



WORCESTER'S LINK TO THE MASSPIKE: AN UPDATE ON THE ROUTE 146 CONNECTOR

**Report No. 03-03
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EXECUTIVE SUMMARY

The building of the Route 146 Connector between the new Massachusetts Turnpike (MassPike) interchange in Millbury and I-290 in Worcester, which began in 1995, will probably not be completed until about 2007. This is a delay of more than a year from the projections the Research Bureau reported more than two years ago (see report no. 01-1, January 30, 2001 and Appendix A on page 8), and a delay of eight years from the projections made when work on the project commenced.¹ A significant part of this delay is the result of the decision to clean and remove contaminated soils. As of January, 2001, about 46% of the project had been completed; as of May, 2003, about 57% has been completed.

This delay indicates the need for Worcester area public officials, as well as business and community leaders, to closely monitor this project to ensure its successful completion in an expeditious manner. This is particularly important in light of the I-290 re-decking project, which will close down one westbound lane of traffic in the morning and one eastbound lane in the afternoon, between exits 13 and 16. The re-decking project is expected to start during this summer and take three to four years to complete at a cost of \$16 million. The combination of the two projects creates the potential for significant traffic congestion problems in Worcester, and untimely delays in the beneficial effects of this project on the City.

I. Introduction

The Route 146 Connector will result in significant improvements to the regional traffic network. There will be improved access to Worcester and the Blackstone Valley Region, which should enhance their attractiveness for both residential and commercial investment. In fact, it is possible that the new MassPike interchange has contributed (along with enhanced commuter rail service) to the increase in local housing values that has already occurred. Since the interchange was completed in 1999, median home sale prices in the Blackstone Valley Region have increased by an average of 60%. Worcester has had a 71% increase, and the remainder of Central Massachusetts, a 38% increase over the same period.² Once the Route 146 connector is finished, a number of remnant land parcels will become accessible for development, although zoning will not be determined until these parcels become available. (Some parcels, such as those abutting the Blackstone River, may be transferred to the Department of Environmental Management.) The project will also result in a re-routing of regional traffic, including heavy truck traffic, away from local streets, making Worcester's neighborhoods more attractive.

The purpose of this report is to provide an update on the status of this project.

¹ On November 11, 1996, the *Telegram and Gazette* reported that the expected completion date was 1999: "Closer to the Valley; Worcester-MassPike link is on schedule."

² Central Massachusetts is defined as consisting of the 40 municipalities covered by the Central Massachusetts Regional Planning Commission (CMRPC). Of those, the Blackstone Valley Chamber of Commerce lists Blackstone, Douglas, Grafton, Hopedale, Mendon, Millbury, Millville, Northbridge, Sutton, Upton and Uxbridge as its members. Median sales data, from 1999 and 2002, were obtained from The Warren Group, <http://www.thewarrengroup.com>.

II. Summary of Route 146/MassPike Interchange Project

The \$290 million Route 146/MassPike Interchange project will relocate and widen about four miles of Route 146 from Route 122A in Millbury to I-290 in Worcester. Construction was started in 1995 and completion as of two years ago was expected by late 2005 or early 2006, although delays will likely push this timetable back to 2007. It is one of the largest recent roadway projects in Massachusetts, along with the Central Artery/Ted Williams Tunnel and Route 3 North projects. The project is divided into 10 major construction segments and several smaller landscaping and railroad agreement contracts. Of the major segments, nine are to be funded and constructed by the Massachusetts Highway Department. One segment was funded and constructed by the Massachusetts Turnpike Authority (MTA).

The Route 146 project will upgrade the existing two-lane, unlimited access roadway segment to a four-lane, divided, limited access highway. It also involves the reconstruction of a segment of Route 20, grade separation of local streets and Route 146 at Hurley and Kane Squares, and completion of the newly constructed interchange connecting the MassPike to Route 146 and Route 20. A bikeway will be constructed utilizing local streets on the northern segment of the project and running along the Blackstone River on an independent path along the southern segment of the project. The project entails the acquisition of approximately 105 housing units and 56 business properties. It includes a gateway and parkway, and “water quality enhancement areas,” or small constructed wetlands that will capture pollutants from highway runoff before they can reach the Blackstone River. (Millbury’s water supply is located adjacent to the Blackstone River just downstream from the Route 146 project area.) The Massachusetts Highway Department has worked closely with Worcester and Millbury to provide amenities to the project by including landscaping, a canoe launch, bicycle paths and recreational access.

