Public Transit Route Performance Report

Annual Report for State Fiscal Year (SFY) 2022

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with

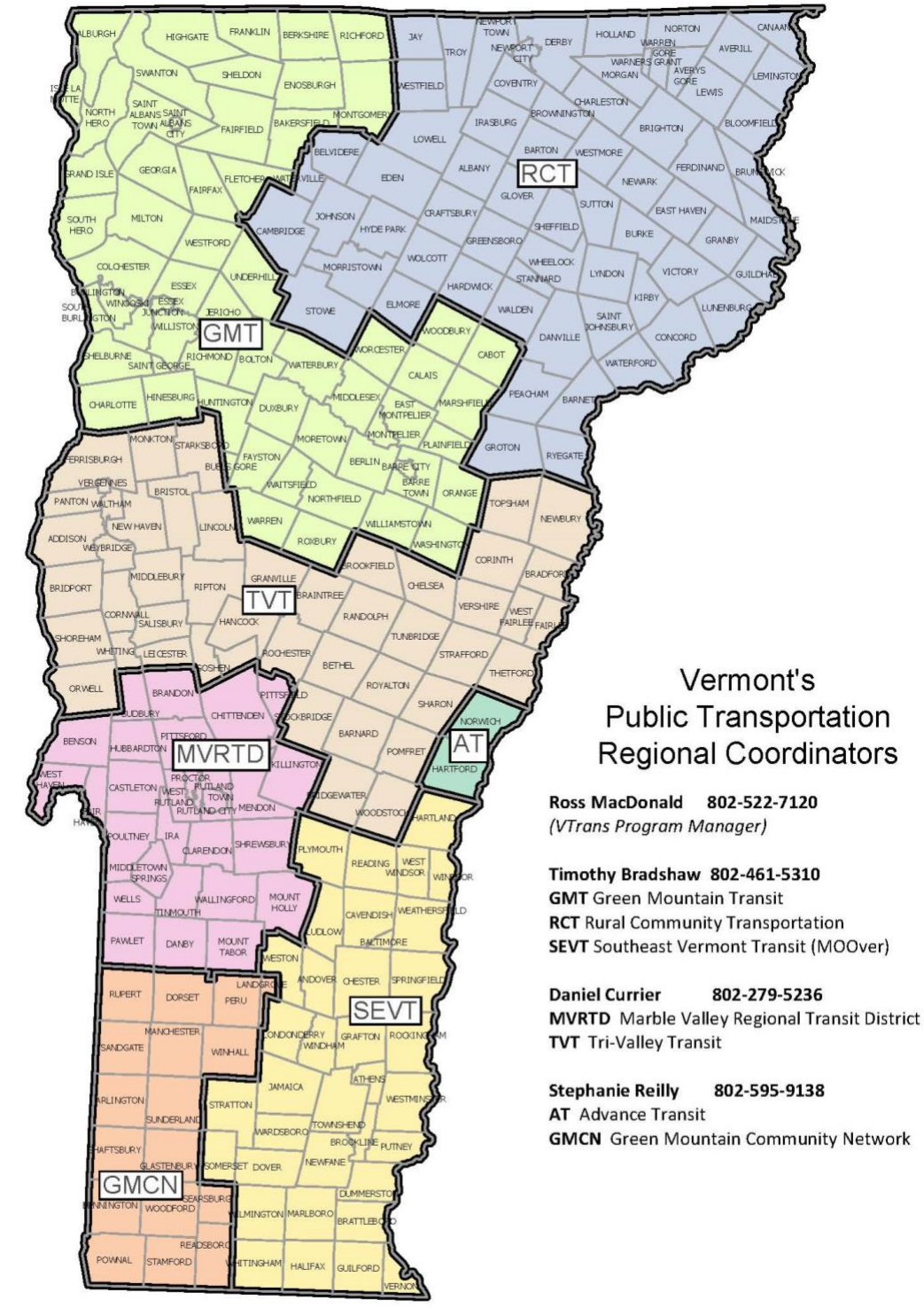
FOURSQUARE ITP
INTEGRATED TRANSPORTATION PLANNING

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. The areas previously served by ACTR and STSI are now shown as Tri-Valley Transit (TVT).

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



Map Produced by the Vermont Agency of Transportation Public Transit Section - 12/28/2022

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) 2022 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 third year using a new evaluation rubric recommended in the 2020 Public Transit Policy Plan. Rather than using two separate route evaluation measures, this report, as did the SFY 2020 and SFY 2021 reports, 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. The entire year of SFY 2021 was affected by the pandemic, with ebbs and flows in ridership reflecting the spread of vaccination and the resurgence of new strains of the virus. While SFY 2021 saw a 41% drop from SFY 2020 and a 52% drop from SFY 2019 levels, ridership rebounded in SFY 2022 with a 45% gain. Commuter-oriented services continued to lag behind other types of routes in the recovery. Subsidized intercity bus, which had been suspended for all of SFY 2021, was restarted in July 2021.

In SFY 2022 Vermont's public transit systems provided 3.54 million trips. This total is 45% higher than last year's ridership, as the state rebounds from the lows of the pandemic.

As of this writing (December 2022), statewide transit ridership is still below pre-pandemic levels even though 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.

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) 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.

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 2019, there had been nine categories, but a significant change was made that year, merging the Volunteer Driver category into the Demand Response category. This change was made for several reasons, all related to the concept of having the data in the RPR be a comprehensive summary of all public transit activity in Vermont. Before 2019, the Volunteer Driver

category included trips and administrative costs associated with all funding programs (of which E&D and NEMT were by far the largest), but it excluded the *mileage* costs associated with the trips and thus did not represent the full cost of providing that service. Meanwhile, the Demand Response category excluded NEMT trips provided on agency vans and taxis and also excluded all ADA complementary paratransit trips. The majority of ADA paratransit trips are provided in Chittenden County, but they also occur in Rutland, Brattleboro and the Upper Valley. The rationale for excluding ADA paratransit trips was that they are required to be provided by law and thus the operators should not be held to particular standards for efficiency or cost effectiveness. There was no rationale for excluding NEMT trips on vans; it was just a vestige of them not having been included when the process was developed in the early 2000s.

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 detail on how the costs were calculated, but most 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.

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.

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 exceptions to this are the Urban category, in which efficiency is measured in boardings and cost per vehicle revenue mile, and the Express Commuter and Intercity categories, 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. Express commuter and intercity trips tend to have little passenger turnover during the trip (in the inbound direction, people tend to get on at stops along the way and then all get off at the final terminal), 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, Express Commuter and Rural 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 2021). 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 the greatest impacts of the pandemic, while the Vermont statistics reflect some 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. Microtransit services are listed in this category separately from the rest of demand response service.

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) **Rural Commuter:** Routes that are similar to the Rural category above but operate primarily during peak commute periods. 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.

6) **Express Commuter**: Routes that operate primarily during peak commute periods and often include express segments. These routes are characterized by one-directional ridership (in most cases), longer route lengths, and serve either of the two largest employment centers in the region: the core of Chittenden County or the Upper Valley area spanning Vermont and New Hampshire. These routes primarily travel on interstate highways and provide limited stops, often serving park and ride lots and major employers (rather than other local destinations).

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

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.

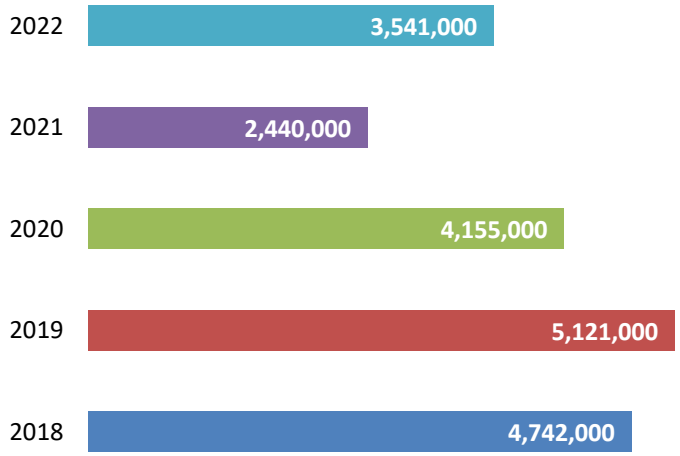
The list of routes and services in each category is not identical to SFY 2021. SEVT's Blue Line was discontinued in SFY 2021 but reinstated this year. Several of SEVT's privately-funded Tourism routes were also suspended in 2021 but operated in 2022. SEVT's express route 74 to the Upper Valley was operated for only a few days in SFY 2022 before being suspended, and thus it is excluded from the analysis. GMT's portion of the 116 commuter was suspended in 2021 but operated in 2022. The LINK Express route between Middlebury and Burlington was transferred from GMT to TVT at the start of SFY 2022. RCT began a new tourism route serving cyclists at Burke Mounthain in the summer. As mentioned above, all intercity bus service was suspended in SFY 2021, but the US 7 route operated by Vermont Translines and the Greyhound route from White River Junction to Springfield, MA were reinstated in July 2021.

