

A Widening Gap: Funding Needed Public Transit Services in the Upper Valley of NH/VT



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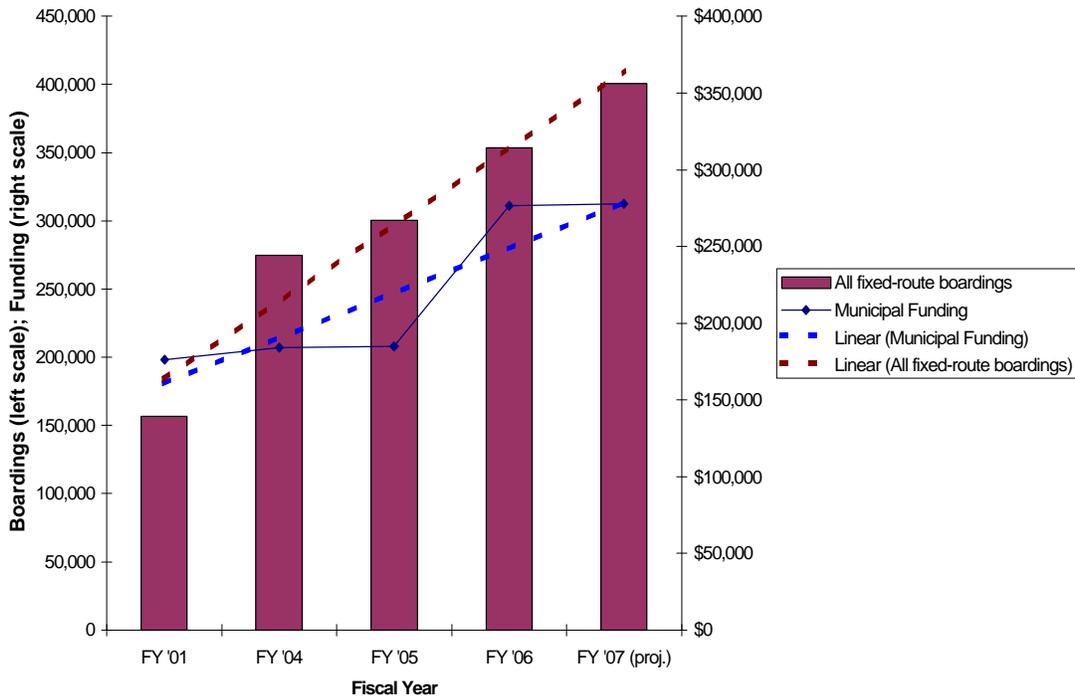
i. Executive Summary

Since 2004, there has been a marked acceleration in Upper Valley public transit utilization, as measured by ridership data.¹ This has followed a trend of smaller annual increases in ridership every year since 2001. The recent increases in ridership have been in excess of 10% annually and reflect, in part, a strong local economy coupled with an adaptation of travel habits (especially commuting habits) to higher gasoline prices. A portion of the ridership increase may also reflect an aging of the regional population, with increases in the number of people who no longer drive or choose to limit their driving.

Unfortunately, municipal contributions have not kept up with the public's need for transit services. **Figure 1**, below, plots the annual fixed-route boardings of Advance Transit for Fiscal Years 2001, 2004 through 2006, and 2007 (projected)² as solid bars (left scale). The solid line plots the financial contributions of the six municipalities served by AT (right scale). The broken lines represent trend-lines for boardings and municipal funding (see legend).

Figure 1

**Advance Transit Boardings and Municipal Contributions,
FY '01 and FY '04 thru '07 (proj.)**



During FY '01, when AT's annual boardings were only 156,800, municipal contributions were the equivalent of \$1.12 per boarding. By FY '04, with boardings steadily increasing and municipal funding almost stagnant, this figure eroded to 67 cents. One year later it was 62 cents. A crisis in 2005 caused by rapidly rising fuel and insurance expenses prompted municipal funding to respond significantly: to 78 cents per boarding. Near-level funding in FY '07, however, will reduce municipal support to 69 cents per boarding if ridership continues to grow at its recent pace. The diverging dashed trend lines clearly illustrate the problem.

¹ "Ridership" is more specifically referred to as "boardings", i.e., the number of persons who board a scheduled point-to-point bus or van service weekly, monthly or annually.

² The FY '07 boardings estimate was computed using the mean annual rate of increase for FY 2004 and FY 2005. AT's Fiscal Year runs from July to June.

In the Upper Valley -- as defined by the Hartford-Lebanon Labor Market Area (LMA) consisting of 35 towns – transit bus travel demand has reached or exceeded capacity during popular morning and evening periods, and not just on Advance Transit. The three non-profit transit providers serving the Upper Valley have each responded by attempting to increase capacity. In fact, a Congestion Mitigation and Air Quality (CMAQ) grant awarded through the State of Vermont has just added an additional frequency to an existing route.³ However, lead times to secure funding for new vehicles can be two to four years. Operating funds are limited and must first be applied to maintain existing services. Proposed new services or capacity expansions must be supported by additional local matching funds. If local matching funds cannot be identified, state and federal funds cannot be used even if they are available. Difficulty securing local matching funds tends to be most acute in less affluent towns and counties that do not have large local employers. Funding and coordination issues are further complicated by the fact that a state political boundary bisects the Upper Valley.

With rare exceptions, local matching funds are required to secure and augment state and federal funding. Local funding has traditionally been derived from individual municipalities served by the carriers. This is a time-consuming and uncertain process because the municipalities are not compelled to allocate funds at all, and with some exceptions do not utilize a formula (or formulae) to link municipal funding to population or ridership.

Municipalities and individual states face many demands for their funds, including expensive programs such as highway construction and maintenance, health care/human services, law enforcement and environmental protection. At the same time, voters demand restraint on spending as they correctly perceive a direct link between spending and taxation – especially income and property taxes. To the extent that funding of transit services is perceived to be discretionary, it is difficult to secure enough working capital from traditional sources to expand transit services, even when a demand for such services is clearly present.

