

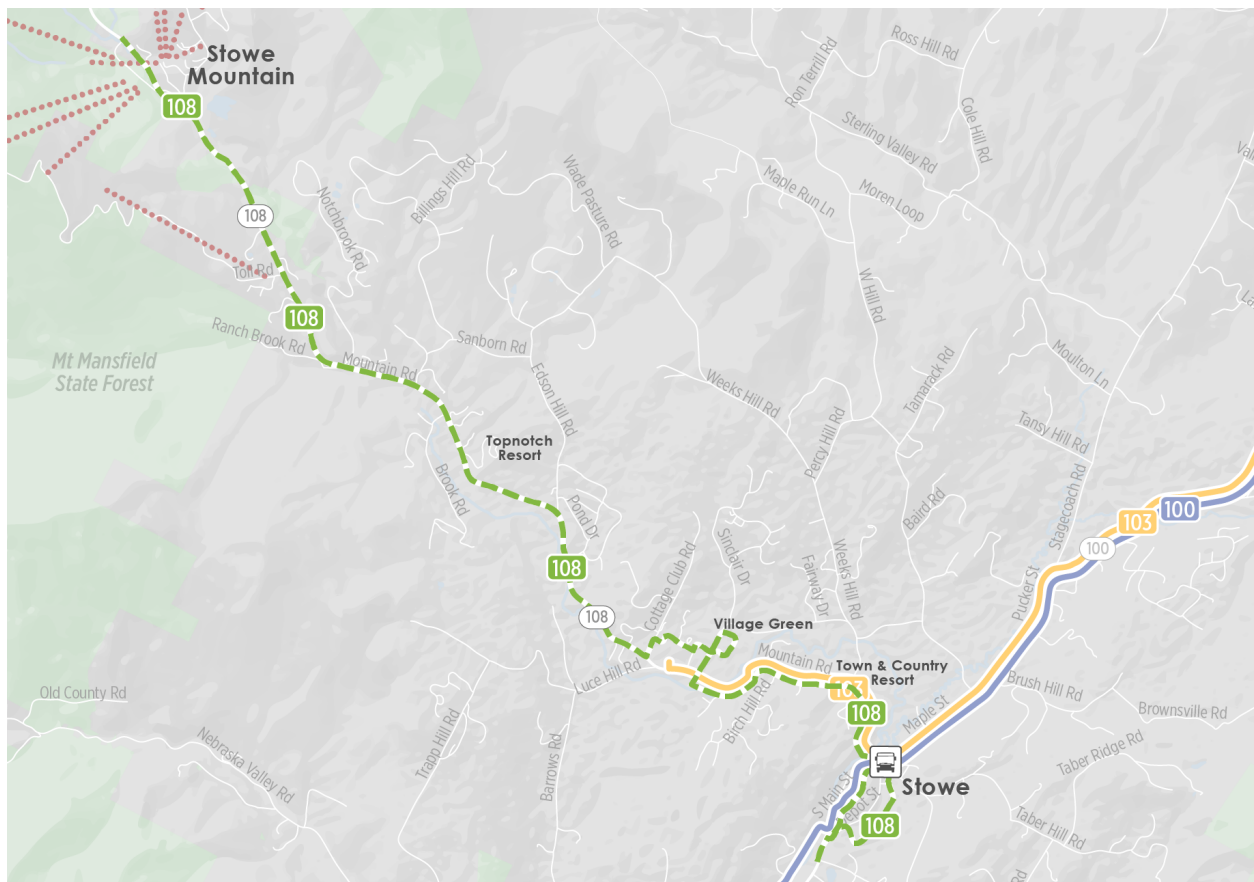
# ROUTE 108

## Mountain Road Shuttle

### ROUTE OVERVIEW

Route 108 is a Seasonal Local route that operates between downtown Stowe and Stowe Mountain, primarily along VT Route 108/Mountain Road. The route provides service to Commodores Inn, downtown Stowe, several resorts (including Town & Country, Village Green, StoweLake, Topnotch, and Spruce Peak), and access to skiing and other winter sports on Mount Mansfield, in addition to restaurants and retail along Mountain Road (see Figure 1).

**Figure 1: Route Map**



Route 108 operates the same schedule on weekdays, Saturdays, and Sundays (see Table 1). The route runs full service during the winter sports season, generally December through March. Buses run every 15-20 minutes in the morning until 10 AM, then every 30 minutes through the midday until 2:30 PM, every 15-30 minutes during PM peak hours, and then every 30 minutes in the evening through the end of service. At the very beginning and end of the season, service runs hourly from 7 AM until 9 PM.

**Table 1: Schedule Statistics**

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (MIN)	DAILY TRIPS (UPHILL/DOWNHILL)
<b>Monday-Friday</b>	6:40 AM to 9:55 PM	15-30/15-30/30	36/36
<b>Saturday</b>	6:40 AM to 9:55 PM	15-30/15-30/30	36/36
<b>Sunday</b>	6:40 AM to 9:55 PM	15-30/15-30/30	36/36

*Note: Peak frequencies are calculated for service between 6:00 am – 9:00 am & 3:00 pm – 6:00 pm. Midday service is 9:00 am – 3:00 pm. Evening service is for service after 6:00 pm. Saturday and Sunday frequencies are shown as AM/PM.*

**Table 2: Service Variants**

VARIANT	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER DAY		
				WKD	SAT	SUN
UPHILL				36	36	36
108-1	Commodores Inn	Mansfield Lodge	Town & Country riders served along Mountain Rd. Golden Eagle served by request only.	27	27	27
108-2	Commodores Inn	Mansfield Lodge	Bus pulls into Town & Country lot and Golden Eagle Resort to serve riders	8	8	8
108-3	Stoweflake	Mansfield Lodge	Trips begin at Stoweflake and continue to Mansfield Lodge	1	1	1
DOWNHILL				36	36	36
108-4	Spruce Peak / Performing Arts Center	Commodores Inn	Village Green served by request only. Town & Country riders served along Mountain Rd. Golden Eagle served by request only.	28	28	28
108-5	Spruce Peak / Performing Arts Center	Commodores Inn	Village Green served by request only. Bus pulls into Town & Country lot to serve riders. Golden Eagle served by request only.	7	7	7
108-6	Spruce Peak / Performing Arts Center	Stowe Shaw's	Trip terminates at Stowe Shaw's after serving Stoweflake	1	1	1

