ENGINEERING STUDY
PROJ. NO. 28757
LAFAYETTE ROAD/MIDDLE STREET BICYCLE FACILITIES PROJECT

PORTSMOUTH, NH

GPI

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SUBMITTED TO:

NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
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City of Portsmouth, Proj. No. 28757
Lafayette Road/Middle Street Bicycle Facilities
Engineering Study
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INTRODUCTION

Lafayette Road and Middle Street (Route 1) comprise a noted transportation corridor within the City of Portsmouth. These principal arterial roadways not only connect many of Portsmouth's close-in, older residential neighborhoods to downtown and outlying commercial areas, but also to many of the schools within the City including the St. Patrick School as well as Portsmouth Middle School and High School.

In February of 2010 the City completed its Safe Routes to School Action Plan. Safe Routes to School (SRTS) is a national program that creates safe, convenient and fun opportunities for children to walk and bicycle to and from their schools. With the increasing need to improve the health and safety of children, SRTS can improve communities by making walking and bicycling safe ways to get to school and by encouraging more children to do so.

As part of this action plan the City polled its residents regarding safety concerns related to encouraging children to walk or bike to school. This polling revealed that:

- 41% of the respondents live within ½ mile of their school and 44% walk or bike to school in the morning and 45% walk or bike from school in the afternoon.
- 66% of respondents indicated that concern about the safety of intersections and crossings affected their decision to allow their children to walk or bike to school.
- 59% and 53% respectively indicated that the amount and speed of traffic along the route was a factor in their decision.
- 73% of respondents indicated that their child thought that walking or biking to school is fun.

As a result the SRTS Action plan recommended *bike lanes along Middle Street (Route 1) from State Street to Portsmouth High School entrance at Andrew Jarvis Drive*.

In July of 2013 the City applied for and received a SRTS grant for this project with 100% of the funding provided by the Federal Highway Administration (FHWA) through the SRTS Program administered by the New Hampshire Department of Transportation (NHDOT). As part of the grant application it was noted that providing dedicated bicycle facilities along this route (between Andrew Jarvis Drive and Congress Street, a distance of 1.3 miles) will encourage students to ride to school and will also encourage people throughout the community to use bicycles more frequently as their chosen mode of transportation. In addition to connecting neighborhoods to the middle school and St. Patrick School, students in grades K through 8 and their families will likely use all or portions of this route to travel to the public library, Alumni and Leary Fields and the South Mill Pond Playground, Lafayette Park and Playground, and the Indoor Pool and athletic fields at the high school. A copy of this grant application is provided in the Appendix of this study.

Safe Routes to School Action Plan Recommendations

Additionally, in 2014 the City developed its Bicycle and Pedestrian Plan. This plan represents a comprehensive strategy to make bicycling and walking safe, comfortable, and convenient for people of all ages and abilities. The plan calls for a connected bicycle and pedestrian network and new programs and policies to help encourage people to walk and bike on a daily basis. It

builds upon the city's considerable attributes and growing support for walking, bicycling, and "Complete Streets". The Bicycle and Pedestrian Plan helps to make walking and bicycling in Portsmouth safer and more convenient through a prioritized set of improvements to streets, sidewalks, and paths. It was developed using data collection and analysis and included broad public and stakeholder involvement. Along Lafayette Road/Middle Street the Bicycle and Pedestrian Plan calls for a buffered bicycle lane between Andrew Jarvis Drive and Madison Street, conventional bicycle lanes between Madison Street and Richards Avenue and a shared lane condition between Richards Avenue and State Street. These recommendations are shown graphically in the Appendix.

A description of the history and purpose of this important project vision as it relates to both the City of Portsmouth and the NHDOT is provided within this Engineering Study. Relevant geometric and traffic control characteristics are provided herein, followed by the proposed alternatives analysis and conceptual designs for potential implementation.

LOCAL CONCERNS MEETINGS

Initial discussions began in the Fall of 2014 with representatives from the City of Portsmouth School, Planning, Emergency Response and Public Works Departments to discuss this project and to understand the context in which it is set. An initial public meeting was held on November 19, 2014. The objective of this process was to facilitate a coordinated planning and design process as the City embarks on its most significant dedicated on-road bicycle facilities project to date.

The initial public meeting consisted of a presentation describing the project objectives and limits as well as existing conditions along the Lafayette Road/Middle Street corridor. In addition, an overview of the various types of bicycle accommodations that were highlighted within the recently completed Portsmouth Bicycle and Pedestrian Master Plan were presented. Each of the bicycle options that have the potential to be implemented as part of this project were discussed including shared-lane markings, bike lanes, buffered bike lanes and cycle tracks. General advantages and disadvantages of each treatment were discussed including the varying level of comfort that cyclists experience with each of these facilities. It was stressed that as a Safe Routes to School Project it is intended to provide a facility that is safe and usable for cyclists of all ages and abilities.

Following the presentation the project team facilitated an open discussion to address attendees' questions and concerns.

Common themes from the discussion portion of the initial public meeting included questions about the scope of the project, how the project would impact vehicular traffic flow, specifics of the various bicycle facility treatments, parking impacts, sight distance concerns at intersecting side streets and the need for enhanced crosswalks coupled with curb extensions traversing Lafayette/Middle Street. Specifically the following was noted about the corridor:

- Unsafe pedestrian environment
- Traffic speeds too high
- Street is too wide
- Parents are not comfortable with children riding on the street
- Students currently walk & bike to School

- Pulling out of side streets is a challenge – lack of sight distance
- Parking is informal
- No parking here to corner not enforced
- Concern that bicycle facility will compound sight distance concerns
- This is an important emergency response corridor

It was noted by the project team that the nature of this project is to implement on-road bicycle facilities along the corridor within the existing footprint of the roadway. The intent is to do so utilizing low cost solutions (paint, bollards, signage, etc.) and not by comprehensively rehabilitating the roadway. It was noted however that while the project scope does not necessarily include sidewalk and pavement improvements the project can be used as an opportunity to identify issues which could be addressed as a separate undertaking.

Minutes of the meeting can be found in the Appendix.

PURPOSE AND NEEDS STATEMENT

Currently the Lafayette Road/Middle Street corridor lacks any bicycle infrastructure despite being listed by regional organizations as a primary bicycle route through the city and exhibiting existing biking activity. The lack of a safe and dedicated facility discourages bicycling as a viable means of transportation for a segment of the population that may otherwise choose this mode if a facility where present. The creation of a dedicated facility along Lafayette Road/Middle Street could also become a primary spine of a future network of bike routes throughout the city as described in the City's Bicycle and Pedestrian Master Plan while also addressing the City's Complete Streets Policy which states:

Streets and roadways in the City of Portsmouth will be convenient, safe and accessible for all transportation users, including pedestrians, bicyclists, transit vehicles and riders, children, the elderly, and people with disabilities.

As a Safe Routes to School-funded project, the need to provide safe and efficient bicycle facilities suitable for school age children must also be a priority. SRTS programs directly benefit schoolchildren, parents, staff and teachers by creating a safer travel environment near schools and reducing motor-vehicle congestion at school drop-off and pick-up zones. Statistics show that 42% of all students between five and 18 years of age walked or bicycled to school in 1969, including 87% of students who lived within one mile of the school they attended. In 2001 fewer than 16% of students walked or bicycled any distance to get to school[1]. This decline is due to a number of factors, including urban growth patterns, increased traffic and parental concerns about safety. The situation is self-perpetuating: as more parents drive their children to school, there is increased traffic at the school site, resulting in more parents becoming concerned about traffic and driving their children to school.

Students that choose to walk or bike to school are rewarded with the health benefits of a more active lifestyle. Safe Routes to School programs offer additional benefits to neighborhoods by helping to slow traffic and provide infrastructure improvements that facilitate walking and biking for everyone. Identifying and improving routes for students to safely walk and bicycle to school is one of the most cost-effective means of reducing weekday morning traffic congestion and can help reduce auto-related pollution. In addition to safety and traffic improvements, a Safe Routes

[1] U.S. Centers for Disease Control and Prevention. Barriers to Children Walking to or from School United States 2004, Morbidity and Mortality Weekly Report September 30, 2005. Available: www.cdc.gov/mmwr/preview/mmwrhtml/mm5438a2.htm.

to School program helps integrate physical activity into the everyday routine of school children. Since the mid-1970s, the number of children who are overweight has more than tripled from 5% to almost 17%. Health concerns related to sedentary lifestyles have become the focus of statewide and national efforts to reduce health risks associated with being overweight. Children who walk or bike to school have an overall higher activity level than those who are driven to school, even though the journey to school makes only a small contribution to activity levels[2].

The purpose of this project is to create a dedicated on-road bicycle facility that is safe and usable for bicyclists of all ages and provides a route to connect neighborhoods to schools and downtown locations within the existing right-of-way.

This will be accomplished by developing an alternative that most effectively:

- Provides a safe and desirable route for kids to and from schools and nearby destinations
- Calms traffic
- Shortens pedestrian crossings
- Narrows the 'street'
- Formalizes parking
- Improves ADA access for travelers to and from school
- Maintains emergency response ability
- Invests incrementally to ensure community acceptance maintains a balance with resources

[2] Cooper A, Page A, Foster L, Qahwaji D. Commuting to school: are children who walk more physically active? American Journal of Preventive Medicine. 2003 November; 25(4):273-6.

EXISTING CONDITIONS

ROADWAY INFRASTRUCTURE

Lafayette Road and Middle Street within the study area is a two lane roadway of varying width that carries approximately 10,000 – 11,000 vehicles a day south and north of Middle Road respectively. Traffic counts were conducted as part of this effort in October of 2014. These included automatic traffic recorder counts (ATRs) capturing continuous 24 hour volumes along both Lafayette Road and Middle Street as well as peak period turning movement counts at Middle Street at Islington Street/Congress Street, South Street at Lafayette Road and Lafayette Road at Andrew Jarvis Drive. Count data is provided graphically on the next page as Figure 1.

Project Limits

Generally there are sidewalks on both sides of the road with the exception of the west side of Lafayette Road south of Lafayette Professional Park and between Willard Ave and Middle Road. Transit service is provided along the corridor by the Cooperative Alliance for Seacoast Transportation (COAST) as part of its Lafayette Road Trolley (Route 41) service. A schedule of operations is provided in the Appendix.

The pavement cross section varies greatly with a typical pavement width of approximately 44 feet although it decreases to as narrow as 28 feet at one location and as wide as 50 feet in others. In some locations there is on-street parking and in others there is not. The uses along the corridor range from residential to commercial to institutional. Within the project limits there are four signalized intersections with Route 1. These are at the intersections with South Street, Summer Street/Miller Avenue, State Street and Islington Street/Congress Street. At some of these intersections there are exclusive turning lanes provided. A rapid rectangular flashing beacon is

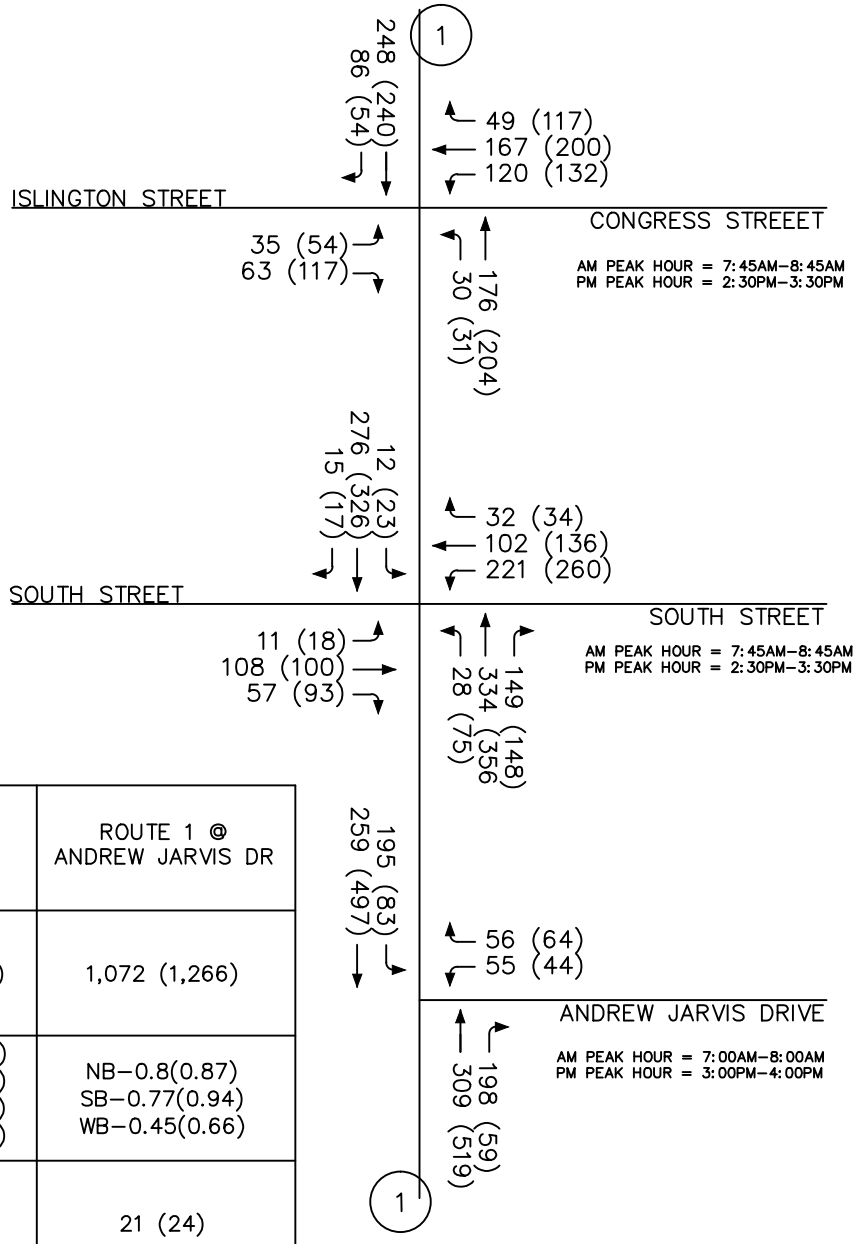
PROPOSED BICYCLE FACILITY

NOT TO SCALE

ATR DATA

MIDDLE STREET:
AVERAGE SPEED = 27
85TH PERCENTILE SPEED = 32
ADT = 10,796
AM PEAK HOUR VOLUME = 779
AM PEAK HOUR = 9:30AM–10:30AM
PM PEAK HOUR VOLUME = 915
PM PEAK HOUR = 4:45PM–5:45PM

LAFAYETTE ROAD:
AVERAGE SPEED = 31
85TH PERCENTILE SPEED = 35
ADT = 9,772
AM PEAK HOUR VOLUME = 700
AM PEAK HOUR = 9:00AM–10:00AM
PM PEAK HOUR VOLUME = 880
PM PEAK HOUR = 5:45PM–6:45PM



	ROUTE 1 @ ISLINGTON ST & CONGRESS ST	ROUTE 1 @ SOUTH ST	ROUTE 1 @ ANDREW JARVIS DR
TOTAL VEHICULAR PEAK HOUR VOLUME	974 (1,149)	1,345 (1,586)	1,072 (1,266)
PEAK HOUR FACTOR (PHF)	NB–0.82(0.92) SB–0.78(0.91) EB–0.8290.82) WB–0.390.88)	NB–0.95(0.87) SB–0.89(0.94) EB–0.85(0.89) WB–0.81(0.85)	NB–0.8(0.87) SB–0.77(0.94) WB–0.45(0.66)
PEAK HOUR PEDESTRIAN VOLUME	49 (115)	10 (12)	21 (24)
TOTAL PEDESTRIAN VOLUME	77 (204)	17 (20)	23 (31)
PEAK HOUR BICYCLE VOLUME	8 (8)	5 (9)	5 (10)
TOTAL BICYCLE VOLUME	13 (14)	6 (13)	6 (14)

GPI Greenman-Pedersen, Inc.
Engineering and Construction Services

Figure 1 - 2014 Existing Conditions
Weekday AM (PM)
Peak Hour Traffic Volumes

located at a crosswalk across Lafayette Road immediately north of Willard Avenue.

The posted speed limit throughout the corridor is currently 30 MPH. The speed study conducted as part of the data collection program indicates average speeds range from 27 mph to 31 mph along the corridor and operational (85th percentile) speeds range from 31 mph to 35 mph.

On-street parking is permitted along the majority of the roadway, however parking utilization varies greatly along the corridor. Parking observations were made during the weekday morning (7-8 AM), midday (11 AM – 1 PM) and evening (7-8 PM) peak periods during the month of February 2015 to understand the existing utilization. During all time periods no vehicles were observed parked on street from Middle Road through the southern extents of the project at Andrew Jarvis Drive. From Middle Road north to Cass Street only 1 vehicle was observed parked during each of the time periods, all in the southbound direction. From Cass Street south there is space for 191 vehicles to park on street, as noted, only one was observed utilizing this available parking.

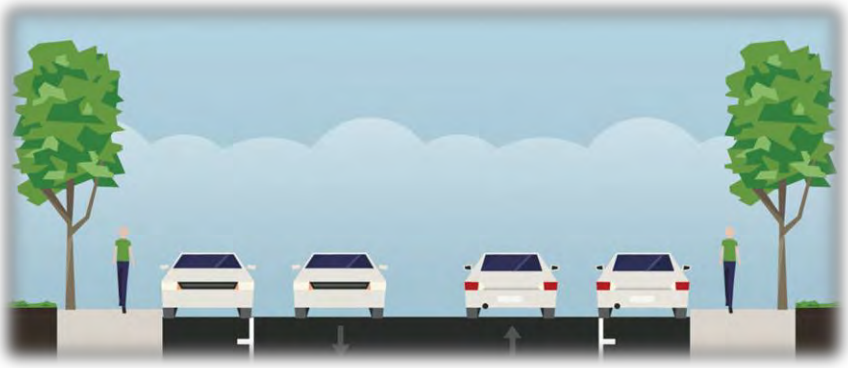
North of Cass Street parking utilization begins to increase. Between Cass Street and Summer Street there is space for 71 vehicles combined in the northbound and southbound directions. During these observation periods a total of 16, 17 and 16 vehicles were observed utilizing these spaces during the AM, midday and PM periods respectively (mostly on the northbound side). This equates to a utilization of no more than 24%.

Between Summer Street and Austin Street there is space for 26 vehicles combined in the northbound and southbound directions. During these observation periods a total of 9, 25 and 10 vehicles were observed utilizing these spaces during the AM, midday and PM periods respectively (mostly on the northbound side). While the AM and PM periods experience a utilization rate of approximately 40% in this stretch, the midday experiences a 96% utilization.

The midday period is the period of highest on-street parking demand.

No on-street parking is permitted north of Austin Street.

As this project is strictly a re-striping project no impacts to structures or subterranean utilities/drainage will be experienced.



Lafayette Road/Middle Street Existing Roadway Use

PROPOSED CONDITIONS

DESIGN CRITERIA

Roadway design concepts contained within this, and all associated documentation, are designed and proposed in compliance to applicable state and industry standards and guidelines. These standards include the following publications:

- A Policy on Geometric Design of Highways and Streets (American Association of Station Highway and Transportation Officials – AASHTO), Fourth Edition, 2001.
- Roadway Design Guide (AASHTO), Third Edition, 2006.
- New Hampshire State Trails Plan (NHDOT), 2004.
- Guide for the Development of Bicycle Facilities (AASHTO), 1999.
- Guide for Planning, Design, and Operation of Pedestrian Facilities (AASHTO), 2004.
- Americans with Disabilities Act (ADA) Standards for Transportation Facilities (ADA), 2006.
- Proposed Accessibility Guidelines for Pedestrian Facility in the Public Right-of-Way (Architectural and Transportation Barriers Compliance Board), 2011.
- Highway Design Manual (NHDOT), 1999.
- Manual on Uniform Traffic Control Devices (Federal Highway Administration – FHA), 2009.
- NACTO Urban Bikeway Design Guide (National Association of City Transportation Officials – NACTO)

ENVIRONMENTAL REVIEW AND DOCUMENTATION

In February 2015, GPI submitted a Request for Project Review (RPR) related to the project. This report identified the project's Areas of Potential Effects (APE) as a means of gauging the level of environmental review required. Specifically architectural and archaeological components were considered and reviewed. The findings of the report concluded that the project will not result in any impacts to architecture or any known archaeological resources with the project area.

In response to the RPR, the Cultural Resources Staff at the Bureau of Environment at the New Hampshire Division of Historical Resources (DHR) for Transportation Projects submitted its findings in February 2015. This response requested that a determination of effect memorandum be provided once a preferred alternative has been identified and associated public input has been gathered. The response indicates that no archaeological issues will arise as a result of the project. A copy of the RPR and response form is provided within the Appendix of this study.

A Draft CE Checklist will be submitted to NHDOT upon notice to proceed to Preliminary Design.

ALTERNATIVES ANALYSIS / PROPOSED LAYOUT

Three alternative concepts were developed to provide on-road dedicated bicycle accommodation along Lafayette Road/Middle Street. The alternatives were designed to provide safe and comfortable bicycle accommodation, specifically targeted at attracting less confident cyclists. The analysis of these alternatives aims to assess feasibility and potential impacts of each concept.

All three alternatives are included in the Appendix as well as their associated construction cost estimate. Below is a general description of the various types of facilities considered as described in the City's Bicycle and Pedestrian Master Plan.

Description

- An exclusive lane for bicyclists designated with pavement markings and signage
- Located adjacent to motor vehicle travel lanes and flows in the same direction as motor vehicle traffic
- **Typical Dimensions:** Min. 5 feet. 6 foot min. preferred adjacent to parked vehicles; 4 ft. acceptable adjacent to curb in low speed environments

Application

- Used on medium to low volume streets with traffic speeds of 40 mph or less

Advantages/Disadvantages

- Provides separate travel lane for bicyclists
- Mixing zones may be required at intersections or bus stops
- Enforcement often required to keep motorists from parking or stopping in bike lanes

Action Required

- Signs and markings, construction
- Estimated cost: $20 - $46K per mile retrofit (type varies); $590K per mile to reconstruct and widen roadway to accommodate bike lanes

Description

- A bicycle lane with additional lateral separation from other roadway users
- Buffer may be located between the bike lane and motor vehicle travel lane, parking, or both
- **Typical Dimensions:** Min. 6 ft. Includes 2 ft. buffer and 4 ft. lane

Application

- Installed adjacent to high speed or high volume traffic
- Installed adjacent to high turnover parking

Advantages/Disadvantages

- Increases operating space and comfort for bicyclists
- Provides passing space for bicyclists
- Requires more space than standard bike lanes
- Requires installation and maintenance of more pavement markings than a standard bike lane
- Enforcement often required to keep motorists from parking or stopping in bike lanes

Action Required

- Signs and markings
- Estimated cost: $55K - 61K per mile (type varies)

Description

- One- or two-way bicycle facility with vertical separation from motor vehicle traffic
- Vertical separation may be provided by parked motor vehicles, flexible bollards, plantings,or curbs
- May be located on a roadway or raised to, or just below, sidewalk level
- **Typical Dimensions:** 4-5 ft. wide travel lane plus minimum 3 ft. buffer from roadway

Application

- Along roadways with high vehicular volumes, speeds, or complex traffic patterns
- Along primary roadway corridors providing access to high-demand destinations where high bicycle volumes are present or desired

Advantages/Disadvantages

- Provides comfort for bicyclists and motorists
- Specialized intersection treatments may be required to accommodate bicyclists
- Separation of bicyclists and pedestrians may require specialized design treatments
- Potential parking restrictions due to sight lines

Action Required

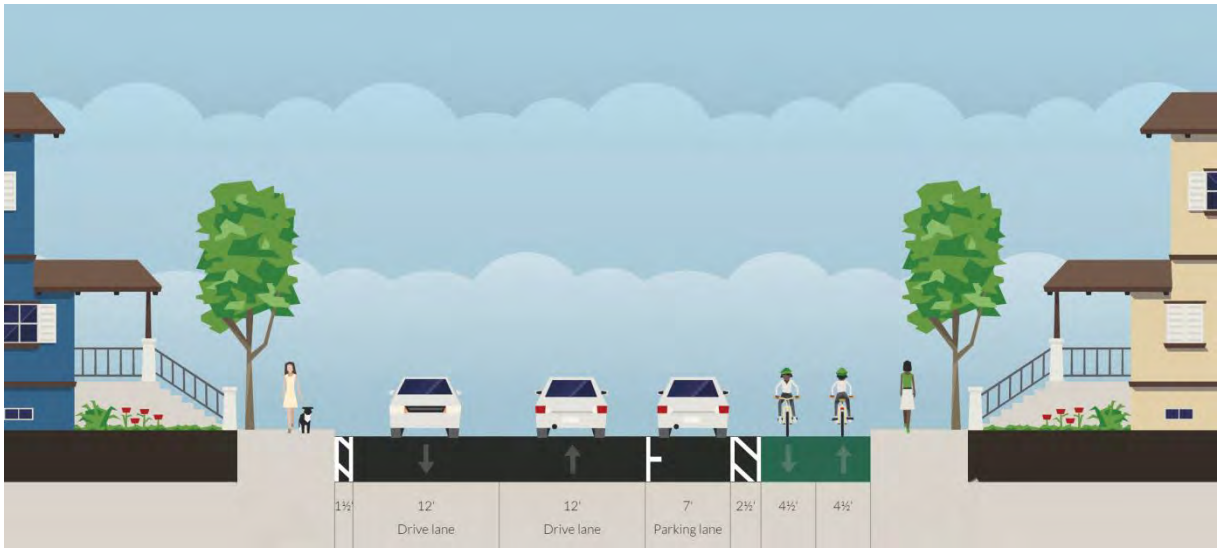
- Construction or signs, markings, and signals depending on level of implementation
- Estimated cost: $127K-153K per mile for retrofit; $710K per mile for construction

Following is a brief description of each alternative. Concept plans for each are found in the Appendix:

Alternative A features a 9 foot two-way cycle track, or protected bike lane, with an associated 2.5 foot buffer on the east (northbound) side of Lafayette Road/Middle Street from Andrew Jarvis Drive to Summer Street/Middle Street. In addition a 7 foot parking lane provides additional protection to the cycle track. Two 12 foot travel lanes accommodate vehicle along with a 1.5 foot shoulder on the southbound side. This concept minimizes the need for bicyclists traveling to or from the High School or Middle School to cross the street. Both schools are located east of Lafayette Road/Middle Street, so any student who also lives east of Lafayette Road/Middle Street could get to and from either school without crossing the street at all.