We conclude that:

- Existing public transportation services in New Hampshire and Vermont are being threatened by inadequate funding;
- Good local and regional public transportation is very much in the public interest;
- Persistent increases in transit ridership (and demand for new services) highlight the need for local municipalities to provide funding commensurate with this growth, while at the same time these municipalities are under severe pressure to limit tax increases;
- Non-traditional sources of local funds should be more aggressively explored to supplement existing funding streams because of public resistance to tax increases;
- Efforts to increase local transit funding should be coupled with legislative action at the State and Federal level to increase funding of rural public transit; including
- An existing U.S. Census Bureau “Micropolitan Region” designation should be exploited to leverage new Federal funds to help support unmet mobility needs unique to such regions that, by definition, are centered on small cities of under 50,000 population.

Some of the potential non-traditional sources of funding include “user fees”, employer participation (through incentives, direct financial support or both), tax-deductible donations and tax-increment financing (TIFs). In the longer term, political advocacy in support of greater allocation of gasoline tax revenue toward public transit is recommended, as well as other measures. The paper concludes with a detailed list of near-term and long-term recommendations.

³ The “River Route” via I-91 and US5 north of Hartford, VT operated by Stagecoach.

I. Introduction and Problem Statement: The Transit Funding Problem in the Upper Valley

Public transit in the Upper Valley⁴ gets people to work, medical appointments and school activities, reduces traffic congestion, and adds to the convenience and quality of life in the Upper Valley. It is effective at encouraging employment, reducing automobile traffic, promoting the independence of seniors, and reducing the need for more parking facilities. All of the region's nonprofit public transit providers report operating at or near capacity during peak periods on their fixed routes and are handling record numbers of boardings. Simultaneously, their costs are rising -- especially for fuel and insurance.

Public transit in the Upper Valley currently depends on appropriations from a few municipalities and employers that annually review their contributions. Instead of increasing transit service in these times of rising costs of automobile travel, there are no assured sources of local funding -- and therefore local match money to pull down Federal dollars -- even to maintain the existing services. Expansion opportunities often must be deferred, even when there is a strong demand for them. Simultaneously, rural transit providers nationally and locally are being compelled to offer certain ADA-compliant transportation services, even if the attendant costs cause them to reduce fixed-route bus services that were already in place.

These funding limitations make it difficult for transit operators to plan for incremental improvements. Although Federal and sometimes State money is available to partially fund certain facilities and services⁵, most of these programs require a local match to secure available Federal program funds. Federal funds are distributed through the individual state departments of transportation. Many states, including Vermont, provide a portion of the local match.⁶ Currently, the allocation to rural public transit is a relatively small pool. With occasional exceptions, these monies are fully allocated to supporting existing services.

The Upper Valley is served by four local transit providers: Advance Transit (AT), Community Transportation Services (CTS)⁷, Connecticut River Transit (CRT) and Stagecoach (STSI). All depend upon federal and state resources to continue operations. As the region becomes more urbanized, even greater dependence on transit services is forecast based upon the surge in passenger ridership in the past five years and particularly in the last two years (2004-2006), during which time gasoline prices doubled. Moreover, ridership figures for 2005-6 suggest a break-out from recent patterns of single-digit annual ridership growth. However, expanding service to meet this growing demand is restricted by relatively modest funding currently available through state and Federal government programs and difficulty raising local matching funds. This is especially problematic in less affluent communities -- typically those that do not have one or more large employers (i.e., a business or an institution such as a hospital that employs hundreds of people and may therefore be uniquely motivated and positioned to support initiatives to improve local transportation resources).

Existing sources of local match funding in the core Upper Valley employment area come primarily from local governments and major institutional employers. Although basic service has survived in the past, the funding required to maintain and expand service and infrastructure in response to demand is surpassing the ability to raise sufficient moneys from

⁴ For this discussion, the Upper Valley is defined as the Hartford/Lebanon Labor Market Area (LMA). The *Upper Valley Housing Needs Assessment* prepared for the Upper Valley Lake Sunapee Regional Planning Commission (UVLSRPC) in 2000 defined this to consist of 23 Vermont communities and 12 New Hampshire communities more-or-less geographically centered on, and including, the core area represented by Hartford, Vermont and Hanover and Lebanon New Hampshire. In 2000, this LMA encompassed approximately 63,313 jobs and 167,387 residents.

⁵ For example, a recent New Hampshire grant to upgrade Advance Transit's maintenance garage.

⁶ Matching fund requirements and availability of state funds varies by state and by the type of transit services being provided. Vermont is currently reviewing its funding policies and priorities through a statewide Public Transit Policy Plan (PTPP) being prepared by an outside consultant.

⁷ CTS's scheduled bus services presently operate only within Newport and Claremont, NH

local sources. This is particularly true for the newer transit bus services from the outlying areas. New sources of revenues must be identified that can raise the required 20% to 50% local match⁸ on a sustainable basis. This White Paper discusses the problem, reviews existing sources of funding, examines what other regions of the country are doing to address this problem, and suggests actions that policy makers and concerned citizens in Vermont and New Hampshire might consider.

