	3.3	\$77.54	2017 NTD

## Columbia Area Transit

Hood River County Transportation District (HRCTD) operates as Columbia Area Transit (CAT) and is the primary transit provider in Hood River County. CAT runs demand response service throughout Hood River County, a local fixed route in the City of Hood River, and multiple intercity fixed routes serving Portland, Cascade Locks, and The Dalles.

Figure 7 Columbia Area Transit 2017 Service Summary

Quantity	Fixed-Route	Demand-Response	Total
<b>Totals</b>			
Vehicles Operated in Maximum Service	5	2	7
Revenue Miles	64,725	83,870	148,595
Revenue Hours	2,388	6,039	8,427
Total Boardings	4,171	22,197	26,368
Fares	\$17,558	\$18,326	\$35,884
Total Operating Expenses	\$176,904	\$554,655	\$731,559
<b>Averages</b>			
Boardings per Hour	1.75	3.68	3.13
Average Fare (\$)	\$4.21	\$0.83	\$1.36
Farebox Recovery %	9.9%	3.3%	4.9%
Operating Cost per Trip	\$42.41	\$24.99	\$27.74
Subsidy per Trip	\$38.20	\$24.16	\$26.38
Operating Cost per Hour	\$74.08	\$91.85	\$86.81
Operating Cost per Mile	\$2.73	\$6.61	\$4.92

## Upper Valley Route

Service in the Upper Valley historically was demand-response, but due to high demand CAT transitioned this service to a point-deviated route in 2017. Service has grown to eight round trips per day and has the second highest ridership in the system, after the Hood River city route.

The Upper Valley Route has three fixed timepoints—Rosauers, the Mid Valley Market in Odell, and McIssac's Market in Parkdale. The bus must meet those timepoints, but otherwise there is flexibility in the schedule for drivers to pick up call-ahead deviations. Anyone is eligible for a pickup. Of the eight round trips each day, three trips serve Parkdale. Service runs Monday through Friday. Fixed stop fares are \$1 per one-way trip, and deviated stop fares are \$2 per one-way trip. In general, call-ahead deviations make up 50% of Upper Valley route boardings.

The market of riders on the Upper Valley Route is generally transit-reliant populations, while the intended market for Highway 35 service is commuters and recreational users. It was determined that these markets have different priorities in terms of travel time and convenience, thus the Upper Valley route will remain separate from a future Highway 35 service, but CAT will connect the two services at Odell and Mount Hood.

Figure 8 illustrates boardings per day broken down by those who boarded at fixed timepoints versus those who called for a deviation for June to December 2018. October was the busiest month with 32 trips per day.



**Figure 8 Monthly Summary of Upper Valley Route Trips, June-December 2018**

Month	Deviated Stop			Fixed Stop			Overall		
	Boardings	Boardings per Day	% of Total Boardings	Boardings	Boardings per Day	% of Total Boardings	Service Days	Total Boardings	Boardings per Day
June	190	12.7	61%	119	7.9	39%	15	309	20.6
July	208	9.9	44%	256	12.2	56%	21	464	22.7
August	328	14.3	50%	330	14.3	50%	23	658	28.6
September	313	16.5	54%	284	14.9	46%	19	597	30.7
October	349	15.2	47%	471	20.5	53%	23	820	32.4
November	250	12.5	43%	390	19.5	57%	20	640	29.4
December	204	10.2	38%	334	16.7	62%	20	538	26.8
<b>Total</b>	<b>1,842</b>	<b>12.5</b>	<b>47%</b>	<b>2,055</b>	<b>14.0</b>	<b>53%</b>	<b>141</b>	<b>3,897</b>	<b>27.6</b>

Note: Service began June 11, 2018 (so June has fewer service days)

During the seven months of service analyzed, a total of 2,195 boardings were recorded taken by 115 unique riders. There are many riders who rarely take a trip—nearly 60 riders took three or fewer trips—and there is a group of riders who have taken many trips—over 20 riders took 30 or more trips.

Trip-level boarding data was provided for a sample week in July, September, and December to capture summer, harvest, and winter ridership. The busiest trips occur midday with nearly five boardings per trip. The 9 a.m. and 1:30 p.m. trips serve Parkdale and have higher proportions of deviated stops.

**Figure 9 Average Daily Boardings per Trip and Stop Type**

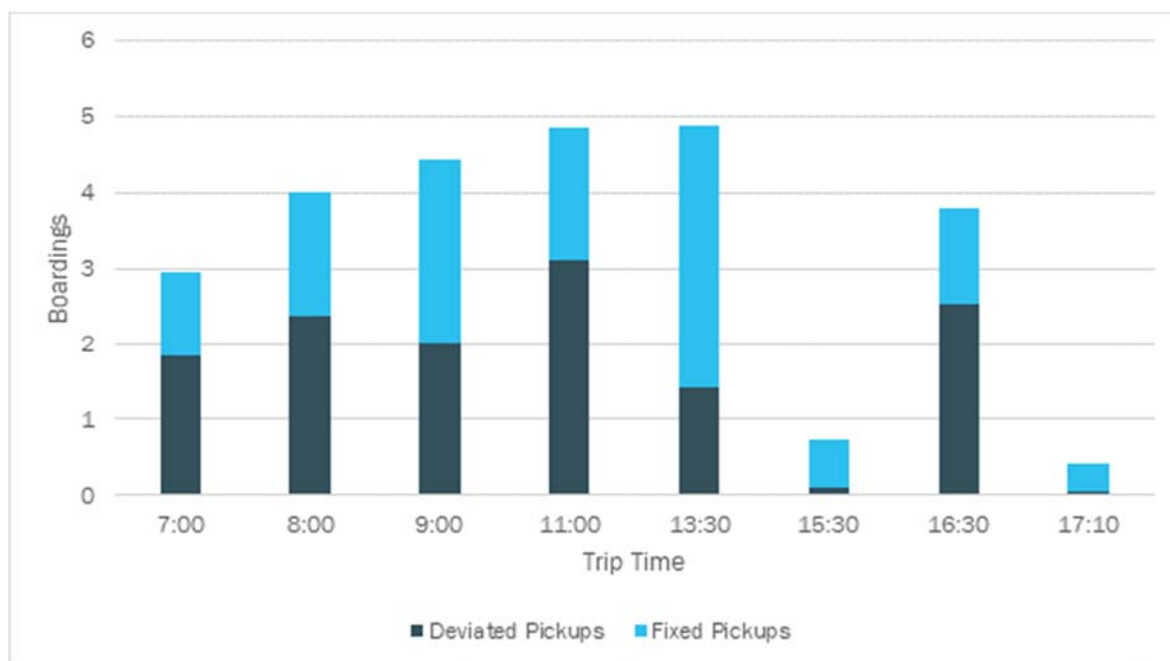
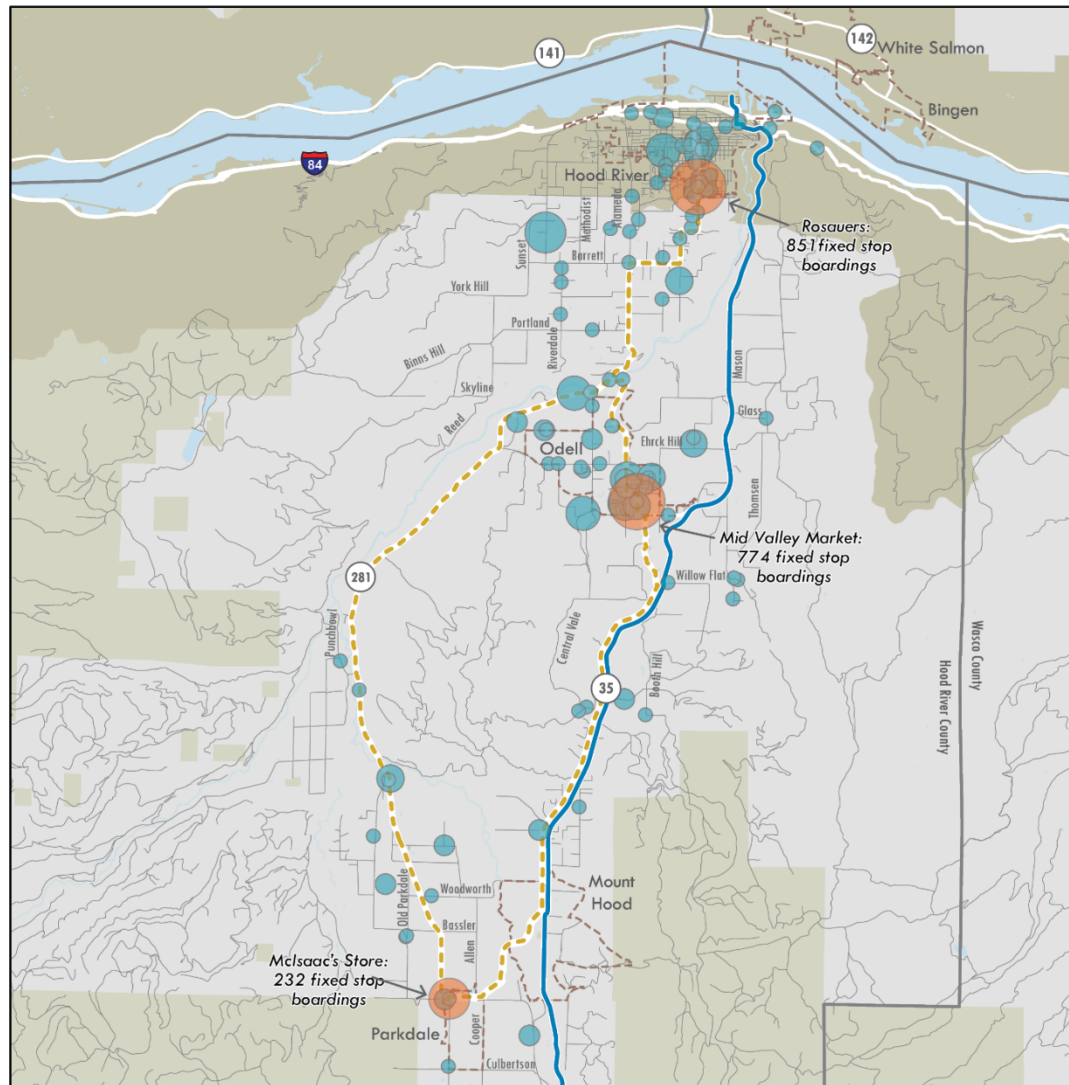


Figure 10 shows the locations of boardings. There were many deviated boardings within Hood River north of the Rosauers. This shows that drivers are picking people up outside of the advertised deviation zone. There are also many deviated boardings just south and west of Hood River and in Odell, some of the Odell boardings being very close to the fixed stop location. The remainder of the boardings are located along southern OR-35 and OR-281 just adjacent to Parkdale.

Figure 10 Upper Valley Route Boardings, June-December 2018



### Transit Boardings

Seven-month totals (June-December 2018)



Place  
National Forest  
Columbia River Gorge  
National Scenic Area

0 1.5 3 Miles



Data Sources: Oregon Spatial Data Library, ESRI, GTFS, Columbia Area Transit

## Mt. Hood Meadows

Mt. Hood Meadows is one of the largest ski resorts in Oregon and the largest ski resort on Mt. Hood. It has been in operation since 1969, and visitation has grown in tandem with the Portland metro area population. Mt. Hood Meadows currently has four parking lots available for customers and employees. During peak season, Mt. Hood Meadows employs 1,200 people and draws 7,000-8,000 people per day. In 2014, the U.S. Forest Service approved the development of a new 878 space parking lot that will open in fall 2019, bringing parking capacity to 3,526 vehicles. On peak days, visitors plus employees often easily overwhelm the parking system. In response, during the 2017–2018 ski season, Mt. Hood Meadows began offering a customer shuttle, traveling from the Hood River waterfront event site to Mt. Hood Meadows, running on weekends and holidays. Mt. Hood Meadows has also been operating an employee commuter shuttle for over 10 years from both Sandy and Hood River, as well as charter service from Portland locations for customers.

### Customer Shuttle

The customer shuttle allows people to park for free at the Hood River waterfront event site and take transit to Mt. Hood Meadows. Shuttle service is contracted to Student Transportation of America and is operated on school buses with space underneath for gear. Vehicle capacities are approximately 45 passengers seated. Service runs on peak days, which include:

- Daily during the last two weeks of December
- Weekends in January, February, and the first weekend in March
- Martin Luther King Jr. Day and President's Day

Service runs almost hourly (Figure 11).

Figure 11 Mt. Hood Meadows Customer Shuttle Schedule (2018-2019)

Vehicle	Depart - Hood River	Arrive - Mt. Hood Meadows	Depart - Mt. Hood Meadows	Arrive - Hood River
1	7:30 AM	8:45 AM	9:00 AM	10:15 AM
2	8:30 AM	9:45 AM	10:00 AM	11:15 AM
3	9:30 AM	10:45 AM	11:00 AM	12:15 PM
4	10:30 AM	11:45 AM	12:00 PM	1:15 PM
1	11:30 AM	12:45 PM	1:00 PM	2:15 PM
2	12:30 PM	1:45 PM	2:00 PM	3:15 PM
3	12:45 PM	2:00 PM	3:00 PM	4:15 PM
4	1:45 PM	3:00 PM	4:00 PM	5:15 PM
3	4:15 PM	5:30 PM	6:00 PM	7:15 PM
4	5:15 PM	6:30 PM	7:00 PM	8:15 PM

The service has been well received by passengers and has yielded strong ridership, as shown in Figure 12. Buses served a total of 9,384 boardings, with an average of 20 boardings per service hour and 361 boardings per day. Anecdotally, there are some passengers who have used Columbia Gorge Express to connect to this shuttle. Based on the service hour estimate below, the shuttle is estimated to cost \$194 per service hour.