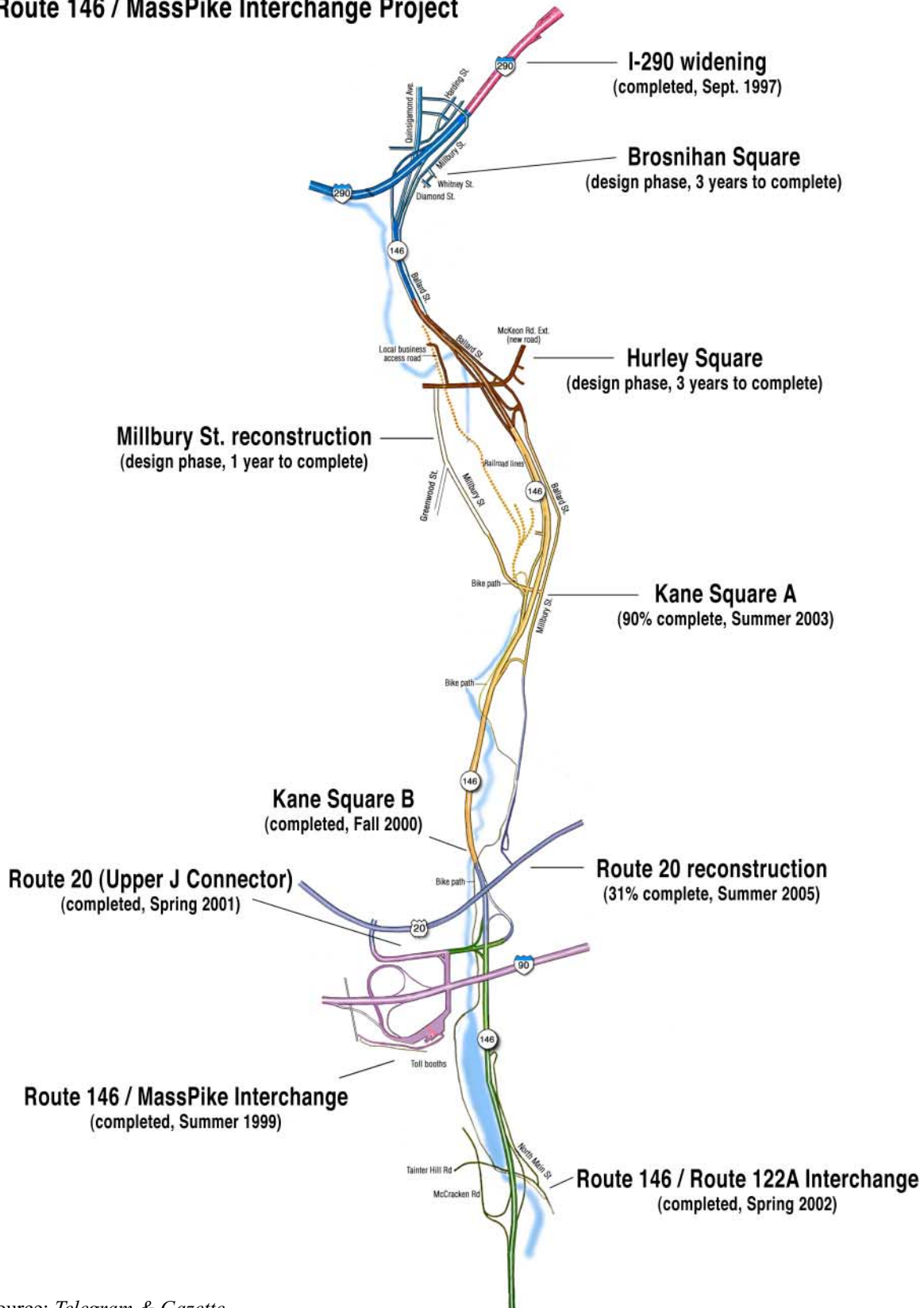
The total projected cost of the individual segments has increased from \$244.4 million as of January, 2001 to \$280.9 million in May, 2003, although this sum is still below the \$290 million estimated at the beginning of the project. Meanwhile, the project has been delayed mostly due to the additional effort of cleaning up soils contaminated by industrial use along the project area, thus preventing the possibility of these contaminants leaching into the Blackstone River and local water supplies. While not specifically required by statute, the environmental reviewers of the project saw it as “a great opportunity to clean up contaminated properties that otherwise might never get cleaned up.”³ According to current plans, the project should be completed by 2007, which would conclude 12 years of construction.

