

**MEMORANDUM**

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Ref: 1465  
Subject: Future Traffic Effects  
Village of Oak Hill  
Village of Newton Upper Falls  
Newton, Massachusetts  
From: Kim Eric Hazarvartian, Ph.D., P.E., PTOE  
Principal  
Date: April 9, 2019

**INTRODUCTION**

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TEPP LLC has prepared this memorandum regarding potential future traffic effects in and near the Village of Oak Hill and the Village of Newton Upper Falls, both in the City of Newton, Massachusetts.

These villages will be subject to combined traffic effects of:

- The Northland Newton Development, in the City of Newton, Massachusetts
- potential operations at the University of Massachusetts Mount Ida Campus, in the City of Newton
- the proposed Church of Jesus Christ of Latter Day Saints meeting house, in the City of Newton
- The Station at Riverside project, in the City of Newton
- the Newton-Needham Innovation District, in the City of Newton and the Town of Needham, Massachusetts
- Needham Crossing, in the Town of Needham
- the potential Muzi Ford area redevelopment, in the Town of Needham
- other land developments and redevelopments

## RECOMMENDATIONS

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Area development and redevelopment character notably includes:

- increased land-use intensity
- increased land-use density
- intended use of transportation modes such as transit, bicycles and pedestrians
- intended reduced reliance on low-occupancy vehicles
- reductions in parking-supply ratios

Land developments and redevelopments in the City of Newton are currently analyzed with an emphasis on transportation impacts and mitigation of *individual* projects. This approach does not fully address *cumulative* or *combined* impacts, of millions of square feet of floor area, which are likely to degrade area transportation operations and affect the community.

*Accordingly, TEPP LLC recommends that the City of Newton consider comprehensive and holistic analysis that addresses cumulative or combined impacts, to ensure appropriate transportation operations, over the long term, for the community.*

Regarding transportation-mode split:

- use of modes such as transit, bicycles and pedestrians may be less than anticipated
- use of low-occupancy vehicles may be greater than anticipated

Low-occupancy vehicles are popular largely due to schedule flexibility, comfort and privacy.

The VHB Northland TIAS relies in part on a robust shuttle service program. However, the VHB Northland TIAS states that the “level and use of the shuttles by residents and workers will take time to materialize and the overall usage is not known at this time.”<sup>1</sup>

*Accordingly, TEPP LLC recommends that the City of Newton seek specific information on the effectiveness of shuttles, based on experience in comparable cities with comparable transit service. This information would be applicable to The Northland Newton Development as well as comprehensive and holistic area analysis.*

Ride-share services are an innovation that may:

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<sup>1</sup> VHB, *Transportation Impact and Access Study, The Northland Newton Development, Newton, Massachusetts* (Watertown, Massachusetts, October 2018). hereinafter Northland TIAS, page 50.

- increase the attractiveness of low-occupancy vehicles
- add to vehicle-trips, with two trip-ends for pick up and two trip-ends for drop off
- involve loading considerations

*Accordingly, TEPP LLC recommends that the City of Newton seek specific information on effects of ride-share services, based on experience in comparable cities with comparable transit service. This information would be applicable to The Northland Newton Development as well as comprehensive and holistic area analysis.*

Technology innovations, including electric, connected or autonomous vehicles, may increase the attractiveness of low-occupancy vehicles by:

- having very low emissions
- allowing higher volumes at better levels of service
- allowing higher volumes with reduced travel times

*Accordingly, TEPP LLC recommends that the City of Newton seek specific information on the potential effects of technology innovations for low-occupancy vehicles. This information would be applicable to The Northland Newton Development as well as comprehensive and holistic area analysis.*

## **THE NORTHLAND NEWTON DEVELOPMENT**

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VHB prepared *Transportation Impact and Access Study, The Northland Newton Development, Newton, Massachusetts*, hereinafter Northland TIAS:<sup>2</sup>

The approximately 22.6-acre site is located along Needham Street in Newton, MA. The Project will include approximately 1.9 million gross square feet (sf) of development (approximately 400 ksf of which consists of parking structures) and will retain the historic Saco Petee mill building that was previously converted to office space. The project includes 180,000 sf of leasable office space (in the historic Saco Petee mill building), 822 residential housing units, 237,000 sf of retail/restaurant/active use space, approximately 1,953 parking spaces, as well as substantial public amenities such as plazas and greens, enhanced pedestrian and bicycle connections and amenities, passive open space enhancements, and a series of robust traffic demand management initiatives. It should be noted that while Northland owns land on both sides of Needham Street, the Project outlined in this document only encompasses the parcel of land west of Needham Street, bounded by Needham Street, Oak Street, the Upper Falls Greenway, and neighboring businesses.<sup>3</sup>

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<sup>2</sup> VHB, Northland TIAS.

<sup>3</sup> VHB, Northland TIAS, page 1.

