

# CTfastrak

## Brings Smart Growth to Connecticut



### Innovative transit concept combines speed and convenience

BY BRUCE C. COWDREY

Imagine a mass transit system that offers the frequency and accessibility of a bus along with the speed and traffic-free advantages of a train. Connecticut's new CTfastrak is considered the latest innovation for attracting more people onto public transit. This inventive concept of bus rapid transit is a convenient high-capacity solution that overcomes nearly every conceivable objection to using public transit.

There are three major advantages to the idea behind bus rapid transit. First, it uses a dedicated transit roadway to avoid traffic, so travel times are significantly shortened, especially when travelling through heavily-congested areas. Second, by operating in a permanent, dedicated guideway that allows buses to enter and depart the line, CTfastrak offers the frequency and accessibility of a typical bus schedule. And third, the flexibility to use express and feeder routes and a new dedicated roadway, gives passengers unparalleled point-to-point service with a no-transfer ride.

The nine-mile, \$567-million busway started construction earlier in 2012 and will be available for passengers in summer 2015.

#### Smart Growth Initiatives

Much like other large urban cities, the highway system that services the metropolitan Hartford, Connecticut area was experiencing increasingly heavy traffic congestion. In response to the growing issue, the Capitol Region Council of Governments developed a long-range plan in the 1990s and conducted a corridor study to identify the best way to address mobility needs in the region. The findings of the study recommended bus rapid transit as the locally preferred alternative to highway travel and described it as the most cost-effective means for addressing congestion.

In addition to alleviating traffic congestion, the busway was designed to serve as a seed project for accelerating economic redevelopment by enabling the state to pursue their smart growth initiatives, while increasing property values in old industrial corridors. In recent years, the concept of smart growth has gained popularity, primarily because it creates a unique sense of community and place, while expanding the range of transportation, employment and housing choices. The idea is to concentrate growth

in compact walkable, bicycle-friendly urban centers, giving people the option to leave their cars at home.

With stations in many older neighborhoods, CTfastrak is expected to serve as an anchor for encouraging smart growth and walkable communities in urban areas. Its primary focus is on long-range, regional considerations of sustainability over the short-term. As a result, it equitably distributes the costs and benefits of development over time while preserving natural and cultural resources and promoting public health. This helps to support a national trend where young professionals, students and empty nesters are spearheading a back-to-the-city movement. Living close to a functional transit system also typically leads to an increased presence for retail shops, schools, entertainment venues and restaurants.

There are eleven transit stations planned, all of which will serve passengers as drop-off points and busway access. Similar to conventional rail rapid transit, the stations will offer important amenities to improve transit travel times and service quality. The project will also offer park and ride connections to Bristol, Cheshire, Plainville, Southington, Waterbury, Central Connecticut State University, UCONN Health Center, the Westfarms Mall area and potentially other points south and west of Hartford. Buses will primarily be clean-fuel hybrids that will have bike racks or on-board storage.

### Funding with New Starts

The busway design and construction is funded through a combination of state and federal sources. The Federal Transit Administration (FTA) New Starts Program is the primary federal funding source. It's a discretionary program that funds capital investments such as new construction or extensions to existing fixed guideway transit systems. This includes commuter rail, light rail, heavy rail, bus rapid transit, streetcars and ferries. The FTA evaluates projects annually and at key points throughout the development phase.

Federal funds will represent 80 percent of the total cost, and of that amount, \$275 million is funded through the New Starts Program. The remaining \$180 million will come from other FTA and Federal Highway Administration (FHWA) funding sources. Local match funding of \$112 million was committed by the State Bond Commission in the spring of 2011. A full Funding Grant Agreement was awarded to ConnDOT in November 2011 by the FTA based on the project's estimated cost of roughly \$567 million.

### Getting Up to Speed

As a federally-funded program that had not previously been used in the state, a coordinated effort between the key stakeholders was essential. ConnDOT worked closely with the FTA, FHWA and regional partners like the Capitol Region Council of Government and Central Connecticut Regional Planning Agency.

The project team included numerous consulting firms and required significant coordination with the Connecticut Department of Energy and Environmental Protection and the U.S. Army Corps of Engineers. However, as a state department of transportation, ConnDOT was more accustomed to building and maintaining highway infrastructure and facilities. The department was functioning as an operating transit agency, something no other DOT in the nation can claim. In this role, the department staff had a significant level of experience building and designing transit infrastructure and operating transit services, but they had never embarked on a new transit construction project of this magnitude.

While many of the engineering team members were intimately familiar with federal highway rules, none of them had ever built a guideway from scratch, not even those who had built maintenance facilities in the past. Building a transit project from the ground up would require an entirely new level of collaboration and cooperation. The department would also need to become familiar with the FTA's New Starts Program and its various requirements. The early phases were dependent on the federal approval process for the funding, and the schedule was developed based on achieving certain milestones.