III. Major Construction Segments:

(The accompanying map on the next page identifies the components of the project.)

³ Correspondence from Russ Cohen, Massachusetts Riverways Program, Massachusetts Department of Fisheries, Wildlife and Environmental Law Enforcement, May 6, 2003.

Route 146 / MassPike Interchange Project



Source: *Telegram & Gazette*
 Prepared by: Worcester Regional Research Bureau

I-290 Reconstruction (\$5.6 Million):

This project included the reconstruction of the section of I-290 from Vernon Street to Brosnihan Square. Also included in this project were the modification of two bridges and two retaining walls, the total reconstruction of a third wall, and the widening of I-290 from three lanes to five on the westbound side. The work began in 1995 and was completed in September of 1997.

MassPike/Route 146 Interchange (\$33 Million):

This segment connects the new Route 146 with the MassPike. It was funded and constructed by the Turnpike Authority. The new interchange accommodates traffic movement from the MassPike to Worcester and through the Blackstone Valley to Providence, Rhode Island. The project included the construction of approximately 1¼ miles of roadway, four bridges, a toll plaza, and park-and-ride facilities. Work began in 1996, and the project was opened to traffic on October 22, 1998. The project was completed in the summer of 1999.

Kane Square “B”/Blackstone River Area (\$12.7 Million):

This segment of the project extended the new Route 146 north from Route 20 to the Kane Square area of Worcester along the Blackstone River. It involved the construction of approximately one-half mile of new four-lane divided highway and two major bridges over the Blackstone River and adjacent wetland areas. The roadway and associated landscaping areas in this segment cap a large deposit of slag left behind by the major steel/wire manufacturing industry previously operated in this area. This is the only segment of Route 146 that is constructed significantly off of the original highway alignment. The contract was advertised in August 1997. Roads Corporation began work in June 1998. The project was completed in the fall of 2000.

Route 20 (Upper J) Connector Construction (\$22.9 Million):

This segment of the project included the construction of a connector roadway that accommodates vehicular movement between the new turnpike interchange, the reconstructed Route 20, and the new Route 146. The “J” Connector is critical to traffic management for the Route 20 construction because it serves as a detour roadway for Route 20 traffic during its reconstruction. The scope of this project included the construction of over one mile of new permanent and temporary roadways, including the excavation of one-half million cubic yards of earth and rock and the construction of two bridges and a portion of a new rail yard. This segment of the project also included relocation of sections of the Providence and Worcester Railroad spur lines. Roads Corporation began work on this project in the spring of 1997. The connector was opened to traffic on October 22, 1998, in conjunction with the opening of the MassPike interchange. The project was completed in the spring of 2001.

Route 146/Route 122A Interchange (\$32.5 Million):

This segment created a grade-separated interchange between the new Route 146 and Route 122A in Millbury. The new interchange is a combination diamond and cloverleaf configuration that will accommodate traffic movements between Millbury Center via Route 122A, the new Route 146, the MassPike, and downtown Worcester. This contract included construction of over a mile of

the new Route 146, approximately one mile of new local roadways, one mile of bicycle path, 11 bridges, and major areas of landscaping and “gateway” treatments.⁴

The contract was advertised for construction in September 1997. Roads Corporation began work in July 1998. Ninety-nine percent⁵ of the original plan was completed in the spring of 2002. Completion had previously been expected by November 2001 at a cost of \$31.7 million. The delay was due primarily to the need for additional sewer work and weather-dependent installation of a final pavement surface. Cost increases were due primarily to contaminated soil removal, additional ledge removal, and demolition of an additional building.

