

United States Senate Committee on Environment and Public Works
Senate Testimony: Brian Searles, Secretary, Vermont Agency of Transportation.
Transportation Challenges in Small States and Rural Areas
April 14, 2011

Chairwoman Boxer, Ranking Member Inhofe, and Members of the Committee, thank you for the invitation to appear before you today to hear key transportation challenges facing small states and rural areas. I believe the challenges we face are critical considerations as we move towards the next transportation reauthorization bill.

Although I represent the State of Vermont, the issues facing small states and rural areas apply throughout the nation. From Arkansas to Wyoming, and Alabama to Oregon, the challenges of an aging infrastructure, increasingly dispersed and aging population will only be exacerbated in the future.

Both the quality and quantity of the transportation systems that serve small states and rural areas have steadily eroded for many decades. Economic and demographic shifts, coupled with long term underinvestment, have all had detrimental impacts on mobility, economic opportunities and the quality of life of rural residents.

1) Challenge in maintaining transportation infrastructure in northern tier winter states – rural challenges

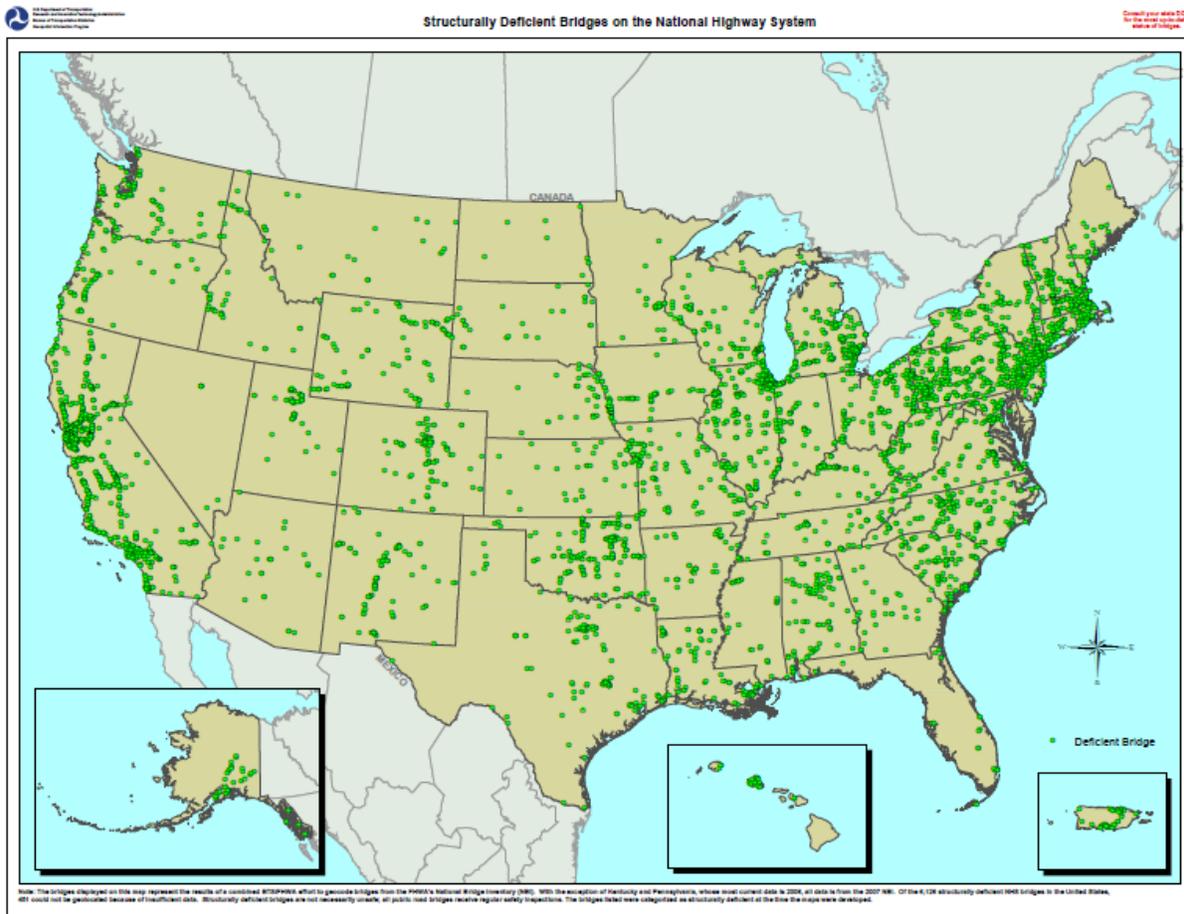
Maintaining transportation infrastructure has always been a challenge. According to the Federal Highway Administration 80% of the national road network are rural roads, accounting for 3.1 million miles of the U.S. transportation system. Rural roads carry about 40% of vehicle miles traveled. City and county governments – which rely heavily on State DOT funding - are responsible for 95% of unpaved and 55% of paved roads¹. While most states have a backlog of deferred paving projects, these backlogs are particularly pronounced in small states and rural areas that receive a disproportionately smaller share of federal transportation transfers, even with the minimum set-aside supplements.

