

1. Agenda

Documents: [AGENDA 05.15.13.PDF](#)

2. Communications

Documents: [2. A. MS4 STORMWATER COMMUNICATION 051513.PDF](#)

3. Action Items

Documents: [3. A PART 1 BRACKETT ST. PARKING MEMO 051013.PDF](#), [3. A. PART 1 COUNCIL ORDER.PDF](#), [3. A. PART 1. BRACKETT PINE COUNCIL AGENDA REQUEST.PDF](#), [3. A. PART 2 WAVERLY ST. PARKING MEMO 050813.PDF](#), [3. A. PART 2. WAVERLY ST. MAP.PDF](#), [3. A. PART 2. WAVERLY ST. PARKING AGENDA.PDF](#), [3. B. BRIGHTON DEERING-FALMOUTH INTERSECTION MEMO.PDF](#), [3. B. BRIGHTON DEERING-FALMOUTH REPORT.PDF](#), [3. C. MEMO ON TOW RATE FEE ADJUSTMENTS 2013.PDF](#), [3. C. OUT OF STATE TOW QUESTIONS JAN 2013.PDF](#), [3. C. TOW PRICES JAN 2013.PDF](#)

4. Committee Updates/Input Sought

Documents: [4. A. 2013-2014 PORTLAND AREA.PDF](#), [4. A. PRESENTATION 2013 CITY PORTLAND TRANS COMM.PDF](#), [4. B. LIBBYTOWN CIRCULATION MEMO.PDF](#), [4. B. LIBBYTOWN SUMMARY.PDF](#)

CITY OF PORTLAND, MAINE
Transportation, Sustainability and Energy Committee

Transportation, Sustainability and Energy Committee

DATE: 5/15/2013
TIME: 5:30 PM
LOCATION: City Council Chambers
City Hall

AGENDA

1. Approval of May 1, 2013 Meeting Minutes
2. Communications: (Public Comment will not be taken)
 - A MS4 5-year Stormwater Management Compliance Program
3. Action Items: (Public Comment will be taken on these items)
 - A Traffic Schedule Amendment- Endorse/forward to City Council 1. Brackett and Pine Streets 2. Waverly Street
 - B Deering/Brighton/Falmouth Street Intersection Study- Endorse final plan
 - C Proposed Tow-operator Fee Increases - Endorse/forward to City Council
4. Committee Updates/Input Sought:
 - A MaineDOT and Maine Turnpike Authority- Present 2013 Project Coordination
 - B Libbytown Circulation Study (PACTS)- Report status and process to date
5. Adjourn

Councilor David A. Marshall, Chair
Councilor Kevin J. Donoghue, Vice Chair
Councilors John Anton and Cheryl Leeman



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Public Services Department

Michael J. Bobinsky

To: David Marshall, Chair and Members of the Transportation, Sustainability and Energy Committee

From: Doug Roncarati, Stormwater Coordinator

Date: May 13, 2013

Subject: MaineDEP MS4 General Permit

Portland operates under the state's 5-year MS4 General Permit for its discharge of stormwater runoff, which is due to expire on June 30th of this year. The Maine Department of Environmental Protection (DEP) has been developing a draft of the next 5-year permit with the goal of having the new permit in place for July 1, 2013.

The Interlocal Stormwater Working Group, a partnership of regulated communities in the Greater Portland area including Portland, has reviewed and submitted a unified set of comments to the DEP, some of which were reflected in the draft permit. DEP posted the draft permit on their website for public comment, which ends on May 24th. After the public comment period ends, the DEP will review and respond to any comments, revise the draft as necessary and submit the final draft to the U.S. Environmental Protection Agency for approval.

Once the MS4 General Permit is final, the City will need to file a Notice of Intent to comply with the permit and then develop a Stormwater Program Management Plan by the end of year that describes the steps it will take to implement the permit.



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MEMORANDUM

TO: David Marshall, Chair, Transportation, Sustainability and Energy Committee

FROM: Jeremiah Bartlett, Transportation Systems Engineer, Dept. of Public Services

CC: Mike Bobinsky, Kathi Earley, DPS; John Peverada, Parking Services

DATE: May 10, 2013

RE: **Proposed Traffic Schedule Change: Brackett Street**

Background

The Department of Public Services was asked by the developer (Redfern LWS LLC) of West End Place (189-191) Brackett Street to endorse the conversion of the “no street” parking regulations on Brackett Street in front of the development, following approval by the Planning Board on February 26, 2013. West End Place is a 39 unit apartment building with two retail suites on the ground floor. At this location (between Pine St and Joy Place) the City currently does not allow parking on the north side of Brackett from Pine Street to a point 173 feet east of Pine Street.

Recommendation

Following a field review, it is the recommendation of the Department that the following changes be made to the traffic schedule on the north side of Brackett Street:

- From a point beginning at the intersection of Pine and Brackett at “0” and running to a point 30 feet easterly – no parking.
- From a point beginning at 30 feet from the intersection of Pine and Brackett and running easterly to a point 96 feet – 15 minute parking.
- From a point beginning at 96 feet from the intersection of Pine and Brackett and running easterly to a point 104 feet – Motorcycle parking.
- From a point beginning at 129 feet from the intersection of Pine and Brackett and running easterly to a point 151 feet – UCarshare parking only.
- From a point beginning at 151 feet from the intersection of Pine and Brackett and running easterly to a point 173 feet. – 15 minute parking.

The Department asks that the Transportation Committee consider this action in your May 15, 2013 meeting, and if supported; take action to recommend this to the full City Council. Supporting graphics and correspondence from the Applicant have also been provided.

MICHAEL F. BRENNAN (MAYOR)
KEVIN J. DONOGHUE (1)
DAVID A. MARSHALL (2)
EDWARD J. SUSLOVIC (3)
CHERYL A. LEEMAN (4)

CITY OF PORTLAND, MAINE
IN THE CITY COUNCIL

JOHN R. COYNE (5)
JILL C. DUSON (A/L)
JOHN M. ANTON (A/L)
NICHOLAS M. MAVODONES, JR. (A/L)

TRAFFIC SCHEDULE AMENDMENT

Ordered, that the City of Portland's Traffic Schedule be and hereby is amended as follows:

By deleting under Brackett Street:

North Side – From Pine Street to a point 173 feet easterly of Forest Avenue

Schedule I – No Parking

By adding under Brackett Street:

North Side

- From a point beginning at the intersection of Pine and Brackett at "0" and running to a point 30 feet easterly – no parking. – Schedule I
- From a point beginning at 30 feet from the intersection of Pine and Brackett and running easterly to a point 96 feet – 15 minute parking. – Schedule XV
- From a point beginning at 96 feet from the intersection of Pine and Brackett and running easterly to a point 104 feet – Motorcycle parking.
Schedule XXXIV
- From a point beginning at 129 feet from the intersection of Pine and Brackett and running easterly to a point 151 feet – UCarshare parking only.
Schedule
- From a point beginning at 151 feet from the intersection of Pine and Brackett feet and running easterly to a point 173 feet. – 15 minute parking.
Schedule XV

**CITY OF PORTLAND, MAINE
CITY COUNCIL AGENDA REQUEST FORM**

TO: Sonia Bean, Senior Executive Assistant
Theresa Tucker, Administrative Assistant

FROM: Michael Bobinsky, Director of Public Services

CC: John Peverada, Parking Manager
Eric Labelle, PE, Assistant Director of Public Services/Operations Manager
Katherine Earley, PE, Engineering Services Manager

DATE: May 15, 2013

1) Council Meeting at which action is requested:

1st reading: N/A
Final action: June 3, 2013

2) Can action be taken at a later date: X Yes No
If not, why not?

