Public Transit Route Performance Report

Annual Report for State Fiscal Year (SFY) 2023

January, 2024

Prepared for VTrans by:
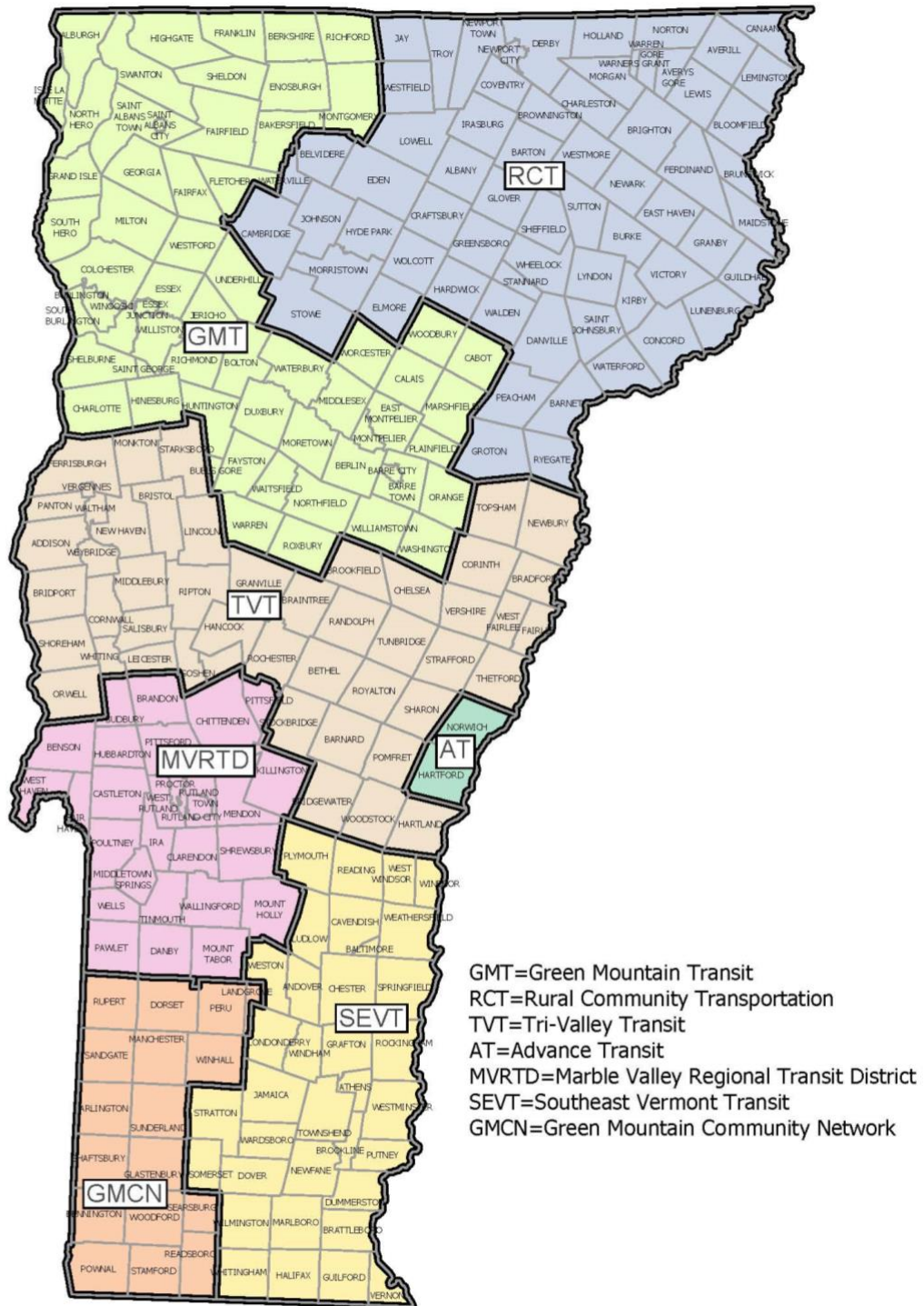
KEY OF VERMONT TRANSIT SYSTEMS AND DIVISIONS

AT	Advance Transit
GMCN	Green Mountain Community Network, Inc.
GMT-Rural	Green Mountain Transit-Rural (previously GMTA)
GMT-Urban	Green Mountain Transit-Urban (previously CCTA)
MVRTD	Marble Valley Regional Transit District
RCT	Rural Community Transportation, Inc.
SEVT-MOOver	Southeast Vermont Transit (previously DVTA and CRT)
TVT-MID	Tri-Valley Transit, Inc. Middlebury Division (previously ACTR)
TVT-ONW	Tri-Valley Transit, Inc. Orange-North Windsor Division (previously Stagecoach)
VABVI	Vermont Association for the Blind and Visually Impaired

Figure 1 illustrates the service areas of Vermont's public transit providers.

Figure 1: Service Areas of Vermont's Public Transportation Providers

Map Produced by the Vermont Agency of Transportation Public Transit Section - 10/16/2023

GMT=Green Mountain Transit
RCT=Rural Community Transportation
TVT=Tri-Valley Transit
AT=Advance Transit
MVRTD=Marble Valley Regional Transit District
SEVT=Southeast Vermont Transit
GMCN=Green Mountain Community Network

EXECUTIVE SUMMARY

VTrans manages Vermont's public transit program, and an essential element of this management is monitoring the performance of all routes and services operated by the state's transit providers. This Public Transit Route Performance Review for state fiscal year (SFY) 2023 presents the results of this annual performance evaluation for public transit services across Vermont. This process helps to ensure that public investment in transit is well spent by comparing performance at the route level to appropriate standards and identifying routes and services that need improvement.

This is the fourth year using a new evaluation rubric recommended in the 2020 Public Transit Policy Plan. Rather than using two separate route evaluation measures, as reports prior to SFY 2020 did, this report focuses on one measure to determine the performance of a route: cost effectiveness. The report includes analysis of both ridership and cost *efficiency*, comparing Vermont routes to sets of national peers, as has been done in the past. But the ratings of acceptable, successful or underperforming for the cost-effectiveness measure are based on the comparison of a route's performance to the average performance of Vermont routes by class, rather than the comparison to national peers.

Of course, comparisons with performance reports from prior years cannot ignore the huge impact that the COVID-19 pandemic has had on transit ridership. While ridership rebounded in SFY 2022 with a 45% gain from the low point in SFY 2021, and continued to grow another 20% in SFY 23, overall totals are still about 17% below the levels of SFY 2019. Commuter-oriented services continued to lag behind other types of routes in the recovery.

> In SFY 2023 Vermont's public transit systems provided 4.26 million trips. This total is 20% higher than last year's ridership, as the state continues to rebound from the pandemic.

As of this writing (December 2023), even though statewide transit ridership is still below pre-pandemic levels, some routes have fully recovered and even exceeded ridership from before the pandemic. In normal circumstances, when routes are shown to be underperforming through the analysis in this report, VTrans works proactively with the subject public transit provider to determine what, if any, strategies may result in increased performance for the route. While the transit ecosystem is not yet normal, it is possible to think critically about route performance. VTrans continues to look for improved performance of services but remains cognizant of factors related to the pandemic that are outside the control of the transit agencies.

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INTRODUCTION

The Route Performance Report (RPR) is developed annually to document the performance of public transit services all over Vermont. The results are presented to the Vermont Legislature as part of VTrans' consolidated transportation system and activities report to the House and Senate Committees on Transportation. The Vermont Agency of Transportation's Policy, Planning, and Intermodal Development (PPAID) Division, specifically the Public Transit Section, is responsible for managing the state's public transit program. This report documents the Public Transit Section's monitoring efforts to ensure that public investment in transit is well spent.

Vermont has seven transit providers, though this report still refers to divisions of two agencies that reflect mergers which occurred over the prior decade. Tri-Valley Transit services in the Middlebury region are shown as TVT-MID and the services in the Orange/North Windsor region are shown as TVT-ONW. Green Mountain Transit continues to be considered as two separate divisions: GMT-Urban and GMT-Rural. This distinction reflects the urban/rural split in the Federal Transit Administration (FTA) program. VTrans authorizes GMT-Urban to be a direct recipient of funds from the FTA, whereas VTrans maintains oversight responsibility for the GMT-Rural division.