Figure 12 Customer Shuttle Summary (2017-2018 season)

Month	Total Boardings	Service Hours	Boardings per Service Hour	Service Days	Boardings per Service Days
December	1,324	142	9.3	8	165.5
January	4,072	142	28.7	7	581.7
February	2,692	142	19.0	9	299.1
March	1,296	41	32.0	2	648.0
<b>Total</b>	<b>9,384</b>	<b>466</b>	<b>20.1</b>	<b>26</b>	<b>360.9</b>

## Employee Shuttle

Mt. Hood Meadows provides a free employee shuttle to reduce on-site parking demand (Figure 13). The shuttle operates December-May and is directly operated by Mt. Hood Meadows. The shuttle stops in Hood River are: CAT, Rosauers, 3<sup>rd</sup> and State Street, China Gorge, and Mount Hood Town Hall. Mt. Hood Meadows pays Mount Hood Town Hall for use of its parking lot. According to the operator, operating costs are approximately \$140 per hour.

Figure 13 Employee Shuttle Schedule

Route	Direction	# Trips	Trip Times	# Vehicles
Hood River–Mt. Hood Meadows	Departing Hood River	3	<b>Monday–Sunday:</b> 6:45 a.m. 7:15 a.m. (two shuttles as necessary) <b>Wednesday–Sunday Only:</b> 12:45 p.m.	1-2
	Departing Mt. Hood Meadows	5	<b>Monday–Sunday</b> 11:00 a.m.* 4:00 p.m. 5:15 p.m. <b>Wednesday–Sunday Only:</b> 7:30 p.m.* 10:00 p.m.	2
Sandy–Mt. Hood Meadows	Departing Sandy	2	<b>Monday–Sunday:</b> 5:55 a.m. <b>Wednesday – Sunday Only:</b> 12:40 p.m.	1
	Departing Mt. Hood Meadows	4	<b>Monday–Sunday:</b> 11:00 a.m.* 5:15 p.m. <b>Wednesday–Sunday Only:</b> 7:30 p.m.* 10:00 p.m.	1
<b>Total (Both Routes)</b>		<b>16</b>	<b>-</b>	<b>3-4</b>

Note: \* Shuttles are run as requested through the concierge. At least three people are necessary to run the route.

As shown in Figure 14, ridership on the Hood River shuttle is much higher than the Sandy shuttle. Boardings in Hood River are highest at the China Gorge stop. CAT does not serve this location.

Figure 14 Employee Shuttle Summary

Route	Day Type	Boardings	Trips	Boardings per Trip	Days	Boardings per Day
Hood River–Mt. Hood Meadows	Weekday	5,349	238	22.5	44	121.6
	Weekend	3,759	113	33.3	18	208.8
	<b>Total</b>	<b>9,108</b>	<b>351</b>	<b>25.9</b>	<b>62</b>	<b>146.9</b>
Sandy–Mt. Hood Meadows	Weekday	2,232	134	16.7	44	50.7
	Weekend	1,178	53	22.2	18	65.4
	<b>Total</b>	<b>3,410</b>	<b>187</b>	<b>18.2</b>	<b>62</b>	<b>55.0</b>
Total (Both Routes)		12,518	538	23.3	124	101.0

## Connecting Transit Services

Additional connecting transit services in the study area include:

**Mt. Hood Express** – Mt. Hood Express provides transit service between Sandy Transit Center and Timberline Lodge along US-26 and Timberline Highway with stops along the way, including at Government Camp. It operates daily (except for Thanksgiving and Christmas Day) with at least six round trips per day. During peak winter season, additional trips are added:

- Three additional daytime runs
  - Every weekend during December–February
  - Every day during the last two weeks of December, plus Martin Luther King Jr. Day and President’s Day
- One additional evening run December 1–March 31.

The buses are equipped with ski boxes in the winter and bike trailers in the summer. Three vehicles operate the service, with a capacity of 37 passengers seated and 13 standees.

**Sandy Area Metro (SAM)** – Sandy Area Metro (SAM) is the transit provider for Sandy and the surrounding area. Bus service is provided between Gresham and Sandy, and between Sandy and Estacada. Riders can connect to the Mt. Hood Express service (provided by Clackamas County) at the Sandy Transit Center. SAM also provides STAR demand-response service to the general public, with fares waived for ADA-eligible riders.

**Columbia Gorge Express (CGE)** – The Columbia Gorge Express (CGE) service began in summer 2016 connecting Gateway Transit Center, Rooster Rock, and Multnomah Falls. In 2018, the service expanded to serve Cascade Locks and Hood River.

Figure 15 presents a summary of boardings (total and per service day) by stop and season. Note that there were issues with the Automated Passenger Counters (APCs) on board the vehicles, especially during the summer, so counts are a rough estimate. The Columbia Gorge Express transports approximately 10-15 people per day from Portland to Hood River. Anecdotally, many people currently drive to Hood River and ride the customer shuttle to Mt. Hood Meadows; there is an opportunity to capture part of this market on CGE. In summer, CGE stops at Sinclair’s gas station, close to the waterfront site where the Mt. Hood Meadows shuttle boards, but in winter, CGE only stops in downtown Hood River. Facilitating a transfer between CGE and Mt. Hood Meadows service would increase its convenience.



Figure 15 Columbia Gorge Express Boardings Summary by Season and Stop (2018-2019)

Month	Service Days	Gateway Transit Center	Rooster Rock	Multnomah Falls	Cascade Locks	Hood River	Total
<b>Total Boardings</b>							
May–September	122	8,072	36,129	40,778	1,835	1,421	88,235
October–November	59	1,102	867	1,807	822	846	5,444
December–January	29	32	0	213	13	269	527
Total	210	9,206	36,996	42,798	2,670	2,536	94,206
<b>Boardings per Service Day</b>							
May–September	122	66.2	296.1	334.2	15.0	11.6	723.2
October–November	59	18.7	14.7	30.6	13.9	14.3	92.3
December–January	29	1.1	0.0	7.3	0.4	9.3	18.2
Total	210	43.8	176.2	203.8	12.7	12.1	448.6

Source: Oregon Department of Transportation

**Mount Adams Transportation Service (MATS)** – Mount Adams Transportation Service (MATS—operated by Klickitat County in Washington) provides fixed route service connecting Hood River with White Salmon and Bingen via the Hood River Bridge. This service is especially critical because pedestrians and bicyclists are not allowed to cross the Hood River Bridge. In 2017, MATS provided four round trips three days per week (Mondays, Wednesdays, and Fridays). Service levels have increased significantly to 10 trips per day, five days per week (Monday–Friday).

**LINK (MCEDD)** – Until January 2018, LINK Public Transit was provided by Mid-Columbia Council of Governments. The organization was dissolved, and the Mid-Columbia Economic Development District (MCEDD) took over LINK operations. LINK provides public transit service in Wasco County. Formerly, LINK used to provide service two days per week between The Dalles and Hood River, but that service is now completely provided by CAT. LINK now only provides demand response service and a shopper shuttle.

**Private/Charter Transportation Services** – A variety of private transportation services provides tours or chartered transportation in the Mt. Hood region. Most of these are based in Portland, but charter services will pick up from other locations. Some of these tour buses loop through the Columbia River Gorge, stop at Mt. Hood, and continue back to Portland. A list of Portland based services is provided here by Travel Portland:

<https://www.travelportland.com/list/mount-hood-tours/>

## MARKET ANALYSIS

### Community Demographics

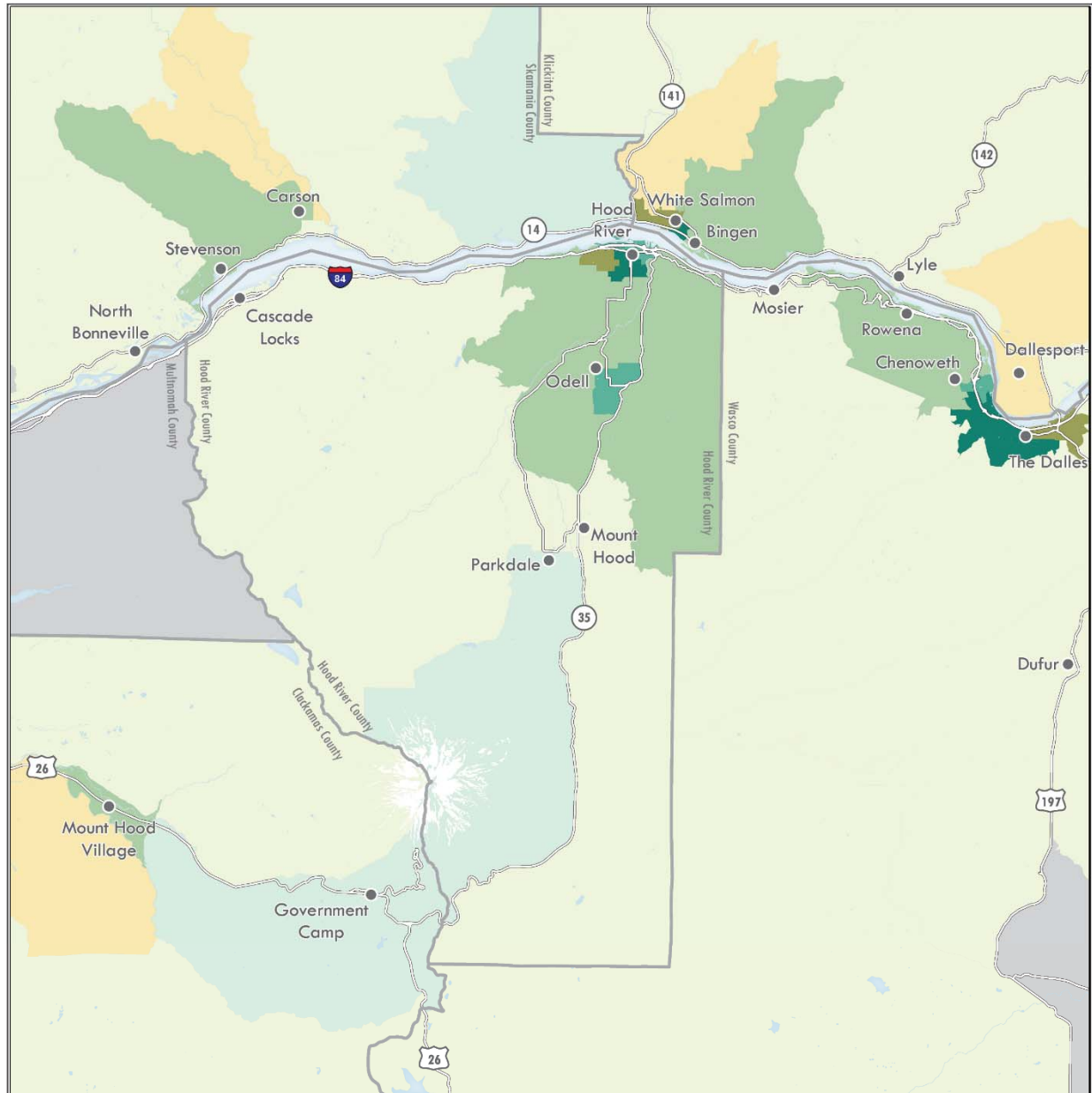
Nearly 27,000 people and more than 13,000 jobs are in the study area, defined as the 22 Census block groups adjacent to the OR-35 corridor and US-26 corridors. Jobs and population are concentrated in Hood River, in the northern end of the study corridor. 10,349 people live in the study area. Less than half of the people who live in the study area live in unincorporated areas (Figure 16). Residents along OR-35 speak primarily English and Spanish at home. Odell and Parkdale have the highest share of residents who speak Spanish at home, at 44% and 40%, respectively.

Figure 16 Population of Communities Along OR-35/US-26

Community	Total population (2017)	Total Jobs (2015)	Estimated Residents per Job
Hood River (city)	7,526	5,634	1.3
Odell	1,857	907	2.0
Parkdale	643	86	7.5
Mount Hood	238	21	11.3
Government Camp	85	493	0.2
Mount Hood Village (west of potential HR-GC alignment)	5,041	38	132.7
Total Incorporated	15,390	7,179	2.1
Total Unincorporated	11,419	9,141	1.2
<b>Study Area Total</b>	<b>26,809</b>	<b>16,320</b>	<b>1.6</b>

Figure 17 shows a matrix of both population and employment in the Oregon-Washington region beyond the immediate study area. The densities of jobs and residents are highest in The Dalles and Hood River, while communities on the Washington side of the Columbia River have moderate levels of job and population density.

Figure 17 Population and Employment Matrix



**Pop. / Emp. Density Matrix**

(by Census Block Group, 2017)



0 5 10 Miles



Data Sources: Oregon Spatial Data Library, ESRI, 2017 American Community Survey 5-year estimates, 2015 LEHD

## Recreation and Tourism

The Mt. Hood region is one of the premier tourism and outdoor recreation destinations in Oregon. According to the Hood River Chamber of Commerce, a total of nearly 1.4 million people visited Hood River County in 2018. The primary activities of interest are skiing (and other snow sports), hiking, camping, and sightseeing.

### Mt. Hood

Over 1.5 million visits are made to Mt. Hood skiing locations each year, based on an estimate defined in Figure 18. This estimate was projected from a 2012-2013 estimate found online<sup>1</sup>—estimates are imprecise and the competing ski slopes do not publish precise data. The projection was made based on the growth in average daily traffic volume in the region between 2013-2017, which has increased by 23%.

Figure 18 Visitation Estimate by Ski Resort

Ski Resort	2012-2013 Estimated Visitors	2017-2018 Estimate (projected based on increased traffic volume)
Mt. Hood Meadows	530,595	650,000
Skibowl	424,476	520,000
Timberline	371,416	455,000
Cooper Spur	10,612	13,000
Summit	5,306	6,500
<b>Total</b>	<b>1,342,405</b>	<b>1,644,500</b>

### Fruit Loop

The Hood River Fruit Loop is an organization of agricultural producers in the Hood River valley who collectively market their sustainable agricultural production to attract visitors and boost sales. The Fruit Loop was organized in 1992 and the first map aimed at visitors was printed in 1993. Many producers on the Fruit Loop sell fruit and other farm products directly from their farm stands and some offer visitors the opportunity to pick their own fruits directly from the orchards. Pears, apples, and cherries are the primary products grown in the Hood River Valley. The Fruit Loop is a popular visitor destination from spring, when fruit trees blossom, through late fall, when farm production and demand for farm labor are at their highest. The exact number of visitors to the Fruit Loop is not currently known, but the busiest time of year for visitors to the Fruit Loop is late summer through early fall.