Two-Way Cycle Track

One design challenge related to this concept relates to placing southbound bicyclists on the east side of the street. Drivers exiting from side streets and driveways are not accustomed to expect bicyclists coming from the right. Careful attention is required to raise awareness of two-way bicycle traffic.



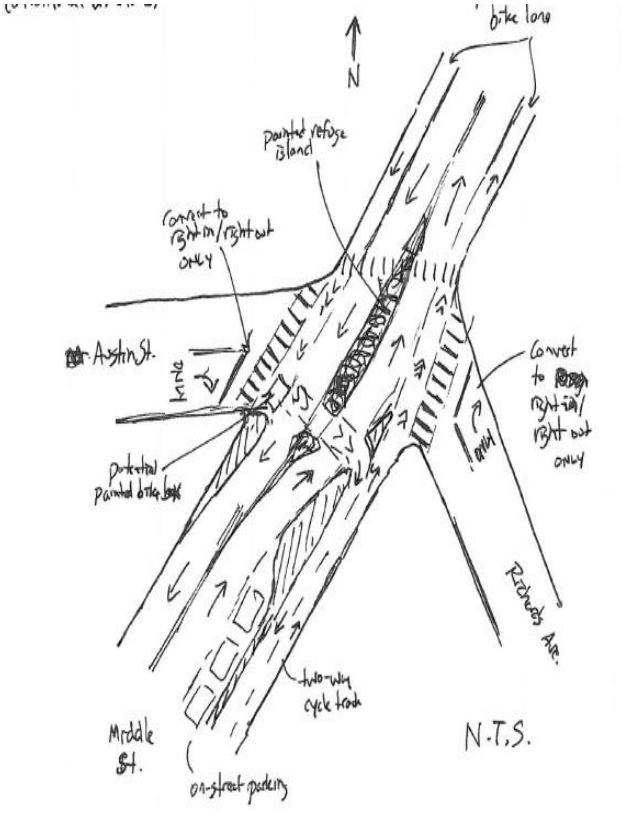
Alternative A

The facility transitions to traditional bike lanes between Summer Street/Miller Avenue and Austin Street/Richards Avenue, and then shared lane markings to the north. The cycle track is separated from traffic with flex post bollards and parked vehicles. The transition point between a two-way cycle track and protected bike lanes could alternately be located at the unsignalized Austin/Richards intersection just to the north for the following two reasons.

1. If the two way bike facility is continued along the northbound side of the roadway, this concept will optimize the amount of on-street parking provided (assumed to be located along the southbound block face).
2. If the primary users are school students, this intersection may provide a better route to the nearby middle school. Avoiding the signalized intersection reduces extra protected phasing and potentially new equipment, signs and complex pavement markings.

Alternative A would impact parking. Based on our parking observations during the midday peak period (critical period) 23 of an existing 42 parked vehicles would be displaced. There would be a remaining inventory of approximately 41 spaces in this section. Some vehicles currently parked between Summer and Austin Street would need to relocate south of Summer Street and some small portion of vehicles may be pushed south of Cass Street or into the surrounding neighborhoods. All other time periods would experience less demand which would be satisfied by the resulting supply.

The estimated construction cost for this alternative is approximately $126,000, including a 15% construction contingency.



Richards Avenue Transition Concept

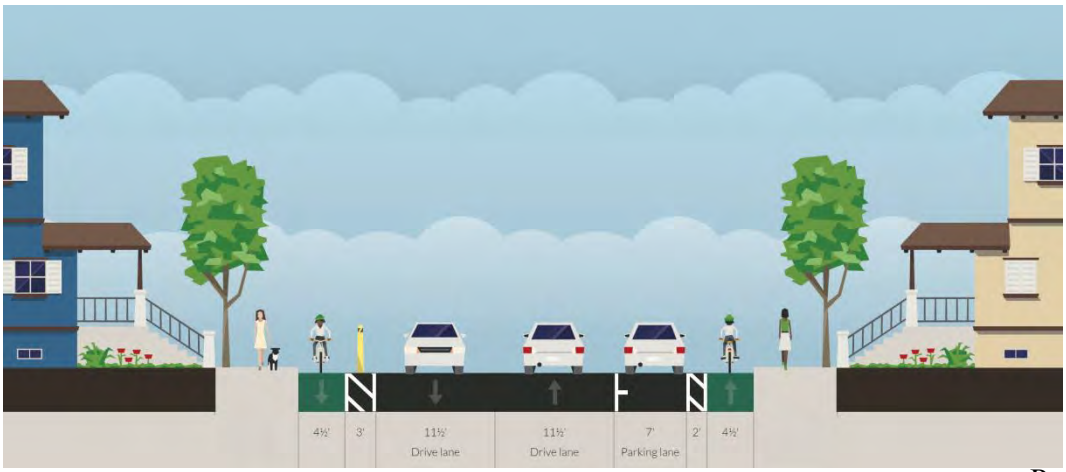
Cycle Track, with Protection

Alternative B includes 4.5 foot one-way cycle tracks on both sides of Lafayette Road/Middle Street from Andrew Jarvis Drive to Summer Street/Miller Avenue. On the northbound side the cycle track would have an associated 2 foot buffer to a 7 foot parking lane. Two 11.5 travel lanes would accommodate vehicle flow. The cycle track on the southbound side would have an associated 3 foot buffer with flex-post bollards affording vertical protection.

The facility transitions to traditional bike lanes between Summer Street/Miller Avenue and Austin Street/Richards Avenue, and then shared lane markings to the north. The cycle track is separated from traffic with flex post bollards and parked vehicles on one side of the street. If for emergency response purposes it is desired to maintain additional unencumbered roadway width the flex post bollards could be eliminated, lending to a buffered bike lane concept.

Buffered Bike Lane, without Protection

While less unique than Alternative A, design of Alternative B also requires careful attention at intersections, since bicyclists are separated from adjacent traffic and may be less visible to turning vehicles. This would occur on both sides of the corridor under Alternative B as opposed to one in Alternative A.



Alternative B

Alternative B would impact parking. Based on our parking observations during the midday peak period (critical period) 23 of an existing 42 parked vehicles would be displaced. There would be a remaining inventory of approximately 43 spaces in this section. Some vehicles currently parked between Summer and Austin Street would need to relocate south of Summer Street. All other time periods would experience less demand which would be satisfied by the resulting supply.

The estimated construction cost for this alternative is approximately $169,000, including a 15% construction contingency.

Alternative C includes traditional bike lanes on both sides of Lafayette Road/Middle Street from Andrew Jarvis Drive to Austin Street/Richards Avenue. The facility transitions to shared lane markings to the north. Parking is provided on both sides of the street for most of the corridor. Concept C utilizes minimal cross section dimensions throughout the corridor (10 foot travel lanes, 5 foot bike lanes and 7 foot parking lanes). Without a buffer this concept does place cyclists directly in the "door zone" of parked cars. This design likely would not be sufficient to attract "interested but concerned" cyclists.

Traditional Bike Lane

Alternative C-1

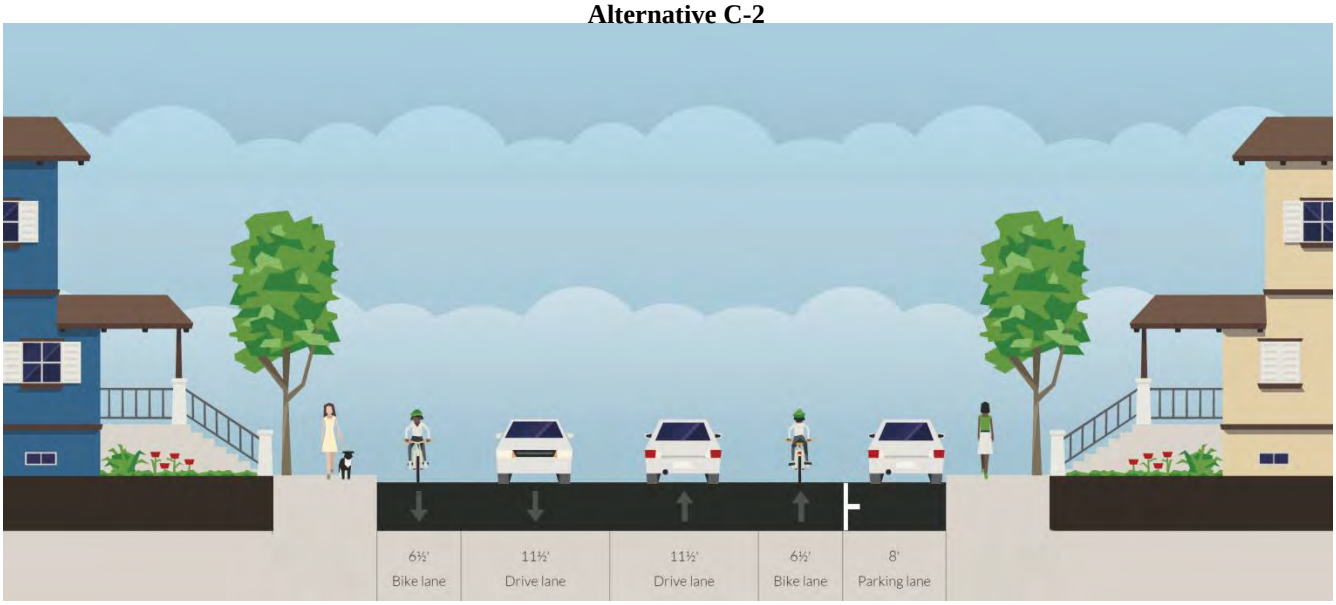
Alternative C would impact parking, although significantly less than the other Alternatives. Based on our parking observations during the midday peak period (critical period) 7 of an existing 42 parked vehicles would be displaced, however there would be a remaining inventory of approximately 83 spaces to in this section, sufficient to satisfy the peak demand.

All projected parking supply for all alterantives is contingent on a formal layout being established during preliminary design and may be adjusted.

The estimated construction cost for this alternative is approximately $85,000, including a 15% construction contingency.

While Alternative C does present a viable alternative in terms of vehicle, bicycle and parking lane widths, it is understood that these widths are not typical in Portsmouth, nor do they achieve desired widths per the Bicycle and Pedestrian Plan. In recognition of this a variation of Alternative C was developed which does achieve more standard widths. This includes two 6.5 foot bicycle lanes, two 11.5 foot travel lanes for vehicles as well as an 8 foot parking lane. Note however that this cross-section limits parking to one side of the roadway, rendering its impact on parking similar to Alternatives A & B.

Alternative C-2



After review each of the Alternatives were compared as to their impacts to safety for all users, traffic flow, mode shift (individuals switching mode choice from vehicles to bikes), and parking supply. In terms of safety Alternatives A and B provide the highest benefit (Alternative A could provide the highest amount of safety if accompanied with proper public education), while Alternative C would provide less improvement to all users. Alternative C provides the lowest impact to parking.

	Alternative A $126,000	Alternative B $169,000	Alternative C $85,000
Traffic Calming	+ +	+ +	+
Pedestrian Safety	+ +	+ +	+/−
Bicycle Safety	+ +	+ +	+
Traffic Safety	+	+	+
Mode Shift	+ +	+ +	+
Parking Supply	−	−	+/−

COST AND ENGINEERING ESTIMATE

As noted in the previous section, construction cost estimates were prepared for each alternative using NHDOT average bid prices. A construction contingency of 15% was carried given the early stage of design. A fee for construction services is not carried in the cost estimates as GPI is currently not under contract for that phase. Please refer to the Appendix for the Construction Cost Estimates referenced in the previous section.

PUBLIC PRESENTATION OF PREFERED ALTERNATIVE

Subsequent to the Initial Public Concerns meeting the design team developed three conceptual alternatives as previously described. Engineers from GPI presented these three alternatives to the public on February 12, 2015 as well as other meetings to update emergency response personnel and the Portsmouth Parking &Traffic Safety Committee. The purpose of these meeting was to gather feedback associated with the alternatives in terms of providing on-street bicycle facilities suitable for school age children and the resulting impacts to safety, traffic flow, parking and emergency response capabilities.

This public discussion of alternatives consisted of a presentation describing the meeting agenda, project background and project purpose as well as the project limits and existing characteristics of the Lafayette Road/Middle Street corridor. Input that was gathered as part of the initial public meeting held on November 19, 2014 was also summarized. Each of the three alternatives was then discussed in detail as well as the associated change to the existing roadway width, the reallocation/organization of the space between cars, how parking and bicyclists will result in a perceived narrowing of the travel way which typically results in lower vehicular travel speeds. It was noted that by delineating no parking zones within 25 feet of intersections, sight distance will be improved for vehicles accessing Lafayette Road/Middle Street. By adding a bicycle facility and designated parking areas, the effective roadway crossing length will be reduced for pedestrians decreasing their exposure to vehicle traffic. Minutes of this meeting are provided in the Appendix to this study which include responses to questions asked.

Individuals were asked to indicate their preferred alternative by placing a sticker on the plan which they felt best achieved the goals of the project. Individuals could also submit written comments subsequent to the meeting. Public input is important to gauge the public's acceptance of these facilities. These comments are also included in the Appendix.

Of the Alternatives:

- 17 individuals indicated preference for Alternative A either by sticker or written comment
- 14 individuals indicated preference for Alternative B either by sticker or written comment
- 4 individuals indicated preference for Alternative C either by sticker or written comment

Discussions with emergency response personnel indicated a strong desire that, whichever alternative be advanced, the ability of emergency response vehicles not be impeded. Police expressed concern about the ability for cars to pull out of the traffic stream and into the shoulder. The fire department indicated that Lafayette Road/Middle Street is a key corridor for fire and ambulance to quickly access/egress downtown between outlying fire stations and hospitals. First responders also expressed a preference to transition the two-way cycle track at Richards Avenue

instead of Summer Street if Alternative A is advanced as it was felt bicyclists would not adhere to a two stage crossing.

After review of comments and concerns GPI recommends Alternative B be advanced as a preferred alternative. Alternative B provides the most flexibility to meet the needs of all users, provides a dedicated, safe facility which could be reasonably expected to attract school age children use and also satisfying emergency response personnel concern. An important decision to be made regarding Alternative B is whether or not to advance it as a cycle track (with vertical protection in the buffer) or as a buffered bike lane (no vertical protection). GPI recommends advancing as a cycle track with flex post bollards as the vertical protection. These devices are relatively low cost and can be break away, so as if emergency response vehicles do need to access this space they could easily do so without risking damage to the vehicle. These bollards could also be easily removed if necessary.

Alternative A, while demonstrating the highest degree of public support and greatest potential for transformative improvement, is felt to have too high of a learning curve associated with it to be applicable to the City of Portsmouth at this time. Alternative C is not preferred since it is not believed it will achieve the objective of promoting and increasing cycling for users of all ages.

A public presentation of the identified alternatives and the preferred alternative was made at the City of Portsmouth City Council meeting held on April 6, 2015. At this meeting the City Council voted to explore Alternative B further as the preferred alternative.

Brief minutes of this meeting are provided in the Appendix to this study.

APPENDIX

SAFE ROUTES TO SCHOOL GRANT APPLICATION
BICYCLE AND PEDESTRIAN MASTER PLAN RECOMMENDATION
MEETING MINUTES
REQUEST FOR PROJECT REVIEW & RESPONSE
COAST SCHEDULE
ALTERNATIVE A
ALTERNATIVE B
ALTERNATIVE C
PUBLIC COMMENTS

SAFE ROUTES TO SCHOOL GRANT APPLICATION

CITY OF PORTSMOUTH
Community Development Department
(603) 610-7232
Planning Department
(603) 610-7216

John W. Corrigan
Safe Routes to School Coordinator
Bureau of Planning and Community Assistance
N.H. Department of Transportation
7 Hazen Drive
Concord, NH 03302-0483

July 17, 2013

Dear Mr. Corrigan and Members of the Statewide Advisory Committee:

Thank you for the opportunity to revise the infrastructure portion of the City of Portsmouth's application for Grant Round 6 for the Safe Routes to School program. Sections of the attached application have been revised to address the items raised in the e-mail from John Corrigan dated June 24, 2013 as well as the memorandum from Brian F. Lynch dated April 5, 2013 summarizing the observations from the field reviews by NHDOT. The portions that have been revised are listed below:

- Page 5, Item 2 -- Infrastructure reimbursement funding sought
  We have increased our total infrastructure budget to include material testing for the bike racks and pedestrian signs. We have also broken the projects into phases for partial funding (if necessary).
- Pages 6 and 7, Table 2: Detailed budget estimate for Infrastructure elements
  We have added material testing line items for Projects 2 and 3.
- Page 10, Student Tally Sheet Results
  We have inserted the Student Talley sheet summary (previously sent to the Committee as an addendum).
- Page 16, Description of Lafayette Road / Middle Street On-Road Bicycle Route Enhancements
  In the last paragraph of that section, we have added that all work will comply with the related ADA requirements.
- Page 17, Figure 1
  We have replaced the previous image with a photo of the U-style rack which is currently our City standard.

Sincerely,

Juliet T. H. Walker, AICP
Transportation Planner
Planning Department

Cc: Scott Bogle, RPC

1 Junkins Avenue
Portsmouth, New Hampshire 03801
Fax (603) 427-1593

Date received at NHDOT:

NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

SAFE ROUTES TO SCHOOL

Application Form for SRTS Reimbursement Funding
Round 6

GENERAL GRANTS

John W. Corrigan
Safe Routes to School Coordinator
Bureau of Planning and Community Assistance
N.H. Department of Transportation
7 Hazen Drive
Concord, NH 03302-0483
jcorrigan@dot.state.nh.us

Part I: Applicant Information

Applicant: Name of municipality, school district, and/or service provider.

City of Portsmouth
1 Junkins Ave
Portsmouth, NH 03801

Name, title, mailing address, telephone number, and e-mail address of a contact person. This individual will be the sponsor's primary contact with the NHDOT.

Juliet T. H. Walker
Transportation Planner
Planning Department
1 Junkins Ave
Portsmouth, NH 03801
(603) 610-7296
jthwalker@cityofportsmouth.com

List by name, physical and mailing address, telephone number and e-mail address each of the schools affected by this application:

Portsmouth Middle School,
155 Parrott Ave
Portsmouth, NH 03801
(603) 436-5781

New Franklin School
1 Franklin Drive
Portsmouth, NH 03801
(603) 436-0910

Dondero School
32 Van Buren Avenue
Portsmouth, NH 03801
(603) 436-2231

St. Patrick School
125 Austin Street
Portsmouth, NH 03801
(603) 436-0739

Little Harbour School
50 Clough Drive
Portsmouth, NH 03801
(603) 436-1708

Identify by name, title, and mailing address the individual or individuals authorized to sign a binding agreement on behalf of the school, municipality, and/or other service provider.

John P. Bohenko
City Manager
1 Junkins Ave
Portsmouth, NH 03801

Sponsoring Regional Planning Commission:

A copy of this application in its entirety has been submitted to:

Scott Bogle
Senior Transportation Planner
Rockingham Planning Commission
156 Water Street
Exeter, NH 03833

Part II: Budget

1) Non-infrastructure reimbursement funding sought:

Evaluation	$ $2,975
Education	$ $4,500
Encouragement	$ $8,650
Enforcement	$ $2,880
Total non-infrastructure	$ 19,005

Table 1: Detailed budget estimate for non-infrastructure elements

	Unit Price	*Unit*	*Quantity*	*Item Total*	*5Es Category*
Walkability / Bikability Evaluation					
Volunteer recruitment and training	25	hours	16	$400	Evaluation
Survey copies	0.15	pages	2,500	$375	Evaluation
Collection / tabulation of checklists	25	hours	40	$1,000	Evaluation
Prepare evaluation summary / report	25	hours	24	$600	Evaluation
International Walk and Bike to School Day					
Coordination / volunteer training	25	hours	32	$800	Education
Publicity flyers	0.15	pages	500	$75	Education
Educational posters	2.5	pages	20	$50	Education
Giveaways / incentives	5	number	200	$1,000	Encouragement
Bike Rally and Rodeo					
Publicity flyers	0.15	pages	500	$75	Education
Event Coordination	25	hours	24	$600	Education
Police detail	60	hours	8	$480	Enforcement
Walk Mount Washington Challenge					
Bumper stickers (or buttons)	2	number	200	$400	Encouragement
Police Safety Training					
Selective traffic enforcement and education (STEP)	60	hours	40	$2,400	Enforcement
Giveaways / incentives	25	number	200	$5,000	Encouragement
Safe Routes to School Program Coordination					
Content for City website	25	hours	24	$600	Education
Annual parent and in-class surveys	25	hours	24	$600	Evaluation
Design of safe routes to school map for each school	25	hours	40	$1,000	Encouragement
Map printing	0.5	pages	2,500	$1,250	Encouragement
Safe Routes to School National Conference Registration	350	fee	2	$700	Education
Safe Routes to School National Conference Travel and Accommodations	800	fee	2	$1,600	Education
			TOTAL	**$19,005**	

2) Infrastructure reimbursement funding sought:

Preliminary Engineering	$ 18,067
Right-of-Way	$ 0
Construction	$ 153,934
Construction Engineering	$ 18,067
Contingency	$ 30,787
Total	$ 220,854

Funding by Phase	
Phase 1 (Priority 1) Bike Lanes	$88,534
Phase 2 (Priority 2) Bike Racks	$24,520
Phase 3 (Priority 3) Pedestrian Signs	$107,800

Table 2: Detailed budget estimate for Infrastructure elements

(approved by David Defosses in the Engineering Division at the City of Portsmouth Public Works Department who is has received LPA certification from NHDOT)

Phase 1) Lafayette Road / Middle Street Bike Lanes

Installations	Unit Price	Unit	Quantity	Item Total	Notes
Signs	$300	each	16	$4,800	based on recommended 2 per block minimum, 8 blocks per mile)
Sharrows (for unstriped portions)	$155	each	8	$1,240	based on recommended 4 per block minimum, 8 blocks per mile)
Striping (installation and removal)	$3	linear foot	13,098	$39,294	striping & layout
Project mobilization				$10,000	
Total Contract Cost				**$55,334**	
Contingency				$11,067	20% of contract
PE/Preconstruction Admin				$11,067	20% of contract
Construction Engineering & Administration				$11,067	20% of contract
Project Total				**$88,534**	

Phase 2) Bike Racks for New Franklin School

Installations	Unit Price	Unit	Quantity	Item Total	Notes
Equipment and shipping	$900	rack	4	$3,600	
Material Testing	$1,000	labor + materials		$1,000	
Installation	$1,500	labor + materials	4	$6,000	
Project mobilization				$4,000	
Total Contract Cost				**$14,600**	
Contingency				$2,920	20% of contract
PE / Preconstruction Admin	$35	hours	100	$3,500	In House Staff Time
Construction Engineering & Administration	$35	hours	100	$3,500	In House Staff Time
Project Total				**$24,520**	

Phase 3) Pedestrian Flashing Signs near Crosswalks

Installations	Unit Price	Unit	Quantity	Item Total	Notes
Signs	$7,000	sign	8	$56,000	
Material Testing	$7,000	labor + materials		$7,000	
Installation	$2,000	labor + materials	8	$16,000	
Project mobilization				$5,000	
Total Contract Cost				**$84,000**	
Contingency				$16,800	20% of contract
Preconstruction Admin	$35	hours	100	$3,500	In House Staff Time
Construction Engineering & Administration	$35	hours	100	$3,500	In House Staff Time
Project Total				**$107,800**	

Part III: Purpose of Application

This application is for:

☐ Non-infrastructure

☐ Infrastructure

☒ Both

Summarize of the projects and programs that will be funded if this application is approved:

The City would like to continue to implement infrastructure projects and non-infrastructure programming as outlined in the City's Safe Routes to School Action Plan which was completed in 2010. Our priority activities for this round include:

- design and construction of an on-road bicycle route on Lafayette Road / Middle Street including marked bike lanes, pavement markings, and signage as appropriate;
- Walk or Bike to School Day events, activities, and incentives;
- evaluation and tracking of walk / bike to school habits and preferences for Portsmouth K-to-8 schools;
- increased traffic safety enforcement in school zones;
- bicycle racks at schools;
- installation of pedestrian flashing signals at four key crosswalks;
- dedicated Safe Routes to School part-time coordinator to provide volunteer trainings and Safe Routes to School program coordination.

