



## 3.0 DEMAND ESTIMATION

### A. *Components of Demand*

In a ski resort, transit demand consists of visitor trips to the mountain base, visitor trips for dining, shopping, etc, employee trips to and from work, and resident (seasonal and full-time) trips for other activities, including shopping, recreation, or other personal business. The importance of each component varies depending on the type of transit service provided, the location of the ski area base relative to the visitor lodging, and the location of employee housing relative to work sites.

In Winter Park, the existing system primarily serves skiers. It is operated mainly in the winter and provides critical transportation between the lodging facilities and mountain base. Two events will change system demand over the study period.

- ▶ The first is that with the development of more lodging at the base area, many more skiers will be within walking distance of the base area. Those staying within walking distance of the mountain base will not need transit during the day but will shift transit use to evening trips into town for evening activities (to eat out, go to bars, or go to grocery store or other shopping). They will likely not make as many trips into town – not everyone will travel to town each evening – so the overall transit ridership levels from this population may decline somewhat. However, at present the ridership into town from people staying in TAZ 1 and 2 is quite high.
- ▶ The second event impacting system demand would be the development of the third base, the gondola from downtown as a third base area. When this is built, approximately 2,500 people will be within 2,000 feet of the mountain base and may choose to walk rather than use transit, on a peak day.

If the system begins operating in the summer and longer in the shoulder seasons, more residents will find they can use transit to meet their travel needs. People will then be more likely to use the transit system for regular work trips and for other activities. A significant number of Winter Park Resort employees (76% of those living in Granby and 19% of total employees) take the employee shuttle bus provided by the resort. A small percentage of other employees living in Fraser or Winter Park also use The Lift in the winter for employment trips (estimated at 5%). Opening employment shuttles from Granby to all employees would also increase the importance of employment trips in the overall demand. Another outcome of increased availability of employment transportation is likely that employees would be able to live further out, in less expensive housing. Over time this may be important as a larger employment base is needed for the growing economy.



## Peaking Characteristics for Transit Services

The impact of peak travel times is a critical component for designing the transit system, but the impacts vary somewhat from those on the roadway network. Key points are:

- ▶ Route structure will be sized for “average” daily transit volume; spares and creative dispatching<sup>1</sup> will be used to address peak demand. In addition, more people are crowded into each vehicle.
- ▶ Employment trips will not vary much between average and peak periods.
- ▶ While the peak transit demand resulting from skiers will decline as more lodging is built at the base, the evening trips for dining and shopping will likely increase. The net effect is that this will soften the peak demand in the morning and afternoon, spreading ridership to the evening hours.

### *B. Demand Projections*

The number of riders was calculated based on the number of residential units in the Valley, including single family, multiple-family, and hotel rooms. The type of trips and when they occur will change as the area develops. As more visitors stay in lodging units at the base, their trips will be into Town, especially in the evening.

From a macro planning perspective, these characteristics of the community provide a reasonable reflection of demand, and they could more than double the current levels of ridership. Approximately 600,000 riders are carried today in Winter Park. A comparable system, Steamboat Springs Transit, carries approximately 1 million annual riders. Their service, however, has developed over many years and night-time and summer ridership are now both important parts of the system. The amount of parking and convenience of transit service will also affect the use of transit, so these numbers should be used to gauge the overall system size that might be expected if each of the above markets is served.

Demand projections were developed using a three-step process. Documentation, at the TAZ level is included in the travel model that is a part of the main report. A table showing the detailed employment projections can be found in **Appendix B-II** of this report.

**Step One:** The total riders on the existing system were compared to the residential units. No distinction was made between type of unit – single family, multi-family, or hotel. These riders reflect day and evening riders in TAZ’s 1-6, where service is currently provided. They include skiers and some employees and miscellaneous trips in the daytime. In the evening they include visitors going into Town and some employees or trips made by residents (i.e. going shopping). A total of:

- ▶ 103.6 daytime riders were carried by The Lift in the 2005-06 season for each housing unit.

<sup>1</sup> Dispatching techniques such as extra trips and “short-turns” are used to use the extra vehicles to move crowds just when and where they are needed. The vehicles are turned back as soon as they are empty.



- ▶ 20.2 night-time riders were carried by The Lift in the 2005-06 season for each housing unit.

**Step Two:** Seasonal ridership was calculated for each zone based on the existing housing units, and compared to the actual ridership carried by routes serving each zone. Some routes serve several zones (especially US 40 and neighborhoods) so estimations were made in comparing the ridership by route to each zone ridership. Key points are:

- ▶ Overall numbers are conservative, as they reflect current patterns of travel; as viability of transit service increases, and service operates most or all of the year, the number of people using transit will likely increase.
- ▶ The night service is only reliable in total. There are difficulties in projecting demand as the level of ridership depends on the type of housing and location of activity centers. It is likely that the primary night ridership will be between the mountain resort, downtown Winter Park, and Fraser. Two illustrations are:
  - The existing night-time Green line, serving TAZ 1, 2, and 5, carried 48,000 passengers in the 2005 - 2006 season while the formula only predicts about 22,000 passengers, and;
  - The night-time Orange line, serving TAZ 4 only carried 5,000 passengers in the 2005-2006 season while the formula predicts 29,000. The predictions for Zone 6 and some of Zone 3, covering much of Fraser, is fairly close to the actual ridership on the night-time Black and Purple routes of 39,000 passengers.
- ▶ The number of new units for 2020 and 2026 (for the entire Fraser Valley) as identified by EPS were used to determine the total seasonal transit demand based on the current trip generation rates per residential unit. Note that this covers area where service is not now provided and may not be provided in the future.
- ▶ The seasonal rates were adjusted to daily rates – again by TAZ – to determine the average level of service needed to meet this demand.

**Step Three:** Employment transportation was calculated separately, using modal splits that were calibrated to current employment levels and adjusted based on the growth of employment and housing by community. Higher mode splits are used as distance between jobs and housing increased. The employment projections are found in the EPS Final Report.

The transit demand was identified based on the current system, as identified in **Table 3.1**. Transit demand reflects, to a certain extent, the level of service available: the better the service the more people will ride. As service improves and becomes a viable alternative for more individuals, one would expect ridership to increase. This is especially true for the employment trips. At present, the commuter service from Granby to the resort is provided only to resort employees. If service were open to the general public, the number of trips would likely increase. If commuter service were available year-round, it is likely that the percentage of employees using transit for commute trips would gradually increase over time.



**Table 3.1 Characteristics of Transit Alternatives: Annual Estimated Ridership**

<b>Markets Served</b>	<b>Current</b>	<b>2020</b>	<b>2026</b>
Visitors and Local Employees			
Winter	568,000	1,110,000	1,255,000
Spring/Summer/Fall	50,000	100,000	150,000
Commuters from Granby			
Winter (all employees)	36,000	51,000	56,000
Spring/Summer/Fall	15,000	21,000	25,000
Elderly or Disabled Individuals	5,000	10,000	12,000
<b>TOTAL</b>	<b>674,000</b>	<b>1,292,000</b>	<b>1,498,000</b>