### Parking Inventory

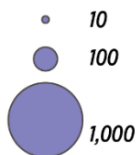
Parking capacity at recreation sites has become strained in certain popular trailheads. Transit could potentially serve these locations and reduce vehicle demand. At the same time, parking capacity is increasing at major resort locations such as Mt. Hood Meadows (Figure 19).

<sup>1</sup> <http://shredhood.org/news/resorts/129-mount-hood-resorts-draw-1-342-405-visits-in-best-season-yet>

Figure 19 Points of Interest and Estimated Parking Capacity



### Parking Capacity at Points of Interest Along Highway 35



### Other Points of Interest

- Activity Center
- Sno Park or Ski Resort



Data Sources: Oregon Spatial Data Library, ESRI



## Employment

The distribution of all jobs in the study area as of 2015 is shown in Figure 20. Each point represents a Census block with at least one job as tabulated through the Census' Longitudinal Employer Household Dynamics (LEHD) data. Employment is heavily concentrated in and immediately adjacent to Hood River, and in Odell. Jobs farther south in the Upper Valley are clustered around OR-281 and OR-35 approaching Parkdale and south of Parkdale.

Due to limitations with LEHD data, Figure 20 does not reflect the full scope of seasonal employment at the numerous farm and recreation employers in the study area. For a job to be counted in LEHD data, a person must hold the position and receive pay within two consecutive three-month quarters in the sampling period.<sup>2</sup>

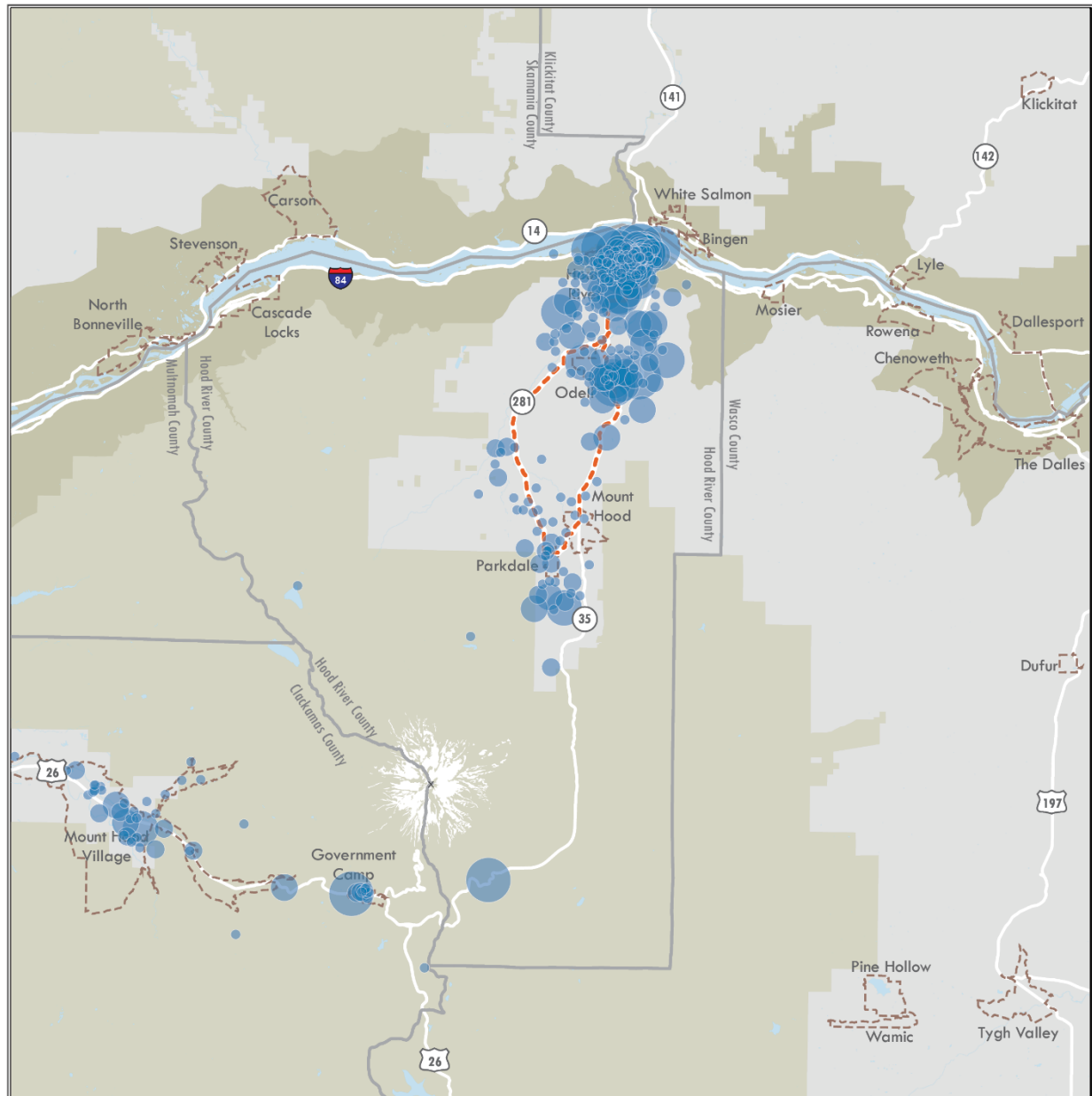
According to the Columbia Gorge Fruit Growers, agriculture in the Hood River valley supports 3,100 jobs during the peak season, which is approximately August through October.<sup>3</sup> Agricultural work is highly seasonal, but roughly 40-50% of these jobs are permanent. Perhaps as many as 15% of seasonal farm workers are employed under H2A visa sponsorships. H2A regulations require that the sponsoring employer provide workers with housing, food, and transportation during their seasonal employment. Anecdotally, a high percentage of farm workers in the Hood River Valley, both seasonal and permanently employed, live on the farms where they work. Therefore, the market for transit services among farm workers may be lower than overall employment numbers would indicate.

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<sup>2</sup> <https://www2.census.gov/ces/wp/2014/CES-WP-14-38.pdf>

<sup>3</sup> Phone interview with Jean Godfrey, Columbia Gorge Fruit Growers

Figure 20 Job Locations in the Study Area



### Employment in the Study Area

Total jobs by Census block

- 1 - 20
- 21 - 50
- 51 - 100
- 101 - 200
- 201 - 421

Existing Transit Services

--- CAT (Upper Valley Route)

- Place
- National Forest
- Columbia River Gorge National Scenic Area

0 5 10 Miles



Data Sources: Oregon Spatial Data Library, ESRI, 2015 Longitudinal Employer Household Dynamics

## TRAFFIC PATTERNS

OR-35 is classified as a Rural Principal Arterial. The road generally has one lane each way except for climbing segments, where there is an additional lane in the southbound direction.

Annual and monthly traffic counts from five Automatic Traffic Recorders (ATRs) on or near OR-35 revealed trends in traffic volumes (Figure 21).

Figure 21 ATR Locations

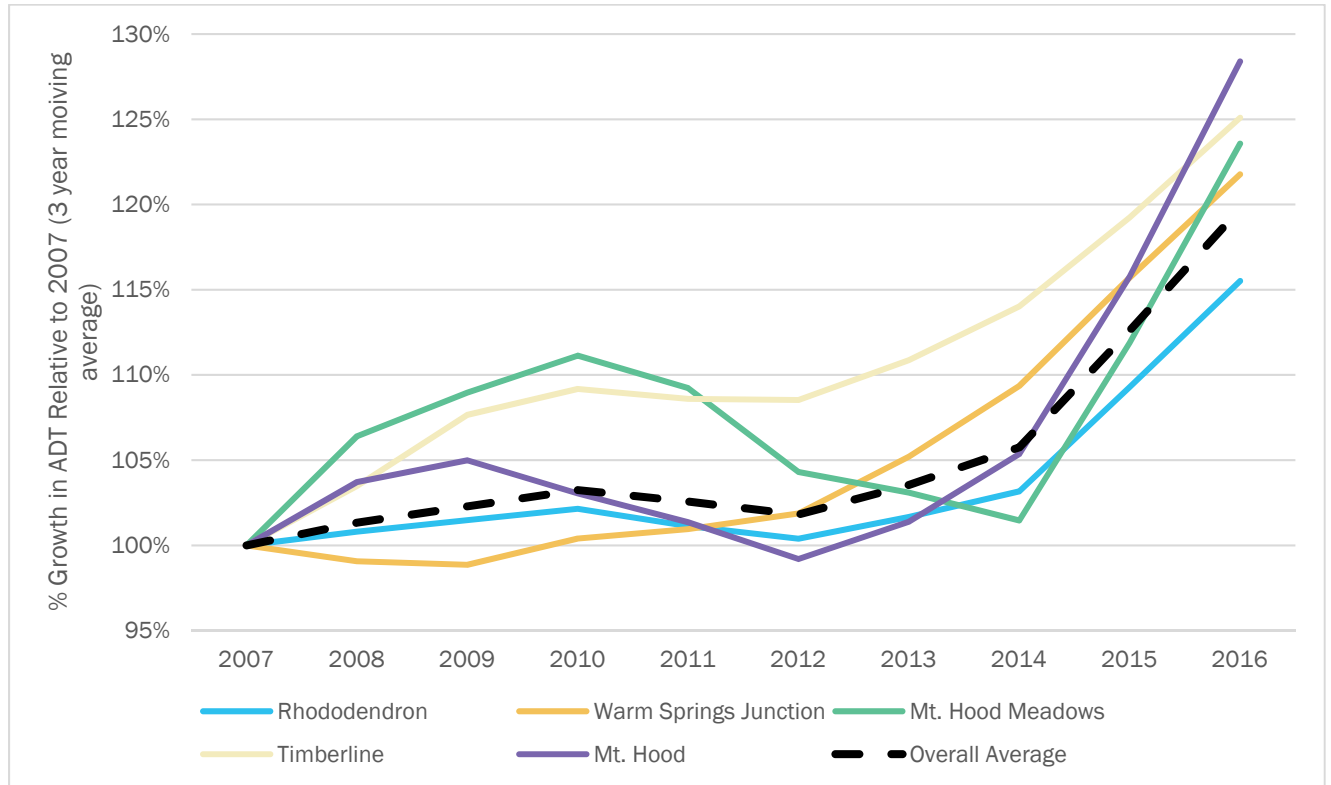


Figure 22 visualized ADT over time by calculating a three-year moving average (to smooth noise in the data) and normalizing that moving average to 2007. Traffic growth hit a peak between 2008-2010 and then declined slightly (likely as a result of the Great Recession) until 2014, after which it has increased dramatically across all five detectors—the 2016 three-year average was 20% higher than 2007.

- **Mount Hood Meadows detector.** Since 2014, traffic at the Mt. Hood Meadows detector grew by 22%, with an average growth of 10% per year.
- **Mt. Hood (OR-35) detector.** Since 2014, traffic at the Mt. Hood detector also grew by 22%, with 10% growth between 2014-2015 and 11% growth between 2015-2016.
- **Overall.** Since 2014, traffic across all detectors has grown by 13%, with an average growth of 6-6.5% per year.

This correlates with anecdotal information from Mt. Hood Meadows, which has seen its visitation rise rapidly in the past few years.

**Figure 22** Normalized Percentage Growth in ADT Relative to 2007 (Three Year Moving Average)



Demand in the study area varies greatly by season. At the Mt. Hood Meadows detector, volumes peak in January, at 40% higher than average or around 3,600 vehicles per day. This is likely associated with ski traffic to and from Mt. Hood Meadows and nearby recreation. Additionally, the Mt. Hood Meadows detector has another peak in September—this is likely associated with traffic for the harvest season.

The Mt. Hood (OR-35) detector just south of Mount Hood has the most dramatic variation in volume of any of the detectors, with volumes in September (3,300 vehicles per day) nearly twice the annual average of 1,700. This increase in traffic is likely due to the harvest season in the Hood River Valley. More detailed data regarding variation by location and month in average daily traffic are presented in Figure 23.

