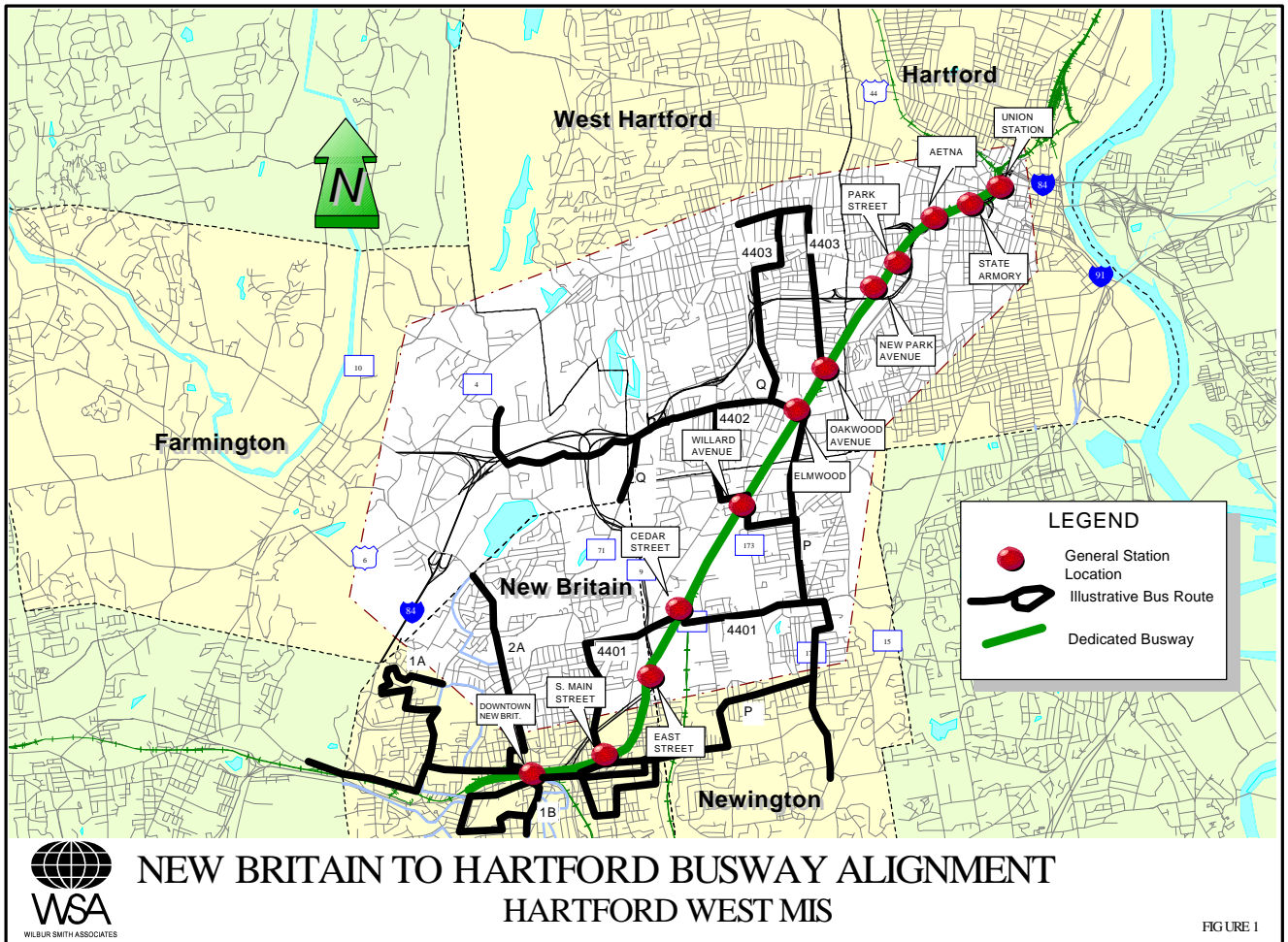


CONNECTICUT DEPARTMENT OF TRANSPORTATION BUS RAPID TRANSIT DEMONSTRATION PROJECT NEW BRITAIN – HARTFORD BUSWAY



1. Project Description

- **Type of Project**

In 1997, the Connecticut Department of Transportation (ConnDOT), Capitol Region Council of Governments (CRCOG) and Central Connecticut Regional Planning Agency (CCRP) undertook a Major Investment Study (MIS) for the Hartford West corridor. This corridor has been broadly defined to include Interstate 84 and the neighborhoods surrounding the highway right-of-way, the parallel arterial roadways, and two rail lines, the Bristol-Hartford line and the New Haven-

Hartford line. The study area encompasses portions of five communities: Hartford, West Hartford, Farmington, Newington and New Britain.

