

August 29, 2018

Mr. Thomas Jameson, P.E. TAP Program Manager NHDOT Bureau of Planning & Community Assistance John O. Morton Building 7 Hazen Drive, PO Box 483 Concord, NH 03302-0483

City of Keene, NH - 2018 Transportation Alternatives Program (TAP) Grant

Dear Mr. Jameson:

The City of Keene is excited to submit this application for funding for its Marlboro Street Corridor Improvement Project to the 2018 round of Transportation Alternative Program (TAP) funding.

The City is proposing to construct complete streets elements recommended for this corridor from the City's "Complete Street Design Guide", with a focus on a 0.5-mile segment of the City's right-of-way from the intersection of Marlboro Street with Main Street to the west and Baker Street to the east. Roadway and streetscape improvements to the Marlboro Street corridor will promote improved pedestrian and bicyclist circulation and safety. The City is also proposing to enhance connections to the local transit network by creating a pull off bus stop for the City Express at the Home Health Care office in the vicinity of the Baker Street intersection. Our proposal will improve access for elementary school students attending Wheelock Elementary School as well as for off-campus Keene State College students who live in the project area.

The City's 2015 Marlboro Street Zoning and Land Use Study explored innovative approaches to encourage redevelopment along Marlboro Street and the Southeast Keene neighborhood through updates to land use regulations for the project area that promote reuse and redevelopment of underutilized properties and strengthen the area as a vibrant, walkable, mixed-use district that were implemented in 2017. The City's Marlboro Street Rezoning creates the perfect opportunity for our proposed improvements to be a keystone for expanding the redevelopment of Marlboro Street and continuation of these approaches in adjacent neighborhoods to improve connectivity, walkability, pedestrian use, traffic flow, access to the City's multi-use pathways/trails and transit network.

We estimate that the project will cost approximately \$598,000. The City will be requesting 80% of federal TAP funds in the amount of \$478,400. The City has allocated \$196,000 in its FY 2017-2022 Capital Improvement Program to support this project.

Thank you for your consideration.

tech shagar

Sincerely,

Elizabeth Dragon City Manager



August 27, 2018

Mr. Thomas Jameson, P.E. TAP Program Manager NHDOT Bureau of Planning & Community Assistance John O. Morton Building 7 Hazen Drive, PO Box 483 Concord, NH 03302-0483

RE: City of Keene Marlboro Street Corridor Improvement TAP Application

Dear Mr. Jameson,

On behalf of the City of Keene, I am writing this letter to express our support for the City's Transportation Alternatives Program grant application for the Marlboro Street Corridor Improvement Project.

The City of Keene is committed to making roadway and streetscape improvements to the Marlboro Street corridor to promote improved pedestrian and bicyclist circulation and safety, to enhance connections to the City's existing rail trail network and increase access to our local transit services. This area of the City is a key gateway to our downtown, and is home to many of the Region's largest employers. While this corridor supports a diverse mix of land uses, including residential neighborhoods and educational institutions, such as Keene State College and Wheelock Elementary School, opportunities for safe crossing and travel for bicyclists and pedestrians are limited. The Marlboro Street Corridor Improvement project is an integral component of a broader effort to redevelop and strengthen this area as a vibrant, walkable mixed-use district and to promote economic growth and redevelopment along this corridor.

Funding from the Transportation Alternative Program would allow the City to leverage funds (\$196,000) currently allocated in its FY 2017-2022 Capital Improvement Program for this project. Attached to this letter is documentation of this funding. The City of Keene also has a wealth of experience administering Local Public Agency (LPA) projects and has multiple staff that are LPA certified.

This grant will support our ongoing efforts to create safe space for all users to travel and access destinations along this corridor and in adjacent neighborhoods and side streets. In addition, this project will create a safe and attractive space for individuals to access the nearby Cheshire Rail Trail.

Sincerely,

Kendall W. Lane, Mayor

only:
<u> </u>

NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION TRANSPORTATION ALTERNATIVES PROGRAM (TAP)

Round 3 - 2018 APPLICATION FOR FUNDING

1. Sponsor Information (Sponsor is the municipality or school district / SAU that is applying. Contact is the person who will be in responsible charge of the project).

Sponsor Name: City of Keene, NH

Mailing Address: 350 Marlboro Street

Keene, NH 03431

Telephone: 603 352 6550

Email: dlussier@ci.keene.nh.us

Contact Name: Don Lussier

Title: City Engineer

Mailing Address: 350 Marlboro Street

Keene, NH 03431

Telephone: 603 352 6550

Email: dlussier@ci.keene.nh.us

Governing Regional Planning Commission: Southwest Region Planning Commission

2. Project Information

Map: (A map is required as part of the application. Map must be scanned as a pdf file. Map should include street names, State route numbers, project details, identification of resources, north arrow, and a scale)

✓ MAP SUBMITT	ED
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Eligible TAP Activities: Check the eligible TAP activity(s) that your project is proposing.

V	Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic-calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990 (42 USC 12101 et seq).
~	Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs.
	Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users.

Description of work being proposed:

SAFETEA-LU: Infrastructure-related projects only.

(Clearly describe purpose and need for project as well as project goals and objectives)

This project will transform Marlboro Street, a gateway corridor to Keene's downtown, by making roadway and streetscape improvements that promote improved bicycle, pedestrian, and transit circulation and safety, provide a safe connection to the City's expansive rail trail network, and create a safe route to school for elementary school students. For many years, the City has sought to strengthen this corridor and adjacent neighborhoods as a more liveable and accessible area, and to create a friendlier and safer place for people of all ages and abilities to walk and ride bicycles.

The Safe Routes to School Program eligible projects and activities listed at section 1404(f) of the

This project proposes to reconstruct a 0.8± mile segment of Marlboro Street to enhance multimodal access, connectivity, and mobility options for all users. It will make it easier for residents living nearby and employees working along this corridor to connect with essential services, such as employment and education, and destinations, such as the City's downtown and rail trail network. In addition, the improved streetscape and enhanced mobility will help facilitate redevelopment and increase the potential for economic development in this area of Keene.

The project involves the installation of buffered and standard bicycle lanes at street grade on both sides of the roadway, sidewalk improvements, traffic calming features such as chicanes

Resources within project limits:

(List all cultural, archeological, and natural resources, as well as any known hazardous materials in project limits)

Identified natural resources in this area include Beaver Brook, which crosses under Marlboro Street, and the Beaver Brook flood plain; however, no impacts are proposed to these resources.

There are no significant historic resources identified in the project limits, though many of the houses are over 50 years old and were built and inhabited by workers in the industries located in the project area. Old industrial properties line the corridor as well; some have been re-purposed into commercial properties but many are in need of redevelopment, a secondary goal to the implementation of this proposal.

Project Details

Road Name(s) (List all roads in project limits)

Marlboro Street and Bartholomew Court

State Route Number: (List all State route numbers or N/A if on a municipal road)

N/A

Railroad: (List name of railroad corridor if rail trail or rail with trail project)

Cheshire Rail Trail (this segment of the rail trail is known as the Keene Industrial Heritage Trail)

Other: (If off-road path, describe beginning and ending termination locations)

N/A

Length of Project: (If more than one location, provide total length of proposed improvement)

1 total project miles (includes 0.8 mile segment on Marlboro Street and 0.2 mile segment along Bartholomew Court connecting to the Cheshire Rail Trail)

Width of proposed improvement: (If width isn't consistent, provide an average width for majority of improvements)

Average width of 65-feet for the majority of improvements

Surface Type: (List Paved, Concrete, Gravel, Stone Dust, etc. for all proposed improvements)

Bituminous Pavement and concrete for improvements along Marlboro St and Bartholomew Court; Stone dust for ramp connection to the Rail Trail

Ownership: (List the entity that owns the land in the limits of your proposed improvements)

City of Keene (all work is within City of Keene right-of-way or on City owned property)

3. Project Cost Estimate

Identify the estimated project costs under each of the phases below.

Note: to avoid errors on the calculated fields \$0.01 has been inserted into the first box

A) Design/Engineering:

(Costs for engineering study, preliminary design, environmental review, identifying and establishing right-of-way, easements preparation, final design, and bid phase services)

B) Right-Of-Way:

(Cost of easement acquisition and/or land acquisition)

C) Construction:

(Cost of constructing project, materials, and labor)

\$ \$0.00

\$544,000.00

\$54,000.00

D) Construction Engineering:

(Cost of engineering oversight for the project. Oversight needs to be almost fulltime.

Calculated Field

Project Total: \$ \$598,000.00

(Min. \$400,000 Max \$1,000,000)

Identify the amount of federal funding you are applying for.

If you are overmatching your project to get your total up to \$400,000 or over \$1,000,000 you add the additional funds to your required match and put that in the Match\$ box below. Your % federal funds will be adjusted based on your amount of overmatch. If you are adding funds that will be in addition to the amount of federal funds and match for your project those are considered non-participating funds. In this case you put the additional funds in the non-participating box. This is usually done if you want to do additional work that may not be eligible under the TAP program but you want the work done under the overall contract.

Federal \$ \$478,400.00

(\$800,000 Max. \$320,000 Min. for federal amount requested)

Match \$ \$119,600.00

(Enter amount of local match and additional funds if applicable)

Calculated Field

80% **%**

(80% Max. for TAP reimbursement)
Calculated Field

Calculatea Fleia

20% **%**

Reason for non-participating funds

Non-Participating \$ \$76,400.00

Calculated Field

Funding Total \$

\$674,400.00

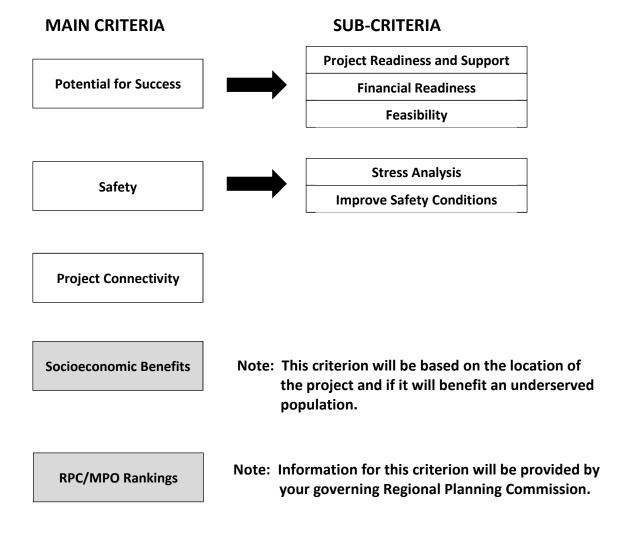
(Min. \$400,000 Max.\$1,000,000**)**

The City is proposing to pay for the engineering design work outside of these grant funds while still submitting the design documents in a prearranged schedule with NHDOT for NHDOT and FHWA review to meet NEPA and LPA standards. Please see "Financial Readiness"

4. Evaluation Criteria (Applications will be scored on criteria developed by the Department's Transportation Alternatives Program Advisory Committee (TAPAC). The TAPAC developed these criteria to select the best applications for funding.)

There are five main criteria and five sub-criteria that will be used to evaluate projects and are listed below:

- The Socioeconomic Benefits criteria Section D will be based on areas where improved mobility and access can be provided to underserved populations. This information will be collected by the Department for scoring based on your project location.
- RPC/MPO Ranking criteria Section E will be done by the governing regional planning commission using the information provided in the application. Application will be submitted to the Department and the Department will forward copies to the Regional Planning Commissions



A) Potential for Success: Sponsor will need to demonstrate the factors that will indicate a project's likeliness to succeed.

MANDATORY REQUIREMENT: All applications must include a letter of support from the Sponsor's governing body committing to actively engaging and leading the project. Application will not be accepted without this letter.

Letter of support attached:

• **Project Readiness and Support:** Is the project part of a local and/or regional plan and effort, and has it been endorsed by local and regional bodies and advocacy groups? That is, did you build your case about the importance of this project to many constituents like conservation commission, planning board, other local groups? Is it part of a regional plan or have RPC/TAC support? Is it part of a master plan or other planning document? (Number of constituents and/or planning documents will be used for scoring)

There is well documented community support for this project, which incorporates and builds upon recommendations to improve the safety and circulation of bicyclists/pedestrians along Marlboro Street included in the City's Marlboro Street Re-Zoning (2017), Complete Streets Guidelines (2016), Land Use Study (2015), Comprehensive Master Plan (2010), and the Transportation Master Plan (2002). The Marlboro Street Corridor Project has been included in the City's Bicycle Pedestrian Path Advisory Committee's draft master plan as a Medium/High priority project for completion (2018). Letters of support from eight City, business, and community groups are included in the supporting documentation.

Each of these plans involved extensive community input to develop goals, recommendations, and priority strategies. In addition, the Wheelock Elementary School Safe Routes to School Action Plan (2015) includes specific recommendations for improving safety for students who walk or bike to school along this corridor. Excerpts from these plans are included in the supporting documentation to highlight the specific recommendations included for Marlboro Street.

For a number of years, the City has been actively working with the community to raise awareness and gauge support for Complete Streets. In 2015, the City adopted a Complete Streets Policy and developed City-specific Complete Streets design guidelines. These guidelines identify Marlboro Street as a Gateway Street, which warrants special consideration for bicyclists, pedestrians, and traffic calming, as well as a Transit Overlay Street, which calls for special consideration of transit stops, transit stop amenities, and pedestrian crossings near transit stops.

Recently, the City completed the Marlboro Street Zoning and Land Use Study, which explored innovative approaches to encourage redevelopment along Marlboro Street and the Southeast Keene neighborhood. The study recommends changes to land use regulations that would promote reuse and redevelopment of underutilized properties and would strengthen the area as a vibrant, walkable, mixed-use district. The City has since implemented the proposed amendments to its zoning that reflect these

• **Financial Readiness:** (TAP is a reimbursement program. Sponsor will have to gross appropriate funds for the entire project. (The Department reimburses a maximum of 80% of each reimbursement request.) Explain how the project will be funded and the timeline for funding. Is there a written commitment to bring this project forward for approval of funds at town meeting, through capital reserve funds, through inclusion in the capital improvement plan, etc. or are there funds already raised/appropriated and dedicated to this project?

The City of Keene has over two decades' worth of experience in successfully managing and completing federal and state grant-funded projects. The City has allocated \$196,000 to support transportation infrastructure improvements to the Marlboro Street corridor in its FY 2017-2022 Capital Improvement Program (CIP). The CIP states that these funds are intended to "construct the interim Complete Streets design concepts included in the [2015 Marlboro Street Zoning and Land Use Study." An excerpt from the City's FY 2017-2022 CIP is included in the supporting documentation along with a detailed budget.

Of the \$196,000 allocated for Marlboro Street, \$119,600 will be used for the project match and \$76,400 will be non-participating funds used for the project design and construction easements. The City of Keene is currently planning a major rehabilitation of water and sewer utilities along Marlboro Street for the 2019 Construction Season. Design for that project is already underway and the project is expected to be advertised for construction in March of 2019. Given the expected timing of TAP Grant award notifications, it will not be possible to incorporate the proposed TAP project into the planned utility contract. Therefore, we anticipate that the streetscape improvements will be advertised for construction separately, in late spring or early summer 2019.

Nevertheless, significant benefits can be realized by conducting the public outreach, design and review process for both projects concurrently. Should the City be selected for this award, we intend to negotiate the design services with the previously selected consultant. Since our prior selection process was not a Qualifications-based process, we understand that the design costs will not be eligible for federal participation. We also understand that the design work will need to comply with the normal state and federal requirements (e.g., NEPA review, ROW process, etc.). The scope of services for the design of the TAP funded project will be prepared to satisfy these requirements, even though the costs are non-participating.

• **Feasibility:** Address historic, cultural, environmental, maintenance, possible areas of contamination, and other related issues that may impact the project's ability to succeed. Applicant should discuss issue and how it will be addressed. Discuss impacts to project timeline and possible financial impacts.

The work proposed will occur entirely within areas of the City's right-of-way and City-owned land that are currently paved and/or disturbed. No known historic or cultural resources of significance exist within the project area. However, the project anticipates the potential loss of a few on-street parking spaces on Marlboro Street (near its intersection with Adams Street), for which there may be some hesitation from businesses. The City will actively communicate and work with business owners and residents in this area to finalize a design that is embraced by the community during the engineering / design phase for the project. In the event that the proposal to remove some on-street parking spaces in this area is met with strong resistance, the City will modify its design to maintain these spaces.

Beaver Brook, a highly urbanized third-order stream, crosses under Marlboro Street in the area to the west of Dartmouth Street (see Project Map). In this same area, a portion of the Brook's 100-year floodplain is adjacent to the northern side of Marlboro Street. No impacts are anticipated to the Brook or the floodplain, as work will occur entirely within the existing paved roadway and roadside area.

Within proximity of the project area is the site of the former Kingsbury Corporation, a tool manufacturer. This property, which is currently vacant, is a known brownfield and is currently undergoing a Phase 1 assessment through the EPA Brownfields Assessment Program. As the proposed work does not directly involve this property, there is no concern for impacts to this site.

As stated in the FY 2017-2022 CIP, the City will adjust the operating budget to cover the annual cost of maintaining the pavement markings and other improvements after project implementation. Additional sidewalk plowing will be required along the proposed rail trail connector, and street plowing will be impacted by the proposed curb extensions, pedestrian refuge island, and chicanes. The Public Works Department is aware of these impacts and is committed to maintaining these facilities for safe access year-round.

Given the strong community support for this project and history of citizen engagement and planning for transportation improvements along this corridor, as well as the minimal environmental/historic resources present in the project area, we do not anticipate impacts to the project's ability to succeed.

B) Safety: Projects will need to demonstrate the extent to which the project will improve safety conditions and/or reduce the perception of user stress as a result of the project being implemented. This criterion will be rated on the difference between the stress level of the existing condition versus the anticipated stress level of the proposed project.

• Stress Analysis:

- Describe the existing stress level of your project area as it exists today without the proposed project and based on the scale below, assign it a letter. You must justify why you chose the letter.
- Describe the anticipated stress level for the project area after the proposed project is completed and based on the scale below, assign it a letter. You must justify why you chose the letter.
- A Facility is reasonably safe for all children.
- B Facility can accommodate users with basic skills and knowledge of traffic.
- C Facility requires an intermediate level of skill and knowledge of traffic to use.
- D Facility requires an advanced level of skill and knowledge of traffic to use.
- E Facility is generally not suitable for pedestrians or bicyclists.

Existing Level of Stress is determined to be Level D.

Marlboro St is a well-traveled roadway with an AADT of 5,700 vehicles in 2013. It has travel lanes which vary in width from 12 to 16+ feet (one in each direction), parallel on-street parking on both sides of the road in most areas, and paved shoulders along the eastern end. Bicyclists are directed to share the travel lane with motorized vehicles with shared lane markings (i.e. "sharrows"). The posted travel speed is 30 mph, however concerns about speeding have been raised by various community stakeholders including Wheelock Elementary School parents and staff.

Existing conditions along Marlboro Street currently favor motorized traffic with modest considerations and facilities that support pedestrians and bicyclists. Although there are 5-foot wide sidewalks along the length of the corridor, several sections of the sidewalk are in poor or fair structural condition and there is only one crosswalk at the intersection with Grove Street near Wheelock Elementary School. This intersection is not safe for children crossing the street unless a crossing guard is present due to the high volume of turning movements, poor sight lines for drivers turning from Grove St. onto Marlboro St., and driver noncompliance with the pedestrian yield law, which was observed during a Safe Routes to School turning movement study. In addition, there are a disproportionate number of driveway curb cuts which threaten pedestrian comfort and safety and make the sidewalk an inconsistent and unpleasant place to walk.

Anticipated Level of Stress Post-Project Construction: Level B

Proposed project improvements include rebuilding sections of the 5-foot sidewalks, installing new crosswalks with curb extensions, traffic calming in advance of the crosswalks,

• **Improve Safety Conditions:** Improvement over existing safety conditions - are there very specific actions that are being taken to improve safety. What specific safety improvements will be made? If there is information, (road safety audit, corridor study, etc.) to support it, please provide it in pdf format with your application. Only specific actions and improvements will be used for scoring - anecdotal information will not be used.

This project will install buffered bicycle lanes where space allows and standard bicycle lanes where space is constrained, creating a separated space for bicyclists to travel along the corridor. This action was recommended as an interim measure by Nelson Nygaard in a 2015 study they conducted of this corridor as part of the Marlboro Street Zoning and Land Use Study. Excerpts from this study are included in the supporting documentation.

The 2002 Keene Transportation Plan indicates there is concern for safe pedestrian crossings at the Grove and Adams Street intersections due to Wheelock Elementary School. A recommendation included in this plan is to install a safe pedestrian crossing at this intersection. This project proposes to install a new crosswalk at this location, and install curb extensions and pedestrian scale lighting to increase visibility of pedestrians entering the crossing. In addition, the travel lanes will be reduced and chicanes installed in advance of the crossing to slow travel speeds and alert motorists. Excerpts from this study are included in the supporting documentation.

In 2015, Southwest Region Planning Commission conducted a study of the walking/biking travel conditions to and from Wheelock Elementary School. As part of this study they surveyed parents of students at the school. Of the 44 households that participated (representing 70 students), 54% indicated they are not comfortable with their child walking or biking to school at any age. The predominant factors influencing this decision are the speed and amount of traffic along the route to school, and the safety of intersections and crossing. This project proposes to enhance the safety and visibility of the intersection and install a new crosswalk in the direct vicinity of the School, and also proposes to reduce travel speeds at these crossing locations. Excerpts from this study are included in the supporting documentation.

C) Project Connectivity: Project will need to demonstrate how it enables movement from origins to destinations, how it fits in with the larger transportation network and identify any other modes it will serve.

Does the project fill a vital gap in an existing transportation network or phased plan? Does it
provide a standalone new facility that did not exist previously? Is it part of a larger phased plan?
List the different modes and destinations it link together? Please describe in detail all
connections, and if part of a phased plan what will the proposed improvement accomplish? Is it
the first phase, middle phase or final phase of the plan.

Marlboro Street is well-traveled roadway that contains a mix of uses including residential, commercial, institutional, and industrial, and connects Keene's southeast neighborhoods to the downtown. A number of the Region's largest employers are located at or near the eastern end of this corridor. At its western end, the corridor connects to the Keene State College Campus, a major employer and educational/cultural institution. Along the length of the corridor, there are diverse community destinations including the Wheelock Elementary School, Home Healthcare Hospice and Community Services (HCS), the Keene Municipal Complex, the Keene Ice Arena, a neighborhood park, local banks, fitness centers, small retail businesses, and offices. Single- and multi-family residences are located along the corridor and the adjacent residential side streets. There is also a concentration of college students that live off-campus in this area of the community.

Although there are a number of destinations in and around the project area, it can be difficult and discouraging for individuals traveling on foot or via bicycle to safely access destinations along and across Marlboro Street. There is just one marked crosswalk near Wheelock Elementary School, and its wide, paved travel lanes and shoulders encourage fast travel speeds. While the Cheshire Rail Trail (Industrial Heritage section - a paved multi-use rail trail) runs parallel to the corridor, there is limited access to this pathway for bicyclists and pedestrians. Currently, the only formal entrance to the trail from Marlboro Street is a ramp made of crushed stone at the City's municipal complex. This access point is not well-marked and can only be accessed by traveling through a busy parking lot with no clear path of travel for pedestrians and bicyclists.