Has the SRTS task force completed a travel plan?

☒ Yes
☐ No

If a travel plan is submitted in support of the application, the information may be summarized in the application. If plans and/or data in the travel plan are referred to in the application, indicate the specific page number.

Copies of the Portsmouth Safe Routes to School Action Plan are included with this submittal.

Part IV: Description of Program

1) Describe how this project addresses the "5Es:" Evaluation, Education, Encouragement, Enforcement, and Engineering.

a) EVALUATION

i) Have in-class and parental surveys been conducted?

An on-line parental survey was conducted between December 2012 and January 2013. In-class surveys were conducted in February of 2013.

ii) Has the survey data been submitted to the National Center for Safe Routes to School?

Yes.

iii) Summary of the results of the surveys.

Parental Survey Results

- Fifty-six households completed the on-line survey and the grade levels represented in the survey were fairly evenly disbursed between all households, with 1st and 3rd having the highest percent of responses.
- 41% of the respondents live within ½ mile of their school and 44% walk or bike to school in the morning and 45% walk or bike from school in the afternoon.
- Most of the kids who walk or ride to or from school live within a ½ mile of the school.
- 66% of respondents indicated that concern about the safety of intersections and crossings affected their decision to allow their children to walk or bike to school. 59% and 53% respectively indicated that the amount and speed of traffic along the route was a factor in their decision.
- Most of the respondents (61%) felt that their school neither encouraged or discouraged walking or biking to/from school.
- 73% of respondents indicated that their child thought that walking or biking to school is fun.
- Only 4% of respondents are not convinced that walking or biking to school is healthy for their child.

Student Tally Sheet Results

- Six classrooms at two different schools (Dondero and New Franklin) participated in the in-class survey. Most of the classes were grade 5, but 2nd and 4th grade classrooms also participated.
- Most of the respondents traveled by bus or family vehicle during the 3-day tally period. Of the sample, 6% to 8% walked to and/or from school and there were no bikers during this period.
- Weather conditions did not vary substantially during the tally period and did not appear to impact the number of walkers.
- Anecdotal feedback from teachers indicated that there are more bikers and walkers during the spring months when the weather is warmer and sidewalks are clear.

iv) Ongoing Evaluation Activities

Bicycle / Pedestrian Counts

One of the most effective ways to measure changes in transportation mode choice is to perform bicycle and pedestrian counts at strategic intersections. We propose conducting these counts on an annual basis, using the guidelines provided in the Safe Routes to School Action Plan (see page 69).

Walkability / Bikability Checklists

In addition to annual updates to the parental and in-class surveys, we propose conducting a survey to help us assess the suitability of our existing roadways and sidewalks for walking and biking. We would distribute this information to a sample of students, parents, and other community members. The results, when tabulated, can be useful for guiding future city expenditures and funding requests for infrastructure improvements along school routes.

b) EDUCATION

Educational activities are operational measures that will enhance the overall effectiveness of existing or proposed bicycle and pedestrian infrastructure. These measures focus on:

- raising awareness about Safe Routes to School program goals and benefits;
- teaching safe behavior for pedestrians, bicyclists, and drivers along school routes;
- providing tools that help parents and students plan and coordinate their individual and household travel plans.

The measures proposed build off the recommendations of the 2010 Safe Routes to School Action Plan (see pages 64 and 65), focusing on activities with high visibility and the capacity to reach a large audience and that benefit students from each of Portsmouth's schools.

Walk and Bike to School Days

We propose organizing a regular Walking/Wheeling Wednesdays program starting the first week of school in September. While we plan to encourage students to walk and bike whenever they can, the emphasis of the Walking/Wheeling Wednesdays will be to educate about the benefits of walking or biking and to demonstrate safe practices for drivers, walkers, and

bikers. For these days, we plan to organize staging areas along school travel routes where parents and students can gather to walk or bike together. Trained volunteers at these locations and all along the routes will demonstrate and distribute informational materials to explain safety measures for parents and students alike.

The target audiences for these days are the "*interested but concerned*" travelers (those who may be very interested in walking or biking to school, but who may for a variety of reasons feel unsafe) as well as the "*strong and fearless*" travelers (who may feel comfortable walking or biking to school but may need a refresher on safe commuting practices). In addition, by increasing visibility community-wide through press releases, newspaper articles, posters, and flyers, we hope to raise awareness for all commuters to be aware and on the look out for pedestrians and bicyclists on these school travel routes.

We also hope to plan a week-long Walking/Wheeling program to correspond with the International Walk and Bicycle to School Day in October. Additional activities / outreach during that week may include: international-themed lunch menus at each of the schools, multi-lingual posters, exhibits with examples from schools around the world, daily educational announcements or fun facts at each school, and a school-by-school logging of total walking / biking miles for the week.

Safe Routes to School Web Presence

Whether through creation of a simple web page, through social networking sites, or a combination of both, we would like to create an on-line presence to educate the Portsmouth community about Safe Routes to School goals and benefits. With this mechanism, we would also link to the wealth of state and national resources available that provide information for parents and students alike.

Safe Routes to School National Conference

To build our community's capacity to carry out local initiatives in support of Safe Routes to School goals, we are proposing funding to cover registration and travel fees for attendance at the Safe Routes to School National Conference in Sacramento, CA in August 2013.

Program Coordination

It is our intent that all of the non-infrastructure activities proposed in this application would be managed by the City's Planning Department and School Department staff with support and coordination from the Safe Routes to School Task Force. However, anticipating that many of these activities may require a significant investment of preparation time, we are requesting funding for a dedicated part-time program coordinator for a period of one-year to be responsible for assisting with coordination and implementation of specific tasks. Providing a dedicated staff person for this purpose, will enable us to move forward quickly toward implementation of these activities and build local volunteer capacity without overburdening existing staff.

c) ENCOURAGEMENT

As with education, encouragement activities improve the effectiveness of existing or proposed bicycle and pedestrian infrastructure (see pages 64 and 65 of the Safe Routes to School Action Plan). Encouragement measures include events and incentives to motivate students to walk or bike to school. Encouragement focuses on positive reinforcement of existing practices and also works to expand or increase student walking and biking habits.

Our target audience for the encouragement measures are the "*interested but concerned*" travelers -- those who may be interested in walking or biking to school, but may need a little extra encouragement to put their intentions into practice.

Suggested Route to School Maps

Providing maps that lay out a Suggested Route to School for walking and/or biking can be one of the most cost-effective and tangible means of encouragement. The purpose of the maps is to provide school officials, parents, and students with a tool to help plan the best walking and bicycling routes to (and from) school.

Walk Mount Washington Challenge

There is often nothing better than a little contest to motivate kids to a task. In the Walk Mount Washington Challenge, each child that participates would track the number of miles traveled by foot in a set amount of time. Each child that walks the length of the Mt Washington Auto

Road (15.2 miles) would receive a bumper sticker or button that says “I walked up Mt. Washington (on my way to school.”

Bike Rally and Rodeo

A bicycle rodeo provides children with a basic understanding of the rules of the road and educates those children and their parents about bike safety. It also provides an opportunity for children to have a trained expert do a safety check on their equipment. A bicycle rodeo is set up with “stations” to test bicycle skills and to do the safety inspection.

We propose organizing a bike rally and rodeo in the summer or fall of 2013 in coordination with another scheduled bicycle event. The bike rally would organize bicyclists (children and adults) to meet at a gathering point and then ride along a pre-determined route to another central gathering point where the bike rodeo and other activities would be undertaken.

The costs would include event preparation / coordination and publicity and a police detail along the pre-determined route for the duration of the organized ride.

Give-Aways / Incentives

We propose to purchase a variety of giveaways to distribute at different Safe Routes to School events to encourage kids to participate. The types of giveaways would range from plastic reflector tags with the Safe Routes to School logo to bicycle helmets that could be raffled.

d) ENFORCEMENT

Enforcement measures are intended to be implemented by the local law enforcement community and are important for the success of both the programmatic and infrastructure activities listed above. As these activities will be carried out under the direction of the Portsmouth Police Department, they are an important member of the Safe Routes to School Task Force.

As recommended in the Safe Routes to School Action Plan, monitoring of speed is one of the most important measures to improve safety along school travel routes. In addition, targeted enforcement programs can also encourage motorists to yield to pedestrians at crosswalks, and help reduce illegal parking, or unsafe school parking lot behavior (see page 68).

STEP (Selective Traffic Enhancement Program)

We propose funding to increase police monitoring of traffic along school travel routes and targeted enforcement in school zones.

e) ENGINEERING

Name: Lafayette Road / Middle Street On-Road Bicycle Route Enhancements

Purpose: Improve road safety for cyclists and create bicycle route to connect neighborhoods to schools and downtown locations.

Need: Though this route is listed by regional organizations as a primary bicycle route through the city and is suited for biking, it has no existing bicycle lanes, bicycle route signs, or bicycle route pavement markings. Providing dedicated bike lanes and/or shared lane markings will notify motorists that this is a primary bicycle route and will also encourage students to bicycle to school.

Location: Along Lafayette Road and Middle Street (Route 1) from Andrew Jarvis Drive to Congress Street. A map of the project area is appended to this application as *Figure 3: Lafayette Rd / Middle St Bike Lanes Proposed Project Area*.

Project details: Lafayette Road and Middle Street (Route 1) connect many of Portsmouth's close-in, older neighborhoods to downtown, St. Patrick School, the middle school, and the high school. Providing dedicated bike lanes and/or shared lane markings along portions of this route will encourage students to ride to school and will also encourage people throughout the community to use bicycles more frequently as their chosen mode of transportation. In addition to connecting neighborhoods to the middle school and St. Patrick School, students in grades K through 8 and their families will likely use all or portions of this route to travel to the public library, athletic facilities at the high school, and the Lafayette Park and Playground.

The Lafayette Road / Middle Street (Route 1) bike lanes could become a primary spine of a future network of bike routes throughout the city (see Bike Network Diagram from the Safe Routes to School Action Plan, page 19). The curb-to-curb dimensions of this portion of Route 1 vary, but it is approximately 42 feet in many locations. To accommodate bike lanes, the Action Plan recommends limiting on-street parking in some locations. In other sections where the road is narrow and on-street parking is necessary, the Action Plan recommends consideration of shared lane markings and signage.

This proposal would include a comprehensive preliminary design process that considers all possible options for this route and determines the most effective way to create a dedicated bike route that is safe and usable for bicyclists of all ages.

This project would also evaluate pedestrian crossings at the intersections along this section of Route 1 to consider where improvements might be necessary to improve ADA access for travelers to and from school. The proposed work will comply with ADA requirements.

Name: Bicycle Racks at New Franklin School

Purpose: Providing secure and convenient bicycle parking helps encourage more children, faculty, staff, and visitors to bicycle to school.

Need: Previous Safe Routes to School projects added racks at Little Harbor, Dondero, and the Middle School. New Franklin School has a need for racks to provide sufficient amount of bicycle parking at this location.

Location: New Franklin School

Project Details: The preferred bike rack design supports a bicycle in an upright position in an area that is secure and convenient. The racks are surface mount racks that would require installation of a concrete pad at the selected location. Each rack would

accommodate two (2) bicycles and provide a means to secure the bicycle in two places.

Figure 1: Example of U-shape style back racks

Name: Pedestrian Flashing Signs near Crosswalks

Purpose: Alert motorists at key pedestrian crossing locations.

Need: While the School Department utilizes crossing guards at a number of locations and the City routinely re-stripes its crosswalks and maintains pedestrian alert signs near some of the crosswalks, the heavy vehicle traffic volumes during school openings and closings increase the need for increasing pedestrian safety at certain crossings. Visibility is particularly a concern for parents with young children walking to school.

Location: Key crossing locations along planned Safe Routes to School routes are at the intersections of Stark and Dennett Streets, Miller Avenue and Lincoln Avenue, Aldrich Road and Middle Street, and Clough Drive and South Street (see pages 21, 36, and 48 of the Safe Routes to School Action Plan.) A map of the

project area is appended to this application as *Figure 4: Locations for Pedestrian Flashing Signals at Crosswalks*.

Project Details: Pedestrian activated flashing signals would be installed at either side of the crosswalks at these locations.

Figure 2: Example of Pedestrian Flashing Signal for Crosswalk

2) Demonstrated community support for program

a) SRTS Task Force members

Name	Affiliation
Ed McDonough	Superintendent of Schools
Thomas Martin	School Board Member, Parent
Peter Newbury	Resident, Bicycle enthusiast
Captain Frank Warchol	Portsmouth Police Department
Juliet Walker	Transportation Planner, Portsmouth Planning Department

b) Documentation of support from governing bodies.

Letter from City Manager
City Council minutes for January 7 including vote on grant

c) Documentation of parental support.

Parent letters (2)

d) Letters of support from representatives of the educational community.

School Board

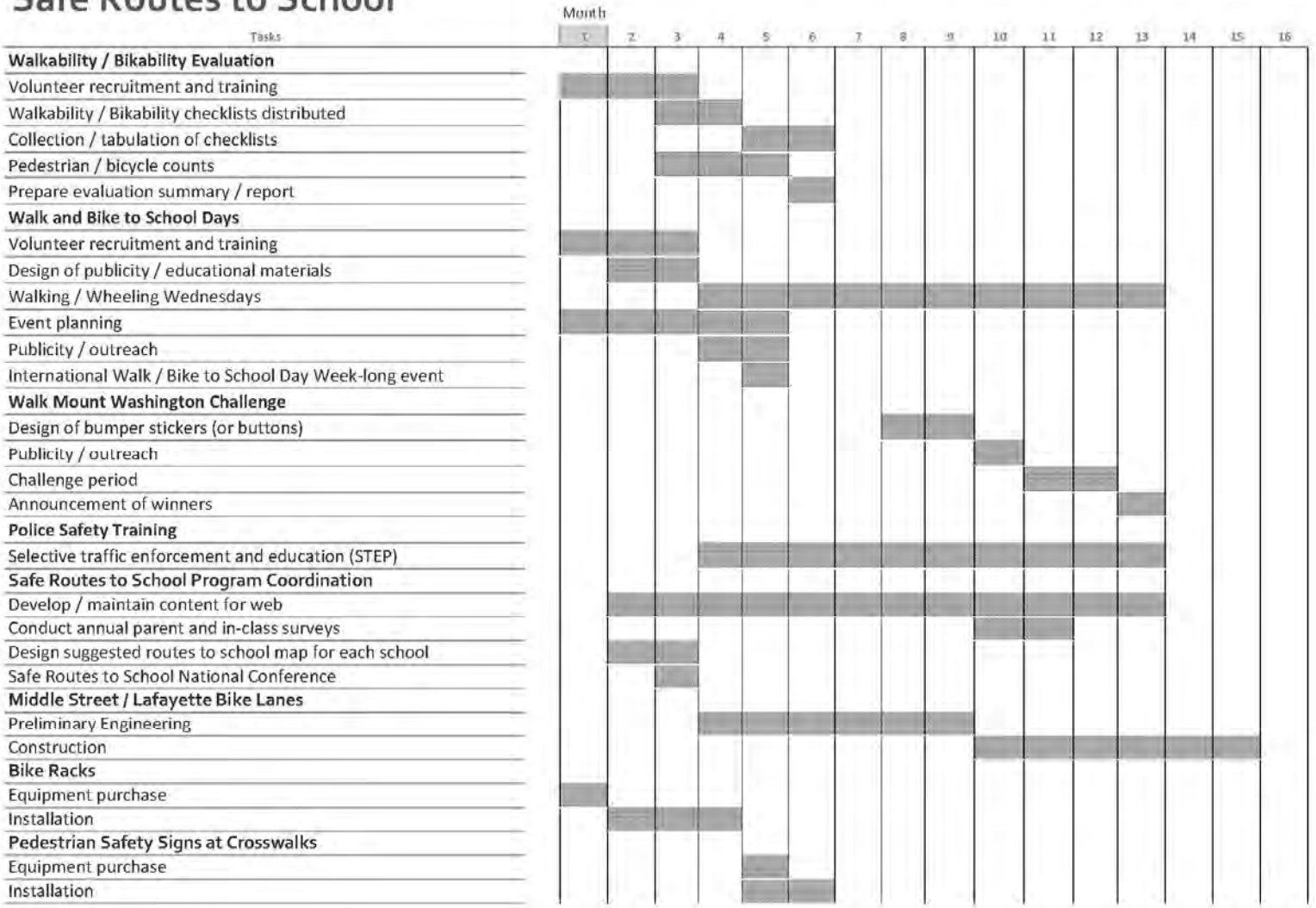
e) Letters of support from walking and bicycling organizations and other interested advocacy groups.

Seacoast Area Bicycle Routes
Health Officer
Sustainable Portsmouth
Local resident

3) For infrastructure proposals, will the project be municipally managed? ☒Yes ☐No (If not municipally managed, indicate who will manage the project, and provide full contact information.)

4) Describe the source and amount of any non-SRTS funds used in connection with the infrastructure and/or non-infrastructure projects.

Safe Routes to School



6) Project Status

With our previous Safe Routes to School grant funding we were able to provide a community workshop from the National Safe Routes to School program, purchase bike racks for a number of our schools, distribute t-shirts for Safe Routes to School activities participants, acquire school crossing delineators, and hire a consultant to prepare the Safe Routes to School Action Plan. The recent addition of the Transportation Planner position in our Planning Department enables us to devote the necessary staff time for coordinating the Safe Routes to School program on behalf of the City.

In addition to the 2010 Safe Routes to School Action Plan, bike lanes, bicycle racks, and crosswalk safety improvements are all supported by the Transportation section of the City's 2005 Master Plan, which included a goal to *"Provide for safe and convenient bicycle and pedestrian circulation throughout the City."* Strategies related to this goal include:

- Provide safe and sufficient parking facilities for bicycles
- Create a network of both shared and separated routes for safe cycling and walking.

Current bicycle and pedestrian related infrastructure projects in the City include:

- Ongoing reconstruction of existing City sidewalks, based on need and coordinated with other street improvements, are carried out under the City's multi-year Citywide Sidewalk Reconstruction Program, which is funded annually in the City's Capital Improvement Plan.

- Marcy Street Area Streetscape Improvements
  This project will upgrade water and sewer pipes prior to replacement of brick sidewalks on Marcy Street, Gardner Street and other miscellaneous brick sidewalks in the Little Harbour School and Portsmouth Middle School neighborhoods

- McDonough Street Area Improvements
  This project will involve major infrastructure upgrades along Langdon, Brewster and a portion of McDonough Streets which are in the neighborhoods near St Patrick and the Portsmouth Middle School. Paving and concrete sidewalk improvements will follow after the water and sewer upgrades have occurred.

- □ Coakley Rd and Cottage Street Sidewalk Connection
  This project seeks to connect Coakley Road pedestrians with an accessible route across the bypass and up Cottage St to Woodbury Avenue. These neighborhoods are in the vicinity of New Franklin School.

Portsmouth currently has more than 50 miles of sidewalks and most of the downtown streets have sidewalks on both sides. Each year, the City allocates significant funding for upgrades to sidewalks and new sidewalk construction. In addition, the City has a strong and longstanding commitment to multi-modal transportation options including continued collaboration with COAST, which provides regional bus service. The City continues to work to increase the number of bicycle racks available throughout the city and is currently preparing to undertake a Bicycle and Pedestrian Master Plan that will be incorporated into the City's Master Plan, which is scheduled to be updated in 2014.

Safety of our school community and our students continues to be a priority for the City. Members of the City's Police Department serve as School Resource Officers at Portsmouth's schools, acting in an educational as well as enforcement role and encouraging safe behavior both in school as well as en route to or from school. As part of the Department's Selective Traffic Enhancement Program (STEP), staff employ electronic message boards with radar-triggered speeding alerts for passing motorists and officers continue to be diligent about enforcement of traffic laws in school zones.

7) Communities with limited resources. Is your community requesting bonus point based on "Objective #2: Make the Program Accessible to Diverse Participants?"

_____Yes ___X___No

BICYCLE AND PEDESTRIAN MASTER PLAN RECOMMENDATION

5B: South


Location Key
Union Cemetery
North Mill Pond
North Mill Pond Path
McDonough Street Playground
Goodwin Park
St. Patrick's School
Portsmouth Middle School
Portsmouth Public Library
Portsmouth District Court
Strawbery Banke Museum
Prescott Park
Trial Gardens
Four Tree Island
Peirce Island
Haven Park
South Mill Pond
Portsmouth City Hall
South Street Playground
Leary Field
South Mill Pond Playground
Clough Field
Little Harbour School
Piscataqua River
Leach's Island
Wentworth Coolidge State Historical Site
Little Harbor Trust Fund Land
NEW CASTLE
RYE
PORTSMOUTH
Portsmouth High School
Jones Avenue Recreation Area
Sagamore Creek
Urban Forestry Center
Deer St
Hanover St
Fleet St
Congress St
Porter St
State St
Cabot St
Chapel St
Pleasant St
Marcy St
Washington St
Junkins Ave
Rogers St
Leary Field Path
Elwyn Ave
Lincoln Ave
Highland St
Middle Rd
South St
Broad St
New Castle Ave
Sagamore Ave
Little Harbor Rd
Belle Isle Rd
Jones Ave
Summit Ave
Andrew Jarvis Dr
Lafayette Rd
Wentworth Rd
Gosport Rd
Odiorne Point Rd
Brewery Ln
Islington St

City of Portsmouth **Bicycle** and **Pedestrian Plan**

Bicycle Network Plan

August 2014

EXISTING FACILITIES

- Shared-Use Path
- Bike Lane
- Shared-Lane Marking

\# Project ID

PROPOSED BIKE IMPROVEMENTS

- Shared-Use Path
- Side Path
- Cycle Track
- Buffered Bike Lane
- Bike Lane
- Contraflow Bike Lane
- Shared-Lane Marking
- Shared Street
- Pedestrian Street
- Bike Boulevard
- Signed Route

SPOT IMPROVEMENTS

- Gate Access
- Intersection Striping
- Raised Intersection
- Pedestrian Scale Lighting
- Actuated Signal
- Bike Signal
- Intersection Geometry
- Trailhead

0 0.125 0.25 Miles

Toole Design Group

MEETING MINUTES

MINUTES OF MEETING HELD ON **October 9, 2014 at 11:00am.**

Lafayette Road/Middle Street Bicycle Facilities
Portsmouth, NH
State Proj. No. 28757 (GPI Proj. No. MAX-2014051.00)

DATE PREPARED: October 14, 2014

LOCATION: City of Portsmouth Planning Department, Portsmouth

ATTENDEES: Jason DeGray, Greenman-Pedersen, Inc.
Joe Johnson, Greenman-Pedersen, Inc.
Peter Rice, Portsmouth DPW
Conor Semler, Kittelson & Associates, Inc.
Rick Taintor, Portsmouth Planning Department
Juliet Walker, Portsmouth Planning Department

PURPOSE: Project Kick-off Meeting

Discussion:

This meeting was held in order to review the project scope and discuss the draft schedule. At this time the contract language has been finalized and is in the process of receiving City Manager's signature.

The project is receiving a portion of its funding through the Safe Routes to School Program with additional funding supplemented by the City. The primary objective of the project is to provide an on-road bike route along Lafayette Road/Middle Street that is safe and usable for bicyclists of all ages.

The City just recently received the final version of their Bicycle/Pedestrian Master Plan. This will be provided to the design team. Conceptual alternatives should be compared with the Master Plan's toolkit for facilities, and any deviations should be communicated early in the design.

Greenman-Pedersen, Inc. (GPI) will compile the base plans for the project using the available GIS data provided by the City. GPI will coordinate with the GIS Coordinator, James McCarty to obtain this information. The project is intended (at this point) to include striping improvements without adjustments to the existing curbline. Field survey is not anticipated.

GPI will perform turning movement traffic counts at the two signalized intersections of Lafayette Street at South Street and Middle Street at Miller Avenue/Summer Street. The traffic counts will include vehicles, pedestrians and bicyclists. The time periods to be collected will coincide with the start and end of the school day. The City requested that GPI also include a count at the intersection of Lafayette Road at Andrew Jarvis Drive which is the entrance to the Portsmouth High School. Improvements are anticipated at this intersection during the summer of 2015 as part of a separate project. A concept was prepared for the anticipated improvements. The DPW will provide GPI with the concept so that a scope/fee can be prepared for the final design. GPI will also install automatic traffic recording devices at two locations along the corridor to determine daily fluctuation of traffic as well as to determine the 85th percentile speed.

GPI will also conduct a parking study to determine the demands along the corridor. There was a discussion of when would be the best time to conduct the parking study. It was determined that the **parking study could be delayed until after the local concerns meeting** so that public input could be sought as to when the greatest demand for parking occurs. Once that has been determined, GPI can perform the parking study.

It was also discussed that the vehicle/pedestrian/bike counts be delayed until after the local concerns meeting. However, GPI and Kittelson (KAI) had additional discussion after the meeting and it is suggested that this data collection not be delayed as weather may be less conducive to walking/biking. As such, it is anticipated that the **vehicle/pedestrian/bicycle data collection will occur the week of October 20th** (given the presence of Columbus Day on October 13th, that week is not ideal of counts). Peak hour counts will be obtained in coordination with school arrival (6:45 to 8:45 a.m.) and departure (2:00 to 4:00 p.m.). GPI will confirm exact times with school administration.