Route 108 has six total service variants, each of which operate on all service days (see Table 2). The primary alignment (variant 108-1 uphill and 108-4 downhill) operates between Stowe and Spruce Peak via Mountain Road. Uphill trips begin at Commodores Inn in Lower Village, then travel north on Depot Street to serve downtown Stowe at Stowe Town Hall. Buses then travel north on Mountain Road, deviating from the main road only to serve the Stoweflake and Village Green resorts, before terminating at Spruce Peak. Downhill buses depart Spruce Peak and serve the gondola access point and serve Stowe Mountain Lodge before returning south on Mountain

Road towards downtown Stowe. Downhill trips serve Village Green by request only. Buses turn south off of Mountain Road onto VT Route 100/S Main Street, bypassing Stowe Town Hall and returning directly to Commodores Inn.

On morning trips between 7:45 AM and 10 AM, buses serve Town & Country Resort by pulling into the parking lot to pick up riders (108-2 uphill and 108-5 downhill). Buses also pull into Golden Eagle Resort on uphill trips only. On all other trips, riders are served directly along Mountain Road, and Golden Eagle is directly served by request only.

On Tuesdays and Thursdays only, one additional downhill trip (4:15 PM) operates on variant 108-6 from Spruce Peak, serving the primary alignment as far as Stoweflake before deviating to serve the Stowe Shaw's and terminate there.

## RIDERSHIP

Route 108 is GMT's highest ridership Seasonal Local route. During the full service season, the route carries 480 passengers per weekday, 796 on Saturdays, and 544 on Sundays, and ranks 1<sup>st</sup> out of GMT's seven Seasonal Local routes in terms of daily ridership on all service days.

When Route 108 operates hourly service at the very beginning and end of the season, when the route carries an average of 140 passengers per weekday (ranking 3<sup>rd</sup> out of six routes in terms of ridership), 89 on Saturdays (4<sup>th</sup>), and 54 on Sundays (4<sup>th</sup>).

### Ridership by Stop

#### Weekdays

Traveling Uphill, the highest ridership stop is Stowe Town Hall with 74 boardings. Other high ridership stops include Top Notch (42 boardings), Edison Hill (36 boardings), and Commodores Inn (34 boardings). Most other stops have fewer than 20 boardings.

On Downhill trips, Spruce Peak has the most ridership activity by far with 130 boardings. This is followed by Fosters (40 boardings), Top Notch (36 boardings), Mansfield Base (34 boardings), and Gondola/Over Easy (26 boardings). All other Downhill stop have 10 or fewer boardings.