To ensure the key milestones would be met, dedicated ConnDOT staff members were assigned to the more technical aspects required, such as travel modeling, vehicle design, Intelligent Transportation Systems design and new methods of fare collection. A cost-benefit analysis and new annual reporting systems were also required. To expedite some of the older processes, ConnDOT Office of Rights of Way created a new way of estimating compensation when appraising smaller acquisitions valued at less than \$10,000. Nearly half of the 142 acquired properties were closed using this new accelerated process. A new transportation easement process was also created to encompass all transportation uses (and valued at up to 99% of fee) to simplify the acquisition process. As a result, hold-ups for variances and zoning applications were not an issue.



Connecticut Department of Transportation staff and government representatives take part in the groundbreaking ceremony at Parkville Station in May.

## Sharing the Right of Way

In addition to requiring federal approval, obtaining the right of way and ensuring that it would be clear when construction needed it was necessary from the very beginning of the project. This took coordination with landowners, municipal leaders, operating railroads, utilities and all members of the design team to achieve a workable design that would minimize the potential impact on the community.

There were a number of complications associated with being in a shared right of way with an active railroad that crosses several major arterials. ConnDOT realized that various utility and Amtrak easements were required. A large number of stakeholders were involved, including four municipalities, two regional planning agencies, three branches of the U.S. Departments of Transportation, business owners, residents, transit customers, multiple transit providers and numerous advocates of quality of life issues for their constituents. A significant amount of collaboration was required.

One of the project's greatest challenges was to design a 9.4 mile fixed guideway into a narrow corridor that included a long-dormant rail right of way, as well as an active Amtrak rail right of way. The existing transportation corridor abutted many homes, businesses, two cemeteries and spanned four municipalities. During the design

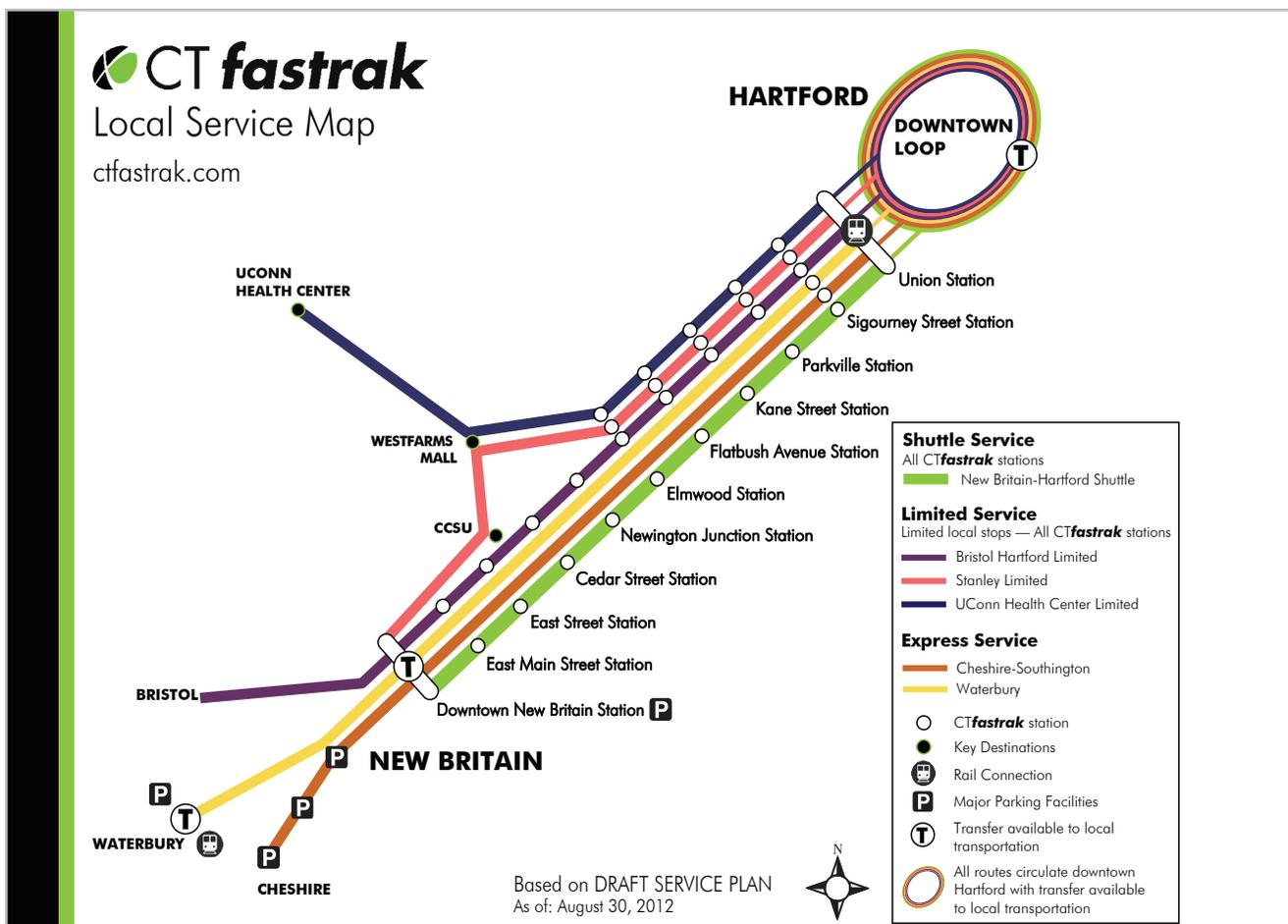
phase, many different options were considered, including the reuse of abandoned rail corridors and structures, easements for operating adjacent to the existing active rail lines and bus access to the guideway from various locations.