The project will create a safer environment for all users by installing buffered bicycle lanes where space allows, standard bicycle lanes elsewhere, and new sidewalk on both sides of Marlboro Street from its intersection with Bartholomew Court and 0.2 miles to the east of its intersection with Grove Street. In addition, chicanes and narrowed travel lanes will slow traffic and improve overall safety. Currently, there are painted sharrows along Marlboro Street; however, bicyclists have to contend with fast travel speeds and vehicles traveling in and out of multiple access points. The buffered and standard bicycle lanes will create a comfortable and safe space for cyclists to ride, with lesser concern for conflict with vehicles. Appropriate and safe transitions into and out of the bike lanes will be considered in the design of this project.

Currently, employees from the major businesses and manufacturers at the east end of the corridor walk along Marlboro Street and the Cheshire Rail Trail (accessing it via the ramp at the Public Works Department) on their lunch or fitness breaks. To connect the on-street facilities to the Cheshire Rail Trail, the at grade bicycle lanes and adjacent sidewalk will transition into a multi-use six foot wide concrete sidewalk extended along Bartholomew Court to the existing sidewalk at the Public Works Department (350 Marlboro Street). A

D) Socioeconomic Benefits: Is the project located in an area where improved mobility and access can be provided to underserved populations?

 The Department will determine if your project falls in an area that will benefit an underserved population based on free and reduced school lunch programs.

NO ACTION NEEDED FROM APPLICANT FOR SECTION D

E) RPC/MPO Rankings: This section will be completed by the local Regional Planning Commission for your project.

• The Department will send applications to the local Regional Planning Commissions to score and develop a regional ranking. This information will then be incorporated into the final score of projects.

NO ACTION NEEDED FROM APPLICANT FOR SECTION E

Only one application will be accepted per municipality

 The Department received 45 letters of interest requesting more than \$28 million in federal funds. Round 3 of the TAP has approximately \$5.3 million in federal funds available for projects. 5) Application Submission Information: The application is an adobe .pdf form and it must be saved and submitted in electronic format on either a CD or a USB thumb drive. Any supporting documents like the Map, Letter of support and other supporting documentation need to be submitted with the application in pdf format and saved to the CD or USB thumb drive.

APPLICATIONS ARE DUE FRIDAY SEPTEMBER 7, 2018 BY 4:00 PM!

<u>Failure to meet this deadline will result in your project being removed</u> <u>from the scoring process.</u>

Submission Guidelines

Format: Application form <u>must</u> be saved electronically as a pdf and then transmitted to the Department. All supporting maps, letters and other documents must be saved as a pdf and transmitted to the Department with the application form.

Applications and supporting documents must be either:

- burned to a CD or DVD
- saved to a USB thumb drive.

<u>Submission:</u> CD, DVD, or thumb drive must be received on or before 4:00 PM September 7, 2018. Delivery can be either:

- Hand-delivered to: Thomas Jameson, TAP Program Manager
 NHDOT Headquarters
 Bureau of Planning & Community Assistance
 7 Hazen Drive, Concord NH
- Mailed to: Thomas Jameson, P.E.
 TAP Program Manager
 NHDOT, Bureau of Planning & Community Assistance
 7 Hazen Drive, P.O. Box 483
 Concord, NH 03302-0483

Warning: If you mail the Application it must be received by the Department on or before 4:00 pm on September 7, 2018

Direct any questions to: Tom Jameson, email: tom.jameson@dot.nh.gov, phone: 271-3462



KEENE, NH: MARLBORO STREET TAP PROJECT - 2018



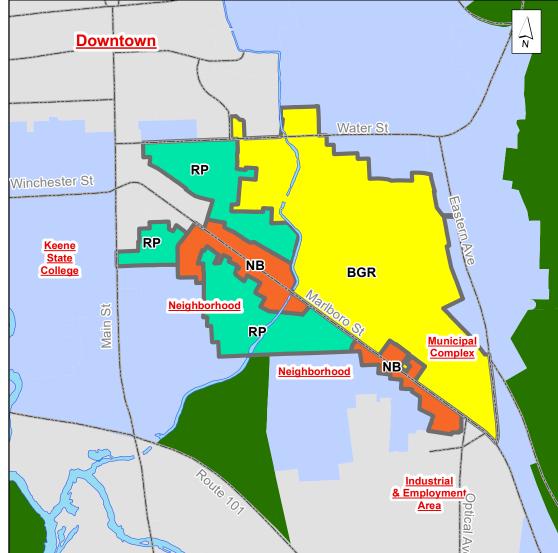


BGR - A downtown district to enhance economic vitality by re-developing new tech. companies as well as clean manufacturing, processing, assembling and wholesaling within walkable and human scale places. Includes height, density and mixed-use incentives.

NB - A downtown district to allow for mixed-use development of small businesses to support the adjacent neighborhoods and workplaces. Focus is on enhancing visual character as well as multi-use circulation throughout the corridor and area, same structure mixed-use and limited parking.

RP - A downtown district to provide or re-create a neighborhood of residential properties that prioritize family units. Mix of small to large residential housing types with shallow front setbacks and moderate to low side and rear setbacks that create a walkable district with shade trees and medium to large blocks.

Marlboro Street Rezoning Districts and surounding landuses



Marlboro Street Improvments

TAP Grant Preliminary Cost Estimate 9/5/2018

<u>ITEM</u>	DESCRIPTION	UNIT	UNIT PRICE	GROVE & ADAMS		BAKER & BARTHOLOMEW		TRAIL CONNECTOR		INTER-NODE IMPROVEMENTS		QUANTITY	TOTAL
202.6 CURB REMO\	/AL & STORAGE	LF	\$ 3.00	600	\$ 1,800	400	\$ 1,200	0 \$	-	3200	\$ 9,600	4,200 \$	12,600
202.8 REMOVAL OF	FENCE	LF	\$ 2.75	0	\$ -	0	\$ -	0 \$	-	0	\$ -	0 \$	-
203.1 COMMON EX	CAVATION	CY	\$ 6.00	1,800	\$ 10,800	1000	\$ 6,000	400 \$	2,400	300	\$ 1,800	3,500 \$	21,000
203.3 EXCAVATING	ASPHALT	SY	\$ 2.50	1,600	\$ 4,000	500	\$ 1,250	0 \$	-	0	\$ -	2,100 \$	5,250
203.3B EXCAVATING	CONCRETE SIDEWALK	SY	\$ 5.00	100	\$ 500	100	\$ 500	0 \$	-	1500	\$ 7,500	1,700 \$	8,500
203.6 EMBANKMEN	NT IN PLACE	CY	\$ 12.00	0	\$ -	0	\$ -	0 \$	-	0	\$ -	0 \$	-
304.2 GRAVEL		CY	\$ 18.00	900	\$ 16,200	500	\$ 9,000	200 \$	3,600	0	\$ -	1,600 \$	28,800
304.3 CRUSHED GR	AVEL	CY	\$ 22.00	900	\$ 19,800	500		200 \$	4,400	300	\$ 6,600	1,900 \$	41,800
403.12 HOT BITUMIN	NOUS PAVEMENT, MACHINE METHOD	TON	\$ 80.00	400		200		80 \$	6,400	500		1,180 \$	94,400
	IG BITUMINOUS SURFACES	SY	\$ 2.00	0	\$ -		\$ -	0 \$	-		\$ -	0 \$	-
4" CONCRETE		SY	\$ 45.00	100	\$ 4,500	100	\$ 4,500	400 \$	18,000	1500	\$ 67,500	2,100 \$	94,500
609.01 STRAIGHT GR		LF	\$ 22.00	200	\$ 4,400	500		550 \$	12,100		\$ -	1,250 \$	27,500
609.02 CURVED GRA		LF	\$ 30.00	100	\$ 3,000	100		0 \$	-		\$ -	200 \$	6,000
609.5 RESET GRANI		LF	\$ 5.00	600	\$ 3,000	400		0 \$		3200	т	4,200 \$	21,000
614.72114 2" PVC COND		LF	\$ 6.00	600	-	400		0 \$		0	\$ 10,000	1,000 \$	6,000
614.51100 CONCRETE PL	•	EA	\$ 350.00	4		3	\$ 1,050	0 \$		0	\$ -	7 \$	2,450
615.003 REMOVING T		EA	\$ 10.00	4	\$ 40	2	\$ 20	1 \$	10		\$ -	7 \$	70
615.004 RELOCATING		EA	\$ 150.00	6	•	1	\$ 600	1 \$	150		\$ -	11 \$	1,650
615.02 TRAFFIC SIGN		SF	\$ 40.00	9	-	9	\$ 360	2 \$	80		\$ -	20 \$	800
618.7 FLAGGERS	13	HR	\$ 22.00	120	•	120		40 \$	880	120	Ψ	400 \$	8,800
	CE OF TRAFFIC (approx. 5%)	LS	\$ 22.00	120	\$ 7,000	120	\$ 7,000	0 \$	000	120	\$ 2,640	0 \$	24,000
625.1 LIGHT POLE B	, , , ,		\$ 350.00	4		4		- T		0		8 \$	
		EA	\$ 650.00	4	, ,		\$ 1,400	0 \$ 0 \$			\$ -	8 \$ 8 \$	2,800
625.5 PEDESTRIAN		EA		4	, ,		\$ 2,600			0	•		5,200
ELECTRICIAN		HR	\$ 60.00	24	. ,	24	. ,	0 \$	-	0		48 \$	2,880
628.1 SAWED CONG		LF	\$ 3.75	40	т	20		0 \$		50		110 \$	413
	MINOUS PAVEMENT	LF	\$ 2.00	250	\$ 500	140	•	270 \$	540	500		1,160 \$	2,320
	CTIVE PAINT PAVE. MARKING, 4" LINE	LF	\$ 0.40	2,000	\$ 800	1400		0 \$		12500		15,900 \$	6,360
	CTIVE PAINT PAVE. MARKING, 12" LINE	LF	\$ 0.80	150		80		20 \$	16	200		450 \$	360
	CTIVE PAINT PAVE. MARKING, 24" LINE	LF	\$ 1.50	0	Τ	-	\$ -	0 \$	-		\$ -	0 \$	-
	CTIVE PAINT PAVE. MARKING, SYMBOL OR WORD	SF	\$ 2.25	100	•	50	-	0 \$	-	100		250 \$	563
	PAVEMENT MARKING LINE, 12" OR UNDER	LF	\$ 0.50	0	т		\$ -	0 \$	-	•	\$ -	0 \$	-
641 LOAM		CY	\$ 33.00	50	· · ·	50		100 \$	3,300	75		275 \$	9,075
645.1110 MULCH		SY	\$ 0.35	400	\$ 140	100	\$ 35	500 \$	175	500	\$ 175	1,500 \$	525
645.5310 SILT FENCE		LF	\$ 2.50	0	7		\$ -	400 \$	1,000	0	Υ	400 \$	1,000
646.5100 TURF ESTABL	ISHMENT WITH MULCH, TACKIFIERS, AND LOAM	SY	\$ 3.50	400	\$ 1,400	100	\$ 350	3 \$	11	500		1,003 \$	3,511
651 EVERGREEN 1	TREES, T.B.D.	EA	\$ 500.00	0	7	0	7	4 \$	2,000	·	\$ -	4 \$	2,000
652 DECIDUOUS 1	•	EA	\$ 700.00	5		4	\$ 2,800	3 \$	2,100		\$ -	12 \$	8,400
654 EVERGREEN S	SHRUBS, T.B.D.	EA	\$ 150.00	26	\$ 3,900	16	\$ 2,400	3 \$	450	0	\$ -	45 \$	6,750
655 DECIDUOUS S	SHRUBS, T.B.D.	EA	\$ 150.00	10	\$ 1,500	10	\$ 1,500	0 \$	-	0	\$ -	20 \$	3,000
657 VINES AND G	ROUNDCOVERS, T.B.D.	EA	\$ 5.00	0	\$ -	0	\$ -	0 \$	-	0	\$ -	0 \$	-
659.1 CAST IRON T	REE GRATE, 72" DIA. W/ REMOVABLE INSERTS	EA	\$ 3,000.00	0	\$ -	2	\$ 6,000	0 \$	-	0	\$ -	2 \$	6,000
659.2 STORMWATE	R BIORETENTION BASIN, STREET TREE	EA	\$ 5,000.00	2	\$ 10,000	2	\$ 10,000	1 \$	5,000	0	\$ -	5 \$	25,000
661.1 PARK BENCH		EA	\$ 750.00	2		4	\$ 3,000	0 \$	-	0	\$ -	6 \$	4,500
661.2 BUTTERFLY G	ARDEN PARK ENTRANCE	LS	\$ 10,000.00	0		1	\$ 10,000	\$	-	0	\$ -	1 \$	10,000
	N AND CLEANUP (approx. 5%)	LS	\$ 100,000.00		\$ 7,000		\$ 6,000	\$	3,000		\$ 9,000	0 \$	22,000
					\$ 153,765		\$ 129,787	Ś	65,612		\$ 181,613	\$	527,776
								Ψ		Add Inflation (1 yr. @ 3%		Ś	543,609
										Prelim & Final Design (app		Ś	
										Construction Engineering		т	54,000
										Crand Tatal /rawad		, ,	54,000

598,000

Grand Total (rounded)

City of Keene 2018 TAP Application

SUPPORTING DOCUMENTATION

- 1. Documentation of Local Match
- 2. Detailed Budget
- 3. Plan Documentation: Excerpts from local plans and studies which reference the need for improvements in the project area
 - a. Marlboro Street Redevelopment Promotional Packet
 - b. Keene Complete Streets Policy and Design Guidelines
 - c. Marlboro Street Zoning and Land Use Study
 - d. Keene Comprehensive Master Plan
 - e. Keene Transportation Plan
 - f. Bicycle Pedestrian Pathways Advisory Committee Master Plan draft
 - g. Wheelock Elementary School Safe Routes to School Plan
 - h. Rethink Marlboro Street summary
 - i. Pedestrian node conceptual drawings
- 4. Documentation of Project Support: Additional letters of support from City and community groups and organizations.

Documentation of Local Match



CITY OF KEENE, NEW HAMPSHIRE 2016 - 2021 Capital Project Funding Request

GENERAL PROJECT DATA

Marlboro Street Corridor Improvements Project Name:

Planning Department:

Physical Location: **Marlboro Street**

Federal Mandate: N/A

State Regulation or Law: N/A

Master Plan (CMP) Focus Area: Quality Built Environment

CMP Vision/Strategy: **Maintaining Neighborhoods**

Council Initiative: **Policy**

V.O.I.C.E.: Continually Assess Facilities and

Infrastructure

Departmental Objective:



Aerial

PROJECT DESCRIPTION/JUSTIFICATION

In 2015 the City completed the Marlboro Street Zoning and Land Use Study which explores innovative approaches to encourage redevelopment along Marlboro Street and the Southeast Keene Neighborhood. The study recommends changes to zoning and other regulations that would promote reuse and redevelopment of underutilized properties, improve stormwater management practices, preserve residential neighborhoods, and strengthen the area as a vibrant, walkable, mixed-use district. It also identified improvements on Marlboro Street and in adjacent neighborhoods to improve connectivity, walkability, pedestrian use, traffic flow, and enhance the appearance of the street. The Study identified various improvements at different points along Marlboro Street. It is recognized that public investment will help encourage private investment in the area.

The proposed project is to construct the interim Complete Streets design concepts included in the Study. These concept level designs are tailored to three distinct segments of Marlboro Street which relate existing street width and to surrounding land uses. The interim design calls for changes that require painted lane markings and crosswalks and removable landscaping; permanent changes such as concrete splitter islands could also be proposed. The first segment from Main St to Grove St. is the widest segment. Here travel lanes would be reduced in width, parallel parking preserved, and a separate "cycle track" for bicycles installed where the street is wide enough. In the middle segment from Grove St. to Baker St. the road is less wide. In this segment, dedicated bike lanes and improved crosswalks are proposed, along with dedicated left turns lanes for vehicles at key intersections. One-sided, on-street parallel parking would be installed, periodically altering between the north and south sides of the street to help with traffic calming. The third segment is from Baker St. to Optical Ave. Here the street would not change significantly from existing conditions because of constrained width. Shared lane arrows "Sharrows" would be maintained for bicyclists. No on-street parking is proposed, and landscape trees should be planted in the existing grass buffer. In FY17 funds are included to develop design plans for the interim improvements including several public meetings. In FY 19 are funds for the installation of the proposed interim work. Once this work is completed the operating budget will need to be adjusted to cover the annual cost of maintaining the pavement markings and other improvements.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
EXPENDITURES								
Design		25,000		171,017				196,017
Construction/Implementation								0
Property/Equip. Acquisition								0
TOTAL	\$0	\$25,000	\$0	\$171,017	\$0	\$0	\$0	\$196,017
FUNDING								
Current Revenue								\$0
Capital Reserve		25,000		171,017				196,017
Debt Funded								0
Federal or State Grants							·	0
Other Sources								0
TOTAL	\$0	\$25,000	\$0	\$171,017	\$0	\$0	\$0	\$196,017

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

High \$50,001 or more

Ongoing

PROJECT STATUS:

Ongoing CIP

Detailed Budget

Marlboro Street Improvments

TAP Grant Preliminary Cost Estimate 9/5/2018

<u>ITEM</u>	DESCRIPTION	<u>UNIT</u>	UNIT PRICE	GROVE & ADAMS		BAKER & BARTHOLOMEW		TRAIL CONNECTOR		INTER-NODE IMPROVEMENTS		QUANTITY	TOTAL
202.6 CURB	REMOVAL & STORAGE	LF	\$ 3.00	600	\$ 1,800	400	\$ 1,200	0 \$	-	3200	\$ 9,600	4,200 \$	12,600
202.8 REMO	OVAL OF FENCE	LF	\$ 2.75	0	\$ -	ŭ	\$ -	0 \$	-	0	\$ -	0 \$	-
203.1 COMM	MON EXCAVATION	CY	\$ 6.00	1,800	\$ 10,800	1000	\$ 6,000	400 \$	2,400	300	\$ 1,800	3,500 \$	21,000
203.3 EXCAV	VATING ASPHALT	SY	\$ 2.50	1,600	\$ 4,000	500		0 \$	-	·	\$ -	2,100 \$	5,250
203.3B EXCAV	VATING CONCRETE SIDEWALK	SY	\$ 5.00	100	\$ 500	100	\$ 500	0 \$	-	1500	\$ 7,500	1,700 \$	8,500
203.6 EMBA	NKMENT IN PLACE	CY	\$ 12.00	0	\$ -	•	\$ -	0 \$	-	0	\$ -	0 \$	-
304.2 GRAVE	<u>ē</u> L	CY	\$ 18.00	900	\$ 16,200	500	\$ 9,000	200 \$	3,600	_	\$ -	1,600 \$	28,800
304.3 CRUSH	1ED GRAVEL	CY	\$ 22.00	900	\$ 19,800	500		200 \$	4,400	300		1,900 \$	41,800
403.12 HOT B	BITUMINOUS PAVEMENT, MACHINE METHOD	TON	\$ 80.00	400	\$ 32,000	200	\$ 16,000	80 \$	6,400	500	\$ 40,000	1,180 \$	94,400
417 COLD	PLANING BITUMINOUS SURFACES	SY	\$ 2.00	0	\$ -	,	\$ -	0 \$	-	0	\$ -	0 \$	-
4" COI	NCRETE SIDEWALK	SY	\$ 45.00	100	\$ 4,500	100		400 \$	18,000	1500	\$ 67,500	2,100 \$	94,500
609.01 STRAIC	GHT GRANITE CURB	LF	\$ 22.00	200	\$ 4,400	500		550 \$	12,100	0	\$ -	1,250 \$	27,500
609.02 CURVE	ED GRANITE CURB	LF	\$ 30.00	100	\$ 3,000	100		0 \$	-		\$ -	200 \$	6,000
609.5 RESET	GRANITE CURB	LF	\$ 5.00	600	\$ 3,000	400	\$ 2,000	0 \$	-	3200	\$ 16,000	4,200 \$	21,000
614.72114 2" PVC	C CONDUIT, SCHEDULE 40	LF	\$ 6.00	600	\$ 3,600	400		0 \$	-	0	\$ -	1,000 \$	6,000
614.51100 CONC		EA	\$ 350.00	4	· ,	3	\$ 1,050	0 \$			\$ -	7 \$	2,450
	OVING TRAFFIC SIGNS	EA	\$ 10.00	4	•	2	\$ 20	1 \$	10	0	\$ -	7 \$	70
	CATING TRAFFIC SIGNS	EA	\$ 150.00	6	\$ 900	4	\$ 600	1 \$	150	0	\$ -	11 \$	1,650
615.02 TRAFF		SF	\$ 40.00	9	7 300	,	\$ 360	2 \$	80		\$ -	20 \$	800
618.7 FLAGG		HR	\$ 22.00	120	<u> </u>	120		40 \$	880	120		400 \$	8,800
	TENANCE OF TRAFFIC (approx. 5%)	LS			\$ 7,000		\$ 7,000	0 \$	-		\$ 10,000	0 \$	24,000
625.1 LIGHT		EA	\$ 350.00	4	, ,	4	\$ 1,400	0 \$		0	\$ -	8 \$	2,800
625.5 PEDES	STRIAN LIGHT BOLLARD	EA	\$ 650.00	4	\$ 2,600	4	\$ 2,600	0 \$		-	\$ -	8 \$	5,200
ELECTI	RICIAN	HR	\$ 60.00	24		24	. ,	0 \$	-		\$ -	48 \$	2,880
628.1 SAWE	D CONCRETE PAVEMENT	LF	\$ 3.75	40	T	20	, -	0 \$	-	50	Ŧ	110 \$	413
628.2 SAWEI	D BITUMINOUS PAVEMENT	LF	\$ 2.00	250	\$ 500	140		270 \$	540	500		1,160 \$	2,320
632.0104 RETRO	DREFLECTIVE PAINT PAVE. MARKING, 4" LINE	LF	\$ 0.40	2,000	\$ 800	1400		0 \$	-	12500		15,900 \$	6,360
632.0112 RETRO	DREFLECTIVE PAINT PAVE. MARKING, 12" LINE	LF	\$ 0.80	150	\$ 120	80	\$ 64	20 \$	16	200	\$ 160	450 \$	360
632.0124 RETRO	DREFLECTIVE PAINT PAVE. MARKING, 24" LINE	LF	\$ 1.50	0	т		\$ -	0 \$	-		\$ -	0 \$	-
632.02 RETRO	DREFLECTIVE PAINT PAVE. MARKING, SYMBOL OR WORD	SF	\$ 2.25	100	\$ 225	50	\$ 113	0 \$	-	100	\$ 225	250 \$	563
632.9110 OBLITE	ERATE PAVEMENT MARKING LINE, 12" OR UNDER	LF	\$ 0.50	0	\$ -	,	\$ -	0 \$	-	·	\$ -	0 \$	-
641 LOAM		CY	\$ 33.00	50	\$ 1,650	50		100 \$	3,300	75		275 \$	9,075
645.1110 MULC	Н	SY	\$ 0.35	400	\$ 140	100	\$ 35	500 \$	175	500	\$ 175	1,500 \$	525
645.5310 SILT FE	<u> ENCE</u>	LF	\$ 2.50	0	\$ -	0	\$ -	400 \$	1,000	0	\$ -	400 \$	1,000
646.5100 TURF E	ESTABLISHMENT WITH MULCH, TACKIFIERS, AND LOAM	SY	\$ 3.50	400	\$ 1,400	100	\$ 350	3 \$	11	500	\$ 1,750	1,003 \$	3,511
	GREEN TREES, T.B.D.	EA	\$ 500.00	0	7	0	\$ -	4 \$	2,000	U	\$ -	4 \$	2,000
	DUOUS TREES, T.B.D.	EA	\$ 700.00	5		4	\$ 2,800	3 \$			\$ -	12 \$	8,400
	GREEN SHRUBS, T.B.D.	EA	\$ 150.00	26		16		3 \$			\$ -	45 \$	6,750
	DUOUS SHRUBS, T.B.D.	EA	\$ 150.00	10		10		0 \$			\$ -	20 \$	3,000
657 VINES	AND GROUNDCOVERS, T.B.D.	EA	\$ 5.00	0		0	\$ -	0 \$			\$ -	0 \$	-
	IRON TREE GRATE, 72" DIA. W/ REMOVABLE INSERTS	EA	\$ 3,000.00	0	·	2	\$ 6,000	0 \$			\$ -	2 \$	6,000
	MWATER BIORETENTION BASIN, STREET TREE	EA	\$ 5,000.00	2		2	\$ 10,000	1 \$	5,000		\$ -	5 \$	25,000
661.1 PARK I		EA	\$ 750.00	2	\$ 1,500		\$ 3,000	0 \$	-		\$ -	6 \$	4,500
661.2 BUTTE	ERFLY GARDEN PARK ENTRANCE	LS	\$ 10,000.00	0		1	\$ 10,000	\$	-	0	\$ -	1 \$	10,000
692 MOBIL	LIZATION AND CLEANUP (approx. 5%)	LS	\$ 100,000.00		\$ 7,000		\$ 6,000	\$	3,000		\$ 9,000	0 \$	22,000
					\$ 153,765		\$ 129,787	\$	65,612		\$ 181,613	\$	527,776
										Add Inflation (1 yr. @ 3%	per year)	\$	543,609
										Prelim & Final Design (ap	prox. 15%)	\$	-
										Construction Engineering	(approx. 10%	\$	54,000
										Grand Total (round	ed)	\$	598,000

