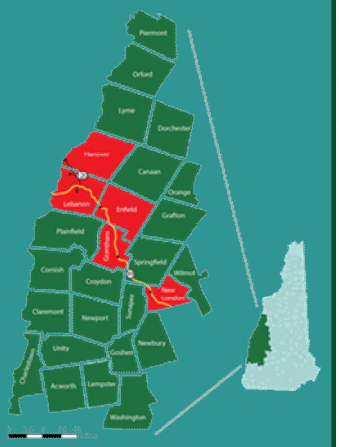
Interstate 89 Commuter Transit Service Feasibility Study

Study Description

The purpose of this study is to evaluate the demand for commuter bus service along the Interstate 89 (I-89) corridor in New Hampshire connecting New London to Lebanon/Hanover and to develop alternatives for service. This is a heavily traveled road with no commuter transit services between these major destinations. The corridor has been identified in numerous documents, such as Long Range Transportation Plans and Human Service Transportation Coordination Plans, as having a need for a transit connection. It has also been documented that the overall regional transportation network would be greatly improved if there was a transit connection.



Study Goals

1. Identify existing transportation systems, level of service, and demand for commuter service in the study area
2. Develop commuter transit service options that connect New London to Lebanon and Hanover
3. Identify coordination and connection opportunities with existing transportation services
4. Identify coordination and partnership opportunities with institutions, agencies and employers in the region

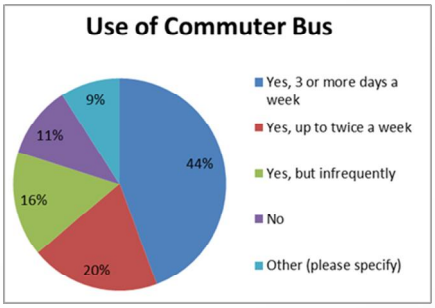
Outreach Results

For the public outreach effort, the study team used a multifaceted approach to gather public input. The effort included a series of "public drop-in sessions" with interactive mapping stations, pop-up tables, and an online survey. Approximately 65 people participated in the public drop in sessions. The survey also proved to be extremely successful.

1,521 surveys were completed

Survey questions were designed to get actionable responses from participants. Results of the survey are described below and in the sidebar to the right.

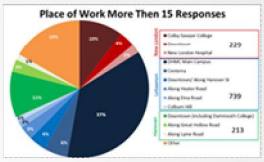
The survey asked how often individuals would use a commuter bus. Eighty percent of respondents said they would use a commuter bus along I-89. Respondents were also asked how frequently they would use a commuter bus service.



Most respondents (78%) were willing to add 15 minutes to their commute to take a bus and were interested in using the Exit 12 or 13 Park and Ride.

"There is a huge need for a bus that runs regularly between New London and the Upper Valley!"

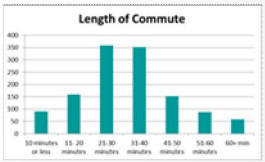
37% of respondents work at DHMC



79% of respondents primarily commute using I-89

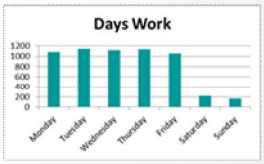
85% drive alone, this is higher than the state average (81.1%)

The average commute time for respondents was 32 minutes



Lack of transit is a top concern for DHMC employees

82% work on weekdays only



92% start work between 6 AM and 10 AM

62% leave work between 4 PM and 5:30 PM

Alternatives

The responses received from the public outreach effort, the market, existing services, and peer analyses were used to develop transit service alternatives. The five alternatives are based on a core route connecting the origins and destinations with the highest demand at either end of the corridor and each have different service characteristics including destinations served and level of service. The trips times are based on work time responses from the survey and maximizing connections with other transit systems.