After the preparation of three technical reports and a comprehensive public involvement program, the principal transportation improvement recommendation to result from this study process is an approximately nine (9) mile long exclusive New Britain-Hartford Busway. This Bus Rapid Transit (BRT) facility would link Downtown New Britain with downtown Hartford's Union Station. While the exclusive Busway would terminate in Downtown New Britain, express bus services would continue via the freeway to Plainville at I-84 and beyond.

The right-of-way from Hartford to Newington Junction is currently owned by Amtrak and is wide enough to accommodate busway construction and operation with no impact on passenger or freight rail operations. From Newington Junction to New Britain, the abandoned railroad right-of-way is state owned and will accommodate a two-lane busway.

- **Method of Operation**

There will be four types of service to use the exclusive bus facility which will run a two-way operation:

Long Distance Commuter Express The first of the busway services is the long distance commuter express routes which currently originate in Bristol, Plainville, Cheshire and Southington and use Interstate 84 into downtown Hartford. The commuter buses will be able to hop on the busway in New Britain and express into Hartford with minimal stops or no stops. This would allow the long distance commuter to avoid the congestion on I-84, reducing the projected commute into Hartford by 10 minutes. Once in Hartford, the long distance commuter buses would circulate through the city to better accommodate their passengers.

Shuttles The shuttle service would run back and forth on the busway making all stops. At each end, Hartford and New Britain, the buses would make loops through the downtowns.

Neighborhood Collectors This service would circulate through the neighborhoods and enter the busway at certain intermediate locations to continue their runs into Hartford, New Britain or another intermediate station.

Feeders This service would drop-off passengers at the stations. These passengers would then take the shuttle service to Hartford, New Britain or to other locations along the busway.

- **Service Levels**

At this time it is contemplated that the primary busway shuttle service would operate 18 hours per day, from approximately 6:00 am until midnight. Although consideration will be given to having the busway operate to parallel the Hartford system's service day of 4:30 am to 2:00 am, most other routes using the busway would operate for shorter spans, generally corresponding to the span of service for similar current services. Frequent peak period service would be provided during a three-hour AM peak and a three-hour PM peak, with less frequent service being

provided in the off-peak, which is the remainder of the day. Weekend/holiday service plans have not been developed, but it is expected that similar services would be provided, although less frequently and possibly over a shorter span of service.

- **Estimated Time Savings**

The busway was selected as the preferred alternative for this corridor because it offers travelers the greatest speed, flexibility and ease of interface as compared with other modal alternatives. Busway travel speed is enhanced by the exclusive use of the facility. In New Britain, where there are a number of grade crossings, bus travel speeds would average 25 mph, while the exclusive grade-separated right-of-way through Newington, West Hartford and Hartford will allow buses to travel at an average of 30 mph or more, with a posted top speed of 45 mph. Projected travel times, average travel speed and travel time savings for Busway users are shown in Table 1.

- **Number and Type of Vehicles providing Service**

The primary busway service will be operated with a mix of standard buses and 60-foot articulated buses. The busway project will expand the current fleet to include ten (10) articulated buses for shuttle service between New Britain and Hartford, ten (10) 40-foot commuter buses for expanded express bus service and ten (10) 30-foot low floor buses for neighborhood circulation. Facilities will be modified and equipment will be purchased to accommodate the articulated buses. The Environmental Impact Statement (EIS) phase will conduct further evaluation of fleet mix and alternate propulsion/fuels.

Table 1
PROJECTED TRAVEL SAVINGS – PEAK PERIOD
Hartford West MIS

Busway Performance Measures	Current System (1995)	System Base Case (2020)	System with Busway (2020)	Busway Only (2020)
Average Trip Time (minutes)	12.2	12.6	8.7	8.7
Average Trip Length (miles)	3.2	3.4	3.2	3.9
New Britain – Hartford transit Travel Time (minutes) *	34.6	33.8	24.8	20.1
Time Savings from Busway (minutes)			9	13.7
Percent Savings			26.6%	40.5%

* Analysis assumes all stops for buses. In operation, through buses will average 45mph.

Source: Technical Report #3, Hartford West Major Investment Study

- **Fare Collection and Boarding**

There are a few options that ConnDOT is reviewing for fare collection. One thought is to collect fares traditionally, i.e., while boarding. Second would be the honor system with proof of fare payment required. The third option is to use platform controls requiring passengers to pay to get access to the platform. Of course, under all these options, the current fare media – daily, 7-day, 31-day and 10-trip tickets would all be honored. More detailed discussions will occur in the next few months concerning boarding and platform control in our two technical work groups for service design and station design.