In addition to the seven transit systems in Vermont, this performance evaluation covers the volunteer driver services provided by the Vermont Association for the Blind and Visually Impaired (VABVI), the Go Vermont vanpool program operated under contract by Enterprise, and the intercity bus services provided by Greyhound and Vermont Translines. Other intercity services (e.g., Megabus, Yankee Trails, and Greyhound's Montreal to Boston route) operate in Vermont and cover their costs through fare revenue. However, the private carriers do not provide data on these routes to VTrans and so they are not reported on here. Demand response service operated by Special Services Transportation Agency in Chittenden County, by Champlain Islanders Delivering Essential Resources in Grand Isle County and by Community Rides Vermont in Washington County are included in the figures for GMT-Urban and GMT-Rural as these agencies operate service under contract to GMT.

METHODOLOGY OVERVIEW

VTrans conducts monitoring of transit services by evaluating statewide trends as well as route-level performance. Several data sources were used to develop this annual report:

- The transit systems provide route-level performance data to VTrans in §5311 – Rural Transit Program Monthly Service Indicator Reports (SIRs).

- VTrans collects data on all demand response programs from the transit providers annually.

- VTrans monitors operating budget data by funding source (federal, state, and local) in its grant tracking spreadsheets, and the transit systems provide their profit and loss statements to analyze local share.

- GMT-Urban's route statistics and budget data were provided directly by GMT.

- In order to calculate operating costs more precisely and consistently at the route level, the transit systems provided operating cost information broken down in such a way to allow for the development of two-point cost models (see further discussion below).

VTrans groups public transit routes and services throughout the state in eight categories, described below. Prior to SFY 2023, there had been eight categories, but a significant change was made this year to add "Vanpool" as a new class and to merge "Express Commuter" and "Rural Commuter" into a single category, "Commuter." Vanpools had never been included in prior performance reports, but the commuters who participate in vanpools can be considered transit riders and the subsidy VTrans provides comes out of its overall budget. Note that the vanpool program does not appear in the charts at the end of the report because it is just a single statewide program and there is no standard for comparison.

The change to the commuter categories was made to reflect the diminished ridership demand for express commuter routes, leading them to be more comparable to rural commuter services. Furthermore, one of GMT's LINK Express routes had been transferred to TVT in SFY 2022 and the other TVT express routes make more sense as rural commuter routes, given their service characteristics. Rather than maintain the "express" category for three GMT-Urban routes plus the commuter service to the Upper Valley operated by SEVT, it was decided to merge all commuter routes into a single category.

Based on recommendations in the 2020 Public Transit Policy Plan (PTPP), the primary method of evaluating route performance changed in SFY 2020 compared to prior years. Rather than using two separate route evaluation measures—productivity and cost-effectiveness—this report focuses just on the latter measure to determine the performance of a route. Basing the rating on just the net cost per passenger trip simplifies the evaluation and avoids cases where a given route might have been underperforming on one measure but satisfactory on the other measure. Ultimately, the cost borne by the taxpayer for a ride taken on a transit vehicle is the most relevant measure of the performance of that transit service.

With the sole focus of the evaluation on cost effectiveness, VTrans determined that it was worthwhile to ensure greater consistency across providers and greater precision at the route level in the estimation of operating costs. In prior years, each provider calculated costs at the route level and reported them through its monthly service indicator reports. These reports did not include details on how the costs were calculated, but some operators seemed to be using a "single-point" cost model based on vehicle hours of service. That is, the agency calculated its total bus and van operating cost, divided by the total bus and van vehicle hours to determine an hourly rate, and then used that rate to estimate the costs at the route level. Other operators used complex cost allocation worksheets that did not necessarily fairly represent the cost of service at the route level.

For this report, the analysis team requested financial information from each provider to be able to divide operating costs into three main categories: mileage-related costs, costs associated with volunteer driver or taxi service, and all other costs. Mileage-related costs include fuel, parts and other maintenance labor and expenses. Volunteer driver and taxi costs include mileage reimbursement and the administrative labor needed to schedule and dispatch volunteer and taxi trips. Other costs include all driver and administrative labor and associated fringe benefits, as well as other overhead costs. This information, in conjunction with other data on the number of revenue miles and revenue hours operated, allowed the team to estimate a "two-point" cost model for each provider with separate rates for vehicle mileage and vehicle hours.

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The two-point models were then applied to each route to re-estimate the total operating cost. The impact of this was generally to increase the costs for commuter and longer-distance routes relative to local routes, as the former accumulate many more miles and thus generate higher maintenance costs. Because this model was based on *revenue* miles and hours, it did not account for large differences among non-revenue service (trips from and back to the garage to the beginning and end of revenue service). For a few routes that are known to have large amounts of non-revenue miles and hours, adjustments were made to costs to reflect this situation. In future years, the total vehicle miles and hours may be used as the basis for the cost estimates.

The other significant change in the evaluation method made in 2020 was that the "acceptable" and "successful" thresholds are no longer based on national peer groups, but rather on a comparison to the average of the routes or services in that class. For each class, the acceptable net cost per passenger was set equal to 1.5 times the class average, and the successful net cost per passenger was set equal to two thirds of the class average. Thus, any route with a net cost per passenger between 66% and 150% of the class average is considered acceptable, while those with costs below 66% of the average are successful and those with high costs more than 150% of the average are underperforming.

To preserve continuity with past reports, this report includes (in Appendix A) analysis of both ridership and cost *efficiency*, comparing Vermont routes to sets of national peers. Ridership efficiency is the same as productivity (riders per unit of service) and cost efficiency is the gross operating cost per unit of service. For most categories, these efficiency measures are based on the vehicle revenue hour of service, thus measuring the number of people who boarded and the cost to operate during each hour that a bus, van, or car was operating in service. The exception to this are the Urban category, in which efficiency is measured in boardings and cost per vehicle revenue mile, and the Intercity category, in which efficiency is measured in boardings and cost per vehicle trip. Routes in urban areas tend to travel slower than rural or small town routes, due to higher levels of congestion, and so measuring based on miles does not "penalize" an operator for running a route in areas with more traffic. Intercity trips tend to have relatively less passenger turnover during the trip, and so the capacity of the vehicle limits the number of people who can board.

Peer groups were established for each category and then the peer average ridership and cost efficiency was calculated. For the Urban, Tourism, and Commuter categories, the peer groups consisted of agencies selected in prior years whose statistics were updated, while for other categories, new sets of peers were chosen based on their similarity in overall operational size to the Vermont operators. The calculated averages were based on the most recent available data from the National Transit Database (report year 2022). As stated above, the peer averages are not evaluation thresholds, but rather serve as reference points to compare the productivity and cost of Vermont services to those of similar operations around the US. It is very important to keep in mind the effects of the pandemic on peer statistics, as peer data reflect ongoing impacts of the pandemic, while the Vermont statistics reflect a greater degree of recovery.

Transit Service Categories

The service category descriptions below serve as guidelines; some routes or services may not fit every description perfectly. VTrans may also consider ridership and cost data to group similar services together.

1) **Urban**: Routes operating primarily in an urbanized area with all-day, year-round service. The city served by the route has a population of at least 17,500 people and high-density development.

2) **Small Town**: Routes operating in towns with 7,500 to 17,500 people with all-day, year-round service. The route typically stays within one town or two adjoining towns and does not run through long stretches of rural areas.

3) **Demand Response**: Primarily service that does not operate on a fixed schedule nor on a fixed route; also includes routes that might otherwise fit in the "Rural" category but operate less than once a day (i.e., shopper service operates only once a week or a few times a month). This category includes all NEMT service in Vermont, ADA complementary paratransit service, trips brokered to taxi services, and trips operated by volunteer drivers. Volunteer drivers use their own vehicles, donate their time to transport riders, and are eligible to receive reimbursement for mileage at the IRS-approved rate. Two microtransit services are listed in this category separately from the rest of demand response service. In SFY 2024, microtransit will likely be its own category as there should be up to five services in operation.