5 9/5/2018 L:\Planning\2018 TAP Grant Application\MarlboroStreet\Marlboro St. TAP Estimate (with Connector)

Plan Documentation

Excerpts from local plans and studies which reference the need for improvements in the project area

- a. Marlboro Street Redevelopment Promotional Packet
- b. Keene Complete Streets Policy and Design Guidelines
- c. Marlboro Street Zoning and Land Use Study
- d. Keene Comprehensive Master Plan
- e. Keene Transportation Plan
- f. Bicycle Pedestrian Pathways Advisory Committee Master Plan draft
- g. Wheelock Elementary School Safe Routes to School Plan
- h. Rethink Marlboro Street summary
- i. Pedestrian node conceptual drawings

Marlboro Street Redevelopment

Mixed-Use Opportunities Connected to a Historic Downtown

The Marlboro Street corridor is poised to reclaim its historic, vibrant, economic diversity.

In days past this area was a bustling gateway vendors. small businesses, railroad, manufacturing companies and the adjacent neighborhoods where many of these business' employees lived. This urban arrangement is the newly appreciated and highly prized live/work scenario. Recent initiatives and changes to Keene's regulatory vibrant structure have created economic development opportunities in this uniquely-situated section of Keene.

The area offers walk & bike-able access to:

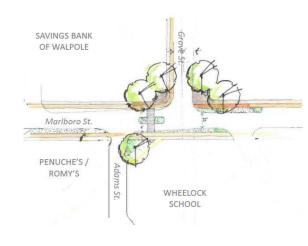
- Keene's historic downtown,
- The Heritage Rail Trail,
- Many of Keene's 23,000 residents,
- The 4,500 student and staff population of Keene State College and
- The hundreds of employees who work downtown Keene each day.

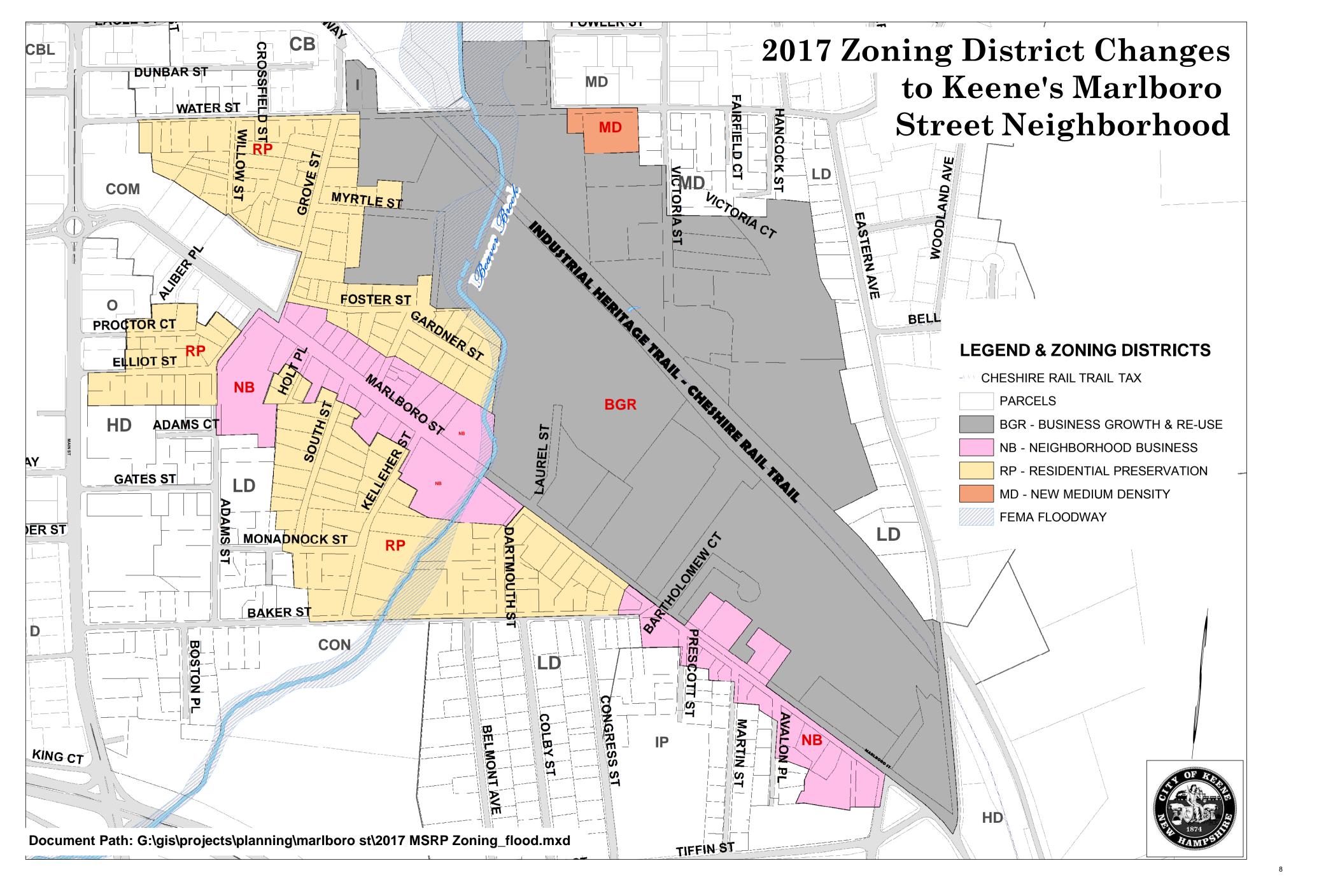


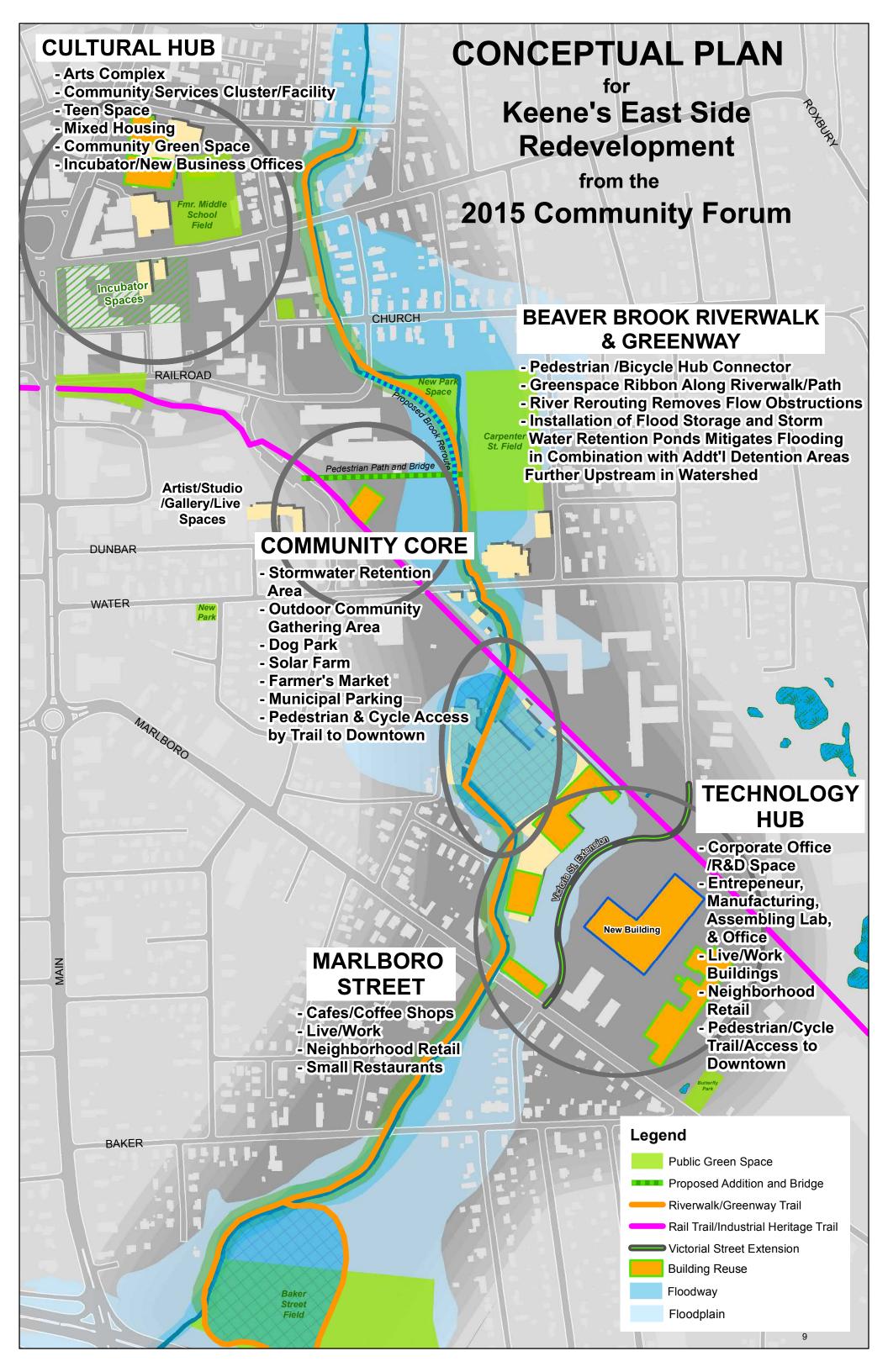
Recent Changes

- ✓ Establishment of the Marlboro Street Corridor
 Economic Revitalization Zone
- ✓ Creation of Two New, Mixed Use Zoning Districts
- Designation of a Community
 Revitalization Tax Relief
 Incentive
- ✓ Budgeted "Complete Street" roadway improvements

GROVE ST./MARLBORO ST. CONCEPT (DRAFT)







RSA 79E

Community Revitalization Tax Relief Incentive FAQs

79-E is a temporary tax relief program to encourage the rehabilitation & use of under-utilized buildings in downtown areas

What structures qualify?

- Existing buildings in the Keene Community Revitalization Tax Relief Incentive (NH RSA 79-E) District (see map on back)
- Residential uses must occupy no greater than 50% of the gross living area

What Projects are Eligible?

Substantial Rehabilitation

 Costs for rehab of a <u>qualifying structure</u> must be ≥ \$75.000

OR

Replacement of Existing Building

- Removal of a qualifying structure & new construction on the same lot where the costs are ≥ \$75,000
 - ✓ The existing structure must not have significant historical, cultural or architectural value
 - ✓ The public benefit of replacement must exceed that of rehab.

Demonstration of Public Benefit*

- · Enhances downtown economic vitality
- Improves a culturally or historically important structure
- Promotes the preservation & reuse of the existing building stock
- Promotes efficient design, safety & greater sense of community consistent w/ the Comprehensive Master Plan
- · Creates at least 1 new, full time job
- · Directly integrates public art
- Achieves a nationally recognized green building standard

*Must demonstrate at least 1 of the above benefits

What is the process for seeking relief?

- 1) Owner submits an application to City
- 2) City staff review the application for completeness
- Once complete, the City Council holds a public hearing on the application w/in 60 days of completeness
- 4) City Council votes whether or not to grant the relief & determine its duration w/in 45 days of the public hearing
- 5) If approved, the Owner records a covenant to ensure the public benefit is preserved



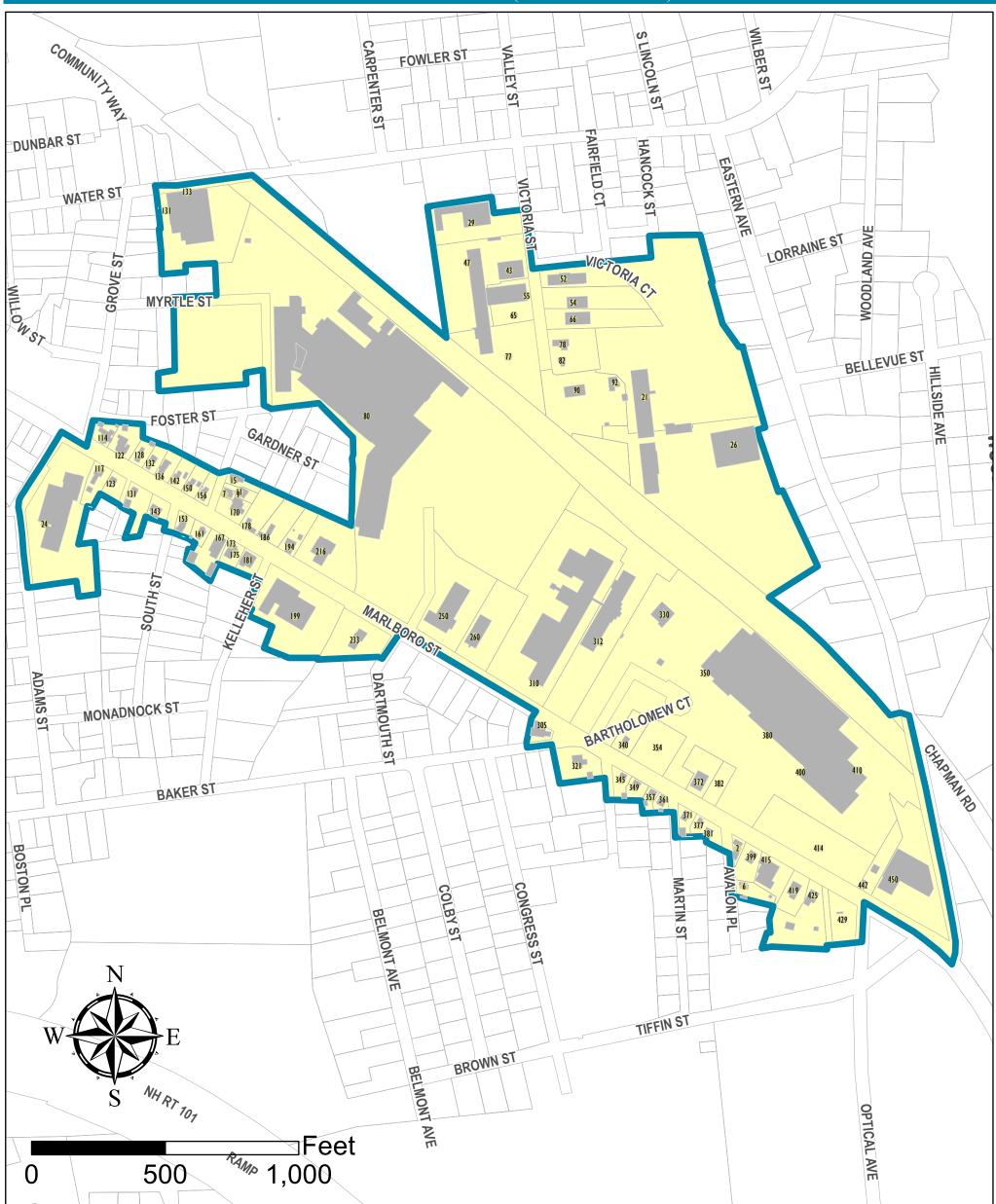
How long is the tax relief period?

- Up to 5 years for rehab or replacement as determined by City Council
- Tax relief is at a pre-rehabilitation assessed value and begins after work is completed
- Projects that provide 3+ public benefits may be considered for a longer relief period

For more information:

Contact: Keene Planning Department 4th Floor City Hall, 3 Washington St. Keene, NH p: (603) 352-5474

CITY OF KEENE COMMUNITY REVITALIZATION TAX RELIEF INCENTIVE (RSA 79-E) DISTRICT



Legend



79-E District Boundary



Building Footprint



Parcel Boundary



Address Number



ERZ FAQs for Businesses

What is the ERZ Program?

ERZ stands for Economic Revitalization Zone. The ERZ tax credit program, which is detailed in RSA 162-N, offers a short term business tax credit for projects that improve infrastructure and create jobs in designated areas of a municipality.

Why were ERZs established?

The ERZs were established to stimulate economic redevelopment, expand the commercial and industrial base, create new jobs, reduce sprawl, and increase tax revenues within the state by encouraging economic revitalization in designated areas.

How is an ERZ defined?

An Economic Revitalization Zone means a zone with a single continuous boundary, designated in accordance with RSA 162-N:8, and having at least one of the following characteristics:

- (a) Unused or underutilized industrial parks; or
- (b) Vacant land or structures previously used for industrial, commercial, or retail purposes but currently not so used due to demolition, relocation of the former occupant's operations, age, obsolescence, deterioration, brownfields, or cessation of operation resulting from unfavorable economic conditions either generally or in a specific economic sector.

A community must request that a site or contiguous area be designated as an ERZ by BEA. Each ERZ is evaluated every five years to assess whether the designation is still eligible.

How much is available in tax credits?

The State of New Hampshire has designated \$825,000 statewide, per year, to be made available for ERZ tax credits.

How long will this initiative be in place?

This program will be in place until 2020, or until the State law governing ERZs is repealed or amended.

What does a business



Revised 11/17

need to do to qualify?

For a business to qualify for an ERZ tax credit it must create a least one (1) new job in the state, and meet the following criteria:

- The business must be physically located in an approved ERZ.
- Investment in plant or equipment must be made directly by the business applying for the ERZ tax credit.
- Jobs created must be full time, direct employees, and not be contracted or "temp" jobs.
- The investment and the job creation must take place within one calendar year.

What is the process for a business to apply for an ERZ tax credit?

To apply for the tax credits you must fill out form ERZ-2 available from the Department of Business and Economic Affairs website.

The deadline to apply is February 10th of the year following the applicant's tax year.

How is the credit calculated?

The credit is based on a percent of the salary for each new full time job created and the lesser of: either a percent of the actual cost incurred for the project or a maximum credit for each new job created in the fiscal year

What is considered a full time job?

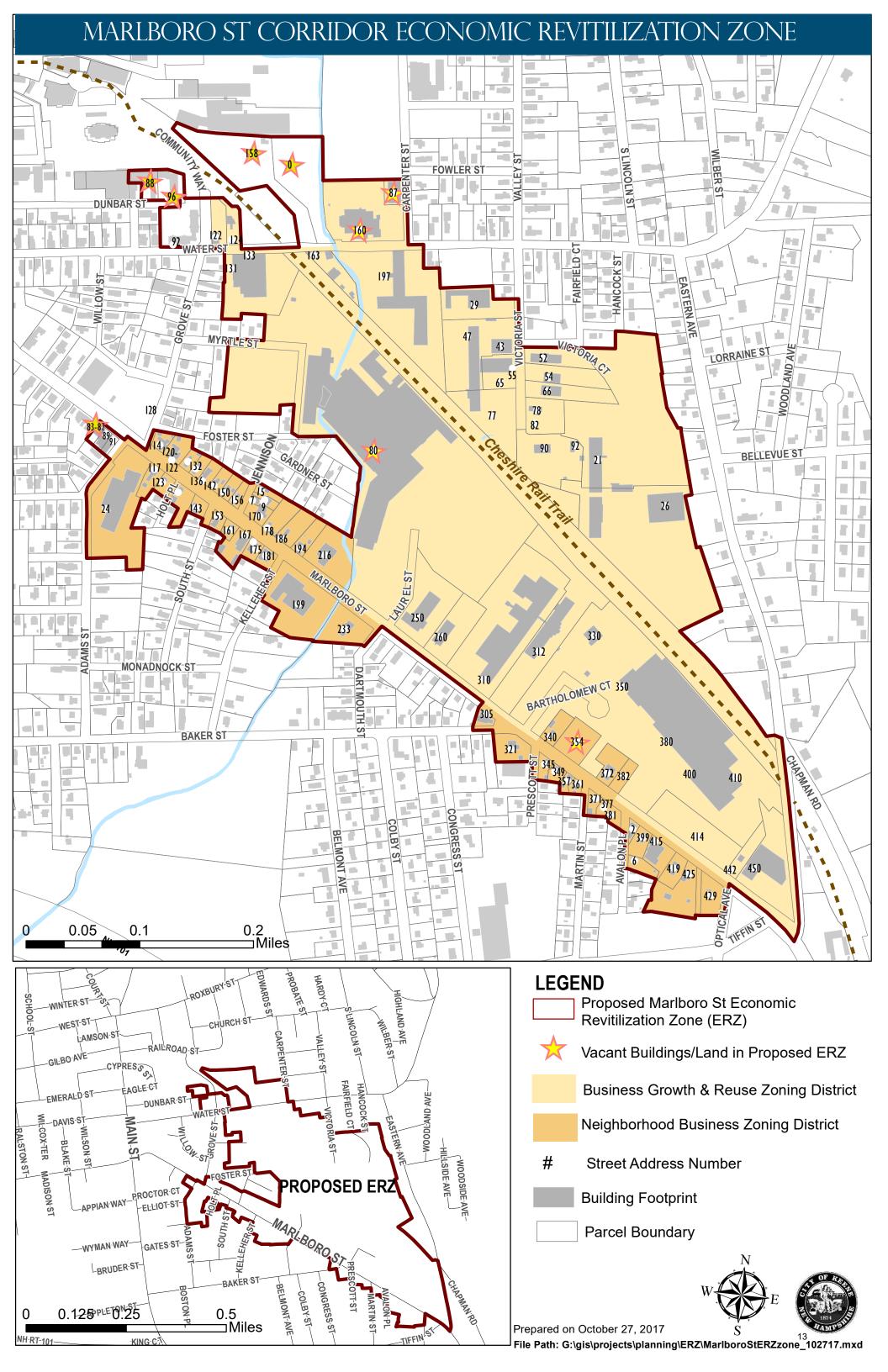
A full time job is at least 35 hours per week and is a permanent, year-round position.