II. The Importance of Public Transit in the Upper Valley Now and in the Future

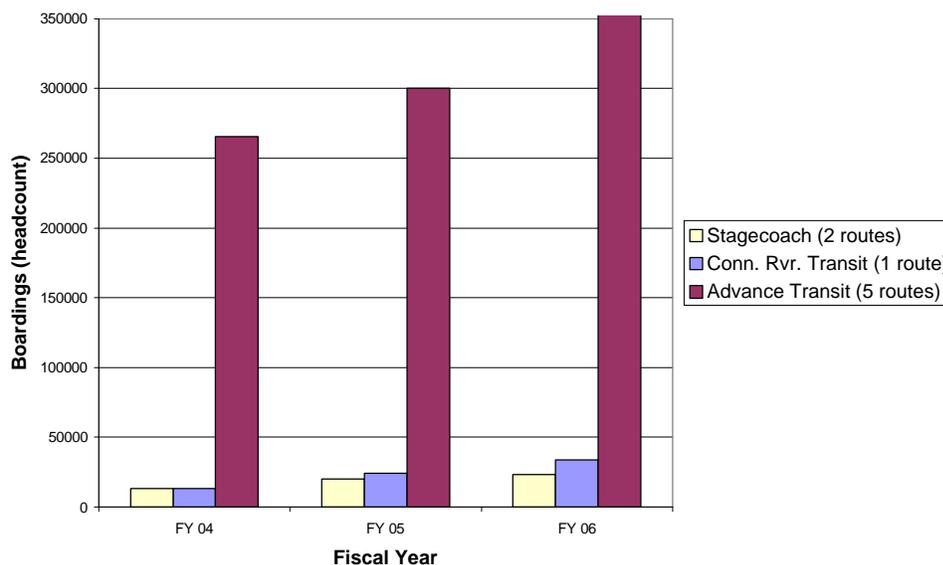
A. Scheduled Fixed-Route Bus Services

Scheduled fixed-route bus services are operated by Advance Transit (five routes), Stagecoach (two routes) and Connecticut River Transit (one route). Boardings on these services have increased at double-digit rates since 2004. With the exception of a Saturday-only route from the Randolph, Vermont area to West Lebanon, NH operated by Stagecoach, all of the existing fixed routes operate Monday through Friday.

Figure 2 shows the boardings trend for all three of the Upper Valley's 501(c)(3) fixed-route transit providers for FY '04 through FY '06⁹.

Figure 2

Fixed Route Boardings by Carrier, FY '04 - FY '06



Ridership increases have not been confined to Advance Transit. In August 2006, Stagecoach – which operates two scheduled commuter bus routes in Vermont that operate to and from the Upper Valley's employment centers each weekday -- submitted a "New Start" application to VTrans to add a second frequency to the River Route (I-91/US 5 north of White River Jct.) using Federal Congestion Mitigation and Air Quality (CMAQ) money. A key

⁸ The required local match percentage is not identical across all Federal or State transit funding mechanisms.

⁹ During FY '04, Stagecoach operated only one fixed route; a second fixed route commenced in FY '05; both are included. Boardings for CRT for FY '04 are for 8 months. In FY '06, Advance Transit added a fourth bus to support the Blue Route schedule, funded by Dartmouth College, Dartmouth Medical School and Dartmouth-Hitchcock Medical Center (DHMC).

justification for the application was that the existing service *was operating at capacity*. The grant was awarded and the additional service began operating January 2, 2007. Local “match” funding is from private (non-municipal) sources. Absent the private sources of the local match funds, the service expansion would not have been possible even with the availability of the Federal funds through the State of Vermont. **Table 1** below, presents fixed-route ridership data for the latest three complete fiscal years for all three 501(c)(3) transit providers that serve the core Upper Valley employment centers:

<u>Route Name or Descriptor</u>	<u>Operator</u>	<u>FY '04</u>	<u>FY '05</u>	<u>FY '06</u>	<u>Annual % Change</u>
River Route	Stagecoach	12,973	14,328	11,998(a)	-3.7%
89-er	Stagecoach	-----	5,547	11,523	107.7%
I-91 North	Conn. River Transit (CRT)	13,408(b)	24,297	33,877	29.8%(c)
Blue	Advance Transit (AT)	108,858	124,009	146,657	16.0%
Red (d)	Advance Transit (AT)	62,671	72,445	84,208	15.9%
Orange (d)	Advance Transit (AT)	41,436	44,002	53,596	13.7%
Green (d)	Advance Transit (AT)	24,772	28,211	34,853	18.6%
Brown (d)	Advance Transit (AT)	27,865	31,293	34,222	10.8%

(a): In FY'06, the River Route experienced its highest individual months during September / October '05. However, over-capacity issues led to a subsequent loss of ridership because passengers could not be certain of getting a seat. Additional service began 1/2/07 - see text; (b) 8 months; (c) obtained by normalizing partial-year CRT FY '04 data multiplying by (12/8=1.5) to yield estimated boardings of 20,112 for a complete year; (d) AT's Red, Orange, Green and Brown routes are not classified as 'Commuter' routes.

The data presented in Table 1 indicate that every fixed-route service but one has experienced at least double-digit annualized growth in boardings since FY 2004. The single exception was the result of *demand in excess of capacity*, which has been addressed by adding a second frequency.

Public transit services return net positive economic and social benefits to the Upper Valley. A study commissioned by the City of Lebanon and conducted by the UVTMA in 2005 estimated that 111 jobs depended on the existence of the scheduled public bus service. The same study conservatively estimated that the people holding these jobs earned at least \$1.2-million annually in gross wages. The study also estimated that 156,000 local auto trips were converted into bus trips on Advance Transit in CY 2004, saving local motorists more than \$341,000 at 40.5 cents per mile (the Internal Revenue Service allowance for business travel that year). Overall, the study identified *over \$530,400 in immediately quantifiable economic benefits* from the existence of transit bus service, which equated to \$1.88 per boarding based on the number of boardings during calendar 2004. As an example, this direct economic benefit per boarding was more than 3 times the funding contribution of the City of Lebanon when the City's FY '05 contribution is divided by the number of Advance Transit boardings that took place within Lebanon/West Lebanon that year.¹⁰

A recent independent study indicates that public transit enjoys broad support. Statewide, a random telephone survey of 749 New Hampshire residents was undertaken between March and August 2005 by the University of New Hampshire (UNH) at Durham. It found that “three quarters of New Hampshire residents support the idea of a transportation service in their area that provides affordable and accessible transportation options for any member of their community.”¹¹

¹⁰ The 2005 contribution by the City was \$81,820. AT reports 162,859 FY '05 boardings within Lebanon; hence \$81,820/162,859 = \$.50 city contribution per boarding. \$1.88/\$0.50 = 3.76. All municipal contributions to AT that year (6 municipalities) totaled \$184,779 vs. 300,412 fixed-route boardings or \$0.62 per boarding.

¹¹ “*New Hampshire Speaks Out: We Want Public Transportation*”, Summary Report, The Institute on Disability/UCED at UNH and Community Action Program Belknap-Merrimack Counties, Inc., p.4.