KAI requested that home address data be obtained for students attending the schools along this corridor so that there is an understanding of origin/destination. City staff will attempt to obtain this data.

The local concerns meeting is tentatively scheduled for mid-November and will focus on describing the project objectives without necessarily proposing solutions. It will be an opportunity to obtain public comment and concern. It is expected that the potential loss of parking along this corridor could be the most contentious issue. GPI recommended that a meeting be held with school administrators prior to the first public meeting. This meeting is being coordinated for mid/late October. Additional outreach to abutters, bike committees/clubs, schools and the City Recreation Department is recommended prior to the first public meeting.

Following the local concerns meeting GPI and KAI will work together with the City to develop three alternatives for the corridor. Preliminary cost estimates will be developed for each. City staff recommended that GPI/KAI meet with COAST to present the three alternatives and discuss how the many bus stops along the corridor will be integrated.

A preferred alternative will be selected and presented at a public forum. It may be possible to have the public presentation prior to the end of the year, but it is possible that this could slide into the early part of 2015.

Once a preferred alternative is selected, it was suggested that the project be brought before the City Council. This will be discussed further when the project reaches this milestone.

Following the public meeting, GPI and KAI will develop the draft Engineering Study for submission to the City. Upon approval of the draft, the final study will be submitted to New Hampshire DOT in accordance with the LPA Process. GPI requested that crash data be provided for the corridor so that it may be included in the Engineering Study. GPI will coordinate with City staff to obtain this data.

City staff indicated that there are adjacent future projects planned that will need to be considered. The first involves improvements to the intersection of Islington Street at Maplewood Avenue/Middle Street. This project will improve pedestrian safety and is envisioned to incorporate shared accommodations for bicyclists. The second project includes the Maplewood Avenue corridor in the vicinity from Deer Street to Islington Street. This project will likely include a road diet with bike lanes and wider sidewalks.

Another potential project may include a change from two-way to one-way traffic flow at the intersection of Greenleaf Avenue with Lafayette Road. This will be considered as the alternatives analyses advance.

City staff indicated that there have been many concerns expressed by the public about the desire for additional crosswalks along this corridor. This should be considered as part of the project with the understanding that these are secondary objectives.

It was noted by City staff that the project corridor is a popular route for events and it is not uncommon to average 1 event a month for road races, etc.

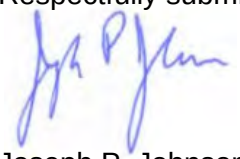
The City currently has two signature bike projects ongoing. The Sagamore Avenue project is currently under construction while the Market Street Gateway project has not yet started construction (tentative for 2015).

ACTION ITEMS SUMMARY:

1. GPI to perform vehicle/pedestrian/bicycle counts the week of October 20th.
2. City to request student home address information.
3. City to schedule local concerns meeting.
4. City to schedule meeting with school administrators prior to local concerns meeting.
5. City to provide GPI with the conceptual plan for Andrew Jarvis Drive.

These minutes constitute my recollection of the Project Kick-off meeting to the best of my knowledge. Please advise me within ten (10) days, in writing, of any exceptions or corrections.

Respectfully submitted,



Joseph P. Johnson, PE, PTOE
Senior Project Manager

cc: Attendees

MINUTES OF MEETING HELD ON **November 19, 2014 at 7:00pm.**

Lafayette Road/Middle Street Bicycle Facilities
Portsmouth, NH
State Proj. No. 28757 (GPI Proj. No. MAX-2014051.00)

DATE PREPARED: November 24, 2014

LOCATION: Portsmouth Middle School, Parrott Avenue, Portsmouth

ATTENDEES: Jason DeGray, Greenman-Pedersen, Inc.
Chief Stephen Dubois, Portsmouth Police Department
Eric Eby, Portsmouth DPW
Joe Johnson, Greenman-Pedersen, Inc.
Peter Rice, Portsmouth DPW
Conor Semler, Kittelson & Associates, Inc.
Juliet Walker, Portsmouth Planning Department
Captain Frank Warchol, Portsmouth Police Department
See attached sign-in

PURPOSE: Initial Public Meeting

Discussion:

Mr. DeGray made a presentation describing the project objectives, the project limits and some of the existing conditions along the Lafayette Road/Middle Street corridor. He also provided an overview of the various types of bicycle accommodations that were highlighted within the Bicycle and Pedestrian Master Plan that was recently completed by the City. Each of the bicycle options discussed have the potential to be implemented as part of this project. Shared-lane markings, bike lanes, buffered bike lanes and cycle tracks each have advantages/disadvantages. But most notable, is the varying level of comfort that cyclists experience with each of these facilities. Mr. DeGray stressed that this Safe Routes to School Project is intended to provide a facility that is safe and usable for cyclists of all ages.

After the presentation, there was an opportunity for questions and comments. Following are the major points of discussion:

What can be done with the existing sidewalks and their condition?
The project scope does not necessarily include sidewalk improvements. However, the project can be used as an opportunity to identify issues which could be addressed as a separate project.

What is being done about the excessive travel speeds of vehicles?
The project scope does not include the adjustment of the existing width of the roadway or physical traffic calming measures. However, the reallocation of the roadway width using striping will provide a perceived traffic calming effect by assigning a specific, narrower space for vehicles to operate. Tighter travel lanes generally result in slower travel speeds. Ultimately the speed issue along the corridor is highly dependent on police enforcement.

Can different types of bike facilities be used along the corridor?
Yes, depending on the particular constraints or objectives, the type of proposed facility may change along the corridor.

What is being done about the parking? Some abutters do not have off-street parking available.
The parking along the project will be studied and discussed further as part of the project. The different options for bicycle facilities will have varying potential impacts on parking. It may be possible that if parking is lost along the corridor, there may be spaces available along the side streets.

There are two problems along this corridor related to increasing the amount of cycling. The first is that past paving operations were not completed properly and this resulted in the asphalt surface not extending all the way to the curb line. This makes for a rough riding surface. The second problem is that the biking of students will occur during the AM peak hour when motorists are most in a rush. It is felt this is an unsafe condition.
These comments are noted.

This project is a bad idea. The project should be focused on reducing traffic. No responsible parent would let their child bike in this area to school. The project terminates at the High School, but what will a bicyclist do beyond this point? Also, downtown speeds are much lower, but there are faster speeds along this corridor.
These comments are noted. As the project progresses, it will be important to convey the advantages that the improvements will have on the community.

From the perspective of a motorist, biker and pedestrian along this corridor, the side streets are not safe to access Middle/Lafayette. The sight distance is an issue pulling out of the side streets and it would be difficult to see bicyclists. The "No parking here to corner" signs are not enforced and causing the sight distance problems.
The City enforces the parking regulations along the corridor. City staff should be contacted when illegal parking is occurring.

South of Miller Street the parking is more sporadic. Better definition of the parking is needed and curb extensions would be very helpful to improve pedestrian visibility and result in improved safety. The rapid rectangular flashing beacon installed along the corridor has been very effective to increase awareness of crossing pedestrians.
These comments are noted.

It is important that this project be looked at as a whole and how it fits into the bike/ped master plan. It is felt that the improved bike facilities along this corridor will have a positive impact on the community. It will provide another transportation option to safely/quickly access places along this route. The facilities will help to increase the number of bikers, not just those biking today. The project will increase awareness and visibility of bicyclists.
These comments are noted.

Within communities that are further along with implementing bicycle facilities, does biking become safer?
Yes, as seen in Portland, as bicycling becomes more popular, the number of crashes remains relatively unchanged.

I am in support of the City's bike/ped initiative, however, I am concerned about the priority of this project as there are other parts of the City that have even less infrastructure than currently exists along this corridor.
The corridor in particular has the ability to connect many schools and desirable destinations which accounted for the eligibility of Safe Routes to School Funding. For this reason, it may rank higher than other projects within the City. Improvements to the Elwyn Park/ Dondero School area will be addressed in a separate City project in the near future.

This project also affords the City the opportunity to try some bicycle facility treatments to see how they are utilized and what works best. These lessons will benefit projects in other locations of the City.

Anything less than bollards and eliminating parking along this corridor would be considered a half measure in order to provide the safest facility. There is a wide range of biking abilities that will be served by this project.
These comments are noted.

Is the example of parking within the buffer of the cycle track a common practice?
Yes, this configuration is common.

The crosswalk at the intersection with Mendon is dangerous. It seems that driver inattention and vehicle speed contribute to the situation.
The City Police are aware of this issue. This would most likely be a good location for curb extensions.

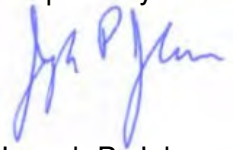
I would not be comfortable with my child riding in the bike lane if it was simply protected by a bollard spaced every 30'.
This comment is noted.

Following are the comments that were noted on the roll plan depicting the existing conditions:

-The crosswalk from Andrew Jarvis Drive across Lafayette Road leads to nowhere.
-The intersection of Greenleaf Avenue at Lafayette Road needs lighting and a crosswalk.
-There is a safety issue at the Mendum/Lawrence crosswalk.
-Lincoln Avenue could be considered as a bike route alternative.
-A crosswalk is needed at the end of Park Street where it intersects Middle Street.
-The sight distance at Union Street is not good.
-The woman's club near Miller Avenue does not have any off-street parking.
-Short term parking is available at the public lot on the corner of Miller Avenue.

These minutes constitute my recollection of the Initial Public Meeting to the best of my knowledge. Please advise me within ten (10) days, in writing, of any exceptions or corrections.

Respectfully submitted,



Joseph P. Johnson, PE, PTOE
Senior Project Manager

cc: City Staff Attendees

Please sign in! Thank you.

NAME	STREET ADDRESS	E-MAIL
Sharon Hartford	59 Bow Ave.	s.hartford@yahoo.com
Charlie Griffin	210 WILLISTON	ca.griffin mh law firm.
Phil Corbett	166 Decatur Rd	corbettphilip@gmail.com
Jerry Zelin	70 Kensington Rd.	gmzelin@yahoo.com
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Tom Smart	133 Lincoln Ave.	tomsmart123@msn.com
Eric Eby	139 Market St. Amesbury	eric.eby@comcast.net
Diane Stradling	351 Union St	dianestradling@gmail.com
William Lyons	62 Mendum Ave.	wm.lyons@comcast.net
JASON KYROUSIS	420 LAFAYETTE AVE	IDMPORTSMOUTH@MYFAIRPOINT.NET

MINUTES OF MEETING HELD ON **January 15, 2015 at 2:00pm.**

Lafayette Road/Middle Street Bicycle Facilities
Portsmouth, NH
State Proj. No. 28757 (GPI Proj. No. MAX-2014051.00)

DATE PREPARED: January 29, 2015

LOCATION: City of Portsmouth Planning Department, Portsmouth

ATTENDEES: Jason DeGray, Greenman-Pedersen, Inc.
Joe Johnson, Greenman-Pedersen, Inc.
Peter Rice, Portsmouth DPW
Conor Semler, Kittelson & Associates, Inc.
Eric Eby, Portsmouth Parking and Traffic Engineer
Juliet Walker, Portsmouth Planning Department

PURPOSE: Review Concepts for Lafayette Street/Middle Road

Discussion:

This meeting was held in order to review the three alternative concepts for bicycle facilities along Lafayette Road/Middle Street developed by the Greenman-Pedersen, Inc. (GPI) team.

The GPI team presented each of the concepts from roll plans and a supplemental memorandum. The concepts included:

- Concept A – Two-way cycle track on the east (northbound) side of the street
- Concept B – Buffered/Protected bike lanes
- Concept C – Traditional bike lanes

Each of the concepts transitions to conventional bike lanes north of Summer Street/Miller Avenue, and then to shared lane markings north of Austin Street/Richards Avenue where the right-of-way is most constrained.

GPI and Kittelson & Associates, Inc. (KAI) walked through the plans one-by-one.

Concept A
The first concept features a two-way cycle track on one side of the street. The cycle track was designed on the east, or northbound, side of Lafayette Road/Middle Street to minimize the need for bicyclists traveling to or from the High School or Middle School to cross the street. Both schools are located east of Lafayette Road/Middle Street, so any student who also lives east of Lafayette Road/Middle Street could get to and from either school without crossing the street at all. Students starting from the west would only have to cross once.

One design challenge related to this concept relates to placing southbound bicyclists on the east side of the street. Drivers exiting from side streets and driveways are not accustomed to expect bicyclists coming from the right. Careful attention is required to raise awareness of two-way bicycle traffic.

The construction of Concept A would require removal of parking along one side of the street for significant portions of the street, particularly between Willard Avenue and Austin Street/Richards Avenue. Peter Rice indicated that the greatest demand for parking occurs between Aldrich Street and Austin Street/Richards Avenue.

Concept B
The second concept provides one-way buffered bike lanes along both sides of the street. The buffer can be designed with a vertical element such as bollards, planters, or parked cars to create a cycle track or protected bike lane. The cycle track design affords greater comfort and protection for bicyclists, but requires the greatest amount of roadway width.

Design of the cycle track requires careful attention at intersections, since bicyclists are separated from adjacent traffic and may be less visible to turning vehicles.

The construction of Concept B would require removal of parking along one side of the street for significant portions of the street, particularly between Willard Avenue and Austin Street/Richards Avenue. Parking impacts for Concept B are nearly identical to Concept A.

Concept C
The final concept would provide traditional five-foot bike lanes along the length of the corridor. This concept impacts parking the least, but provides the lowest levels of comfort to riders and would likely fail to attract students to travel to school by bicycle.

Peter Rice and Juliet Walker voiced a preference for Concept A as it would offer the greatest sense of comfort for riders and would represent a significant step forward for cycling in Portsmouth. They agreed that the next step is to take the concepts to the public while weighing the impacts to parking and seeking to identify the best design treatments.

Discussion of Impacts
Parking impacts are likely to be among the most significant concerns for the public. While each of these concepts would result in the loss of some parking supply, it is important to articulate the benefits. The proposed redesign would formalize parking by creating defined parking spaces. The total supply of parking is likely to be decreased, but the parking that is available will be more efficient and predictable.

GPI will study parking in the area of most concern (between Aldrich Street and Austin Street/Richards Avenue) to come to the public meeting equipped with sufficient information to discuss impacts. The presentation to the public will emphasize the number of spaces this project will provide compared with the number of spaces currently in use.

Another impact of the concepts would be shrinking widths of road space. The concepts feature 10’ lane widths and 7’ wide parking stalls. City staff noted that in other similar road types in Portsmouth, the standard has typically been 11’ to 12’ travel lanes and 8’ wide parking stalls. It was noted by all that the concepts include extra space for buffers which could be utilized to accommodate wider travel and parking lanes if desired. The final design will ensure enough space is provided to safely accommodate all roadway uses.

Emergency services have expressed concern over road diets and the potential impacts to emergency response times. The design of each concept provides frequent opportunities (through driveways and side streets) for vehicles to pull out of the way of emergency response vehicles. The presentation to the

public and emergency agencies will emphasize that these considerations featured into the design of each concept.

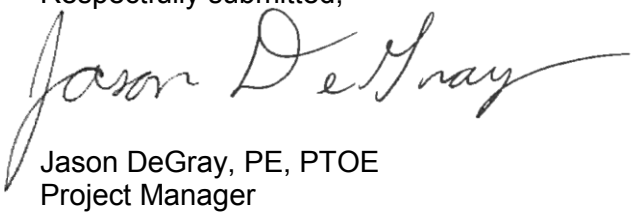
Public Meeting
The next public meeting to present the concepts was discussed. Tentative times for the meeting were identified, and the meeting was ultimately scheduled for February 12 at 7:00pm.

In addition to the items described above, the GPI Team and the City agreed on several themes to emphasize in the public meeting. First, the project is a complete streets project for the City of Portsmouth, not just Safe Routes to School. It will create a safer environment for all roadway users, especially pedestrians. And it will formalize parking for people who need to park along the corridor. Finally, emergency considerations were included from the outset.

Finally, the group discussed the upcoming presentations by Jeff Speck, who was planning a visit to Portsmouth and was interested in featuring the Lafayette Road/Middle Street project in his talks. The GPI Team would provide Jeff with some images to include in his presentation.

These minutes constitute my recollection of the Project Kick-off meeting to the best of my knowledge. Please advise me within ten (10) days, in writing, of any exceptions or corrections.

Respectfully submitted,



Jason DeGray, PE, PTOE
Project Manager

cc: Attendees

MINUTES OF MEETING HELD ON **February 12, 2015 at 7:00pm.**

Lafayette Road/Middle Street Bicycle Facilities
Portsmouth, NH
State Proj. No. 28757 (GPI Proj. No. MAX-2014051.00)

DATE PREPARED: February 26, 2015

LOCATION: City Council Chambers, Portsmouth City Hall, 1 Junkins Avenue, Portsmouth

ATTENDEES: David Allen, Deputy City Manager, Portsmouth
Jason DeGray, Greenman-Pedersen, Inc.
Eric Eby, Portsmouth DPW
Joe Johnson, Greenman-Pedersen, Inc.
Peter Rice, Portsmouth DPW
Conor Semler, Kittelson & Associates, Inc.
Juliet Walker, Portsmouth Planning Department
See attached sign-in

PURPOSE: Conceptual Design Public Meeting

Discussion:

Mr. DeGray made a presentation describing the meeting agenda, project background and project purpose. He also discussed the project limits as well as some of the existing characteristics of the Lafayette Road/Middle Street corridor. He summarized the input that was gathered as part of the initial public meeting held on November 19, 2014. Based on the public concerns expressed, there were three bicycle accommodation concepts developed for the corridor. Although the concepts focused on bicycle accommodations, this is a 'complete street' project since the improvements directly impact the pedestrian and vehicle experience. Although there is no anticipated change to the existing roadway width, the reallocation/organization of the space between cars, parking and bicyclists will result in a perceived narrowing of the travel way which typically results in lower vehicular travel speeds. Also, by delineating no parking zones within 25 feet of intersections, sight distance will be improved for vehicles accessing Lafayette Road/Middle Street. By adding a bicycle facility and designated parking areas, the effective roadway crossing length will be reduced for pedestrians decreasing their exposure to vehicle traffic.

Mr. Semler provided an overview of each concept prepared for the project. These consist of the following:

Concept A – Two-Way Cycle Track
Concept B – Buffered Bike Lanes
Concept C – Traditional Bike Lanes

Advantages/disadvantages of each were discussed with particular attention focused on the varying level of comfort that cyclists experience with each of these concepts.

After the presentation, there was an opportunity for questions and comments. Following are the major points of discussion:

Will the project introduce more crosswalks along the corridor?
The project can be used as an opportunity to identify where additional crosswalks may be needed. However, actually improvements associated with this project are anticipated to consist of pavement markings. Additional crosswalks may require new wheelchair ramps which would be considered as part of a separate project.

With the introduction of a bike facility, where are motor vehicles supposed to stop at minor street approaches to Lafayette Road/Middle Street?
The stop line location along minor street approaches is not expected to move. Vehicles will be required to stop where they do today, check for bicycles/vehicles and proceed when there is a sufficient gap.

There is a concern that pavement markings will not slow traffic. Could a mid-block pedestrian signal be introduced to stop traffic?
This is considered an incremental project where the first step includes striping improvements to define a dedicated bicycle facility. Moving forward, the City will remain committed to make adjustments as necessary and based on how driver characteristics change. Although pavement marking improvements are anticipated as part of this project, more permanent features may be introduced as part of a future project if the striping improvements prove successful.

Could Concept A move the bicycle lanes to the curb?
Concept A could not simply move the bike lane adjacent to the curb without introducing a buffer from the on-street parking stalls. Otherwise, passenger side car doors would open into the bike lane.

How are property values impacted by bicycle facilities?
Given the limited number of bicycle facilities, we are not aware of data available regarding this question. Generally speaking, people have a desire to live in locations where biking and walking opportunities are available. This is often seen when property values increase when multi-use paths are constructed in close proximity.

Would the City consider progressing from Concept A to Concept B to eventually Concept C?
Not necessarily, the project is intended to implement the best suited facility to accomplish the objectives.

Are there standards/metrics when there are too many access points/driveways where a cycle track may become unsafe?
There is limited data available for cycle tracks regarding this question. Signing, striping and public outreach will be critical so that drivers and bicyclists understand how safe access to driveways should occur.

When there are buffered bike lanes, do bicyclists comply with travelling in the proper direction?
Yes, provided the facility was adequately design.

What are the parking impacts of these concepts?
An inventory of the parking demand was performed along this corridor. Although parking is basically allowed along the entire corridor, the demand is much higher along the north end of the project. Some vehicles could be displaced by these concepts on a block-by-block basis depending upon final design decisions.

Andrew Jarvis to South Street is a dangerous stretch along Lafayette Road. Greenleaf is a tough intersection.
The character from Andrew Jarvis to South Street is quite different from the rest of the corridor and it may not be appropriate to use the same bicycle facility within these limits as the rest of the corridor. Also, on-street parking generally does not occur within these limits. It may be appropriate to sign no-parking along these limits.

Would this bicycle facility be intended for four-season use? Does the City support the potential maintenance?
The City is committed to the project and would not construct the improvements otherwise. Four-season use is envisioned, but is highly dependent on snow amounts.

Emergency vehicles need to be able to fit between two vehicles that have pulled over for an emergency vehicle.
There will be continued coordination with City Staff as the project advances toward a preferred design.

Following are the comments that were noted on the roll plans depicting the three Concepts:

Concept A:
- Sight distance is a problem at the Union Street intersection.
- A ped/bike crossing light is needed across Middle Street in the vicinity of Wibird/Madison.
- A ped/bike crossing light is needed across Middle Street at Union Street.
- A ped/bike crossing light is needed across Middle Street at Mendum Avenue.
- More pedestrian crossings are needed at side streets (general comment).
- Fix the Greenleaf intersection.
- There were 8 stickers of 'support' on this concept.

Concept B:
- I like Concept B the best of the 3 options. The cyclists are protected which will encourage kids w/parents to use the lanes.
- There were 4 stickers of 'support' on this concept.

Concept C:
- This is my least favorite of the three options especially if we are trying to encourage children to bike to school. They are not protected from moving traffic.
- There were 2 stickers of 'support' on this concept.

Also attached are written comments obtained the night of the meeting as well as subsequent to the meeting.

These minutes constitute my recollection of the Conceptual Design Public Meeting to the best of my knowledge. Please advise me within ten (10) days, in writing, of any exceptions or corrections.

Respectfully submitted,

Jason DeGray

Jason DeGray, PE, PTOE
Project Manager

cc: City Staff Attendees

MINUTES OF MEETING HELD ON **April 6, 2015 at 7:00pm.**

Lafayette Road/Middle Street Bicycle Facilities
Portsmouth, NH
State Proj. No. 28757 (GPI Proj. No. MAX-2014051.00)

DATE PREPARED: April 10, 2015

LOCATION: City Council Chambers, Portsmouth City Hall, 1 Junkins Avenue, Portsmouth

ATTENDEES: City Councilors
Jason DeGray, Greenman-Pedersen, Inc.
Eric Eby, Portsmouth DPW
Joe Johnson, Greenman-Pedersen, Inc.
Peter Rice, Portsmouth DPW
Juliet Walker, Portsmouth Planning Department
Public Audience

PURPOSE: Preferred Alternative Presentation

Discussion:

Ms. Walker made a thorough presentation to the City Council providing an overview of the project need and project limits. Three concepts were developed for the project and were described in detail. The concepts included the following as presented at previous public meetings:

Alternative A: Two-Way Cycle Track
Alternative B: Buffered Bike Lane
Alternative C: Traditional Bike Lane

For each alternative, the pros and cons of each were discussed as well as an overview of on-street parking impacts. It was indicated that the impacts would be explored in greater detail as part of the preliminary engineering phase of the project.

A video was shown that provided samples of various bicycle facilities within the country.

Ms. Walker indicated that the preferred alternative for the project is the buffered bike lane since it has the potential to achieve the project goals while having a more manageable learning curve relative to Alternative A. Alternative A has the potential to be the most transformative improvement, but may be more suited for a community that already has a more advanced bike network. Alternative C is not preferred since it is not believed it will achieve the objective of promoting and increasing cycling for users of all ages.

As part of the question and answer period of the meeting, the following was discussed:

Question – Could angled parking be looked at as a means to reduce the impacts to parking?
Answer – This could be looked at as part of the preliminary design.

Question – Has the Parking, Traffic and Safety Committee (PTS) made a recommendation?
Answer – The concepts were presented to the PTS Committee in order to gain input. They did not make a recommendation for any one concept. The design will go before the PTS committee again as part of the preliminary design. Also, abutters will be contacted during the preliminary design to review specific impacts along the corridor.

Question – Are we asking the bicyclists of the City to navigate too many different types of bike facilities? Can we safely transition between the facilities?
Answer – It is understood that the transitions will be a very important part of the design and these will be studied and reviewed in detail as part of the preliminary engineering phase.

The City Councilors voted to explore Alternative B further as the preferred alternative.

These minutes constitute my recollection of the Preferred Alternative Meeting to the best of my knowledge. Please advise me within ten (10) days, in writing, of any exceptions or corrections.