States with severe winters and temperature variations are even more prone to exacerbated roadway maintenance costs. The corroding effects of salt and liquefied snow removal agents, coupled with continued freeze and thaw cycles and the wear and tear of snow removal for highway safety, add significant cost to roadway maintenance budgets.

¹ Rural Policy Research Institute (2011): *Rethinking Federal Investments in Rural Transportation: Rural Considerations Regarding Reauthorization of the Surface Transportation Act*, p.9
http://www.rupri.org/Forms/RUPRI_Transportation_April2011.pdf

Much attention has recently been focused on inadequate bridge structures. According to the FHWA, there are 55 structurally deficient bridges along Vermont's National Highway System alone². Approximately 30% of Vermont's 2,694 long structure bridges are considered structurally deficient or functionally obsolete³. Vermont ranks 42nd among the 50 states for the percentage of structurally deficient bridges. This is due, in large part, to the age of Vermont's bridge network. Many bridges were replaced bridges flooded in 1927 and are now in need of replacement or major rehabilitation. Interstate bridges are approaching 50 years of age and are now in need of significant rehabilitation.

As I look at a map of the nation's deficient bridges, I see similar high numbers in Nebraska, New York, Oklahoma, and other states with large rural populations.



http://www-nrd.nhtsa.dot.gov/departments/nrd-30/nca/stsi/50_VT/2009/50_VT_2009.htm

² Research and Innovative Technology Administration (2011): *Structurally Deficient Bridges*. http://www.bts.gov/programs/geographic_information_services/maps/structurally_deficient_bridges_on_the_national_highway_system/vt/html/vt.html

³ Vermont Agency of Transportation (2011): *2011 Structures Section Annual Report*. <http://www.leg.state.vt.us/reports/2011ExternalReports/263513.pdf>

A recent example of how failing to replace structurally deficient bridges can impact communities is seen in Vermont. In 2009, an inspection performed on the Champlain Bridge (also referred to as the Crown Point Bridge) revealed that two of the bridge's support piers were not structurally sound. As a result, the bridge was immediately closed to all traffic on October 16, 2009. The emergency bridge closure has impeded vital transportation links between New York and Vermont communities, and has impaired trade flows from surrounding states and Canada.



The demolished Champlain Bridge, April 2010

In rural states, such as the case in Vermont, there can be few detour options, creating significant dislocation for commuters and businesses. In the case of the Champlain Bridge, the closure resulted in residents from New York and Vermont having to add over 100 miles per day to their drive to work, schools and hospitals.

Another illustration of this challenge is the sheer scale of maintaining interstate bridges. Per capita, rural states maintain significantly more bridge miles than the national average. For example, Vermont maintains

429 square feet of Interstate bridges per capita, 33.2% above the national average, and ranks 11th among all states⁴. The top 10 are all rural states or states with significant rural populations:

- 1) Louisiana
- 2) Wyoming
- 3) Hawaii
- 4) Montana
- 5) Alabama
- 6) West Virginia
- 7) Arkansas
- 8) Mississippi
- 9) Kansas
- 10) Connecticut

In addition to the list of the current structurally deficient bridges, the next decade will present us with unprecedented maintenance requirements for other bridges. These maintenance requirements will come during a time of severely constrained resources. Without adequate funding necessary to perform this maintenance, the list of structurally deficient bridges will grow longer.