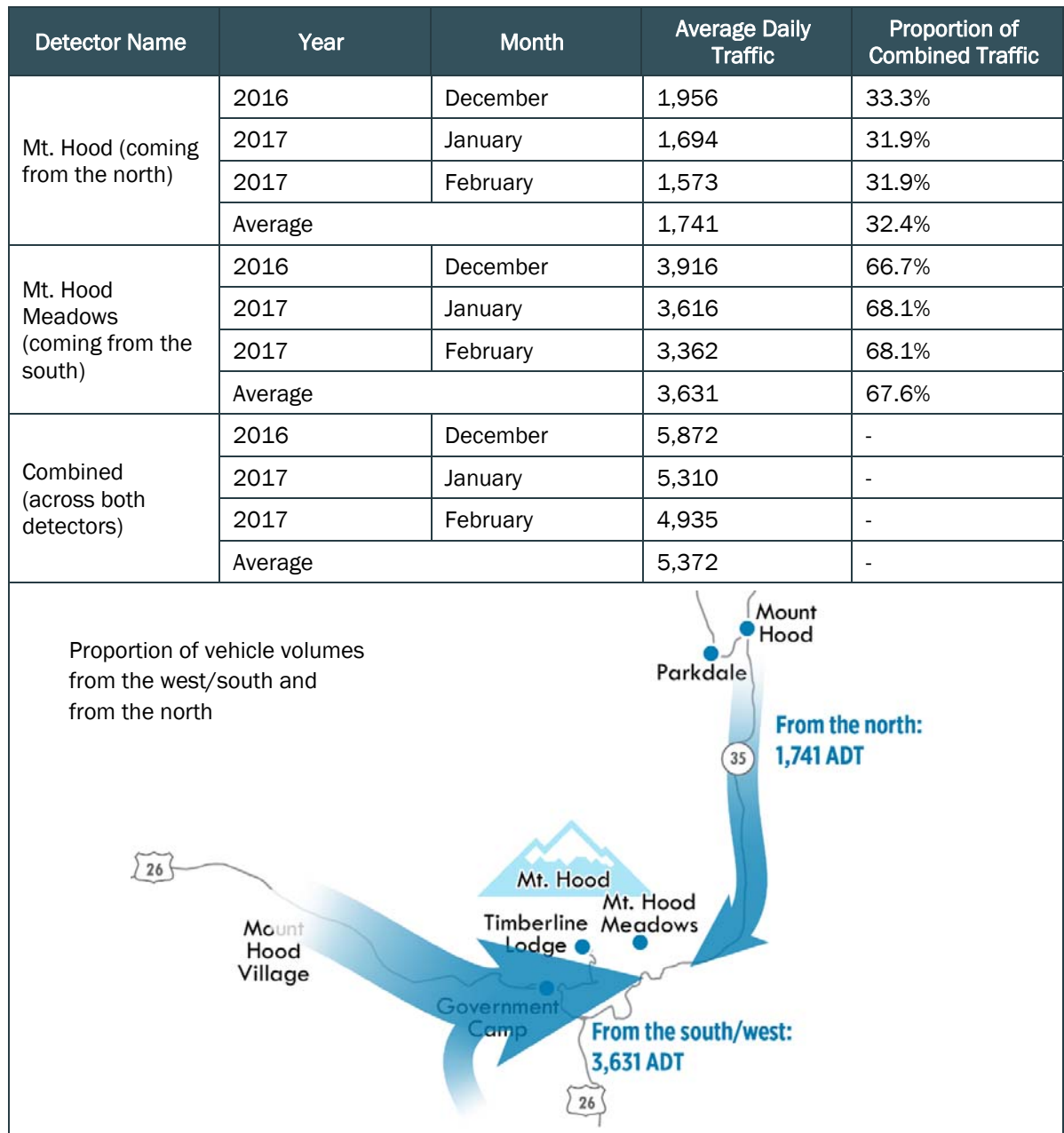
**Figure 23** Average Daily Traffic Patterns by Month and Detector

ATR ID	Detector Name	January	February	March	April	May	June	July	August	September	October	November	December	Average (across months)
<b>Average Daily Traffic by Month and Detector</b>														
03-006	Rhododendron	9,080	9,496	9,337	8,675	9,598	10,695	13,874	13,623	12,734	8,087	7,313	10,161	10,223
03-009	Warm Springs Junction	3,174	4,811	4,775	5,463	7,083	7,962	9,785	10,099	8,000	5,788	4,612	4,536	6,341
03-007	Mt. Hood Meadows	3,616	3,362	2,833	2,050	1,609	2,070	2,837	2,614	3,993	1,614	1,156	2,966	2,565
03-008	Timberline	1,633	1,683	1,633	1,593	1,979	2,300	2,800	2,600	1,602	1,339	1,650	2,376	1,932
14-003	Mt. Hood	1,694	1,573	1,412	1,214	1,383	1,760	2,303	2,129	3,323	1,313	853	1,450	1,701
<b>Average (across detectors)</b>		<b>3,839</b>	<b>4,185</b>	<b>3,998</b>	<b>3,799</b>	<b>4,330</b>	<b>4,957</b>	<b>6,320</b>	<b>6,213</b>	<b>5,930</b>	<b>3,628</b>	<b>3,117</b>	<b>4,298</b>	<b>4,552</b>
<b>Percent of AADT by Month and Detector</b>														
03-006	Rhododendron	88.8%	92.9%	91.3%	84.9%	93.9%	104.6%	135.7%	133.3%	124.6%	79.1%	71.5%	99.4%	100.0%
03-009	Warm Springs Junction	50.1%	75.9%	75.3%	86.2%	111.7%	125.6%	154.3%	159.3%	126.2%	91.3%	72.7%	71.5%	100.0%
03-007	Mt. Hood Meadows	141.0%	131.1%	110.4%	79.9%	62.7%	80.7%	110.6%	101.9%	155.7%	62.9%	45.1%	115.6%	100.0%
03-008	Timberline	84.5%	87.1%	84.5%	82.5%	102.4%	119.0%	144.9%	134.6%	82.9%	69.3%	85.4%	123.0%	100.0%
14-003	Mt. Hood	99.6%	92.5%	83.0%	71.4%	81.3%	103.5%	135.4%	125.2%	195.4%	77.2%	50.1%	85.2%	100.0%
<b>Average % of AADT</b>		<b>84.3%</b>	<b>91.9%</b>	<b>87.8%</b>	<b>83.5%</b>	<b>95.1%</b>	<b>108.9%</b>	<b>138.8%</b>	<b>136.5%</b>	<b>130.3%</b>	<b>79.7%</b>	<b>68.5%</b>	<b>94.4%</b>	<b>100.0%</b>

Given the volume data, a simple estimate can be made about how many visitors to Mt. Hood Meadows are utilizing the US-26 route to arrive versus how many are using the OR-35 route. This is important to consider in estimating the travelers that would likely use a Hood River–Government Camp Service.

Figure 24 presents the average daily traffic observed at the two detectors adjacent to the Mt. Hood Meadows resort, and then divides each of them by the total traffic observed at both detectors to estimate the proportion of traffic coming from the north (Mt. Hood) versus coming from the south (Mt. Hood Meadows). Roughly a third of the traffic is consistently coming down OR-35 from the north, while two-thirds of the traffic is using US-26 to approach Mt. Hood Meadows from the south.

**Figure 24 Winter Peak Traffic Trends for Detectors Adjacent to Mt. Hood Meadows Resort (2016-2017)**





## 2 COMMUNITY OUTREACH

### OUTREACH METHODS

Public transportation is a community service. As such, community input is foundational to creating a service model. Methods involved in collecting input included:

- Five stakeholder interviews
- Tabling at three community spaces—engaging a total of 82 people
- A focus group specifically targeting the Spanish-speaking community—12 people attended
- A community survey promoted online and available in hard copy—380 completed responses, 39 of which were in Spanish

### KEY FINDINGS

The following section summarizes input from all methods.

#### Markets for Transit

- Importance of marketing and publicizing Highway 35 transit service, including Spanish-language efforts on social media, radio, and print media.
- There are many markets and would be great to serve them all—but the priority is getting people to work. This is about equity, quality of life, and community building. Tourists are a bonus.
- Use different types of service to cater to different markets, and price them accordingly. For example, some people will pay more for the concierge, full-service deal, while others can pay less but deserve basic, reliable public transportation.
- Tap into places that have infrastructure to support visitors, like the ski resorts. Help promote their summer offerings and reduce the strain on natural areas that both cannot support many additional visitors and may not be safe for first-time recreationalists.
- Bicyclists are a transit market, as they can take transit to destinations and bicycle back into Hood River. There are also mountain biking trails at Mount Hood Meadows.
- Congestion on Highway 26 is affecting tourist and employee markets.
- Packing houses in Odell are a potential transit market—employees generally work regular shift times.
- Development—Summit ski area and additional parking and development at Mount Hood Meadows—will affect the market for transit. Ski resorts understand the importance of transit to reduce congestion. When parking is full, there are still empty chairs on the lifts—bring more people to the mountain experience since there is capacity at the resorts but not capacity in the parking lots.





- Opportunity to coordinate with service being planned from Warm Springs to Government Camp.
- Visitation levels along Highway 35 are highest during winter and summer weekends—summer is quite popular according to the survey (stakeholder feedback was that winter is by far the highest visitation time).
- A large percentage of visitors access two destinations during a trip along Highway 35, demonstrating the need for transit to accommodate trip chaining.
- A significant percentage of people responding to the survey indicated interest in accessing Timberline and Government Camp. While 25% of total survey respondents travel via Highway 26, the survey indicated demand for Highway 35 transit to connect to Government Camp.
- There is strong interest in transit for commute purposes along Highway 35. Shifts start early, generally at 7 or 8 a.m.

## **Service Needs**

- Service design must balance the demand for quick service directly from Hood River to Mt. Hood destinations with the need to provide local service and stops along the corridor.
- Vehicles must be able to comfortably accommodate bicycles and passenger gear such as backpacks, skis, mountain bikes, and snowboards.
- Bus operators who speak Spanish may greatly encourage ridership among the Spanish-speaking community.

## **Transit Stops**

- Based on community feedback, highest priority locations for transit stops are Hood River (China Gorge, Waterfront, and Port), Mt. Hood Meadows, Tamanawas Falls, and Government Camp.
- There is a need to secure park-and-ride locations with adequate capacity on the north end of the proposed route.
- Tamanawas Falls is very popular but should balance bringing more visitors with the need to preserve and protect natural areas.
- Willingness to find a more permanent transit hub in Hood River where multiple transit agencies can serve and support transfers, either at Barman site or Port of Hood River site at the foot of the Hood River Bridge.
- Changes to Government Camp rest area mean Highway 35 service should not plan on using the rest area stop, but instead serve a stop or multiple stops on Government Camp Loop.

## **Local Needs Versus Visitor Needs**

- Local residents and visitors both expressed greatest interest in using transit service for winter and summer weekend travel along the corridor.
- Local residents favored improving connections between Hood River and the population centers along the corridor more highly than did visitors, who preferred expedited service to trailheads and major Mt. Hood destinations.
- As indicated in the community survey, 70% of people who currently travel the corridor for work would use a bus service for this trip more than once per week if it were available.

- Locals and visitors use different areas of the mountain—Hood River residents know that the Hood River Meadows (HRM) parking lot at Mount Hood Meadows is often less crowded, while visitors want to access Mount Hood Meadows’ main entrance.

## TYPICAL TRIP CHARACTERISTICS

The following quantitative data from the survey and community tabling supports and further fleshes out the key findings. Public transportation must meet typical trip patterns connecting origins and destinations at the times people want to travel.

Figure 25 shows that the top destinations are recreational trails and Mt. Hood Meadows, each chosen by 53% of respondents, followed by Parkdale (52%) and Timberline (43%).

**Figure 25** Which destinations do you typically visit on a trip to the Highway 35/Mt. Hood area? (N=380)

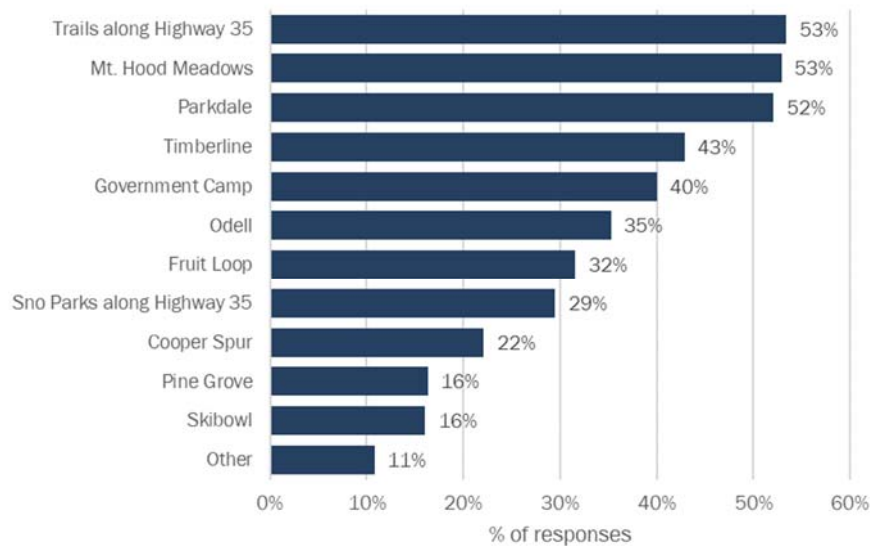


Figure 26 shows the seasonal variation in visits to the Highway 35 area for survey respondents. Winter and summer are the peak seasons for visits—more than half of respondents say they visit the area five times or more per winter, while 48% visit five times or more per summer.