Respectfully submitted,

Jason DeGray

Jason DeGray, PE, PTOE
Project Manager

cc: City Staff Attendees

REQUEST FOR PROJECT REVIEW & RESPONSE

NEW HAMPSHIRE DIVISION OF HISTORICAL RESOURCES
State of New Hampshire, Department of Cultural Resources 603-271-3483
19 Pillsbury Street, Concord, NH 03301-3570 603-271-3558
TDD Access Relay NH 1-800-735-296 FAX 603-271-3433
www.nh.gov/nhdhr *preservation@dcr.nh.gov*

Request for Project Review by the New Hampshire Division of Historical Resources for Transportation Projects

INSTRUCTIONS

The Division of Historic Resources (DHR) is New Hampshire's State Historic Preservation Office (SHPO). Under state and federal laws, the DHR works with other governmental agencies to review publicly-assisted projects that may affect historical or archeological resources. Historic preservation "Review & Compliance" (R&C) is a consultation process to identify significant historic properties in the planning stage of a project, so that any harm to them can be avoided, minimized or mitigated. It is intended to be a conflict-resolution and problem-solving process that balances the public benefit in historic preservation with the public benefit from a variety of governmental initiatives.

The RPR is not simply a checklist. It is a framework to facilitate a clear and accurate exchange of information. Compiling data for the RPR can strengthen your recognition and understanding of cultural resources and their relationship to your project. Clear and accurate information will support federal and state agencies, including the DHR, in making informed recommendations and comments. **By following these instructions, you can help facilitate an efficient, productive consultation process.**

Laws and regulations protecting historical resources and guiding the DHR's review and consultation are listed below, with citations for additional information noted:

National Historic Preservation Act of 1966, as amended:
www.achp.gov/nhpa.html

NH RSA 227-C:9:
www.gencourt.state.nh.us/rsa/html/XIX/227-C/227-C-9.htm

ACOE NH Programmatic General Permit:
www.des.state.nh.us/wmb/Section401/reviewProcess.html

Federal Highway Administration: Section 4(f):
www.environment.fhwa.dot.gov/strmlng/newsletters/mar08nl.asp

Before You Submit the Request for Project Review Form

1. Check the DHR's Review & Compliance website at www.nh.gov/nhdhr/review to be sure you have downloaded the most current form.

2. Determine the entire geographical area in which changes may occur (Area of Potential Effect). The boundaries of the Area of Potential Effect (APE) should be clearly described and indicated on a 7.5 minute USGS topographic quadrangle map (computer generated or clear copy). (*Guidance to determining an APE is provided below*.)

3. As soon as a proposed APE has been determined, and before initiating the review process you should determine the presence/absence of standing structures, whether or not there are any previously surveyed properties, and if and when any properties have been determined eligible or not eligible for listing in the National Register of Historic Places within or adjacent to the APE. Understanding this baseline information regarding cultural resources can inform project development from the start.

4. Gather information on already-identified historic properties within or adjacent to the APE. Information on recorded historic properties is available at the DHR, and this information **must** be collected prior to submitting project review materials. The DHR records are open to the public by appointment by calling the DHR Records Coordinator at 603.271.6568 or email at tanya.krajcik@dcr.nh.gov. So that you have this information at your fingertips at all stages in the development of your project, the DHR recommends that all survey/National Register nomination forms and their Determination of Eligibility (green) sheets are copied during your initial visit to use the DHR files. Please be aware that survey in New Hampshire is far from complete, and the absence of historic resources in DHR records does not mean that no historic properties are present.

5. Field review the APE, taking photographs as directed in this form and instructions.

6. Following the records check and field review, project proponents should complete the Request for Project Review Form and any needed attachments in their entirety by referring to these instructions. Enclose the required additional information and submit 2 copies of your application packet in paper. Please include 1 self-addressed stamped envelope in order to expedite the review process. Incomplete materials received by the DHR or DOT will be returned without review.

7. Be aware that, in the event historical resources are affected by your project, you may need to speak with your lead federal agency about developing a plan for public involvement.

8. There is no need to submit the copy of these instructions that print out with the RPR form. It is there for your information and use.

Photograph Submittals

Photographs submitted for project review may be either 35mm black/white, color digital or prints. All photographs must be clear, crisp, and focused. Digital images should not be pixilated. Photographs must be sized 3" x 5" or larger and their subject locations keyed to an accompanied map. They may be embedded in printed Word® documents. All photos must be printed. No CDs, flashdrives, or other storage media with digital images will be accepted.

How to Complete the Request for Project Review (RPR) Form

GENERAL PROJECT INFORMATION

New Submittal or Additional Information – Indicate if the project, or any part thereof, has been previously reviewed by DHR and if so, insert the DHR review number (R&C #). If we know that a project has been previously reviewed, we can often avoid asking for duplicate information.
DOT Project Name and Number – Provide the DOT project name and number, following DOT protocol.

Brief Descriptive Project Title – Provide a title that clearly but concisely indicates what the project involves. Examples might be *Town Bridge over City Brook Rehabilitation Project* or *North Street and South Road Intersection Improvement Project.*
Project Location and City/Town(s) – Provide the geographical location of the project as well as the independent city or town(s) in which it is located. If the project is located in more than one municipality, then identify them all. *Note that NH State Plane Geographic Coordinates are not required on the RPR for Transportation Projects because it is recognized that transportation projects typically involve large areas not easily characterized by one point. However, this makes it very important that very clear project location information (APE) is provided on project mapping.*
Lead Federal Agency – Indicate the federal agency that is responsible for Section 106 Compliance and that agency's permit or job reference number (if known). If you do not know the federal agency involved in your project, please contact the party requiring you to apply for Section 106 review, *not* the DHR, for this information.
DOT Environmental Manager – Indicate the DOT environmental manager (if applicable) who is involved with the project.

APPLICANT INFORMATION

Applicant Name – Provide the name and contact information of the applicant (project sponsor).
Contact Person to Receive Response – Provide the name and contact information of the person to receive the DHR's response. The address provided should be a mailing address. Be sure to include a self-addressed stamped envelope with your application packet to expedite the review process.

PROJECT BOUNDARIES AND DESCRIPTION

Determining an appropriate Area of Potential Effects (APE)
Derived from 36 CFR § 800 and Advisory Council on Historic Preservation guidance.

Please note that the final determination of the Area of Potential Effects is made by the lead federal agency in consultation with the DHR (State Historic Preservation Officer). While the final APE is subject to approval by the lead federal agency and the DHR, project sponsors should propose their understanding of an appropriate APE for the purposes of initiating consultation.

The Area of Potential Effects is the geographic area(s) where an undertaking *may* directly or indirectly cause alterations in the character or use of historic properties.

- Defining the APE is project-based, not resource-based; it is based on reasonably foreseeable effects of the project/undertaking without regard to the existence of historic properties.

- Look at all phases of all alternatives under consideration when delineating the APE.

- Examples of possible effects that guide APE delineation:
    - physical destruction/damage, reflecting limits of disturbance including staging areas, access areas, and depth of disturbance
    - direct alterations
    - alterations to view, reflecting the height of construction
    - atmospheric alterations, including temporary and permanent noise and/or vibration impacts and potential water or air quality impacts
    - neglect or abandonment
    - transfer out of federal ownership
    - secondary or cumulative effects

- APE delineation *not* influenced by:
    - property boundaries
    - what you know or think you know about the presence/absence of historic properties
    - concern regarding the effort needed to identify historic properties in a large area

- APE tips:
    - The APE is best documented through mapping. Once you've identified all the areas that may be impacted by all the alternatives in consideration for your project, draw a logical line around these

areas. The line does not need to follow existing boundaries on the landscape, nor does it need to be a particular shape.
  - While it usually is, the APE does not need to be a contiguous area (i.e., two or more direct impact APEs), nor does there need to be one per project (i.e., one APE for direct impacts, one APE for visual/atmospheric impacts).
  - During a Section 106 review, not every property in the APE may need to be inventoried. Determination of the appropriate level of identification efforts will take place after the APE is delineated.
  - The APE may change if new effects are identified later in the review or if project plans change.

Project Map – A clear computer generated or photocopy of the 7.5 minute USGS topographic quadrangle map, or a **clearly labeled** portion thereof, showing the exact boundaries of the proposed APE **must** be attached to this application. Do **not** reduce or enlarge the map. Color copies are helpful. Label the map with the name of the USGS quadrangle. Topographic maps may be printed or downloaded free of charge at: http://granitview.unh.edu. Please refer to the R&C FAQ's at http://www.nh.gov/nhdhr/review/rc_faq.htm for help on accessing this data.

Narrative Project Description – Attach a detailed written description of the APE and the proposed undertaking.

- **What is the character of the APE?:** The narrative should describe the project's area of potential effects including areas of potential physical and visual impacts, secondary areas or impacts, such as staging areas or borrow pits, and alterations to a structure, a building, or its landscape. Describe any known past disturbances or alterations to the project area such as grading, filling, paving, excavation and demolition, along with an approximate date.
- **What is the proposed action?:** The narrative should clearly describe the proposed action in as much detail as currently known.

Engineering Plans – Attach current large-scale maps or engineering plans, showing the APE's existing conditions and proposed changes. If this type of comprehensive plan is not yet available for the project, explain why and give a date as to when it will be submitted; provide an available map with existing conditions and the proposed APE. The drawing should indicate compass orientation, contours, general soil types, and presence of wetlands. If any existing buildings, structures, cemeteries, dams, canals, bridges, foundations, ruins, old wells, cellar holes, stone walls, trails, or specialized uses such as dump sites, etc., are present, their locations should be shown.

Photos of APE – Provide photographs showing the APE and the area adjacent to the project location, as well as specific areas of proposed ground impacts and disturbances. These photographs should provide general visuals of the landscape(s), streetscape(s), and relationships between buildings and structures within and adjacent to the area of proposed impact. They should also include views of areas where there might be ground impacts and disturbances, such as drainage or staging areas. Blank photo logs are available on the DHR website for your convenience, however informative photo captions explaining each image can be used in place of a photo log. Photos should be keyed to project mapping for efficient project review.

DHR File Review – During the identification stage of the review process you should determine the presence/absence of standing structures. **Indicate the date the file review occurred on the RPR form** and be sure to include the results of the DHR Records search for historic properties with your submittal packet. **Complete Table 1**, to easily compile information you've found during your file review visit, and enclose the table with the RPR form. Blank table forms are available on the DHR website. *The DHR recommends that all survey/National Register nomination forms and their Determination of Eligibility (green) sheets are copied for your use in project development. The information compiled and analyzed in these forms may contribute to all stages of project design and consultation, including reasons for significance, character-defining features, and resource (National Register) boundaries.*

ARCHITECTURE

Buildings, Structures, and Landscapes in APE – Based on the results of your DHR file review *and* your field review, are there any properties more than 50 years of age **within or adjacent** to the APE? Some or all of these may not be recorded in the DHR files. Be aware that resources that may not be directly impacted by your project should be addressed. For example, you should note a house located on a tax parcel that includes land within or adjacent to your APE even if your project may not involve demolition or alteration of that house. The types of properties to note include buildings, structures (such as bridges, stone walls, culverts, railroad corridors, dams, etc.), objects (such as monuments and mileposts), historic districts, and landscapes (could include designed gardens, scenic roadways, campuses, or a collection of farms across a rural agricultural landscape).

If *none* of these are located in your APE, please note that in your project narrative and then skip to the Archaeology section of the RPR.

If *any* of these are located in your APE you must submit the following information:

Complete Table 2 – As transportation projects often involve many properties and resources, the DHR created Table 2 to assist you in compiling basic information about properties that haven't yet been surveyed within the APE. The first column, Resource Identification, should include the most specific information available with the goal being the ability to link resource information to mapping and photos. Provide an approximate age for the resources in your APE and the source for that information. Sources to determine approximate age could include owner information, visual inspection, municipal records, etc. Blank table forms are available on the DHR website. *Between Table 1 and Table 2, in conjunction with photos, mapping, and project information, a clear idea of known resources and possible inventory needs will be established for efficient use by you, the project team, and federal and state agencies in moving project consultation forward.*

Photos of Cultural Resources – Current photographs of all buildings and structures within the APE must be included with the application materials. These photos should show at least the full front side of a building, however an angled shot showing the front and one side is typically very helpful. Neighborhood streetscape images should be included if applicable, such as when the project is located within an established or possible historic district. Streetscape images should not focus on the pavement, but clearly show the properties alongside the roadway. Blank photo logs are available on the DHR website for your convenience, however informative photo captions explaining each image can be used in place of a photo log. Photos should be keyed to project mapping for efficient project review.

National Register Resources and Mapping – If any resources within or adjacent to your APE are already known to be National Register-listed or eligible (discovered through your DHR file review or online at http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome [listed only]) then include copies of National Register boundary mapping and depict the National Register boundary of each of those resources on the 7.5' USGS project map noted above. *Remember that the RPR is intended to compile baseline information to determine what cultural resources information exists and what, if any, additional information or analysis needs to be gathered. A graphic clearly identifying where each known historic resource is located is extremely helpful to everyone involved in project development. This information also provides you with the opportunity to avoid or minimize impacts to these historic resources at the earliest stages of project design.*

ARCHAEOLOGY

Ground-Disturbing Activity in Project Area – While ground-disturbing activities are generally self-explanatory, be aware that they include activities such as construction or modification of drainage ditches and retention ponds, and temporary areas used for staging and access.

If there is *no* ground-disturbing activity in your project area, please note that in your project narrative.

If *any* ground-disturbing activity is anticipated, submit the following information:

Description of Previous Land Use – Attach a detailed descriptive narrative of current and previous land use and any known disturbances within the project area as described in project narrative.

Known or Suspected Archaeological Resources – Please note to the best of your knowledge whether the land owner/developer is aware of any archaeological resources within the project area (i.e. cemeteries/grave markers, stone walls, cellar holes, wells, foundations, dams, etc.).

TYPE AND MEANING OF DHR's RESPONSE

Insufficient information to initiate review – RPR packages will be returned to the project sponsor's contact person without review if, upon receipt, the DHR or DOT determines that the RPR package has not been completed sufficiently to review the project efficiently. *The purpose of this policy is to avoid excessive waste of time and money resulting from efforts to interpret or track down unclear or missing materials.*

Additional information is needed in order to complete review – Depending on the presence or types of resources in a project area, there may be multiple steps to the cultural resources consultation process. The necessity of progressing to the next step depends on the result of each preceding step. (*See the DHR website for a flowchart explaining Section 106 of the National Historic Preservation Act of 1966 at www.nh.gov/nhdhr/reviewdocuments/106flowchart.pdf.*) Consultation for some projects may quickly progress from the RPR to preparation of a Determination of Effect Memorandum, while others require continued consultation and

fulfillment of additional steps in the process, such as surveys by qualified consultants and findings of effect by the lead federal agency and the DHR.

Comments – In the RPR's comment box, DHR may explain what type of information is necessary to continue review, if needed. If no additional information is needed, DHR will note its opinion as to the project's effects. For transportation projects the effect finding will be formalized on a Determination of Effect Memorandum, signed by FHWA, DOT, and others.

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Your Request for Project Review is ready to be submitted to the DHR if you've:

- ✓ Determined the entire geographical area of the proposed project and of the project's potential impacts (Area of Potential Effects [APE])
- ✓ Conducted a DHR file review for already-identified historic properties within or adjacent to the APE
- ✓ Conducted a field review for other resources 50 years old or older within or adjacent to the APE
- ✓ Completed the Request for Project Review Form in its entirety including all requested information and attachments
- ✓ Included 1 self-addressed stamped envelope

As the New Hampshire Department of Transportation (DOT) is often directly involved in transportation projects, RPRs for these projects will be coordinated through DOT. Mail 2 copies of the completed RPR form and required materials, and 1 self-addressed stamped envelope to:

Cultural Resources Staff
Bureau of Environment
NH Department of Transportation
7 Hazen Drive
Concord, NH 03302

RPRs **cannot** be accepted via facsimile or e-mail. Please provide a completed form even in cases where project information is included in a separate document, such as DES permit applications and other environmental reports and applications. Environmental documents may be submitted as attachments to the form, only if they provide an important part of the project description. The DHR has a different focus from other agencies. In order to reduce costs and be as environmentally friendly as possible please do not submit entire permit applications. The DHR will retain all items and supporting documentation submitted with a review request, including photographs and publications. Items to be kept confidential should be clearly identified. For questions regarding project review please visit www.nh.gov/nhdhr/review or contact the R&C Specialist at christina.st.louis@dcr.nh.gov or 603.271.3558.

Please mail 2 copies of the completed form and required material to:

Cultural Resources Staff
Bureau of Environment
NH Department of Transportation
7 Hazen Drive
Concord, NH 03302

DHR Use Only	
R&C #	_____
Log In Date	____ / ____ / ____
Response Date	____ / ____ / ____
Sent Date	____ / ____ / ____

Request for Project Review by the New Hampshire Division of Historical Resources for Transportation Projects

☒ This is a new submittal.
☐ This is additional information relating to DHR Review and Compliance (R&C)#:

GENERAL PROJECT INFORMATION

DOT Project Name & Number City of Portsmouth- Safe Routes to School, State Project Number: 28757

Brief Descriptive Project Title City of Portsmouth Safe Routes to School Project (US Route 1)

Project Location Lafayette Rd/Middle St (US Route 1)

City/Town Portsmouth

Lead Federal Agency and Contact *(if applicable)*
(Agency providing funds, licenses, or permits)
Permit Type and Permit or Job Reference #

DOT Environmental Manager *(if applicable)* N/A

PROJECT SPONSOR INFORMATION

Project Sponsor Name Juliet T. H. Walker, AICP

Mailing Address 1 Junkins Avenue Phone Number (603) 610-7296

City Portsmouth State NH Zip 03801 Email jthwalker@cityofportsmouth.com

CONTACT PERSON TO RECEIVE RESPONSE

Name/Company Adele Fiorillo, Normandeau Associates Inc.

Mailing Address 30 International Drive, Suite 6 Phone Number (603) 319-5303

City Portsmouth State NH Zip 03801 Email afiorillo@normandeau.com

This form is updated periodically. Please download the current form at http://www.nh.gov/nhdhr/review. *Please refer to the Request for Project Review for Transportation Projects Instructions for direction on completing this form.* Submit 2 copies of this project review form for each project for which review is requested. Include 1 self-addressed stamped envelope to expedite review response. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, additional information will be needed to complete the Section 106 review. All items and supporting documentation submitted with a review request, including photographs and publications, will be retained by the DOT and the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process and the DHR's role in it, please visit our website at: http://www.nh.gov/nhdhr/review or contact the R&C Specialist at christina.st.louis@dcr.nh.gov or 603.271.3558.

PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION

Project Boundaries and Description

- ☒ Attach the relevant portion of a 7.5' USGS Map (photocopied or computer-generated) ***indicating the proposed area of potential effect (APE).*** *(See RPR for Transportation Projects Instructions and R&C FAQs for guidance. Note that the APE is subject to approval by lead federal agency and SHPO.)*
- ☒ Attach a detailed narrative description of the proposed project.
- ☒ Attach current engineering plans with tax parcel, landscape, and building references, and areas of proposed excavation, if available.
- ☒ Attach photos of the project area/APE with photo key (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) *(Blank photo logs are available on the DHR website. Informative photo captions can be used in place of a photo log.)*
- ☒ A DHR file review must be conducted to identify properties within or adjacent to the APE. Provide file review results in **Table 1**. *(Blank table forms are available on the DHR website.)*
  File review conducted on 12/04/2014.*

  **The DHR recommends that all survey/National Register nomination forms and their Determination of Eligibility (green) sheets are copied for your use in project development.*

Architecture

Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the APE? ☒ Yes ☐ No
If no, skip to Archaeology section. If yes, submit all of the following information:

- ☒ Attach completed **Table 2**.
- ☒ Photographs of ***each*** resource or streetscape located within the APE. Add to the photo key and photo log noted above. (Digital photographs are accepted. All photographs must be clear, crisp and focused.)
- ☐ Copies of National Register boundary (listed *or* eligible) mapping, and add National Register boundaries for listed and eligible properties to the 7.5' USGS project map *(if applicable).*

Archaeology

Does the proposed undertaking involve ground-disturbing activity? ☐ Yes ☒ No
If yes, submit all of the following information:

- ☐ Description of current and previous land use and disturbances.
- ☐ Available information concerning known or suspected archaeological resources within the project area (such as cellar holes, wells, foundations, dams, etc.)

Please note that for many projects an architectural and/or archaeological survey or other additional information may be needed to complete the Section 106 process.

AGENCY COMMENT *This Space for DOT and Division of Historical Resources Use Only*

Sent to DHR; Authorized DOT Signature:_____ Date: _____

☐ Insufficient information to initiate review.

☐ Additional information is needed in order to complete review.

Comments:_____

_____

_____

_____

_____

_____

_____

If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation.

Authorized DHR Signature: _____ Date: _____

PROJECT DESCRIPTION

Action/Project Name: City of Portsmouth Safe Routes to School Project (US Route 1)

State Project Number: 28757
Federal Project Number: X-A003 (791)

The project involves the creation of a dedicated on-road bike facility along US Route 1 (Lafayette Rd/Middle St) from its intersection with Andrew Jarvis Drive to its intersection with Congress Street/Islington Street. The project length is approximately 1.3 miles and improvements will primarily include pavement markings and work within the existing right-of-way.

PURPOSE AND NEED

The City of Portsmouth received a Safe Routes to School (SRTS) grant for the purpose of improving road safety for cyclists and pedestrians and to create a bicycle route to connect neighborhoods to schools and downtown locations. This design process includes all possible options for this route within the existing Right-of-Way in order to determine the most effective way to create a dedicated on-road bike route that is safe and usable for bicyclists of all ages.

PROPOSED ACTION

ROADWAY

Improvements along US Route 1 primarily include pavement markings and work within the existing right-of-way. Sidewalk work is not included in the project at this time. Modification to the existing curb line is not anticipated. The extent of the bicycle accommodation improvements will be highly dependent on potential restructuring of on-street parking.

Potential bicycle accommodations may include bicycle lanes, buffered bicycle lanes, shared facilities and/or cycle tracks. The project may also include minor traffic signal improvements based on proposed bicycle accommodations as well as to satisfy compliance with the current Manual on Uniform Traffic Control Devices (MUTCD).

This project will also evaluate pedestrian crossings at the intersections along this section of Route 1 to consider where improvements might be necessary to improve safety.

ALTERNATIVES CONSIDERED

The City is evaluating several alternatives to improve safety for bicyclists and pedestrians along the corridor. Dedicated and shared bicycle facilities will be explored while understanding that the curb-to-curb width will be maintained. Pedestrian improvements will be limited to localized crossing locations.

Concepts to-date include the following:

- Two-way Cycle Track on the east side (northbound) of the street;
- Buffered/Protected Bike Lanes; and
- Traditional Bike Lanes.

These concepts are attached. The City will conduct an alternatives analysis and utilize a public process to reach the preferred alternative for the project. At this point the project is limited to roadway striping modifications with associated new roadside signs. New traffic signal equipment may be included but would be limited to mounting new equipment on existing posts. No excavation is included in the project at this time.

ARCHAEOLOGY

Land Use

The proposed project area is located along 1.3 miles of US Route 1 that runs through the City of Portsmouth. This section of US Route 1 has one lane of traffic in each direction and contains residential and commercial uses.