B. Paratransit Bus/Van Services

Specialty transit services are another element of the rural public transit framework. Although these services transport modest numbers of people compared with scheduled, fixed bus routes, they deserve mention because of their costs and necessity. “Demand response” and “paratransit” do not mean the same thing. “Demand response” is a generic term that simply means a service that is operated upon request. That is, when a customer requests transportation, a vehicle is dispatched. The customer is often required to provide advance notice to the operator. These services typically serve very low-volume areas, market segments or routes. “Paratransit” means a demand-response service that is equipped to accommodate mobility-impaired customers who can’t utilize other public transit services or taxicabs. Operation of paratransit services can be compulsory.

Effective January 1, 2007, Advance Transit (AT) began operating compulsory ADA/paratransit services, partially supported by funding from NHDOT. However, existing sources of funding will not fully cover the added cost of this service. AT reports it must find about \$64,000 in its existing FY '06-'07 budget to fund the first six months of the new service. AT has indicated that VTrans (Vermont DOT) is unable to commit to any funding support during FY '07 and that it is unclear whether or not it will be able to do so in FY '08 even though some of the new service will be in Vermont.

Most of the local public transit providers in Vermont and New Hampshire operate some form of demand-response service. In addition, several social service entities¹² operate some type of limited demand-response transportation services geared to a specific market segment. Typically, the objective is to provide essential transportation to and from medical services or for grocery shopping. This type of rural service has heretofore often been augmented by volunteer drivers – an approach that has broadly become more challenging because of liability concerns and difficulty recruiting volunteers.

The number of trips provided by demand-response services in New Hampshire has been roughly static over the past three fiscal years and is illustrated by a sampling in Table 2.¹³ An individual passenger trip provided by a demand-response service is likely to be much more expensive than those provided by scheduled fixed-route buses because the vehicles typically transport only a few people at a time.

Table 2: Demand-Response Ridership Data from Three NH Transit Providers

Demand-Response Ridership Data From Three NH Transit Providers				
	<u>1999</u>	<u>2003-04</u>	<u>2004-05</u>	<u>2005-06</u>
COAST ¹⁴		1,491	1,680	1,501
Concord Area Transit (CAT)	10,901	10,578	11,528	12,927
Manchester Transit Authority		10,762	9,943	10,224

Stagecoach operates demand-response bus/van services within the Upper Valley separate from its fixed routes. As noted above, Advance Transit has begun offering similar services within its service territory.

These specialty transit services bring their own funding and implementation challenges in a rural environment. The topic is included here is to facilitate awareness that paratransit services are as much an element of the rural transit picture as fixed-route bus services. Moreover, while specialty services are essential, they are costly. When paratransit services

¹² e.g., Grafton County Senior Center, Bugbee Senior Center.

¹³ This may reflect the limited geographic coverage of these services, not necessarily the lack of need.

¹⁴ Cooperative Alliance for Seacoast Transportation (Portsmouth area)

are under-funded, cuts affecting existing discretionary transit services including fixed-route transit bus operations can occur. As the average age of the populations of Vermont and New Hampshire continues to increase, especially outside of increasingly urban southeastern New Hampshire, demand for specialty transportation services will likewise increase.

C. Park & Ride Facilities

Park & Ride facilities in the Upper Valley are relatively inexpensive and well-utilized, but still too few and far-between, and historically have taken many years from concept to completion. Limited Park & Ride (P&R) facilities exist along I-89 and I-91 and in a few of the surrounding towns, most of which are served by a scheduled transit bus route. Many of the P&R lots are unimproved or marginally improved dirt, gravel or "hard pack" tracts without lighting or a waiting shelter. Exceptions include the lot at I-91 and Route 25 in Bradford, Vermont, the lot off I-91 at Exit 14 in Thetford, Vermont, and the lot at I-89 Exit 2 in Sharon, Vermont. Other lots, such as those at I-91 Exits 8 and 9 and at I-89 Exit 4 are scheduled for improvements. The area's three Regional Planning Commissions (RPCs) monitor and regularly report P&R utilization. On November 20, 2006, NHDOT opened a new 53-space P&R at I-89 Exit 13 (Grantham) that was overwhelmingly supported by the Town of Grantham and the nearby Eastman Community and includes an attractive waiting shelter. A scheduled bus service from Claremont and Newport via Grantham was proposed in early 2006 but failed to attract enough funding despite a survey of DHMC employees that indicated adequate potential demand.

In mid-2006, NHDOT estimated that Phases I and II of the new Grantham P&R could be built by an outside contractor for about \$95,000, including paving, drainage, lighting, landscaping and a modest waiting shelter.¹⁵ Being the newest P&R lot in the Upper Valley and the only one built on an unimproved site in recent years, this figure might serve as a reliable gage of the cost of constructing a similar P&R facility elsewhere in the region. If just 20 private automobiles use the lot five days a week and each vehicle operator avoids a 30-mile round-trip commute, after 48 working weeks of a typical year the avoided auto mileage would be 3,000 miles a week and 144,000 miles a year. At 40 cents per mile, a P&R lot costing \$95,000 to build would recoup its taxpayer costs in less than two years, exclusive of *any* value placed on avoided air pollutants or wear-and-tear on the roadways.¹⁶ This is as good or better than the payback period often used as a threshold metric for commercial projects, and demonstrates that well-used P&R lots are a very good value for the community and state DOTs.

An important trend worth noting is public comments in favor of modest lighting and landscaping at P&R facilities. A perception of reasonable safety when returning to ones vehicle at night should be reflected in P&R design and upgrade projects going forward.

¹⁵ Does not include site acquisition. NHDOT already owned the property.

¹⁶ Unlike a commercial project, which returns earnings to its investors, the benefits springing from a P&R project are returned to the public in the form of avoided out-of-pocket expenditures by the individuals who use the facility.