3) This item is sponsored by: *The Department of Public Services and The Parking Division.*

This Item was reviewed by the Transportation, Sustainability and Energy Committee on May 15, 2103 and was passed.....

If a memorandum addresses the following issues, you may attach and reference the memorandum but please highlight it so staff can easily answer I-V.

- I. SUMMARY OF ISSUE:** The Department of Public Services requests approval to amend the Traffic Schedule for the purpose of installing parking in front of a new development, West End Place located at the corner of Pine & Brackett Streets
- II. REASON FOR SUBMISSION:** (What issue/problem will this address?)
At the current time, there is no parking on Brackett from the corner of Brackett and Pine running easterly for 173 feet. The new development contains 39 residential units and 2 retail units. The development has a submitted and had accepted a Transportation Demand Plan. The building will provide tenant parking on the first level for 34 cars.
- III. INTENDED RESULT:** (How does it resolve the issue/problem?)
This request will provide timed parking for 4 cars, 2 motorcycles and a UCarshare spot. This parking will provide customer parking for businesses on both sides of Brackett Street.

- IV. **FINANCIAL IMPACT:** There are minimal signage changes to be made and they will be conducted using Department operating budget funds.
- V. **STAFF ANALYSIS & RECOMMENDATION:** The Department of Public Services recommends this action to increase on street parking at this location. This action will cost the City a minimal amount.

Attachments:

- Council Order
- Map of Location



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MEMORANDUM

TO: David Marshall, Chair, Transportation, Sustainability and Energy Committee

FROM: Jeremiah Bartlett, Transportation Systems Engineer, Dept. of Public Services

DATE: May 8, 2013

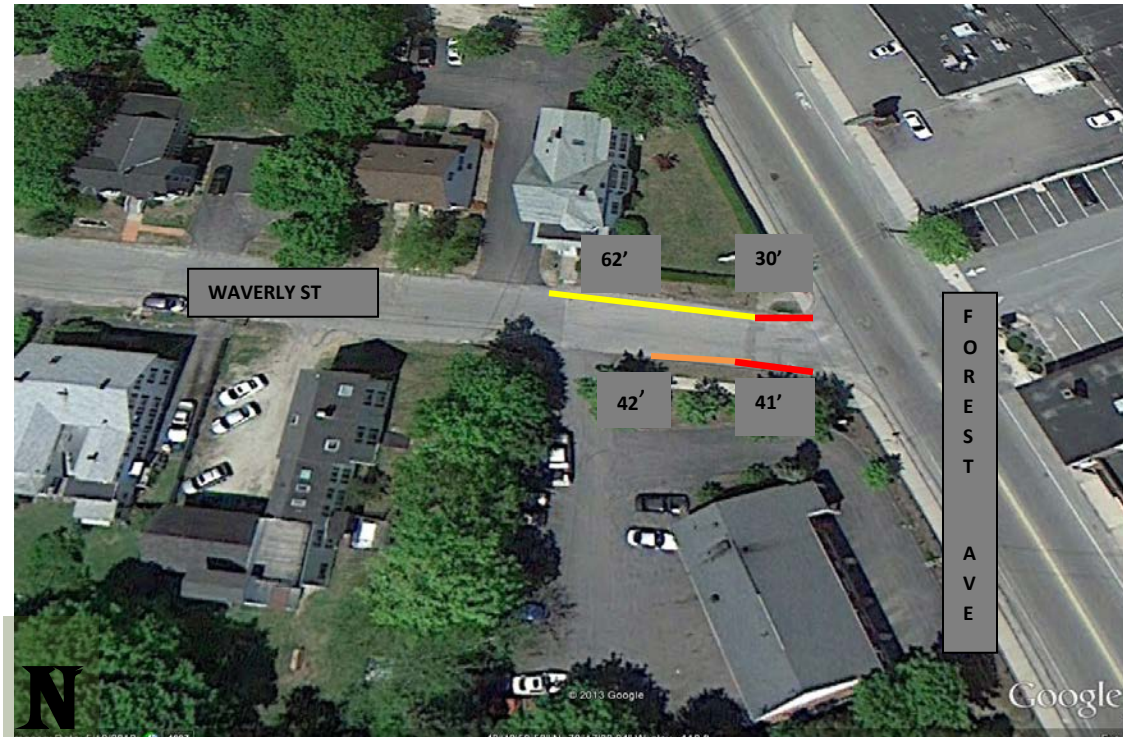
RE: **Proposed Traffic Schedule Change: Waverly Street**

Background

The manager of Port City Car Care requested an adjustment to the 'No Parking' area to that businesses' only driveway, located on Waverly Street. The width of this street, combined with the presence of unregulated parking on both sides of the street, makes deliveries difficult.

Recommendation

Following a field review, as well as obtaining feedback from abutters and discussing the matter with John Peverada, it is the recommendation of the Department that the No Parking designation on the south side of Waverly Street west of Forest Avenue (the frontage of Port City Car Care) be extended from 41 feet in length to 83 feet in length, or the approximate equivalent of two vehicles. The supporting documentation, including the Council agenda request and a map of the proposed change, is included in the graphic.



City of Portland-Public Services

Waverly Street (Two-Way)

Proposed (—) Convert 2 unrestricted parking spaces into 2 no parking anytime spaces

May/June, 2013

— = No Parking

— = Unrestricted Parking

**CITY OF PORTLAND, MAINE
CITY COUNCIL AGENDA REQUEST FORM**

TO: Sonia Bean, Senior Executive Assistant
Theresa Tucker, Administrative Assistant

FROM: Michael Bobinsky, Director of Public Services

CC: John Peverada, Parking Manager
Eric Labelle, PE, Assistant Director of Public Services/Operations Manager
Katherine Earley, PE, Engineering Services Manager

DATE: May 15, 2013

- 1) Council Meeting at which action is requested:

1st reading: N/A
Final action: June 3, 2013
- 2) Can action be taken at a later date: X Yes No
If not, why not?
- 3) This item is sponsored by: *The Department of Public Services and The Parking Division.*

(If the item is sponsored by a Council Committee include the date the committee met and the outcome of the vote.)

If a memorandum addresses the following issues, you may attach and reference the memorandum but please highlight it so staff can easily answer I-V.

- I. **SUMMARY OF ISSUE:** The Department of Public Services requests approval to amend the Traffic Schedule for the purpose of installing no parking in the area from Forest Avenue to the first driveway entrance on the south side of Waverly Street.
- II. **REASON FOR SUBMISSION:** (What issue/problem will this address?)
The reason for this request is to provide ample room for vehicles and/or emergency vehicles to enter and exit Forest Avenue, which in turn will help traffic flow more smoothly. At this time vehicles are parking on both sides of the street. This makes it difficult for larger vehicles to enter and exit Forest Avenue. In some instances small delivery vehicles cannot access delivery points or they block Waverly Street during deliveries.
- III. **INTENDED RESULT:** (How does it resolve the issue/problem?)
The intended result is to create a "No Parking Any Time" area to provide the necessary road width for vehicles to pass by each other and maneuver.