4) **Rural**: Routes operating in towns with fewer than 7,500 people or connecting two small towns running through undeveloped areas. These routes operate year-round with daily service, but the frequency may be low (more than one hour between trips).

5) **Commuter:** Routes that operate primarily during peak commute periods and are intended to serve work trips. Rural examples of these routes usually connect several small towns or villages with intermediate stops and operate primarily on state routes in rural areas. Some routes connect outlying areas to the nearby city, with a significant portion of the mileage in rural areas. A few commuter routes operate on express highways and serve the Burlington metropolitan area and the Upper Valley.

6) **Tourism**: Seasonal routes that serve a specific tourist trip generator, such as a ski area.

7) **Vanpool**: The Go Vermont vanpool program, operated through a contract with Enterprise covers subsidized vanpools anywhere in Vermont.

8) **Intercity**: Routes operating regularly scheduled, fixed route, and limited stop service that connects places not in close proximity and makes meaningful connections to the larger intercity network.

The list of routes and services in each category is not identical to SFY 2022. As mentioned earlier, all commuter routes are now in one category. This is the first year that the Go Vermont vanpool program appears in this report. SEVT's new microtransit service in Windsor—the MicroMOO—is shown in the demand response category. RCT's tourism route serving cyclists at Burke Mountain in the summer was renamed the Crown Connector. RCT's Jay-Lyn Shuttle was moved from the Small Town class to the Rural class, where it had been until SFY 2018. GMT-Rural's City Commuter was moved from the Commuter category to Small Town, since it serves local stops along its entire alignment. SEVT's Okemo Seasonal service was completely revamped in SFY 23 to be a village service in Ludlow and Proctorsville, connecting to Okemo, rather than a long-distance commuter service. It was therefore reclassified as a Tourism route.

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STATEWIDE TRENDS

This section describes the trends in Vermont's transit ridership and costs in recent years, before delving into route-level performance in the next section.

Transit Ridership

Figure 2: Statewide Ridership

Year	Ridership
2023	4,273,000
2022	3,541,000
2021	2,440,000
2020	4,155,000
2019	5,121,000
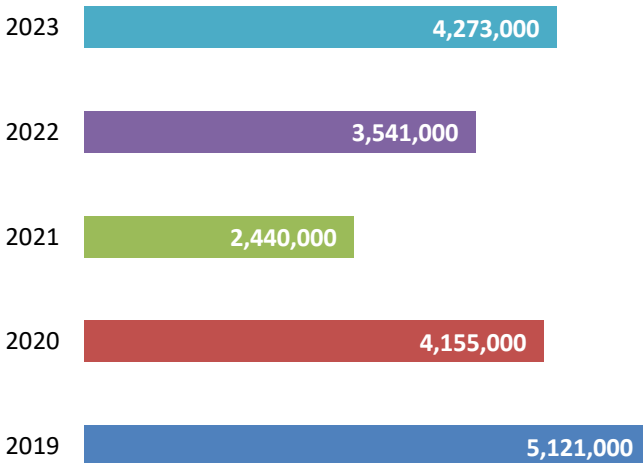
In SFY 2023 Vermont's public transit systems provided 4.27 million trips. This figure represents a 21% increase over the total from SFY 2022, but still remains about 17% below the ridership carried in SFY 2019.

As is true every year, about half of Vermont's transit trips occur in the Chittenden County region. In SFY 2023, the share is 50.6%. Even though Chittenden County has only about a quarter of Vermont's population, the density of the Burlington metropolitan area results in a much higher number of transit trips on a per capita basis.

Transit Costs

In SFY 2023 transit operating costs totaled $59.96 million, a 13.2% increase over SFY 2022 (see Figure 3). The increase is mainly due to more service being operated (especially demand response and tourism routes), as well as increasing fuel prices and labor costs as inflation and a driver shortage affected all of the state's transit providers. Demand response services saw an increase in cost of $3.5 million, while the Urban and Rural categories had increases below the statewide average. The subsidized intercity service cost less in SFY 2023 than the prior year because of increased ridership and fare revenue. The Chittenden County region accounted for 32% of the total costs, which is slightly below its typical share.
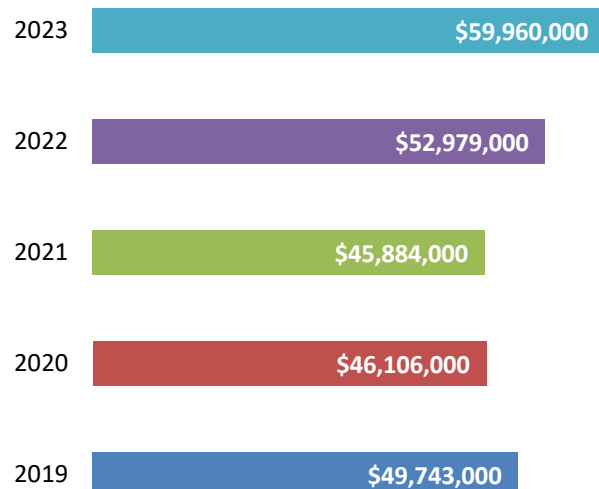
Figure 3: Statewide Operating Costs

Year	Operating Costs
2023	$59,960,000
2022	$52,979,000
2021	$45,884,000
2020	$46,106,000
2019	$49,743,000

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Figure 4: Cost per Trip

Cost per Trip

In SFY 2023 the average cost for a transit trip in Vermont was $14.03, a decrease of 6% from the prior year (see Figure 4). The improvement in cost effectiveness is due to increased ridership as travelers returned to the transit system. Note that this calculation involves the gross cost per trip, and so the lack of fare revenue in SFY 2023 has no impact on this statistic. As ridership continues to recover and inflation eases, the cost per trip would be expected to drop in SFY 2024.

Year	Cost per Trip
2023	$14.03
2022	$14.96
2021	$18.81
2020	$11.10
2019	$9.71
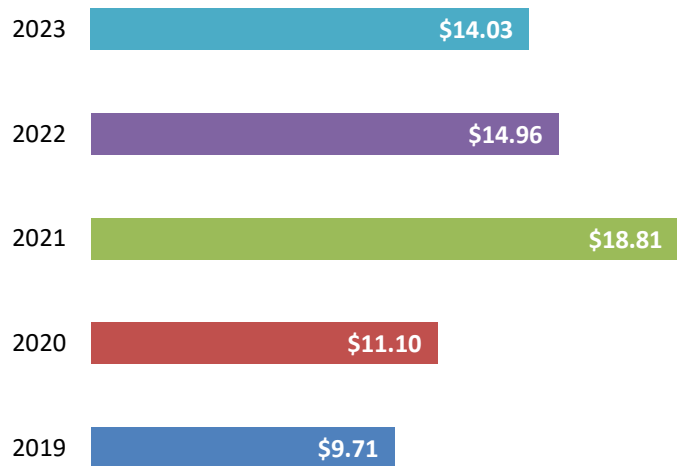
RESULTS BY SERVICE CATEGORY

Vermont's transit systems provide an array of services to meet various markets and needs. The Urban service category generates the highest share of ridership statewide, followed by Small Town and Demand Response. Figure 5 illustrates FY 2023 ridership by service category as a share of the statewide total. Compared to years before the pandemic, the Urban category comprises a larger share, mainly because other service types, especially commuter-oriented routes, suffered steeper ridership losses during the pandemic. Prior to FY 2021, the Urban share was generally in the 41-43% range, but this share grew to 48% in SFY 2021. In SFY 2022 and 2023, the share settled at 46% as other services (commuter and tourism routes) began to recover. Small Town routes saw their share grow slightly, from 18% last year to 19% this year. The share of Demand Response grew from 13% to 15% of the total, and Tourism grew from 9% to 10%. At its peak in 2016, commuter routes carried 17% of the total ridership in Vermont. That figure dropped to 10% during the pandemic and is down to 8% in SFY 2023 as other types of routes recover more quickly than commuter services. Adding the vanpool program to the mix did not have a significant impact on any of the percentages, as it represents less than half a percent of the statewide total.