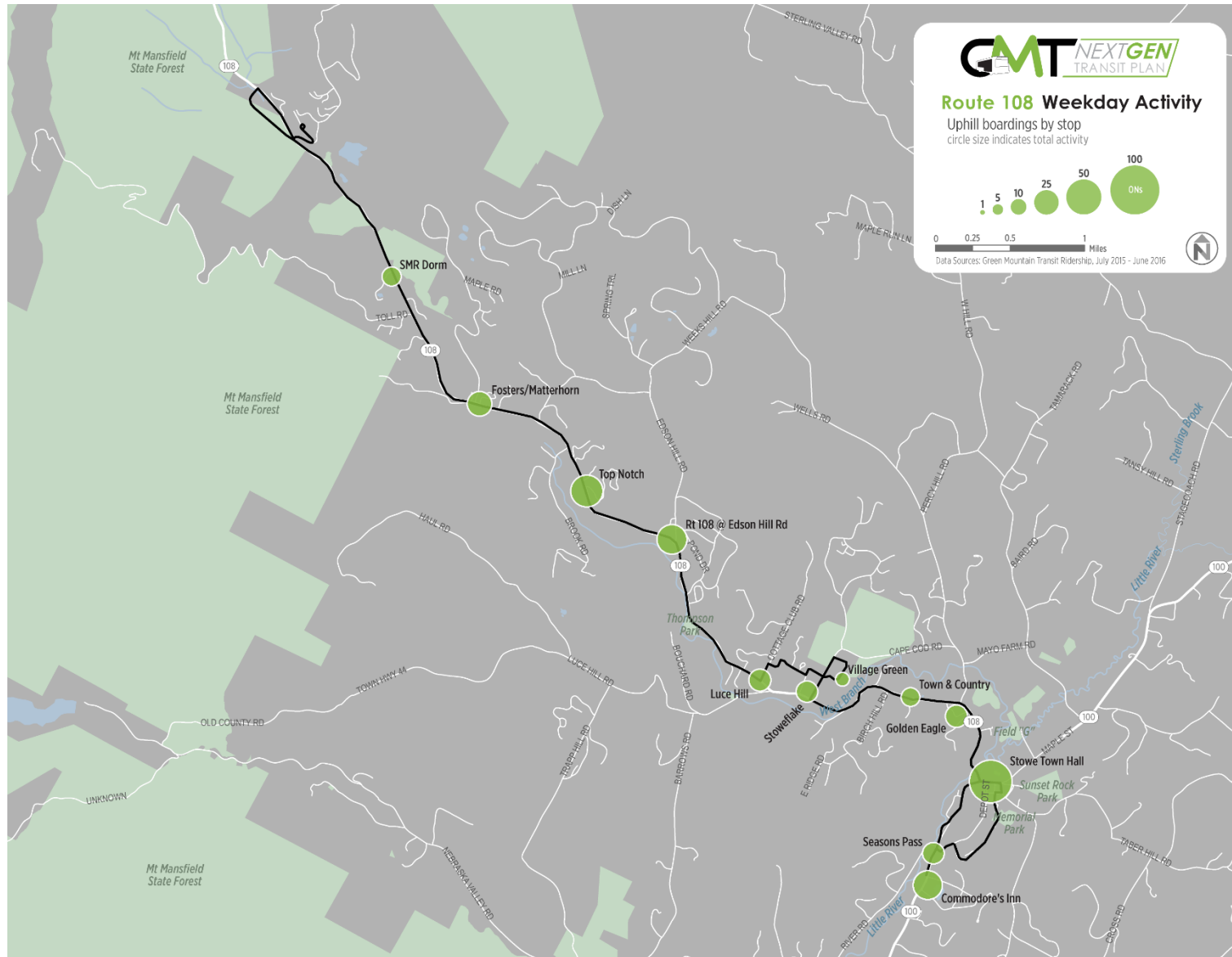
#### Saturdays

Saturday ridership is the highest ridership of the week. On Saturdays, Uphill ridership is highest at Edison Hill (87 boardings), Stowe Town Hall (78 boardings), Fosters (74 boardings), and Commodores Inn (63 boardings). Traveling Downhill, Spruce Peak has the highest ridership activity with 195 boardings, followed by Mansfield Base with 105 boardings. Except for Gondola/Over Easy, which has 64 boardings, no other Downhill stop has more than 30 daily boardings on Saturday.

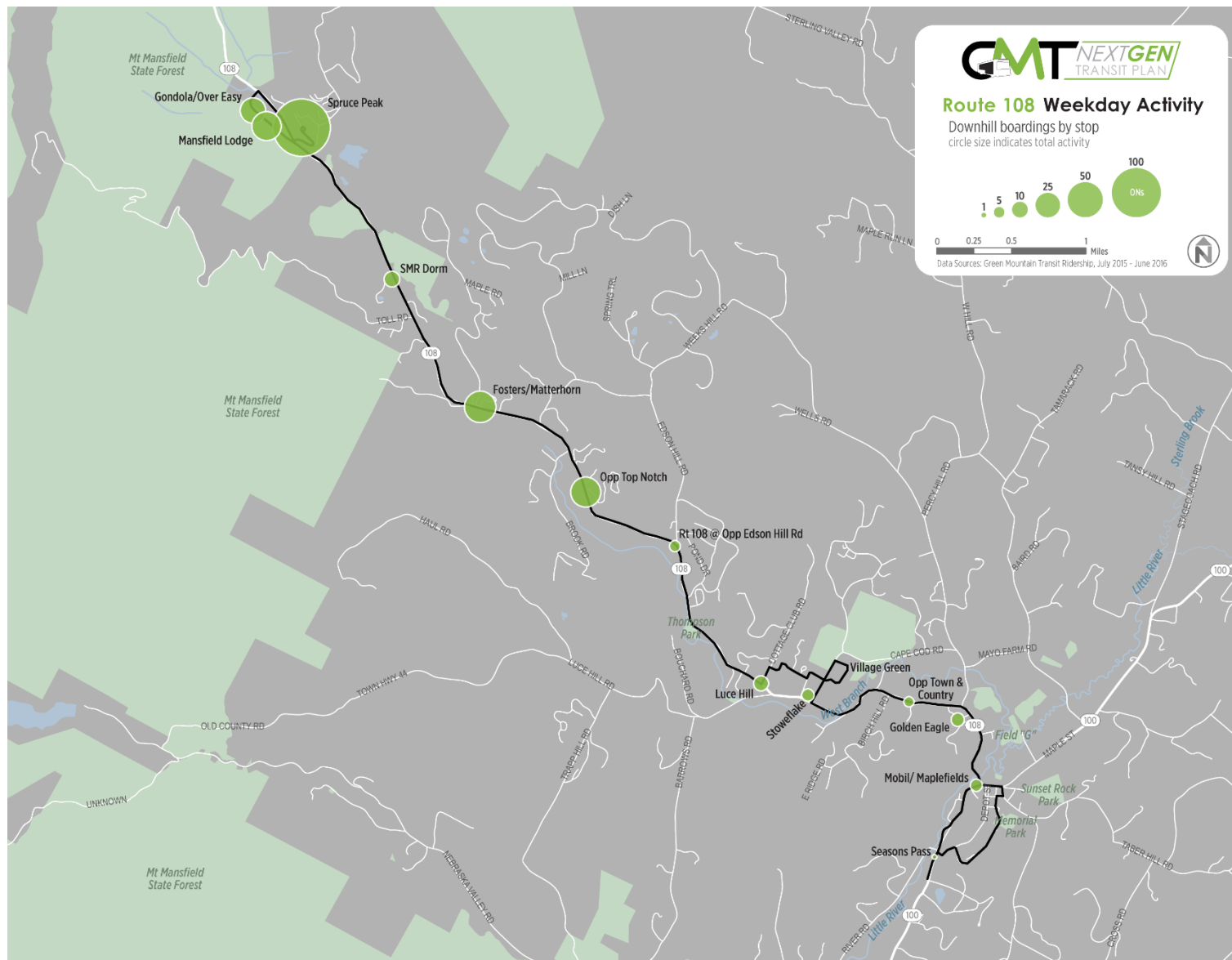
#### Sundays

On Sundays, Uphill ridership is highest at Stowe Town Hall (56 boardings), Fosters (54 boardings), and Edison Hill (52 boardings). On Downhill trips, Spruce Peak has the highest ridership activity with 146. Mansfield Base has 73 boardings, and Gondola/Over Easy has 47 boardings.