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



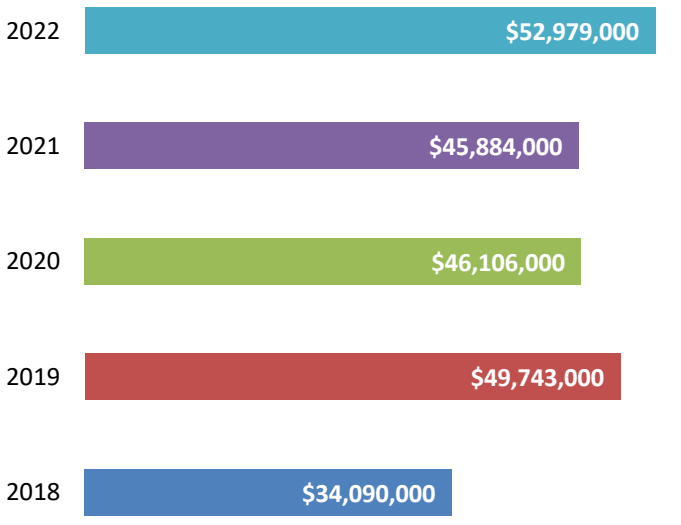
In SFY 2022 Vermont's public transit systems provided 3.54 million trips. This figure represents a 45% increase over the total from SFY 2021, but still remains about 30% below the ridership carried in SFY 2019.

As is true every year, about half of Vermont's transit trips occur in the Chittenden County region. In most years, Chittenden County's share is slightly under 50%, but in SFY 2022, the share is 51%, indicating that rural areas saw more ridership loss associated with the pandemic than the urban area.

Transit Costs

In SFY 2022 transit operating costs totaled $53 million, a 15.5% increase over SFY 2021 (see Figure 3). The increase is mainly due to more service being operated (especially intercity bus 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 nearly $3 million, while the Urban, Small Town, Rural and Rural Commuter categories had increases below the statewide average. The Chittenden County region accounted for one third of the total costs, which is its typical share.

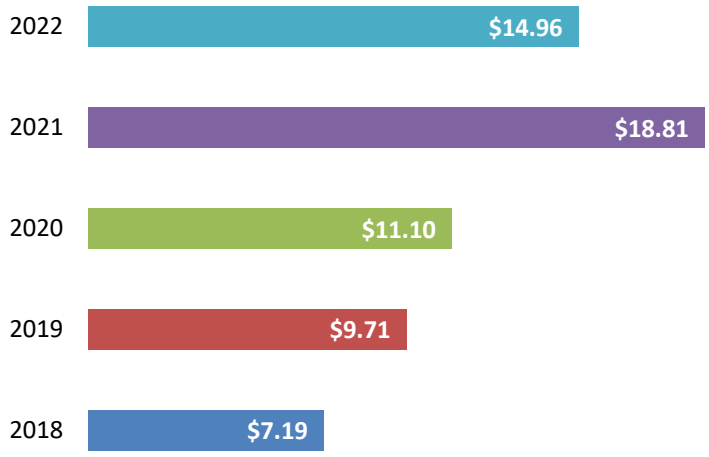
Figure 3: Statewide Operating Costs



Cost per Trip

In SFY 2022 the average cost for a transit trip in Vermont was $14.96, a decrease of 20% 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 2022 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 2023.

Figure 4: Cost per Trip



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 2022 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, the share dropped slightly to 46% as other services (commuter and tourism routes) began to recover. Small Town routes also saw their share shrink, from 21% last year to 18% this year. It is important to note that Urban and Small Town routes saw ridership gains in SFY 2022, but the gains were not as great as many of the other route classes. The share of Demand Response was roughly the same as last year, but Tourism recovered from 5% to 9% of the total.

Figure 6 shows the operating costs per service category as a percentage of statewide costs in SFY 2022. Because costs were not affected as much by the pandemic as ridership was, the percentage shares of costs in SFY 22 were similar to those in SFY 2021 and prior years. Costs grew for almost all categories, except Express Commuter, which dropped because GMT's Middlebury LINK Express was transferred to TVT and reclassified as a Rural Commuter route. Intercity bus went from zero percent in SFY 21 to 3% in SFY 22 as service was restarted. Increased fuel prices, higher labor costs, raised mileage reimbursement rates, and general inflation affected all routes in the state.

Figure 5: Transit Ridership by Service Category

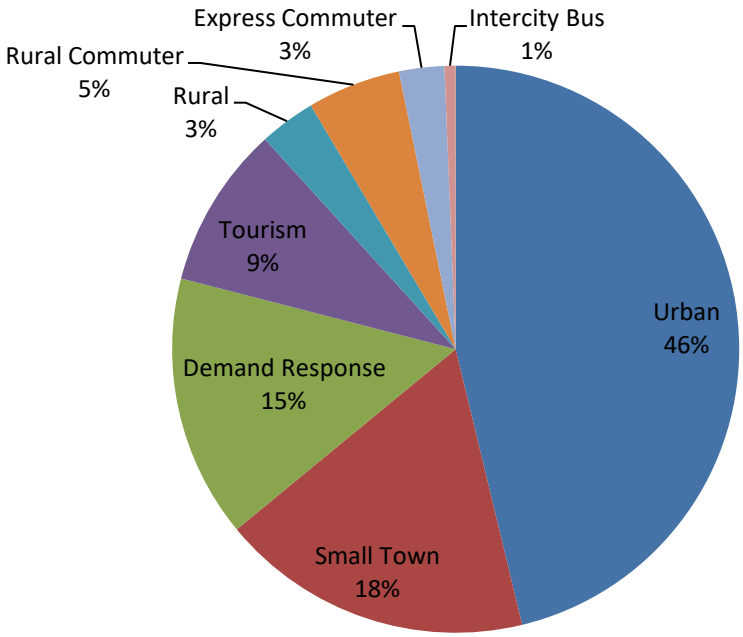
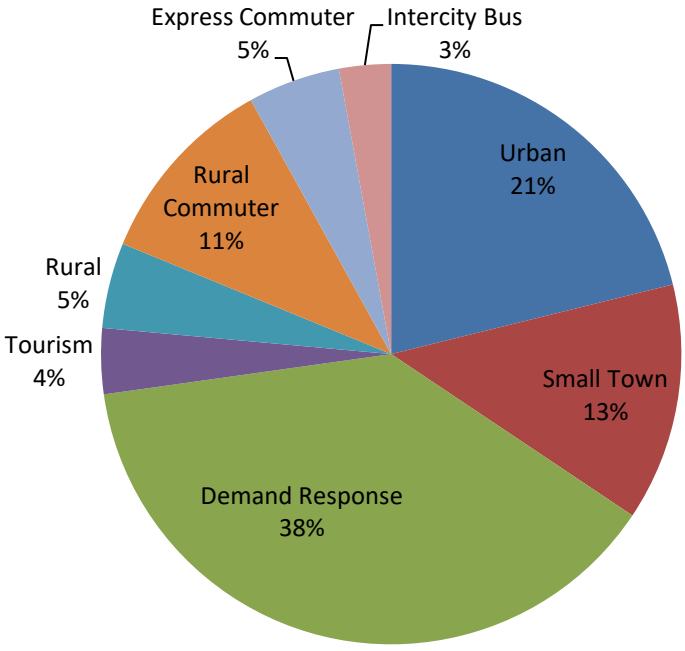


Figure 6: Operating Costs by Service Category

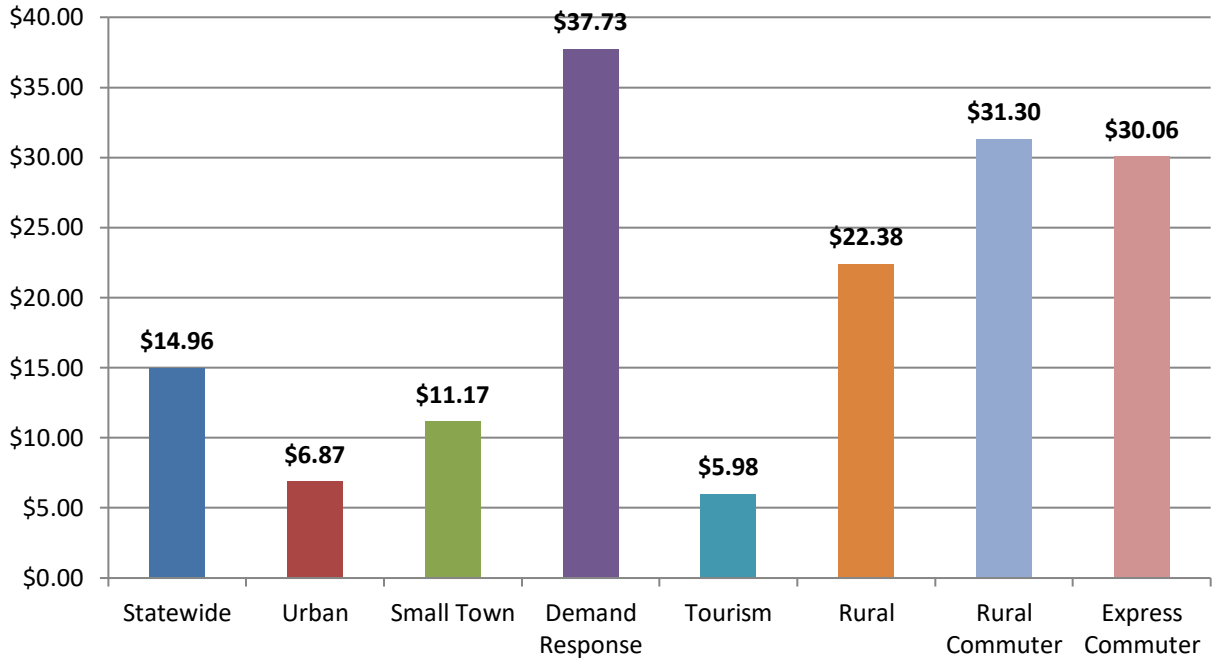


Not surprisingly, Urban service consumes a smaller percentage of the total cost compared to its share of the total ridership, because urban bus routes, which can carry 40 people or more on some trips, are more cost-effective on a per passenger basis. In contrast, Demand Response service consumes 38% of the total cost but only accounts for 15% 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. Rural

Commuter, Express Commuter and Intercity Bus all 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.