Figure 6 shows the operating costs per service category as a percentage of statewide costs in SFY 2023. Because costs were not affected as much by the pandemic as ridership was, the percentage shares of costs in SFY 23 were similar to those in prior years. Costs grew for almost all categories, except Intercity, which dropped because of increased fare revenue as ridership recovered. Urban costs grew the slowest, at just under 4%, while Small Town, Tourism and Demand Response all grew by double digits. Increased fuel prices, higher labor costs, raised mileage reimbursement rates, and general inflation affected all routes in the state. The sharper increases in the Small Town and Tourism categories were due to the City Commuter being added to Small Town, Okemo Seasonal being added to Tourism, and an increase in service on GMT's Mountain Road Shuttle.

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Figure 5: Transit Ridership by Service Category

Vanpool 0.4%
Intercity Bus 0.7%
Rural 4.1%
Commuter 7.5%
Tourism 9.7%
Urban 45.6%
Demand Response 13.2%
Small Town 18.8%
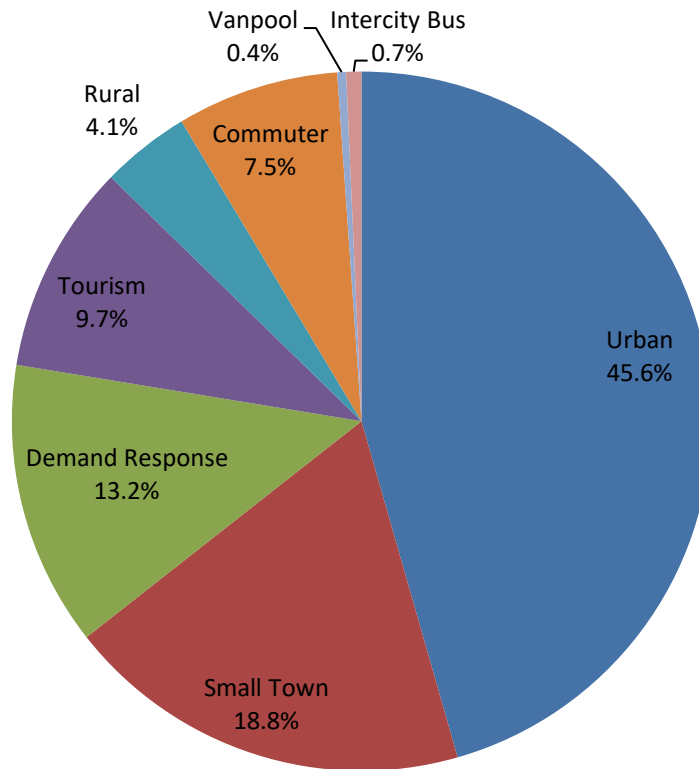
Figure 6: Gross Operating Costs by Service Category

Vanpool 0.5%
Intercity Bus 2.1%
Commuter 16.2%
Urban 19.5%
Rural 5.5%
Tourism 3.9%
Small Town 13.2%
Demand Response 39.2%

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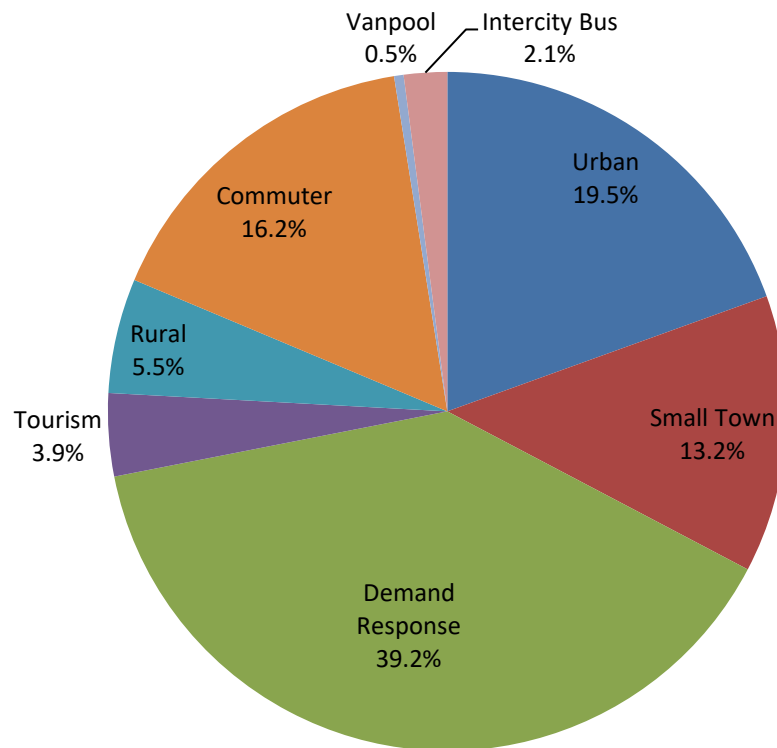
Not surprisingly, Urban service consumes a smaller percentage of the total cost compared to its share of the total ridership, because urban bus routes, which can carry 40 people or more on some trips, are more cost-effective on a per passenger basis. In contrast, Demand Response service consumes 39% of the total cost but only accounts for 13% of the total riders. This reflects the fact that many demand response trips are carrying one person, or at most a few people, at a time. Commuter and Intercity Bus consume greater shares of the cost than of the ridership because these trips are generally longer and thus more costly than local trips in an urban or small town area. Tourism services are generally short and mostly quite productive, and thus are more similar to urban routes in their performance.

These differences in the cost per trip by mode are shown more explicitly in Figure 7. It should be noted that for the statewide figure and the first six classes, the cost per trip is the gross operating cost divided by boardings, but for vanpool and intercity, the figure shown is the subsidy per trip, net of intercity passenger fares and fees for vanpool participation. Urban, Small Town, Tourism and Vanpool had a cost per trip that was lower than the statewide average. Compared to SFY 2022, the cost per trip dropped for all route classes, except for Demand Response, due to higher ridership. Higher ridership for bus routes almost always translates into higher productivity (efficiency), but this is not usually the case for demand response services, where additional demand (absent changes in policies regarding eligibility) translates into additional van and volunteer trips with no appreciable change in productivity. The decreases were greatest for Rural (-17%) and Urban (-13%) and least for Commuter (-4%) and Tourism (-5%). Demand Response and commuter routes were the most expensive types of service on a per trip basis. Demand Response trips would be even more expensive were it not for the fact that 38% of all such trips were operated by volunteer drivers who were paid only for the mileage they accumulated and nothing for their time.