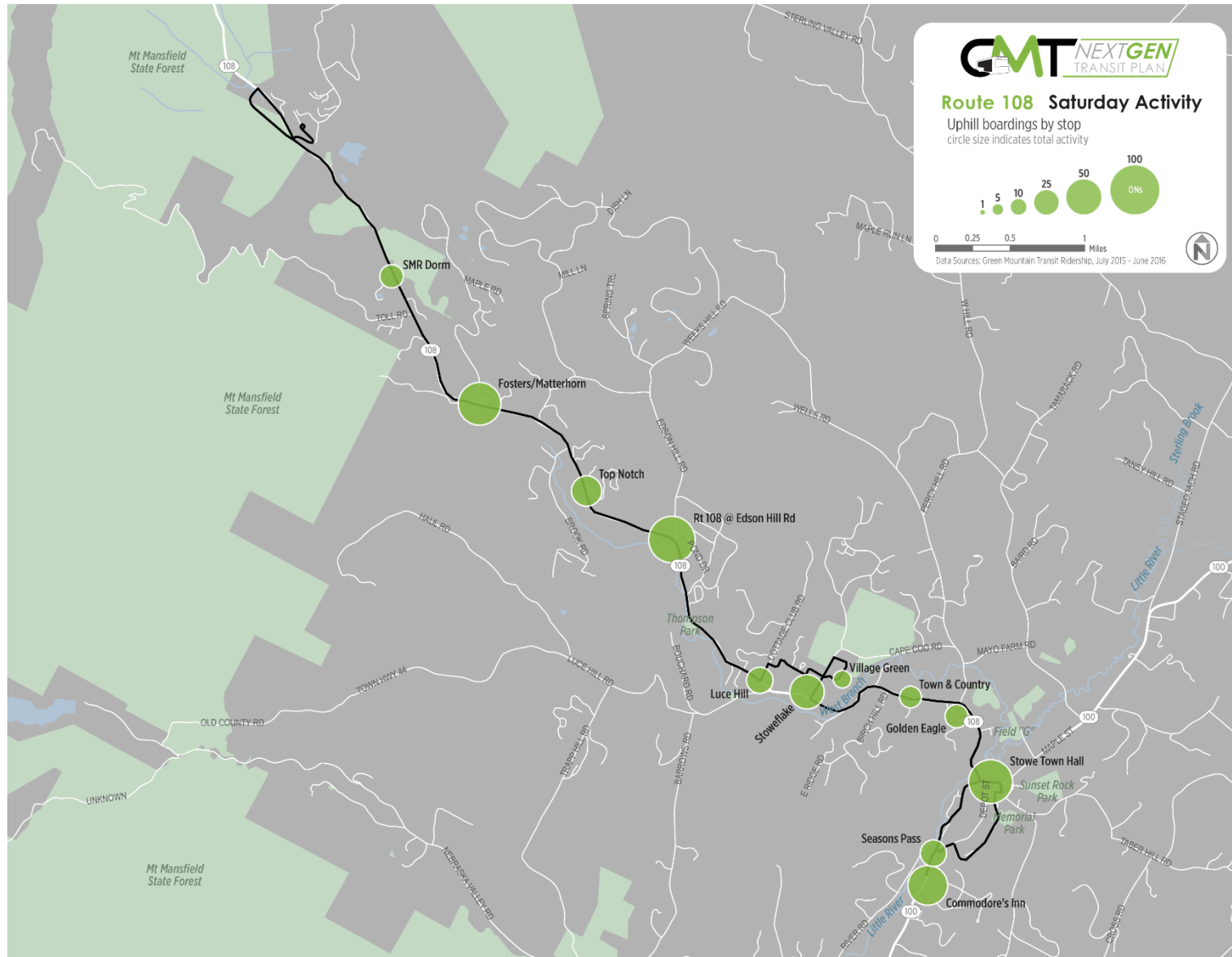
**Figure 2: Weekday Uphill Ridership by Stop**



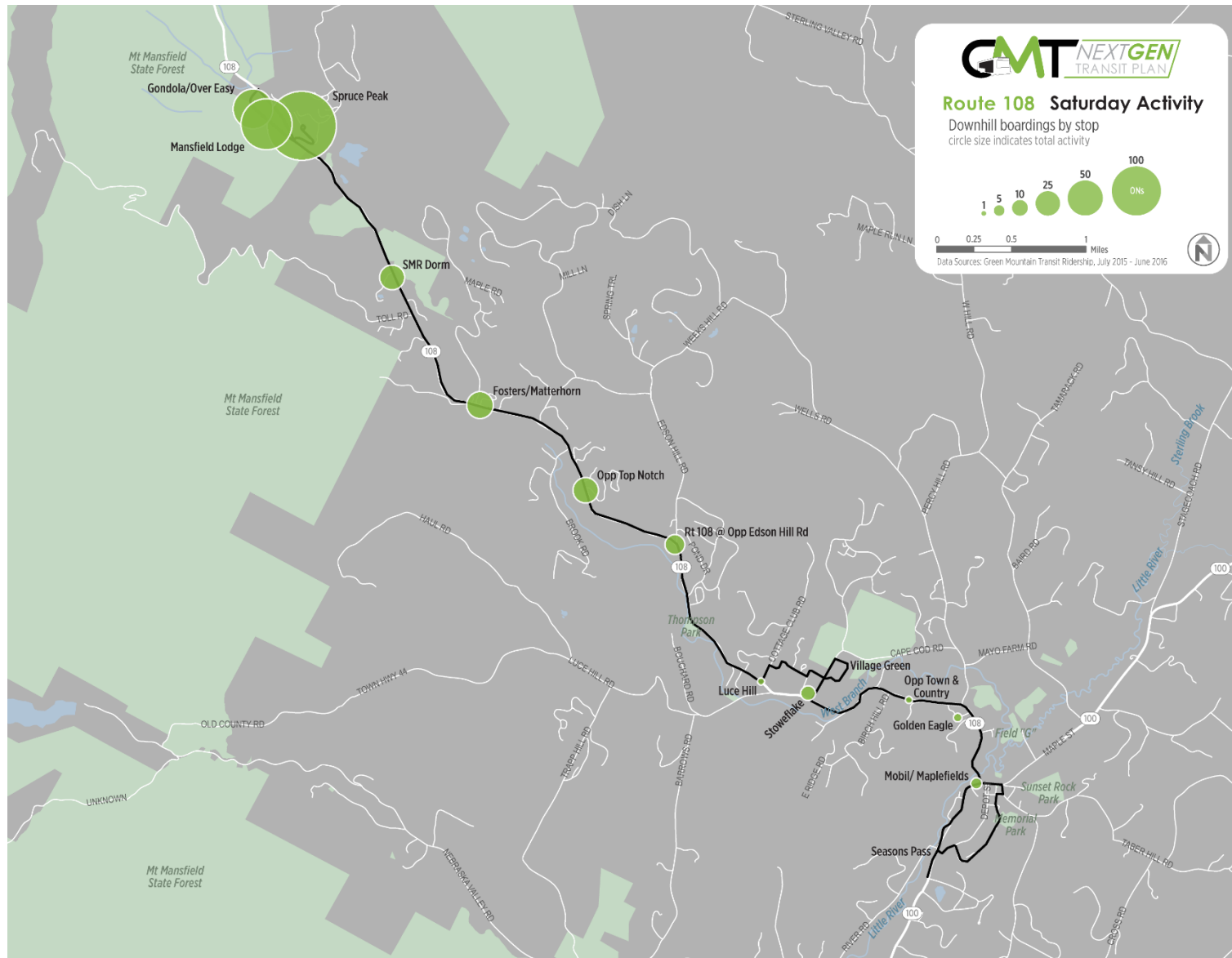
**Figure 3: Weekday Downhill Ridership by Stop**