- IV. **FINANCIAL IMPACT:** There are minimal signage changes to be made and they will be conducted using Department operating budget funds.
- V. **STAFF ANALYSIS & RECOMMENDATION:** The Department of Public Services recommends this action to increase safety at this location. This action will cost the City a minimal amount. The end result will be the removal of (2) two unrestricted parking spaces on the south side of Waverly Street.

Attachments:

- Council Order
- Map of Location

MICHAEL F. BRENNAN (MAYOR)
KEVIN J. DONOGHUE (1)
DAVID A. MARSHALL (2)
EDWARD J. SUSLOVIC (3)
CHERYL A. LEEMAN (4)

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JILL C. DUSON (A/L)
JOHN M. ANTON (A/L)
NICHOLAS M. MAVODONES, JR. (A/L)

TRAFFIC SCHEDULE AMENDMENT

Ordered, that the City of Portland's Traffic Schedule be and hereby is amended as follows:

By deleting under Waverly Street:

South Side – From Forest Avenue to a point 41 feet westerly of Forest Avenue

Schedule I – No Parking

By adding under Waverly Street:

South Side – From Forest Avenue to a point 83 feet westerly of Forest Avenue

Schedule I – No Parking

Memo

To: District 2 Councilor David Marshall, Chair, Transportation, Sustainability, & Energy Committee
District 1 Councilor Kevin Donoghue, Vice-Chair, Transportation, Sustainability, & Energy Committee
District 4 Councilor Cheryl Leeman, Transportation, Sustainability, & Energy Committee
At-Large Councilor John Anton, Transportation, Sustainability, & Energy Committee

From: Bruce Hyman, Bicycle-Pedestrian Program Coordinator & Project Manager

CC: Michael Bobinsky, Director of Public Services
Kathi Earley, Engineering Services Manager
Alex Jaegerman, FAICP, Planning Division Manager

Date: March 14, 2013

Re: Brighton-Deering-Falmouth Street Intersection Study: Draft Final Report

At its March 20, 2013 meeting, the Transportation, Sustainability and Energy Committee unanimously endorsed Alternative 6, the 5-Leg Roundabout (Brighton-Deering-Falmouth) with Full Roundabout (Deering-Bedford) concept.

At the meeting, the focus of the discussion was on two topics related to the dual roundabout concept: 1) recommendations related to providing safer pedestrian crossings, including for the blind and visually impaired, and, 2) minimizing to the extent possible private property impacts.

Staff seeks your endorsement of the Draft Final Report to be then sent to the full City Council for adoption as a Master Plan.

Brighton Ave / Deering Ave / Falmouth Street Intersection Study

Portland, Maine



Prepared for **City of Portland, ME**
 PACTS / Portland Area Comprehensive Transportation System

Prepared by **VHB / Vanasse Hangen Brustlin, Inc.**
 Bedford, New Hampshire

Brighton Avenue/Deering Avenue/Falmouth Street Intersection Study

Portland, Maine

Prepared for

The City of Portland, ME
PACTS/ Portland Area Comprehensive Transportation System

Prepared by

VHB/ Vanasse Hangen Brustlin, Inc.
Bedford, New Hampshire

May, 2013

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Executive Summary

Study Purpose

This study has been prepared with the purpose of developing a plan to enhance *mobility* at the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection, and to do so in a *context sensitive* manner that considers *safety, accessibility, aesthetics* and compatibility with the *University of Southern Maine (USM) Master Plan*. This goal of enhancing mobility was not limited to enhancing the mobility of automobiles, but rather was to enhance the mobility of all users. In particular, this study incorporates the notion of “Complete Streets” in that any solution must consider and balance the needs of all ages, abilities and modes – including pedestrians, bicyclists, motorists, and transit users.

Existing Conditions

To gain a thorough understanding and appreciation of the existing conditions, VHB conducted a review of land use within the study area including the surrounding neighborhoods and the USM campus. This also included a review of the USM Master Plan to understand how any potential future changes on the campus might affect potential changes to the roadway system. Additionally, VHB conducted a comprehensive field reconnaissance to observe existing traffic flow patterns, traffic operational issues, pedestrian, bicycle, and transit activity. The field inventory noted such features as pavement width, lane use, crosswalks, traffic control, transit stops, bicycle routes, etc.

Traffic volume and pedestrian movement counts available through other recent studies conducted in the area were reviewed and used to establish weekday morning and weekday evening peak period traffic flow networks. For the purpose of evaluation, these base year traffic volumes were used to forecast and establish future year 2014 and 2024 design year conditions.

Public Input

To ensure that the study considered the needs and desires of the community, the study was driven by an open and active public participation process. This public participation process began with an initial public meeting in March of 2012. This initial public meeting consisted of two parts. The meeting began with a late-

afternoon site-walk where members of the public were invited to walk the study area and view the study intersection with the Study Team. This allowed members of the public to point out various problem areas and opportunities in the field. The site-walk was followed by a more formal evening public meeting where the Study Team described the study purpose, the study schedule and solicited input from the public with regard to problem areas, opportunities and potential solutions.

Having solicited input at the March public meeting, the Study Team held a second public meeting in April 2012 to present and discuss a range of potential solutions. This meeting provided attendees an opportunity to comment, question, and discuss the benefits and impacts of the various alternatives. Plans depicting the various conceptual alternatives, including traffic simulations, were posted on the PACTS website to provide the maximum exposure to the alternative solutions.

A third public meeting was held in July 2012 to present and discuss refinements to the range of alternatives in an effort to arrive at a preferred alternative. Upon receiving public input at and following the July public meeting, the alternatives were presented to the City Council's Transportation Sustainability & Energy Committee in November 2012 and again in March 2013.

Study Needs

The results of field observations, operational analyses, and input from the public, suggested that the overriding problem with the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection is the existing six-legged layout of the intersection, which results in the stop lines and crosswalks on Brighton Avenue and Deering Avenue being set back from the intersection. From a traffic operational perspective, this layout requires additional and longer traffic signal phasing - resulting in inefficiencies, congestion, and long delays. From a safety perspective, the intersection is confusing for motorists, pedestrians, and bicyclists. The pedestrian crosswalks are lengthy and not well connected, and some of the curb ramps are not Americans with Disabilities Act (ADA) compliant.

Based on input received at the public meetings, the following specific problem areas were identified:

- Lane use confusion (pavement markings/ signage)
- Traffic congestion leading to diversions to other routes
- Inefficient layout of the intersection
- Pedestrian crosswalks are confusing, unconnected, and have poor visibility
- Skewed intersection approach angles result in tight vehicular turns
- Need to better accommodate all modes (pedestrian, bicycle, transit, emergency response)
- Need for aesthetic enhancements (landscaping, lighting, etc.)