Maintaining rail infrastructure is also a challenge for small and rural states. Deregulation in the railroad industry in the 1970s resulted in the abandonment of many short lines in rural states. A number of states had to acquire abandoned rail lines to ensure continued freight service and intercity passenger rail, and today deal with the same deferred maintenance requirements seen with highways and bridges.

Compounding the funding challenge is that small and rural states have very limited ability to raise additional revenues to close funding gaps, through, for example, public-private partnerships or tolls. We know that a minimum of 30,000 Annual Average Daily Traffic is required for tolls just to recover start-up and operation costs. Vermont only has one highway that carries that level of traffic volume, and it is surrounded by state roads that travelers can use to bypass tolls.

2) Impact of transportation problems to households.

Due to sprawling land use patterns that date back to farm economies in existence for over 200 years, residents of rural states travel longer distances to worksites and needed services, such as healthcare and employment training. Rural residents also tend to have lower incomes than the national average. This affects family budgets as transportation costs account for the second highest spending category, after housing costs. (Among the lowest 20 percentile income bracket, transportation costs account for 42% of family budgets)⁵. And these family budgets are increasingly under strain due to high energy costs. As we talk here today, the average price of gasoline is approaching \$4/gallon. Dependence on driving and

⁴ Analysis conducted by the Vermont Agency of Transportation based on the U.S. Bureau of the Census 2009 State population counts and the FHWA National Bridge Inventory (December 2010)

⁵ Rural Policy Research Institute (2011), p.7

longer commutes is the major reason why over 44% of all Green House Gas emissions in Vermont are generated by the transportation sector, a rate you will find in other rural states.

The demographic trends of rural areas are also different from urban areas, and exacerbate transportation challenges. Most rural states are aging, with the share of residents 65 and over accounting for a significantly higher rate than their urban counterparts. As older residents require more transportation services (i.e. transit services to medical appointments), providing those services to sparsely populated areas will cost even more in the future.

Lack of density has been one of the biggest challenges in developing public transit networks in small and rural states as it is difficult to build the critical mass to provide cost-efficient transit services. People with low-incomes, the elderly, and those living with disabilities in rural communities need transportation options that allow them to access job and educational opportunities, medical facilities, and normal day-to-day interaction with friends and family. Yet federal statistics show that more than 1.6 million rural households do not have access to a car and 38% live in areas with no public transport⁶.

3) Impacts to economic prosperity (interstate and international trade)

Rural states, especially Border States, play an increasingly important role in the movement of goods and the enhancement of national and global trade. Federal laws, such as the North American Free Trade Agreement, and general growth in global trade, have led to major increases in freight, particularly heavy truck traffic. , This leads to concerns about roadway maintenance costs along the National Highway System. Over 40% of Vermont's freight flows are through flows – trips that neither originate nor are destined for Vermont⁷. This rate is even higher for international trade – 67% of all flows originate or are destined for other states. Vermont, like many rural and border states, is therefore critical for the movement of goods between states and to international markets.

Despite this critical role in economic trade, the net result of these increased traffic flows is higher maintenance costs for our highways and bridges, exacerbating our other transportation challenges.

Vermont is currently involved in a federal pilot study that I believe is critical to ensure the efficient flow of freight to other states. Our federally allowed interstate weight limits is currently 80,000lbs, substantially lower than neighboring jurisdictions. Through a combination of grandfathered regulations (New York), federal exemptions (New Hampshire), and raised weight limits (Quebec), Vermont now finds itself an island among its neighbors. The lower interstate weight limit has resulted in heavy trucks using the state highway network. Many state roadways were not designed to handle heavy trucks, particularly through village centers and historic downtowns. This is impeding interstate and international trade, as well negatively affecting the quality of life of many rural communities.

⁶ Rural Policy Research Institute (2011), p.7

⁷ Vermont State Freight Plan (draft)

4) Highway Safety

With high levels of vehicle miles travelled in rural states, highway safety is also a high priority. Dependence on automobile travel has historically been correlated with higher accident rates. According to National Highway Traffic Safety Administration data (2009), Vermont's fatality rate per 100,000 in population was 8% above the national average⁸. NHTSA data shows similar above-average rates for other rural states with high VMT.