Kane Square “A” (\$44.0 Million):

This segment of the project includes the construction of an interchange between the new Route 146 and local streets in the Kane Square area of Worcester, and the construction of almost a mile of the new Route 146 roadway and two bridges at the northern terminus of the planned bicycle path at Millbury Street in Worcester. It also includes the construction or reconstruction of approximately 1½ miles of local streets, including allowances for the bikeway, reconstruction of an existing rail spur, and construction of a new railroad bridge over the Blackstone River to provide continued rail access to existing development in the area.

The contract was advertised in March, 1998, and awarded to The Middlesex Corporation in December, 1998. Work began in April, 1999. The work is approximately 90% complete. Expected completion of the project has been delayed from November, 2001 to Summer, 2003, due to delays in relocation of utilities by private businesses, as well as additional work to extend the Millbrook conduit. The estimated cost of the project increased from \$28.5 million to \$44.0 million due to contaminated soils and extension of the Millbrook conduit.

Route 146 Landscaping (Grow & Install) Contracts (\$7 Million):

MassHighway is proceeding with three separate contracts for extensive planting and landscaping work along the Route 146 corridor. The three contracts are in the area of the Route 122A interchange, Kane Square “A” area, and Kane Square “B” area. The Kane Square “B” project is currently 88% complete, while the Route 122A and Kane Square “A” sections are only about 25% complete, as they are contingent on the associated roadway contracts. The landscaping work is expected to be complete by the end of 2003, including significant plantings in the Kane Square “A” and Route 122A areas. The estimated cost as of May, 2002 is \$7 million, up from the January, 2001 estimate of \$6 million, due to additional landscaping work on the I-290 corridor through downtown Worcester.

⁴ Route 146 has been called the “Gateway to the Blackstone Valley.” In addition to landscaping, several architectural features will be added to the project to point out its historical significance. These features include hoop designs on the bridge fencing system, unique colors for each bridge rail/fence system, and an old-fashioned block wall finish on exposed concrete sections.

⁵ The installation of traffic lights at the intersection of Tainter Hill Road with McCracken Road was deleted from the contract due to extensive modifications associated with a large private development being constructed in the area. The traffic signal will instead be constructed as part of the mitigation associated with that development.

Route 20 Reconstruction (\$33.3 Million):

The reconstruction of Route 20 will include the construction of a one-mile section of a four-lane divided highway, a new partial interchange between Millbury Street (the old Route 146) and Route 20, and the completion of the Route 146/Route 20/MassPike interchange. It will also include a mile of new bicycle path, two bridges, another portion of the new rail yard, and the reconstruction of approximately three-quarters of a mile of Millbury Street (the old Route 146) in Worcester. The total cost of this segment has increased from \$20.5 million to \$33.3 million. (It should be noted that the City Council's Public Works Committee is considering a plan to rename portions of various streets in order to create a continuous Millbury Street. The portion of Millbury Street between Ashmont and Quinsigamond avenues would be renamed Olde Millbury Street, the portion of Millbury Street between Hurley and Kane squares would be renamed Blackstone River Road, and Ballard Street would be renamed Millbury Street.)

The Route 20 reconstruction will be accomplished through three contracts, two of which have been completed. The first contract consisted of the construction of a new access road for the Upper Blackstone Treatment Plant. ET&L Construction Corporation began the project in May, 2001 and completed it during the fall of that year at a cost of \$2.5 million.

The second contract was for the demolition of the existing Route 20 bridge structures. This contract was advertised in September, 2000. The bids were opened in December, 2000. MRP Site Development completed the project in the fall of 2001. The cost increased from the original bid of \$1 million to \$3.3 million due to cleanup of contaminated soils found in the area of the Route 20/Route 146 interchange.

The third contract involves the construction of the new Route 20 bridge as well as roadway sections of Routes 20 and 146. Middlesex Corporation is constructing the project. A limited amount of work is being done on the new Route 146 alignment. This work is due to be completed this summer, allowing traffic to use the new Route 146 alignment from Route 20 northerly to the Kane Square "A" project limit. Completion of the rest of the project, including the Route 20 bridge construction, is expected by the summer of 2005. The Route 20 bridge construction should begin in about one year. The cost of this segment increased from about \$17 million to \$27.5 million due primarily to the cleaning and removing of contaminated soils. It is currently 17% complete.