Evaluation Criteria

The first step in developing potential solutions was to establish a set of evaluation criteria and other considerations to be used to measure how well each alternative meets the study needs. Based on input received at the initial public meeting, the following criteria were established:

- Enhance safety
- Improve pedestrian mobility
- Reduce vehicular congestion
- Improve bicycle mobility
- Enhance area aesthetics
- Consistency with the USM Master plan

As the study proceeded and as public input continued to be received, other criteria were added:

- Needs of emergency response services (police, fire, etc.)
- Needs of the blind and visually impaired community

Also, in addition to the above criteria, other considerations included, property impacts, parking impacts, impacts to the triangle parks, construction costs, the ease of difficulty of implementation, and any potential diversionary impacts.

Alternatives

Having acquired an understanding of the need and desired outcome through an open public-participation process, and having established evaluation criteria, the next step was to develop a range of alternatives. Several alternatives, or variations of alternatives, were developed. All but one of the alternatives included discontinuing the segment of Brighton Avenue that runs between Bedford Street and Falmouth Street. Those alternatives all had the benefit of reducing the six-leg Brighton Ave/ Deering Avenue/ Falmouth Street intersection to a five-leg intersection, and necessitated that the segment of Bedford Street, between Brighton Avenue and Deering Avenue, be converted from its current one-way operation to two-way flow.

The alternatives included variations and combinations of the use of traffic signals or roundabouts to control traffic flow at the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection and at the Deering Avenue/ Bedford Street intersection. One alternative, which did not involve discontinuing the Brighton Avenue segment, was to install a 6-leg roundabout at the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection.

In addition to the various roadway modification alternatives, the alternatives evaluation also included a “Do Nothing” alternative. The Do Nothing alternative serves as a baseline condition for comparison with the other alternatives.

Separate from consideration of the more substantial alternatives, VHB identified a range of near-term actions that, although not actions that would fully address the identified needs, would address some of the problems and could be implemented relatively easily and at relatively low cost. The near-term actions include items such as enhanced directional signing and pavement markings, and the upgrade of crosswalks and pedestrian ramps.

Findings and Conclusions

Based on the results of the alternatives evaluation, public input, and input from City staff, the full range of alternatives were narrowed to two final alternatives. Both alternatives consisted of discontinuing the segment of Brighton Avenue that runs between Bedford Street and Falmouth Street. Both alternatives would provide the same general street system layout of providing a 5-leg Brighton Avenue/ Deering Avenue/ Falmouth Street intersection and a 3-leg Deering Avenue/ Bedford Street intersection. The difference between the two alternatives was that one used traffic signal control at both intersections while the second alternative included the installation of roundabouts at both intersections.

Upon further consideration of how well each of the two remaining alternatives met the goal of enhancing the safe and efficient movement of all users (pedestrians, bicyclists, motorists, transit users), with particular consideration given to the accessibility needs of the blind and visually impaired, the potential property impacts, project costs, and potential diversionary impacts, City staff made a recommendation to advance the two roundabout alternative. The City Council's Transportation Sustainability & Energy Committee accepted and endorsed that recommendation at its March 2013 meeting.

1

Introduction

1.1 Project Background

Portland Area Comprehensive Transportation System (PACTS) in partnership with the City of Portland initiated this transportation planning study to develop, evaluate, and recommend potential transportation solutions aimed at improving operations and mobility at the intersection of Brighton Avenue with Deering Avenue and Falmouth Street.

The Purpose of this study is to develop a plan to enhance *mobility* at the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection, and to do so in a *context sensitive* manner that considers *safety, accessibility, aesthetics* and compatibility with the *University of Southern Maine (USM) Master Plan*. The goal of enhancing mobility is not limited to enhancing the mobility of automobiles, but rather to enhance the mobility of all users. In particular, this study incorporates the notion of “Complete Streets” in that any solution must consider and balance the needs of all ages, abilities and modes – including pedestrians, bicyclists, motorists, and transit users.

1.2 Study Area

The primary Study Area is generally limited to the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection extending to Bedford Street with its intersections with Brighton Avenue and Deering Avenue. The impacts on surrounding neighborhood streets were considered as well. The study area is depicted in **Figure 1**.

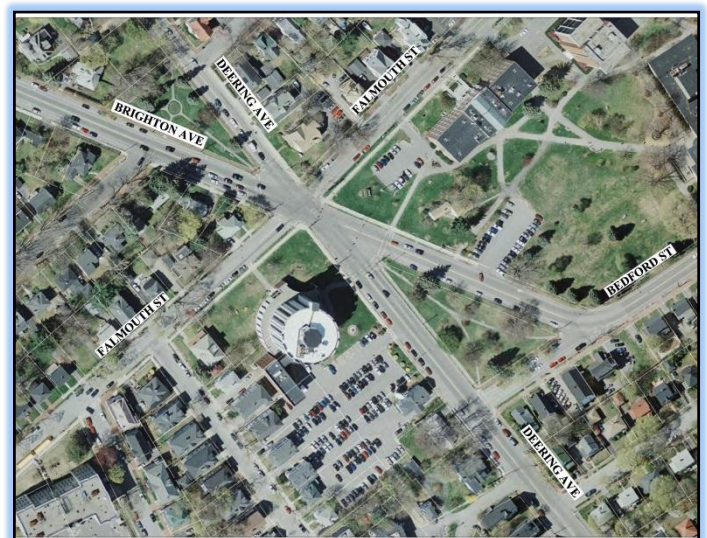


Figure 1 - Study Area

2

Existing Conditions

2.1 Introduction

This chapter describes the existing transportation facilities (roadway, public transportation, bicyclist and pedestrian) as well as the traffic operational conditions within the study area. It is this information that will serve as the foundation for understanding the existing conditions and for developing and evaluating potential solutions to address the existing deficiencies and opportunities.

2.2 Existing Transportation Facilities

2.2.1 Roadways

Brighton Avenue (ME Route 25) is a two-lane bi-directional roadway with turn lanes provided at major intersections. Brighton Avenue is oriented in a general northwest to southeast direction connecting I-95 to the northwest with Forest Avenue (ME Route 302/ 100) by way of Bedford Street in the southeast. The roadway is one of the primary vehicle corridors in this section of Portland carrying between 10,000 and 20,000 vehicles per day. In the vicinity of the Deering Avenue and Falmouth Street intersection the average daily traffic (ADT) was recorded at approximately 10,400 vehicles in 2010 with a posted speed limit of 30 mph. As the road way extends northward, the volume of traffic is higher as is the posted speed limit, which is posted at 35 mph. Land use along Brighton Avenue is a mix of residential and commercial.

Deering Avenue is also a two-lane bi-directional roadway with turning lanes at major intersections. Oriented in a mostly north-south direction, Deering Avenue generally parallels Forest Avenue connecting to Congress Street in the south and intersecting Forest Avenue at Woodford's Corner in the north. Land use is primarily residential along Deering Avenue with recreation access in the south to Deering Oaks Park, Portland Ice Arena and Fitzpatrick Stadium.

Falmouth Street is a two-lane bi-directional roadway with turn lanes at major intersections. Aligned in a general east-to-west orientation, Falmouth Street provides access to residential neighborhoods while bordering the northern edge of the University of Southern Maine's (USM) Portland campus. The posted speed limit is 25 mph on Falmouth Street.