There were five crucial miles of railroad right of way connecting downtown Hartford that were needed, all of which were owned by Amtrak. Also, a number of valuable billboards situated along Interstate 84 in Amtrak's railroad right of way could not be relocated due to recent changes in state statutes. These billboards represented a significant long-term source of revenue for the company, and this would require a thorough evaluation and compensation. Through a collaborate effort, ConnDOT was able to negotiate with Amtrak and the goal of having a dedicated corridor was achieved.

## Abandoned Rail Stations

Design adjustments were made to accommodate changes in the land use around the eleven proposed station locations in support of local economic redevelopment that was important to each municipality.

An abandoned rail right of way in New Britain and Newington had been land banked for a future transportation purpose and was owned by the state. But it had been unused



With eleven new stations planned, design adjustments were made to accommodate land use changes in support of local economic development.



CTfastrak will utilize an abandoned railroad right of way with a corridor built in an easement alongside an active Amtrak railroad right of way.

for many years and abutters had grown comfortable with using it as their own. To ensure a seamless process, dedicated attorneys from the Attorney General's Office were assigned to prepare and negotiate agreements with Amtrak for utilizing their right of way and for litigating condemnation appeals and independent construction contractors to build.

The state worked closely with the City of New Britain to design the downtown New Britain terminal within a parcel so as to leave enough area for the city to pursue a development opportunity where the station property fronts Main Street. They also worked with the Town of Newington and a private developer who each owned land surrounding a proposed station, to coordinate the projects and share an access drive so the combined development would warrant a traffic signal that would benefit all three. The team also held negotiations with an area university to trade the state-owned land abutting their campus for land abutting the project right of way that could be used for a station.

Construction officially began in June 2012. Although there are still some design details and even a few lingering right of way issues to be finalized, the newly implemented negotiations and acquisition processes have proven effective, ensuring that all pieces of the corridor will be available when they are needed.

### Improving Access

Reducing peak-hour congestion is a major objective for many of today's metropolitan areas. CTfastrak will increase peak-hour travel speeds on Interstate 84 and some major arterials, as well as improve the air quality. Both short and long term job growth is projected. In fact, from its earliest stages, the CTfastrak project contributed directly to the local economy through its 4,000 temporary construction jobs and another 100 permanent jobs.

The flexibility of CTfastrak operations will allow the transit system to more effectively respond to changing ridership demands and future development within the corridor. It is also anticipated that towns most directly impacted by the project will be encouraged to pursue more smart-growth initiatives, which in turn will result in increased property values.

Buses using this corridor are expected to have faster travel times than cars since they will bypass congested traffic areas. The service plan includes commuter express, shuttle, connecting feeder bus services and circulators, the bus routes that circle a community on a set schedule and enable people to get around at all hours without the hassle or cost of driving. The attraction of a one-seat ride, combined with newly-built connections, will significantly improve access from outlying communities to the downtown area. Ultimately, it will connect to more than 110 miles of local and express transit routes and the interstate rail system.

CTfastrak is designed to attract new passengers who wouldn't otherwise use mass transit, and ConnDOT predicts that it will service 16,000 riders daily by 2030, doubling the number of riders using bus service along that corridor. As more and more commuters benefit from the convenience and speed offered by systems like CTfastrak, the state hopes to spur a new generation of passengers who elect to leave their cars at home.

#### Bruce Cowdrey

*For 26 years, Bruce has been employed by the State of Connecticut Department of Transportation within the Office of Rights of Way, serving as the senior appraiser and reviewer on several high-profile eminent domain projects. He was responsible for clearing state properties on CTfastrak following the acquisition and preparing the properties for construction contractors. Bruce joined IRWA in 1988, and as a member Connecticut Chapter 23, has held Chapter President and other board/committee roles.*