A review of previous land uses was conducted at the New Hampshire Department of Historic Resource's in Concord on Thursday, December 4, 2014. This file review found the following five (5) documented historical properties adjacent to the project area:

1. Portsmouth Public Library (former) – 8 Islington Street
2. Morton Benedict House – 30 Middle Street
3. Jones John Paul House – 43 Middle Street
4. Larkin Rice House – 180 Middle Street
5. Rundlet May House – 364 Middle Street

NH DOT Project and Number and/or Project Title: City of Portsmouth – Safe Routes to School Project				DHR R&C #:
RPR Table 1: PREVIOUSLY SURVEYED OR LISTED PROPERTIES				
NH DHR Property Name / Historic District Name	NH DHR Inventory #	National Register-listed, Eligible, or Not Eligible	Date of Determination (mm/dd/yy)	National Register Criteria of Significance (if applicable)
Portsmouth Public Library (Academy Building) 8 Islington Street		National Register Listed	03/20/1973	
Morton Benedict House 30 Middle Street		National Register Listed	05/11/1973	
Jones John Paul House 43 Middle Street		National Register Listed	11/28/1972	
Larkin Rice House 180 Middle Street		National Register Listed	11/29/1979	
Rundlet-May House (Middle and State Streets) 364 Middle Street		National Register Listed	06/07/1976	
**Add rows as necessary				

NH DOT Name and Number and/or Project Title: City of Portsmouth – Safe Routes to School Project		DHR R&C #:
RPR Table 2: PROPERTIES WITHIN THE AREA OF POTENTIAL EFFECT; NOT YET SURVEYED		
Resource Identification (property address, parcel number, mile marker etc. with ability to link to mapping and photos)	Estimated Age	Basis for age: owner info., visual, municipal records etc.
Individual residential properties along the 1.3 mile project route (Lafayette Road/Middle Street)	**Lafayette Road:** Houses were built between 1700 and 1991 **Middle Street:** Houses were built between 1758 and 2004	**City of Portsmouth Online Property Records Database:** http://gis.vgsi.com/portsmouthnh/Search.aspx
**Add rows as necessary		

TOPO! map printed on 11/24/14 from "Northeast.tpo" and "Untitled.tpg"

70°47.000' W | 70°46.000' W | WGS84 70°45.000' W

43°05.000' N

43°04.000' N

43°03.000' N

BEGIN PROJECT AT
ISLINGTON ST/CONGRESS ST

END PROJECT AT
ANDREW JARVIS DRIVE

MN 15½° TN

NORMANDEAU environmental consultants

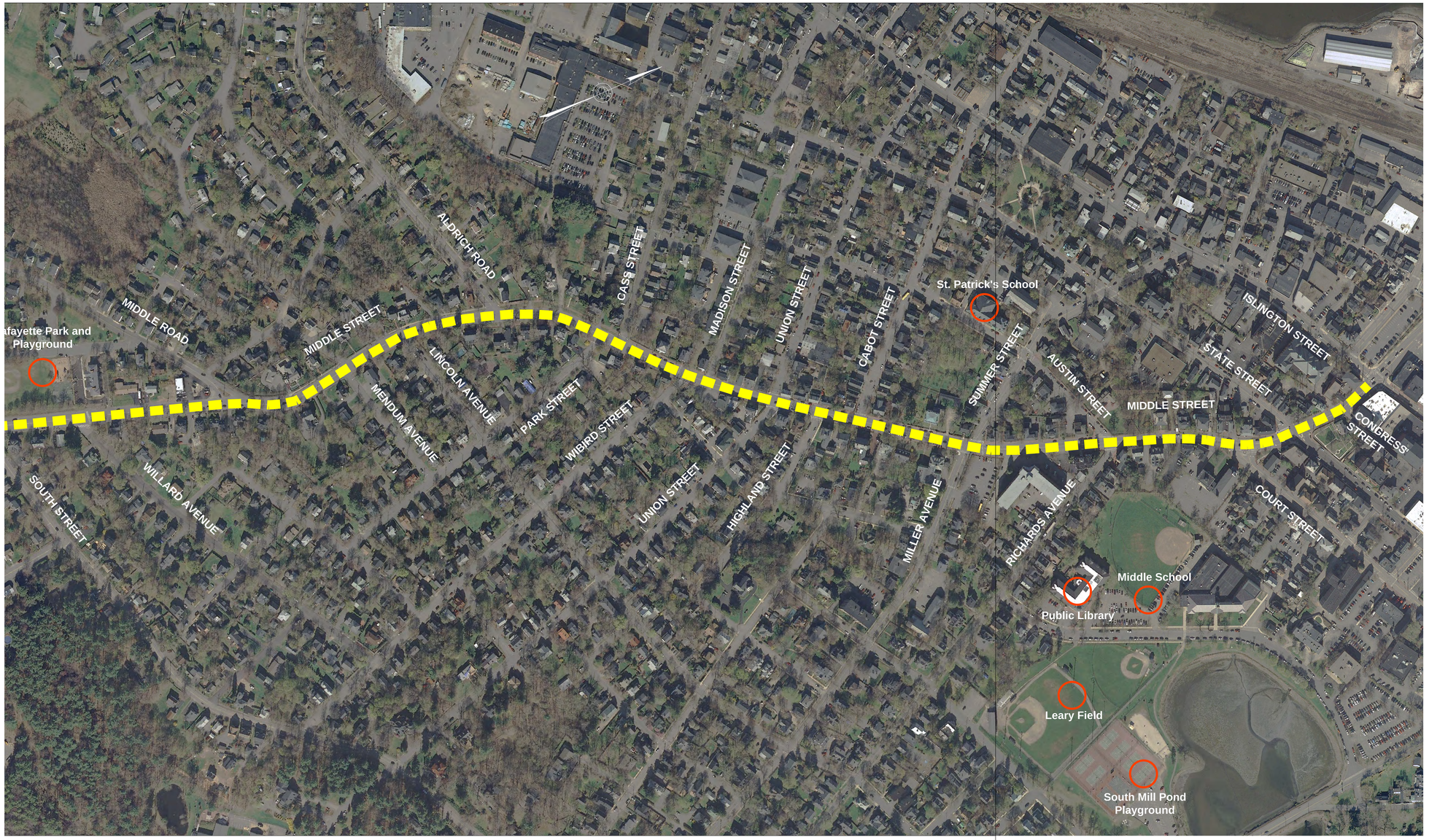
0 .5 1 MILE

0 1000 FEET 0 500 1000 METERS

Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

Source:
Greeman Pedersen, Inc.

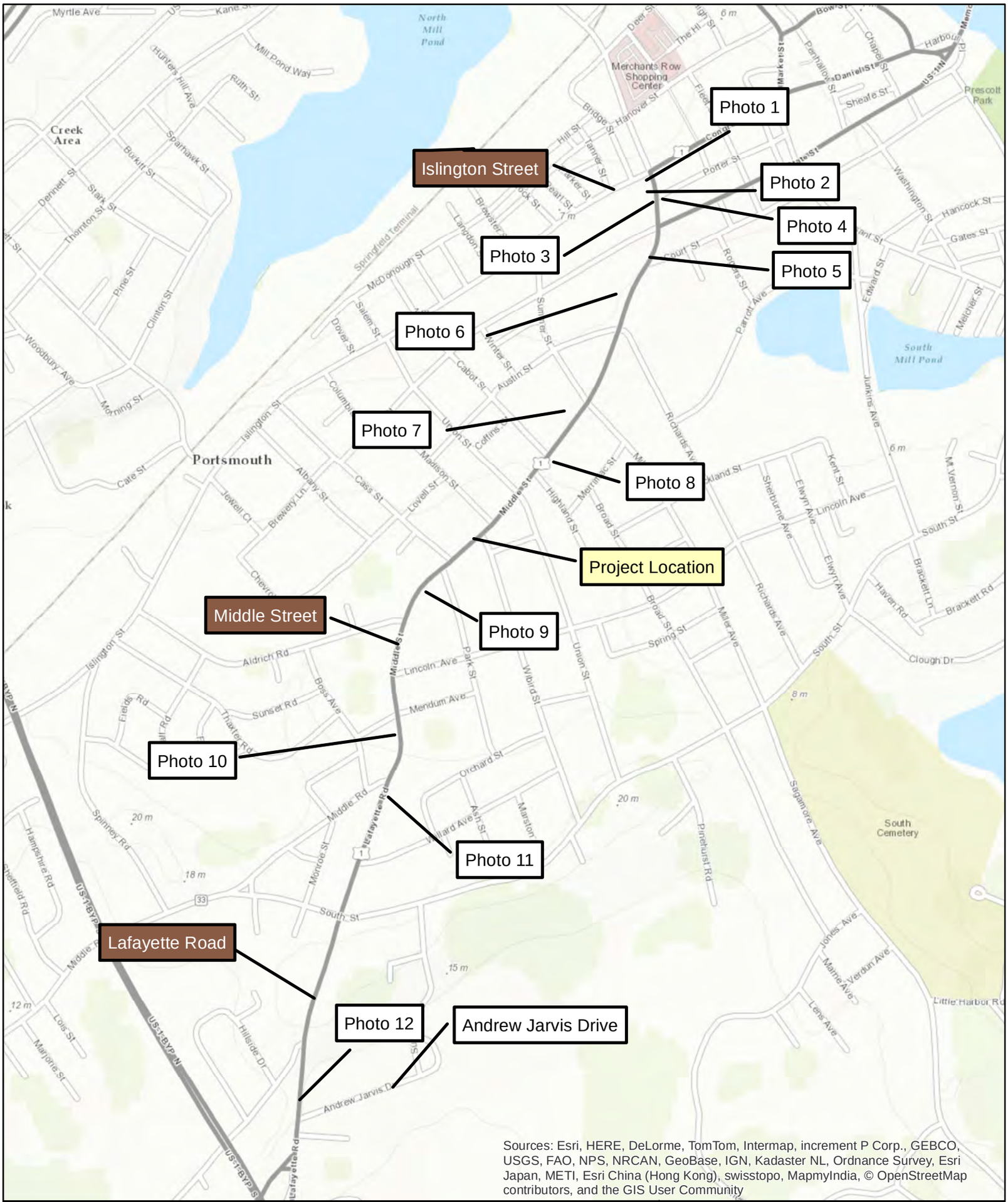
GPI



LAFAYETTE ROAD/MIDDLE STREET

PORTSMOUTH, NH

NORMANDEAU environmental consultants



PHOTOGRAPH LOG

N

0 500 1,000 Feet

Portsmouth Safe Routes To School
Project Location Map
Portsmouth, NH

NORMANDEAU environmental consultants
25 Nashua Road Bedford, NH 03110
(603) 472-5191 www.normandeau.com

Date : 1/9/2015
Drawn By: lferrisi
Project No: 23570.000

Photo 1: Portsmouth Public Library (Former), 8 Islington Street, Portsmouth, NH

Photo 2: Morton Benedict House, 30 Middle Street, Portsmouth, NH

Photo 3: Middle Street, facing south near Islington Street, Portsmouth, NH

Photo 4: Jones John Paul House, 43 Middle Street, Portsmouth, NH

Photo 5: Facing Middle Street, looking west, Portsmouth, NH

Photo 6: Larkin Rice House, 180 Middle Street, Portsmouth, NH

Photo 7: Rundlet-May House, 364 Middle Street, Portsmouth, NH

Photo 8: Middle Street, facing northeast, Portsmouth, NH

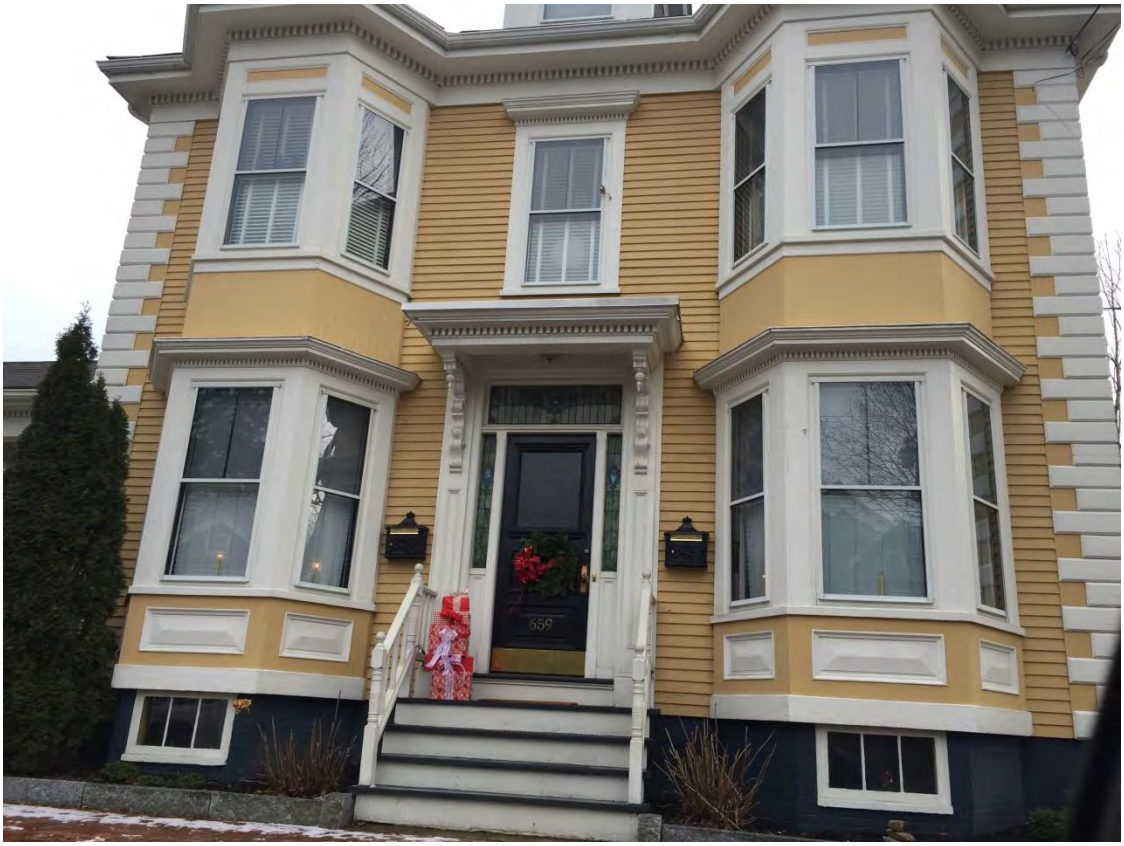
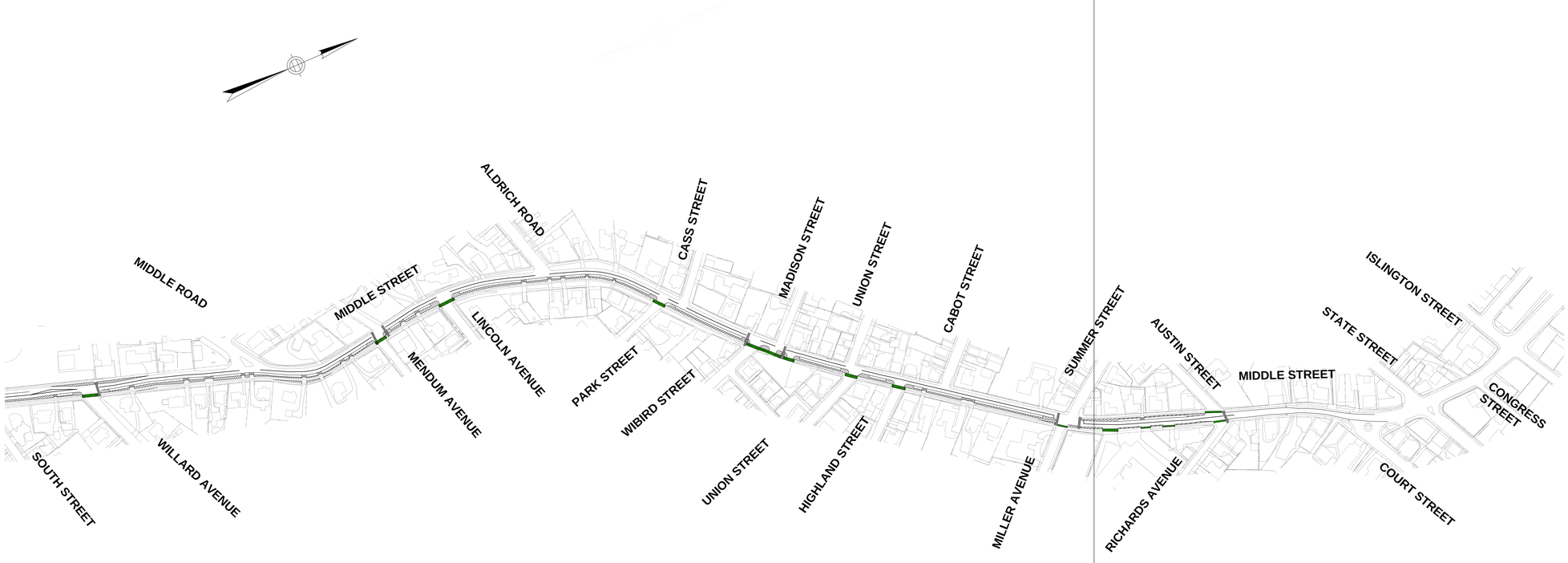


Photo 9: Middle Street, facing southeast, Portsmouth, NH

Photo 10: Middle Street, facing northeast, Portsmouth, NH

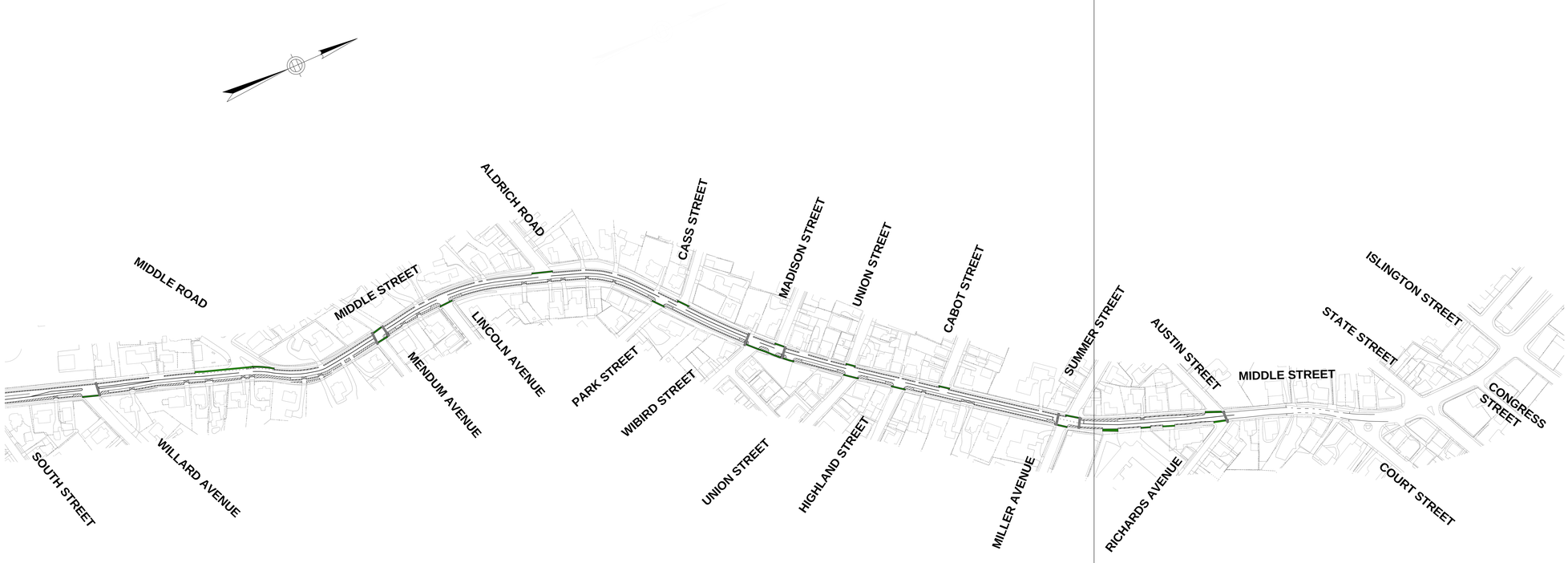
Photo 11: Lafayette Road, facing southeast, Portsmouth, NH

Photo 12: Lafayette Road, facing north near, Andrew Jarvis Drive, Portsmouth, NH



CONCEPT A
TWO-WAY CYCLE TRACK

LAFAYETTE ROAD/MIDDLE STREET
PORTSMOUTH, NH



CONCEPT B
BUFFERED/PROTECTED BIKE LANES

LAFAYETTE ROAD/MIDDLE STREET
PORTSMOUTH, NH

CONCEPT C
TRADITIONAL BIKE LANES

LAFAYETTE ROAD/MIDDLE STREET
PORTSMOUTH, NH

REQUEST FOR PROJECT REVIEW RESPONSE

Please mail 2 copies of the completed form and required material to:

Cultural Resources Staff
Bureau of Environment
NH Department of Transportation
7 Hazen Drive
Concord, NH 03302

RECEIVED
FEB 20 2015

DHR Use Only
R&C # 6471
Log In Date ___/___/___
Response Date ___/___/___
Sent Date ___/___/___

RECEIVED
BUREAU OF ENVIRONMENT
FEB 13 2015
NH DEPARTMENT OF TRANSPORTATION

Request for Project Review by the New Hampshire Division of Historical Resources for Transportation Projects

☒ This is a new submittal.
☐ This is additional information relating to DHR Review and Compliance (R&C)#:

GENERAL PROJECT INFORMATION

DOT Project Name & Number City of Portsmouth- Safe Routes to School, State Project Number: 28757

Brief Descriptive Project Title City of Portsmouth Safe Routes to School Project (US Route 1)

Project Location Lafayette Rd/Middle St (US Route 1)

City/Town Portsmouth

Lead Federal Agency and Contact *(if applicable)* FHWA
(Agency providing funds, licenses, or permits)

Permit Type and Permit or Job Reference # X-A003(791)

DOT Environmental Manager *(if applicable)* N/A

PROJECT SPONSOR INFORMATION

Project Sponsor Name Juliet T. H. Walker, AICP

Mailing Address 1 Junkins Avenue Phone Number (603) 610-7296

City Portsmouth State NH Zip 03801 Email jthwalker@cityofportsmouth.com

CONTACT PERSON TO RECEIVE RESPONSE

Name/Company Adele Fiorillo, Normandeau Associates Inc.

Mailing Address 30 International Drive, Suite 6 Phone Number (603) 319-5303

City Portsmouth State NH Zip 03801 Email afiorillo@normandeau.com

This form is updated periodically. Please download the current form at http://www.nh.gov/nhdhr/review. *Please refer to the Request for Project Review for Transportation Projects Instructions for direction on completing this form.* Submit 2 copies of this project review form for each project for which review is requested. Include 1 self-addressed stamped envelope to expedite review response. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, additional information will be needed to complete the Section 106 review. All items and supporting documentation submitted with a review request, including photographs and publications, will be retained by the DOT and the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process and the DHR's role in it, please visit our website at: http://www.nh.gov/nhdhr/review or contact the R&C Specialist at christina.st.louis@dcr.nh.gov or 603.271.3558.

PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION

Project Boundaries and Description

- ☒ Attach the relevant portion of a 7.5' USGS Map (photocopied or computer-generated) ***indicating the proposed area of potential effect (APE).*** *(See RPR for Transportation Projects Instructions and R&C FAQs for guidance. Note that the APE is subject to approval by lead federal agency and SHPO.)*
- ☒ Attach a detailed narrative description of the proposed project.
- ☒ Attach current engineering plans with tax parcel, landscape, and building references, and areas of proposed excavation, if available.
- ☒ Attach photos of the project area/APE with photo key (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) *(Blank photo logs are available on the DHR website. Informative photo captions can be used in place of a photo log.)*
- ☒ A DHR file review must be conducted to identify properties within or adjacent to the APE. Provide file review results in **Table 1**. *(Blank table forms are available on the DHR website.)*
  File review conducted on 12/04/2014.*

  **The DHR recommends that all survey/National Register nomination forms and their Determination of Eligibility (green) sheets are copied for your use in project development.*

Architecture

Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the APE? ☒ Yes ☐ No
If no, skip to Archaeology section. If yes, submit all of the following information:

- ☒ Attach completed **Table 2**.
- ☒ Photographs of ***each*** resource or streetscape located within the APE. Add to the photo key and photo log noted above. (Digital photographs are accepted. All photographs must be clear, crisp and focused.)
- ☐ Copies of National Register boundary (listed *or* eligible) mapping, and add National Register boundaries for listed and eligible properties to the 7.5' USGS project map *(if applicable).*

Archaeology

Does the proposed undertaking involve ground-disturbing activity? ☐ Yes ☒ No
If yes, submit all of the following information:

- ☐ Description of current and previous land use and disturbances.
- ☐ Available information concerning known or suspected archaeological resources within the project area (such as cellar holes, wells, foundations, dams, etc.)

Please note that for many projects an architectural and/or archaeological survey or other additional information may be needed to complete the Section 106 process.

AGENCY COMMENT *This Space for DOT and Division of Historical Resources Use Only*

Sent to DHR; Authorized DOT Signature: JME Date: 2/13/2015

☐ Insufficient information to initiate review.

☐ Additional information is needed in order to complete review.

Comments: No archaeology issues

No survey appears necessary based on descriptions of alternatives provided. Please continue to coordinate as design proceeds and share results of public coordination.
Prepare a determination of effect memo after project is more defined and public input has been gathered and addressed.

If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation.

Authorized DHR Signature: Laura A Black Date: Feb 25, 2015

COAST SCHEDULE

Cooperative Alliance for Seacoast Transportation

Member Login

Buy a Bus Pass

Portsmouth Trolleys

Weekday Printable Schedule

Weekend Printable Schedule

Connections:

- Route 2 at Fox Run Mall
- Route 4 at Fox Run Mall
- Route 7 at Fox Run/Ports. Trans. Ctr.
- Route 20 at Fox Run Mall
- Route 100 at Market Square

About making connections

Fare Information

COAST Regional Fare: $1.50 for routes 1, 2, 6, 7, 20, 33, trolleys 40 and 41.

COAST Clipper Connection Fare: $3.25 for routes 2cc, 41cc,

Service news:

- Service Cancellation for February 2 - 02/01/15
- Service Cancellation Notice for 1/27 - 01/26/15
- Clipper Connection Delay 1/28/15 - 01/26/15
- Service & Fare Change - 09/06/13
- Proposed Fare Increase and Service Changes - 07/09/13

Year Round Trolleys - Pease Tradeport / Downtown / Lafayette Rd

Pease Tradeport M-F | Lafayette Rd M-F | Trolley Saturdays | Bus Stop Listing | Map

Schedules read from TOP to BOTTOM. Not sure what you're looking at? How to read the schedule.