Bedford Street extends between Forrest Avenue and Deering Avenue passing through the USM campus. The segment from Forrest Avenue to Brighton Avenue provides two-way flow with a single lane in each direction. The segment from Brighton Avenue to Bedford Street is limited to one-way flow in the direction away from Deering Avenue.

Brighton Avenue, Deering Avenue and Falmouth Street intersect to form a six-legged signalized intersection. The signalized intersection is on the southern end of a signal system that spans the entire length of Brighton Avenue and is adjacent to the Forest Avenue signal system. The traffic signal operates with five phases including an exclusive pedestrian phase to accommodate the seven marked crosswalks at the intersection.

2.2.2 Public Transportation

The Greater Portland METRO is a public transportation system that currently provides the only regularly scheduled daily service through the study area intersections. The outbound bus stop is located on the southeast corner of the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection while the inbound bus stop is located on the corner of Brighton Avenue with Bedford Street. Regular trips are scheduled with buses approximately every half hour between 5:30AM and 11:30PM during weekdays and Saturdays with a reduced Sunday schedule. Both bus stops are identified by METRO signs listing the bus route number (4). The Route 4 – Westbrook schedule can be found in the Appendix and more information on METRO can be found at <http://gpmetrobus.net>.

In addition to the METRO bus, the Regional Transportation Program (RTP) provides general public bus service between communities in Cumberland County including Portland. RTP also provides para-transit services via scheduling. However no regularly scheduled stops are located within the study area.

While not located in the immediate study area, a railroad line crosses Brighton Avenue approximately 0.3 miles north of the Falmouth Street intersection. Amtrak provides service via the Downeaster trains south to Boston, MA and north to Brunswick, ME. Additionally freight trains also use the rail line. Queuing vehicles waiting for the trains to clear the roadways can back up through the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection.

2.2.3 Bicyclist and Pedestrian Facilities

Portland has an extensive bikeway network throughout the city including marked bicycle lanes, shared lanes, paved shoulders and shared use pathways. In the study area, both Brighton Avenue and Deering Avenue have existing bicycle lanes which are identified by both pavement markings and signs. As shown on the Draft Bikeway Network City of Portland, Maine (found in the Appendix) there are plans to expand the bicycle network and to designate Falmouth Street as a planned neighborhood byway in the future. However, the existing bicycle lanes do not extend through the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection as the pavement width used for the bicycle lanes is reallocated to form turn lanes at the signalized intersection. “Share the road” signs are present to warn vehicle drivers of the presence of bicyclists through the intersection.

Due to the urban nature of the study area and the proximity of the University of Southern Maine’s Portland campus, pedestrian facilities are present on all approaches to the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection. Sidewalks are present on both sides of the roadways and crosswalks are present on all approaches of the signalized intersection. Two of the six corners of the signalized intersection are parks which include pedestrian pathways which are not parallel to the road surfaces. Crosswalks are also present at the unsignalized intersection of Bedford Street with Deering Avenue.

Note that with the presence of the University of Southern Maine's Portland campus, the University of Maine School of Law, and King Middle School (92 Deering Avenue) there is a substantial volume of pedestrians and bicyclists traveling through this intersection. With the Iris Network serving the visually impaired and blind located on Park Avenue, the probability is high that some of the pedestrians will also be visually impaired.