How is the credit applied to my tax liability?

The tax credits shall be available to the taxpayer only for tax liabilities arising during tax periods including the tax period for which the tax credit is applied, up to an additional five (5) consecutive tax periods following the date of certification by the BEA commissioner.

The maximum amount of tax credit is \$240,000 per application, and the maximum applied per year by a taxpayer is limited to \$40,000.

Who do I call with additional questions?



Summary Details for Marlboro Street's New Zoning Districts - 2017 Encouraging Economic Revitalization









The project, begun in 2013, focused on updating the area's industrial zoning to allow for mixed uses and to encourage new, clean, industrial &technology businesses within walking distance of the adjacent, residential neighborhood. The area's downtown location has enabled extending Keene's downtown streetscape elements to re-invigorate and stimulate the Marlboro Street Corridor into a more vibrant mix of uses including multi-dwelling structures on top of businesses to extend the daytime use into nighttime. The project benefitted from a ten member, ad-hoc committee of residents and representatives of local businesses who attended 24 meetings over two years as well as four, community workshops, and 12 public workshops held by the Joint Committee of Planning, Licenses and Development combined with the Planning Board. These public workshops explored, discussed and revised details of each, of the three, resulting zoning districts. Keene's City Council approved O-2016-01-C and O-2016-02-A on October 19, 2017. Additional information is available at the Keene Planning Department, 603-352-5474. Each zoning district summary may include an:

- o Intent
- o General Provisions
- o Incentives
- o Permitted Principal Uses

- o Parking Provisions
- o Dimensional Regulations, and a
- o Location Map

In City Council November 19, 2015. Report filed as informational. 6A1

Veri M. Hood

Assistant City Clerk

<u>City of Keene</u> NEW HAMPSHIRE

November 10, 2015

TO:

Mayor and City Council

FROM:

Municipal Services, Facilities and Infrastructure Committee

SUBJECT:

RESOLUTION: R-2015-40 - Relating to Complete Streets

On a vote of 4 to 0, the Municipal Services, Facilities, and Infrastructure Committee recommends the adoption of Resolution R-2015-40.

Chairman/Designee

Background:

Public Works Director Kürt Blomquist and Planner Tara Germond introduced themselves. Mr. Blomquist reported that the MSFI Committee has gone through the Complete Streets resolution twice and it was available to the public for input. He continued that they reviewed the design guidelines, which they will adopt per the street utilities standards. They published in the Keene Sentinel that the design standards have been produced and are being adopted, and that will go into effect upon their adoption. Ms. Germond added that they incorporated the edits and comments that were received at previous meetings on the resolution, in its final form as it was presented to the City Council.

Chair Duffy replied that the committee is pleased to see the word "inclusive" in the resolution. He asked if committee members or members of the public had questions or comments. Hearing none, he asked for a motion.

Councilor Jones made the following motion, which was seconded by Councilor O'Connor.

On a vote of 4 to 0, the Municipal Services, Facilities, and Infrastructure Committee recommends the adoption of Resolution R-2015-40.

Mr. Blomquist thanked the committee, the Planning Department, Ms. Germond, Ms. Brunner at the Southwest Regional Planning Commission, and everyone who has been a part of this. He continued that with the adoption of this resolution a component of the Comprehensive Master Plan is being implemented.



CITY OF KEENE

R-2015-40

Fifteen

In	the	Year	of Ou	r Lord	Two	Thousand	and.		**********		***********	 	 	
					Rel	ating to Co	mplet	te Streets						
A	RES	OLU	TION	Į		,			********	*********	********	 	 *************	

Resolved by the City Council of the City of Keene, as follows:

WHEREAS, the City of Keene works to have a well-balanced and connected transportation infrastructure that is safe, more livable, and welcoming for all users, including drivers, public transportation riders, pedestrians, bicyclists as well as older people, children and those with mobility challenges, and

WHEREAS, the City, in its 2008 Community Vision, calls for a transportation system that connects people and goods locally, regionally and globally, and will allow people to be less dependent on their cars, and will promote alternatives to the use of fossil fuels; and

WHEREAS, the City, in its 2010 Comprehensive Master Plan, recommends that the City become a Complete Streets community and the City Council adopted a 2011 resolution to adopt a Complete Streets policy; and

WHEREAS, to support this vision, it is the intent of the City of Keene to formalize the planning, design, operation, and maintenance of all streets so that they are safe for users of all ages and abilities as a matter of routine.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF KEENE AS FOLLOWS:

Application

Complete Streets are inclusive streets that are designed, operated, and maintained to enable safe access and mobility for all users, so that pedestrians, bicyclists, motorists and public transportation users of all ages and abilities are able to safely move along and across a street.

All City-owned transportation facilities in the public right of way including, but not limited to: streets, bridges and all other connecting pathways should be designed, constructed, operated, and maintained to support the concept of Complete Streets where appropriate or feasible.

The City will approach transportation improvements and project phases as an opportunity to create safer, more accessible streets for all users. These phases include, but are not limited to: planning, programming, design, right-of-way acquisition, construction, reconstruction, operation and maintenance. Ordinary maintenance activities designed to

keep assets in serviceable conditions (e.g. mowing, sweeping, and cleaning) may be exempt from this policy.

Complete Streets principles may be achieved through single elements incorporated into a particular project or incrementally through a series of smaller improvements or maintenance activities over time.

In the event that the existing right-of-way does not allow for the accommodation of all Complete Streets design elements, alternatives will be explored such as obtaining additional right-of-way, use of revised travel lane configurations, paved shoulders, signage, traffic calming, education or enforcement to accommodate all potential users.

It is recognized that designs should reflect and adapt to the context and character of the surrounding built and natural environments and enhance the appearance of such. This Policy recognizes that transportation needs vary and must be balanced in a flexible, safe, and cost effective manner.

The City will follow the adopted Keene Complete Streets Design Guidelines as well as the latest design standards. In recognition of context sensitivity, public input and the needs of many users, a flexible, innovative and balanced approach that follows other appropriate design standards may be considered, provided that a comparable level of safety for all users is present.

Implementation

Complete Streets are integral to everyday transportation decision-making practices and processes. To this end:

- (a) The City will incorporate Complete Streets principles into existing plans, manuals, checklists, decision-trees, rules, regulations, and programs as appropriate;
- (b) The City will review current design standards, including regulations which apply to new roadway and transportation infrastructure design and construction, to ensure that they reflect the best available design standards and guidelines, and effectively implement Complete Streets, where feasible;
- (c) The City will identify and seek out appropriate sources of funding for implementation of this policy and to have project selection criteria that will identify projects that support Complete Streets projects:
- (d) The City should promote inter-departmental coordination among City departments with an interest in the activities that occur within the public right-of-way or on public lands in order to support Complete Streets goals; and

(e) The City should consider and pursue educational opportunities to ensure that all users of the transportation system understand and can safely utilize Complete Streets project elements.

Performance Measures

This policy encourages the evaluation and regular reporting of progress on the implementation and maintenance of Complete Streets. Periodic updates should be considered to be given to the City Council and/or other boards/committees on transportation infrastructure projects undertaken to the extent these projects meet the objectives of this policy.

Kendall W. Lane, Mayor

In City Council November 5, 2015. Referred to the Municipal Services, Facilities and

Infrastructure Committee.

City Clerk

GATEWAY STREETS

Roads classified as Gateway Streets are primarily arterials streets emanating out from the City's downtown to state routes within and outside Keene. These streets contain a mix of land uses and destinations including but not limited to retail and commercial centers, professional offices, educational institutions, human service agencies, residences, gas stations, and grocery stores. These streets are the primary travel corridors in the City and should be accommodating of all modes of transportation.





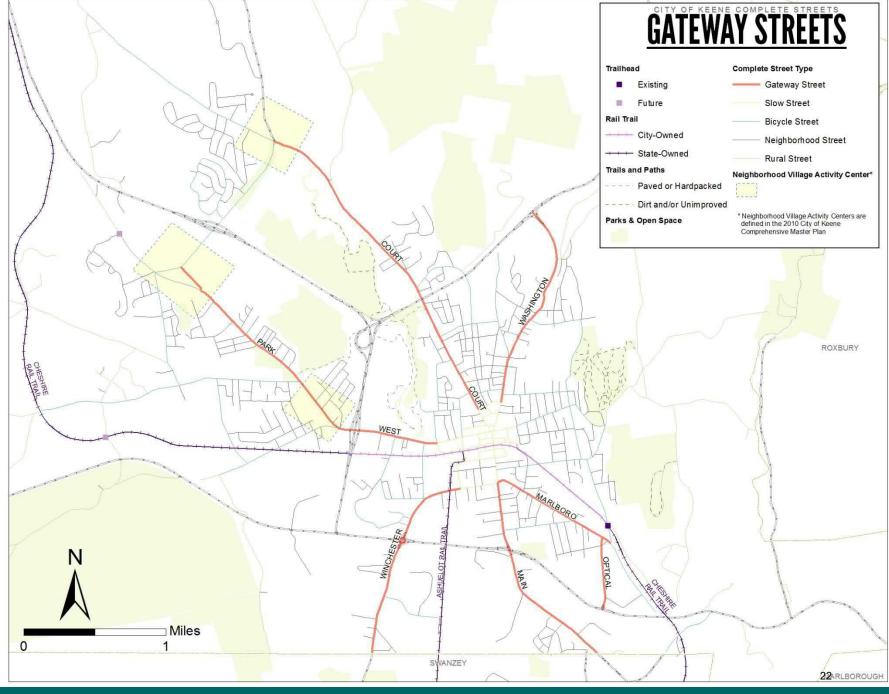
Where are Gateway Streets in Keene?

- ☐ Court St*
- ☐ Main St*
- ☐ Marlboro St*
- ☐ Optical Ave
- ☐ Park Ave

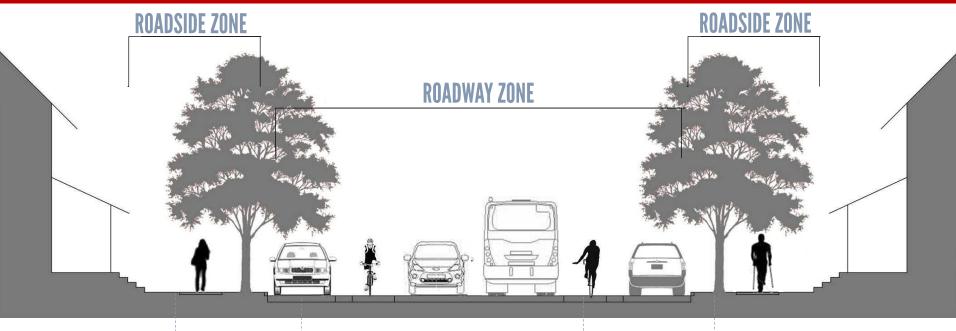
- ☐ West St*
- ☐ Winchester St*

[☐] Washington St*

^{*}Street type changes along roadway segment.



GATEWAY STREET ELEMENTS



Unobstructed Pedestrian Pathway

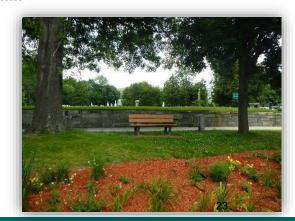
Parallel Parking On-Street

Marked Bike Lanes or Sharrows

Green Buffer with Street Trees and Space for Bioswales or Rain Gardens







GATEWAY STREET CONSIDERATIONS

ROADSIDE ZONE ROADWAY ZONE

Sidewalk		Vel	Vehicle Travel Lanes		
	5' minimum; 8' - 10 ' preferred width		10' minimum; 12' maximum		
	5' minimum unobstructed walking area	Do	Jactrian Crassings		
	Located on both sides of the street	rti	lestrian Crossings		
	Consider curb extensions at intersection with crosswalks		Special pavement treatment in high volume pedestria		
	Ramped at all driveway entrances and street intersections with a slope not		pavement, special pavers, high visibility paint, raised,	etc.)	
	to exceed 1:12		6-10' wide		
	Located at least 5' from edge of street pavement right-of-way permitting		Longitudinal ladder markings per MUTCD requiremen	IS	
	Consider use of pervious materials		Comply with ADA for smoothness and visibility		
			Placed at every intersection		
Grei	en Buffer		In areas of high pedestrian volume consider mid-bloc	k crossings	
	5; minimum		If speeds and volume warrant, consider signage		
	2' minimum area for snow storage	Dil	o Lance / Charrows		
	Located adjacent to sidewalk		e Lanes/ Sharrows		
	Deciduous trees of a minimum 2" caliper planted every 40' – 50"		4' minimum; 5'-6' preferred		
	Native trees, shrubs and perennial plantings that are wet/dry/salt tolerant		Use bike safe drain grates		
	(avoid species susceptible to disease)		Minimum visibility treatment of white line, bicycle ico		
	Consider grates or mulch around tree bases in high volume pedestrian areas;		Consider integrating color pavement (e.g. green) for considering color pavement (e.g. green)		
	6' x 6' minimum		Place on both sides of street or a minimum of one si		
	Consider use of bioswales or rain gardens for stormwater infiltration.		Consider sharrows as alternative to bike lanes (mining		
	J .		white chevron / bicycle symbol directing bicyclists to	ride in the safest location	
Furniture / Amenites			within the travel lane)		
			Markings should be located outside of door zone of p	oarked cars	
	Bicycle Racks	Me	dians / Refuge Islands		
	Parking meters placed behind green buffer		6' minimum width with 7" minimum reveal, 5' pedestr	ian nath and 10" long.	
	Consider using multi-space pay stations		The cut-through or ramp width should equal the wid		
	Covered transit shelters at bus stops		Landscape with native trees, shrubs, and perennial p		
	e: Furniture should not obstruct 5' pedestrian walking area		tolerant (plantings should not exceed 2'-3' high)	manungs that are wether yrsait	
, , , ,	. Further of Should hot obstract of podostrain walking arou		tolerant (plantings should not exceed 2.3 mgm)		
l ioh	ting	Par	rking		
_			Angled parking on-street in low-speed commercial ar	eas (17' long by 8" wide at a 4:	
	Pedestrian scale fixtures placed 50' if space allows in high volume pedestrian areas		degree angle perpendicular to curb)	2 2 3 2 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2	
П	Vehicular fixtures at all intersections and 28' high		Parallel parking on-street (7' minimum width, 8' prefe	rred)	
	Consider energy efficient lighting (e.g. LED, solar fixtures, etc.)		Consider back in angled parking	•	
Ш	Consider energy enrolent lighting (e.g. LED, Sold) fixtures, etc./		Consider use of pervious pavement	24	

TRANSIT OVERLAY

In areas of the City that are either currently served by fixed-route public transportation services or where transit services would be ideally located in the future, special considerations should be made for accommodating transit vehicles and users. In 2015, the primary provider of fixed-route bus service in Keene is the City Express. The City Express' 2015 bus stop locations are located on the map on page 27. The recommendations outlined for Transit Streets on the following pages should be considered in addition to those associated with the underlying Complete Street type.

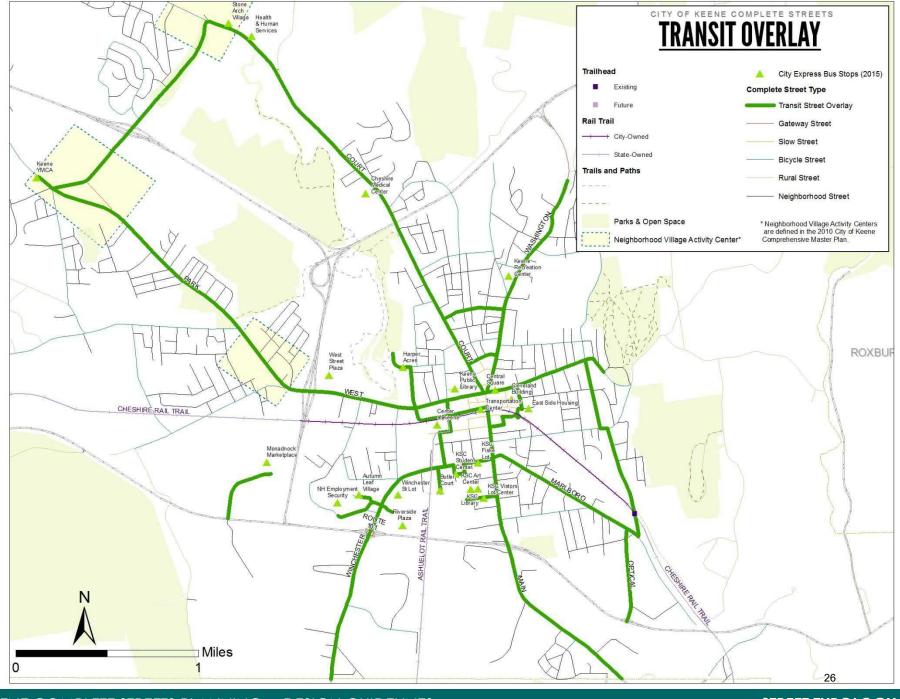




Transportation Center on Gilbo Avenue



25



TRANSIT OVERLAY CONSIDERATIONS

ROADSIDE ZONE ROADWAY ZONE

Transit Stop Amenities

- ☐ Covered transit shelters at bus stops
- ☐ Covered Bicycle Racks
- □ Covered benches
- □ Pedestrian scale fixtures at transit stops. Consider energy efficient lighting (e.g. LED, solar fixtures, etc.)
- □ Pedestrian scale signs with bus route information

Note: Furniture or shelters should not obstruct 5' pedestrian walking area

Transit Stops

- □ Placed in front of crosswalks
- □ 100' 140' curbside for streets
- ☐ Consider bus bulbs (6' X 35') for streets with higher traffic volume, high transit ridership, crowded sidewalks and/or inadequate space for transit stop amenities
- □ 100' 140' bus turnouts for transit stops with longer dwell times

Vehicle Travel Lanes

10' minimum; 12' maximum

Pedestrian Crossings

- Consider placing In areas near transit stops
- Special pavement treatment in high volume pedestrian areas (e.g. integral colored pavement, special pavers, high visibility paint, raised, etc.)
- 6-10' wide
- □ Longitudinal ladder markings per MUTCD requirements
- ☐ Comply with ADA for smoothness and visibility
- ☐ If speeds and volume warrant, consider signage

Parking

Remove on-street parking at transit stop locations

Marlboro Street **ZONING AND LAND USE REGULATIONS PROJECT**





FINAL REPORT | 13 JANUARY 2014

Prepared for the City of Keene
by The Cecil Group | Nelson\Nygaard | Alta Planning & Design | GZA

<u>Planning Board Development Standards</u> – Continue enhancing and improving upon Low Impact Development and Best Management Practices standards for stormwater management.

Transportation Strategy

The purpose of the transportation strategy is to transform the district into a dynamic pedestrian- and bicycle- friendly corridor. There are a number of specific recommendations along Marlboro Street itself, including curb cut reductions, bicycle lanes and tracks as well as reconfigured turning lanes. Recommendations are provided for the neighborhood streets off Marlboro Street, the future street network and increased connections to the Cheshire Rail Trail. Lastly, this section includes a parking strategy with reduced minimum parking requirements, municipal parking leases and new parking policy standards with time-limited spaces.

- <u>Parcel Access</u> Future curb cuts and parcel redevelopments can be planned
 with an eye towards consolidating curb cuts to minimize conflicts and
 improve pedestrian and bicycle comfort and safety. As shown in *Appendix E: Transportation Strategy*, there are opportunities to limit the number of
 curb cuts, which can be realized through shared access easements.
- <u>Vehicle/Truck Access</u> With the recent reconstruction of Grove Street
 and proposed redesign of Marlboro Street, an alternative truck route is
 recommended to access Water Street and eastern downtown businesses
 via Marlboro Street and a turn right onto Grove Street. The City may
 need to reconstruct the curb line to help aid trucks taking a right turn at
 this intersection and will need to widen Grove and Marlboro Street to
 accommodate this truck turning movement.
- Cheshire Rail Trail Recommendations include formalizing existing and creating new access points to encourage pedestrian and bicycle mobility between residential neighborhoods looking to connect to and from downtown as well as within the district. Important access points include intersections with proposed streets such as Victoria Street, the Baker Street bike connector, and the Greenway connector. Another recommendation is to improve the Water Street and Cheshire Rail Trail intersection for pedestrians and bicyclists. Finally, providing lighting along the length of the trail can help to provide better visibility and safety for those on the trail during the evening hours.
- <u>Future Street Network</u> The vision of new connecting streets, shown in Figure 12, provides an interconnected network of streets that improves connectivity within the district in order to make destinations more accessible and safe for all modes of transportation as well as to promote an innovative mix of uses that supports a wide range of businesses and industrial uses, supported by shops, restaurants, and new housing.
- <u>Complete Streets</u> On Marlboro Street, interim and permanent cross sections are proposed for each of the three segments with widened sidewalks, bicycle lanes and tracks, and street trees. Off of Marlboro Street,



Cheshire Rail Trail Looking North

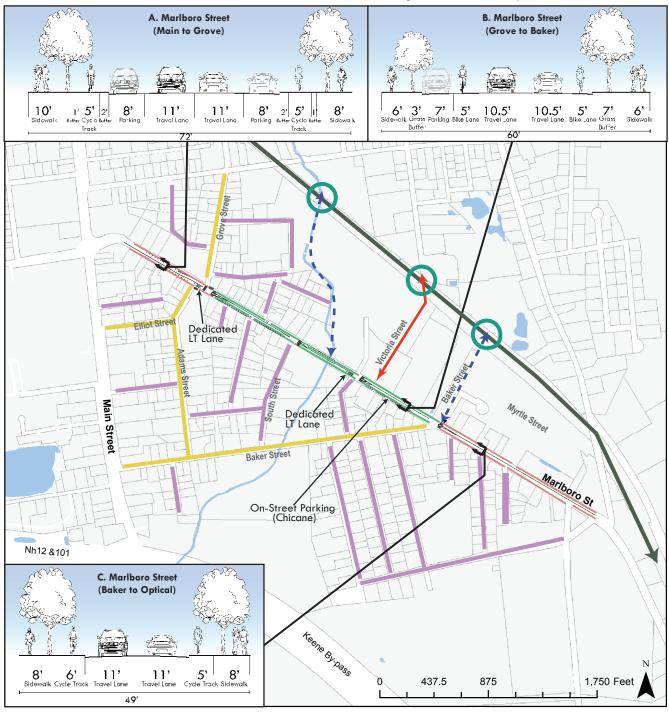


Marlboro Street



Elliot Street

Figure 12 District Transportation Recommendations



District Transportation Recommendations

Marlboro St Improvements Street Typologies New Streets and Connections Cycle Track Connecting Streets Street Extensions Bike Trail Connections Bicycle Lanes Residential Streets Chesire Rail Trail Rail Trail Access Points

- street typologies have been created to signify the hierarchical difference in proposed roadway cross-segments within the district and to distinguish the differences between the various residential neighborhoods streets. Proposed designs consider the connections and accessibility within the residential neighborhoods and between the neighborhood and Marlboro Street.
- Parking Management Sharing parking spaces among a mix of uses reduces the total number of spaces required compared to the same uses in stand-alone developments. The benefit to the surrounding community is a more efficient use of land resources with the potential for redevelopment at infill locations that might otherwise be dedicated for parking. The City can create a shared parking program between public and private parking spaces along the corridor to create additional parking opportunities for visitors, employees, and customers. On-street parking in the district could be time-limited and/or subject to permit parking for long-term residential or employee parking.