Hurley Square (\$39.3 Million):

This segment of the project includes approximately three-quarters of a mile of the new Route 146 roadway adjacent to the Vernon Hill neighborhood in Worcester; an interchange between the new Route 146 and the local street network; the construction or reconstruction of approximately 1½ miles of City streets; and construction of three highway bridges and a new pedestrian bridge over Route 146 linking the Vernon Hill and Quinsigamond Village neighborhoods, and providing access to the Blackstone Valley Heritage Corridor Visitor Center. As part of this project, the Millbrook conduit will be extended to alleviate flooding in the Green Island area of the City. The design consultant for this segment is Greenman-Pederson, Inc. Advertising of the project was delayed

from late fall of 2001 due to additional study of the hazardous materials in the ground in that area and revision of the project design. Estimated cost of this segment also increased from \$33.0 million to \$39.3 million. Bids are scheduled to be opened on May 20, 2003. Completion of the project is expected about three years after construction commences.

Brosnihan Square (\$50 Million):

This segment is the most complex element of the project. It includes the reconstruction of the existing I-290/Route 146/Quinsigamond Avenue interchange as well as the reconstruction of over one-half mile of existing I-290 roadway, over one mile of the new Route 146 and associated ramps, and over a mile of new City streets. It also includes the construction of seven bridges and major wall structures. All of this work will be done while maintaining traffic operations on I-290, the adjacent City streets, Route 146, and within the existing Brosnihan Square interchange. The design consultant for this segment is a joint venture of HDR/Volmer Associates. The design is 75% complete. It is expected that it will be advertised in 2003. The project is expected to be completed three years after construction commences.

Millbury Street Reconstruction (\$635,000):

This segment includes the reconstruction of over one-half mile of Millbury Street through both an industrial section of Worcester, south of Greenwood Street, and the Quinsigamond Village neighborhood, north of Greenwood Street. The construction will include sidewalks along with resurfacing and roadway reconstruction. Traffic signals will be installed at the Millbury/Greenwood Street intersection. MassHighway is designing the project in-house. The project is at the 100% design stage. It will be constructed after the Kane "A" and Hurley Square projects are completed to ensure that duplication of effort or interference between projects is minimized. The project is expected to be completed one year after construction commences. The \$635,000 estimated cost was revised from the previous estimate of \$525,000 mostly due to inflation.

Appendix A: Summary of Route 146 Connector Construction Progress

Segment	January 2001			May 2003		
	Cost (million \$)	Completion Date	Percent Complete	Cost (million \$)	Completion Date	Percent Complete
I-290 reconstruction	5.6	Sept. 1997	100	5.6	Sept. 1997	100
146/MassPike interchange	33.0	Summer 1999	100	33.0	Summer 1999	100
Kane Square "B"	12.7	2001	99	12.7	Fall 2000	100
Route 20 (upper J) connector	22.9	Spring 2001	98	22.9	Spring 2001	100
Routes 146/122A interchange	31.7	Nov. 2001	72	32.5	Spring 2002 ¹	99 ²
Kane Square "A"	28.5	Nov. 2001	55	44.0	Summer 2003 ¹	90
Route 146 Landscaping	6.0	2003	5	7.0	Late 2003 ¹	46 ³
Route 20 reconstruction:	20.5	2.5 years	0	33.3	Summer 2005	31
–Upper Blackstone				2.5	Fall 2001	100
–Bridge demolition				3.3	Fall 2001	100
–Main reconstruction				27.5	Summer 2005	17
Hurley Square	33.0	2 years	0	39.3	3 years ¹	0
Brosnihan Square	50.0	3 years	0	50.0	3 years	0
Millbury Street reconstruction	0.525	1 year	0	0.635	1 year	0
TOTAL	244.4	Early 2006	46	280.9	2007¹	57

¹ These segments have been delayed since the Research Bureau's last report in January, 2001.

² This project will not be finished as originally planned. See the footnote on page 5 for explanation.

³ The three separate contracts are 88%, 25%, and 25% completed.

Source: Massachusetts Highway Department.

Prepared by: Worcester Regional Research Bureau.

**Worcester Regional Research Bureau
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