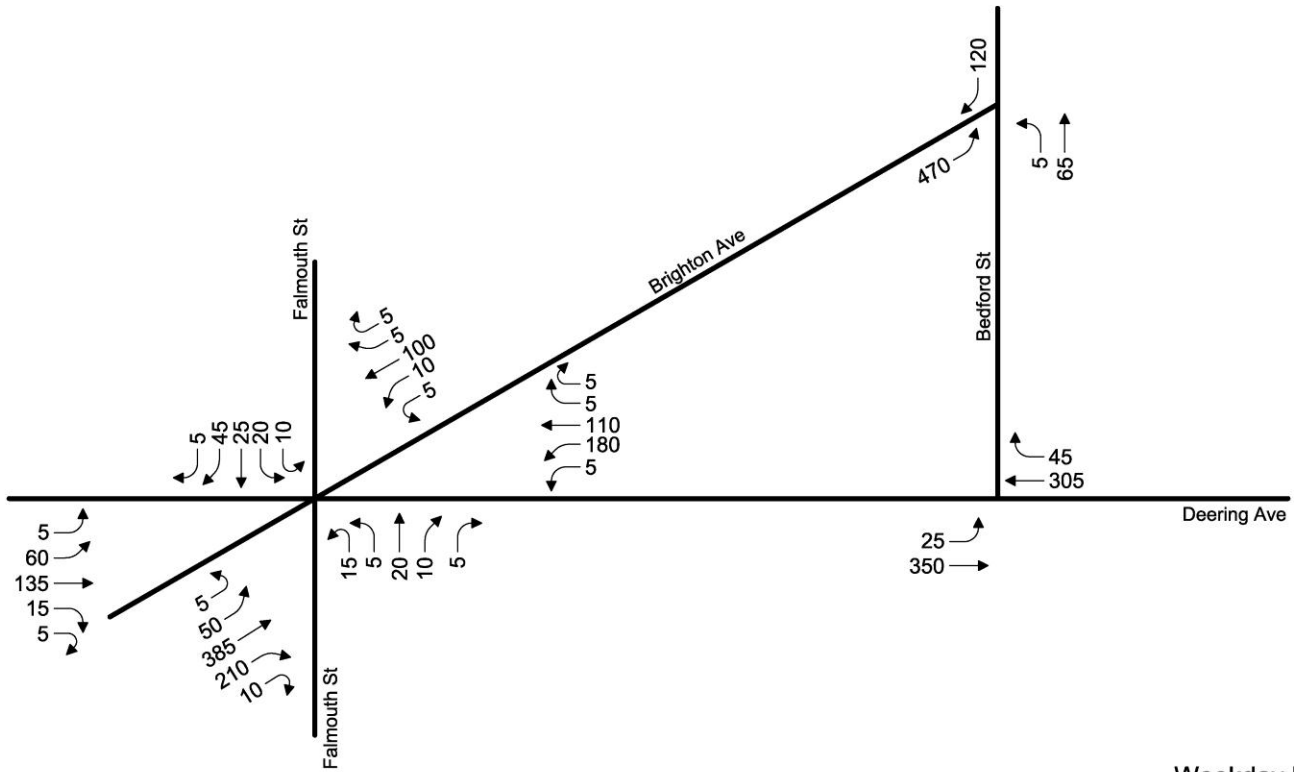
2.3 Traffic Operations

2.3.1 Traffic Volumes

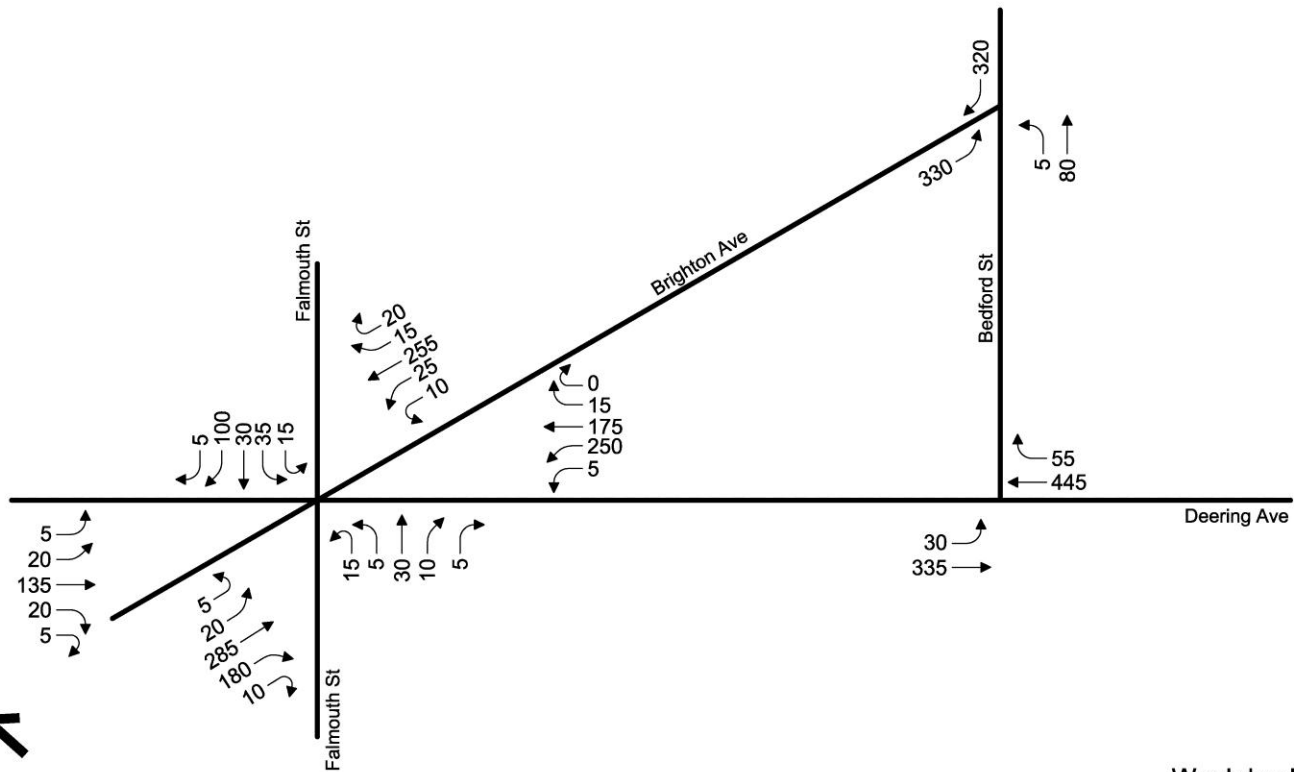
Traffic volume networks were developed for this project based on various data sources. Traffic volume networks from the Brighton Avenue Traffic Signal Modernization project conducted by VHB for the Maine Department of Transportation (MaineDOT) included the intersection of Brighton Avenue with Deering Avenue and Falmouth Street. This along with data obtained from Gorrill-Palmer Consulting Engineers, Inc. for the intersections of Brighton Avenue at Bedford Street and Bedford Street at Deering Avenue and spot intersection counts were used to determine existing traffic volumes for the study area.

The basis for the evaluation of alternatives will be the comparison to a No Build condition which was derived from the 2010 peak hour traffic volumes previously developed for the Brighton Avenue Traffic Signal Modernization project. Using a one percent annual growth rate from PACTS, the 2010 volumes were forecasted to an opening year of 2014 (the year an improvement project is assumed to be completed).

To forecast the 2024 design year, the same methodology was used. Traffic-volume projections account for both normal background traffic and various site specific development projects within the region. In this case, no site specific developments were identified and only the PACTS historical growth rate was used for normal background growth. The 2014 opening year and 2024 future year weekday morning and evening peak hour traffic volume networks are presented in **Figures 2 and 3**.