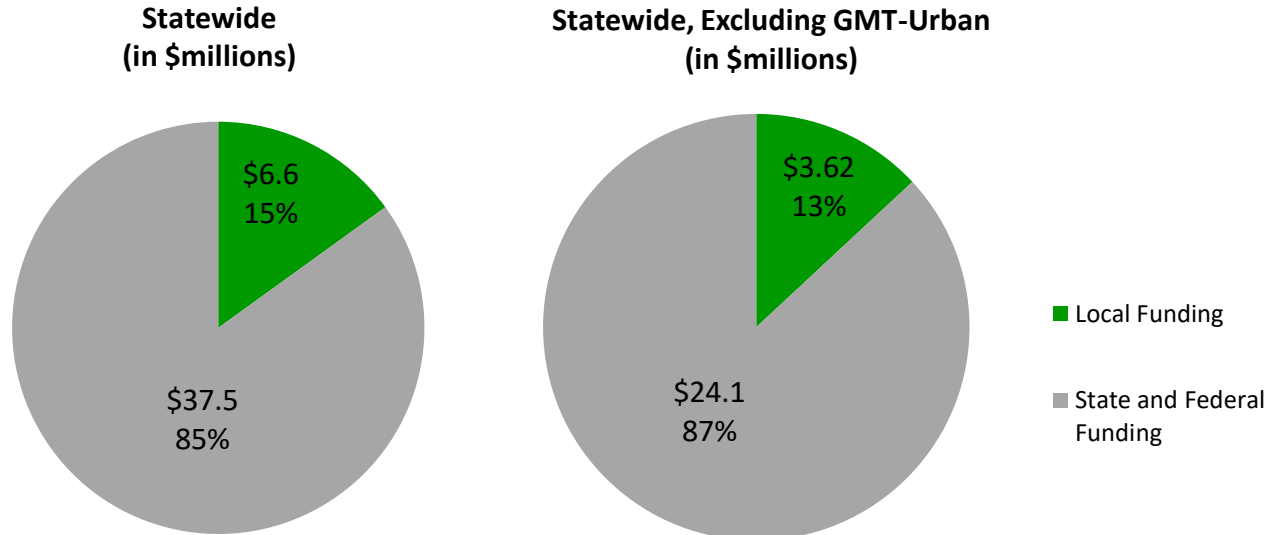**Figure 7: Cost per Trip by Service Category**
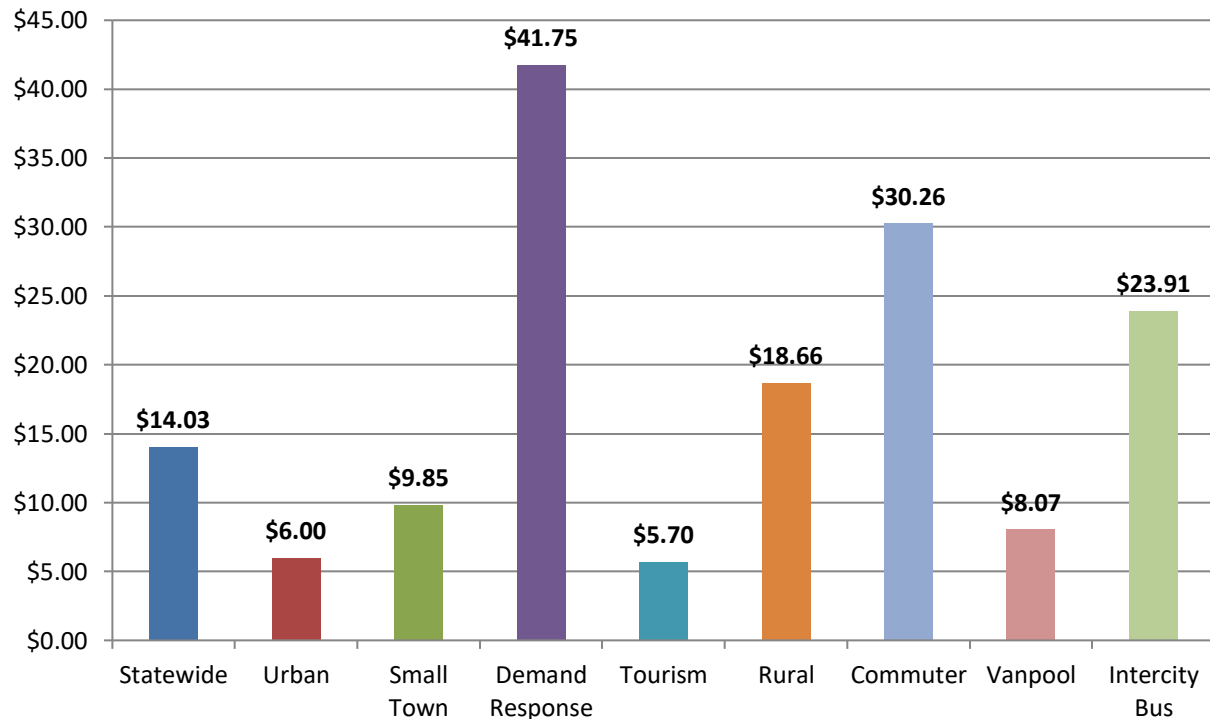
LOCAL SHARE

The Public Transit Section also examines the transit providers' performance in generating local revenue. The Vermont Public Transit Policy Plan establishes a statewide goal that 20% of the funds for public transportation should be generated locally. This is a broad interpretation of local funding to include fare revenue, contributions from individuals, contracts with outside agencies, and payments from cities and towns.[1] In other words, local share refers to the percentage of transit expenses that are *not* covered by the Federal Transit Administration, the Federal Highway Administration, or the State (and excludes State funding for capital, Rideshare, RTAP, JARC, and Medicaid).

Figure 8 displays the local share of transit operating budgets statewide in SFY 2023, based on actual operating expenses from VTrans' grant tracking spreadsheets. These figures exclude funding for Medicaid transportation, and thus are less than the total shown in Figure 3. The continued statewide policy of fare-free service resulted in lower-than-normal local shares. The local shares in SFY 2023 are higher than in the prior two years because the federal aid associated with coronavirus relief programs, which had zero local match requirements, were being exhausted and replaced by regular formula funds. The local share statewide grew from 8% to 15%. Excluding GMT-Urban, the local share of transit budgets outside of Chittenden County grew from 6% last year to 13%. These figures also exceeded the local share in SFY 2021, but they have not yet returned to pre-pandemic levels.

Figure 8: Local Share

Statewide (in $millions)	Statewide, Excluding GMT-Urban (in $millions)
$6.6 / 15% — $37.5 / 85%	$3.62 / 13% — $24.1 / 87%

Legend: ■ Local Funding ■ State and Federal Funding

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[1] The federal definition of local match for FTA funds excludes fare revenue from the calculation but includes state operating assistance.

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OLDER ADULTS AND PERSONS WITH DISABILITIES (O&D) TRANSPORTATION PROGRAM

FTA's §5310 program is targeted toward older adults (people 60 and older) and people with disabilities. The O&D Program, formerly known as the E&D Program, is used in most parts of the country to finance the purchase of accessible vans and buses. In Vermont the scope of the O&D Program has been expanded by incorporating funds from the §5311 (rural funding) program to help pay for administrative and preventive maintenance costs.

In SFY23, the total amount spent on the O&D program in Vermont was $6.68 million, 80% of which ($5.34 million) was federal money. Some of the local match for the federal funds consisted of in-kind contributions from the volunteer drivers who provide demand response service for the transit agencies. Overall, O&D ridership continued to be negatively affected by the pandemic, with about 112,000 trips carried compared to 200,000 in SFY 19. The SFY 23 figure was about 5% higher than the SFY 22 figure of 107,000 trips. Green Mountain Transit (GMT) with its partners Special Services Transportation Agency in Chittenden County and CIDER in Grand Isle County accounted for the largest share at about 25% of the total. Rural Community Transportation accounted for the second largest share at 19%. The cost per passenger trip ranged from about $33 at Marble Valley in Rutland, to about $85 at Tri-Valley Transit.

Trips funded through the O&D Program are provided across many modes and serve many purposes as shown in Figure 9. In SFY 2023, 9% of E&D trips were provided on bus routes, 34% in vans, and, most importantly, 55% in private cars operated by volunteer drivers. These figures represent a significant shift of about 4% from volunteer drivers and 2% from vans toward buses compared to SFY 2022. (The O&D program is used to fund some scheduled bus services, mostly shopping routes, and these were more popular in SFY 2023 than they had been during the height of the pandemic.) Some 62% of E&D trips transport people to medical appointments and critical care services such as dialysis and cancer treatments. Because of the pandemic, travel to adult day programs and senior meals continued to be lower than in pre-pandemic years though the figures were slightly higher in SFY 2023 than in the previous year. Shopping and social/personal trips accounted for 22% of O&D trips, slightly down from last year.