**Figure 26** How often do you visit destinations in the Highway 35/Mt. Hood area by season? (N=295)

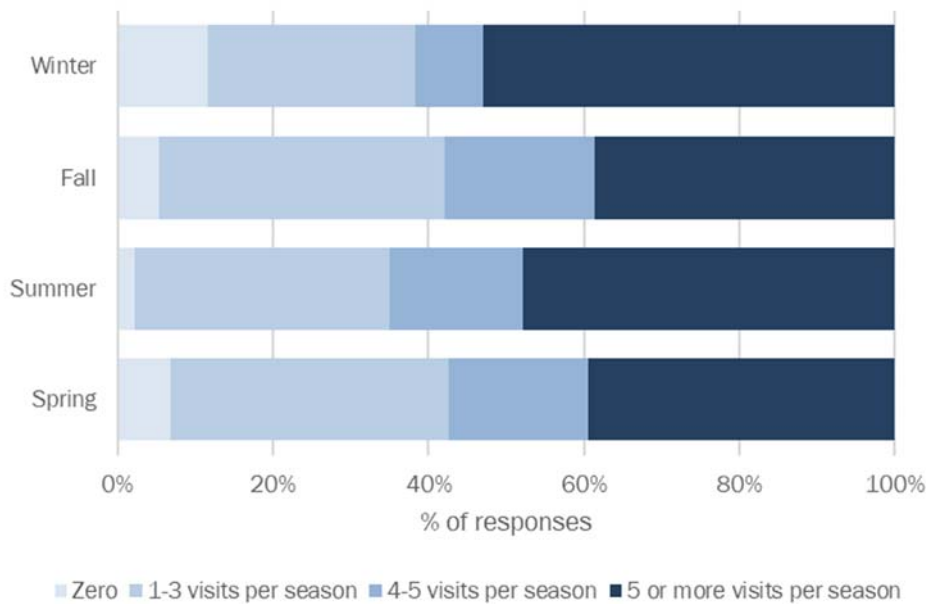
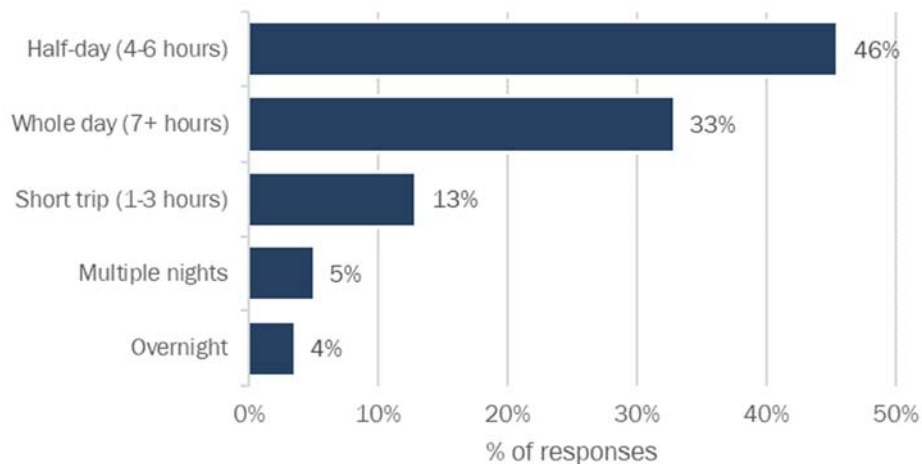


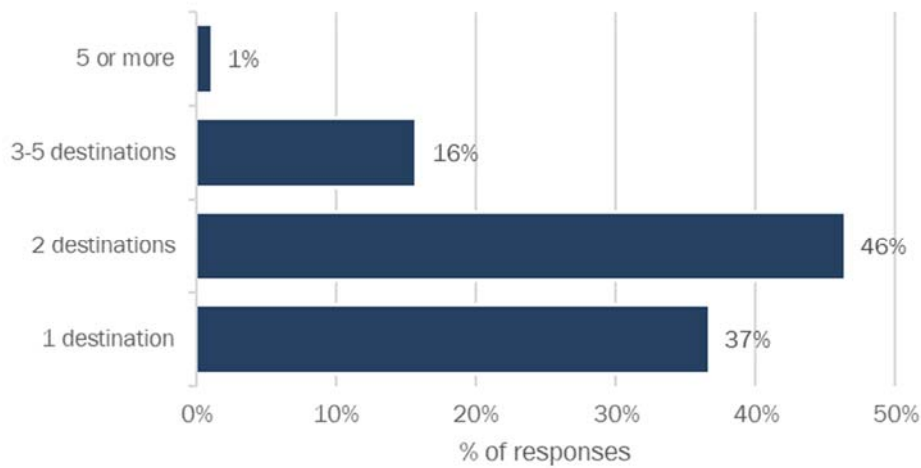
Figure 27 shows survey respondents' typical visit length. Seventy eight percent of respondents visit for at least a half day, with just 13% saying they make visits of one to three hours. Nine percent said they visit overnight or for multiple nights.

**Figure 27** How long is your typical visit to the Highway 35/Mt. Hood area, including all destinations you visit? (N=356)



As shown in Figure 28, 83% of respondents visit one or two destinations on a single trip to the Highway 35 area, while 17% typically visit three or more destinations.

**Figure 28** How many different destinations do you typically visit on a single trip to the Highway 35/Mt. Hood area? (N=349)



## STOP PRIORITIES

Where the bus should stop was asked in the community survey as well as during the tabling events.

In the survey, respondents were asked to rate each proposed stop unimportant to very important (scored between one and four, respectively, in analysis). Figure 29 shows average scores for all stops. Mt. Hood Meadows was the most popular stop.

Survey respondents were coded as either local (Mt. Hood/Hood River/Columbia Gorge Area) or visitor, based on home ZIP code provided. As shown in Figure 29, visitors and local residents scored many stops with a similar level of importance, such as Mt. Hood Meadows Main Entrance, Hood River Port, and Tamanawas Falls. Stops rated as more important by visitors than by local residents included Hood River Waterfront, Trillium Lake/Snow Bunny Sno Park, and Government Camp Rest Area, while local residents rated Hood River China Gorge, Odell, Parkdale, and Mount Hood Town Hall as more important.

**Figure 29** Average Score for Potential Stops (ranked by All Responses)

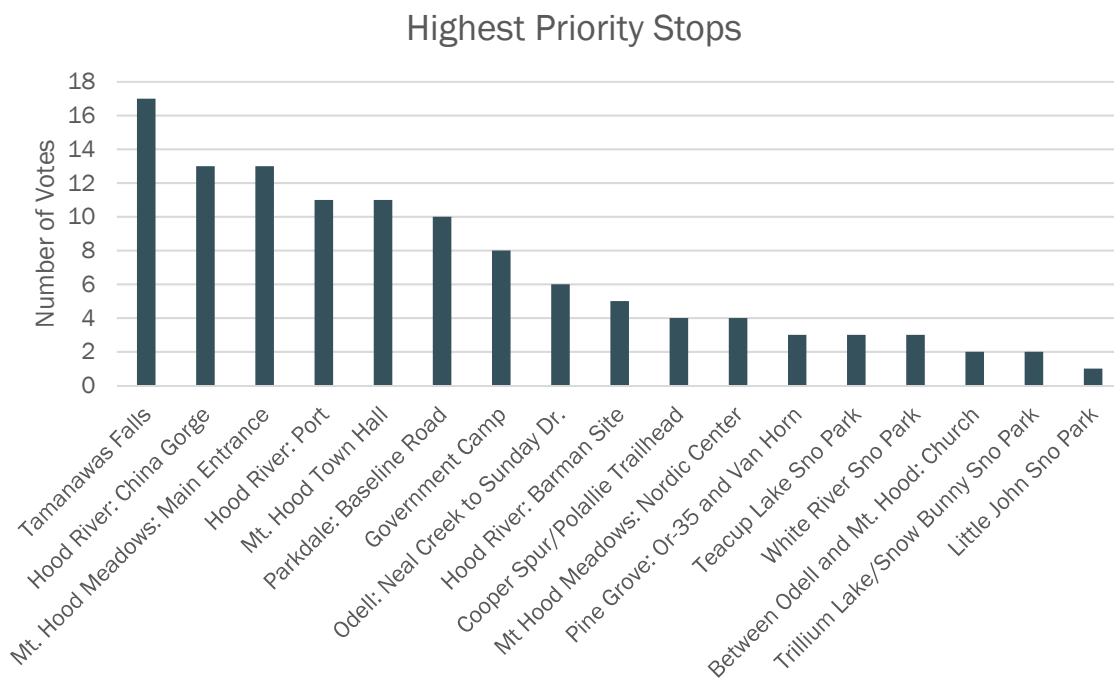
Proposed Stop Location (sorted north to south)	Average Score (1=least important, 4=most important)		
	All Responses	Local Responses	Visitor Responses
Mt. Hood Meadows - Main Entrance	3.39	3.34	3.46
Hood River - Waterfront	3.30	3.15	3.52
Government Camp - Rest Area	3.18	2.95	3.49
Hood River - China Gorge	3.14	3.26	2.96
Mt. Hood Meadows - Nordic Center	3.10	3.07	3.14
Tamanawas Falls	2.94	2.95	2.93
Hood River - Port	2.87	2.87	2.88
Hwy 35 near Parkdale	2.86	2.95	2.72
Mount Hood - Town Hall	2.85	2.97	2.66



Proposed Stop Location (sorted north to south)	Average Score (1=least important, 4=most important)		
	All Responses	Local Responses	Visitor Responses
Cooper Spur/Polallie Trailhead	2.85	2.86	2.84
Hwy 35 near Odell	2.77	2.89	2.59
Trillium Lake/Snow Bunny Sno Park	2.72	2.54	2.99
White River Sno Park	2.61	2.57	2.69
Little John Sno Park	2.49	2.50	2.47
Pine Grove	2.32	2.42	2.15

Community members at tabling events were also asked to prioritize bus stop locations. Figure 30 shows their responses. It also includes one additional stop that was not initially proposed by the project team but was suggested by several community members (Teacup Lake Sno-Park). In comparing feedback from the survey to the tabling events, many top priority stops overlap (Tamanawas Falls, Mt. Hood Meadows, Hood River China Gorge, Hood River Port).

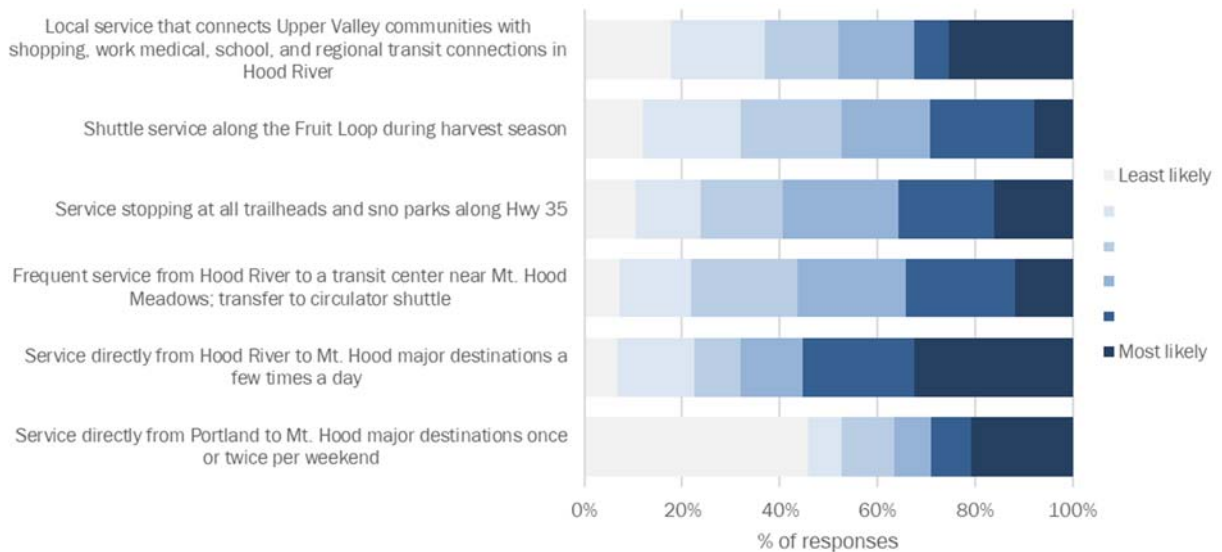
**Figure 30**      **Tabling Feedback - Stop Prioritization**



## SERVICE PRIORITIES

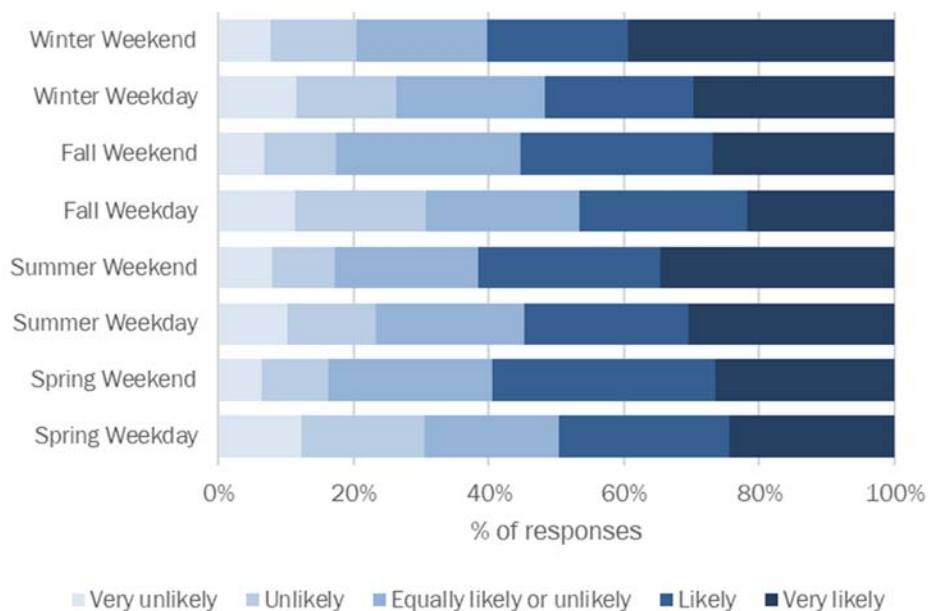
Survey respondents were given questions about hypothetical transit service as shown in Figure 31. Respondents by far favor bus service along the Highway 35 corridor that travels from Hood River directly to major destinations on Mt. Hood a few times per day.

**Figure 31** Which type of transit service would you consider riding along or to Highway 35? (N=263)



Future service along Highway 35 may incorporate seasonal changes to reflect shifting demand. Figure 32 shows the likelihood that respondents would ride a bus service on the Highway 35 corridor by season and day of the week. Overall, winter weekend and summer weekend service options scored the highest.

**Figure 32** When are you most likely to ride a bus service in the Highway 35 corridor? (N=311)



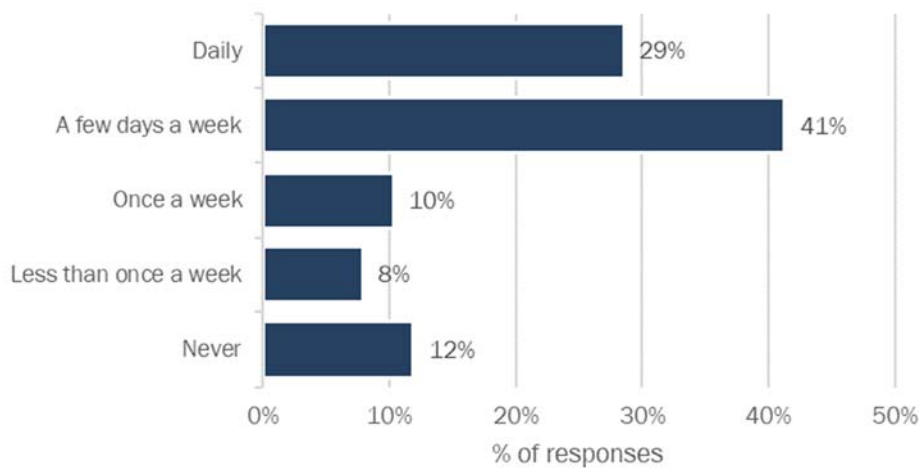


## COMMUTING

Survey respondents who answered that they currently travel the Highway 35 corridor for work/commuting were directed to a subset of questions to understand commute patterns. The majority of respondents are full-time, year-round employees, while nearly one-quarter are full-time seasonal workers. Eighty four percent of respondents' work locations are in Hood River or Parkdale/Mount Hood CDP.