III. The Current Transit Funding Situation in the Upper Valley and Nationally

A. Existing National and NH/VT Transit Funding Policies and Programs

According to a 2005 study published in the *Journal of Public Transportation*, “in recent years there has been a proliferation of local option transportation taxes, ranging from local option gas taxes to property taxes to sales taxes. The increased use of these dedicated local revenue sources for transportation in general, and transit in particular, has enabled local governments to fill in the financial gap left by state and federal governments and take more control over the selection of funded projects. There is noticeable regional variation in the particular instruments that have been selected.”¹⁷

Below are listed the most typical State sources for transit funding¹⁸:

General Fund:	20 states
Gas Tax:	15 states
Motor Vehicle/rental car sales tax:	10 states
Registration/title/license fees:	8 states
Bond proceeds:	8 states
General sales tax:	7 states

Included in the Appendix is a summary of transit funding sources by state from the State Agency Transportation Coordination Project (2000), Oregon DOT, reproduced from “New Hampshire Speaks Out: We Want Public Transportation”, Summary Report, 2005. Eighteen sources of transit funding are utilized in one or more states (not including “Casino revenues” which have no application in Vermont or New Hampshire, or “Other” (unspecified)). Vermont and New Hampshire utilized only one funding source for public transportation as of the study date.

In New Hampshire, only the General Fund is utilized. In FY 2003, New Hampshire provided local transit systems a total of \$100,000 in operating assistance match and \$100,000 in capital assistance. This \$200,000 total was equivalent to just \$40,000 for each of the five largest operators in the state. The state will sometimes fund a special project or support capital acquisitions. In Vermont, only Chittenden County (Burlington area) has a sufficiently large population to apply directly to the Federal Transit Administration (FTA) for some grants through its transit agency, CCTA. Presently, property taxes account for 24% of the CCTA operating budget. In most Vermont towns, the only source of funds for local match is the local general property tax.¹⁹

B. Comparison of Upper Valley Transit Funding with National Practices

Funding of rural public transit in the Upper Valley is out of step with national practices and trends. This is partially because other regions of the country allocate a portion of local sales taxes, gasoline taxes, property taxes and surcharges on certain permits or vehicle registrations to pay for public transit. This is especially true of the Southeast and the West. In New Hampshire, legislation and possibly a state constitutional amendment would be required to use revenue from gasoline taxes or highway tolls for public transit. There is no personal income tax (for most people) and no sales tax. Public transit funding is therefore confined to the General Fund at the state level. Vermont has both a personal income tax and a statewide sales tax, but local municipalities use only property tax revenue to provide local match support for public transportation services. Quoting the *Journal of Public Transportation* again, “The Northeast is most reliant on local general revenue, largely due to

¹⁷ *Journal of Public Transportation*, Vol. 8, No. 3, page 20.

¹⁸ Vermont Public Transportation Policy Plan Memo dated October 13, 2005; original source: US DOT Bureau of Transportation Statistics. *Survey of State Funding for Public Transportation 2003*.

¹⁹ Draft Vermont Public Transportation Policy Plan, January 2005, pp. 1-3.

the fact that the states in this region have generally shied away from permitting the enactment of dedicated local taxes like sales taxes. Local general funds tend to be the primary local revenue source for many agencies in the Northeast."²⁰

Vermont (VTrans) is currently developing a new Public Transit Policy Plan (PTPP), using the services of TranSystems Corporation -- an outside consultant. The final report has entered a comment period but was not yet available at this writing.

In fiscal 2003, New Hampshire ranked 42nd out of 50 states for state funding of public transportation, distributing just \$200,000 in state grant money as noted previously or 16 cents per capita.²¹ By contrast, Vermont -- with approximately half the population -- allocated \$5.3-million, or \$8.56 per capita. The disparity between New Hampshire's level of '03 state transit funding compared with Vermont's was only partially offset by a Federal commitment of \$11.02-million to New Hampshire compared with \$9.69-million to Vermont. Thus, transit funding in Vermont that year from Federal and State sources combined still exceeded New Hampshire's by \$3.77-million. It should be noted that NHDOT's *proposed* FY '08 budget for public transit *operating* assistance (not capital) is \$500,000, increasing to \$600,000 in FY '09.²² If approved by the Governor, this would be a modest but commendable effort to increase operating funds approximately 100% over recent levels.

Table 3, below, lists FY 2003 per capita *state* spending on public transportation for each of the six New England states:

Table 3: State Public Transit Spending per Capita, FY '03	
State	FY '03 Public Transit Spending per Capita
Connecticut	\$53.43
Maine	\$1.72
Massachusetts	\$181.16
New Hampshire	\$0.16
Rhode Island	\$34.79
Vermont	\$8.56

For FY '03, the national average state (not Federal) expenditure on public transportation was \$30 per capita. (See **Appendix Table A-2** for a complete list, including population figures.)

C. Practical Challenges and Consequences

In view of the above, the practical challenge for public transportation in the Upper Valley is to secure reliable funding sources for both its existing transit services and its considered response to the rapidly rising demand for public transportation. In an environment where most of the current funding either comes from or via a General Fund at the state level or from municipal and institutional contributions for which there is no guarantee of support, a third leg of the proverbial stool would be helpful. This could help channel funding toward additional routes and frequencies and/or extended hours of operation. It could also help provide continuing funding for routes that were started with federal Congestion Mitigation and Air Quality (CMAQ) grants, which expire after three years. When a CMAQ grant expires, all of the CMAQ grant money must be replaced by some other source or sources in order for the service to continue in operation no matter how successful it is as measured by passenger boardings or trips.

²⁰ *Journal of Public Transportation*, loc. cit.

²¹ New Hampshire's 2003 state public transit funding was ahead of 43rd-ranked Nevada by one cent per capita. Seven states spent nothing on public transit that year.

²² UVTMA telecon with NHDOT November 2006.