Signage is a particular concern as the ability to provide and maintain signage is escalating in costs. Signage is critical for both the mobility and safety of the traveling public.

5) Transportation Funding Dilemma

Environmental challenges require transportation policy to support strategies to modernize vehicle fleet efficiencies and reduce Vehicle Miles Travelled (VMT). The steady increase in VMTs of the 1970-1990's has begun to stabilize. Moreover consumers have begun to purchase more fuel-efficient vehicles and the nation's fleet will continue to meet higher efficiency standards. Fuel-efficient vehicles and VMT reductions have an immense positive impact in reducing energy use and Co2 emissions. However, current transportation funding is largely based on gasoline taxes that pay for road and bridge improvements. Under the current funding formula, increases in more energy-efficient vehicles will result in less funding to maintain critical transportation infrastructure. Both federal and state revenues will continue to decline, even as the safety of our roads and bridges are further compromised by underinvestment. Transportation funding strategies at the state and national level must address this dilemma.

Recommended Actions

The upcoming reauthorization provides an opportunity to modernize, strengthen, and integrate transportation systems that connect rural residents and places to each other and to the wider world, and to improve transportation, economic development and quality of life for rural residents.

A) Increase overall funding

It has become clear that formula funds are insufficient to meet the current and future transportation system needs of small states and rural areas. Public-private partnerships and tolls, particularly those that rely on heavy use, are not viable in rural areas.

The rural federal-aid highway system connects small and mid size communities to the national surface transportation network and international trade. It is an integrated system that ties the nation together. Without a healthy transportation system, the nation's metropolitan areas will also suffer.

⁸ National Highway Traffic Safety Administration (2011): State Traffic Safety Information (FY 2009) <http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/STSI/USA%20WEB%20REPORT.HTM>

In order to ensure the viability of small state and rural area transportation systems, we need to reinvent funding mechanisms and not be too dependent on per-gallon gas tax. If this means user charges (i.e. per-mile) it must also be sensitive to the needs of low-income rural residents who drive long distances for work and other services, and cannot afford the latest fuel-efficient vehicles.

We also need to take into account the added funding needs of Border States, which bear a disproportionately higher burden of transportation system maintenance, for benefits that accrue to the nation as a whole.

B) Streamline funding to allow for flexible uses (allow operating)

The complexity and diversity of small states and rural areas, and the associated variety of needs and expectations for transportation, also call for flexible and integrated responses to federal funding.

There is a need to streamline federal funding and the regulatory process to allow flexibility in shifting funds between modes, including the ability to use more federal funding towards the operations of rural public transit systems and passenger rail. Small and rural states that provide operating funds to transit and rail systems pay a high portion of their state transportation funds towards these critical modes. Flexibility is needed in federal programs such as CMAQ to allow operating funds to be shifted towards these modes on a permanent basis.

We must also be proactive and plan for future technologies that will decrease our carbon footprint. For example, the energy-efficient vehicles that will be produced by the nation's auto manufacturers will require electric vehicle charging stations and support infrastructure. State DOT's should be allowed to develop their own programs, with federal assistance, including incentives for energy efficient drive-trains and infrastructure.

I would also suggest continuing and expanding the scope of federal programs that have had a big impact on the nation's energy use and CO2s. The cash for clunkers program, for example, resulted in significantly reducing the number of older, less efficient vehicles on our highways. The modernization of automobile fleets also had the direct benefit of sustaining and creating jobs in the nation's auto manufacturing heartlands, such Michigan, Ohio and Tennessee.

C) Support major initiatives that are regional and national in scope

I would also encourage you to support major regional and national initiatives that have transportation advantages of connecting small states and rural areas to larger cities. For example, the Northeast Rail Corridor has the potential to redefine future modal splits, and reduce our dependence on the automobile. Raising transit and rail ridership will benefit our nation's transportation network.

Finally, we hope for your support in making permanent Vermont's Interstate Pilot project. Streamlining interstate weight limits is critical for the nation's continued economic prosperity.

I hope the challenges I discussed today and their proposed solutions are taken into account during the next reauthorization.

Thank you for your time today.

Brian Searles, Secretary
Vermont Agency of Transportation