These differences in the cost per trip by mode are shown more explicitly in Figure 7. Urban, Small Town and Tourism had a cost per trip that was lower than the statewide average. Compared to SFY 2021, the cost per trip dropped for all route classes due to higher ridership. The decreases were greatest for Tourism (-43%) and Rural (-41%) and least for Demand Response (-12%) and Small Town (-14%). 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 40% 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



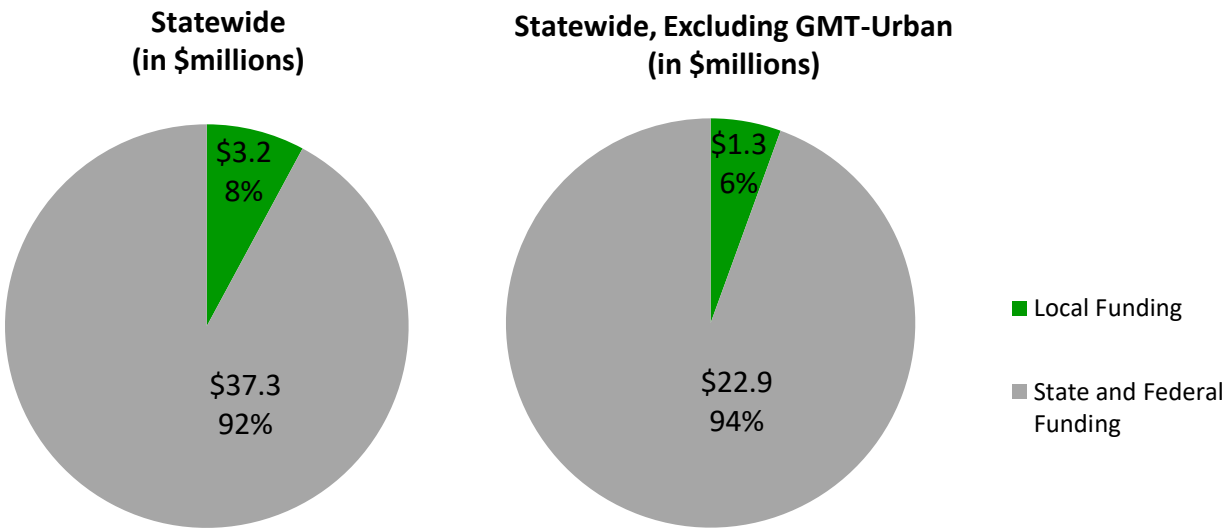
LOCAL SHARE

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).

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

Figure 8 displays the local share of transit operating budgets statewide in SFY 2022, 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 2022 are even lower than those in SFY 2021 because in addition to the lack of fare revenue, the significant increases in federal aid associated with coronavirus relief programs had zero local match requirements. Many transit providers continued to collect local contributions from municipalities, institutional partners, and individual donors, but they did not spend those funds because there was no match requirement. This local money will be available in future years to match federal capital and operating funds. The local share statewide dropped from 13% to 8%. Excluding GMT-Urban, the local share of transit budgets outside of Chittenden County dropped from 7% last year to 6%.

Figure 8: Local Share



ELDERS AND PERSONS WITH DISABILITIES (E&D) TRANSPORTATION PROGRAM

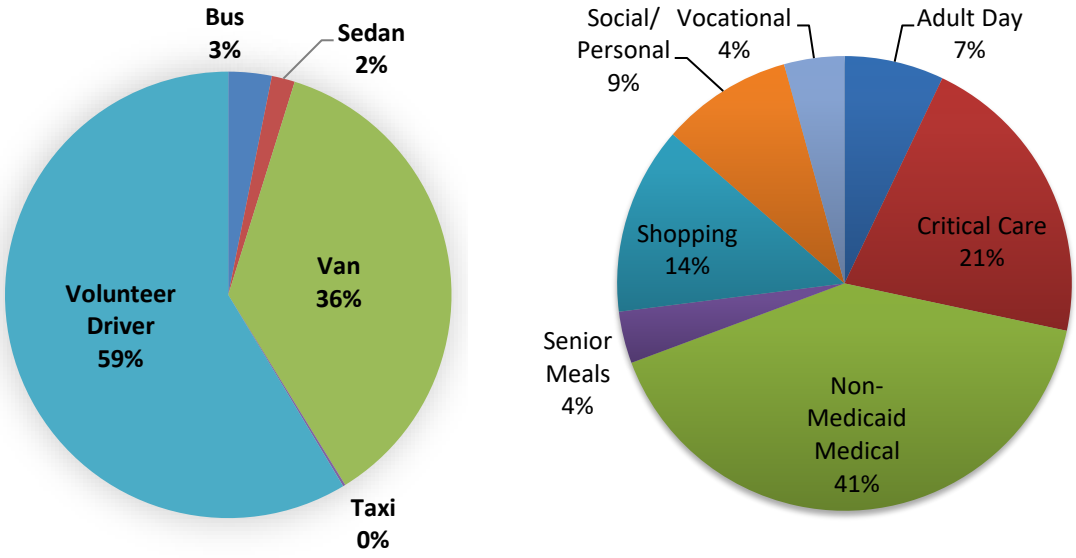
FTA's §5310 program is targeted toward older adults (people 60 and older) and people with disabilities. The E&D Program, as it is commonly known, is used in most parts of the country to finance the purchase of accessible vans and buses. In Vermont the scope of the E&D Program has been expanded by incorporating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

In SFY22, the total amount spent on the E&D program in Vermont was $5.12 million, 93% of which ($4.75 million) was federal money. This federal percentage is higher than in prior years because coronavirus relief funds do not require the 20% match that regular formula funds do. Some of the local match for the federal funds consisted of in-kind contributions from the volunteer drivers who provide E&D service for the transit agencies. Overall, E&D ridership was continued to be negatively affected by the pandemic, with about 107,000 trips carried compared to 200,000 in

SFY 19. The SFY 22 figure was 30% higher than the SFY 21 figure of 90,000 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 26% of the total. Rural Community Transportation accounted for the second largest share at 19%. The cost per passenger trip ranged from about $27 at Marble Valley in Rutland, to about $65 at Tri-Valley Transit.

Trips funded through the E&D Program are provided across many modes and serve many purposes as shown in Figure 9. In SFY 2022, 3% of E&D trips were provided on bus routes, 36% in vans, and, most importantly, 59% in private cars operated by volunteer drivers. These figures represent a significant shift of about 10% from volunteer drivers toward vans compared to SFY 2021. Higher gasoline prices in the second half of the fiscal year discouraged some volunteers from driving as much as they had in the past. 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. Shopping and social/personal trips accounted for nearly a quarter of E&D trips.

Figure 9: E&D Trips by Mode and Purpose



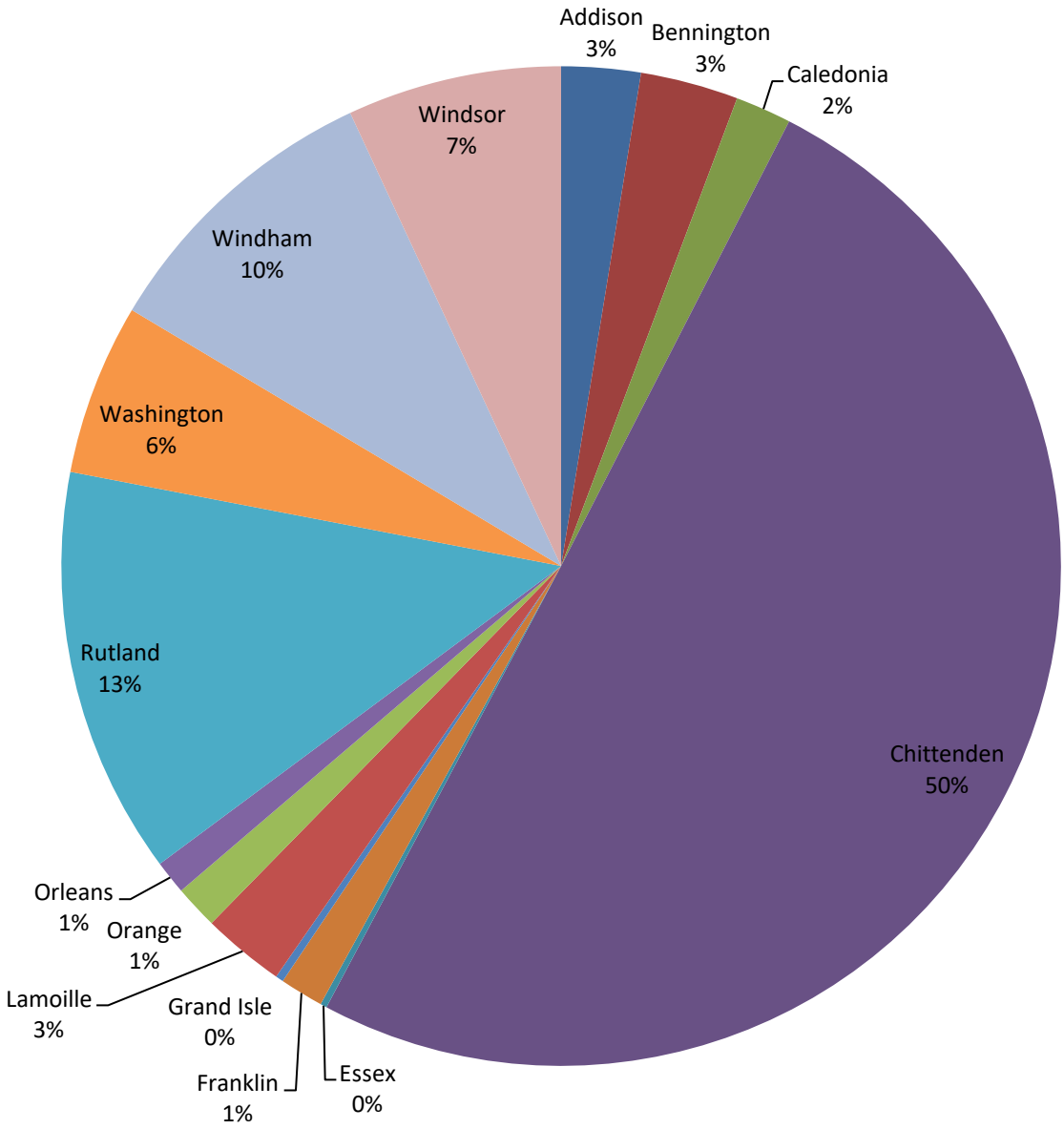
Volunteer driver trips cost less per passenger trip than vans and can provide a more personalized service to seniors and persons with disabilities, some of whom are traveling long distances (including to neighboring states) for medical services and other needs. Volunteer drivers are especially important 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 E&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. This new concept had not yet taken effect in SFY 2022.