- **Use of Intelligent Transportation System (ITS) Capabilities**

There are plans for station signage and announcements, signal priority, Automated vehicle Location (AVL) and real time public information and the development of “Smart ITS” signal system for grade crossing control, if appropriate

- **Traffic Engineering and Infrastructure**

Twelve stations would be provided in four communities along the busway. They are critical elements in the acceptance of and success of BRT operations. Stations are proposed to display a high degree of amenity and traveler convenience, and will vary from small stations with platforms and shelters to stations with larger permanent structures. Joint development with office, residential, retail or other commercial uses will be investigated to further strengthen system ridership. The final element of transit friendly design will include connectivity for pedestrians, transit riders, parkers, bicyclists, and others using busway services. In addition to stations constructed on the busway, stations may also be built along routes that feed the busway. Bus routes will be able to enter and exit the busway at intermediate locations. Final location studies will be necessary to determine the exact location of stations and bus access points.

Connecting bus routes and van services will link passengers with off-line destinations at station locations. Bus terminal access in New Britain could include a direct connection to the limited-access Route 72 freeway. In Downtown Hartford, buses could leave the busway and circulate through the central business district. Park-and-ride lots would offer further flexibility in meeting passenger needs.

2. Problems Addressed by the Project

Both bus users and auto commuters would benefit from the busway, as would residents and businesses in the entire study corridor. By offering an attractive transit alternative, the busway can reduce travel demand on the congested I-84 roadway, thereby expanding the physical capacity of the multi-modal corridor and enhancing the accessibility to the downtown Hartford central business district.

New bus routes designed to take advantage of the busway will also be able to offer residents of the region greater access to suburban employment centers in the towns of West Hartford, Newington,

New Britain, Farmington and Plainville. The flexibility of busway operation would allow the transit system to more effectively respond to changing ridership demand and future development within the corridor.

3. Implementation and Operations Schedule

As currently planned, the New Britain - Hartford Busway would begin operation by mid 2003. The EIS began in December 1999 with design beginning in early 2001. Detailed service planning began in early 2000. Following right-of-way acquisition, construction would begin in early 2002.

4. Funding Plan

ConnDOT has committed to fully fund the state match necessary for the construction and equipment purchase of the New Britain - Hartford Busway. ConnDOT will pursue federal New Starts and other transportation funds appropriate for this effort within the defined time frame. A Regional Transit Strategy conducted by CRCOG will clearly define responsibility for funding the operating subsidies generated by expanded operations.

Total project costs are projected to be \$82.0 million. This includes all design and construction activities as well as vehicle acquisition (10 articulated, 10 40-foot and 10 30-foot low floor), and modifying the current maintenance facility to accommodate the articulated buses.

Use of Funds

Planning	\$ 2,000,000
EIS	\$ 1,900,000
Design	\$ 5,000,000
Right-of-Way	\$ 3,100,000
Construction	\$62,100,000
Bus Equipment	\$ 7,900,000
Total Project Cost	\$82,000,000

5. Issues of Concern re: planning, design, implementation and/or operations

During the MIS Study, a number of issues were raised that will require further study during subsequent study phases. Operating costs and subsidies are of major concern. The State of Connecticut currently pays a subsidy of about \$7.7 million dollars a year on the existing transit services in the Hartford West corridor. This equates to roughly \$1.33 per person per trip. The busway will require an additional \$5.7 million dollars per year to support the new service. Other areas of concern include coordination with the CRCOG Regional Transit Strategy Study recommendation, downtown bus circulation study recommendation, busway stations, community participation in advisory groups, multi-use pathways and downtown development.

In addition to the above issues, the following are additional topics of concern:

Negotiations with Amtrak to operate the planned services on a shared right-of-way between Newington Junction and Union Station; access and egress points for buses along the busway; reevaluation of bus routes that may use all or part of the busway for service, especially those that provide for reverse commuting to suburban job locations; evaluation of structures along the busway to determine the need for rehabilitation or reconstruction; integration with development plans in neighborhood areas in all contiguous towns; development of a signal system for grade crossing control; station concerns such as security and amenities; concerns of residents who abut the busway with the noise and their safety; and concerns of the commuting public with the removal of neighborhood services.

6. Current Status

ConnDOT held neighborhood meetings to begin the public involvement process. During these meetings the public is informed of how the process has evolved and how the determination was made to build a busway. Also, during the neighborhood meetings the public was asked for their input on the stations, such as the location of the station, the name of the station and what amenities the public is interested in seeing at the stations. In May 2000 ConnDOT will proceed to the next level of public involvement which is to hold public information meetings one in each of the four towns that will host the busway.

The Federal Transit Administration (FTA) approved ConnDOT to enter into Preliminary Engineering (PE) with a "Recommended New Start" project rating. ConnDOT is scheduled to begin design in early 2001. The Final MIS was prepared and distributed in 1999. The Environmental Impact Statement (EIS) is underway with expected completion by December 2000.

7. Contact

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