Related Actions and Strategies

This planning process focused upon specific aspects of the City's regulatory framework and policies which have been described above – zoning, design guidelines, transportation, stormwater management and flood protection within the limits of the planning area. The balance of this Report contains the associated recommendations for each of these topics.

However, discussions of other related actions and strategies emerged during the course of studies. The consultant team has noted possible steps that the City may consider in the future to address these issues or accomplish these goals. Although these topics were not within the scope of the studies or the subject of this Report, they have been noted and are assembled in this section for several reasons:

- Other community concerns and goals This is a record of community concerns or goals which were expressed during meetings and work sessions that cannot be reasonably addressed by the zoning or other regulatory measures that are the subject of this study;
- Actions or regulatory steps outside of the Marlboro Street planning area
 The City can consider actions or regulatory changes outside of the planning area that can improve conditions within the district and
- Non-regulatory actions to complement planning and regulatory goals In some cases, the City can take non-regulatory actions that will support the planning goals for the Marlboro Street area.

PROPERTY DETERIORATION AND NEGLECT

The review of existing conditions noted instances of significant deterioration of buildings and accumulated neglect of both buildings and properties

Recommendations CITY OF KEENE
21 of 73

Marlboro Street **ZONING AND LAND USE REGULATIONS PROJECT**





APPENDIX E | TRANSPORTATION STRATEGY

the figure below. The City would need to reconstruct the curb line to help aid trucks taking a right turn at this intersection and need to widen Grove and Marlboro Street to accommodate this truck turning movement in the interim. This will require a more in-depth turning movement analysis before reconstruction.

With future redevelopment in the core of the Marlboro Street corridor, the creation of a new Victoria Street extension to Marlboro Street will provide a better option for trucks destined for Water Street businesses, allowing direct access off of Marlboro and avoiding the use of Water Street all-together.

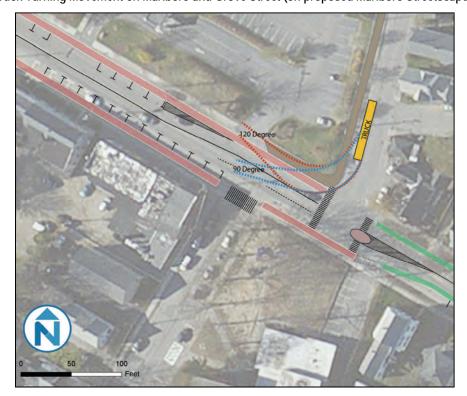


Figure 5 Truck Turning Movement on Marlboro and Grove Street (on proposed Marlboro Streetscape)

C) Cheshire Rail Trail

The City of Keene is blessed with the availability of a highly developed system of recreational trails that bisect the city and region. The Cheshire Rail Trail is one of the most important regional and local connectors not only for the city, but for the future success of the Marlboro Street corridor in particular. The availability and proximity of this multimodal connector provides opportunities to enhance and encourage travel by foot and bicycle between the corridor, the downtown, and beyond, serving to better link activity areas in the city and providing a direct amenity for future development in the corridor. This rail trail should serve as a parallel but complimentary connection to Marlboro Street itself, potentially providing sidewalk-like activity on the northern edge of redeveloped parcels as well as multiple access points for the neighborhood and businesses in the district.

Recommendations

Recommendations include enhancing existing and creating new access points to encourage mobility between residential neighborhoods looking to connect to and from downtown as well as within the district. Important access points include intersections with proposed streets such as the proposed Victoria Street extension, the Baker Street bike connector, and the Greenway connector. Other access points from local neighborhood streets should also be considered to provide more direct access to the trail from residential neighborhoods directly north of the rail trail. Improved access points to the multi-use path should be enhanced to encourage fluidity between intersecting streets that supports a higher level of connectivity throughout the district.



Figure 6 Existing and Proposed Trail Access Points

Another recommendation includes providing better treatment at the Water Street and Cheshire Rail Trail intersection to accommodate pedestrians and bicyclists who are utilizing the path. Figure 7 and Figure 8 depict existing conditions at this intersection. There is little to no signage leading up to the trail, no pedestrian scale lighting, and the crosswalk linking the multi-use path across Water Street is deteriorating.

Attribution License 2.0

D) Future Street Network

Mobility throughout the Marlboro Street district is and will continue to be intimately related to its land uses, demographics, and available transportation infrastructure. The vision set out for the future of this district hinges on the concept of providing an innovative mix of uses that supports a wide range of businesses and industrial uses, supported by shops, restaurants, and new housing, while simultaneously working to better preserve the existing traditional neighborhood-scaled housing within and surrounding the district. In order to bring this vision to fruition, it is essential to provide an interconnected network of streets that improves connectivity within the district in order to make destinations more accessible and safe for all modes of transportation while avoiding creation of single pinch points for traffic. As proposed redevelopment plans occur overtime, the importance of a connected and viable street network that supports the mobility needs of all users is necessary to sustain both corridor and neighborhood vitality.

Within the district, Marlboro Street will continue to serve as the main thoroughfare for vehicular traffic, with added enhancements for pedestrians and bicyclists throughout the corridor. The street will continue to channel traffic through to major destinations both northwest and southeast of the district, and new development will be served by Marlboro and several new streets within the innovation district, such as Victoria Street, the extension of Baker Street as well as the proposed continuation of Myrtle Street through to Bartholomew Ct. to Optical Avenue, as seen in Figure 11.

Marlboro Street will provide a level of neighborhood protection, allowing development and through movement to be concentrated along the corridor, preserving the character of abutting traditional neighborhoods. The proposed Myrtle Street extension through to Optical Avenue will provide additional network connectivity for more localized access to proposed developments north of Marlboro Street. The creation of this roadway and new crossing streets allows for better access and permeability between local neighborhoods within the proposed district, as well as to and from the key through connections of Marlboro Street and the Cheshire Rail Trail.

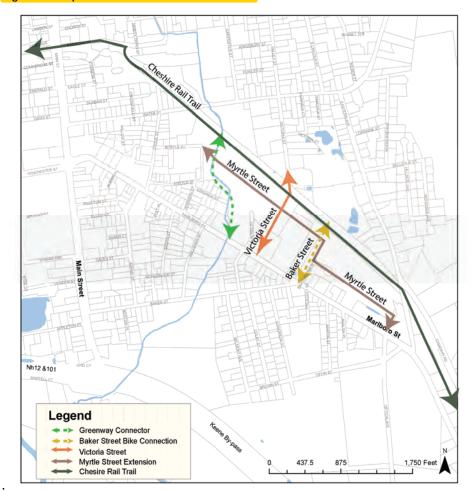


Figure 11 Proposed Street and Bike Connections

Recommendation: Complete Streets

The design of a complete transportation system that promotes pedestrian-oriented place-making begins with the understanding of street contexts. Different streets have different conditions and should merit design considerations that are specific to their particular environment. Design improvements on connecting roadways within the Marlboro Street corridor will be addressed in a manner that both facilitates multimodal access and connections throughout the corridor, while providing uninhibited circulation patterns for all users of the road. As shown in Figure 12, street typologies have been created to signify the hierarchical difference in proposed roadway cross-segments within the district. Street typologies are mainly categorized to distinguish the differences between the various residential neighborhoods streets, as proposed designs should consider the connections and accessibility within the residential neighborhoods and between the neighborhood and Marlboro Street.

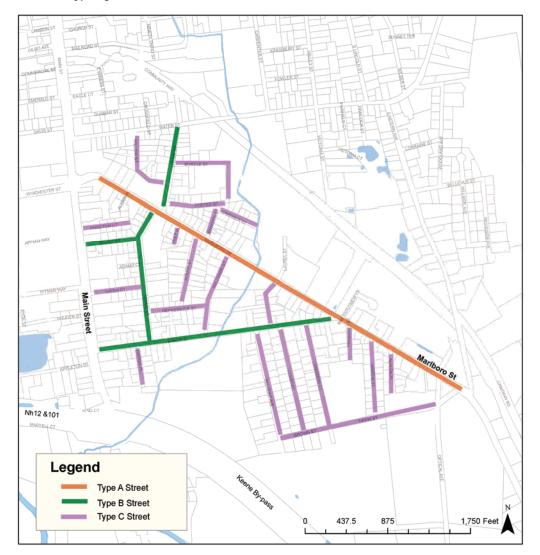


Figure 12 Street Typologies

Recommended Street Typologies

Street Type A - (Marlboro Street)

The physical and aesthetic landscape of Marlboro Street reflects the various land uses throughout the corridor. With the future redevelopment of the street, recommendations build off of three distinct segment characteristics, which include: the "Traditional Commercial Street," along the north-westernmost third of Marlboro, from Main Street to Grove Street; the "Innovation Street," from Grove Street to Baker Street; and the "Green Connector," spanning from Baker Street to Optical Avenue. Proposed recommendations for both the short and long term enhancements will provide enhanced bicycle and pedestrian facilities along the Marlboro Street corridor.

Northern Marlboro Street (Main to Grove- Traditional Commercial Street)

Between Main and Grove Street, Marlboro Street is at its widest with 53 feet curb to curb width, carrying one lane of traffic in each direction and parallel parking on both sides of the street.

Marlboro Street Zoning and Land Use Regulations Project- Transportation Final Report City of Keene

Sidewalks are present on both sides, as well as shared lane bicycle markings (sharrows). However, there is a vast amount of width dedicated to each vehicle travel lane, encouraging higher vehicle speeds than desired, providing insufficient protection for bicyclists, and minimizing the potential pedestrian space (See Figure 12).

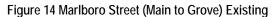
Short-term recommendations for this segment of the street include preserving parallel parking along both sides of the roadway and narrowing travel lanes to about 11 feet each. The remaining roadway space would then be separated with a line of landscaping barrels to buffer a 7.5 foot wide space on each side of the street between parked cars and the sidewalk that can be used as a community art space and potentially sidewalk cafes or "parklets." When not occupied with active uses, this space can also serving as an informal cycle track. With sharrows for bicyclists the only viable facility approaching and leaving Main Street, sharrows would continue through this stretch, ultimately connecting to a dedicated bike lane east of Grove, though the buffered space would serve as an ideal cycle track when available. In winter months, the landscaping barrels can be removed and snow stored in the buffers, helping to preserve the full-width of the adjacent sidewalks.

The long-term recommendation proposes a more formalized cycle track facility, running the span of this street segment. The cycle track would be raised to the level of the sidewalk and contain a two-foot buffer from the parked cars and one-foot buffer from the landscaped sidewalk space, helping to separate pedestrian and bicyclist zones. Travel lanes and parking widths would remain consistent.

In both the short- and long-term, parking on the northern curbline would drop to accommodate a left-turn lane onto Grove Street. This is shadowed by a pedestrian crossing island that serves both as a safe pedestrian crossing as well as a neighborhood protection element, marking a clear gateway to the next, less-commercial segment of Marlboro Street. The island may even carry a low-mounted gateway sign and/or landscaping.



Figure 13 Example: Cycle Track, Vassar Street, Cambridge, MA

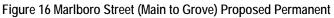


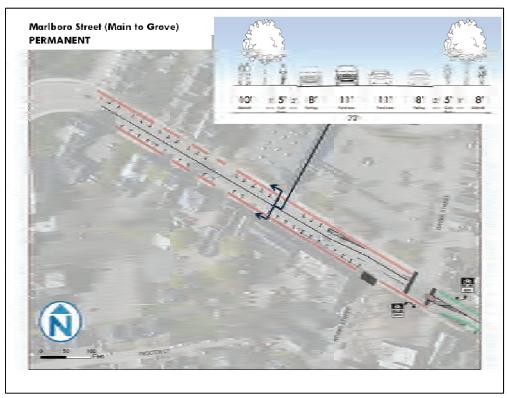


Marlboro Street (Main to Grove)
INTERIM

5 7 7.5 8 111 111 B 7.5 6

Figure 15 Marlboro Street (Main to Grove) Proposed Interim





Middle Marlboro Street (Grove to Baker- Innovation Street)

The existing cross-section of Marlboro Street spanning from Grove Street to Baker Street has a smaller curb to curb measurement as compared to the previous. It still retains parking on both sides of the roadway but has 11' travel lanes. Sidewalks are present along both sides of the road, but they are narrower and somewhat deteriorated. The future vision for this segment of the corridor is to provide traffic calming elements that help to improve bicycle and pedestrian enhancements.

Both the short- and long-term recommendation for this street segment include providing southbound dedicated left hand turning lanes and crossing islands at key intersection points, including Grove Street and the proposed Victoria Street, as well as crosswalks located at Kelleher and Marlboro Street. These facilities will help to create better opportunities for pedestrians to cross Marlboro Street, as opposed to existing conditions, where crosswalks are scarce. Dedicated on-street bicycle lanes will run the entirety of this street segment, and one-sided on-street parking will serve as chicanes, periodically altering between the north and south sides of the street at the crosswalk locations.

Figure 17 Marlboro Street (Grove to Dartmouth) Existing



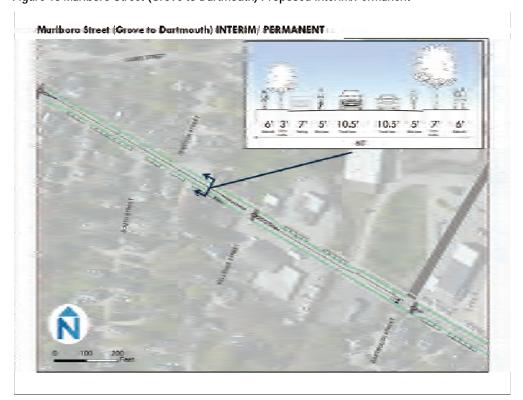


Figure 18 Marlboro Street (Grove to Dartmouth) Proposed Interim/Permanent

Southern Marlboro Street (Baker to Optical- Green Connector)

Marlboro Street, from Baker to Optical Avenue, has the most dissimilar characteristics compared to the previous two segments. Travel lanes narrow to approximately 11' against a two-foot shoulder. The curb to curb width does not allow for parking on either side of the street. Sidewalk facilities are in poor condition, and there is little to no landscaping to protect or shade pedestrians. This segment of the roadway has become a hostile and uninviting pedestrian environment, exacerbated by the number of large curb cuts.

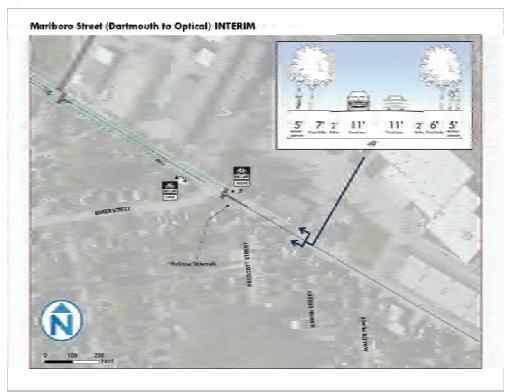
The short-term recommendation for this segment of the street does not drastically change from existing conditions. Because of the constrained width of the roadway, the recommendation is to maintain existing sharrows on the roadways, however providing the option for bicyclists to utilize the sidewalk as a means of travel in the interim. The recommendation of utilizing the sidewalk as in the short term scenario acknowledges that the constrained roadway conditions do not allow for a dedicated bicycle facility. Providing the option for bicyclist to utilize the sidewalk as well as the roadway provides a protected facility in the interim, and the lack of on-street parking along this segment of Marlboro allows bicyclists to be visible to motorists. In addition, because of the available width in the grass buffer new grass or trees should be planted to provide a shaded environment for pedestrians and bicyclists.

Long-term recommendations for this street segment include providing a formal cycle track facility for bicyclists. This would include removing the two foot roadway buffer and converting the existing landscape buffer to a wider sidewalk with street tree pits. The bicycle facility would be at the sidewalk level, separated from roadway traffic.

Figure 19 Marlboro Street (Dartmouth to Optical) Existing



Figure 20 Marlboro Street (Dartmouth to Optical) Proposed Interim



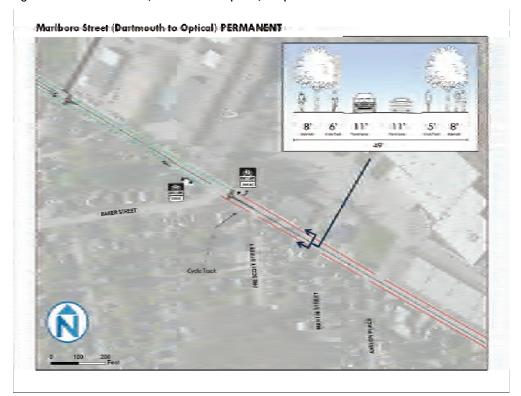


Figure 21 Marlboro Street (Dartmouth to Optical) Proposed Permanent

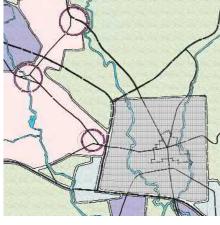
Street Type B – (Connecting Streets)

Streets categorized as Type B generally have higher traffic volumes compared to local streets within the district, helping to connect vehicles from local residential streets to Main Street and Marlboro Street. Streets such as Adams, Elliot, Grove, and Baker Street should be traffic-calmed connector streets with facilities that not only accommodate vehicular travel but safer pedestrian travel. These streets are two-way streets (with the exception of Elliot which remains one-way) that accommodate one or two sides of parking, functioning as slow community connectors or as "yield" streets when both sides have parking (yield streets are described further below in Type C streets). There is a lack of street curbing on a majority of these streets should be modified to have a formalized curb and sidewalk to help separate vehicle and pedestrian zones. Landscaped curbside islands should be added at staggered locations to buffer and protect on-street parking while improving the character of these community streets and allowing additional trees to be planted. Crosswalks and ADA compliant curb ramps should be provided at all intersections, and parking should be accommodated on at least one side of the roadway.









Keene Comprehensive Master Plan













SEPTEMBER 2010

Since the airport is located in the town of Swanzey, it is subject to Swanzey's zoning regulations. The airport is currently zoned business and its surrounding areas are zoned residential, business, industrial park, special lake protection and rural/agriculture. In order to ensure the airport's economic success into the future, coordination with Swanzey is imperative. Reviewing the existing zoning around the airport with the town of Swanzey to create a mix of nonresidential retail and aviation commercial uses may be beneficial to both municipalities.

The 2003 Airport Master Plan recommends several actions for the airport's future developments, many of which are complete, under way, or scheduled in the current Capital Improvement Program. The airport's role in economic development and in the overall transportation system should not be ignored. Rather, it should be enhanced through its development as a regional "Aviation Center of Excellence." There are several strategies in need of further exploration, including providing another access route to the airport, changing public perception of the airport's proximity to the community, pursuing an economic development strategy for sites surrounding the airport, and including it as part of a formal emergency management and preparedness plan.

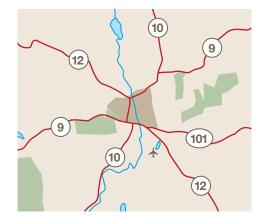
Downtown Corridors

Improving major corridors will improve traffic flow and visually enhance the approaches to various parts of the community. West Street in particular was discussed time and again during the planning process as a corridor in need of a "facelift," i.e., providing pedestrian and bicyclist infrastructure, access management, street trees and grassed medians, etc. All of these could change the way West Street looks and how Keene is perceived by visitors entering the community from that corridor. Other downtown corridors include Marlboro Street and Optical Avenue, Winchester Street, Court Street, Washington Street, and Roxbury Street. More information on downtown corridor development can be found in the land-use section of this plan.

Regional Gateways

As Keene and southwest New Hampshire grow, the need for convenient access to markets within and outside the region will grow as well. Currently, four primary regionwide transportation gateways connect Keene to the rest of the world:

- NH Route 9 from the west and east
- NH Route 101 from the east
- NH Route 10 from the north and south
- NH Route 12 from the north and south



These gateways, like many of the former railroads, all converge in Keene forming a bypass system around the central core. Traffic from Vermont, Massachusetts and other parts of New England must travel through Keene and southwest New Hampshire along these highways to access other areas and communities. Keeping the rural character of these gateways is important to the community; they provide the first experience visitors have with the community, and



Open Spaces & Greenway Connections

A community's green and open spaces consist not only of farmlands, forests, fields, playgrounds, golf courses, baseball fields, pathways and trails, but also of school fields, front and backyards, downtown pocket parks and street trees, cemeteries, and streetscapes. Greenways connect open spaces together by creating corridors of natural habitat areas, combined with trails for active and passive recreational use. Greenways also serve as corridors for the movement of wildlife between habitat areas.

Keene is fortunate to have an extensive network of parks and open spaces for both active and passive activities and uses. Parks have played an integral role in Keene's development. From Central Square to Ashuelot River Park to the historic Dinsmoor Woods and Ladies' Wildwood Park, these areas help create a sense of identity and add to Keene's quality of life, attracting businesses, visitors and residents.

With the proper design, open spaces and the greenway connections between them can provide an important opportunity for environmental stewardship and education. Parks and other green spaces are important to Keene's sustainability and climate change efforts since they reduce the heat retained by buildings and pavement – the "urban heat island effect." The vegetation in green spaces filters air, improving air quality, and provides crucial habitat for wildlife. Green spaces cleanse and infiltrate stormwater runoff; when integrated into the built environment, natural stormwater treatment systems are cost-effective solutions that assist in flood mitigation.

Throughout the planning process, discussions clearly articulated the community's broad desire to increase physical connections to and among existing open spaces, neighborhoods, and the downtown core.