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 6% and 13% of trips, seven small counties with between 1% and 4% 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 2022 is presented in Figure 10.

Figure 10: Public Transit Trips by County of Origin in SFY 2022



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. It is important to reiterate while all services in Vermont were affected by the pandemic, VTrans understands that the impacts did not affect all services equally.

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 2022 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 2022 performance standards by category. The standards from SFY 2021 are shown for reference. The standards for last year were reflected the depths of the pandemic, and so the average cost per passenger for this fiscal year is lower for every route class. Other than the Demand Response class, which is similar to last year, the standard for this year is about 20% lower on average than the standard from SFY 2021. 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 2022 Performance Standards Compared to SFY 2021

	"Successful" Cost-Effectiveness Standard		"Acceptable" Cost-Effectiveness Standard	
Service Category	2022	2021	2022	2021
Urban	$5.99	$7.63	$13.49	$17.16
Small Town	$10.41	$12.13	$23.42	$27.28
Demand Response	$30.65	$31.67	$68.96	$71.26
Tourism	$4.86	$6.92	$10.94	$15.57
Rural	$22.56	$26.35	$50.76	$59.28
Rural Commuter[2]	$33.38	$43.35	$75.11	$97.53
Express Commuter	$26.16	$34.97	$58.86	$78.68

[2] The thresholds are based on the straight average of services in the Rural Commuter class. If a weighted average had been used, the Acceptable threshold would have been $46.95 and six additional routes would have been deemed not acceptable. The straight average is so high because four of the five routes that did fail had extremely high costs per passenger, ranging between $112 and $172.

Route Evaluation Results

Given the way the standards were set, the vast majority (85%) of the 108 transit services evaluated across the state met the Acceptable standards for cost-effectiveness. A sizable portion (32%) of the state's transit routes were considered Successful, thus leaving 51% in the acceptable-but-not-successful group.

Improved Transit Routes

Three routes moved from underperforming to acceptable performance in cost-effectiveness since SFY 2021. Two other routes saw improved performance which got them close to the range threshold, but did not quite make it below the threshold.

- In the Small Town category, GMCN's Blue Route saw its cost per passenger drop from $28.09 to $14.91 and the Middlebury Shuttle operated by TVT improved from $28.30 to $22.55..
- In the Rural Commuter category, MVRTD's Rutland–Ludlow route improved from $212.04 to $22.68 due to a 10-fold increase in ridership. SFY 2021 ridership had been severely impacted by the pandemic.
- The two other improved routes that did not quite achieve acceptable status are the Valley Floor Shuttle operated by GMT-Rural which improved from $91.37 per passenger to $13.35 per passenger, and TVT's 89er Express Commuter, which improved from $117.74 to $80.81.

Underperforming Transit Services

Statewide, 15 transit services did not meet the Acceptable thresholds for cost-effectiveness.[3] Six of these services underperformed for the first time:

- RCT: Jay-Lyn Shuttle
- VABVI Demand Response
- RCT: Burke Shuttle
- GMT-Rural: US 2 Commuter
- Vermont Translines US 7

The Jay-Lyn Shuttle showed a significant ridership loss compared to SFY 2021, while the cost to operate it was much higher than the prior year. It is likely that SFY 21 cost estimate was too low for this route based on further examination. It did not miss the Acceptable threshold by a large margin and if ridership recovers in SFY 23, it should achieve acceptable performance this year. VABVI's demand response service operates many long trips with few opportunities for coordinating passengers into a single vehicle. RCT's Burke Shuttle was a brand-new service catering to mountain

[3] Technically, the ADA paratransit service operated by Advance Transit and SEVT's Stratton route 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, as other agencies do, since it does not operate E&D or Medicaid service. The Stratton route is new and 100% privately funded, so it is not considered underperforming in this context.

bike riders. The peak demand would have been in July through September and thus the performance in May and June is likely not representative of its cost effectiveness. Most of the operation of the US 2 Commuter is performed by RCT. GMT-Rural operates one round-trip per day; if this service were considered as part of RCT's service, the route as a whole would operate with an acceptable cost per passenger. Finally, the level of service on the US 7 intercity route operated by Vermont Translines was doubled when service was reinitiated. As of the end of SFY 22, ridership has not responded sufficiently to allow the service to have an acceptable net cost per passenger. With the initiation of Amtrak service between Burlington and Rutland and then on to Albany and New York City in the summer of 2022, it will be important to continue monitoring ridership on the US 7 intercity bus line.

Table 2 lists the services that have been underperforming for at least two consecutive years. It is not surprising that half of these are commuter services, since these were hit especially hard by the pandemic. GMT's Airport route is a combination of the former College Street Shuttle and the South Burlington Circulator. This route was extended to connect with other services at the Downtown Transit Center at the beginning of SFY 2023, which may help its performance. Advance Transit is planning to restructure the Yellow Route as part of its ongoing Transit Development Plan.

Table 2: Underperforming Services

Service Category	Route	Years Underperforming
Express Commuter	TVT-Stagecoach: 89er	9
Rural Commuter	TVT: Thetford Connector	2
Rural Commuter	RCT: 15/14 Commuter	3
Rural Commuter	RCT: Littleton	2
Rural Commuter	SEVT: Okemo Seasonal	2
Urban	GMT-Urban: Airport	2
Urban	GMT-Urban: Williston/Essex	7
Rural	TVT: Bradford Circulator	3
Small Town	AT: Yellow Route	3
Tourism	GMT: Valley Floor Shuttle	3