Weekday Morning



Weekday Evening

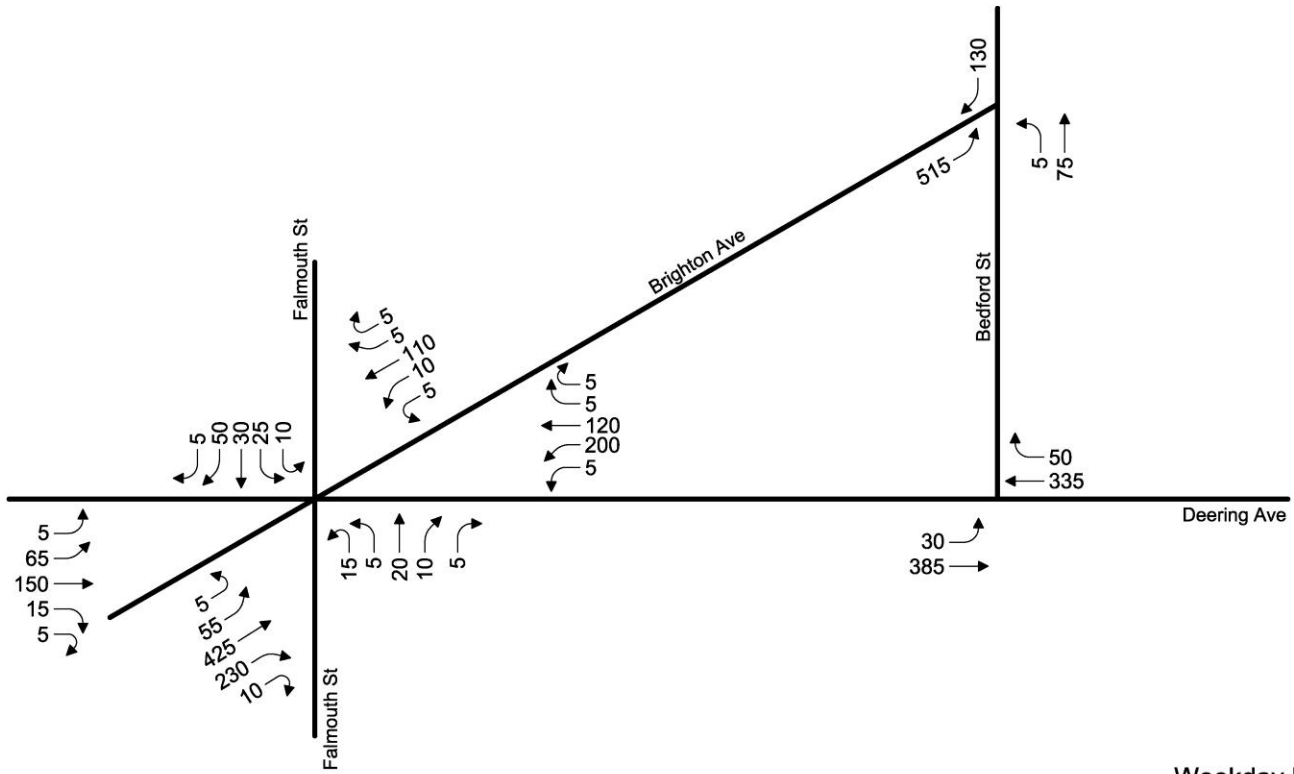


Not to Scale

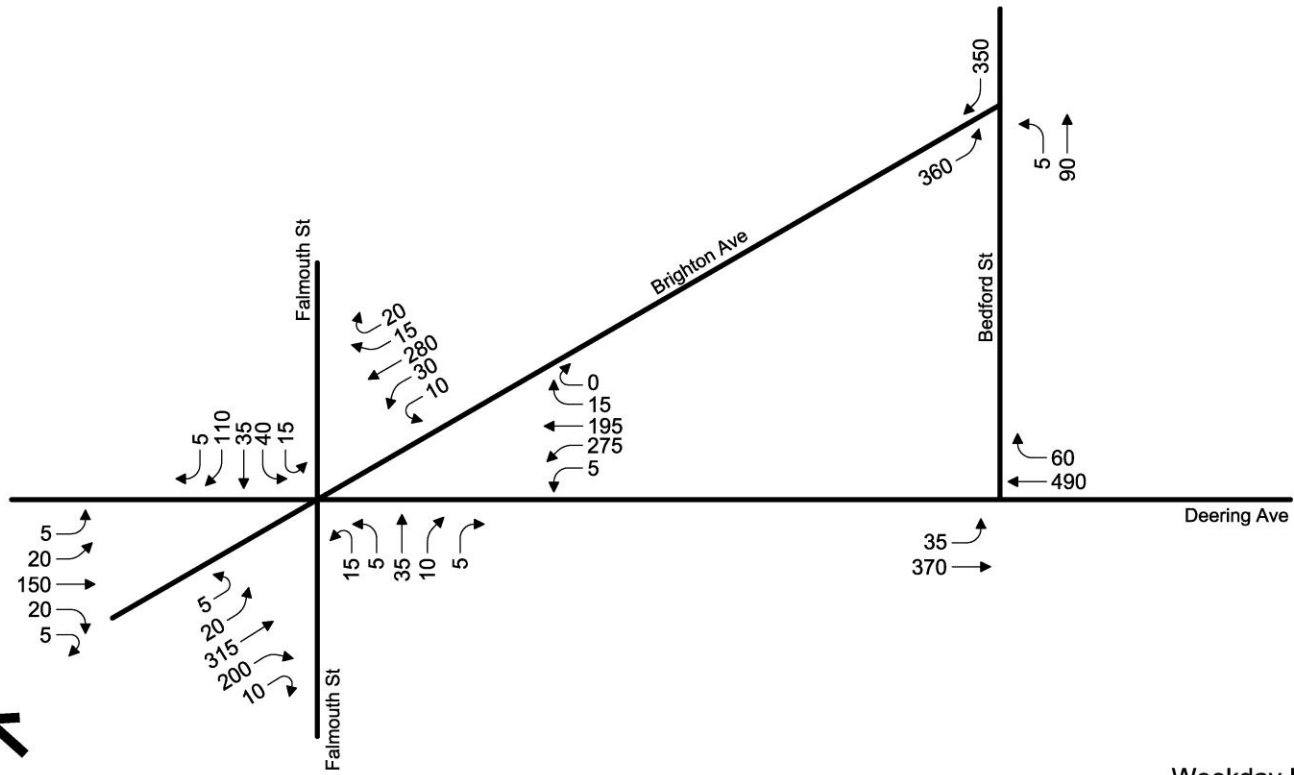
Vanasse Hangen Brustlin, Inc.

2014 Weekday Morning & Evening
Peak Hour Traffic Volumes

Figure 2



Weekday Morning



Weekday Evening

Not to Scale

Vanasse Hangen Brustlin, Inc.

2024 Weekday Morning & Evening
Peak Hour Traffic Volumes

Figure 3

2.3.3 No Build Traffic Operations

Measuring the volume of traffic through the study area intersections indicates the importance of the intersections to the overall street system, but does not necessarily indicate the quality of traffic flow. To assess the quality of traffic flow, capacity analyses were conducted to determine how well the intersections serve the traffic demands placed on them. The traffic-performance measures and the evaluation criteria used in the operational analyses are based on the methodology presented in the *2000 Highway Capacity Manual*.¹

A primary result of capacity analysis is the assignment of Level of Service (LOS), which is a qualitative measure describing operational conditions. LOS generally describes these conditions in terms of such factors as speed and travel time, density or freedom to maneuver, traffic interruptions, comfort, and convenience, thereby providing an index to quality of traffic flow. Six Levels of Service are defined that range in letter designation from LOS A to LOS F, with LOS A representing the best operating condition and LOS F representing the worst. Results of the 2014 Opening Year condition and 2024 future year condition operational analyses are summarized in **Table 1** for both the weekday morning and weekday evening conditions.

Table 1 - No Build Signalized Intersection Analysis of Brighton Avenue/Deering Avenue/Falmouth Street Intersection

2014 Weekday Morning			2014 Weekday Evening		
<u>v/c*</u>	<u>Delay**</u>	<u>LOS***</u>	<u>v/c</u>	<u>Delay</u>	<u>LOS</u>
0.88	63	E	0.93	102	F
2024 Weekday Morning			2024 Weekday Evening		
<u>v/c</u>	<u>Delay</u>	<u>LOS</u>	<u>v/c</u>	<u>Delay</u>	<u>LOS</u>
0.96	76	E	1.12	105	F

* Volume to Capacity Ratio.

** Delay in seconds per vehicle.

*** Level of Service.

As shown in **Table 1**, the results of the 2014 opening year No Build conditions operational analyses show that during the weekday evening the intersection of Brighton Avenue/ Deering Avenue/ Falmouth Street operates at a LOS F and during the weekday morning operates only slightly better at a LOS E. Both peak hour conditions show more than 60 seconds of delay. In the future, LOS remains at the

¹

2000 Highway Capacity Manual, Special Report 209, Transportation Research Board, Washington, DC.

same levels while delay and volume to capacity ratios increase. A summary of the level of service analyses by intersection approach can be found in the Appendix.

1.3.4 Summary of Deficiencies

The 2014 and 2024 No Build operational analyses revealed deficiencies at the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection. The signalized intersection is anticipated to operate over capacity and with long delay at LOS E/ F during peak hours. These operations result in long queues on several approaches which can divert traffic through nearby residential neighborhoods as motorists attempt to avoid the congestion. It should be noted with the completion of Brighton Avenue Traffic Signal Modernization project the signal timing has recently been optimized within the existing geometric constraints to provide optimal signal timing and that further improvements within the existing constraints are unlikely. The following chapter describes the evaluation of alternatives aimed at improving mobility through the intersection while balancing the needs of users of all ages, abilities and modes (including pedestrians, bicyclists, motorists, and transit users).

3

Alternatives Evaluation

3.1 Problem Statement

The results of field observations, operational analyses, and input from the public, suggested that the overriding problem with the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection is the existing six-legged layout of the intersection, which results in the stop lines and crosswalks on Brighton Avenue and Deering Avenue being set back from the intersection. From a traffic operational perspective, this layout requires additional and longer traffic signal phasing - resulting in inefficiencies, congestion, and long delays. From a safety perspective, the intersection is confusing for motorists, pedestrians, and bicyclists. The pedestrian crosswalks are lengthy and not well connected.