**Figure 4: Saturday Uphill Ridership by Stop**

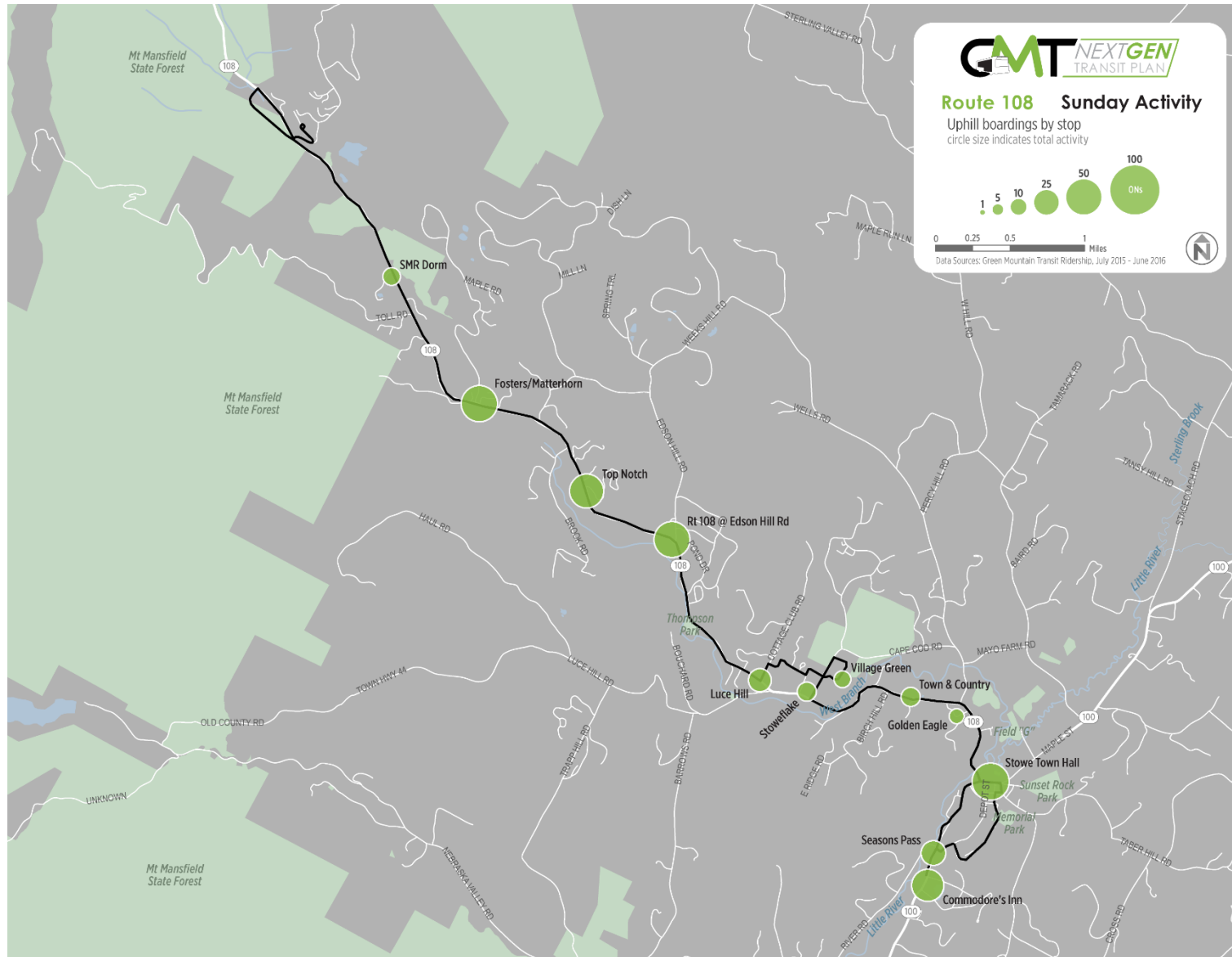


**Figure 5: Saturday Downhill Ridership by Stop**



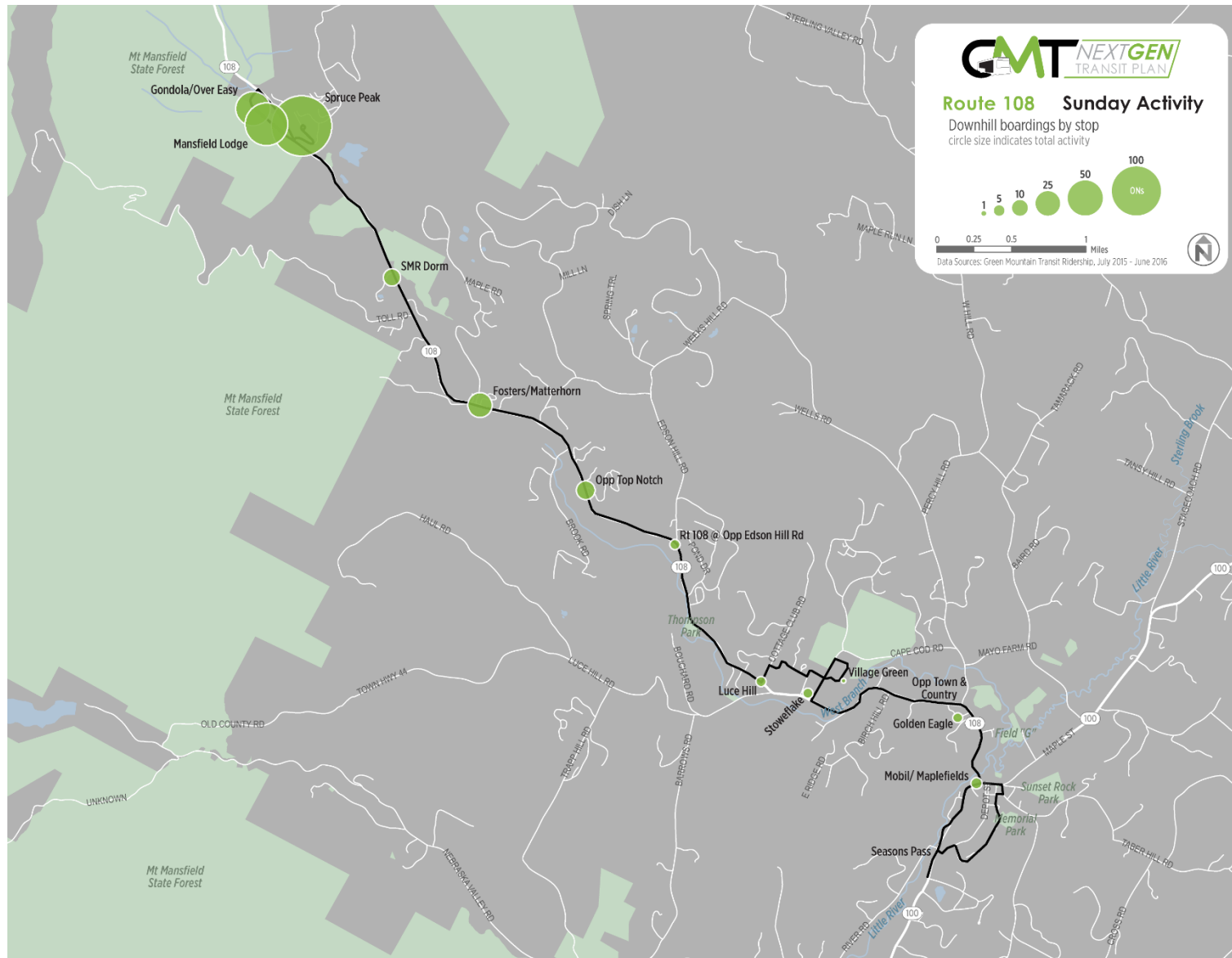


**Figure 6: Sunday Uphill Ridership by Stop**





**Figure 7: Sunday Downhill Ridership by Stop**

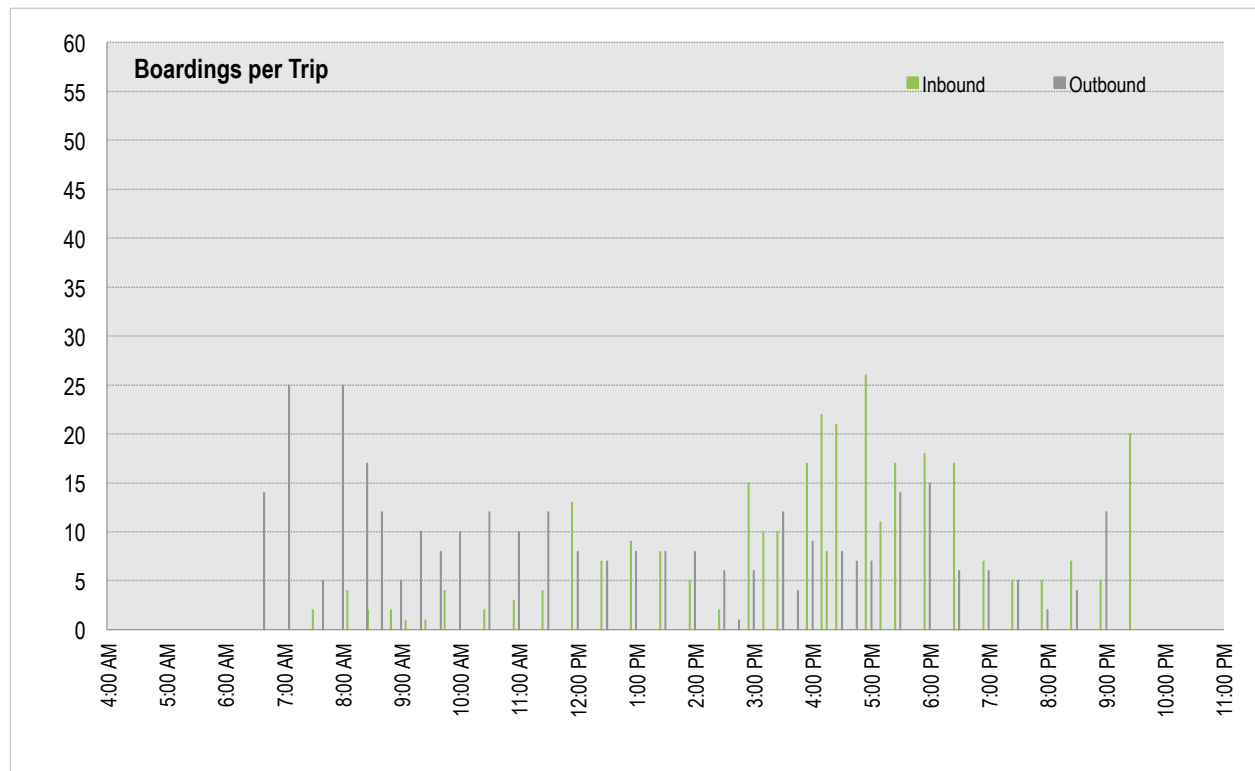


## Ridership by Trip

### Weekdays

Weekday ridership on uphill (outbound) trips is highest in the morning, reaching 25 riders on both the 7:05 AM and 8 AM trips. Ridership on trips during the midday