Performance Graphs

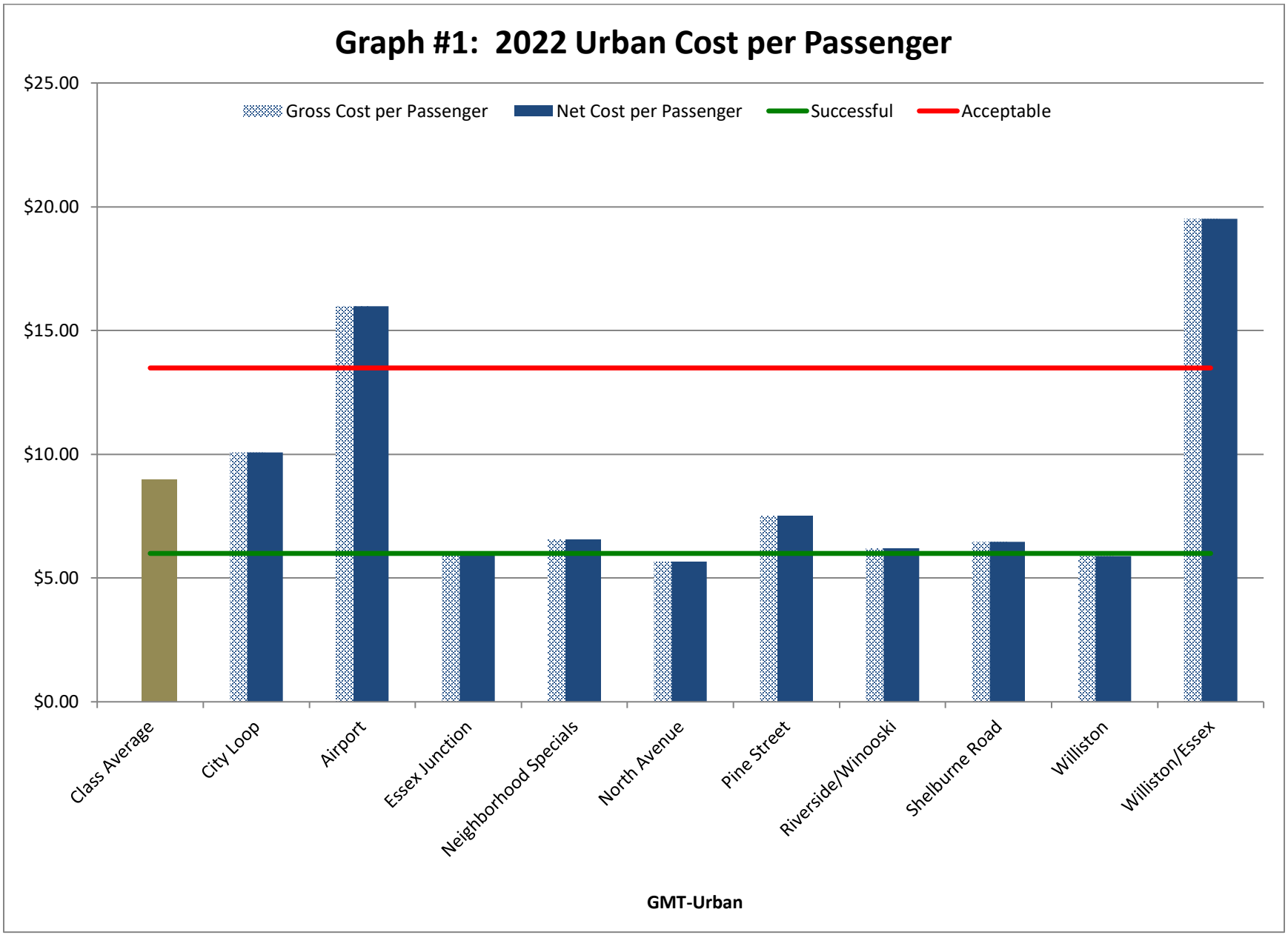
The next section of the report includes graphs depicting the cost effectiveness of all transit services in Vermont for SFY 2022. For each route, the graph shows the net cost per passenger as a solid color bar and the gross cost per passenger as a gray pattern bar. Because there were no fares collected (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. New transit services, or portions of existing services, which are funded through the CMAQ Program are distinguished by a diagonal line fill in the graphs. Each provider has a specific and consistent color used throughout all of the graphs. Two of the charts, for Small Town and Rural 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.

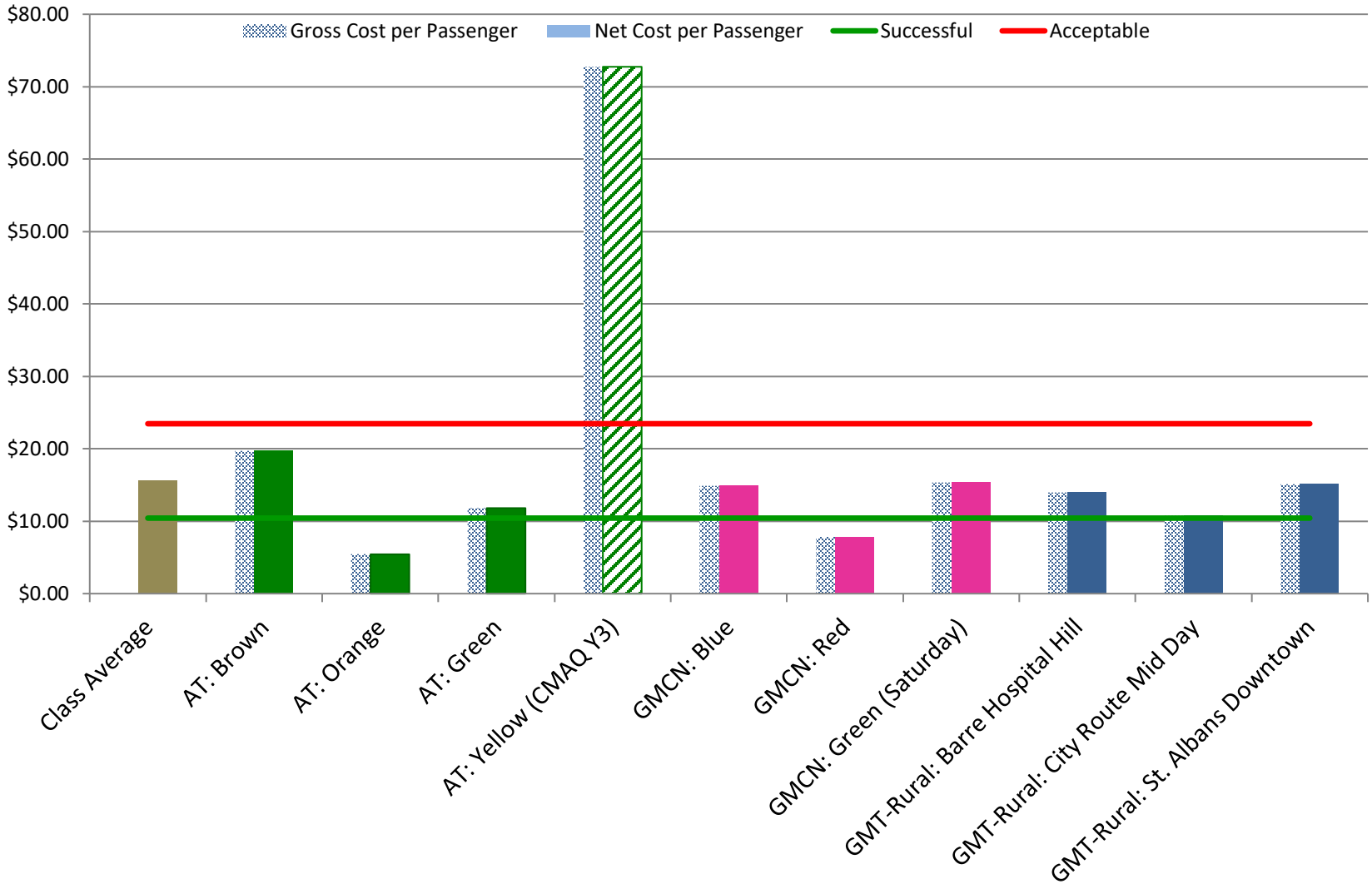
Appendix A contains two additional sets of graphs showing the ridership efficiency (productivity) and cost efficiency of each route. These charts also show the average performance of the national peers on these measures. The peer performance is based on 2021 data, and therefore reflects the impacts of 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 2018 through SFY 2022. Appendix C presents the historical performance for every route or service in Vermont from SFY 2018 through SFY 2022, showing the trends in ridership efficiency, cost efficiency and cost effectiveness.