Figure 9: O&D Trips by Mode and Purpose

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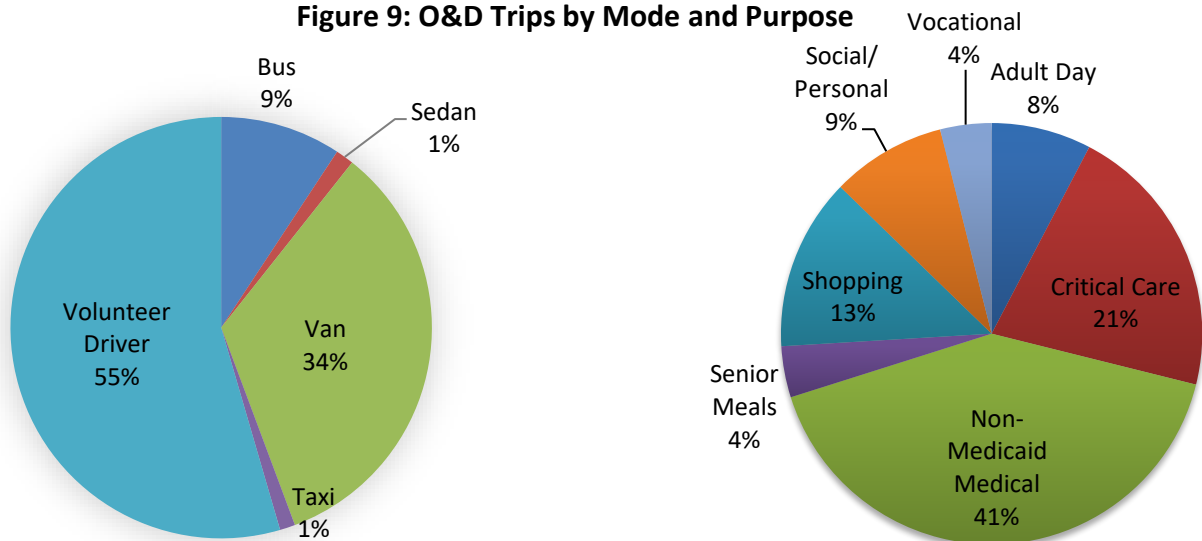
Volunteer driver trips cost less per passenger trip than vans and can provide a more personalized service to seniors and persons with disabilities, some of whom are traveling long distances (including to neighboring states) for medical services and other needs. Volunteer drivers are especially important to mobility in large rural areas, where the population is thinly distributed, such as the Northeast Kingdom. However, in places where bus service is available, having O&D passengers use the bus routes is the most cost-effective means of travel.

VTrans is working to expand the pool of drivers by extending the program beyond volunteers to paid contractors, similar to drivers for Uber and Lyft. Together, the contract drivers and volunteers will be considered "community drivers" and will be paid either for mileage or at an hourly rate under contract.

COUNTY-LEVEL STATISTICS

Reflecting overall population by county, public transit boardings by county show one large county (Chittenden), accounting for half of Vermont's transit trips, four medium-size counties accounting for between 5% and 14% of trips, seven small counties with between 1% and 3% of trips, and two tiny counties with less than 1% of of the statewide total. The breakdown of public transit trips by county of origin in SFY 2023 is presented in Figure 10.

Figure 10: Public Transit Trips by County of Origin in SFY 2023
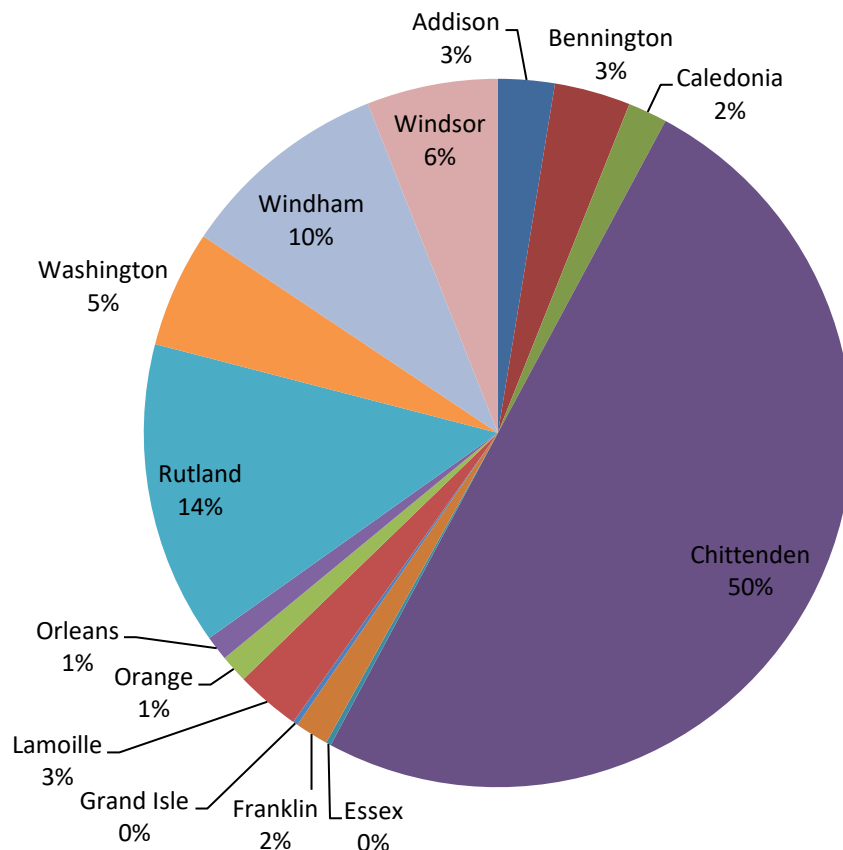
ROUTE-LEVEL PERFORMANCE

Based on recommendations in the 2020 Public Transit Policy Plan, the Public Transit Section evaluates Vermont's transit services by their cost effectiveness. Prior to 2020, both productivity and cost-effectiveness were used to evaluate routes, but as described earlier, the evaluation method was changed to focus on cost effectiveness, while retaining productivity and cost efficiency as reference measures to compare to national peer groups. For the evaluation, all transit services in the state are grouped by service category and evaluated against the average performance in that category.

Methodology for Developing Performance Standards

Since 2020, the performance evaluation has been based on comparing the net cost per passenger for each route to the average of each route class. This figure was calculated by taking the gross operating cost, subtracting out any fare revenue and then dividing by the number of boardings. As no fare revenue was collected in SFY 2023 except on intercity bus routes, the net cost per passenger is equal to the gross cost per passenger.

The "Successful" standard for each service category was 66.6% of the category average and the "Acceptable" standard was 150% of the class average. Thus, if a route or service cost two-thirds of the class average or less per passenger, it was successful, but if it cost 50% more than the class average on a per passenger basis, it was not acceptable.

Table 1 summarizes the SFY 2023 performance standards by category. The standards from SFY 2022 are shown for reference. The standards for last year reflected only a partial recovery from the pandemic, and so the average cost per passenger for this fiscal year is lower by about 17% on average, in line with the overall 20% growth in ridership. The Demand Response class shows an increase in cost per passenger because, as discussed earlier, it does not benefit from an increase in productivity when ridership rises. The intercity standard is not shown in the table since it has been fixed by contract since the introduction of intercity service in SFY 2015.

Table 1: SFY 2023 Performance Standards Compared to SFY 2022

Service Category	"Successful" Cost-Effectiveness Standard		"Acceptable" Cost-Effectiveness Standard	
	2023	2022	2023	2022
Urban	$4.94	$5.99	$11.13	$13.49
Small Town	$7.70	$10.41	$17.32	$23.42
Demand Response	$32.63	$30.96	$73.42	$69.67
Tourism	$4.66	$4.86	$10.49	$10.94
Rural	$19.30	$22.56	$43.43	$50.76
Commuter[2]	$25.81	$35.88	$58.07	$80.74

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[2] In prior years, Rural Commuter and Express Commuter were separate classes. The 2022 figures represent the thresholds for the Rural Commuter class.

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Route Evaluation Results

Given the way the standards were set, the vast majority (83%) of the 106 transit services evaluated across the state met the Acceptable standards for cost-effectiveness. A sizable portion (25%) of the state's transit routes were considered Successful, thus leaving 58% in the acceptable-but-not-successful group.

Improved Transit Routes

Three routes moved from underperforming to acceptable performance in cost-effectiveness since SFY 2022: the US 7 intercity service operated by Vermont Translines, the Okemo Seasonal service operated by SEVT and TVT's 89er. RCT's Jay-Lyn Shuttle had improved performance, but what allowed it to attain acceptable performance was the transfer into the Rural class from the Small Town class. Other underperforming routes from last year saw improved performance which got them closer to the range threshold.

