

# **Needham/Newton Rail Right-of-Way Transportation Improvement**

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The Metropolitan Area Planning Council conducted a study of a proposed shuttle bus service utilizing the old railroad right-of-way behind Needham Street in Newton to provide faster commuter access between the MBTA Green Line and the New England Business Center in Needham. The MAPC released their final report in March, 2013, available at <http://www.mapc.org/needhamnewton-rail-right-way-transit-concept>. Unfortunately, the study was of limited scope requested by the Town of Needham and the City of Newton, and did not address transportation alternatives that could further improve that commuting time and experience.

The study pointed out that such a privately operated shuttle bus already serves that route (as well as MBTA bus 59) via Needham Street. The concept of utilizing the ROW would be to reduce the travel time by escaping traffic congestion, but the study estimates only a 5 or 10 minute time saving would result. Congested roadway access is still required to reach the Newton Highlands MBTA station and the New England Business Center at both ends of the route. The average shuttle speed on the right-of-way is projected at only 15-20 mph, based on the need to share the narrow lane with pedestrians and bicyclists (the shuttle would run infrequently, only during rush hours). Furthermore, the study estimates that only a modest increase in business shuttle ridership would result, in spite of the considerable capital costs required to address the roadway and ROW access ramp needs.

An excellent transportation alternative to the proposed shuttle bus would provide Hubway bicycle sharing (<http://www.thehubway.com/about>) via the planned Upper Falls Greenway, between the Green Line (either Newton Highlands or Elliot stations) and the New England Business Center. Travel time via the point-to-point Hubway service which is available on-demand to riders would permit nearly equivalent trip times compared to the shuttle bus (which makes stops and would take an estimated 15 minutes) but without waiting for intermodal connections at the station. Deploying the Hubway system would deliver a net improvement to commuting times. Furthermore, ridership demand could be extensive given the safety of the Greenway without vehicular traffic and congestion.

By contrast, MAPC estimates for a feasibility study of the shuttle bus on the ROW would cost \$200,000 to \$300,000 in 2013 dollars. Instead, for that study price alone we could supply capital to implement infrastructure and fund operations of a Hubway system for three years per rough guidelines provided by Scott Mullen, General Manager of Hubway:

*27-dock linear stations (71' long by 6' wide footprint with bicycles docked).*

*This comes with 14 bicycles, software, solar mast, etc.*

*Equipment cost: ~\$64k*

*Operations cost per station per year: ~\$24k*

*Based on a 3-year standard contract to run two 27-dock stations:*

*Total contract cost would be ~\$272k.*

*Another scenario might be to purchase 3 stations and place one at Eliot and another at Newton Highlands T stops. The third would need to be a larger capacity station in the industrial park to accommodate demand. Assume ~\$7200 to add capacity to the station above at a rate of 2bikes/4docks.*