COST-EFFECTIVENESS PERFORMANCE BY SERVICE CATEGORY

FOR THE PERIOD JULY 2021 THROUGH JUNE 2022

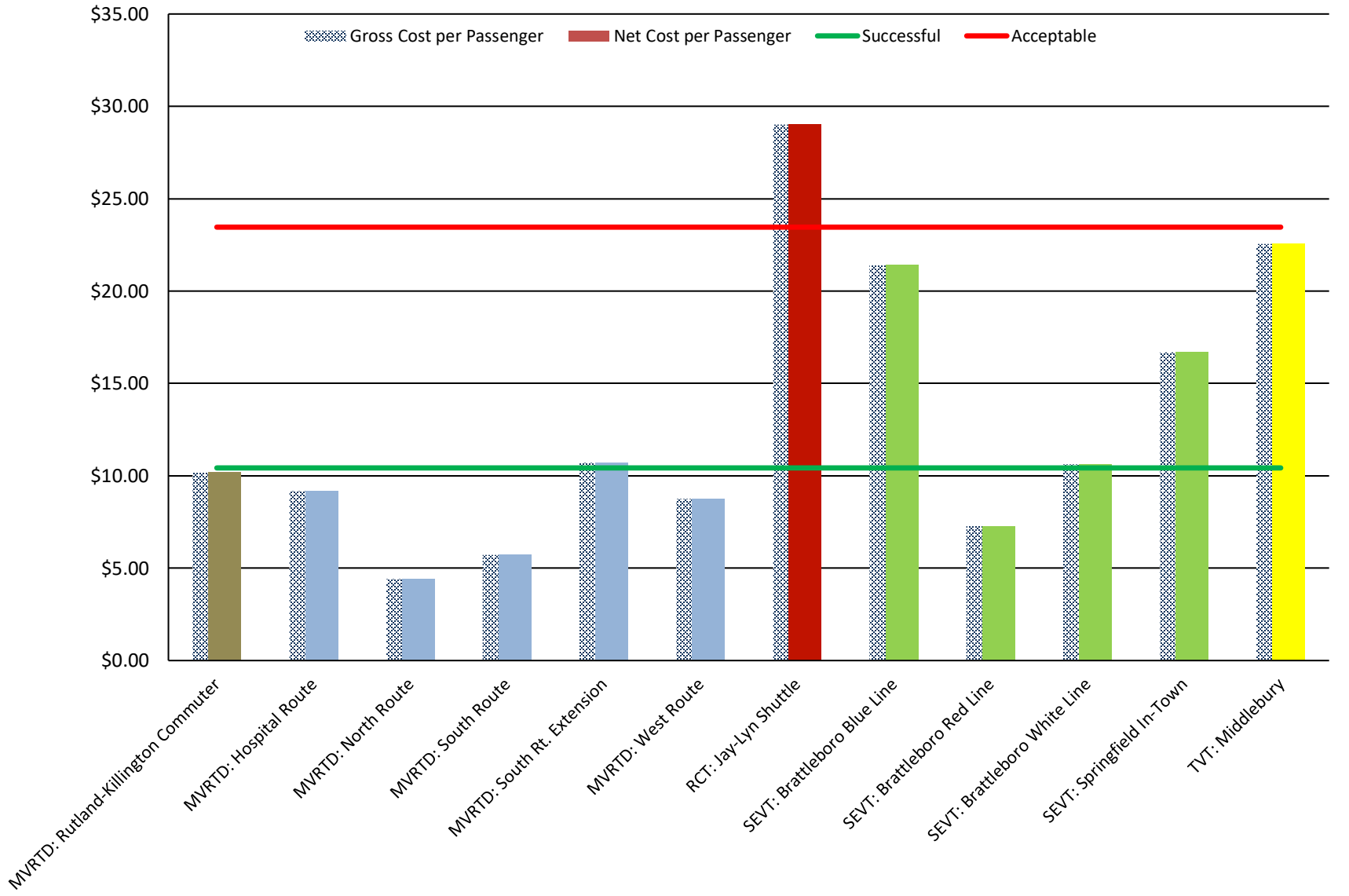

Graph #1: 2022 Urban Cost per Passenger
$25.00
$20.00
$15.00
$10.00
$5.00
$0.00
Gross Cost per Passenger
Net Cost per Passenger
Successful
Acceptable
Class Average
City Loop
Airport
Essex Junction
Neighborhood Specials
North Avenue
Pine Street
Riverside/Winooski
Shelburne Road
Williston
Williston/Essex
GMT-Urban

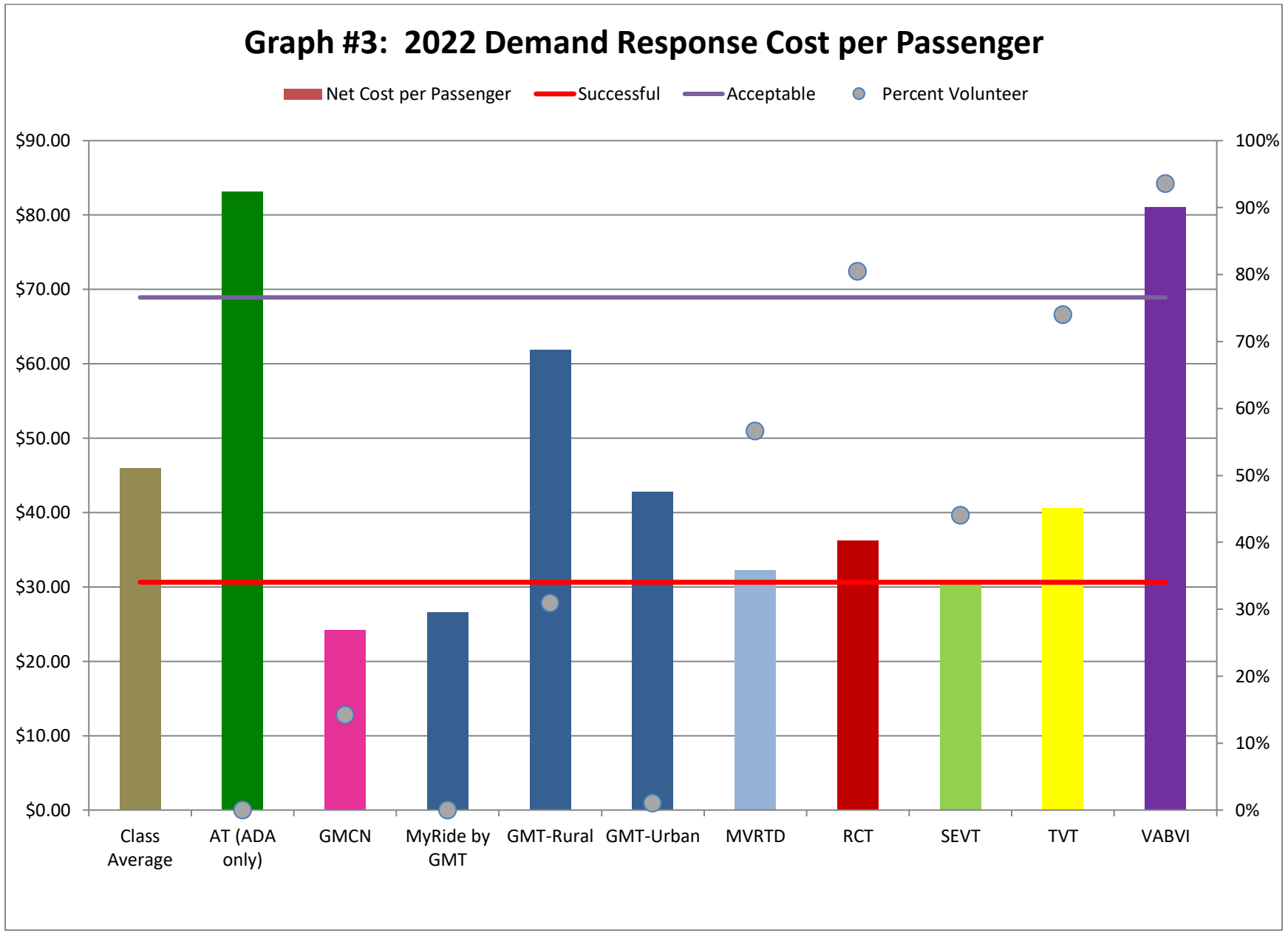
Graph #2: 2022 Small Town Cost per Passenger (page 1)



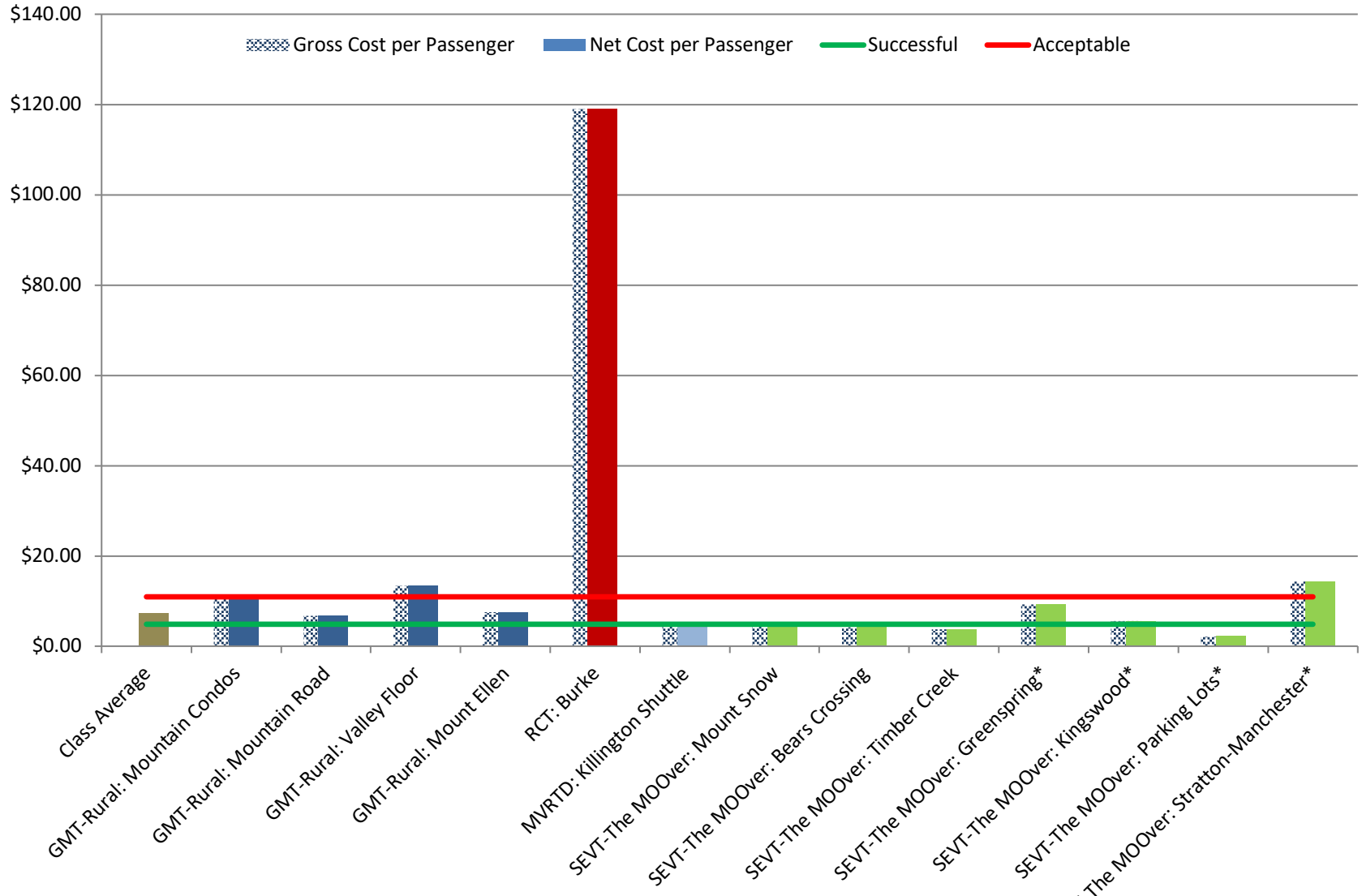
Note: Data for AT routes represent the entire route, even though a portion of the route is in New Hampshire.