Lafayette Road Trolley (Route 41) WEEKDAYS

Days of Operation:	M-F	M-F	M-F	M-F	M-F	M-F	M-F	M-F	M-F	M-F	M-F
OUTBOUND (to Hillcrest Estates)											
*41cc											

100, 101 and 103

More about fares

Transit Trip Planner

Google Maps

Start e.g. Green St, Somersworth, NH

End e.g. Fox Run Mall, Newington, NH

Date 03/18/2015 Time 1:55 PM

Plan by: Departure Time

Get Directions

WHAT'S THIS? Put in where you are and where you're going - Google Transit will tell you where the bus stops are, which routes to take, and what time to be at the stop!
Please note: the Trip Planner is provided as a helpful tool; neither COAST nor Google are responsible if your trip doesn't work exactly as planned or imagined.

General Schedule Information

All schedules read from top to bottom.

Always be ready at the stop a

Market Square (departure)	6:00a	7:07a	7:37a	8:07a	8:37a	9:07a	10:07a	11:07a	12:07p	1:07p	2:07p	More times
Middle/Summer St. P Masons Lot – see details (City of Portsmouth Lot #6)												
Lafayette Rd. (Lafayette Plaza/Crossroads House)	6:07	7:15	7:45	8:15	8:45	9:15	10:15	11:15	12:15	1:15	2:15	continued below
Campus Dr. (Community Campus)		7:20	7:50	8:20	8:50	9:20	10:20	11:20	12:20	1:20	2:20	
Lafayette Rd. (Wal-Mart)		7:25	7:55	8:25	8:55	9:25	10:25	11:25	12:25	1:25	2:25	
Lafayette Rd. (Hillcrest Estates) (arrival)	6:12	7:30	8:00	8:30	9:00	9:30	10:30	11:30	12:30	1:30	2:30	
INBOUND (to Market Square)												
Lafayette Rd. (Hillcrest Estates) (departure)	6:12	7:31	8:01	8:31	9:01	9:31	10:31	11:31	12:31	1:31	2:31	
Lafayette Rd. (Lafayette Plaza/Lens Doctor)	6:19	7:40	8:10	8:40	9:10	9:40	10:40	11:40	12:40	1:40	2:40	
Middle/Miller Ave. P Masons Lot – see details (City of Portsmouth Lot #6)												
Market Square (arrival)	6:28	7:49	8:19	8:49	9:19	9:49	10:49	11:49	12:49	1:49	2:49	

*41cc This runs continues past Market Square to Kittery at the Portsmouth Naval Shipyard, arriving at 6:38am. Returns to Market Square for 6:50am. A Clipper Connection monthly pass or a base cash fare of $3.25 is required to travel through to Kittery, or board in Kittery and travel back to Portsmouth.

Lafayette Trolley (41) continues on from Market Square as Pease Tradeport Trolley (40); Riders may stay aboard at no additional charge.

Added runs are funded through a Federal Congestion Mitigation Air Quality grant related to the construction on the Little Bay Bridges. Find out more at www.coastbus.org/LBB.html.

Lafayette Road Trolley (Route 41) WEEKDAYS continued

Days of Operation:	M-F	M-F	M-F	M-F	M-F	M-F	M-F	M-F	M-F
OUTBOUND (to Hillcrest Estates)									

few minutes early.

Can't find your stop? Help reading the schedule.

New to riding the bus? Please see our New Riders Guide on how to ride the bus.

		*41cc							
Market Square (departure)	3:07p	3:50p	4:20p	4:50p	5:20p	5:50p	6:20p	7:20p	8:20p
Middle/Summer St. P Masons Lot – see details (City of Portsmouth Lot #6)									
Lafayette Rd. (Lafayette Plaza/Crossroads House)	3:15	3:58	4:28	4:58	5:28	5:58	6:28	7:28	8:28
Campus Dr. (Community Campus)	3:20	4:03	4:33	5:03	5:33	6:03	6:33	7:33	8:33
Lafayette Rd. (Wal-Mart)	3:25	4:08	4:38	5:08	5:38	6:08	6:38	7:38	8:38
Lafayette Rd. (Hillcrest Estates) (arrival)	3:30	4:13	4:43	5:13	5:43	6:13	6:43	7:43	8:43
INBOUND (to Market Square)									
Lafayette Rd. (Hillcrest Estates) (departure)	3:31	4:14	4:44	5:14	5:44	6:14	6:44	7:44	8:44
Lafayette Rd. (Lafayette Plaza/Lens Doctor)	3:40	4:23	4:53	5:23	5:53	6:23	6:53	7:53	8:53
Middle/Miller Ave. P Masons Lot – see details (City of Portsmouth Lot #6)									
Market Square (arrival)	3:49	4:32	5:02	5:32	6:02	6:32	7:02	8:02	9:02

*41cc This run begins in Kittery at the Portsmouth Naval Shipyard at 3:40pm. A Clpper Connection monthly pass or a base cash fare of $3.25 is required when boarding at the in Kittery.

Lafayette Trolley (41) continues on from Market Square as Pease Tradeport Trolley (40); Riders may stay aboard at no additional charge.

Added runs are funded through a Federal Congestion Mitigation Air Quality grant related to the construction on the Little Bay Bridges. Find out more at www.coastbus.org/LBB.html.

COAST is located at 42 Sumner Drive in Dover, NH.

ALTERNATIVE A

Alternative A

	Unit	Unit Price	Quantity	Cost	Item(s)
CONSTRUCTION ELEMENTS					
PAVEMENT MARKINGS AND SIGNING					
REMOVE SIGNING	EACH	$500.00			
NEW SIGNING	EACH	$350.00	20	$7,000	
REMOVE LANE MARKING	L.F.	$0.88	26,200	$23,056	
Green Paint	S.F.	$0.78	6,575	$5,129	
THERMOPLASTIC PAVEMENT MARKING 4 INCH	L.F.	$0.62	30,176	$18,709	
THERMOPLASTIC PAVEMENT MARKING 6 INCH	L.F.	$1.08	19,388	$20,939	
THERMOPLASTIC PAVEMENT MARKING 12 INCH	L.F.	$2.08	1,200	$2,496	
THERMOPLASTIC PAVEMENT MARKING, 24 INCH	L.F.	$4.08		$0	
THERMOPLASTIC 8 FOOT LETTERS	EACH	$2.97		$0	
THERMOPLASTIC ARROWS	EACH	$47.80	20	$956	
THERMOPLASTIC PAVEMENT DIAMOND	EACH	$44.58	20	$892	
THERMOPLASTIC BIKE SYMBOL, WHITE, 8'	EACH	$200.65	20	$4,013	
THERMOPLASTIC BIKE SYMBOL, WHITE, 4'	EACH	$157.65		$0	
THERMOPLASTIC HANDICAP SYMBOL, WHITE, 8'	EACH	$267.88		$0	
THERMOPLASTIC HANDICAP SYMBOL, WHITE, 4'	EACH	$200.65		$0	
FLEX POST BOLLARDS	L.F.	$4.00	6,550	$26,200	

INTIAL COST ESTIMATE	$109,389
CONTINGENCY (15%)	$16,408
TOTAL COST ESTIMATE	**$126,000**

ALTERNATIVE B

Alternative B

	Unit	Unit Price	Quantity	Cost	Item(s)
CONSTRUCTION ELEMENTS					
PAVEMENT MARKINGS AND SIGNING					
REMOVE SIGNING	EACH	$500.00			
NEW SIGNING	EACH	$350.00	20	$7,000	
REMOVE LANE MARKING	L.F.	$0.88	26,200	$23,056	
Green Paint	S.F.	$0.78	8,255	$6,439	
THERMOPLASTIC PAVEMENT MARKING 4 INCH	L.F.	$0.62	43,276	$26,831	
THERMOPLASTIC PAVEMENT MARKING 6 INCH	L.F.	$1.08	20,960	$22,637	
THERMOPLASTIC PAVEMENT MARKING 12 INCH	L.F.	$2.08	1,200	$2,496	
THERMOPLASTIC PAVEMENT MARKING, 24 INCH	L.F.	$4.08		$0	
THERMOPLASTIC 8 FOOT LETTERS	EACH	$2.97		$0	
THERMOPLASTIC ARROWS	EACH	$47.80	20	$956	
THERMOPLASTIC PAVEMENT DIAMOND	EACH	$44.58	20	$892	
THERMOPLASTIC BIKE SYMBOL, WHITE, 8'	EACH	$200.65	20	$4,013	
THERMOPLASTIC BIKE SYMBOL, WHITE, 4'	EACH	$157.65		$0	
THERMOPLASTIC HANDICAP SYMBOL, WHITE, 8'	EACH	$267.88		$0	
THERMOPLASTIC HANDICAP SYMBOL, WHITE, 4'	EACH	$200.65		$0	
FLEX POST BOLLARDS	L.F.	$4.00	13,100	$52,400	

INTIAL COST ESTIMATE	$146,719
CONTINGENCY (15%)	$22,008
TOTAL COST ESTIMATE	**$169,000**

ALTERNATIVE C

Alternative C

	Unit	Unit Price	Quantity	Cost	Item(s)
CONSTRUCTION ELEMENTS					
PAVEMENT MARKINGS AND SIGNING					
REMOVE SIGNING	EACH	$500.00			
NEW SIGNING	EACH	$350.00	5	$1,750	
REMOVE LANE MARKING	L.F.	$0.88	26,200	$23,056	
Green Paint	S.F.	$0.78	8,255	$6,439	
THERMOPLASTIC PAVEMENT MARKING 4 INCH	L.F.	$0.62	28,600	$17,732	
THERMOPLASTIC PAVEMENT MARKING 6 INCH	L.F.	$1.08	14,982	$16,180	
THERMOPLASTIC PAVEMENT MARKING 12 INCH	L.F.	$2.08	1,200	$2,496	
THERMOPLASTIC PAVEMENT MARKING, 24 INCH	L.F.	$4.08		$0	
THERMOPLASTIC 8 FOOT LETTERS	EACH	$2.97		$0	
THERMOPLASTIC ARROWS	EACH	$47.80	20	$956	
THERMOPLASTIC PAVEMENT DIAMOND	EACH	$44.58	20	$892	
THERMOPLASTIC BIKE SYMBOL, WHITE, 8'	EACH	$200.65	20	$4,013	
THERMOPLASTIC BIKE SYMBOL, WHITE, 4'	EACH	$157.65		$0	
THERMOPLASTIC HANDICAP SYMBOL, WHITE, 8'	EACH	$267.88		$0	
THERMOPLASTIC HANDICAP SYMBOL, WHITE, 4'	EACH	$200.65		$0	

INTIAL COST ESTIMATE	$73,514
CONTINGENCY (15%)	$11,027
TOTAL COST ESTIMATE	**$85,000**

PUBLIC COMMENTS

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please leave your contact information if you wish in case we need clarification on any of your comments:

Name: Lily Beyer

Email: lbeyer@gmail.com

Concept A – Two-Way Cycle Track

Comments: This is my preferred option. Safer for everyone. Narrower ~~travel~~ travel lanes? (Maybe w/ paint stripe to West?)

Concept B – Buffered Bike Lanes

Comments: 2nd best. It would definitely be an improvement over the existing conditions.

Concept C – Traditional Bike Lanes

Comments: How is this better than what we have now?

Please note which concept you prefer by placing one of the large circular stickers on the plan of your choice.

Thank you!

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please leave your contact information if you wish in case we need clarification on any of your comments:

Name: Grace Lessner

Email:

Concept A – Two-Way Cycle Track

Comments: Have biked on this type of track in Montreal & loved it. This is the safest concept for bikers & all. Thanks.

Concept B – Buffered Bike Lanes

Comments:

Concept C – Traditional Bike Lanes

Comments:

Please note which concept you prefer by placing one of the large circular stickers on the plan of your choice.

Thank you!

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please leave your contact information if you wish in case we need clarification on any of your comments:

Name: Mary Lou McElwain

Email: ml259@comcast.net

Concept A – Two-Way Cycle Track

Comments: would like both concepts Study studied for this corridor

Concept B – Buffered Bike Lanes

Comments:

Concept C – Traditional Bike Lanes

Comments: Not SAFE!

Please note which concept you prefer by placing one of the large circular stickers on the plan of your choice.

Thank you!

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please leave your contact information if you wish in case we need clarification on any of your comments:

Name: Doug Roberts

Email: doug.roberts@portsmouthnh.com

Concept A – Two-Way Cycle Track

Comments: like this one. somewhat concerned about the need for drivers to look left for cyclists

Concept B – Buffered Bike Lanes

Comments: OKay

Concept C – Traditional Bike Lanes

Comments: This one is inadequate for the goal of making Middle St. safe for school children

Please note which concept you prefer by placing one of the large circular stickers on the plan of your choice.

Thank you!

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please leave your contact information if you wish in case we need clarification on any of your comments:

Name: Dan Rawding

Email: danerawlingdesign.com

Concept A – Two-Way Cycle Track

Comments: ruins 1 side of street – not driver/user intuitive – requires overly conscious alertness for users – / drivers –

Concept B – Buffered Bike Lanes

Comments: good concept – yet ruins 1 side of street – needs to be balanced – sidewalk, bike, park, drive each side of street –

Concept C – Traditional Bike Lanes

Comments: unsafe – user error potential great w/ significant consequences

Please note which concept you prefer by placing one of the large circular stickers on the plan of your choice.

Thank you!

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please leave your contact information if you wish in case we need clarification on any of your comments:

Name: Brian Early

Email: brianjearly@gmail.com

Concept A – Two-Way Cycle Track

Comments: This nice, but these always seem kind of slow when riders are trying to pass one another. Also, with the sociality of Portsmouth, I foresee traffic jams of people seeing their friends stopping & chatting

Concept B – Buffered Bike Lanes

Comments: I like this design the best only if riders respect the correct directions, which I fear they won't be.

Concept C – Traditional Bike Lanes

Comments: The other designs are much cooler when thinking about riding in three seasons, but I think this will be the best design in four seasons, especially for winters like this one. Middle Road needs to be a main corridor at during the worst of winters.

Please note which concept you prefer by placing one of the large circular stickers on the plan of your choice.

Lastly, I wonder if Middle Road is the best street to encourage children cycling. Portsmouth has a great number of side streets that could be made into bicycle thoroughfares without infringing on the artery that Middle St is

Thank you!

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please leave your contact information if you wish in case we need clarification on any of your comments:

Name: Sue Allen

Email: sallen3538@comcast.net

Concept A – Two-Way Cycle Track

Comments: I don't like the idea of both directions on one side. It forces kids on the other side to cross over to get on the bike lanes.

Concept B – Buffered Bike Lanes

Comments: This is my concept of choice. The kids are protected by the parked cars going to school.

Concept C – Traditional Bike Lanes

Comments: Least favorite - no protection

Please note which concept you prefer by placing one of the large circular stickers on the plan of your choice.

Thank you!

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please leave your contact information if you wish in case we need clarification on any of your comments:

Name: GERRY DUFFY

Email: GDUFFY44@GMAIL.COM

Concept A – Two-Way Cycle Track

Comments: Please seriously consider as a beginning for traffic calming — pedestrian/cyclist controlled lights, maybe 2 or 3, between the main lights @ Miller + South

Thanks! Really exciting!

Concept B – Buffered Bike Lanes

Comments:

Concept C – Traditional Bike Lanes

Comments:

Please note which concept you prefer by placing one of the large circular stickers on the plan of your choice.

Thank you!

Seacoastonline.com

February 20. 2015 2:01AM

Print Page

City should move forward with buffered bike paths

Feb. 19 — To the Editor:

Thanks to the sustained efforts of residents, Portsmouth is on the verge of an historic breakthrough, one that will bring the city into the fold of other communities that have rebalanced their transportation infrastructure to better accommodate non-vehicular traffic. It should obvious by now that the more Portsmouth residents who are able to safely walk, bike, jog, or push strollers around town, the more we will gain from a wide range of benefits: personal health, environmental health, and pride in a civic structure suitable for the 21st century. Years of input from citizens (Portsmouth Listens, charrettes, etc.) have made it abundantly clear that a large number of Portsmouth residents favor substantially improved bicycle and pedestrian infrastructure.

The work and citizen advocacy has brought us to the point where the Portsmouth Planning Department now has a “Safe Routes to School” grant-funded actionable plan, ready for implementation as soon as in the fall. This flagship project focuses on the key corridor for many of the city’s families and students: the Middle Street/Lafayette Road stretch from Richards Avenue to Andrew Jarvis drive. This corridor, if rendered safe for cyclists, would open up the possibility, for generations to come, of countless trips back and forth to school for large numbers of the city’s children and their parents.

Of the three options on the table at the recent City Hall presentation, residents overwhelmingly favored the option that would provide a “bike track,” a dedicated two lane bike path, on the east side of the corridor. The path would be buffered on one side by the sidewalk and on the other — and this is the key shift and innovation for our town — a marked buffer zone between the path and parked cars on a narrower road. The buffer is absolutely essential in providing not only real safety (i.e. drivers swinging car doors open) but also the critical feeling of security. There is no way I would let a young child of mine ride down Middle Street on a “traditional” bike lane. The speed of traffic and lack of a buffer would make it far too risky. But I would let my kid ride on a dedicated, buffered, two-lane path.

There’s no financial cost to the city for this project but there are other concerns. A handful of parking spaces might be lost. Conceivably, vehicular trips into and out of town might take an extra 30 seconds. In some places it might indeed be a tight fit for emergency vehicles. But their crews are amazing and we know they can do it. Just look around at the extreme conditions they are dealing with right now in our snow-narrowed streets.

Other communities that have successfully implemented these kinds of infrastructure improvements have had exactly the same issues. A collaborative effort between planners and emergency services, whose concerns are completely understandable and laudable, is essential. After all, our taxes pay for the salaries and work of city employees in all departments and it’s reasonable to expect them to work together for a pragmatic and positive outcome for the benefit of the

entire community. Emergency services, while extremely important, are, after all, one part of a complex picture. The residents of Portsmouth have been very clear about where they want their city to go. They want and expect change, change we shouldn't fear but welcome.

If you have a stake in this issue please contact city officials and let them know your thoughts. If we don't take advantage of this opportunity now, it'll be a long time before we have another chance. And parents will continue to taxi their kids to school. They could be out in the fresh air, getting some exercise.

Gerald Duffy

Portsmouth

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please leave your contact information if you wish in case we need clarification on any of your comments:

Name: Rich Matthes

Email: matthes.rich@gmail.com

Concept A – Two-Way Cycle Track

Comments: My Favorite in many ways especially for kid friendly approach. I am concerned about it being too unfamiliar to visiting drivers

Concept B – Buffered Bike Lanes

Comments: Best Concept in my opinion, protects cyclists & is less confusing to visiting and local drivers

Concept C – Traditional Bike Lanes

Comments: This concept is dangerous doors hit & kill cyclists

Please note which concept you prefer by placing one of the large circular stickers on the plan of your choice.

Thank you!

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please leave your contact information if you wish in case we need clarification on any of your comments:

Name: Christopher David

Email: chris@leonine labs.com

Concept A – Two-Way Cycle Track

Comments: IF feasible re cost, & if first responders' concerns can be addressed, then please "go big or go home". I for one will be willing to volunteer web design/dev/marketing to any community educational efforts. I live on Middle St & will be happy w/ any of these plans, & will use the lanes myself. Prefer the most kid- & family-friendly plan.

Concept B – Buffered Bike Lanes

Comments:

Concept C – Traditional Bike Lanes

Comments:

Please note which concept you prefer by placing one of the large circular stickers on the plan of your choice.

Thank you!

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please e-mail this form to jthwalker@cityofportsmouth.com.

Name: Matt Glenn

Email: matthglenn@gmail.com

Concept A – Two-Way Cycle Track

Comments: I feel that a two-way track on one side of the road can cause more confusion for drivers who are used to looking in one direction for oncoming traffic. Because of the number of street crossings, I don't think this is a good option for Middle/Lafayette.

Concept B – Buffered Bike Lanes

Comments: This is my top choice. The loss of parking is not significant, and this would make a much safer bike route. I bike this rode occasionally, and would ride on it more.

Concept C – Traditional Bike Lanes

Comments: This is also an ok option for me (speaking as an experienced bike commuter) but not a great option for kids getting to school, families, etc. Definitely an improvement over what exists, but we should take the opportunity to do the best option.

Thank you!

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please leave your contact information if you wish in case we need clarification on any of your comments:

Name: Diane Stradling

Email: diane.stradling@gmail.com

Concept A – Two-Way Cycle Track

Comments: Concerned that serious cyclists will still want to ride with traffic, not against it.

Concept B – Buffered Bike Lanes

Comments: Yes, feels safest need more crosswalks & maybe traffic light between South & Miller, perhaps Union since its the only intersection

Concept C – Traditional Bike Lanes

Comments: too dangerous – CARS opening doors

Please note which concept you prefer by placing one of the large circular stickers on the plan of your choice.

Thank you!

Juliet T.H. Walker

From: Nick Allen <nick.allen@innerbridge.com>
Sent: Friday, February 27, 2015 12:53 PM
To: Juliet T.H. Walker
Subject: Middle St / Lafayette Rd Bicycle and Pedestrian Corridor Project

Hi Juliet,

I recently reviewed your plans for the Middle St / Lafayette Rd Bicycle and Pedestrian Corridor Project. First of all, very well done. I applaud your effort and attention to detail. I also appreciate how inviting you have been to public feedback.

Of the options presented on the site, I am most in favor of Option B - with protect cycling lanes on either side of the road. I cycle to work almost every day - except for this past February - due to the weather. for the most part, I find cycling in Portsmouth to be fairly safe. There are enough people on bikes that drivers are aware of them. However, I have had enough close calls with cars to know that a physical divider between the bike lanes and cars is in the best interest of public safety. I was in Europe recently and saw the same concept in place there, and it worked very well (in terms of everyone clearly understanding where they should be).

Regardless of which plan you select, I think, a communications strategy is equally important for both cyclists and drivers.
Cyclists:
- Code of conduct/responsibility (obey stop signs/lights, pedestrians, one-way streets, etc.). I would support ticketing cyclists for breaking traffic laws.
- Equipment: helmets, lights, reflectors

Motorists:
- where there are not bike lanes, 3’ is the state law for passing (runners, cyclists, etc.) Most drivers don’t know this law.
- Accountability and consequences for car/pedestrian/cyclist accidents. Any incident involving a vehicle and a pedestrian/cyclist is going to favor the vehicle. Here is a good article discussing this issue: http://www.salon.com/2015/02/22/why_hitting_a_pedestrian_is_a_nearly_un_punishable_offense/

Finally, perhaps the city can facilitate the discussion of issues between drivers/cyclists?

Thank you for your efforts to make Portsmouth a safer city.

Nick

Nick Allen
nick.allen@innerbridge.com
603-661-8638
Skype: nh.allen

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please e-mail this form to jthwalker@cityofportsmouth.com.

Name: Eric Weinrieb

Email: Eric@altus-eng.com

Concept A – Two-Way Cycle Track

Comments: although i like the folw of this plan. I have reservations as to how it will be received by the vehicular cummunity. It might be found to be confusing to motorists. I also have significant concerns at the transition areas which are not depicted on these renderings.

Concept B – Buffered Bike Lanes

Comments: I think that this layout will provide the best solution on this corridor. It will allow safe transition from non-bike lane areas. Motorists will find the bicycle traffic easier recognize their movements. Recreational cyclists will be more apt to utilize these lane rather than crossing back and forth. The plans need to be further vetted with clear descriptions as to how the transitions will occur. Stripped makrings on this plan should be considered as landscaped in the final design.

Concept C – Traditional Bike Lanes

Comments: This concpet is a true winner for legal community. This design is very similar to the design where a cyclist was killed in Durham. It is extremely unsafe and cannot be further explored.

Thank you!

Johnson, Joe

From: Juliet T.H. Walker <jthwalker@cityofportsmouth.com>
Sent: Tuesday, February 24, 2015 8:51 AM
To: DeGray, Jason; Johnson, Joe
Subject: FW: Bike lanes on Middle St.

Juliet T. H. Walker, AICP
Transportation Planner
Planning Department
City of Portsmouth
1 Junkins Avenue
Portsmouth, NH 03801
(603) 610-7296
www.planportsmouth.com
Twitter: @PlanPortsmouth

-----Original Message-----
From: Jeff Latimer [mailto:gusbike@me.com]
Sent: Tuesday, February 24, 2015 8:44 AM
To: Juliet T.H. Walker
Cc: Rick Taintor; Bradley Lown
Subject: Bike lanes on Middle St.

Hi Juliet -

With regards to the proposed bike lanes on Middle and in order of preference I'm in favor of

Option A - Protected bike lane
Option B - Bike lane with parking between bike lane and traffic - this has worked well in NYC as I understand it.

I am strongly opposed to Option C which is the option that Durham used leading almost immediately to the death of a person on a bike there. This design really ought to be banned.

Thanks for your tireless efforts on behalf of people riding bicycles in Portsmouth.

Jeff

Juliet T.H. Walker

From: Paul Novotny <paul@paulnovo.us>
Sent: Thursday, February 26, 2015 2:45 PM
To: Juliet T.H. Walker
Subject: Re: Middle Street / Lafayette Road

Thanks for the reply, then my preference is for Concept A, "The two-way protected bike lane".