	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
Daily Ridership	145	130	85	70	55
Annual Ridership	36,270	32,630	21,335	17,570	13,805
Cost per Hour	$89.04	$88.23	$87.04	$89.56	$86.66
Passengers/Hour	6.42	7.03	4.66	5.38	5.37
Passengers/ Trip	6.15	6.67	4.36	5.19	5.00
Cost Efficiency	$11.22	$9.91	$15.89	$13.28	$12.79
Cost/Passenger	$14.48	$13.23	$19.97	$17.27	$17.33
Farebox Recovery	22.5%	25.1%	20.4%	23.1%	26.2%

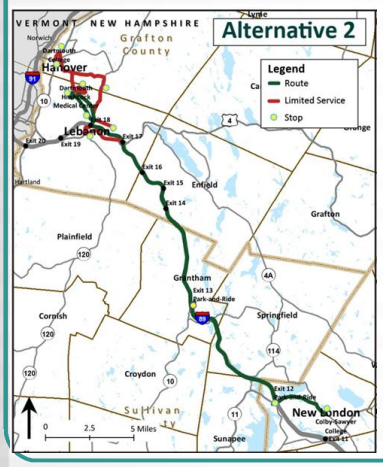
Best Performer — Worst Performer

Alternative	Days of Operation	Service Hours	Trips (AM/PM) Northbound	Trips (AM/PM) Southbound	Mid-day Trip	Vehicles Required
1	Mon-Fri	5:40 AM -9:55 AM 1:20 PM - 7:00 PM	7/5	4.5/7	Yes	5
2	Mon-Fri	5:40 AM -8:55 AM 1:20 PM - 7:00 PM	6/4	3.5/6	Yes	4
3	Mon-Fri	5:40 AM -9:55 AM 1:20 PM - 7:00 PM	6/4	4.5/5	yes	3
4	Mon-Fri	5:40 AM -9:45 AM 3:00 PM - 6:40 PM	4/3	2.5/4	No	3
5	Mon-Fri	5:40 AM -9:45 AM 3:45 PM - 6:40 PM	4/2	2/3	No	2

To evaluate the alternatives, performance measures were used to compare how each alternative ranked. The performance measures evaluate the service effectiveness, financial efficiency, and cost effectiveness of each alternative. High service effectiveness (ridership, passengers/hour and passengers/trip) and farebox recovery and low financial/cost efficiency values (cost per hour, cost/passenger, cost efficiency) indicate a better performing alternative.

Recommendation

The recommended alternative is Alternative 2. However, using a phased approach to build to this level of service was deemed most appropriate. The core level of service (represented by Alternative 5 here) is implemented first and service is added and expanded as awareness of the service and ridership grows until the ideal level of service is reached. An expansion of the Exit 12 Park and Ride would be required under any alternative. Additionally, although not explicitly part of this study, there were many requests throughout the outreach process to include service between the study corridor and points south, including Concord. In this phased scenario, select trips could be added to Concord as an expansion of the Preferred Alternative.



Fares

Cash Fares – Single One-way Trip	
Adult	$3.00
Seniors 65 & Older	$1.50
Individuals with Disability	$1.50
Children under 4	Free
Passes	
10-Ride	$25.00
Monthly – Adult	$60.00
Monthly – Senior or Disabled	$30.00

Phasing

- Alternative 5
  - Base line service
- Alternative 4
  - Additional PM peak trips
  - Service to Heater Road
- Alternative 2
  - Additional trips during peak hours
  - Add mid-day service
  - Service to Great Hollow Road
- Extend service to Concord
  - Select trips extended to Concord

Revenue/Funding

Capital Funding - Federal

- FHWA National Highway Performance Program
- Flexible Federal Highway Funds
- Bus and Bus Facilities (FTA 5339)
- Enhanced Mobility (FTA 5310)

The cost to operate the initial level of service (Alternative 5) would be $239K annually plus an additional $353K in capital costs to purchase vehicles and equipment. Fares are projected to cover 26% of the cost; an additional $175K would be needed annually to cover the operational cost of the service. There are several innovative ways to fund transit, which have been used nationwide but in New Hampshire, many would require state legislative changes.

Toll Revenue

Taxes: Sales tax, Gas tax, Property tax, Hospitality tax, Excise tax, Utility tax, Income tax, Lottery

Parking

Fees: Vehicle fees, Development impact fee, Mortgage recording fee, Underground tank fee

Partnerships with private organizations

Federal formula funding

Fares