IV. Solutions for Sustainable and Responsive Rural Transit Funding

A. The Role of Fares

Farebox recovery²³ for rural transit providers is characteristically low – typically 10% or less – due to the relatively low density of boardings per vehicle-mile operated. For example, the recent Stagecoach “New Start” proposal for a second River Route (I-91 north) frequency assumed a farebox recovery of just 6.25% (\$5,000 against a predicted annual deficit of \$80,000). Fares can be used as a demand management tool when travel demand exceeds capacity on certain routes or at certain times of day – assuming a fare system is in place or is applied if there is none.²⁴ More typically, fares are increased when operating costs go up. For example, Stagecoach charges a fare and CRT requests a donation on the commuter bus routes they each operate to and from Hartford, Hanover and Lebanon. In the fall of 2006, both companies increased fares or the requested donation and reported little or no resistance.²⁵

Because of the inverse nature of transit demand elasticity (a fare increase results in a demand decrease) a transit provider can’t raise fares high enough to erase an operating deficit. If this were possible, major urban transit systems handling very large numbers of boardings per vehicle-mile would be more likely to recoup their operating costs from fares than rural providers with much lower boardings density per route-mile or vehicle-hour operated. However, even the large urban systems fall well short of doing so, even with state-of-the-art magnetic fare payment systems that are intended to reduce labor costs.

Typical fare elasticities for public transit systems range from about -0.12 to -0.45 , with the lower end of the range more typical of urban transit systems (during peak AM and PM commuting periods). In 2005, the UVTMA estimated the theoretical²⁶ arc elasticity on Advance Transit at -0.426 – remarkably close to recent academic work that found fare elasticities for peak and off-peak periods combined to be about -0.43 for rural transit systems.²⁷ This value means that 4.3% of boardings will be lost if a fare is increased 10%. To the best of our knowledge, no studies have been completed that investigate whether the doubling of gasoline prices since 2004 has caused the demand for rural transit services to become more inelastic and, if so, whether the effect will be durable or is transient and will subside to historic norms if gasoline prices plateau or fall.

Hiking transit bus fares to “whatever the market will bear” is antithetical to the contribution that a well-utilized public transit system makes to reducing roadway traffic congestion. Public policy objectives demand that citizens be encouraged to use public transportation because even a small reduction in motor vehicle volume can yield noticeable improvements in traffic congestion, air pollution and even defer the costs of some highway expansion projects.

B. Impact Fees and Other Taxes, Fees & Tolls

The following are three examples of non-traditional sources of public transit funding used or proposed elsewhere:

²³ The percentage of operating expenses “recovered” through fares.

²⁴ Advance Transit is fare-free system-wide and CRT requests a donation.

²⁵ Dartmouth College and DHMC both reimburse fares for their employees as part of a Transportation Demand Management (TDM) program that encourages employees to reduce single-occupant vehicle (SOV) commuting.

²⁶ “Theoretical” because AT does not charge a fare, and therefore any fare imposed, however small, would represent a percentage fare increase of infinity.

²⁷ See for example Fare Elasticity and Its Application to Forecasting Transit Demand, Larry H. Pham, Ph.D. and James Linsalata, American Public Transit Association, Research and Statistics Division, August 1991.

According to a draft of the forthcoming Vermont Public Transportation Policy Plan (PTPP), the state of Minnesota in 2002 “began using a motor vehicle sales tax to replace property taxes as a transit funding source.”²⁸

In early 2006, a \$2-a-day tax on car rentals was proposed (HB 301) as the first dedicated funding source for South Florida Tri-County Regional Transportation Authority, which already operates regional commuter rail (“Tri-Rail”) and bus services. The proposed fee was projected to generate \$46 million annually and yield a total capitalized value of \$1.2-billion for the RTA by matching additional state and federal funds, plus loans.²⁹ The proposed measure failed to reach the House floor. However, several important transportation proposals around the nation were successful when put to voters during the 2006 national mid-term elections.

Very recently, a sophisticated congestion pricing experiment was conducted in Stockholm, Sweden. Using technology similar in concept to the “EZ Pass” system widely adopted in America, Swedish commuters were electronically charged a variable toll ranging from zero (free) after 6:30 PM and until 6:30 AM to a maximum of \$2.76 (US dollar equivalent) during peak travel times of 7:30 AM to 8:29 AM and 4:00 PM to 5:29 PM. Traffic planners observed that motorists had changed their travel habits in response to the new system and hoped that Stockholm commuters would notice enough of an improvement in traffic congestion to retain the new toll structure. “During the Stockholm trial, the city collected data on how the system affected air quality, parking and bus ridership. The results showed that traffic passing over the cordon decreased 22%, while traffic accidents involving injuries fell by 5% to 10%. Exhaust emissions, including carbon dioxide and particles, decreased by 14% in the inner city and by 2% to 3% in Stockholm County.” In addition, the peak-period trip time into or out of the city fell from three times the off-peak travel time to just over double the off-peak travel time. Finally, use of “all forms of public transportation” (buses, trains, trams, etc.) increased 6% and ridership on inner-city bus routes rose 9% compared with a year earlier.³⁰

The foregoing highlights three ways in which a U.S. state, a domestic metropolitan area and a European country have attempted to augment transit funding by tapping non-traditional sources of money or manage traffic congestion by implementing systems that result in desired changes in behavior.

C. Vehicle Registration Surcharges and Gasoline Taxes

As of March 1, 2006, the City of Lebanon is collecting a \$5 surcharge on motor vehicle registrations (except antique autos) to help fund transportation infrastructure projects per RSA 261:153, VI. This mechanism allows a New Hampshire municipality to collect a surcharge of up to \$5 on motor vehicle registrations to help fund local transportation projects, including sidewalks. As of this writing, it is not clear if the City of Lebanon intends to apply any portion of these funds to support local transit services. Nevertheless, it indicates an attempt by the largest municipality in the Upper Valley to augment the revenue available for transportation-related works by imposing a fee -- already permitted by New Hampshire state law -- that has a connection to users of the transportation system.

The Town of Hanover began collecting a surcharge on vehicle registrations several years ago. Proceeds are added to the town’s General Fund and used for alternative transportation projects such as sidewalks and bike paths.

Presently, all gasoline taxes collected by the State of New Hampshire must be used for “highway” projects. The state’s Supreme Court reaffirmed this when it recently ruled that such funds (including toll road receipts) could not be used to fund a portion of a commuter rail

²⁸ Vermont Public Transportation Policy Plan (PTPP), draft dated Oct. 13, 2005, p. 2.

²⁹ *Florida Looks At Rental Car Tax to Pay for More Transit Projects*, South Florida Sun-Sentinel, April 18, 2006.