is lower, generally between eight and 12 riders per trip, with a smaller peak later in the day at 5:30 PM (14 riders) and 6 PM (15 riders). Downhill (inbound) trips have few riders until later in the day, with most trips between 3 PM and 6:30 PM carrying between 10 and 26 riders. Ridership is lower throughout the evening except for spikes on the last trip in each direction.

**Figure 8: Weekday Ridership by Trip**



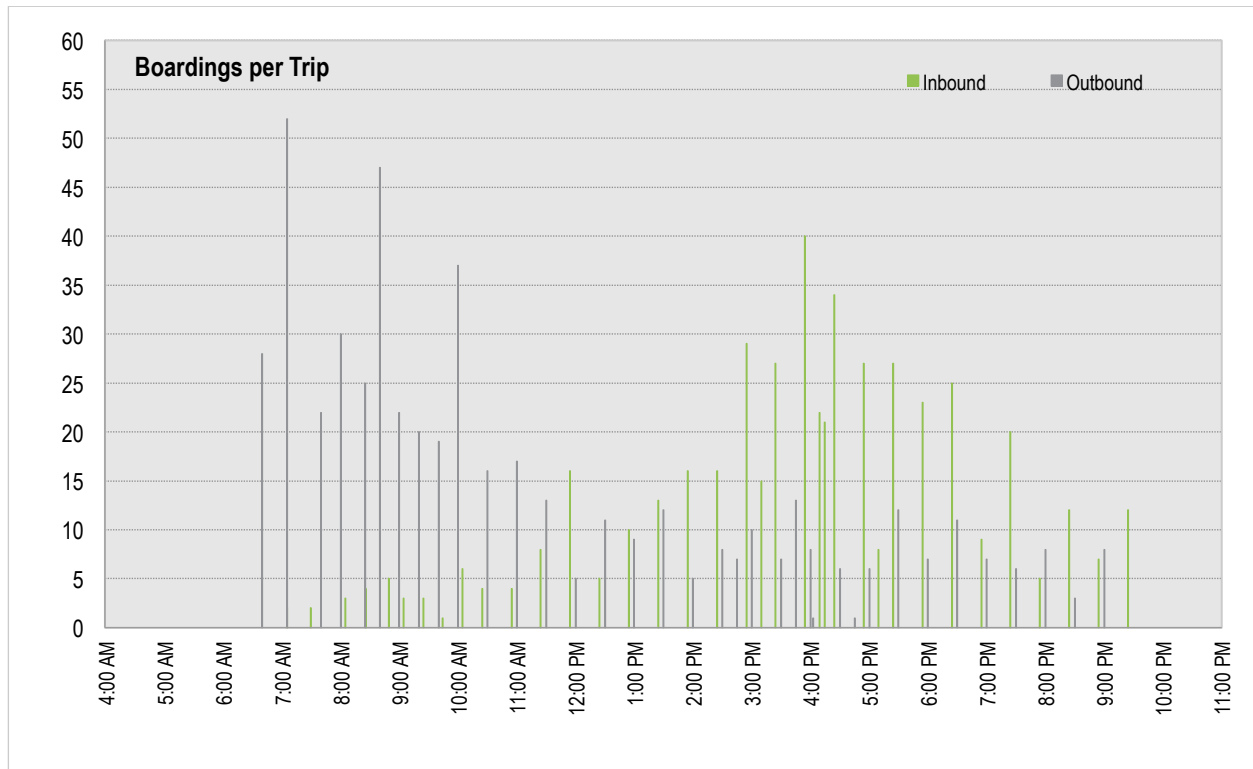
### Saturdays

Weekend ridership patterns are similar to weekday ridership, but with much higher volumes. On Saturdays, ridership on uphill trips is high throughout the morning: most trips carry between 15 and 30 riders, but the highest ridership trips are at 7:05 AM (52 riders), 8:40 AM (47 riders), and 10 AM (37 riders). Ridership is lower in both directions during the midday, then ridership increases on downhill trips starting around 3 PM. Most trips between 3 PM and 6:30 PM carry between 20 and 30 riders, but the highest ridership trips are at 3:55 PM (40 riders) and 4:25 PM (34 riders).