▶ Open Space & Greenway Connections Strategies

Trails and Bicycle Pathways

Trails provide the opportunity for passive and active recreation while also providing alternatives to driving by connecting neighborhoods to parks, open spaces and Keene's downtown. Keene has worked hard to create the excellent trail system it has today. To continue to expand the network and fill in gaps, the following recommendations from the City's Bicycle/Pedestrian Path Advisory Committee should be implemented:

New Bicycle Paths

- Roundhouse T connector from School Street to Island Street
- Route 12 North Connector
- Cheshire Rail Trail North (Whitcomb Mill Road to Stone Wall Farm)
- Cheshire Rail Trail South (Eastern Avenue out toward Route 101)

New or Expanded Bicycle Lanes

- Washington Street (Central Square to Route 9)
- Marlboro Street Optical Avenue Route 101
- Wheelock Park Road (Park Avenue to Appel Way Trail)
- Summit Road (Maple Avenue to New YMCA)
- Upper Court Street (Hospital Roundabout to Hastings Avenue)
- Upper Washington Street (end of '09 improvements to Old Concord Rd.)
- Base Hill Road (State Route 9 West to Swanzey Town Line)
- State Route 10 South (Winchester Street Roundabout to Swanzey)
- State Route 12 South aka. Lower Main Street (101 Bypass to Swanzey)

Highway Improvements/Share the Road

- Arch Street (Park Avenue to Old Chesterfield Road)
- Base Hill Road
- Bradford Road
- Court Street (Central Square to Roundabout)
- Chapman Road
- Concord Road (to Jordan Road)
- Eastern Avenue
- Felt Road
- Hastings Avenue
- Hurricane Road
- Island Street
- Jordan Road
- Key Road
- (North and South) Lincoln Street
- Main Street (Central Square to 101 Bypass)
- Meadow Road
- Old Walpole Road
- Park Avenue
- Roxbury Road (Jordan Road to Chapman Road)
- Roxbury Street (Central Square to North/South Lincoln Street)
- Rule Street
- Whitcomb Mill Road
- West Street (bike path outlet to West Hill Road)
- Winchester Street (Main Street Roundabout to 101 Bypass Roundabout



Strategic Planning Areas

Though a small New England community, Keene has various components that, when growth and change occur, should have different foci than other areas. The characteristics of these areas and community amenities are described below. It is recommended that as the community moves forward, specific strategic area plans be developed for each.

West Keene Strategic Planning Area

Characterized by a mix of older, suburban neighborhoods that transition to Keene's traditional agricultural and forested hillside areas. Focus should be on maintaining these neighborhoods, creating the ability for trail/pathway connections, and bolstering neighborhood/village activity centers that provide small-scale neighborhood goods and services to this area (e.g. hardware stores, veterinary offices, laundromats, small markets, etc.). As West Keene transitions eastward, densities should increase, which is consistent with the pattern established today, and the scale of streets and blocks should reflect a highly walkable community that blends seamlessly and transitions into the urban core commercial and neighborhood areas. In particular, sections of the 2002 Transportation Plan that reference Park Avenue and Maple Avenue should be referenced and implemented (pages 56 – 58).

Winchester/Marlboro Street Strategic Planning Area

This planning area and transportation corridor should be studied for its entire length within the urbanized core. There are opportunities for a mix of higher density housing and provision of retail and community services that transition to the Key Road commercial area along Winchester Street towards Keene State College and the Blake Street Neighborhood in the direction of Main Street. To the east side of Main Street, along Marlboro Street, there are similar opportunities to balance higher density housing with the existing single- and two-family residential neighborhoods. There is also the opportunity to extend light commercial uses from the Main Street roundabout to the Public Works Facility just before Optical Avenue. As this area transitions towards the Optical Avenue gateway into the community from Route 101, the inclusion of a higher density of industrial/manufactur-ing/business/office uses should be pursued with the provision of connections to adjacent neighborhoods, creating a walkable area. Pages 39-47 of the 2002 Transportation Plan should be referred to for this area as well.

City of Keene Transportation Master Plan

2002



Keene Planning Board City of Keene, NH

Date of Public Hearing: September 23, 2002 Approval by City Council: November 21, 2002 Formal Adoption by Planning Board: November 25, 2002

The Gateway Corridors

As part of this Transportation Master Plan, the following gateway corridors are addressed and summarized: Marlboro Street, Winchester Street including Lower Winchester Street and Upper Winchester Street, West Street, Court Street, the Park Avenue and Maple Avenue corridors, and Washington Street.

MARLBORO STREET

Marlboro Street is classified as a "Major Street" in this Transportation Master Plan. It is approximately 1 mile long and extends from Main Street to NH Route 101 via Optical Avenue.

Marlboro Street was laid out in 1740 with sections added throughout the 1800's. A portion of Marlboro Street today uses the right-of-way of the Third NH Turnpike Road. In the past, Marlboro Street served as a main route to communities east of Keene until the NH Route 101 Bypass was constructed in 1958. The intersection of Main Street with Marlboro Street was relocated in 1968 to facilitate the construction of the Federal Post Office.

For three-quarters of the length of the street, the right-of-way is approximately 66 feet wide and includes two 12-foot wide travel lanes and 6-foot wide shoulders. There are 5-foot wide sidewalks located on both sides of the street as far as Martin Street, where that sidewalk ends.

Marlboro Street is expected to see increased use with the construction of the Keene-Swanzey Bypass project. A new connector road from NH Rt. 12 will be built to bring northbound traffic to a reconstructed four-way intersection at NH Rt. 101 and Optical Avenue. This new connector road will place increased pressure on the Main Street and Marlboro Street intersection and on properties that abut Marlboro Street.

Between 1993 and 1998, NH DOT counts show that average daily traffic volumes have decreased slightly along Marlboro Street (see table below).

Table 10: Average Daily Traffic Volumes on Marlboro Street							
Location	1993	1995	1998				
East of Main St.	9,800	8,700	8,600				
West of Optical Ave.		6,400	5,200				
South of Kelleher	6,300						
Street							

In the 2000 LBG intersection report, average annual daily traffic volumes were estimated for 1999 and 2015 (see table below). The 2015 year traffic anticipates increased traffic volumes on Marlboro Street due to the proposed extension of Optical Avenue.

Table 11: Average Annual Daily Traffic Volumes on Marlboro Street					
Location	1999	2015			
East of Main St.	8,960	12,902			
West of Optical Ave.	5,165	7,024			

For a discussion of the Marlboro/Main and Winchester Street intersection, refer to page 33 of this Transportation Master Plan. The Marlboro Street and Optical Avenue intersection is presently laid out at an angle with a stop sign on Optical Avenue. While the intersection was operating satisfactorily in 1999, the 2000 LBG study anticipates that it will degrade to a LOS of C by the year 2015. If this forecast is found to be accurate, Keene should engage an engineering study to redesign and reconstruct the intersection.

Land Use

The Marlboro Street corridor supports a mix of residential, commercial and industrial land use. The street provides access to large residential areas. Wheelock Elementary School is also located at the intersection of Marlboro and Adams Street. There is a concern that commercial uses and activities could encroach upon established residential areas located on the south side of the street. These neighborhoods should be protected. There has been ongoing redevelopment of property and reuse of the existing buildings along the street. The City of Keene is redeveloping a large former warehouse into a new municipal facility at 350 Marlboro Street. Refer to map on page 43.

Pedestrian Access

The sidewalk on the north side of Marlboro Street connects to the sidewalk located on the west side of Eastern Avenue. This enables pedestrian access to the Keene Industrial Heritage Bicycle/Pedestrian Trail, but additional points of access are needed along Marlboro Street. One such point of access could occur at Keene's new police, fire and public works facility located at 350 Marlboro Street. This location could be a park and walk site.

There is also a concern for safe pedestrian crossings at the Grove and Adams Street intersections due to Wheelock Elementary School. It is recommended that signage and/or devices such as a "wink-o-matic" be installed at these intersections to alert motorists. As Keene performs future road overlay projects on Marlboro Street, a safe riding surface should be provided and bicycle-friendly storm drainage grates installed.

Recommendations

- 1. There should be a safe pedestrian crossing provided at Grove and Adams Street.
- **2.** A "wink-o-matic" or other similar blinking warning device should be considered at this intersection to alert motorists to pedestrian crossings.
- 3. Install a point of access for pedestrians from the new municipal facility on Marlboro Street to the Keene Industrial Heritage Trail.
- **4.** Consider the development of a park and walk site at 350 Marlboro Street.
- 5. Bicycle friendly storm drainage grates should be installed when a road overlay project on Marlboro Street is performed.

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- 5. Bicycle friendly storm drainage grates should be installed when a road overlay project on Marlboro Street is performed.

BPPAC ID	Project	(X)Organizational Support	(Y) Importance Level			
BE16	South Bridge/Ashuelot RT Gap	HIGH	HIGH			
	Drainage, Grading and improved surfacing of a segment of the Ashuelot Rail Trail between south bridge and the existing extent of paved surface near Keene State College and Walmart Plaza.					
BE17	Ashuelot Green Space Trailhead	MEDIUM	MEDIUM			
Ashuelot Green Space is a proposed Residential/Open space development off Ashuelot Street abutta Ashuelot River Park. Establishment of a trail head with facilities at that location has been a priority BPPAC and City since the project was initially proposed.						

COMPLETE STREETS

BE 18	MAIN STREET	HIGH	HIGH		
	Create and implement a plan for making Main Street and Downtown Bicycle and Pedestrian Friendly and a Complete Street.				
BE19	Emerald Street Bike Route/In Street	MEDIUM	HIGH		
	Bike Route Signage and In Street facilities for bicyclists down Emerald Street towards the Roundhouse T projects would facilitate Bicycle and Pedestrian traffic towards existing infrastructure from Main Street and create a transition zone from the "slow street" to separate grade and integrated facilities that exist at the westerly end of Emerald Street.				
BE20	Complete Streets Implementation	HIGH	HIGH		
	Conduct current condition assessments as follows and establish baseline data per the street designations as outlined in the Complete Streets Design Guidelines to measure progress by.				
BE21	Sidewalk connectivity/access	HIGH	HIGH		
	Current condition assessment and inventory to help assess connectivity and access points to the larger Bicycle/Pedestrian System and ensure multi-use access to downtown is occurring and improved.				
BE22	MARLBORO STREET / REZONING PROJECT	MEDIUM	HIGH		
Overall plan for making Marlboro Street and it's corridor Bicycle and Pedestrian Friendly, be a Complete Street.			, better connected and		

X - Organizational Support = Budget+ Policy (CIP/Operations Budget + Master Plans, City Code/State Law + Program Opportunities)

Y - Importance Level = Community Objectives (Safety + Sustainability + Accessibility + Availability + Connectivity)

WHEELOCK ELEMENTARY SCHOOL SAFE ROUTES TO SCHOOL ACTION PLAN





September 2015 • Keene, NH

STUDY AREA

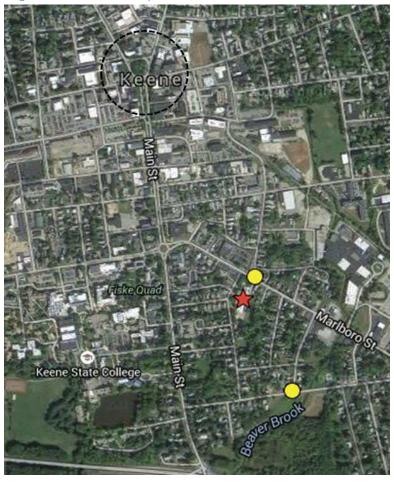
Wheelock Elementary School (WES) is located in a residential neighborhood on Adams Street, approximately 0.5 miles from Central Square in Keene, NH and approximately 0.25 miles from Keene State College. Figure 2 shows an aerial view of the school in relation to the crossing guard locations and downtown Keene. The school includes grades Kindergarten through fifth and enrolled 238 students in the 2014-2015 academic school year. Approximately 58% of the student population, or 138 students, lived within a one-mile radius of the school in 2014. Map 1 on the next page displays the extent of the WES study area and the relationship of the school with the surrounding neighborhoods, college, and downtown area.

Primary access to Wheelock Elementary School is from the intersection of Marlboro Street and Adams Street, however the school can also be accessed at the other end of Adams Street from Baker Street. There are two crossing guards; one is located at the intersection of Marlboro St. and Grove St., and one is located at the intersection of Baker St. and Kelleher St.

Figure 3. A close-up aerial view of Wheelock Elementary School.



Figure 2. Aerial images of the school in relation to the surrounding neighborhoods and Central Square in Keene.





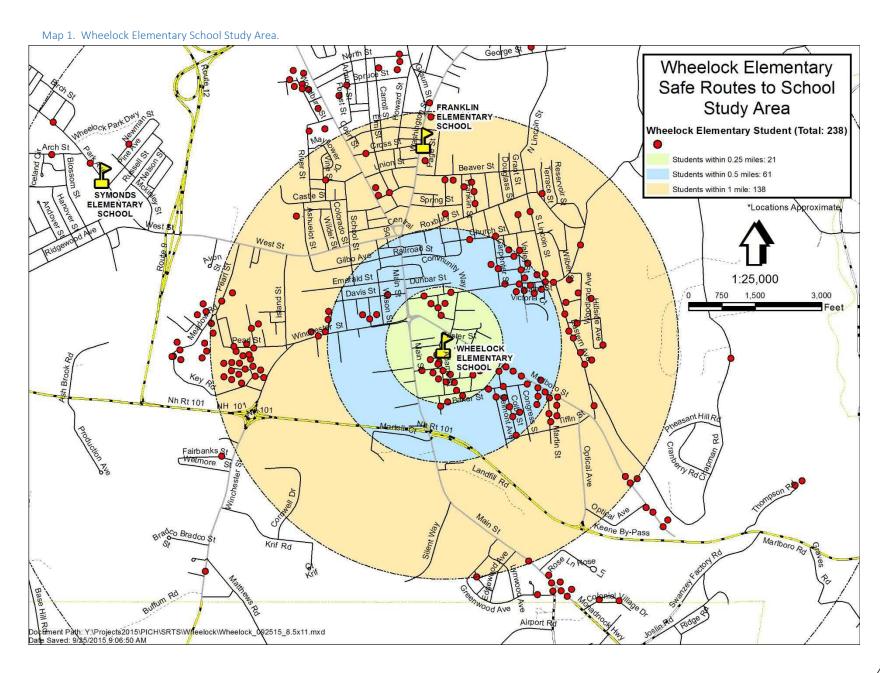
= Location of Wheelock Elementary School



= Crossing guard locations on Marlboro St. and Baker St.



= Location of Central Square in Keene, NH



EVALUATION OF EXISTING TRAVEL CONDITIONS

To better understand existing travel conditions within the study area (see Map 1), SWRPC staff conducted morning and afternoon field studies to review the behaviors and travel patterns of students, buses, and motorists at WES during drop-off and pick-up hours, collected and analyzed traffic speed and volume data, and distributed and analyzed data from a take-home parent survey and an in-class student tally related to student travel modes. A review of these observations and analysis is included in the sections below.

School Arrivals and Departures

School begins at 8:20 am and lets out at 3:00 pm (2:55 pm for Kindergarten). The bus loading and unloading zone is located directly in front of the school on Adam's Street, and bus arrivals are staggered between 8:00 and 8:20 am. As children exit the school bus, they are greeted by a student safety patrol. Students in grades K-2 line up and walk together to the school playground on the corner of Adams St. and Marlboro St., and students in grades 3 – 5 go to the playground behind the school. A few parents were observed using the bus loading and unloading zone to drop off children, despite signs that prohibit use of the bus loading zone for this purpose.

There are several parking spaces on Adam's Street in front of the school for parents to use during drop-off and pick-up, however there are not enough spaces to accommodate more than 4-5 cars at a time. As a result, many parents park along Adam's Street or in the Savings Bank of Walpole parking lot and then walk their kids to school the rest of the way. Traffic flow on Adam's Street was congested in both the morning and afternoon, partly due to cars parked along both sides of the roadway which constricted two-way traffic. A few cars were observed speeding in the school zone on Adam's Street.

Adult crossing guards were present at the crossing on Marlboro Street and on Baker Street in both the morning and afternoon. In general, motorists on Marlboro Street did not stop for pedestrians waiting to cross the street unless the crossing guard was present, and several drivers were observed speeding. No pedestrians were observed on Baker Street during the observation period. Cars turning from Grove Street onto Marlboro Street usually pulled up too far before stopping, and as a consequence blocked the crosswalk for pedestrians.



The crossing guard stops traffic on Grove Street to allow a father and his child to cross the street. Cars often blocked this crosswalk by pulling up too far before stopping.

Parent and In-Classroom Surveys

Wheelock Elementary School (WES) and SWRPC staff worked with WES faculty and administration to conduct the National SRTS Parent and In-Classroom Surveys during the second half of the 2014-2015 school year. These surveys helped generate an understanding of the number of students currently biking and walking to school and identified some of the barriers that prevent parents from allowing their children to walk or bike to school.

Parent Survey

A total of 44 households representing 70 students completed the Parent Survey. Of this sample, over half (54%) of parents indicated they are not comfortable with their child walking or biking to school at any age. The remaining parents surveyed were comfortable with their child walking at various different ages ranging from third grade to seventh grade, as shown in Figure 4.

Parents cited numerous factors that influence their decision to either allow or not allow their child to walk/bike to and from school. The two predominant factors influencing parents are the speed of traffic along the route to school and the amount of traffic along the route to school, which were noted by 36% of survey respondents. Other significant factors indicated on the survey included the safety of intersections and crossings, weather or climate, and distance. Table 1 displays the full range of parent responses to this survey question.

Among the parents surveyed, 43% live a mile or less from school. Thirty four percent live between 1 and 2 miles away, 18% live greater than 2 miles away, and 5% of parents were unsure of their distance from school.

A few of the general comments shared by parents on this survey are included on the next page. Many of these parent comments emphasize that parents do not feel comfortable letting a child walk or bike to school alone for various reasons, including distance, weather conditions, safety of intersections, and dangerous people along the route.

Figure 4. Grade at which parents are comfortable allowing their child to walk or bike to/from school.

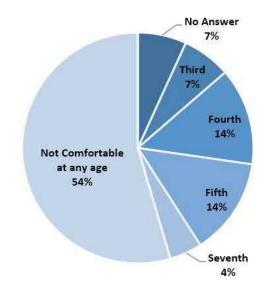


Table 1. Factors influencing decision to allow child to walk/bike to school.

Influencing Factor	% Respondents
Speed of traffic along route	36%
Amount of traffic along route	36%
Safety of intersections and crossings	34%
Weather or climate	34%
Distance	32%
Time	27%
Violence or crime	23%
Adults to walk or bike with	20%
Sidewalks or pathways	20%
Crossing guards	14%
Convenience of driving	11%
Before or after school activities	7%

Walking/Biking Alone

"Would be ok with him walking with a friend, but not alone. Has a younger brother so right now if we walk I am with them. Also street crossing marks are misplaced at Water and Grove. They don't line up with the sidewalk on the other side of the street - confusing."

"Would love to see more children walking and biking to school! If our son had a travel buddy, we (parents) would let him go with friend rather than one of us."

"Having a buddy to bike with would encourage him. Also I have a younger daughter who cannot ride on her own but would like to ride with her brother. Not comfortable making him responsible

Safety Concerns

"Even at an older age it is too dangerous for my child to walk or bike to school... There are hypodermic needles on sidewalks on any given day. And most importantly, cars drive way too fast and drivers do not stop for walkers nor do they ever yield/stop for children, Even when I walk them to school we were almost run over at least 4 times."

"I feel that Water Street is not a safe area for my child to walk or bike alone. I feel that the intersection of Water and Grove is very unsafe. I also don't approve of the bar near the school."

"Our only concern is with him crossing Baker Street. Traffic tends to speed over hill and crosswalk is located at bottom of hill (this includes police cruisers) and this particular crosswalk does not have a crossing quard."

Other Comments & Concerns

"I wish children in younger grades were allowed to bike to school with a responsible adult who would lock the bike at school."

"My children and I often walk to school when it is warmer (hard to do in the winter). As they grow, I am sure they would enjoy biking too, but aftercare doesn't allow for that."

"Adams St. near school is congested. I wish they would use grass area between curb and sidewalk to widen the street. You need the parking on the east side of street, but currently with parked cars, traffic cannot go both ways."

"I think the City and schools did a great job trying to keep up with the weather. I feel it is the college people that cause bottlenecks around the school zone. They don't follow directions.

Figure 5. Locations of traffic counters (yellow) and turning movement counts (blue).

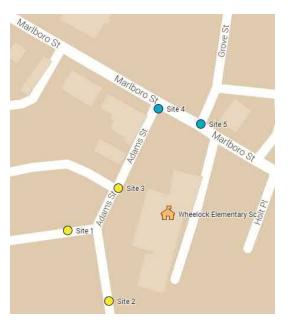


Table 4. Number of bicyclists observed during peak morning and afternoon hours.

# Bicyclists Observed	Marlboro St. & Grove St.	Marlboro St. & Adams St.
Morning (7 – 9 AM)	18	6
Afternoon (2 – 4 PM)	7	6

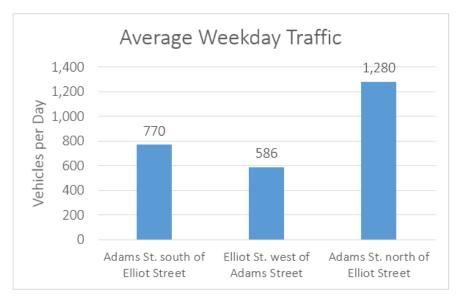


Figure 6. Average weekday traffic at three SWRPC traffic counting sites, in vehicles per day.

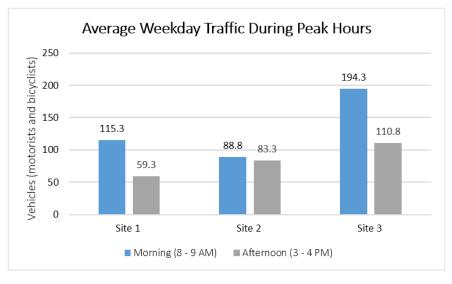


Figure 7. Average weekday traffic volumes during peak morning and afternoon hours at the three traffic counter sites, in vehicles per hour.

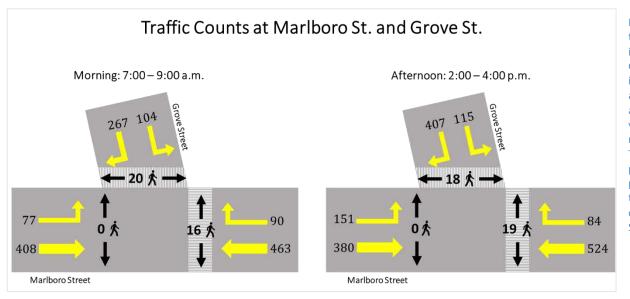


Figure 8. Morning and afternoon turning movement counts at the intersection of Marlboro St. and Grove St. The yellow arrows indicate the direction of vehicles, and the numbers next to the arrows indicate the number of vehicles counted (including motorized vehicles and bicyclists). The number next to the figure of a person indicates the number of pedestrians observed crossing at that location. Counts were conducted on June 3, 2015 by SWRPC staff.