- The US 7 Intercity route doubled its service level at the beginning of FY22, leading to underperformance in its first year back after the pandemic shutdown. In the second year, there was substantial ridership growth and the route easily surpassed the cost-efficiency threshold.
- The Okemo Seasonal route was completely restructured between FY22 and FY23. Previously, it traveled between Rockingham and Ludlow and carried few passengers while accumulating many miles. In FY23, the route was changed to a local service in Ludlow, serving the town and the ski resort and carried nearly 10 times the number of riders while operating fewer hours and many fewer miles.
- TVT's 89er route, which has underperformed for many years in a row, saw an improvement in ridership which brought the cost per passenger down from $81 in FY22 to just under $59 in FY23. This, along with the merging of the two commuter classes into one, allowed it to clear the acceptable threshold by 62 cents per passenger.

Underperforming Transit Services

Statewide, 18 transit services did not meet the Acceptable thresholds for cost-effectiveness.[3] Seven of these services had acceptable performance in FY22 but failed to in FY23 (some of these had failed in other years prior to FY22, but not in FY22 itself):

- AT: Brown Route
- SEVT: Brattleboro Blue Line
- SEVT: Springfield In-Town
- TVT: Middlebury
- GMT-Rural: Waterbury Commuter
- GMT-Urban: Jeffersonville Commuter
- SEVT: West Dover

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[3] Technically, the ADA paratransit service operated by Advance Transit also underperformed with regard to cost effectiveness. Because of the change in the scope of the Demand Response category, AT's ADA service only started being included in the Route Performance Report in SFY 19. Unlike other agencies that have a mix of demand response data, ADA paratransit is the only type of demand response service operated by AT. The regulations regarding ADA service limit the ability of AT to schedule these trips in a cost-efficient way, and AT does not have the possibility of coordinating them with other demand response service since it does not operate E&D or Medicaid service.

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Other than the Yellow Route, Advance Transit's Brown Route has been its poorest performer. In its recently completed Transit Development Plan, AT intends to restructure the Brown Route within the next few years, as funding becomes available. Brattleboro's Red and White Lines are among the most successful Small Town routes in Vermont, but the Blue Line has lagged behind. Nevertheless, it only failed to meet the acceptable threshold by 88 cents per passenger. The Springfield In-Town route has had marginal performance for years and sometimes surpasses the threshold and other years does not. TVT's Middlebury Shuttle barely failed to meet the threshold (by 41 cents). In the second half of FY24, a portion of the existing shuttle service will be replaced by a new microtransit service. GMT's Waterbury Commuter usually achieves acceptable status, but it appears to be a victim of the continuing impacts of the pandemic and the growth of working at home. The Jeffersonville Commuter has been on the margins for years, similar to the Springfield route. Finally, the West Dover route is a very low service route operating just one trip in the morning on school days. A handful of children rode it regularly in SFY 2022 resulting in about 100 trips per month, but most of them stopped riding in SFY 2023 and overall ridership dropped significantly. It should also be noted that operationally, the bus running the West Dover service continues onto the Wilmington Brattleboro route when it finishes its one morning trip. Thus the cost of operating the West Dover trip partially offsets deadhead time and mileage for the supplemental Wilmington-Brattleboro service.

Table 2 lists the services that have been underperforming for at least two consecutive years. RCT has discontinued both the 15/14 and Littleton commuter services as of the end of FY23. Advance Transit has already restructured the Yellow Route (in September 2023) as part of implementing its Transit Development Plan.

Table 2: Underperforming Services

Service Category	Route	Years Underperforming
Commuter	TVT: Thetford Connector	3
Commuter	RCT: 15/14 Commuter	4
Commuter	RCT: Littleton	3
Urban	GMT-Urban: Airport	3
Urban	GMT-Urban: Williston/Essex	8
Rural	TVT: Bradford Circulator	4
Small Town	AT: Yellow Route	4
Tourism	GMT: Valley Floor Shuttle	4
Tourism	RCT: Crown Connection	2
Demand Response	VABVI	2

VABVI's demand response service operates many long trips with few opportunities for coordinating passengers into a single vehicle. RCT's Crown Connection (called the Burke Shuttle last year) was a new service catering to mountain bike riders. It may take a couple of years to establish a strong ridership base for this service. Other routes such as the Valley Floor Shuttle, Bradford Circulator, Thetford Connector and the two GMT-Urban routes may require service changes to be able to attain acceptable status. A microtransit service in the urban area may be a more efficient way to

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serve the Williston-Essex area and trips at the airport, allowing the rest of the Airport route to be reconfigured and made more attractive.

Performance Graphs

The next section of the report includes graphs depicting the cost effectiveness of all transit services in Vermont for SFY 2023. For each route, the graph shows the net cost per passenger as a solid color bar and the gross cost per passenger as a gray pattern bar. Because there were no fares collected (except on intercity bus routes), the net cost and gross cost are equal in every case. The standard for Successful performance, equal to the 66% of the class average, is shown on each graph as a green line, while the standard for Acceptable performance, equal to 150% of the class average, is shown as a red line. Each provider has a specific and consistent color used throughout all of the graphs. Two of the charts, for Small Town and Commuter, are split into two pages because of the large number of routes in those classes.

The Demand Response chart is treated a bit differently from the others. The gross cost per passenger is not shown as very few of the demand response services would have any fare revenue even when fares are collected. Secondly, the chart also shows the percentage of demand response trips that are operated by volunteer drivers for each agency through grey dots that refer to the right-hand axis. Dots that appear higher on the chart indicate a greater percentage of trips operated by volunteer drivers. In general, there is an inverse relationship between cost-effectiveness and volunteer percentage, as volunteer trips are typically less costly than those operated by agency drivers. However, there are other important factors affecting cost, such as the average length of the trips and the density of demand, which can affect how easily an agency can coordinate trips. Thus, GMT-Urban has a lower cost per passenger than GMT-Rural even though GMT-Rural uses volunteer drivers much more often. Demand response trips in the GMT-Urban area tend to be much shorter than those in other areas, and the higher population density in Chittenden County allows for more ride coordination.

Appendix A contains two additional sets of graphs showing the ridership efficiency (productivity) and cost efficiency of each route. These charts also show the average performance of the national peers on these measures. The peer performance is based on 2022 data, and therefore reflects lingering impacts of the pandemic. This appendix also includes all of the performance data in a tabular format for easy reference. Appendix B includes charts that portray historical ridership, total operating cost, and cost per trip by transit system/division from SFY 2019 through SFY 2023. Appendix C presents the historical performance for every route or service in Vermont from SFY 2019 through SFY 2023, showing the trends in ridership efficiency, cost efficiency and cost effectiveness.

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COST-EFFECTIVENESS PERFORMANCE BY SERVICE CATEGORY

FOR THE PERIOD JULY 2022 THROUGH JUNE 2023

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Graph #1: 2023 Urban Cost per Passenger

Legend: Gross Cost per Passenger, Net Cost per Passenger, Successful, Acceptable

Categories: Class Average, City Loop, Airport, Essex Junction, Neighborhood Specials, North Avenue, Pine Street, Riverside/Winooski, Shelburne Road, Williston, Williston/Essex

GMT-Urban

Graph #2: 2023 Small Town Cost per Passenger (page 1)

Legend: Gross Cost per Passenger | Net Cost per Passenger | Successful | Acceptable

$97.72 (AT: Yellow)

Categories: Class Average, AT: Brown, AT: Orange, AT: Green, AT: Yellow, GMCN: Blue, GMCN: Red, GMCN: Green (Saturday), GMT-Rural: Barre Hospital Hill, GMT-Rural: City Commuter, GMT-Rural: City Route Mid Day, GMT-Rural: St. Albans Downtown

Note: Data for AT routes represent the entire route, even though a portion of the route is in New Hampshire. The class average does not include the AT Yellow Route which was restructured in September, 2023.