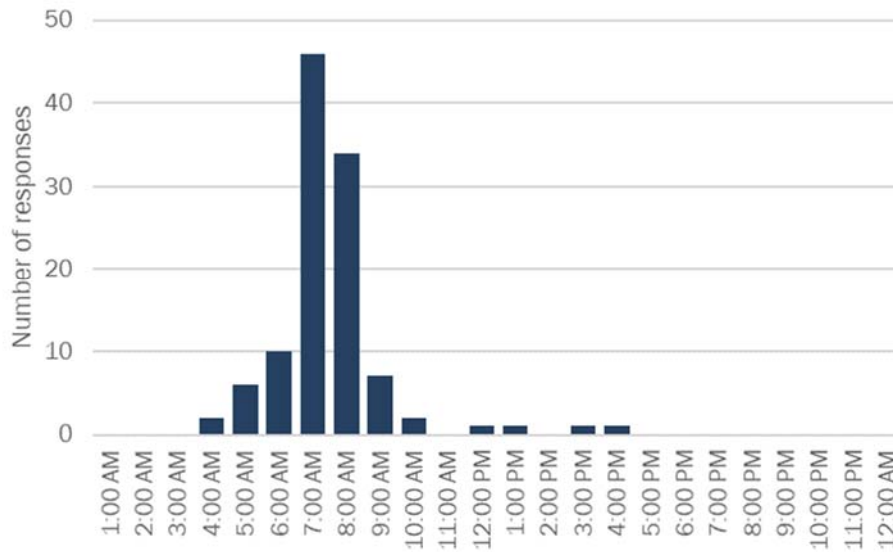
Figure 33 illustrates how often respondents thought they would use transit to get to work along the Highway 35 corridor if it were available. Seventy percent of respondents indicated that they would use transit to get to work more than once per week.

**Figure 33** How often would you use transit on the Highway 35 corridor to get to work if it were available? (N=126)

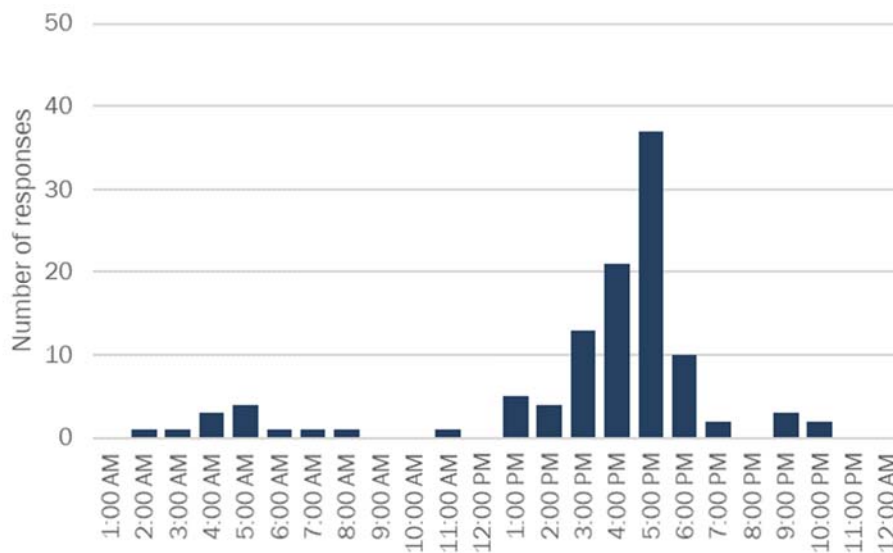


Typical times that respondents arrive at and depart from work are shown in Figure 34 and Figure 35, showing that the majority of workers arrive at work before 9 a.m., and 66% typically arrive before 8 a.m. In general, arrival and departure times are earlier than the 9 a.m. to 5 p.m. work schedule typical of many office jobs.

**Figure 34** What time do you typically need to arrive at work? (N=111)



**Figure 35** What time do you typically depart from work? (N=110)





## **3 ALTERNATIVES DEVELOPMENT**

Public and stakeholder outreach revealed a strong desire for public transportation from Hood River to Mt. Hood Meadows and Government Camp. The path between those two locations is fairly limited via Highway 35. Therefore, alternatives focused on stop locations and service levels.

### **STOP LOCATIONS**

Numerous recreation destinations as well as community destinations exist along Highway 35. A comprehensive list of potential stop locations was taken to the public and vetted through stakeholders. This process revealed demand levels, implementation steps, and implementation timelines. For example, some stops have high demand but will be difficult to implement, while others might be easy to serve but have low demand. Below, all stops considered have been sorted into two main categories: those that can be quickly implemented and/or were high priority for the public and stakeholders, and those that will take longer to implement and/or had low demand. Figure 36 provides a map of all locations.

Figure 36 Highway 35 Potential Stop Locations



## Higher Priority and/or Immediate-Term Stops

The stops below could either be implemented in the immediate term or were highly ranked by the public and stakeholders.

### Hood River Waterfront (Barman Site)

Multiple transit services stop near the Sinclair's gas station just north of downtown Hood River, including Mount Adams Transportation Services (MATS) from White Salmon/Bingen, the summer-only Columbia Gorge Express (CGE), and the Hood River summer trolley. Sinclair's currently allows buses to use its site to turn around. For the past two years, Mt Hood Meadows has provided a customer shuttle on peak weekends. The shuttle departs from the Hood River event site parking area, where there is ample parking in winter. A future Highway 35 service could market winter customer parking at the event site parking area and pick up passengers at the existing CGE/MATS/Trolley stop. CGE only serves this stop in summer to avoid downtown traffic; in winter, CGE stops instead in downtown Hood River. With the implementation of Highway 35 service to the mountain, CGE should serve the Sinclair's site in winter as well as summer.

Figure 37 Hood River Waterfront Stop Overview



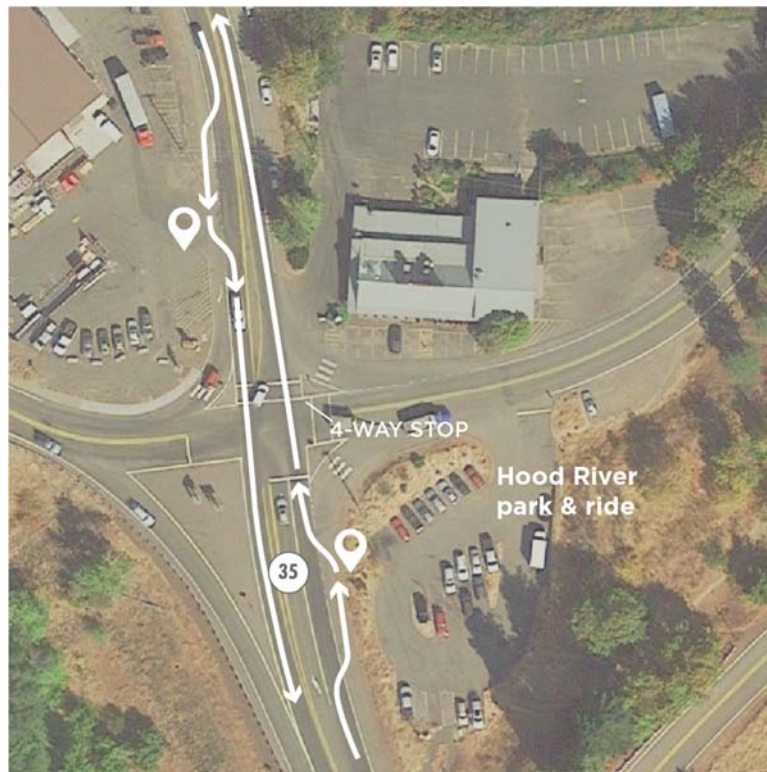


<b>Site Ownership:</b>	Private (Sinclair's)
<b>Public Demand:</b>	High
<b>Ease of Implementation:</b>	Easy
<b>Time Frame for Implementation:</b>	Immediate
<b>Capital Cost:</b>	Bus stop sign + installation (\$150 each; Quantity 1) Costs related to potential site purchase and design for a bi-state transit hub
<b>Park-and-Ride Opportunity?</b>	Yes – winter only
<b>Potential Partners:</b>	NA
<b>Benefits:</b>	<ul style="list-style-type: none"><li>▪ Short walk to both downtown Hood River and the Hood River waterfront</li></ul>
<b>Challenges:</b>	<ul style="list-style-type: none"><li>▪ Buses must use the Sinclair's site to turn around</li><li>▪ Transit customers put pressure on Sinclair's infrastructure (restroom, trash facilities, etc.)</li></ul>
<b>Steps to Implementation:</b>	<ul style="list-style-type: none"><li>▪ Modify CGE service to connect with Highway 35 service in winter</li><li>▪ Discuss implications of additional transit service with property owner</li><li>▪ Advertise unified timetable for all the services using this site</li><li>▪ Investigate use of site for a transit center long-term</li></ul>

## **Hood River – China Gorge**

The Hood River Park-and-Ride is located adjacent to downtown, across the street from the China Gorge restaurant. It is currently served by the Mt. Hood Meadows' employee shuttle and is the shuttle's highest ridership location, reaching capacity early every morning. Visitors park at an informal location up a steep grade directly to the east. This location was suggested as an ideal site for transit because it is easy to access and well-known by Hood River residents. Due to the small size of the park and ride, transit vehicles must pull off Highway 35 to serve passengers.

Figure 38      Hood River China Gorge Stop Overview



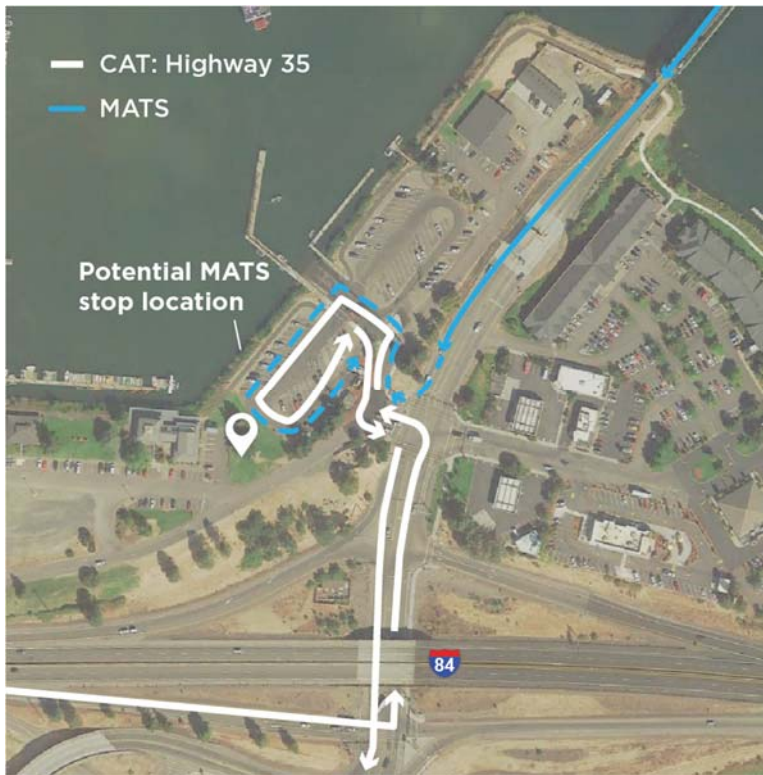
Site Ownership:	ODOT
Public Demand:	High
Ease of Implementation:	Medium
Time Frame for Implementation:	Immediate
Capital Cost:	Bus stop sign + installation (\$150 each; Quantity 2 = \$300) Potential shelter costs
Park-and-Ride Opportunity?	Yes
Potential Partners:	China Gorge, ODOT
Benefits:	<ul style="list-style-type: none"> <li>▪ Easy to access and just outside downtown</li> <li>▪ Known community location where people currently meet to park and carpool</li> <li>▪ Intersection of Highway 35 and Old Columbia River Road is 4-way stop controlled; easy for bus to pull in and out of traffic and for pedestrians to cross</li> </ul>
Challenges:	<ul style="list-style-type: none"> <li>▪ Parking lot fills quickly in the morning</li> <li>▪ Will need to make modifications to street to ensure safety for passengers</li> </ul>
Steps to Implementation:	<ul style="list-style-type: none"> <li>▪ Work with property owners to gain approval on stop location</li> <li>▪ Begin process of site modifications with ODOT</li> </ul>



## Hood River – Port

The Port of Hood River owns a parking area by the foot of the Hood River Bridge that could be used as a park-and-ride. Many community members expressed interest in using park-and-ride to access Mount Hood. This location was viewed positively due to its easy access for Washington residents and ample parking.