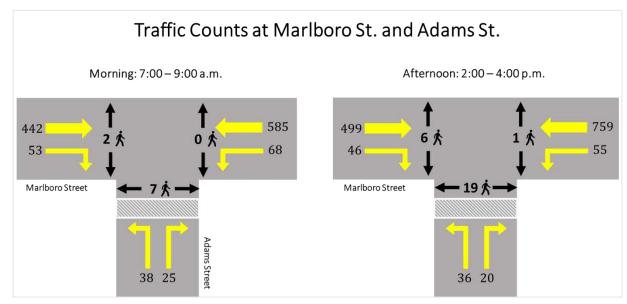


Figure 9. Morning and afternoon turning movement counts at the intersection of Marlboro Street and Adams Street. The yellow arrows indicate the direction of vehicles, and the numbers next to the arrows indicate the number of vehicles counted (including motorized vehicles and bicyclists). The numbers next to the figure of a person indicate the number of pedestrians observed crossing at that location. Counts were conducted on June 3, 2015 by SWRPC staff.

Accident/Crash Data

Between 2004 and 2013, there were 1,299 accidents reported within a 1-mile radius of Wheelock Elementary School (see Map 1 on page 4). During this timeframe, there were a total of 62 pedestrian crashes, most of which occurred on Main Street, West Street and Winchester Street. Twelve pedestrian crashes were reported within a ¼ mile of Wheelock Elementary School. There were a total of 24 accidents reported between 8:00 am – 8:30 am on weekdays, and a total of 63 accidents were reported between 3:00 pm – 3:30 pm on weekdays. Table 5 displays the number of crashes that were reported within a 1-mile radius of Wheelock School by year, Table 6 displays the number of crashes that were reported within a 1-mile radius of WES by day of the week, and Table 7 shows the number of crashes that were reported on selected roads near the school.

Table 5. Number of reported accidents by year in the study area.

Year	# of Crashes
2004	132
2005	104
2006	98
2007	97
2008	99
2009	188
2010	167
2011	98
2012	192
2013	124

Day	# of Reported Crashes
Monday	182
Tuesday	198
Wednesday	182
Thursday	211
Friday	245
Saturday	164
Sunday	116

Table 6. Number of reported accidents by day of the week within the study area.

Table 7. Number of reported accidents for selected streets within the study area.

# Crashes	Marlboro St.	Adams St.	Baker St.	Lower Main St.
Total	41	11	6	68
Bicyclist	0	0	0	1
Pedestrian	0	1	0	3

- Create a School-wide "mileage club" or run a school-wide "mileage contest." Children can track their trips individually, or classes can track their miles as a class and compete against other classes. Students or classes are rewarded with recognition, awards, and/or trophies. Tips for organizing a mileage club/contest include:
 - ➤ Bring in a local expert, such as Beth Corwin from Symond's Elementary School, to share lessons learned from developing a successful "Walk, Roll, & Ride" program.
 - ldentify a program coordinator, such as a PE teacher or another staff member that is enthusiastic about the program.
 - ➤ Decide where children can accrue mileage (on the way to school, at home, on the school campus).
 - > Create system for logging and tracking mileage or number of times walked / bicycled.
 - > Decide on incentives (recognition at school assembly, trophy or other type of award).
 - > Seek funding to support the program—materials, awards, prizes, etc.
 - Recognize and reward participation.
 - > Track participation.
 - ➤ Make changes as needed—the program will change over time to fit the unique needs of your school community.
- Utilize the National Safe Routes to School website (<u>www.saferoutesinfo.org</u>) and the NH DOT SRTS
 program (<u>www.nh.gov/dot/org/projectdevelopment/planning/srts</u>) as resources to identify ideas
 and opportunities for additional encouragement activities.



Symonds Elementary School students get their cards punched for the Symonds "Walk, Roll, and Ride" program.

Enforcement Recommendations

The goal of enforcement is to deter unsafe driver behavior as well as unsafe pedestrian and bicyclist behavior. Enforcement strategies encourage all users of the roadway to obey traffic laws and share the road. Enforcement strategies should be implemented in combination with education, encouragement, and engineering strategies to have a maximum impact. Used on its own, enforcement does not usually result in long-term, lasting changes in driver behavior. Recommended enforcement strategies are listed below.

• Work with local law enforcement to address speeding on Marlboro Street. The school should set up a meeting with the Keene Police Department to discuss options for traffic calming on Marlboro Street during peak morning and afternoon hours. Potential options may

include increasing patrols during peak morning and afternoon hours when the school speed zone is in effect and/or posting portable speed trailers or active speed monitors that show motorists' speeds as they approach the school crossing.

- Work with local law enforcement to address dangerous driver behavior on Adams Street. During field observations, SWRPC staff observed several motorists who sped down the street during peak morning drop-off hours. Also, according to comments from crossing guards and school staff, some drivers will pass busses when they are stopped to drop off or pick up children. The school should consider meeting with the Keene Police Department to discuss options for additional patrols or other measures that could help deter this type of behavior.
- Work with the City to ensure the continued presence of crossing guards at key intersections. Adult crossing guards remind drivers that pedestrians are present and help children develop the skills needed to safely cross the street at all times. The school should continue to advocate for crossing guards at the Marlboro Street crossing and, if needed, at the Baker Street crossing.
- Strictly enforce proper drop-off and pick-up process. The school should inform and remind parents of the proper drop-off and pick-up process on a regular basis. In addition, the school may want to consider having a staff person direct parents to stay clear of the bus loading and unloading zone during drop-off and pick-up times.

Engineering Recommendations

Engineering is a broad concept used to describe the design, implementation, operation and maintenance of traffic control devices or physical measures, including low-cost as well as high-cost capital measures. Infrastructure such as sidewalks, visible crosswalks, trails/paths, and connectivity between sidewalks and trails/paths creates conditions that improve safety for walking and bicycling in the area surrounding the school. Recommended engineering strategies for Wheelock Elementary School are listed below.

- Work with the City of Keene to address speeding on Marlboro Street. In addition to the enforcement recommendations above, the school may want to meet with the City to explore options for traffic calming on Marlboro Street. Potential traffic calming measures could include narrowing traffic lanes, adding curb extensions or a pedestrian refuge island at the school crossing on Marlboro Street, and/or adding in bike lanes (which will narrow travel lanes and create wider turning radii at intersections).
- Work with the City of Keene to address traffic congestion on Adams Street. The school may want to meet with the City of Keene to address traffic flow problems on Adams Street, especially during peak morning and afternoon hours. The school should try to include residents in the surrounding neighborhoods in these discussions, as any decisions made will have an impact on residents of Adams Street and smaller neighborhood roads connected to Adams Street.

APPENDICES

Appendix A: Wheelock Field Review Summary

Appendix B: National Safe Routes to Schools Parent Survey

Appendix C: National Safe Routes to Schools In-Classroom Student Tally

Appendix D: Wheelock Elementary School Traffic Study

Appendix E: National Safe Routes to Schools Walkability Checklist

Field Review

On April 30, 2015, SWRPC staff visited Wheelock Elementary School during the morning arrival and afternoon departure periods to observe travel patterns of students, vehicles, and buses as well as site characteristics and conditions. The key observations and findings from this field visit are documented below.

PARENT DROP OFF / PICK UP OF CHILDREN

- Parent drop-off for K-5 occurs between 8:00 a.m. and 8:20 a.m.
- Parents entering from Marlboro or Baker and then exiting on Elliot Street seemed to be the predominant drop-off route.
- Parents entering from Baker Street can get stuck behind the school buses.
- There are three parking spots in front of the school on Adams Street where
 parents can drop off their kids; parents often use "fake" parking spot at end of
 line as a fourth parking spot (see top picture on right).
- Parents also park on the opposite side of Adams St. and on Elliot St. to drop off their children. Parents who do this walk their children to the school.
- Cars parked along the southern end of Adams Street do not leave enough room for two-way traffic.
- Some parents park in the Savings Bank of Walpole parking lot to drop off their kids and then walk with their kids to the school.
- Adams Street becomes congested during pick up and drop off times.
- Parent drop-off for preschool occurs later and takes place in the bus zone.
 Preschoolers are handed off by their parents to a staff person who then walks the child to the front door.

BUSES

• The bus zone is directly in front of the main entrance to the school; signs prohibit parking in the bus zone.



The parent drop-off and pick-up location in front of the school has 3 parking spots and one handicapped spot. The car at the end of the line (on the left) is using a "fake" parking space.



Children dropped off by the school bus are greeted by a student safety patrol and escorted to the playground.

- Bus arrivals are staggered between 8:00 and 8:20 a.m.; there are three buses for K-5 in the morning and one bus for preschool. The preschool bus will be gone next year.
- Four student safety patrols were present to walk children in grades K- 2 to the playground on the corner of Adams St. and Marlboro St.
- Children in grades 3-5 exit the bus and go to the larger playground on the south side of the school.
- Parents were observed dropping off their children in the bus zone when buses were not using the space.

SPEED

- Speed limits in the school zone are posted at 20 mph; during non-school hours speeds are 30 mph.
- Speeding was observed on Adams Street, Marlboro Street, and on Baker Street during school drop-off and pick-up hours.
- Speed bumps or other traffic calming devices could be useful for slowing down traffic on Adams Street in the school zone.
- Traffic calming devices such as a speed bump or a sign that shows your speed could be helpful on Baker Street at the bottom of the hill near the bridge over Beaver Brook.

WAYFARING

- There are signs to indicate the bus zone and the parent drop-off and pickup zone.
- "Yield to pedestrian" markings on the street indicate pedestrian crossings to motorists.
- Yellow pedestrian crossing signs at crosswalks mark pedestrian crossing locations along with white ladder marks in crosswalk.



Children line up behind the student safety patrol to walk to the playground.



Speed limits in the school zone are posted at 20 miles per hour.

• There were no wayfaring signs for bicyclists; it is assumed children biking on busier roads such as Marlboro Street would use the sidewalk.

LIGHTING

- There are two pedestrian-scale lights in the front of the school, one by the main entrance and one by the playground for the younger children. Each of these has four light bulbs as pictured to the right.
- There is some lighting along pedestrian routes leading into the school on Marlboro Street and Adams Street.
- According to school staff, lighting is not an issue.

BIKE USE / FACILITIES

- There are two bike racks by the larger playground at Fuller that can accommodate approximately 45 bicycles in their current configuration.
- No bicycles were observed on the bike racks on the day the site was observed.
 According to school staff, usually there are 3-4 bicycles on the bike racks.
- There are no bike lanes on Marlboro Street, however there are "Sharrows" that indicate
 motorists should share the road with bicyclists. It is assumed children would ride their
 bikes on the sidewalk on Marlboro St. due to the high volume of traffic.
- There are no "sharrows" or signs on Adams Street to indicate that motorists should share the road; no shoulders and sidewalks are narrow and bumpy in some locations.

SIDEWALKS

- There are sidewalks on all routes leading into the school (along Adams Street, Baker Street, Marlboro Street, other neighborhoods streets, etc.).
- All sidewalks observed were in good or fair condition. Some sidewalks in the neighborhood streets were bumpy due to roots pushing up, potholes, and wearing away at the edges.



Above: One of two light posts is located in front of the school.

Below: Two large bike racks are located near the playground for older children. No bicycles were observed on the bike racks.



- Sidewalks on Marlboro Street and along the far side of Adams Street near Penuche's bar are concrete. Most other sidewalks are asphalt.
- One sidewalk on Baker Street ends abruptly just past the bridge over Beaver Brook.

CROSSINGS

CROSSING GUARDS

- There are two crossing guards, one at the intersection of Marlboro Street and Grove Street and one at the intersection of Baker Street and Kelleher Street.
- Each crossing guard has a yellow safety vest and a hand-held stop sign for stopping traffic.
- The crossing guards are on duty from 8:00 to 8:20 a.m. in the morning and 3:00 to 3:20 p.m. in the afternoon.

MARLBORO ST. CROSSING

- There are two crosswalks at this intersection, one that crosses Grove Street and one that crosses Marlboro Street.
- In general, motorists on Marlboro Street did not stop for pedestrians waiting to cross the street unless the crossing guard was present.
- Drivers were observed speeding and acting impatient on Marlboro Street.
- Cars turning from Grove Street onto Marlboro Street often pulled up too far and would block the Grove Street crosswalk for pedestrians (see picture on right).







Right: This picture shows the sidewalk on the eastern side of Adams Street. **Left (top & bottom):** These pictures show the sidewalk directly in front of the school.



The crossing guard stops traffic on Grove Street to allow a father and his child to cross from the Savings Bank of Walpole parking lot over to the school. Cars often blocked this crosswalk by pulling up too far before stopping.

- Some parents who parked in the bank parking lot crossed diagonally from the corner of the parking lot over to the school instead of using the marked crosswalks.
- The crossing guard stopped traffic to allow buses to turn from Grove Street onto Marlboro Street.

BAKER STREET CROSSING

- The crossing on Baker Street is located at the intersection of Baker St. and Kelleher St.
- Cars coming down Baker Street tend to speed, especially if they are coming down the hill.
- Several motorists were observed talking on their cell phones while driving.
- According to the crossing guard, there used to be a sign that displayed motorists' speeds as they came over the hill. This was helpful for slowing down traffic, but it has since been removed.
- No pedestrians were observed crossing the crosswalk.

ST IP





Top Left: The crossing guard at Baker Street leaves her post at 3:20 p.m.

Bottom Left: A parent crosses Grove Street with his children.

Right: Two children wait for traffic to stop before crossing Marlboro Street.

DRIVER BEHAVIOR

- Drivers were observed speeding on Adams Street in the school zone in both the morning and the afternoon.
- Parents often used illegal parking spots due to the lack of available on-street parking near the school (see picture on right)
- Some parents were observed in the bus zone during pick-up and drop-off times.
- Several parents attempted to avoid Adams Street altogether by parking on Elliot Street, Marlboro Street, or in the Savings Bank of Walpole parking lot.
- According to school staff, some motorists will illegally pass school buses when their lights are flashing. This behavior was not directly observed.



This picture shows a car parked in a "No Parking" zone. During pick up and drop off times, almost all of the onstreet parking was in use.











Saturday, September 19, 2015 Keene, New Hampshire

Rethink Marlboro Street Volunteers

The following individuals helped with set-up and break-down of the event, and also helped with planning, outreach, and event logistics.

Michael Acerno Rebecca Baldwin Johnny Bolster Georgia Cassimatis Michele Chalice Matt Collins Dave Curran Chris Cusack Beverly Doolan Anne Francisco Yves Gakunde Samantha Gaudette Tara Germond Susan Hansmeier Peter Hartz Kate Hickey Chris Jackson Chris Kessler

Dawn Kopczynski Darryl Masterson Nevada Millen Megan Pietrowski Kelsey Plifka **Greg Pregent** Jen Risley Rowland Russell Jenna Schiffelbein Ben Schiffelbein Will Schoefmann Susy Thielen **Bruce Thielen** Todd Touslev Matt Waitkins Erik Willis Kat Wood Tim Zinn

Rethink Marlboro Street Sponsors

The following organizations helped with event planning, outreach, logistics, donated or lent materials, donated space, or provided funding for Rethink Marlboro Street.

City of Keene

Healthy Monadnock 2020

Centers for Disease Control and Prevention

Hannah Grimes Center

310 Marlboro/Brehm Realty, LLC Granite State Landscape Architects

Home Healthcare Hospice and Community

Services (HCS) Kat Wood Yoga

Keene Friends of Public Art (Keene FPA) Keene State College Geography Club Keene State College Green Bikes

Make it So: The Monadnock Makerspace Monadnock Alliance for Sustainable

Transportation

Monadnock Buy Local Monadnock Cycling Club Monadnock Food Co-op Monadnock Healthy Eating Active Living

(MHEAL)
Pedals4People
Pellettieri Associates
Penuche's Ale House
Savings Bank of Walpole

Southeast Keene Neighborhood Group

The Peak Radio 101.9/100.7

WKBK Radio 107.5 3M Manufacturing Achille Agway

Amicci's Italian Style Pizza

Brewbakers Cafe Landscape Forms Maple Hill Nursery

Pexco

Ramunto's Brick Oven Pizza

Tuckahoe Turf

Introduction

Rethink Marlboro Street was a live, on-street demonstration of what Marlboro Street in Keene could look like as a "Complete Street." It took place in Keene, NH on Saturday, September 19, 2015. The goal of this event was to give the Keene community a chance to experience first-hand how space within the public rightof-way could be reallocated to promote safety and enhance sense of place. Volunteers installed pop-up crosswalks, pop-up protected bike lanes, temporary curb extensions, a pedestrian island, a "parklet" (i.e. a pop-up) mini park in an on-street parking space), and more to help spark conversations (and imaginations!) around how we can build better streets that will contribute to a vibrant community. In addition to streetscape improvements, there were several activities and food trucks to help draw people in and create an enjoyable experience for everyone.



The demonstration project was located on Marlboro Street in Keene, stretching from the corner of Grove Street to the end of the Savings Bank of Walpole property, or approximately one block.

Complete Streets – Designed with Everyone in Mind

Complete Streets are streets that are designed and built for all users, not just motorists. For many years, traffic engineers focused primarily on moving as many cars as possible, as quickly as possible. This approach to road design resulted in roads that move cars fairly well but often are not safe for seniors, youth, people with disabilities, and others walking, biking, or taking transit. Because many people don't feel safe, they drive to their destinations rather than use other options, which increases the amount of traffic on roads and leads to other problems, such as congestion, air pollution, and decreased road safety.

Complete Streets seek to change this way of thinking so that pedestrian, bicycle, and transit accommodations are no longer seen as amenities to be included when possible, but rather as core elements of street design, left out only if there is a truly compelling reason. Complete Streets will look different depending on where they are and what they are used for, but they all have one thing in common: they are designed with everyone in mind.







Examples of "Complete Streets." Left: rural road with paved shoulder for bicyclists and walkers. Middle: neighborhood road with sidewalk, green buffer, and street trees. Right: downtown Main Street in Keene with a wide sidewalk, street trees/green buffer, street furniture, on-street parking, and outdoor café seating (not visible in picture).

Planning Process

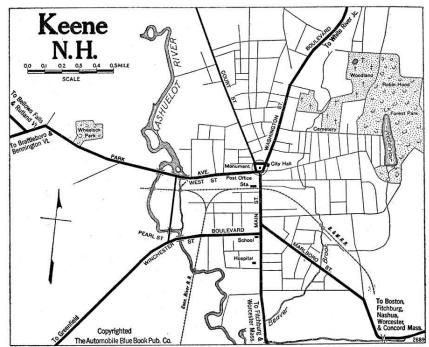
Southwest Region Planning Commission (SWRPC) began working with the City of Keene Planning and Public Works departments to plan a Complete Street demonstration event in the late spring/early summer of 2015. There were several steps to the planning process, which included:

- 1) Determine the event location, date, and time;
- 2) Get the local community involved;
- 3) Make the event fun;
- 4) Recruit help; and
- 5) Advertise the event.

Why Marlboro Street?

Marlboro Street in Keene, NH has historically been a gateway into the City's center. It was the route people took to get to Boston, Nashua, Worcester, and Concord, MA. The close proximity of the B&M Railroad and the presence of Beaver Brook attracted industrial companies such as Kingsbury Corporation, which provided over 1,000 well-paying jobs during the heyday of the industrial era. Over time, however, the area declined, and in 2011 the Kingsbury Corporation declared bankruptcy.

In 2012, The City of Keene was awarded a Community Planning Grant by the NH Housing Finance Authority which allowed the City to conduct a study that looked at revising local land use regulations to revitalize surrounding neighborhoods. The resulting report included not only zoning recommendations, but also redevelopment design guidelines, flood risk management strategy, stormwater management strategy, and a transportation strategy. Recommendations within the transportation strategy included making Marlboro Street a Complete Street.

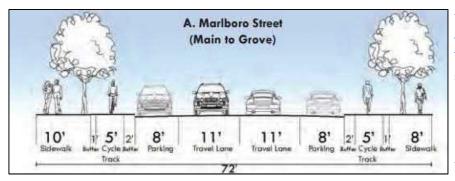


Above: A 1919 road map of Keene, New Hampshire, from the Official Automobile Blue Book, showing the Ashuelot River, major roads (including Marlboro Street), railroads and stations, bridges, cemeteries, and major landmarks.

These Complete Street recommendations, along with the wide width of the roadway and the City's plans to redesign the roadway, made Marlboro Street an ideal location for a live, on-street demonstration of a Complete Street. It was a chance for the City to try out some of the design recommendations included in the Marlboro Street Zoning and Land Use Regulations report and get feedback from the public. The roadway is wide enough to include various different streetscape elements, which are shown later on in this report in the "Demonstration Design" section. And finally, it was an area in need of attention, and this project was a way to reach a wider audience about the possibilities for a redesign of Marlboro Street.

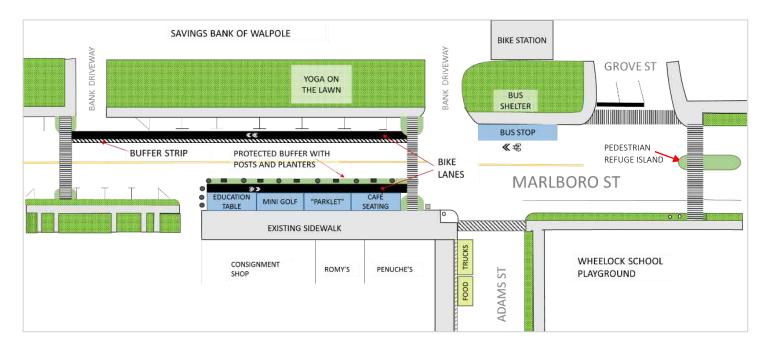
Demonstration Design

The design of the demonstration project was based on the design recommendations the City of Keene received in the <u>Marlboro Street Zoning and Land Use Regulations report</u>, however we were unable to replicate the design recommendations exactly. The authors of the report recommend raised cycle tracks on the section of Marlboro Street between Main Street and Grove Street. They also recommend narrowing the travel lanes to 11' wide, maintaining parallel, on-street parking, and including green buffer space between the cycle track and the sidewalk and parked cars.



This cross section, taken from the Marlboro Street Zoning and Land Use Regulations report, shows the recommended road design for the section of Marlboro Street between Main St. and Grove St. The authors propose to narrow travel lanes to 11', maintain parallel on-street parking on both sides of the roadway, and include raised cycle tracks that are buffered from sidewalks and parked cars.

The demonstration design included two protected bike lanes, one with a ~4'striped buffer strip that cars could drive over to access on-street parking spaces, and one with a 2' protected buffer that included posts and planters. The design also included two new crosswalks with curb extensions to shorten the crossing distance, a pedestrian refuge island that helped to slow traffic entering the demonstration area, a pop-up bus stop, outdoor seating, a "parklet" (i.e. a mini park that takes up one on-street parking space), mini-golf, and an education table. Yellow "Pedestrian Crossing" signs were placed in the center of each of the crosswalks to help slow down traffic and make the crosswalks more visible. A mock-up of the design is shown below.



Public Input

A major goal of the Complete Streets demonstration event was to gather public input on the proposed design changes for Marlboro Street, as well as to get public input on the Complete Streets concept more generally. There were four comment boxes placed throughout the demonstration area, and 40 written comments were gathered this way. An example comment card is shown at the right.