Graph #2: 2022 Small Town Cost per Passenger (page 2)

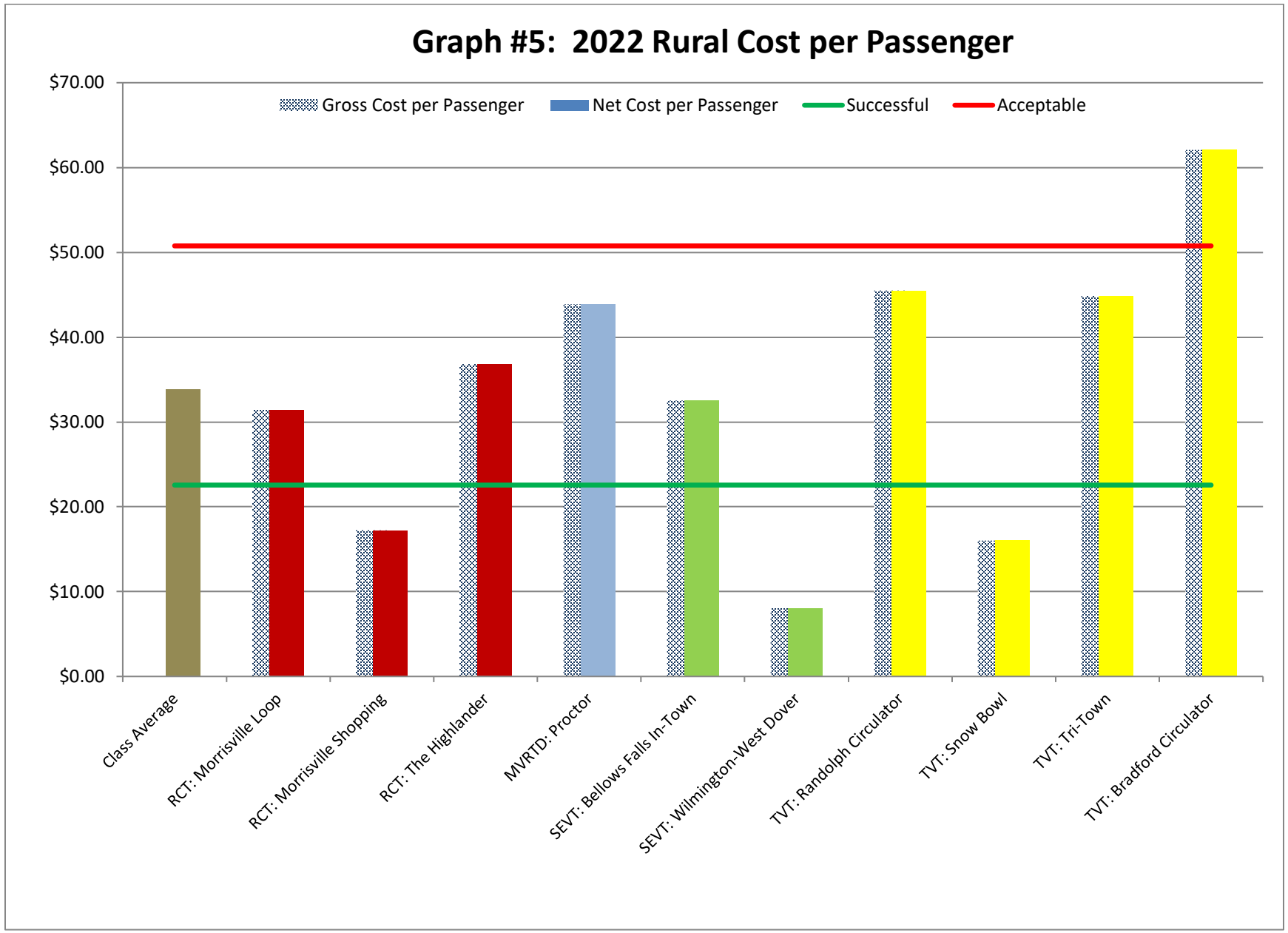


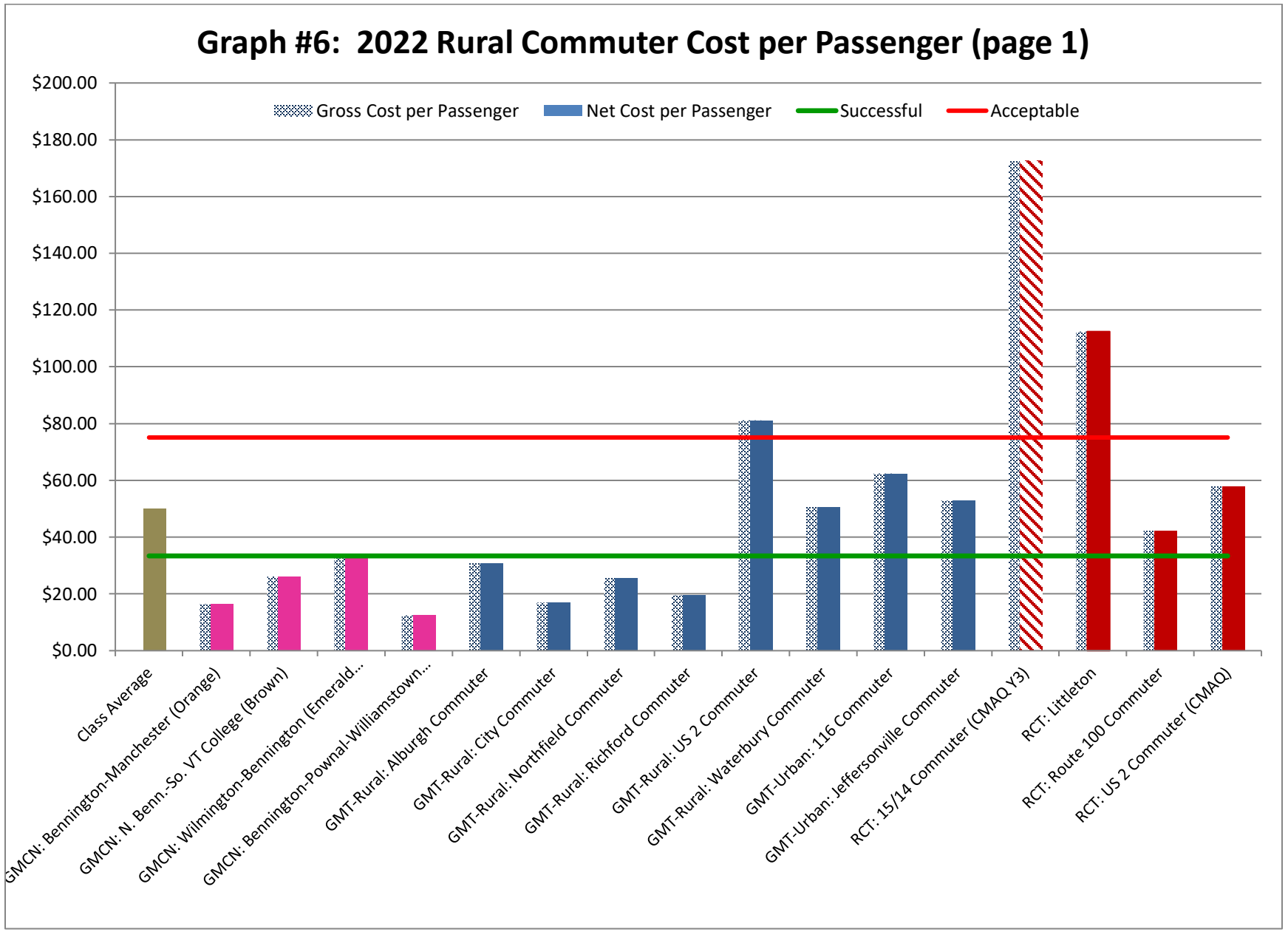

Graph #3: 2022 Demand Response Cost per Passenger
Net Cost per Passenger
Successful
Acceptable
Percent Volunteer
$90.00
$80.00
$70.00
$60.00
$50.00
$40.00
$30.00
$20.00
$10.00
$0.00
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Class Average
AT (ADA only)
GMCN
MyRide by GMT
GMT-Rural
GMT-Urban
MVRTD
RCT
SEVT
TVT
VABVI