Figure 39 Hood River Port Stop Overview



Site Ownership:	Port of Hood River
Public Demand:	Medium
Ease of Implementation:	Easy (winter)
Time Frame for Implementation:	Medium
Capital Cost:	Bus stop sign + installation (\$150 each; Quantity 1) Potential shelter costs
Park-and-Ride Opportunity?	Yes – winter only (Nov/Dec/Jan/Feb)
Potential Partners:	Port of Hood River
Benefits:	<ul style="list-style-type: none"> <li>Ample parking available in winter</li> <li>Easy connection for Washington residents via the Hood River Bridge</li> <li>MATS could also serve the site</li> </ul>

<b>Challenges:</b>	<ul style="list-style-type: none"> <li>▪ There are no destinations easy walking distance from the site; would be primarily for park and ride</li> <li>▪ Need to gain buy-in from Port to use site for transit</li> <li>▪ Parking is constrained starting in early Spring</li> <li>▪ Site must be prioritized for fishing use</li> </ul>
<b>Steps to Implementation:</b>	<ul style="list-style-type: none"> <li>▪ Work with Port of Hood River to understand requirements for using site for transit</li> </ul>

## Odell Neal Creek Road

Odell is home to several major employers, including packing houses and the Cardinal Glass Factory. Odell also has strong ridership on CAT's Upper Valley Route, which provides point-deviated service connecting Hood River, Odell, and Parkdale. Service along Highway 35 must be as direct as possible, therefore it will not serve downtown Odell; however, there is an opportunity to make a short deviation off Highway 35 to both link up with CAT's Upper Valley service, and provide an option for those who are able to walk to a bus stop. Service along Neal Creek Mill Road would serve two stops: one at Cardinal Glass, and one at the intersection with Stadelman Drive. Since Neal Creek Mill Road is a local street, the bus is assumed to stop in-lane.

**Figure 40 Odell Potential Transit Circulation**



Figure 41 Odell Potential Stop Overview

<b>Site Ownership:</b>	Public road
<b>Public Demand:</b>	Medium
<b>Ease of Implementation:</b>	Easy
<b>Time Frame for Implementation:</b>	Immediate
<b>Capital Cost:</b>	Bus stop sign + installation (\$150 each; Quantity 4 = \$600) Basic shelter (\$10,000; Quantity 4 = \$40,000)
<b>Park-and-Ride Opportunity?</b>	No
<b>Potential Partners:</b>	Town of Odell, Cardinal Glass, Hood River County
<b>Benefits:</b>	<ul style="list-style-type: none"> <li>▪ Serves employment area in eastern Odell</li> <li>▪ For those who are able, the stop at Stadelman Drive is a 10-minute walk to the packing houses in downtown Odell</li> <li>▪ Deviation takes little travel time; there are good locations for turning off Highway 35 at Neal Creek Mill Road and turning back onto Highway 35 at Sunday Drive (good sight lines, road is two lanes each way)</li> </ul>
<b>Challenges:</b>	<ul style="list-style-type: none"> <li>▪ Narrow roadway on Neal Creek Mill Road means bus must stop in-lane</li> <li>▪ Little space for passengers to wait</li> <li>▪ Need buy-in from businesses behind stop locations</li> </ul>
<b>Steps to Implementation:</b>	<ul style="list-style-type: none"> <li>▪ Begin discussions with property owners to notify them about potential bus stop</li> <li>▪ Install signage per County standards</li> <li>▪ Coordinate Upper Valley schedules with Highway 35 service</li> <li>▪ Show transfer opportunity on Upper Valley map and schedule</li> </ul>

## Mount Hood Town Hall

Mount Hood is located between Odell and Parkdale, making it a convenient site for transit. The Mt. Hood Meadows employee shuttle already serves this location. The resort rents several Town Hall parking spaces from Mount Hood for shuttle riders to use.

Figure 42 Mount Hood Town Hall Stop Overview



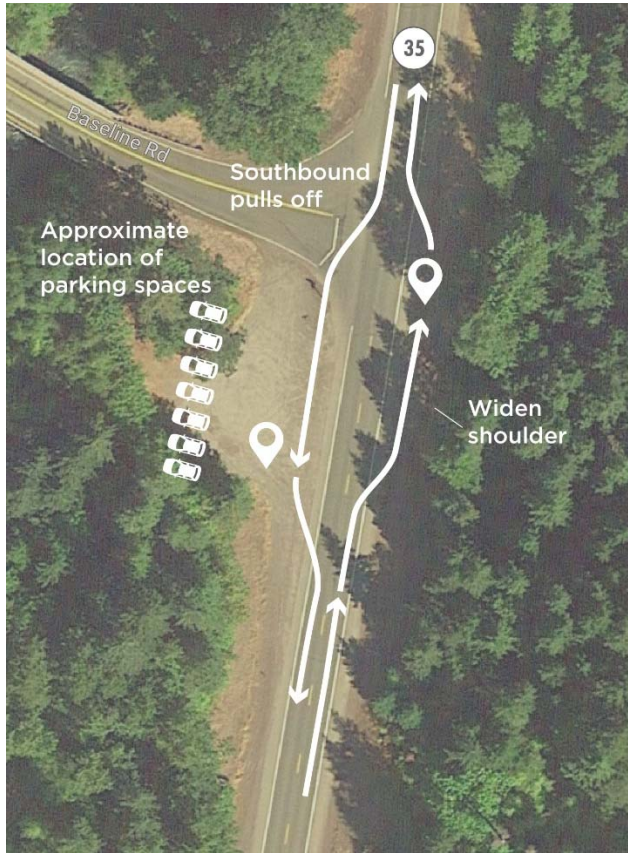
Site Ownership:	Mount Hood
Public Demand:	Medium
Ease of Implementation:	Easy
Time Frame for Implementation:	Immediate
Capital Cost:	Bus stop sign + installation (\$150 each; Quantity 2 = \$300) Potential shelter costs
Park-and-Ride Opportunity?	Yes – with agreement from Mount Hood
Potential Partners:	Mount Hood
Benefits:	<ul style="list-style-type: none"> <li>▪ Already served by Mt. Hood Meadows employee shuttle</li> <li>▪ Parking is available</li> <li>▪ Located between the communities of Odell and Parkdale</li> </ul>
Challenges:	<ul style="list-style-type: none"> <li>▪ Small parking lot</li> </ul>
Steps to Implementation:	<ul style="list-style-type: none"> <li>▪ Work with Mount Hood to understand feasibility of adding more transit service</li> </ul>



## Baseline Road, Parkdale

Like Odell, the community of Parkdale is located west of Highway 35 and would be difficult to serve without adding several minutes of travel time to a Highway 35 route. Community outreach showed there was public interest in taking transit to the Mount Hood area to avoid chaining up and driving in the winter, and to access employment. The intersection of Baseline Road and Highway 35, southeast of Parkdale, is already being used as an informal park and ride. Construction is needed to ensure safety at this location, meaning this stop will be longer-term for implementation.

Figure 43 Baseline Road Stop Overview



Site Ownership:	ODOT
Public Demand:	Medium
Ease of Implementation:	Medium
Time Frame for Implementation:	Medium
Capital Cost:	Bus stop sign + installation (\$150 each; Quantity 2 =\$300) Shoulder paving; Overhead flashing beacon Potential shelter costs
Park-and-Ride Opportunity?	Yes
Potential Partners:	ODOT

<b>Benefits:</b>	<ul style="list-style-type: none"> <li>▪ Provides service to Parkdale</li> <li>▪ Makes use of a known park and pool site</li> <li>▪ Stop does not add much travel time</li> </ul>
<b>Challenges:</b>	<ul style="list-style-type: none"> <li>▪ Site may not be plowed in winter</li> <li>▪ Shoulder is narrow on west side - southbound bus may need to pull off the road or stop in-lane</li> <li>▪ Northbound bus must stop in-lane. ODOT may require flashing signage to alert drivers of a potential stopped vehicle ahead and pedestrians who may be crossing the street</li> </ul>
<b>Steps to Implementation:</b>	<ul style="list-style-type: none"> <li>▪ Continue discussion with ODOT on whether bus can stop in-lane. May require flashing light installation</li> </ul>

### **Mt. Hood Meadows Main Entrance**

The success of the customer shuttle from Hood River to Mt. Hood Meadows demonstrates an appetite for shuttle service. Community input stated that the resort's existing employee shuttle is often full, giving employees no alternative but to drive to work. The front door of Mt. Hood Meadows is by far the location with the biggest need for transit along the Highway 35 corridor.

**Figure 44** Mt. Hood Meadows Stop Overview





Site Ownership:	Private (Mt. Hood Meadows)
Public Demand:	High
Ease of Implementation:	Easy. Mt. Hood Meadows indicated willingness to accommodate transit by reorganizing main entrance parking.
Time Frame for Implementation:	Immediate
Capital Cost:	Bus stop sign + installation (\$150 each; Quantity 1) Shelter + installation (\$10,000-\$18,000)
Park-and-Ride Opportunity?	No
Potential Partners:	Mt. Hood Meadows
Benefits:	<ul style="list-style-type: none"><li>▪ Front door service to the biggest draw in the region</li><li>▪ Serves both customers and employees</li><li>▪ Increases connectivity to a major destination</li></ul>
Challenges:	<ul style="list-style-type: none"><li>▪ Parking lot can be difficult to navigate during the peak season</li><li>▪ Traffic congestion on the road accessing Mt. Hood Meadows will slow down the bus</li></ul>
Steps to Implementation:	<ul style="list-style-type: none"><li>▪ Continue discussions with Mt. Hood Meadows and determine exact stop location and parking arrangements</li></ul>

## **Government Camp**

Government Camp is served by Mt. Hood Express and the Timberline Lodge shuttle from Summit to Timberline. Public outreach showed a strong desire to get to Government Camp and Timberline from Hood River; however, numerous projects are happening in the Government Camp area that make it difficult to find a good place for transit to stop in the short term. These projects include relocation of the existing rest area and redevelopment of the Summit Ski area. Government Camp remains a critical connection but serving it will take some time and coordination with other efforts. Clackamas County has undertaken several studies, including a transit hub location project, Transit Development Plan, and electronic fare project, that will provide the groundwork for future transit circulation in Government Camp.

In combination with the Summit Ski area redevelopment, Mt. Hood partners hope to create a “park-once” environment with dedicated parking areas and circulator shuttles between major destinations so that patrons can park in one place and take transit. Ultimately, the goal is for transit to become robust enough that patrons can visit Mt. Hood without a car at all, alleviating congestion, improving safety, and preserving the natural resources of the mountain. These projects all will set the stage for a future transit connection from Mt. Hood Meadows to Government Camp.



Figure 45 Government Camp Site Overview



Site Ownership:	Private (Summit Ski Area), ODOT (Rest Area)
Public Demand:	Medium
Ease of Implementation:	Medium. Requires location of transit hub first.
Time Frame for Implementation:	Medium
Capital Cost:	Unknown. May be integrated as part of transit hub project – capital costs related to site purchase and shelter construction.;
Park-and-Ride Opportunity?	Park-and-ride is desired in a future transit hub
Potential Partners:	Timberline Lodge, Clackamas County, ODOT
Benefits:	<ul style="list-style-type: none"> <li>▪ Fills in gap in transit between Mt. Hood Meadows and Government Camp</li> </ul>
Challenges:	<ul style="list-style-type: none"> <li>▪ Transit hub needs to be located; this could be the same site as the rest area or a different site</li> </ul>
Steps to Implementation:	<ul style="list-style-type: none"> <li>▪ Continue/begin studies that will affect transit routing to Government Camp (Clackamas County Transit Development Plan, Clackamas County transit hubs study, electronic fares)</li> <li>▪ Work with partners to make a case for moving forward with relocating rest area</li> <li>▪ Continue Summit Ski area redevelopment plans</li> </ul>

## Lower Priority or Long-Term Stops

### Pine Grove

Pine Grove is located between Hood River and Odell. The bus could potentially serve the intersection of Van Horn Drive and Highway 35.

Figure 46 Pine Grove Potential Location



Site Ownership:	Private
Public Demand:	Low
Ease of Implementation:	Easy with agreement from property owner

## Valley Worship Church

Located just north of Mount Hood Town Hall, the Valley Worship Church parking lot may be available during weekdays and potentially used as a park-and-ride. Public demand for a park-and-ride in this location was determined to be low.

Figure 47 Valley Worship Church Potential Location



Site Ownership:	Private (church)
Public Demand:	Low
Ease of Implementation:	Easy with agreement from church

## Cooper Spur/Polallie Trailhead

This site has an existing informal parking area at the southwest corner. Cooper Spur Road leads to the Cooper Spur resort. One issue is that the street is often unplowed during winter months.

Figure 48 Cooper Spur Potential Location



Site Ownership:	US Forest Service
Public Demand:	Medium
Ease of Implementation:	Medium – Need approval from Forest Service



## Tamanawas Falls

Tamanawas Falls is by far the most popular destination for access demands; however, the space offers many access challenges. The existing parking area is located on a curve, resulting in poor sight lines. Parking is not organized or enforced, leading to unsafe behavior. Access challenges could be met in two ways. First, parking could be provided at the Sherwood Campground to the south. Second, the US Forest Service could create a new trail linking the East Fork Trail to the Tamanawas Trail, adding only about a quarter mile to the Tamanawas Trail. This site is also part of the Wild and Scenic river corridor, which is another layer of consideration.

Figure 49 Tamanawas Falls Access Issues and Opportunities



Site Ownership:	US Forest Service
Public Demand:	High
Ease of Implementation:	Hard

## Little John Sno Park

Little John Sno Park, like many Sno Parks, was ranked as a low priority by the public during outreach. Implementing transit service at this site would be straightforward with approval from the Forest Service.

Figure 50 Little John Sno Park Potential Stop Location



Site Ownership:	US Forest Service
Public Demand:	Low
Ease of Implementation:	Easy with Forest Service permission

## Mt. Hood Meadows Nordic Center/Teacup Sno Park

Elk Meadow Trailhead is one of the two main access points to Mt. Hood Meadows (MHM). The trailhead leads to the Nordic Center and Hood River Meadows parking lot. Mt. Hood Meadows is planning updates to this area of the resort, including a new parking lot and lodge. Transit service Westbound could stop on Highway 35 at the access point to Hood River Meadows and the planned lodge. Eastbound is Teacup Sno Park, another popular destination. Parking at the site of Teacup Snow Park is disorganized, but there is enough space for a bus to pull off if it is not blocked by parked cars.