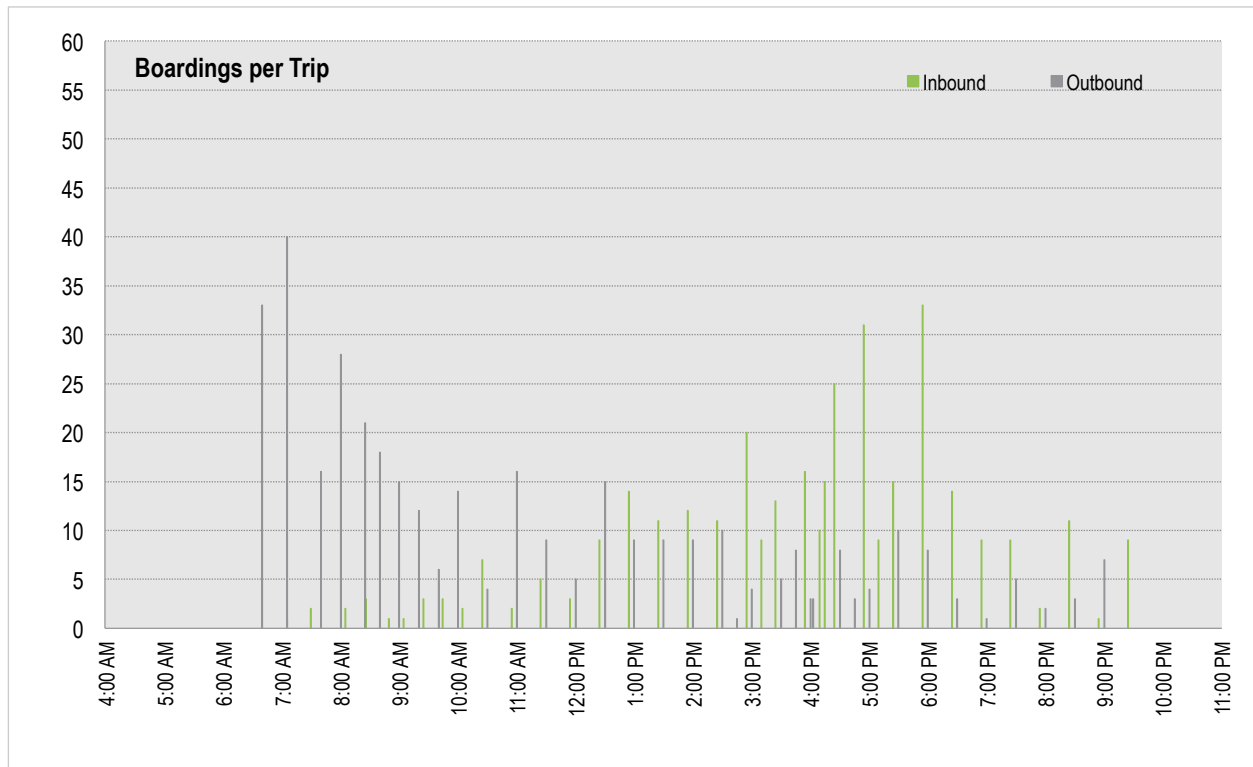
### Sundays

Ridership is slightly lower across the day, but with the same morning peak for uphill trips and afternoon/evening peak for downhill trips. The 7:00 AM uphill trip carries 40 riders, while the trip at

**Figure 9: Saturday Ridership by Trip**



**Figure 10: Sunday Ridership by Trip**



6:40 carries 33 riders. Downhill ridership is highest between 4:00 PM and 6:00 PM, reaching 31 riders at 4:55 PM and 33 riders at 5:55 PM.

## SERVICE PRODUCTIVITY

On weekdays, the route carries an average of 480 passengers per day, or 13.5 passengers per revenue hour (see Table 3). Ridership is significantly higher on weekends than on weekdays: On Saturdays, Route 108 carries 796 passengers, or 22.4 passengers per revenue hour. On Sundays, Route 108 carries 544 passengers, or 15.3 passengers per revenue hour. Route 108 meets the VTrans Successful threshold for productivity on Saturdays and Sundays and for cost-effectiveness on both weekdays and weekend days. However, it only meets the VTrans Acceptable threshold for productivity during weekdays. However, the route meets VTrans' Successful threshold for cost-effectiveness on all days.

**Table 3: Productivity Statistics**

	MONDAY-FRIDAY	SATURDAY	SUNDAY
<b>Average Daily Ridership</b>	<b>480</b>	<b>796</b>	<b>544</b>
<b>Pax/Revenue Service Hour</b>	<b>13.5</b>	<b>22.4</b>	<b>15.3</b>
VTrans "Successful" Threshold	14.55	14.55	14.55
VTrans "Acceptable" Threshold	7.27	7.27	7.27
<b>Pax/One-Way Trip</b>	<b>6.3</b>	<b>10.5</b>	<b>7.2</b>
<b>Pax/Revenue Mile</b>	<b>0.7</b>	<b>1.1</b>	<b>0.8</b>
<b>Cost/Passenger</b>	<b>\$5.32</b>	<b>\$3.21</b>	<b>\$4.69</b>
VTrans "Successful" Threshold	\$5.82	\$5.82	\$5.82
VTrans "Acceptable" Threshold	\$11.64	\$11.64	\$11.64

Source: Green Mountain Transit, May 2016; VTrans Performance Reviews (2016)

## SERVICE IMPROVEMENT OPTIONS

Opportunities to strengthen Route 108 are listed below. Some suggestions may be contradictory, as there is usually more than one approach to improving a route.

- **Add Earlier Uphill Trips:** Ridership data demonstrates that uphill ridership is high beginning at 7 AM, but there is a 40-minute gap until the next uphill trip. Operating service every 20 minutes or better from the start of service would better match demand for uphill trips.
- **Operate Service with Consistent Headways:** Route 108 operates every 30 minutes or better throughout the day. The majority of service operates on consistent headways, but some trips run at irregular intervals that necessitate referencing the schedule. Trips could be scheduled so that Route 108 runs every 20 minutes 6:30 AM – 10:00 AM, every 30 minutes 10 AM – 2:30 PM, every 15 minutes 2:30 PM – 5 PM, and every 30 minutes 5:00 PM – 10:00 PM.
- **Discontinue Trips to Shaw's:** Route 108 currently provides two trips per week to Shaw's Supermarket, once on Tuesday afternoon and once on Thursday afternoon. This variant only serves part of the route's main alignment, operates on only one trip, and complicates the route's schedule for passengers. Route 103 Morrisville Shopping Shuttle already serves Shaw's five days a week year-round, with connections in downtown

Stowe to Route 108. An additional Route 103 trip could be added later in the afternoon if there is demand.

- **Discontinue Pull-In Service at Town & Country Resort and Golden Eagle Resort:** Route 108 buses currently pull into the parking lots of Town & Country and Golden Eagle on select morning trips. These variants make service inconsistent and complicate the route for passenger. The front door to Town & Country is approximately 100 feet from Mountain Road, and on all other trips riders board the bus along the road. Golden Eagle is a 500-foot walk to Mountain Road. Maintaining Route 108 service on Mountain Road at all times would make travel times more consistent, improving reliability, and would make the schedule simpler and easier to understand.