³⁰ *Will Stockholm Traffic Take Its Toll?*, Wall Street Journal, August 29, 2006, pp. B1 & B8.

project in Nashua. However, NHDOT constructs Park & Ride lots that sometimes include waiting shelters to support carpools, vanpools and express bus riders.

Neither the New Hampshire nor the Vermont legislature has raised the gasoline tax for several years, despite increased highway funding needs and a backlog of deferred maintenance and unfunded projects in both states. University of New Hampshire researchers estimate that a one-cent increase in the New Hampshire gasoline tax would raise \$7- to \$8-million³¹. Such an increase would represent no more than one-half of one percent (0.5%) of the cost of a gallon of gas at recent retail prices. This modest step would have a big revenue impact and given the myriad effects of market forces and other taxes and fees on the petroleum supply-chain, the one-cent tax increase would be virtually transparent.

D. Micropolitan Region Challenges & Potential Opportunities

Currently, public transit funding on a *regional* level is nonexistent except where an individual state implements policies that consider both an urban core and its surrounding area as a region. Despite the fact that a Micropolitan Region is an official designation of the U.S. Census Bureau³², there are no Federal programs that direct public transit funding to designated Micropolitan areas. According to the U.S. Census Bureau, the Hartford-Lebanon area is the second-largest designated Micropolitan Region in the country with a population of 167,387 as of 2000. As of 2000, there were five other Micropolitan regions in New Hampshire and three in Vermont.^{33, 34} Nothing in the literature reviewed by the UVTMA implied any near-term prospect of dedicated Federal transit funding for Micropolitan Regions. Nevertheless, micropolitan areas contain more than 28 million people (one in ten Americans) and account for over a fifth of all U.S. counties.³⁵ Therefore, advocacy for targeting Federal transit funds to micropolitan communities is in order, even though the possible emergence of such policies/programs appears to be some years away.

³¹ Antal and Dornblut, loc. cit.

³² Defined as "at least one urban cluster of at least 10,000 but less than 50,000 in population".

³³ *Micropolitan America: A Brand New Geography*, Robert E. Lang and Dawn Dhavale, Metropolitan Institute at Virginia Tech Census Note 05:01 (May 2004)

³⁴ Claremont, Concord, Keene, Laconia and Berlin in NH; Barre, Bennington and Rutland in VT.

³⁵ *Micropolitan America: A Brand New Geography*, loc. cit.

V. Recommendations and Next Steps

Recommendations could be broadly placed into one of two categories: “short to intermediate term”, meaning they could be implemented relatively quickly (0 to 2 years), and “long term”, meaning they will likely require several years of effort. Some initiatives would require putting the question to voters on a local or statewide ballot during an appropriate election period. Some long-term initiatives would require Legislative action or new Federal policies.

In the short to intermediate term:

- Source municipal operating fund support by an agreed formula (e.g., percentage of fixed-route boardings within each municipality or transit users resident in each) including a funding floor, and possibly in combination with other initiatives. Whether formally or informally agreed, the formula should be simple, objective, relevant, and easy to monitor.
- Engage the direct financial participation of the business community to support operational funding of the public transit infrastructure.
- Promote awareness of public transit benefits, possibly including an employer rewards/“buy out” system (participants agree to leave car at home and use public transportation a certain number of days per week or per month); underscore the relationship to employer attraction/retention concerns and parking issues.
- Encourage New Hampshire municipalities to adopt vehicle registration surcharges if not already collecting them, and to allocate these funds to public transportation infrastructure.
- Encourage municipalities that are already served by public transit to explore tax-increment financing (TIFs). A TIF allocates all or a portion of the incremental tax revenue resulting from a documented increase in the assessed value of properties due to some betterment. As currently implemented, TIF revenue probably can’t be used to support transit bus operations but *could* be used for certain infrastructure, such as waiting shelters.
- Support state DOTs in recommending larger operating assistance budgets before their respective state Legislature. Encourage them to do so if they are not. Provide testimony and/or supporting data if appropriate.
- Support greater re-allocation (“flexing”) of transportation funds to transit at the state level (both NH and VT) to the extent permitted by existing Federal SAFETEA-LU legislation.
- Support the allocation of more NH gasoline tax revenues for bus (i.e, highway-based) public transportation.

In the longer term:

- Work with state legislators to formally allocate a portion of state gasoline tax revenues to pay for public transportation, or increase the state gasoline tax and allocate all or part of the increase to public transportation.
- Encourage adoption of vehicle registration surcharges in Vermont (this is already allowed in NH by Statute).
- Explore a “regional revenue district” or “service district” concept with local and State political representatives, with funds raised from the public and private sectors specifically allocated to public transportation.

- Work with State Congressional Delegations to promote Federal action to allocate a portion of Federal transit dollars to Micropolitan Areas as identified by this existing U.S. Census Bureau classification.

VI. Appendices

Table A-1 – Transit Funding Sources by State

State	General Fund	Motor Fuels taxes	Property tax	Local Sales Tax	Vehicle Registration Fee	State Sales Tax	Special Transit Funds	Lottery Revenues	Business Surcharge	Motor Vehicle Sales Tax	Oil Overcharge Funds	Cigarette Tax	Taxi Licensing Fee	Toll Road Revenues	Disabled Parking Fees	Casino Revenues	Bond Revenues	Employers Payroll Tax	Public Utility Tax	Other	
Alabama																					
Alaska			X				X														
Arizona				X	X		X	X													
Arkansas	X		X																		
California		X	X	X		X															
Colorado																					
Connecticut		X		X	X								X					X			
Delaware		X			X									X				X			
Florida	X				X										X						X
Georgia	X		X	X																	
Hawaii			X		X																
Idaho	X																				
Illionois	X		X			X															
Indiana			X			X															
Iowa	X		X							X	X										
Kansas	X	X				X												X			
Kentucky	X																				
Louisiana		X	X					X	X												
Maine	X																				X
Maryland		X	X		X				X	X											X