Figure 51 Nordic Center/Teacup Potential Location



Site Ownership:	ODOT
Public Demand:	Medium-Low
Ease of Implementation:	Medium
Time Frame for Implementation:	Medium
Capital Cost:	Bus stop sign + installation (\$150 each; Quantity 2 = \$300)
Park-and-Ride Opportunity?	Yes, at Teacup Sno Park
Potential Partners:	ODOT
Benefits:	<ul style="list-style-type: none"> <li>▪ The Nordic Center area is popular with Hood River locals</li> <li>▪ By stopping just off Highway 35, the bus can serve each stop efficiently</li> <li>▪ Mt. Hood Meadows runs a shuttle between Hood River Meadows and the front door, meaning passengers may be able to hop on the shuttle from the Highway 35 stop</li> </ul>
Challenges:	<ul style="list-style-type: none"> <li>▪ Disorganized parking at Teacup Sno Park makes it difficult for transit to consistently access the site</li> <li>▪ Passengers accessing the Nordic Center may need to walk to their final destinations and may be carrying gear</li> <li>▪ The Eastbound and Westbound stops are offset, meaning passengers may need to walk a good distance along Highway 35 and cross the Highway to access their destinations</li> </ul>
Steps to Implementation:	<ul style="list-style-type: none"> <li>▪ Determine how the Mt. Hood Meadows shuttle will change with the opening of the new parking lot and how a Highway 35 transit stop could integrate with the shuttle</li> </ul>

## White River Sno Park

Like Little John, White River Sno Park was ranked as a low priority but could be implemented with approval from the Forest Service.

Figure 52 White River Potential Location

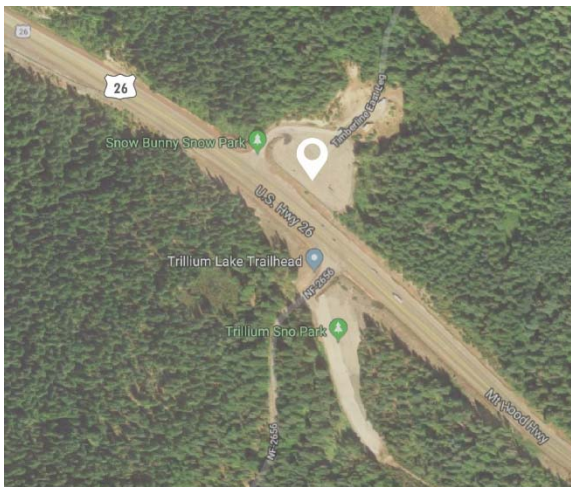


Site Ownership:	US Forest Service
Public Demand:	Low
Ease of Implementation:	Easy with Forest Service permission

## Trillium Lake/Snow Bunny Sno Park

Like Little John and White River Sno Parks, this stop location was ranked as a low priority.

Figure 53 Trillium Lake Potential Location



Site Ownership:	US Forest Service
Public Demand:	Low
Ease of Implementation:	Easy with Forest Service permission





## SERVICE LEVEL OPTIONS

Three options for service span and frequency were developed, as shown in Figure 54, Figure 55, and Figure 56. The options differ in terms of the seasons of service (year-round versus winter only) and frequency levels. In terms of costs, it is assumed that for year-round service, CAT would purchase vehicles and directly operate service at a cost of \$80 per hour. If service were to be run during winter only, purchasing vehicles and hiring drivers would not be cost-effective; rather, CAT would either lease vehicles and hire short-term drivers or contract out parts of the service for a higher operating cost per hour of \$120.

Figure 54 Option 1: Year-Round Service, High Frequency

	Jan-Dec	Dec – April Base	Dec-April Peak
Span	7:00am - 6:30pm	5:45am - 6:30pm	5:45am - 6:30pm
Service Days	7 days a week	Monday - Friday	Saturday & Sunday
Service Hours/day	18	16	8
Vehicles	2	4	5
Annual Days (Estimate)	360	150	43
Annual Hours (Estimate)	6,480	2,400	344
Cost	\$ 518,400	\$ 192,000	\$ 27,520
Total Cost	\$ 737,920		

Note: Assumes cost of \$80/hour via direct operation

Figure 55 Option 2: Year-Round Service, Low Frequency

	Jan-Dec	Dec – April Base	Dec-April Peak
Span	7:00am - 6:30pm	5:45am - 6:30pm	5:45am - 6:30pm
Service Days	7 days a week	Monday - Friday	Saturday & Sunday
Service Hours/day	10	24	8
Vehicles	2	4	5
Annual Days (Estimate)	360	150	43
Annual Hours (Estimate)	3600	3600	344
Cost	\$ 288,000	\$ 288,000	\$ 27,520
Total Cost	\$ 603,520		

Note: Assumes cost of \$80/hour via direct operation



Figure 56 Option 3: First-Year Demo (Winter Only)

	Winter Base	Winter Peak
Span	5:45am - 6:30pm	5:45am - 6:30pm
Service Days	7 days a week	Additional Peak Days
Service Hours/day	25	10
Vehicles	2	3
Annual Days (Estimate)	100	30
Annual Hours (Estimate)	2500	300
Cost	\$ 300,000	\$ 36,000
Total Cost	\$ 336,000	

Note: Assumes cost of \$120/hour via contractor

## 4 RECOMMENDED ALTERNATIVE

Conversations with stakeholders and partners revealed strong support for piloting service from Hood River to Mt. Hood Meadows during the 2019 winter season. Numerous projects happening around Timberline Lodge and in Clackamas County will affect transit circulation and access in Government Camp, therefore it makes sense for CAT to coordinate with partners and extend Highway 35 service to Government Camp in a phased approach. This will allow CAT to close the gap in transit services between Hood River and Government Camp by first focusing on the highest demand connection—between Hood River and Mt. Hood Meadows during winter—and pilot the service on a smaller scale than extending all the way to Government Camp in the first year.

### RECOMMENDED ALTERNATIVE

Using public and stakeholder feedback, the stop locations shown to the public were categorized by demand and implementation difficulty in Figure 57. This allowed for phasing of stops for implementation, mapped in Figure 58 and listed in Figure 59.

Figure 57 Stop Demand and Implementation Difficulty

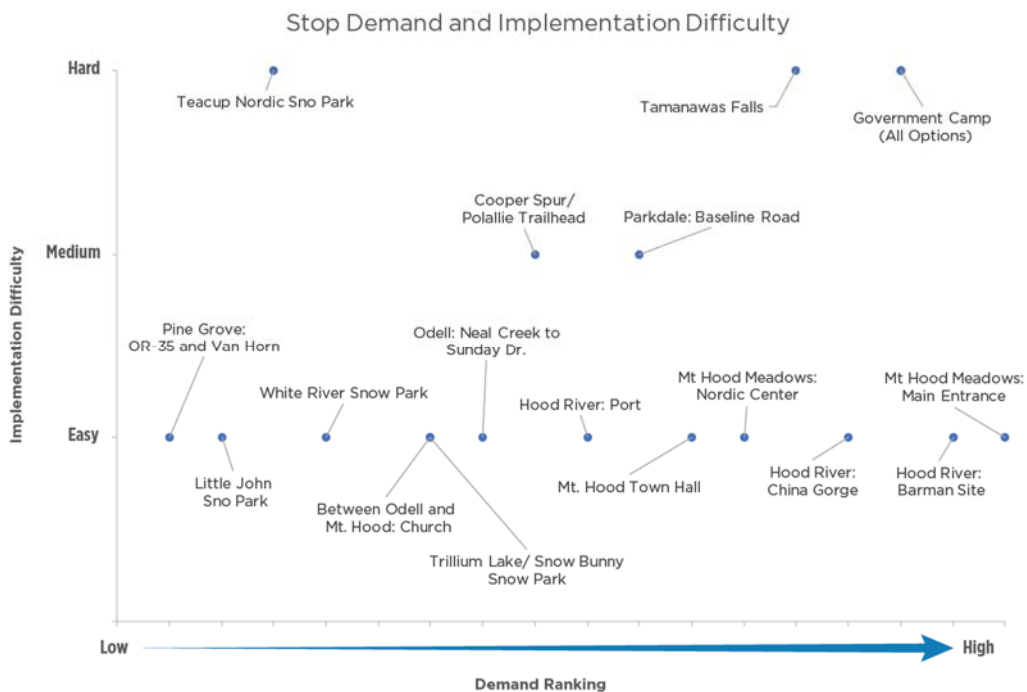


Figure 58 Prioritized Stop Locations





**Figure 59** Stop Location Phasing

Immediate-Term	Medium-Term	Long-Term
A. Hood River – Barman Site	C. Parkdale – Baseline Rd.	J. Pine Grove
F. Hood River - Port	E. Government Camp	K. Valley Worship Center
G. Hood River – China Gorge		L. Cooper Spur/Polallie Trailhead
H. Mount Hood – Town Hall		M. Tamanawas Falls Trailhead
B. Odell – Neal Creek Rd.		N. Little John Sno Park
D. Mt. Hood Meadows Main Entrance		O. White River Snow Park
		P. Trillium Lake/Snow Bunny Sno Park
		I. Mt. Hood Meadows Nordic Center/Teacup Snow Park

The draft routing of service in the immediate-term is shown in Figure 60. The bus will serve Hood River to Mt. Hood Meadows in the first year of operations until additional funding can be secured and planning processes have gotten underway to locate an optimal space for transit in Government Camp.



Figure 60 Recommended Alternative Routing



Recommended schedules (peak and off-peak) are shown in Figure 61 and approximate service hour and mile needs are identified in Figure 62. Service will begin in late November or early December 2019, pending funding, and will likely run until the end of February 2020.

Figure 61 Proposed Schedules

Base Schedule			Peak Day Schedule (added trips in green)		
HR	MHM	HR	HR	MHM	HR
5:45	7:00	8:15	5:45	7:00	8:15
6:15	7:30	8:45	6:15	7:30	8:45
7:30	8:45	10:00	7:30	8:45	10:00
8:30	9:45	11:00	7:45	9:00	10:15
9:00	10:15	11:30	8:30	9:45	11:00
14:00	15:15	16:30	9:30	10:45	12:00
15:00	16:15	17:30	10:15	11:30	12:45
15:30	16:45	18:00	14:00	15:15	16:30
			14:45	16:00	17:15
			15:00	16:15	17:30
			15:30	16:45	18:00

Figure 62 Service Hours and Miles Totals

Day Type	Daily Service Hours	Daily Service Miles	Annual Service Days	Annual Hours	Annual Miles
Normal Service Days	20	600	90	1,800	54,000
Peak Service Days	27.5	825	30	825	24,750
Total Service Days			120	2,625	78,750

Stop amenities share information and provide waiting space for passengers sheltered from the weather. Given that service will start in winter, places to wait are especially important. Given the timeline for service implementation, however, stop amenities must be prioritized at the most critical location – those places where passengers are most likely to be waiting outside. At the Hood River Port, for example, park and ride demand is high and walk-ups are less likely, thus passengers can likely wait inside their vehicles, whereas on Neal Creek Road walk-up passengers will be the primary user. Figure 63 shows the immediate-term stops and desired stop amenities and cost of the item and installation, using estimates from CAT.



Figure 63 Stops Cost

	Sign	Qty	Total	Shelter	Qty	Total	Stop Total
Hood River Waterfront	\$150	1	\$150			\$0	\$150
Hood River China Gorge	\$150	2	\$300			\$0	\$300
Hood River Port			\$0			\$0	\$0
Neal Creek Road	\$150	4	\$600	\$10,000	4	\$40,000	\$40,600
Mt Hood Meadows Main Entrance	\$150	1	\$150	\$10,000	1	\$10,000	\$10,150
Mount Hood Town Hall	\$150	2	\$300			\$0	\$300
<b>Grand Total</b>							<b>\$51,500</b>

## IMPLEMENTATION NEXT STEPS

### Funding Grant Application

- Submit FLAP grant application for operating funding and solidify funding commitments from local partners by August 31, 2019
- Determine whether funding will be channeled through ODOT or a new cooperative agreement between CAT and Western Federal Lands

### Service Operations

- Refine routing. One option is for CAT to replace one or both of Mt. Hood Meadows' employee shuttles. The employee shuttle serves 3<sup>rd</sup> and State, which is not on the potential Highway 35 routing. CAT and Mt. Hood Meadows must coordinate to ensure employees who used Mt. Hood Meadows employee routes in winter 2018-2019 are still served.
- Set fares and fare payment options. Explore a fare package for Portland to Mt. Hood Meadows customers via CGE and Highway 35. Coordinate with ODOT and MTR so that transfers between CGE and Highway 35 service can be as seamless as possible.
- Continue working with partners to pursue short-term stop locations at the Hood River park and ride (China Gorge), Mount Hood Town Hall, and the Hood River Port.
- Ensure that CGE winter service will still serve the waterfront (Barman) site to facilitate transfers between CGE and Highway 35 service
- Begin purchase and installation of stop amenities.

### Marketing and Branding

- Web site and social media. Create an online presence and begin promoting.
- Service name. Brainstorm a route name and brand matching that will appeal to the markets it is intended to serve.



- Publicize service. Use the web site and social media, but also the CGE mailing list and other resources, to promote Highway 35 service during its opening season. In particular, target marketing at the Portland metro area since so many Mt. Hood visitors come from there.

### **Regional Efforts**

- Participate in Vision Around the Mountain project, which will create an implementation plan to circle Mt. Hood with transit.

### **Monitoring**

- Set up data collection template and establish protocols for daily data tracking and monthly reporting. Key metrics include boardings by stop, on-time performance, passenger load, farebox recovery, passengers per revenue hour and mile, and operating cost per hour and mile. Set up a reporting template with the goal of evaluating service performance to roll into the next cycle of FLAP grants.
- Establish performance benchmarks for the metrics listed above.

### **Infrastructure Improvements**

- Each of the planned and potential stops proposed carries with it the need for capital investments. This will require identification of appropriate funding sources, property sites, and other logistical considerations.