Also, if possible, a crosswalk at Aldrich would be nice. Full disclosure, I live on Aldrich. :-)

-Paul

On Thu, 2015-02-26 at 14:36 -0500, Juliet T.H. Walker wrote:
> Hi Paul,
>
> Thanks for sending this. The proposed protection would be parked cars as well as paint and/or flexible bollards initially. Longer term, we could consider adding planters or other physical barriers. You can see examples of similar treatments on the project web page, where we've posted some videos of relevant examples -- http://planportsmouth.com/middle-lafayette-bike-ped.html.
>
> Juliet T. H. Walker, AICP
> Transportation Planner
> Planning Department
> City of Portsmouth
> 1 Junkins Avenue
> Portsmouth, NH 03801
> (603) 610-7296
> www.planportsmouth.com
> Twitter: @PlanPortsmouth
>
> -----Original Message-----
> From: Paul Novotny [mailto:paul@paulnovo.us]
> Sent: Thursday, February 26, 2015 2:33 PM
> To: Juliet T.H. Walker
> Subject: Middle Street / Lafayette Road
>
> Hi Juliet, I have attached my comments about the Middle St / Lafayette Road protected bike lanes. I do have one question though, how is the "protection" for Concept A and B going to be done? Is it going to be street painting, or physical barriers like the planters shown in the concept drawings?
>
> -Paul

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please e-mail this form to jthwalker@cityofportsmouth.com.

Name: Paul Novotny

Email: paul@paulnovo.us

Concept A – Two-Way Cycle Track

Comments: I like this concept, as well as Conept B. Both provide better seperation from traffic and cars.
My prefernce to A and B comes down to how the protection is done. I would prefer the one that provides better protection from traffic,
ie does one provide solid barriers instead of just painting the street?

Concept B – Buffered Bike Lanes

Comments: See Concept B comment.

Concept C – Traditional Bike Lanes

Comments: This is my least favorite. It doesn't seem to be any safer for bikers than the current situation.
Bikers are still exposed to traffic on one side, and drivers getting out of their cars on the other side (being doored!).

Thank you!

Johnson, Joe

From: Juliet T.H. Walker <jthwalker@cityofportsmouth.com>
Sent: Monday, February 23, 2015 9:57 AM
To: DeGray, Jason; Johnson, Joe
Subject: FW: bicycle plan input

Juliet T. H. Walker, AICP
Transportation Planner
Planning Department
City of Portsmouth
1 Junkins Avenue
Portsmouth, NH 03801
(603) 610-7296
www.planportsmouth.com
Twitter: @PlanPortsmouth

From: Patricia Bagley [mailto:patbagley@aol.com]
Sent: Thursday, February 19, 2015 11:56 AM
To: Juliet T.H. Walker
Subject: bicycle plan input

February 12, 2015
We **welcome** your feedback and input on this project. Please e-mail this form to jthwalker@cityofportsmouth.com.

Name: Patricia Bagley

Email: Patbagley@aol.com

Concept A – Two-Way Cycle Track Comments: This looks to be the safest. Recommended by Jeff Speck. My vote! I prefer the additional safety of parked cars as a buffer between bikers and autos, trucks, and buses.

Concept B – Buffered Bike Lanes Comments: My second vote. Safer on one side than the other, but not as safe as Concept A.

Concept C – Traditional Bike Lanes Comments: I can't support Concept C for safety reasons. Drivers are too hurried and distracted to consider bikers. It's not intentional. Bikers are not on drivers' radar just yet. Imagine a driver talking on a cell phone, needing to make a right turn, and here comes a biker….

COMMENTS: If we are to do anything, let's do it right. Safety is the main issue. Concept A seems to offer the best safety and peace of mind. In general, bikers are both annoying and envied. They are not considered as co-sharers of the roads. We have lived in an automobile-owns-the-road culture (unless you are on an interstate, then the trucks own the road). If Portsmouth takes the high road (no pun intended) with Concept A, then perhaps the culture will change and we will become like other cities where bikers are tolerated and even welcomed.

Thank you, Juliet, for having the Herald ask for our comments. I missed the most recent meeting, regrettably, and appreciate the opportunity for input. Perhaps when our bike lanes are established, we can further educate the public to biking awareness.

Great job!

[redacted]

Thank you!

Juliet T.H. Walker

From: CYNTHIA STIFTER <tvr@psu.edu>
Sent: Tuesday, February 24, 2015 3:51 PM
To: Juliet T.H. Walker
Subject: pedestrian/bike plan for Middle/Lafayette

Dear Julie,

I would like to share my thoughts about the 3 bike plans proposed by the city.

Given the 3 choices, I would recommend Concept B where there is a protected bike lane on each side of the street.

I do not recommend Concept A as this concept treats bikes as non-traffic and encourages cars to disregard the rights of bikes to be on the road. Also, I can see how there might be bike-bike accidents.

Concept C would be my second choice. My problem with this concept is not that bikes are not protected from the cars but that on one side the bike rides next to parked cars. This poses a danger to the cyclist. However, I do like this concept as bikes need to be integrated into traffic and this concept does that while giving them room on the road to ride. If there were no parking on the side of the road then I would have chosen this proposal.

Cindy Stifter
294 Pleasant St.

Conceptual Alternatives Public Meeting Middle Street/ Lafayette Road

February 12, 2015

We welcome your feedback and input on this project. Please e-mail this form to jthwalker@cityofportsmouth.com.

Name:

Email:

:

Concept B – Buffered Bike Lanes

Comments: I vote for concept B

Steve Bakula
Pedal Power Cycle
Portsmouth

Conceptual Alternatives Public Meeting

Middle Street/Lafayette Road

February 12, 2015

We **welcome** your feedback and input on this project. Please e-mail this form to jthwalker@cityofportsmouth.com.

Name: William McQuillen

Email: baldunionthug@gmail.com

Concept A – Two-Way Cycle Track

Comments: This plan will make the area far more congested and traffic a nightmare. Public safety will be an issue as you now are reducing traffic flow on a main artery and giving no room for safety vehicles to get through as the bike paths and parking have eliminated all the room in this corridor

Concept B – Buffered Bike Lanes

Comments: This Plan also will make traffic more problematic by reducing tun lanes and make the Route 1 corridor more congested as people try to get to downtown,making it less desireable

Concept C – Traditional Bike Lanes

Comments: This is clearly the best choice for bicyclists and vehicles

Thank you!

CHARLES A. GRIFFIN

210 HILLSIDE DRIVE

PORTSMOUTH NH 03801

603-431-4605

SAFE ROUTES TO SCHOOL.

In his February 20th letter to the editor , Mr Gerald Duffy extols the virtues of the "Safe Routes to School Program " and urges his readers " to contact city officials and let them know your thoughts."

I am taking Mr.Duffy up on his suggestion and since he chose a public forum to explain why he supports the proposal, I am using the same forum to explain why I object to it.

While I question the wisdom of the proposal as a whole, my primary objection is to the portion of the plan that proposes to extend the limits of the project along Lafayette Road through the intersection at South Street all the way to Jarvis Drive.

The Safe Routes to School Program is explained on the NHDOT Internet as a "nationwide effort encouraging children in kindergarten through eighth grade ,including those with disabilities, to safely walk or ride bikes to school."

The City's Safe Routes to School Action Plan prepared in 2010 states " It will help further develop safe routes to the five schools in the City of Portsmouth (not including the high school) and the context map shows

the route extending out Middle Street but stopping at the intersection of Lafayette Road and Middle Road, . and going nowhere near the high school.

Such a plan is consistent with the objective of the program as set for the by the NHDOT but Including the high school in this proposal is not .

I question how many high school students are going to ride their bikes to school. It is hardly the “cool” thing to do and I submit the designers of the program reached the same conclusion which is why they did not include high school students when they designed the program.

If you have ever attempted to drive through the intersection of Lafayette Road and South Street and Greenleaf Avenue and Lafayette Road around 7 am when school is in session, you know those intersections are an absolute gridlock because of the traffic heading to the high school. This morning with school not in session there were no gridlocks.

And we are asked to believe that allowing students to ride bicycles through those intersections is going to be safe?

Mr Duffy admits that he would not allow a child of his to ride down Middle Street on a “traditional” bike lane because “the speed of traffic and the lack of a buffer would make it far too risky.”

So why has the City expanded the scope of the Safe Routes to School proposal?

While on the one hand using a Safe Routes to School Grant to defray the cost of the program, the City has used that grant as a springboard to implement the broader Middle Street/Lafayette Road Bicycle and Pedestrian Corridor Project the goal of which is to make travel along a critical section of Route 1 safer and appealing for pedestrians and bicyclists of all ages .

The proponents of this expanded plan propose to address the safety issue by installing a two way cycle track along the easterly side of Lafayette Rod from Jarvis Drive to Congress Street. This track will be 4-5 feet in width and have a minimum 3 foot buffer,meaning that up to 8 feet of existing roadway will no longer be available for use by motor vehicles.

Currently, there are left hand turn lanes from Lafayette Road onto Jarvis Drive, from Lafayette Road onto Greenleaf Avenue and from Lafayette Road onto South Street. If the width of the existing roadway is reduced by 8 feet to accommodate the bicyclists what will happen to these left hand turn lanes? I submit there will not be enough room for them to remain which will only make the situation worse as the

same amount of vehicular traffic will be forced through a much narrower passageway.

The proponents also have produced a plan showing the “Project Limits “ or the boundaries of the plan. It shows the southernmost boundary ending at Jarvis Drive.,the entrance to the high school .

However, if the purpose of the plan is to accommodate bicyclists of all ages. does anyone seriously believe that an adults bicycling on Lafayette Road I are going to stop at Jarvis Drive, turn around and head back towards downtown simply because the plan says that is where the route stops?

Rather will they not continue on Lafayette Road towards and through the traffic lights at the intersection of Lafayette Road and the Route 1 By-pass and onto a four lane highway enroute to Dunkin Donuts, McDonald’s , Fresh Foods or any of the myriad of businesses in that area ?

How safe will that be for cyclists and motorists alike?

The proponents also fail to understand that the character of Lafayette Road between the intersection with the By-Pass and South Street is far different from that beyond the intersection with South Street and the downtown .The first stretch carries much more traffic much of which

enters and exists at South Street and for that reasons is much less safe than the stretch between South Street and the downtown.

Mr.Duffy also tells us that vehicular trips In and out of town might take an extra 30 seconds and in some places it might be a tight fit for emergency vehicles , " but their (city) crews are amazing and we know they can do it."

Indeed. Try telling someone riding in an ambulance to the hospital with a serious condition that 30 seconds doesn't make difference. Remember , the ambulance frequently travels along Lafayette Road and down Greenleaf Avenue enroute to the hospital. Try telling the ambulance driver , police officer or firefighter responding to a call who has to travel on a narrower Lafayette Road that 30 seconds doesn't make a difference!

Decisions of this nature require balancing competing interests namely the desire of a minority who like to ride their bicycles wherever they please versus the vast majority who understand that roadways and highways exist to accommodate motor vehicles. One need look no farther than Rye in recent summers to see what can happen when bicyclists start riding in areas not intended to accommodate them.

Bicyclists want the same privileges but not the same responsibilities as motorists. Motorists must have their vehicles inspected to make sure

they are safe to be operated on roadways. Are bicyclists required to do so ?

Motor vehicles must be equipped with headlights for driving at night? Are bicycles required to have headlights ?

Motorists must stop at red lights and wait until the light changes to green before proceeding. On several occasions I have observed bicyclists stop at a red light and then proceed through it before it changes to green.

In short the so called Safe Routes to School proposal is anything but safe for students cyclists and motorists and should go no farther or at least it's scope be limited to what was originally proposed.

Charles A. Griffin

05 Mar 2015

Juliet Walker
City of Portsmouth
1 Junkins Ave
Portsmouth NH 03801

Middle Street Safe Routes to School Concepts

Dear Juliet,

Please find below a whole series of comments that relate to "doing it right". I do understand and agree that "right" is fuzzy, and subject to finances and opinion and opportunity.

One system-level idea that I think should define what we do: The purpose of the bike/ped program is to get people on bicycles around town, and so we are attempting to find out what barriers exist that prevent people (adults to elementary school kids) from riding bicycles on Middle St, and then remedy those barriers while not inordinately impacting people who drive vehicles on Middle St.

Most likely, many of those barriers, their priority, and their solutions will be fuzzy just like "doing it right" but being able to describe barriers and solutions may help everybody. But, it's makes a clear question for any suggestion or question - "will this help get people on bicycles?"

And as you mentioned, we indeed have 4 options, option D being to do nothing quite yet.

All that said **I strongly believe that Concept A has the most benefits and the fewest technical challenges** to make it work from many perspectives. Below I work through the various issues per Concept.

I'd be very happy to talk with you more, either to answer questions or discuss alternatives.

Peter

A - BARRIERS

Ease of Use: One of the barriers I feel strongly about is the ease of use of the infrastructure. Ease of use will drive acceptance - any interruption or difficult entry/exit will encourage people to use other pathways (including being on the vehicle laneways). This extends to maintenance (plowing, paving, etc.), so any acceptable means we have to encourage ease of use should be implemented. What this does mean is that the details can make a significant difference to the final rendition of each plan.

Safety: A second barrier is safety. One point that we didn't really discuss is how this is being 'marketed' to the public and thus what cross-section of users we are publicly encouraging. Given this is a Safe Routes to School program, and that the plan makes mention of connecting to schools and library, etc., I think we have to assume that we are encouraging rather vulnerable users. You mentioned you'd send your kids onto Middle with Concept-C style or even the current (non) striping, but I feel you (and I, etc.) are a special case. The many discussions I've had with Sustainable Portsmouth and other groups, experiencing places like Seattle where Concept-C was implemented on many roads across the city (and since replaced with buffered lanes), and following the national and international bicycle transport trends leads me to believe that Portsmouth would benefit erring the Middle Street bike/ped improvements towards obvious safety.

Cost: I understand City Hall's desire to avoid construction improvements and 'solve' this with a new striping plan. Note that we have both creation and ongoing maintenance costs. It will be interesting as we get into the details and hopefully any difficult spots are few.

B - SAFETY and EASE OF USE

In general:

Concept C - For an experienced person on a bicycle, riding Middle with 'old-school' bike lane striping would be very close to what it is now - doable, but pay close attention to doors and side streets, etc. There's a very thin air gap between you and parked vehicles on the right and 30+ mph moving traffic on the left. This scenario does very little to protect vulnerable users, besides suggest to people in vehicles that they should stay on their side of a white line. Also, navigation on a street like this is difficult for people on bicycles, as turning onto a sidestreet (especially across traffic) requires significant shoulder checking (potentially perilous between parked and moving vehicles) or finding a spot to pull off and cross like a pedestrian. Again, all of this is doable as an experienced person on bicycle, but the level of danger rises dramatically as experience decreases, and the consequences of a door, wandering vehicle, or mistaken wobble into traffic can mean death or serious injury. It's a very A/B scenario with significant consequences and relatively thin margins of error.

Concept B - There are two different safety scenarios here: 1) a 2-foot air gap to 30+ mph traffic on the west (outbound) side, or 2) a 3-foot air gap plus parked cars on the east (inbound) side. (And the idea of alternating the parking is noted, as is the Sagamore situation of parking only on the non-house side.) Scenario 2 is similar to Concept A so I will address it below. The Scenario 1 outbound 2-foot air gap is certainly a significant improvement from Concept-C. This increases the margins of error for both the people in vehicles and on bicycles. There will be a marked change in navigation as a shoulder check doesn't have to be as quick or as far, and there are no car doors waiting to

suddenly open ahead. Even with the increased margins of error, Concept B outbound bike lanes stiff suffer from possible significant injury or death consequences if the (easy to cross) air-gap margin is breached. We need to ensure that people in vehicles turning across the bike lanes have enough sight line to see people on bicycles in the bike lanes approaching intersections and also that people on bicycles recognize the green fill paint denoting intersections (and driveways?) so they watch for crossing vehicles.

Concept A - This is the current mainstay suggestion of bike/ped designers worldwide and the type that many cities are turning to. All people on bicycles are separated from moving vehicles by not only by an air gap, but also by physical objects (parked vehicles and bollards in our situation). The only time people on bicycles and in vehicles have to interact is at intersections, which are easily marked in a way that everybody notices. One bonus of Concept A versus Concept B inbound bike lane is that Concept A has the extra buffer of the outbound bike lane between opening doors and their lane, and the outbound lane which is closest to the vehicle has easy visibility into and from the vehicle. We may mean we could narrow the 3-foot buffer slightly if we need the space for other lanes. Similar to Concept B, we need to ensure that people in vehicles turning across the bike lanes have enough sight line to see people on bicycles in the bike lanes approaching intersections and also that people on bicycles recognize the green fill paint denoting intersections (and driveways?) so they watch for crossing vehicles. This is especially important here as there is two-way bike traffic on the inbound side, but also a reduced worry on the outbound side with no bike lanes.

Specifics:

1) Sight lines: Certain sections of Middle St have difficult sight lines due to elevation changes and curves that make crossing the road and especially shoulder checking on a bicycle difficult. This is very true for Concept C, and B to a degree.

2) Sidestreet/intersection crossings: Concept B and C both suffer from safety concerns getting people on bicycles across the outbound intersections of Aldrich, Middle Rd and Greenleaf. All of those intersections are have long crossing distances along Middle St, are certainly high volume entry and exits from Middle St, and due to sightlines people in vehicles tend to encroach on the travel lanes to have a safer/quicker entry. Concept A avoids those situations completely with bicycles only on the 'inbound' side.

3) Entry and Exit (next 3 paragraphs):

Exit and entry from Concept C is easy and understandable, in that the person on a bike will operate the same as a person in a vehicle. When the striping disappears at Miller or Richards, the lanes simply turn into sharrows - easy for people in vehicles and on bicycles to understand, though it does increase the danger level slightly for people on bicycles. At the Jarvis end, any outbound person trying to turn into the school area will have to be in the vehicle travel lane, mixing with the 3-way intersection traffic.

Concept B is similar to C on the outbound lane. On the inbound lane, entry is very easy from a sidestreet on the inbound side. Entry into the inbound lane from a sidestreet on the outbound side is tricky in that we have to encourage people to come all the way to the far curb and not turn into the vehicle lanes. This means good visibility of where the bike lane is (helped by the green fill paint at both sidestreets and driveways and maybe a bike symbol at sidestreets) and not obscuring it behind cars parked too close to the intersection (which will also make sidestreet exit and entry for people in vehicles easier, with better visibility of both bike lane and vehicle lanes). Designing enough visibility at

each intersection, and also each driveway, is going to be tough and could reduce parking spots. Where the striping ends at Miller or Richards, the transition to sharrows is relatively easy and understandable. At Jarvis, the situation will be the same as Concept C.

Concept A entry is easy from any spot on the inbound side. From the sidestreets on the outbound side, we again have to encourage people to come all the way across and not obscure the entry. Green fill paint, bike symbols, etc… What this does mean is that any person on bicycle who is exiting the bike lane and crossing the vehicles lanes into a sidestreet on the outbound side will effectively turn at a sidestreet intersection area to be perpendicular to the vehicle travel lanes before crossing. This _greatly_ increases safety and visibility and predictability for everybody. The current concept at the Millar/Richards end is to transition to air-buffered lanes on both sides at Millar and then to sharrows at Richards. This means that at Millar, we need a way to get people on bicycles from the outbound side to the inbound side. An option would be to add a pedestrian segment to the signal timing, with diagonal striping/fill to indicate the transition. This could operate similarly to the pedestrian "all-play" at Maplewood/Islington/Congress/Middle intersection. It would mean infrastructure changes and additions at the Millar/Middle signal, including bicycle level sensors or push-buttons to activate the pedestrian segment. Please note that if we use push-buttons similar to Maplewood/Islington, there _have_ to be buttons located directly next to the bicycle lanes and not up on the sidewalk out of easy reach. When people on bicycles depart from the library and Middle School area to head out of town, this means at Richards they are being asked to cross the street, and then cross again at Millar. I suspect they will ride the sidewalk to Millar and join the buffered bike lanes. An option may be to extend the air-buffered two-lane bikeway from Millar to Richards, if we have room for three bike lanes and two air buffers. At Richards, all bicycle laneways become sharrows, so nobody will be encouraged to bicycle against traffic on the roadway or sidewalk from Court.

C – LANE WIDTHS, TRAFFIC CALMING and EMERGENCY VEHICLES

See attached spreadsheet. Interestingly, Concept A allows for wider vehicle travel lanes than B and C if given the same overall width, wide enough that the emergency vehicle width request could be honoured without impacting parking, etc.

Please note the suggested different buffer widths for concept B and C. Concept B has people on bicycle approaching parked vehicles only from the rear, and so a 3-foot buffer is more appropriate than 2, whereas in Concept A people on bicycles travelling directly next to the parked vehicles are approaching from the front of the vehicle, allowing better visibility both into and from the vehicle and so a 2-foot buffer could be appropriate.

Concept C - The bike lane striping will make a slight difference to vehicle speeds, but I would guess nothing significant because the visual lane widths and sight lines are effectively similar to the current state. This doesn't significantly slow vehicle speeds that are directly next to people on bicycles.

Concept B - The inbound lane will feel squeezed between parked vehicles and the outbound travel lane. The outbound lane will not as squeezed because of the visual effect of the 2-foot buffer plus bike lane. This could be construed as a bonus in that it traffic calms incoming higher-speed traffic and makes the exit from downtown feel faster.

Concept A - With the vehicle travel lanes completely separate from the bike lanes, there isn't as much worry about traffic calming. And with the potential for wider lane widths as noted by the spreadsheet, vehicle speeds would probably be similar to Concept C, meaning that emergency vehicles both would have more room and traffic speeds would be higher requiring less passing. As noted in Safety above, ensuring good visibility of people in the bicycle lanes approaching intersections will be important.

D – WATER DRAINAGE

Concept C won't suffer from any pathway grates or serious water drainage issues since the grates and main puddles will be under the parked cars.

Concept B means both bike lanes will be at the very edge of the roadway, exposing the people on bicycles to more grates and deeper puddles on both sides of the road. This will be similar to Sagamore Ave and other roads where there isn't any on-street parking, and even though Public Works tries very hard to make the grates and bumps minimal impact, just by the nature of water flow there has to be some elevation change.

For Concept A, people on bicycles will only be affected by grates and puddles on the inbound side, but they have the (safe) outbound bicycle lane to veer into to pass any obstacles without veering into the air-gap buffer directly next to traffic. The sidewalks on the outbound side might see more splash activity from passing vehicles.

E – REGULAR MAINTENANCE

Concept C will need very little maintenance beyond the usual roadway work and simple re-striping.

Concept B will need more roadway work to maintain the two bike lanes as smoother pathways, and re-striping means more green fill and white marking than Concept C or A. The inbound bike lane pavement and buffer striping will stay in good shape for longer, but the outbound bicycle lane may not fare as well from wandering vehicle tires.

Concept A will need more roadway work only on one side of the road, and with the two-way bike lanes seeing only bicycle traffic the pavement and buffer striping should remain in much better shape for longer.

F – WINTER MAINTENANCE

We do live in New Hampshire, and so will be dealing with winter conditions for some of the year. As noted during the bike/ped process last winter and as experienced again this winter, safe pedestrian access to town is difficult where sidewalk conditions or design don't allow easy clearing (or when it just isn't done, as we can see on Badger Island and beyond). As much as bicycles aren't typically used in winter, the different concepts do facilitate different plowing possibilities and thus allow and encourage _safe_ bicycle use during the winter.

Concept C - Same plowing scenario as currently, so the bike lanes stay open all year, even if parked cars hinder plowing.

Concept B - Same plowing scenario as normal on the outbound side, but the inbound side is too narrow between the curb and parked vehicles for a sidewalk plow and could

likely get filled up with snow, delaying use until after the piled up snow melts. On the outbound side, more than likely the bike lane would get overflow snow from the road and sidewalk and usage would be delayed until the piled snow melts.

Concept A - The vehicle travel lanes would be cleared as normal between the parked cars and curb, so the vehicle lanes would operate much like Court, State or any other downtown street with sidewalks directly next to the roadway. On the inbound side, the double bike lane is wide enough to allow a sidewalk plow to easily operate and keep the bike lanes clear of snow, facilitating people exiting their cars (they don't have to walk on the roadway as much when they can use the bike lanes) and regular use by people on bicycles. This would be beneficial in times of heavier snow when parking downtown is negatively impacted.

5-Mar-15

Middle Street Bike/Ped lane widths

All numbers in feet

Emerg: **25.5 total request**

vehicle	emerg	vehicle
8	9.5	8

Concept C **48 total width** 22 vehicle travel lanes only
Jarvis - Millar 34 bike and vehicle travel lanes

Parking	Bike	Travel	Travel	Bike	Parking
7	6	11	11	6	7

Concept C **34 total width** 22 vehicle travel lanes only
Miller - Richards 34 bike and vehicle travel lanes

Bike	Travel	Travel	Bike
6	11	11	6

Concept B **42 total width** 31 parking to buffer, inclusive
Jarvis - Millar 35 parking to curb, inclusive

Bike	Buffer	Parking	Travel	Travel	Buffer	Bike
4	3	7	11	11	2	4

Concept B **34 total width** 26 buffer to buffer, inclusive
Millar - Richards

Bike	Buffer	Travel	Travel	Buffer	Bike
4	2	11	11	2	4

Concept A **39 total width** 31 buffer to curb, inclusive
Jarvis - Millar

Bike	Bike	Buffer	Parking	Travel	Travel
4	4	2	7	11	11

Concept A **38 total width** 26 buffer to buffer, inclusive
Millar - Richards

Bike	Bike	Buffer	Travel	Travel	Buffer	Bike
4	4	2	11	11	2	4