There were 36 people who responded to the first question, "How do you think Complete Streets could benefit your community?" Nineteen people noted that Complete Streets made the road safer

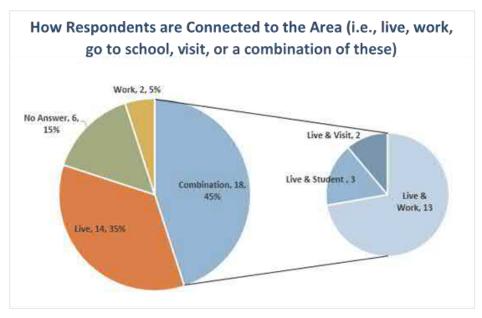
We W	ant	to H	lear	from You!
Complete Streets ar How do you think Co				d safe for everyone to use.
			m	
Do you think any of made permanent? \		ALC: NO	1000	de for this event should be

An example comment card from the event.

and slowed down traffic; 18 people noted that aesthetics were improved, 7 of whom voiced support for more green space; 15 people voiced support for protected bike lanes; 10 people noted that Complete Streets help foster community and promote wellness/social connection; 10 people remarked that Complete Streets promote walking and biking; 5 people voiced support for the crosswalks, and 5 people voiced support for a bus stop or transit route on Marlboro Street. Respondents also mentioned environmental benefits, economic benefits, need for public art, need to keep on-street parking, need for more public gathering/hang-out spaces, and need for more/better sidewalks. Two people thought that money could be better spent on other projects.

Thirty-five out of forty respondents answered "Yes" to the second question on the comment card, "Do you think any of the temporary changes we made for this event should be made permanent? Why or why not?" Four people chose not to answer this question, and one person said no.

Of the 40 people who responded, 32 noted that they live in the area. Six people chose not to answer, and two people work in the area but do not live in the area. The chart below shows the breakdown of responses to this question.



Comment Card Responses

The table below displays the written comments that were collected at Rethink Marlboro Street. The third question on the comment card that asked whether people live, work, or go to school in the area (or visit) was omitted in order to fit the table in this document.



1. How do you think Complete Streets could benefit your community?	2. Do you think any of the temporary changes we made for this event should be made permenant? Why or why not?	4. Other comments?
Fantastic changes. I would make this area a destination if it were designed this way. It would greatly benefit the community.	Yes - all. It makes biking and walking safer and would be a significant draw for the surrounding community with the green spaces.	Fantastic work!!
Looks nice, provides community, slows traffic.	Gardens, food, people!	Nice display.
Bike lanes are needed. Green spaces, music, and art are lacking on this section of town. What took so long?	Yes - it makes the ties in community stronger. It's fun. More public art, please!	
no answer	Yes, will slow traffic down in the area. Need trees and nice medians to get rid of the eyesore (romies [sic] building)	
Bike lanes - all over the city - wider	Yes!!	
Attractive to businesses and home buyers.	Plants separating bike lane is great! Attractive and safer.	
Safer bike routes (I was recently hit by a car not to mention several close calls - and I follow the rules!) More kids/families walking to school.	Bike lane/street vendors and community. Plants moving into the road looks beautiful. Aesthetic cities captivate imagination.	Even those not here or aware of the benefits will benefit. In regards to West Street: Studies have shown that instead of 2 lanes in each direction having one lane each with a turning lane in the middle is much safer for cars AND bikes and doesn't really affect the traffic timing as much as one would think. PLEASE consider this for all, especially our cyclists and pedestrians. Front in parking on Main Street is also dangerous for cyclists.

1. How do you think Complete Streets could benefit your community?	2. Do you think any of the temporary changes we made for this event should be made permenant? Why or why not?	4. Other comments?
Cars need to share routes with bikers and walkers. It is forward thinking.	Opportunity for safe biking (commuting) is essential. Bike lanes!	
I think it is wonderful idea [sic].	Only if they allow for parking area.	Create a parking area for cars and bikes and take a bus.
Community building - user friendly.	ALL of it!	
no answer	All of them	Close the street to automobile traffic.
More pedestrian traffic and fewer cars! Less pollution and automobile noise pollution.	Absolutely - better for the town and spirit of Keene	Please close this and other streets to cars!!!!
Spend on north end Spring St. Bridge Beaver Brook walls by Beaver St. and Brook St [sic].	No spend on north end	Do not do this!!
It's a great idea I feel unsafe riding my bike [sic]	The City Express thing the protective bike lanes [sic]	This has been needed for a long time - this needs to happen
Walkability in Keene is [sic] to Main Street and the addition to Marb. Street would be a huge improvement and benefit for the community!	The Green Space is so lovely! Eye please [sic] and environmentally sound!	
New sidewalks and bike path	no answer	
As one of the gateways into Keene it would be gorgeous. It also encourages Ped and Bike use. I would ride more if I felt safer.	I think it is a great idea. I support its implementation.	Yes I am a tax payer
I think this is the best idea Keene has had in a long time! This is something that should have been done forever ago! This is AWESOME!!!!!	Yes! It's so helpful and beautiful! And this is what we need! It could really help Keene become a better place which is what we want!!!!!	LOVE THIS!!!!!
Would look amazing, great idea	Yes, way safer	
It would encourage biking and walking more. Also it will be safer for everyone	Yes. All of them	

1. How do you think Complete Streets could benefit your community?	2. Do you think any of the temporary changes we made for this event should be made permenant? Why or why not?	4. Other comments?
They create more livable environments that draw more visitation (i.e. \$) and make people HAPPY! And isn't "happy" the point of living together?	Yes - it's more humane, pleasing and encouraging to community.	
I think (believe) more people would be drawn to getting out being social and riding their bike!	Yes! I love the idea of having more permanent places for the community to hang out, tables with games, etc.	Yes! Please keep going with this project. Love it!
I think there are more important things for the town to spend money on, beaver brook flooding issues - paving streets that already need it, cleaning		Up the homeless, + heroin [sic]
When the Savings Bank of Walpole came to Marlboro St - that was a huge improvement of the stretch. I'd like to see more.	Yes - the beautification of the St the bike lane - sidewalks	
Water St. Included? Fencing on Water St. Ugly? [sic] Restaurant near ice rink		
Would feel safer knowing my kids are not so close to the cars	the flowers by the crosswalk to make it more visible	
Marlboro St currently a runway - also solar glare in the AM horrendous - creates BLINDSPOT @ Wheelock School		
It would help with slowing cars, reducing car traffic, and increasing bikes and pedestrians	Yes!	
Bring more appealing atmosphere by planting grass, plants, etc	Yes - make it look nicer	
It would slow cars down and allow for cleaner and safer streets	Yes. I love the bike path that has lane dividers. Feels safer for me and kids.	

1. How do you think Complete Streets could benefit your community?	2. Do you think any of the temporary changes we made for this event should be made permenant? Why or why not?	4. Other comments?
Safer, more friendly environment to foster a healthy community	Yes! Bike lanes and crosswalks	How do we get involved? How do we show support?
Alternatives to driving safe bikeways more space to socialize w/ community [sic]	Yes! Bike lanes more crosswalks outdoor seating	lets make it happen!
Safer for residents for walking and biking	The small parks and bike paths	
Greatly. Public education about "rules of the road" for DRIVERS would make things safer for pedestrians and bicyclists.	Yes. Visual cues help everyone	Complete Streets ideas seem to bring the community together in a good way
no answer	More bus stops	
I think having more people get around by foot or bike will make our community more healthy, relaxed, and connected. It will also cut down on air pollution.	YES, especially the ped crossing. This is a scary place to cross the street! More bike lanes in Keene would be excellent.	I would love it if they could keep the North St. bridge plowed or snowblown in winter.
I think that it will slow traffic and rive traffic to the [sic]	love them all - made a great feel	
Encouraging more walking, biking, and other physical activity. Safety! Community-building!	Bike lanes - obviously they are being used! And bike racks.	Add recycling bins next year! Too much waste!:[
no answer	YES!	Please put a bus stop on Marlborough St. [sic], preferably close to KPD but anywhere will help.
Complete Streets encourage wellness in many ways: walking, biking, community gathering	OMG!! A covered bike rack with a bus stop!! Especially if said bus went to Brattleboro!	Marlboro Street REALLY could use these crosswalks!!

Event Picture Gallery

Below: Existing conditions on Marlboro Street.





Left: A view of the demonstration project after set-up was complete. Curb extensions, a crosswalk, and part of the buffered bike lane are visible in the foreground. In the background, the posts for the protected bike lane are visible.

Right: The protected bike lane helped make cyclists feel safer by putting a physical barrier between the bike lane and motorized traffic.





Left: The temporary crosswalk got a lot of use during the event. Motorists yielded to pedestrians in the crosswalk, making this area a much more walkable place.

Right: A pop-up bus stop, with a covered bench and bike rack, showcased what public transit on Marlboro Street might look like.





Left: The Bike Art and Kinetic Sculpture Exhibition, organized by Friends of Public Art, was a huge success. Three people won prizes, and Friends of Public Art plans to make this an annual event with two separate divisions, one for adults and one for children.



Left: Harry McKelvey (left) accompanied by Todd Tousley (right) provided musical entertainment during the event.

Right: Kat Wood, a local yoga instructor, led free, 20-minute yoga sessions on the lawn.





Left: The Southeast Keene Neighborhood Group (SEKNG) designed and built a parklet, or a mini-park that fits inside an on-street parking space. Several members built furniture out of recycled pallets and worked with a local nursery to borrow plants for the day.

Right: Make it So: The Monadnock Makerspace built a "Zen Art Putt-Putt" course that was very popular with children. The Makerspace plans to build a mini-golf course at its location on Eagle Court in Keene, NH.





Left: Friends of Public Art constructed a "bike art sculpture bench" made out of recycled bicycle parts which made its debut at Rethink Marlboro Street. The bench will be permanently installed along a bike path in Keene, NH.

Right: The Bike Station included green bikes, courtesy of the Keene State College Green Bikes program, which could be borrowed for free. It also featured a tune-up station which was operated by Chris Jackson from Pedals4People (shown in the background under the blue tent).



For More Information

To learn more about Rethink Marlboro Street, please visit the Monadnock Alliance for Sustainable Transportation website at www.monadnocktma.org or contact Mari Brunner, a Planner with Southwest Region Planning Commission, at mbrunner@swrpc.org or 603-357-0557.



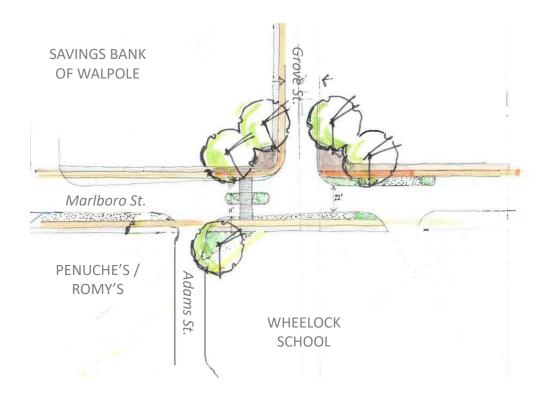








GROVE ST./MARLBORO ST. CONCEPT (DRAFT)



BAKER ST./MARLBORO ST. CONCEPT (DRAFT)



Documentation of Project Support

Additional letters of support from City and community groups and organizations.



August 27, 2018

Mr. Thomas Jameson, P.E. TAP Program Manager NHDOT Bureau of Planning & Community Assistance John O. Morton Building 7 Hazen Drive, PO Box 483 Concord, NH 03302-0483

City of Keene, NH - 2018 Transportation Alternatives Program (TAP) Grant

Dear Mr. Jameson:

On behalf of the City of Keene Planning Board, I am writing to express strong support for the City of Keene's Marlboro Street Corridor Improvement Project and request your full and fair consideration of their Transportation Alternatives Program application.

Complete Street strategies are identified as a top implementation strategy in Keene's most recent Master Plan to improve infrastructure for bicycling and walking. The Marlboro Street Corridor is identified in the Master Plan as a major downtown corridor in need of improved and enhanced transportation flow. It is also identified as a "Gateway Street" and a "Transit Overlay Street" in the City's recently adopted Complete Streets Planning and Design Guidelines. This document recommends design treatments such as highly visible pedestrian crossings, refuge islands, bicycle lanes, traffic calming, and transit stops for this street.

Additionally, the proposed improvements do not conflict with the City's historic, environmental and cultural initiatives or identified priorities. In fact, these improvements will serve to further improve the City's relationship with other local partners such as Keene State College and Wheelock Elementary School on issues of safe transportation for their student population immediately adjacent to the project area. Lastly, these Complete Street improvements would encourage non-motorized traffic along the corridor furthering municipal goals to decrease greenhouse gas emissions within the transportation sector.

The Planning Board looks forward to the synergistic goal achievement that this project can promote through its transportation enhancements, route connections and safety improvements for all the area's elementary as well as college students and residents.

Sincerely,

Gary Spykman, Planning Board Chair



Wheelock School

24 Adams Street, Keene, New Hampshire 03431-4132 603-352-2244 FAX 603-357-9028

August 28, 2018

Mr. Thomas Jameson, P.E.

TAP Program Manager

NHDOT Bureau of Planning & Community Assistance
John O. Morton Building

7 Hazen Drive

PO Box 483 Concord. NH 03302-0483

RE: City of Keene Marlboro Street Corridor Improvement TAP Application

Dear Mr. Jameson:

I am writing to express support for the City of Keene's Marlboro Street Corridor Improvement Project.

I am the school principal at Wheelock School. Wheelock School is located at 24 Adams Street. Students who live along Marlboro Street and its feeder streets walk and bike to school using Marlboro Street on a regular basis. Student pedestrian and biking safety is a huge priority for me and for the school community. These proposed traffic calming and bicycle/pedestrian improvements along Grove Street to Baker Street will help to increase safety at several intersections that are used by our families.

As part of the Wheelock School Community, I feel that this project would create a safer and more reliable transportation connection between student homes and their neighborhood school. The project would also provide improved access to downtown services for parents that they or their family members may need or benefit from. Improving walkability and bikeability has been a goal of the Keene community in general and the benefits to students and families are clearly evident in student attendance, student health and student productivity.

I look forward to witnessing the safety improvements for the students and families who are part of the Wheelock School community,

Sincerely,

Patricia Yoerger
Principal, Wheelock School
24 Adams Street Keene, NH 03431
603-352-2244



August 31, 2018

Mr. Thomas Jameson, P.E. TAP Program Manager NHDOT Bureau of Planning & Community Assistance John O. Morton Building 7 Hazen Drive, PO Box 483 Concord, NH 03302-0483

RE: City of Keene Marlboro Street Corridor Improvement TAP Application

Dear Mr. Jameson,

I'm writing to express strong support for the City of Keene's Marlboro Street Corridor Improvement Project on behalf of Savings Bank of Walpole.

The largest branch of Savings Bank of Walpole has been located on Marlboro Street for over 16 years. With 45 employees and over 10,000 face-to-face customer interactions at this location monthly, the bank takes great pride in attracting people and the businesses they represent to our Marlboro Street branch. Located just off of Main Street and our vibrant downtown, the Marlboro Street Corridor Improvement Project would enhance Marlboro Street by fostering economic growth and community activity along this reemerging corridor. It will allow residents, employees, students, and others to safely access our local elementary school and college, recreational centers, employers, parks, retail businesses, offices, and the expanded rail trail network. The project would also provide a better backdrop to the numerous events hosted on or near Marlboro Street such as road races and marathons, festivals, Keene State College events and commencements, and Savings Bank of Walpole's annual Community Appreciation Cookout.

As a local lender, employer and neighbor, we look forward to seeing the Marlboro Street Corridor Improvement Project completed for the safety, growth, and beautification of our neighborhood.

Sincerely,

Dominic A. Perkins

Vice President Retail Administration

Savings Bank of Walpole

SouthEast Keene Neighborhood Group

Meeting Since 2006

We are a committed group of Keene, New Hampshire residents trying to maintain the quality life in the Southeast Keene neighborhood

August 28, 2018

Mr. Thomas Jameson, P.E. TAP Program Manager NHDOT Bureau of Planning & Community Assistance John O. Morton Building 7 Hazen Drive, PO Box 483 Concord, NH 03302-0483

RE: City of Keene Marlboro Street Corridor Improvement TAP Application

Dear Mr. Jameson:

We are writing to express our strong support for the City of Keene's Marlboro Street Corridor Improvement Project. As members of the Southeast Keene Neighborhood Group with its 25 members we hope that you will seriously consider this application for the City's Transportation Alternatives Program.

Members believe that this project would create a safer and more reliable multimodal transportation connection between the City's vibrant downtown by connecting the recreational rail trail network and the underdeveloped Marlboro Street Corridor. This project would foster economic growth and community activity along this corridor by creating opportunities for residents and others to safely access community resources in the area, such as educational institutions, employment centers, parks, retail establishments, offices, and the rail trail network, via various modes of travel. It would also revitalize Marlboro Street as an economic area in our city.

We have participated in the year-long process of studying Marlboro Street Improvement area and provided our ideas and hopes. We support the regrowth and safety improvements for all users that this project; we also see this project providing a stimulus for more development in this corridor heading into the downtown.

Sincerely,

David Curran

16 Prescott Street

Jan Manwaring
50 Belmont Avenue

Southeast Neighborhood Group Keene, New Hampshire 03431



Jeffrey T. Maher Director of Campus Safety and Compliance 229 Main Street, Keddy Hall

Keene, NH 03435-2019 Phone: 603-358-2959 Email: TitleIX@keene.edu

Mr. Thomas Jameson, P.E. TAP Program Manager NHDOT Bureau of Planning & Community Assistance John O. Morton Building 7 Hazen Drive, PO Box 483 Concord, NH 03302-0483

August 30, 2018

RE: City of Keene Marlboro Street Corridor Improvement TAP Application

Mr. Jameson,

Please accept this letter expressing support for the City of Keene's TAP application for the construction of traffic calming and bicycle/pedestrian improvements along the Marlboro Street corridor. As the Director of Campus Safety for Keene State College we are always looking for opportunities to partner with the City to create a safer environment for our students. This area of Keene is densely populated with student housing and pedestrian traffic. This project will allow the City of Keene to develop a safer connection to link our residential community to the business district and campus. This proposal will enhance the safety of our students and community members and creates a transportation footprint in keeping with the goals and vision for the City of Keene. On behalf of Keene State College, I am pleased to offer my support for this proposal. Please feel free to contact me directly if I can be of further assistance.

Sincerely,

JEFFREY T. MAHER

Jeff Maher Director of Campus Safety and Compliance



September 4, 2018

Mr. Thomas Jameson, P.E. TAP Program Manager NHDOT Bureau of Planning & Community Assistance John O. Morton Building 7 Hazen Drive, PO Box 483 Concord, NH 03302-0483

RE: City of Keene Marlboro Street Corridor Improvement TAP Application

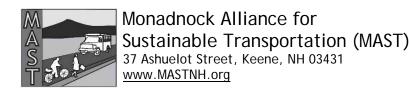
Dear Mr. Jameson:

On behalf of the Greater Keene Chamber of Commerce (GKCC) based in Keene and serving the Monadnock Region –I am writing to express my continued support for the City of Keene's Marlboro Street Corridor Improvement Project and recommend your full and fair consideration of its Transportation Alternatives Program application.

GKCC supports the City of Keene's ongoing effort to create a safer and more reliable multimodal transportation connection between the City's vibrant downtown, its recreational rail trail network and the Marlboro Street Corridor. This project continues to promote economic growth and encourages redevelopment of underutilized properties while strengthening community activity along this corridor. This will also leverage related initiatives in and around the City by creating opportunities for residents and others to safely access community resources in the area, such as educational institutions, employment centers, parks, retail establishments, offices, and the rail trail network, via multiple modes of travel. It includes a plan for a new pull-out for a bus stop anticipated for the new City Express bus route along Marlboro Street further connecting the neighborhoods and businesses in this area to access Keene's downtown.

Our Chamber continues to work closely with the City on these types of programs and projects, and we look forward to being part of the growth and safety improvements for all users that this project would stimulate along this corridor.

Philip N. Suter President/CEO



August 27, 2018

Mr. Thomas Jameson, P.E. TAP Program Manager NH DOT Bureau of Planning & Community Assistance PO Box 483 Concord, NH 03302-0483

Re: City of Keene Marlboro Street Corridor Improvement TAP Application

Dear Mr. Jameson:

We are writing to express strong support for the City of Keene's Marlboro Street Corridor Improvement Project on behalf of the Monadnock Alliance for Sustainable Transportation (MAST).

The MAST Steering Committee would like to take this opportunity to express its support for the City of Keene's Marlboro Street Corridor Improvement TAP proposal. This project would create a safer and more reliable multimodal transportation connection between the City's vibrant downtown, the underdeveloped Marlboro Street Corridor and the Region's recreational rail trail network. This project also enhances travel corridors commonly used by both Keene State College students commuting from the surrounding neighborhoods and grade school students traveling to Wheelock School, the neighborhood grade school. This project supports and advances MAST's vision for a future Monadnock Region where citizens can move around conveniently and safely, with or without personal automobiles. It is also directly aligned with our 2012-2020 Action Plan strategies to expand use and availability of sidewalks and walkways, and to increase use and availability of bicycle infrastructure and public transit.

The MAST Steering Committee strongly urges you to consider fully supporting this project as it represents a significant move towards making Keene a more sustainable and multimodal transportation hub.

Sincerely,

Will F. Schoefmann

Chairman, MAST Steering Committee



August 30, 2018

Mr. Thomas Jameson, P.E. TAP Program Manager NHDOT Bureau of Planning & Community Assistance John O. Morton Building 7 Hazen Drive, PO Box 483 Concord, NH 03302-0483

RE: City of Keene Marlboro Street Corridor Improvement TAP Application

Dear Mr. Jameson,

On behalf of the Healthy Monadnock initiative I am writing to express dedicated support for the City of Keene's Marlboro Street Corridor Improvement Project. Healthy Monadnock is a region wide community initiative that supports this project because it would increase access to physical activity opportunities by creating safer and more reliable spaces for individuals to walk, bike and connect to the City's downtown and recreational rail trail network. In addition to fostering economic growth and community activity along this corridor, this project would create opportunities for residents and others to safely access community resources in the area, such as educational institutions, employment centers, parks, retail establishments, offices, and the rail trail network via various modes of travel.

This project supports multiple Healthy Monadnock goals including increased physical activity, increased social connections, and improving conditions the support mental well-being. We know the numerous benefits of active transportation as well as the positive impacts of spending time outside. This project is also in alignment with the Greater Monadnock Community Health Improvement Plan which specifically prioritizes physical activity and active transportation.

Improving safe walking and biking space and modes of travel between these destinations will have a significant impact on community health and wellbeing. We look forward to the health and safety improvements that this project would stimulate along this corridor.

Sincerely,

Tricia J Wadleigh, MPH

Partner Manager, Center for Population Health Cheshire Medical Center Dartmouth-Hitchcock Health Affiliate

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(603) 354-5454 x3030



HealthyMonadnock.org

Cheshiremed.org