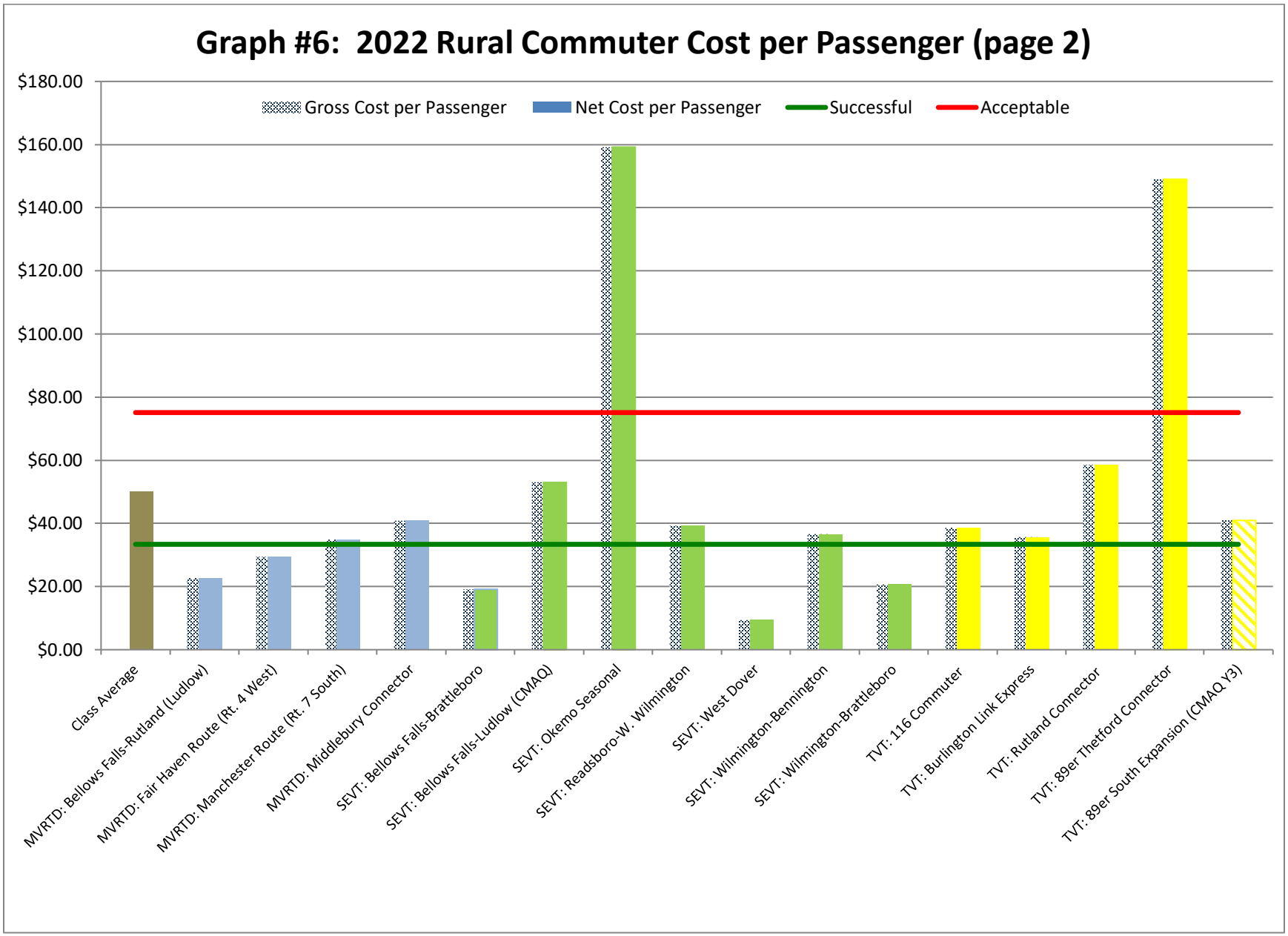
Graph #4: 2022 Tourism Cost per Passenger

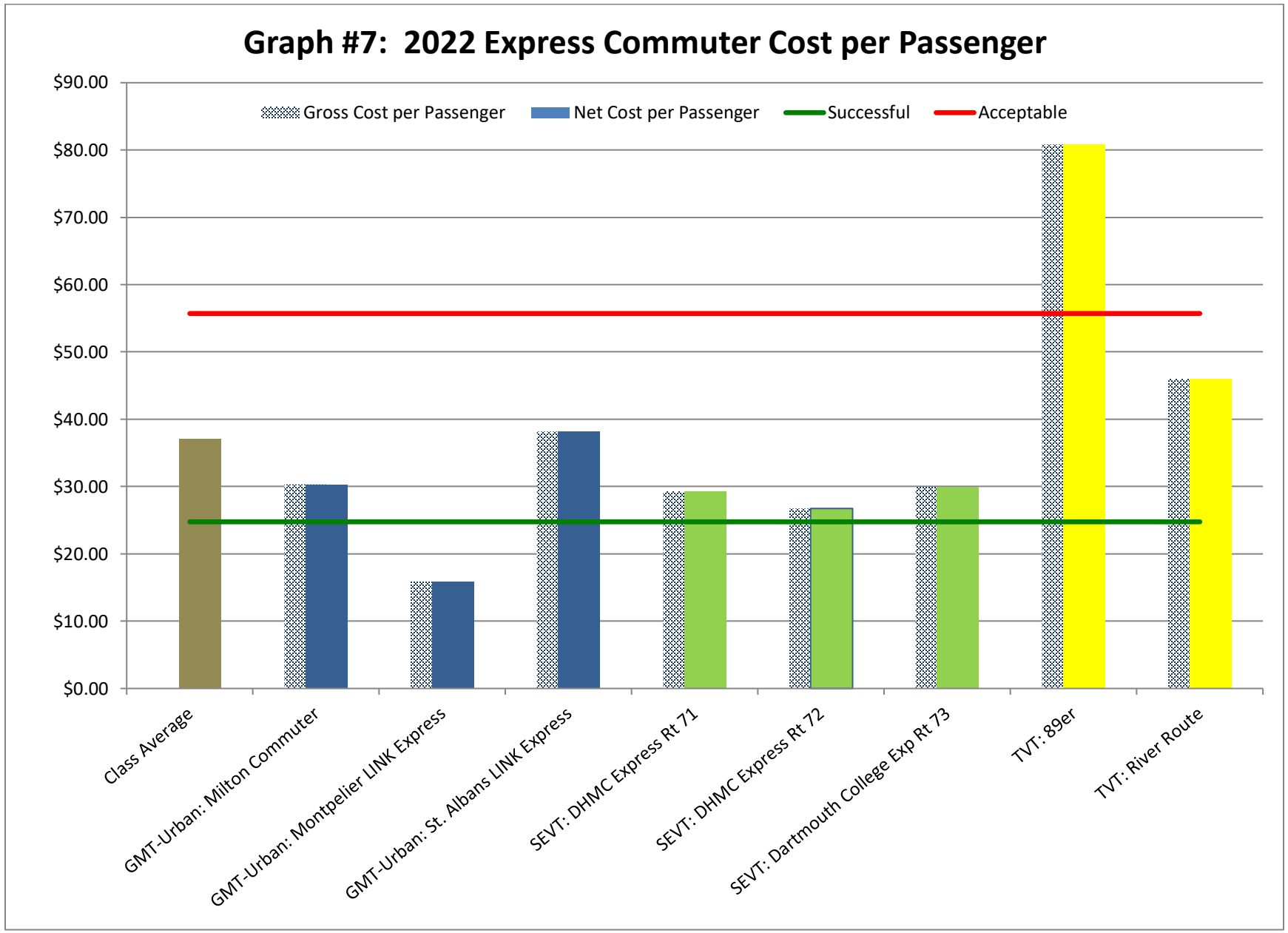


*Privately funded operations; no state or federal funds used.


Graph #5: 2022 Rural Cost per Passenger
$70.00
$60.00
$50.00
$40.00
$30.00
$20.00
$10.00
$0.00
Gross Cost per Passenger
Net Cost per Passenger
Successful
Acceptable
Class Average
RCT: Morrisville Loop
RCT: Morrisville Shopping
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: 2022 Rural Commuter Cost per Passenger (page 1)
$200.00
$180.00
$160.00
$140.00
$120.00
$100.00
$80.00
$60.00
$40.00
$20.00
$0.00
Gross Cost per Passenger
Net Cost per Passenger
Successful
Acceptable
Class Average
GMCN: Bennington-Manchester (Orange)
GMCN: N. Benn.-So. VT College (Brown)
GMCN: Wilmington-Bennington (Emerald...
GMCN: Bennington-Pownal-Williamstown...
GMT-Rural: Alburgh Commuter
GMT-Rural: City Commuter
GMT-Rural: Northfield Commuter
GMT-Rural: Richford Commuter
GMT-Rural: US 2 Commuter
GMT-Rural: Waterbury Commuter
GMT-Urban: 116 Commuter
GMT-Urban: Jeffersonville Commuter
RCT: 15/14 Commuter (CMAQ Y3)
RCT: Littleton
RCT: Route 100 Commuter
RCT: US 2 Commuter (CMAQ)


Graph #6: 2022 Rural Commuter Cost per Passenger (page 2)
$180.00
$160.00
$140.00
$120.00
$100.00
$80.00
$60.00
$40.00
$20.00
$0.00
Gross Cost per Passenger
Net Cost per Passenger
Successful
Acceptable
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: Okemo Seasonal
SEVT: Readsboro-W. Wilmington
SEVT: West Dover
SEVT: Wilmington-Bennington
SEVT: Wilmington-Brattleboro
TVT: 116 Commuter
TVT: Burlington Link Express
TVT: Rutland Connector
TVT: 89er Thetford Connector
TVT: 89er South Expansion (CMAQ Y3)


Graph #7: 2022 Express Commuter Cost per Passenger
$90.00
$80.00
$70.00
$60.00
$50.00
$40.00
$30.00
$20.00
$10.00
$0.00
Gross Cost per Passenger
Net Cost per Passenger
Successful
Acceptable
Class Average
GMT-Urban: Milton Commuter
GMT-Urban: Montpelier LINK Express
GMT-Urban: St. Albans LINK Express
SEVT: DHMC Express Rt 71
SEVT: DHMC Express Rt 72
SEVT: Dartmouth College Exp Rt 73
TVT: 89er
TVT: River Route

Graph #8: 2022 Intercity Cost per Passenger