Since the project was filed, Northland Development has modified the proposal:

The modified redevelopment plan includes: 180,000 sf of leasable office space (in the historic Saco Pettee mill building; no change from existing), 800 residential housing units, 115,000 sf of retail/restaurant/active use space, and approximately 1,550 parking spaces.<sup>4</sup>

### **UNIVERSITY OF MASSACHUSETTS MOUNT IDA CAMPUS**

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The University of Massachusetts states:

The 72-acre University of Massachusetts Mount Ida Campus is located at 777 Dedham Street, Newton, MA. Approximately 8 miles from downtown Boston.<sup>5</sup>

### **CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS MEETING HOUSE**

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The meeting house is proposed to the east of Carlson Avenue, south of Dorothy Road. The church anticipates 244 parking spaces, assemblies of about 200 people and overlapping services.

### **THE STATION AT RIVERSIDE PROJECT**

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VHB prepared *Transportation Impact and Access Study, The Station at Riverside Redevelopment, Newton, Massachusetts*, hereinafter Riverside TIAS:<sup>6</sup>

The Project is located on an approximately 14.4-acre site along Grove Street in Newton, Massachusetts (The Site). The Site is currently home to the Massachusetts Bay Transportation Authority's (MBTA) Riverside Station, the terminus of the D Branch on the Green Line, and the existing Indigo Hotel.

The Project will include approximately 1.43 million gross square feet (sf) of development which will consist of 562,247 sf of leasable office space, 675 residential units, 64,609 sf of restaurant/retail space, and a 194-key hotel. The proposed hotel will essentially replace the existing 194-key Indigo Hotel on the site. The Project will be supported by approximately 2,866 parking spaces that will support both the proposed development and the existing commuter needs at the MBTA Station. The Site will also include a pick-up/drop-off loop for commuters using the MBTA Station as well as well as substantial public amenities such as

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<sup>4</sup> VHB Memorandum, Revised Building Program and Traffic Generation (Watertown, Massachusetts, February 14, 2019), page 1.

<sup>5</sup> <https://www.umass.edu/mic/>. Accessed April 7, 2019.

<sup>6</sup> VHB, *Transportation Impact and Access Study, The Station at Riverside Redevelopment, Newton, Massachusetts* (Watertown, Massachusetts, March 2019).

plazas and greens, enhanced pedestrian and bicycle connections and amenities, and passive open space enhancements. To support the additional traffic generated by the Project, the Proponent is proposing significant infrastructure enhancements surrounding the site. Specifically, the Proponent is proposing modifications to the Grove Street interchange with Route 128/I-95, enhancements along Grove Street itself, and making Recreation Road two way between Grove Street and Recreation Park to the north. The infrastructure improvements proposed have been developed through an iterative process with MassDOT and a formal Interchange Modification Report has been prepared and submitted to Federal Highway to garner support for the changes<sup>7</sup>

## **THE NEWTON-NEEDHAM INNOVATION DISTRICT**

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The Newton-Needham Innovation District states:

A partnership between the City of Newton, Town of Needham, the Newton-Needham Regional Chamber, area real estate holders and local businesses, the N2 Innovation District houses some of the nation's most forward-thinking companies. This 500 acre area is comprised of multiple distinct neighborhoods of varying architectural styles, offering everything from high-quality retail to modern class A office space to restored mill buildings and industrial workspaces.<sup>8</sup>

## **NEEDHAM CROSSING**

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The Town of Needham States:

Needham Crossing welcomes world-class businesses and complimentary retailers in a modern, connected, mixed-use urban layout that embraces contemporary architecture and urban design. Needham Crossing is unique in its mix of residential, office and other commercial uses (including retail, restaurant, and consumer services allowed on the first floor of multi-story buildings), as well as the natural amenities which surround it—Cutler Lake Park and the Charles River. Already a high tech center with PTC, TripAdvisor, and other companies, Needham Crossing is home to many life science companies including Verastem. Needham Crossing is serviced by infrastructure undergoing expansion and improvement through Add-A-Lane on Route 128 (adding a new Kendrick Street interchange to the existing and soon-to-be improved Highland Avenue one), MassWorks on Highland Avenue (widening and improvements fostering multimodal travel), widening of Second Avenue intersection, and new traffic signal at First Avenue. The 2011 rezoning of this area reflects the Town's vision of an urban, real, ready, flexible and accessible modern environment. Existing infrastructure to-

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<sup>7</sup> VHB, Riverside TIAS, page 1 to 2.

<sup>8</sup> <https://www.n2innovationdistrict.com/about>. Accessed April 7, 2019.

gether with improvements already funded will support up to three million square feet of new development with visibility on and easy access from/to Route 128.<sup>9</sup>

## **MUZI FORD AREA**

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Form + Place states:

The third zoning amendment being debated by the town is a proposal to create a new Highway Commercial 1 Zoning District in the area often identified as the “Muzi Ford” site, which in fact covers a larger footprint than just the Muzi Ford business (see plan above). The purpose of this proposal is to maximize the economic value of redevelopment to the Town and subject certain uses to proper vetting through a special permit process. This proposal seeks to accomplish the goal of maximizing economic potential through increased commercial density and increased allowable building heights both by right and by special permit.<sup>10</sup>

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<sup>9</sup> <http://www.needhamma.gov/index.aspx?NID=3730>. Accessed April 7, 2019.

<sup>10</sup> <https://www.formandplace.com/blog/2019/2/12/a-look-into-needhams-future-through-three-proposed-zoning-initiatives>. Accessed April 7, 2019.