Table A-1, continued

State	General Fund	Motor Fuels taxes	Property tax	Local Sales Tax	Vehicle Registration Fee	State Sales Tax	Special Transit Funds	Lottery Revenues	Business Surcharge	Motor Vehicle Sales Tax	Oil Overcharge Funds	Cigarette Tax	Taxi Licensing Fee	Toll Road Revenues	Disabled Parking Fees	Casino Revenues	Bond Revenues	Employers Payroll Tax	Public Utility Tax	Other
Massachusetts	X					X														
Michigan	X	X	X		X					X										
Minnesota	X		X														X			
Mississippi								X												
Missouri	X			X																
Montana	X	X	X	X																
Nebraska	X	X	X																	
Nevada				X			X													
New Hampshire	X																			
New Jersey	X	X					X													
New Mexico																				
New York	X	X		X					X											
North Carolina	X	X		X	X															
North Dakota					X															
Ohio	X		X	X																
Oklahoma	X	X																		
Oregon	X		X									X						X		
Pennsylvania	X					X	X	X									X	X		
Rhode Island		X															X			
South Carolina	X	X																		
South Dakota																				
Tennessee	X	X															X			
Texas	X	X		X						X										
Utah				X																
Vermont			X																	
Virginia		X		X	X															
Washington			X		X															
West Virginia	X		X																	
Wisconsin		X			X															X
Wyoming				X			X													

Data Source: State Agency Transportation Coordination Project. (2000). The Coordination Challenge. Oregon Department of Transportation.

Table A-2 – Public Transit Expenditures by State for FY 2003

State	2003 Federal	2003 State	2003 State Population	2003 Per Capita State Spending
Alabama	\$55,708,644.00	\$0.00	4,500,688	\$0.00
Alaska	\$35,037,287.00	\$0.00	648,818	\$0.00
Arizona	\$21,234,890.00	\$13,768,000.00	5,580,811	\$2.47
Arkansas	\$83,400,160.00	\$2,800,000.00	2,725,714	\$1.03
California	\$1,037,264,991.00	\$1,294,100,000.00	35,484,453	\$36.47
Colorado	\$134,970,569.00	\$0.00	4,550,688	\$0.00
Connecticut	\$122,623,117.00	\$190,300,000.00	3,483,372	\$53.43
Delaware	\$13,453,444.00	\$74,600,000.00	817,491	\$91.25
Florida	\$268,672,898.00	\$93,500,000.00	17,019,068	\$5.49
Georgia	\$133,442,986.00	\$5,232,669.00	8,684,715	\$0.60
Hawaii	\$50,469,727.00	\$0.00	1,257,608	\$0.00
Idaho	\$10,838,325.00	\$312,000.00	1,366,332	\$0.23
Illinois	\$486,077,907.00	\$754,000,000.00	12,653,544	\$59.59
Indiana	\$64,977,046.00	\$34,800,000.00	6,195,643	\$5.62
Iowa	\$34,023,988.00	\$9,500,000.00	2,944,062	\$3.23
Kansas	\$24,439,584.00	\$6,000,000.00	2,723,507	\$2.20
Kentucky	\$49,395,998.00	\$1,400,000.00	4,117,827	\$0.34
Louisiana	\$73,200,208.00	\$4,292,500.00	4,496,334	\$1.10
Maine	\$8,988,625.00	\$2,250,000.00	1,305,728	\$1.72
Maryland	\$204,507,123.00	\$763,500,000.00	5,508,909	\$138.59
Massachusetts	\$221,430,134.00	\$1,165,492,492.00	6,433,422	\$181.16
Michigan	\$108,026,968.00	\$207,800,000.00	10,079,985	\$20.62
Minnesota	\$143,169,667.00	\$229,200,000.00	5,059,375	\$45.30
Mississippi	\$15,681,001.00	\$0.00	2,881,281	\$0.00
Missouri	\$78,173,441.00	\$6,600,000.00	5,704,484	\$1.16
Montana	\$6,837,809.00	\$390,000.00	917,621	\$0.43
Nebraska	\$14,056,687.00	\$1,600,000.00	1,739,291	\$0.92
Nevada	\$46,687,529.00	\$325,000.00	4,500,752	\$0.15
New Hampshire	\$11,020,834.00	\$200,000.00	1,287,687	\$0.16
New Jersey	\$474,826,119.00	\$812,900,000.00	8,638,396	\$94.10
New Mexico	\$14,892,639.00	\$0.00	1,874,614	\$0.00
New York	\$983,801,302.00	\$1,763,200,000.00	19,190,115	\$91.88
North Carolina	\$85,073,110.00	\$91,650,000.00	8,407,248	\$10.91
North Dakota	\$7,679,247.00	\$1,620,000.00	633,837	\$2.56
Ohio	\$145,216,794.00	\$20,700,000.00	11,435,798	\$1.81
Oklahoma	\$37,458,144.00	\$2,750,000.00	3,511,532	\$0.78
Oregon	\$125,933,795.00	\$30,910,000.00	3,559,596	\$8.68
Pennsylvania	\$348,230,994.00	\$823,800,000.00	12,365,455	\$66.62
Rhode Island	\$22,410,313.00	\$37,442,000.00	1,076,164	\$34.79
South Carolina	\$34,344,175.00	\$6,000,000.00	4,147,152	\$1.45
South Dakota	\$5,484,118.00	\$923,000.00	764,309	\$1.21
Tennessee	\$76,939,883.00	\$30,400,000.00	5,841,748	\$5.20
Texas	\$330,035,078.00	\$25,700,000.00	22,118,509	\$1.16
Utah	\$120,077,517.00	\$0.00	2,351,467	\$0.00
Vermont	\$9,694,425.00	\$5,300,000.00	619,107	\$8.56
Virginia	\$121,165,641.00	\$131,500,000.00	7,386,330	\$17.80
Washington	\$193,723,591.00	\$39,900,000.00	6,131,445	\$6.51
West Virginia	\$19,689,552.00	\$2,200,000.00	1,810,354	\$1.22
Wisconsin	\$71,247,923.00	\$108,900,000.00	5,472,299	\$19.90
Wyoming	\$5,447,663.00	\$1,500,000.00	501,242	\$2.99
National totals	\$6,791,183,610.00	\$8,799,257,661.00	292,505,927	\$30.08