Graph #2: 2023 Small Town Cost per Passenger (page 2)

Legend: Gross Cost per Passenger · Net Cost per Passenger · Successful · Acceptable

Route	Value
MVRTD: Rutland-Killington Commuter	~$7.75
MVRTD: Hospital Route	~$9.25
MVRTD: North Route	~$3.70
MVRTD: South Route	~$4.15
MVRTD: South Rt. Extension	~$9.65
MVRTD: West Route	~$7.80
SEVT: Brattleboro Blue Line	~$19.00
SEVT: Brattleboro Red Line	~$7.50
SEVT: Brattleboro White Line	~$7.15
SEVT: Springfield In-Town	~$21.65
TVT: Middlebury	~$18.60

Graph #3: 2023 Demand Response Cost per Passenger

Legend: Net Cost per Passenger, Successful, Acceptable, Percent Volunteer
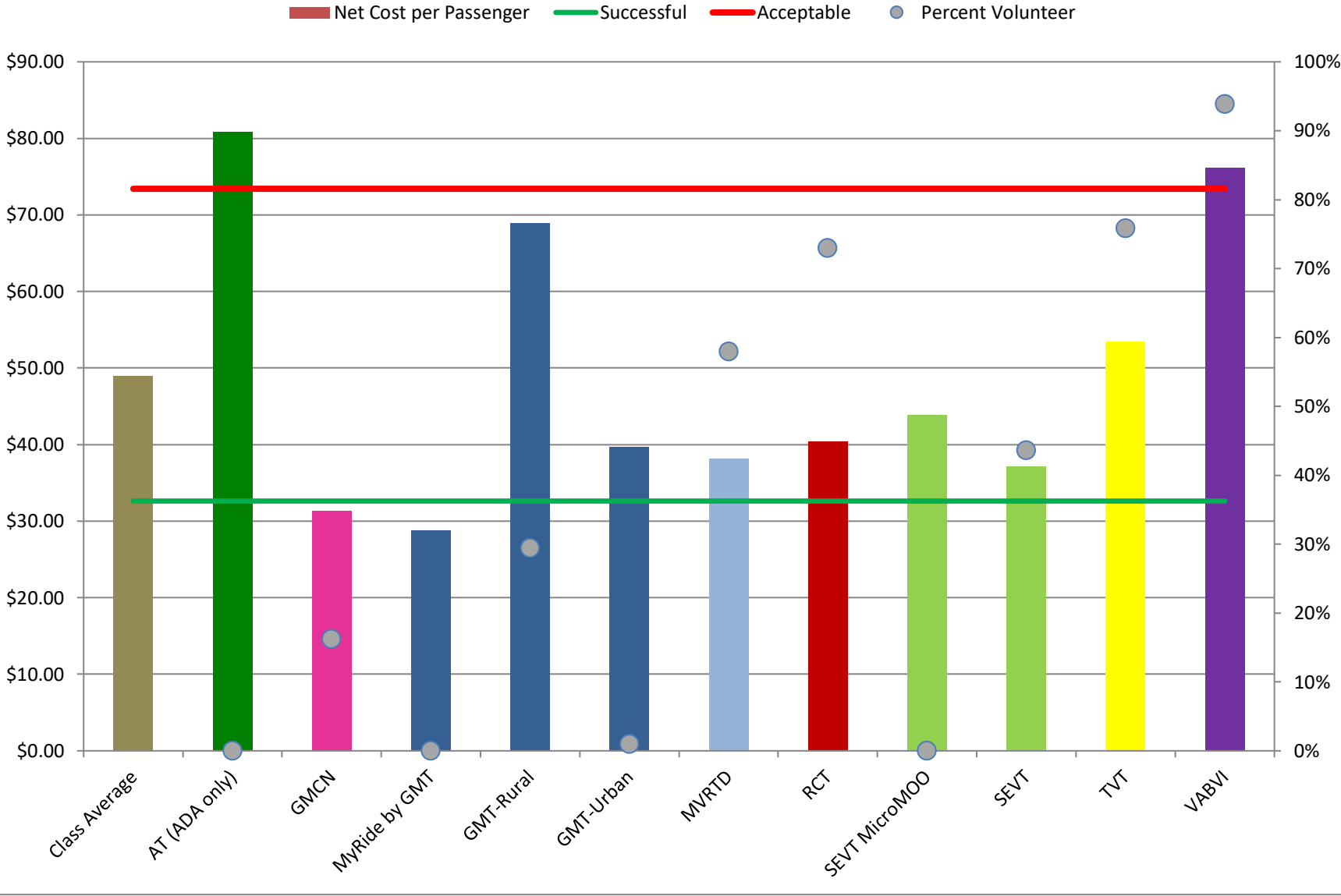
Graph #4: 2023 Tourism Cost per Passenger

Legend:
- ▦ Gross Cost per Passenger
- ■ Net Cost per Passenger
- ▬ Successful
- ▬ Acceptable

$118.42

Categories (x-axis):
- Class Average
- GMT-Rural: Mountain Condos
- GMT-Rural: Mountain Road
- GMT-Rural: Valley Floor
- GMT-Rural: Mount Ellen
- RCT: Crown Connection
- MVRTD: Killington Shuttle
- SEVT-The MOOver: Mount Snow
- SEVT-The MOOver: Okemo Seasonal
- SEVT-The MOOver: Bears Crossing
- SEVT-The MOOver: Timber Creek
- SEVT-The MOOver: Greenspring*
- SEVT-The MOOver: Kingswood*
- SEVT-The MOOver: Parking Lots*
- SEVT-The MOOver: Stratton-Manchester*

*Privately funded operations; no state or federal funds used.

Graph #5: 2023 Rural Cost per Passenger

Legend: Gross Cost per Passenger | Net Cost per Passenger | Successful | Acceptable

Categories: Class Average, RCT: Morrisville Loop, RCT: Morrisville Shopping, RCT: Jay-Lyn Shuttle, RCT: The Highlander, MVRTD: Proctor, SEVT: Bellows Falls In-Town, SEVT: Wilmington-West Dover, TVT: Randolph Circulator, TVT: Snow Bowl, TVT: Tri-Town, TVT: Bradford Circulator

Graph #6: 2023 Commuter Cost per Passenger (page 1)

Legend: Gross Cost per Passenger | Net Cost per Passenger | Successful | Acceptable

Categories:
- Class Average
- GMCN: Bennington-Manchester (Orange)
- GMCN: N. Benn.-So. VT College (Brown)
- GMCN: Wilmington-Bennington (Emerald CMAQ)
- GMCN: Bennington-Pownal-Williamstown (Purple)
- GMT-Rural: Alburgh Commuter
- GMT-Rural: Northfield Commuter
- GMT-Rural: Richford Commuter
- GMT-Rural: Waterbury Commuter
- GMT-Urban: 116 Commuter
- GMT-Urban: Jeffersonville Commuter
- GMT-Urban: Milton Commuter
- GMT-Urban: Montpelier LINK Express
- GMT-Urban: St. Albans LINK Express
- RCT: 15/14 Commuter (CMAQ)
- RCT: Littleton
- RCT: Route 100 Commuter
- RCT: US 2 Commuter (CMAQ)

Graph #6: 2023 Commuter Cost per Passenger (page 2)

Legend:
- Gross Cost per Passenger
- Net Cost per Passenger
- Successful
- Acceptable

Categories (x-axis):
- Class Average
- MVRTD: Bellows Falls-Rutland (Ludlow)
- MVRTD: Fair Haven Route (Rt. 4 West)
- MVRTD: Manchester Route (Rt. 7 South)
- MVRTD: Middlebury Connector
- SEVT: Bellows Falls-Brattleboro
- SEVT: Bellows Falls-Ludlow (CMAQ)
- SEVT: Readsboro-W. Wilmington
- SEVT: West Dover
- SEVT: Wilmington-Bennington
- SEVT: Wilmington-Brattleboro
- SEVT: DHMC Express Rt 71
- SEVT: DHMC Express Rt 72
- SEVT: Dartmouth College Exp Rt 73
- TVT: 116 Commuter
- TVT: Burlington Link Express
- TVT: Rutland Connector
- TVT: 89er
- TVT: River Route
- TVT: Thetford Connector

Graph #8: 2022 Intercity Cost per Passenger

Legend:
- Gross Cost per Passenger
- Subsidy per Passenger (Trip)
- Successful
- Acceptable

X-axis categories:
- Greyhound: White River Junction-Springfield, MA
- Vermont Translines: Route 7