*2 stations with 23 docks/11 bikes = ~\$56k x 2 = \$112k*

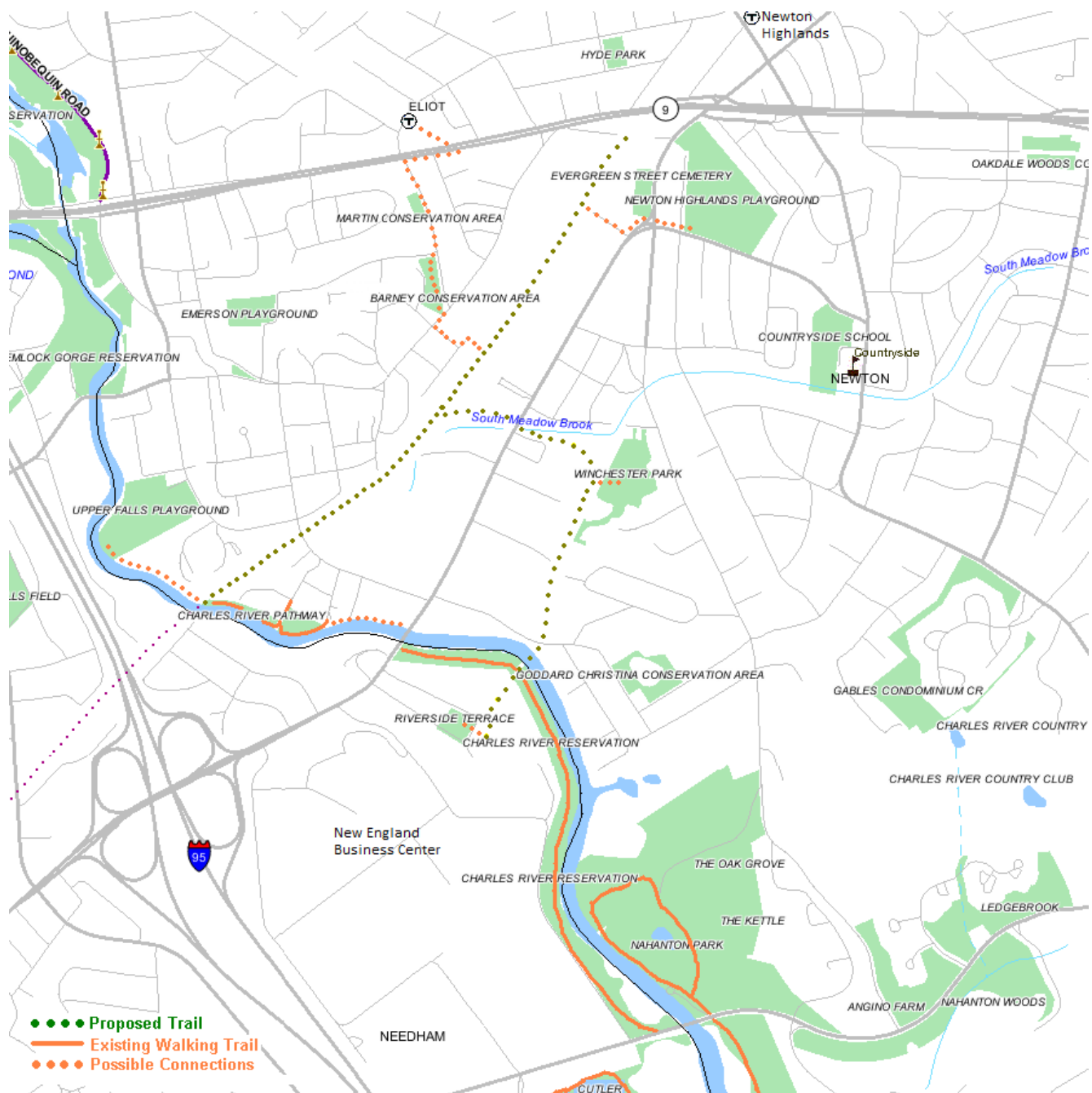
*1 station with 35 docks/18 bikes - ~\$80k*

*Operations cost \$24k x 3 stations x 3 years = \$216k*

*Total contract cost would be \$328k*

Furthermore, there exists potential for the Greenway to reach directly into the New England Business Center without requiring Hubway cyclists to mix with busy traffic on access roads. An ideal extension of the Greenway would utilize the old railroad spur that splits off the main line, crosses Needham Street, runs adjacent to Winchester Park, and crosses the Charles River via an existing unused railroad bridge at Christina Street (see the attached map). That bridge meets an existing bicycle/pedestrian pathway to Fourth Avenue within the Business Center. The old railroad spur is currently unobstructed, and traverses land owned by the adjacent industrial property holders. It could be converted along with the Greenway main line ROW using the same low-cost construction methods since the steel rails are still in place.

This proposal would deliver a ready-to-use and easily expandable Hubway route to safely serve New England Business Center commuters entirely via the Upper Falls Greenway by the time the Hubway system reaches Newton next year. The Greenway construction costs are covered, and the Hubway capital and operating costs are less than completing the shuttle bus study alone. Commuting time between the Green Line and the Business Park would be reduced compared to the bus trip, along with reduced traffic congestion and lower carbon emissions from scheduling additional bus service. Hubway users would also enjoy the benefits of a safe, easy, and enjoyable ride on the Greenway, plus cycling has been proven to increase workers level of awareness in the morning and benefit their cardiovascular health.



**Map of the Upper Falls Greenway showing Neighboring Trails**  
*(Including proposed spur extension to the New England Business Center)*