Based on input received at the public meetings, the following specific problem areas were identified:

- Lane use confusion (pavement markings/ signage)
- Traffic congestion leading to diversions to other routes
- Inefficient layout of the intersection
- Pedestrian crosswalks are confusing, unconnected, and have poor visibility
- Pedestrian curb ramps are not all ADA compliant
- Skewed intersection approach angles result in tight vehicular turns
- Need to better accommodate all modes (pedestrian, bicycle, transit, emergency response)
- Need for aesthetic enhancements (landscaping, lighting, etc.).

3.2 Evaluation Criteria

The first step in developing potential solutions was to establish a set of evaluation criteria and other considerations to be used to measure how well each alternative

meets the study needs. Based on input received at the initial public meeting, the following criteria were established:

- Enhance Safety
- Improve pedestrian mobility
- Reduce vehicular congestion
- Improve bicycle mobility
- Enhance area aesthetics
- Consistency with the USM Master plan.

As the study proceeded and as public input continued to be received, other criteria such as how well the various alternatives met emergency response needs and the needs of the blind and visually impaired community were added to the evaluation criteria.

Also, in addition to the above criteria, other considerations included, property impacts, parking impacts, impacts to the triangle parks, construction costs, the ease of difficulty of implementation, and any potential diversionary impacts.

3.3 Conceptual Alternatives

Having acquired an understanding of the need and desired outcome through an open public-participation process, and having established evaluation criteria, the next step was to develop a range of alternatives. Several alternatives, or variations of alternatives, were developed. All but one of the alternatives included discontinuing the segment of Brighton Avenue that runs between Bedford Street and Falmouth Street. Those alternatives all had the benefit of reducing the six-leg Brighton Ave/ Deering Avenue/ Falmouth Street intersection to a five-leg intersection, and necessitated that the segment of Bedford Street, between Brighton Avenue and Deering Avenue, be converted from its current one-way operation to two-way flow.

The alternatives included variations and combinations of the use of traffic signals or roundabouts to control traffic flow at the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection and at the Deering Avenue/ Bedford Street intersection. One alternative, which did not involve discontinuing the Brighton Avenue segment, was to install a 6-leg roundabout at the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection.

In addition to the various roadway modification alternatives, the alternatives evaluation also included a “Do Nothing” alternative. The Do Nothing alternative serves as a baseline condition for comparison with the other alternatives.

Separate from consideration of the more substantial alternatives, VHB identified a range of near-term actions that, although not actions that would fully address the identified needs would, address some of the problems and could be implemented relatively easily and at relatively low cost. The near-term actions include items such

as enhanced directional signing and pavement markings, and the upgrade of crosswalks and pedestrian ramps.

Several of the alternatives include changes from the existing traffic flow patterns. The 2014 and 2024 traffic volume networks were modified to reflect these changes by maintaining the vehicles origins and redistributing them to fit the new traffic flow patterns.

3.3.1 Alternative 1: 5-Leg Signal with Bedford St Signal

Under Alternative 1, the southern leg of Brighton Avenue would be discontinued and the Brighton Avenue / Deering Avenue / Falmouth Street intersection would be converted to a five-leg signalized intersection. Bedford Street from Deering Avenue to the existing Brighton Avenue intersection would be converted from an existing eastbound one-way street to two-way flow with the intersection of Bedford Street at Deering Street converted to a traffic signal controlled intersection. Alternative 1 is depicted in **Figure 4**.



Figure 4 - 5 Leg Signal with Bedford Street Signal

For the Brighton/ Deering/ Falmouth intersection the existing lane geometry would be maintained with two approaches on Deering Avenue NB, Brighton Ave SB, and Falmouth St WB. Falmouth Street EB and Deering Avenue SB would maintain

their existing single approach lanes. This alternative would eliminate a signal phase and compress the length of the intersection. The new signal at Bedford Street at Deering Avenue would be coordinated with the Brighton Avenue/ Deering Avenue / Falmouth Street intersection and tied into the existing signal system.

Table 2 - Alternative 1 - Signalized Intersection Capacity Analysis Summary

		2014			2024		
		<u>v/ c*</u>	<u>Delay**</u>	<u>LOS***</u>	<u>v/ c</u>	<u>Delay</u>	<u>LOS</u>
Brighton Ave/ Deering Ave/ Falmouth St	AM	0.72	36	D	0.79	38	D
	PM	0.87	41	D	0.95	70	E
Deering Ave/ Bedford St	AM	0.55	22	C	0.61	22	C
	PM	0.58	29	C	0.64	25	C

* Volume to Capacity Ratio.

** Delay in seconds per vehicle.

*** Level of Service.

The results of the operational analysis for this alternative show an improvement in operations over the No Build alternative. Delay, volume-to-capacity ratio, and level of service all show improvement. However, during the weekday evening peak the Brighton Avenue / Deering Avenue/ Falmouth Street intersection is projected to operate at LOS E in 2024 with a high volume-to-capacity ratio of 0.95. This would suggest a return to high congestion levels within 10 years.

3.3.2 Alternative 2: 5-Leg Signal (Modified) with Bedford St Signal

Alternative 2 is similar to Alternative 1 in that the Brighton Avenue NB approach would be discontinued and the Bedford Street/ Deering Avenue intersection would be placed under traffic signal control. Alternative 2 differs from Alternative 1 in that it provides a three-lane approach on Deering Avenue consisting of a relatively short left-turn lane for vehicles turning left onto Falmouth Street, a through lane for vehicles traveling onto Brighton Avenue and a shared through/ right-turn lane for vehicles traveling onto Deering Avenue or turning right on Falmouth Street. Alternative 2 is depicted in **Figure 5**.



Figure 5 - Signal (Modified) with Bedford St Signal

Table 3 - Alternative 2 - Signalized Intersection Capacity Analysis Summary

		2014			2024		
		<u>v/ c*</u>	<u>Delay**</u>	<u>LOS***</u>	<u>v/ c</u>	<u>Delay</u>	<u>LOS</u>
Brighton Ave/ Deering Ave/ Falmouth St	AM	0.73	32	C	0.80	34	C
	PM	0.70	32	C	0.76	43	D
Deering Ave/ Bedford St	AM	0.52	22	C	0.58	27	C
	PM	0.55	22	C	0.64	21	C

* Volume to Capacity Ratio.

** Delay in seconds per vehicle.

*** Level of Service.

The results of the operational analysis for Alternative 2 show an improvement in operations over the No Build alternative and over Alternative 1. Delay, volume to capacity ratio and level of service are all improved. During the weekday evening peak the Brighton/ Deering/ Falmouth intersection is projected to operate at LOS D in 2024. All other conditions would operate with good levels of service (LOS C or better). These results indicate that Alternative 2 would improve vehicle operations and reduce congestion.

3.3.3 Alternative 3: 6-Leg Roundabout

As shown in **Figure 6**, Alternative 3 maintains the existing 6-leg nature of the Brighton/ Deering/ Falmouth intersection while converting the existing signalized intersection to a roundabout. Each of the six approach legs would provide a single lane. No changes would be made to the Bedford Street/ Deering Avenue intersection. Note that Alternative 3 is the only alternative that maintains the existing six approaches at the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection.

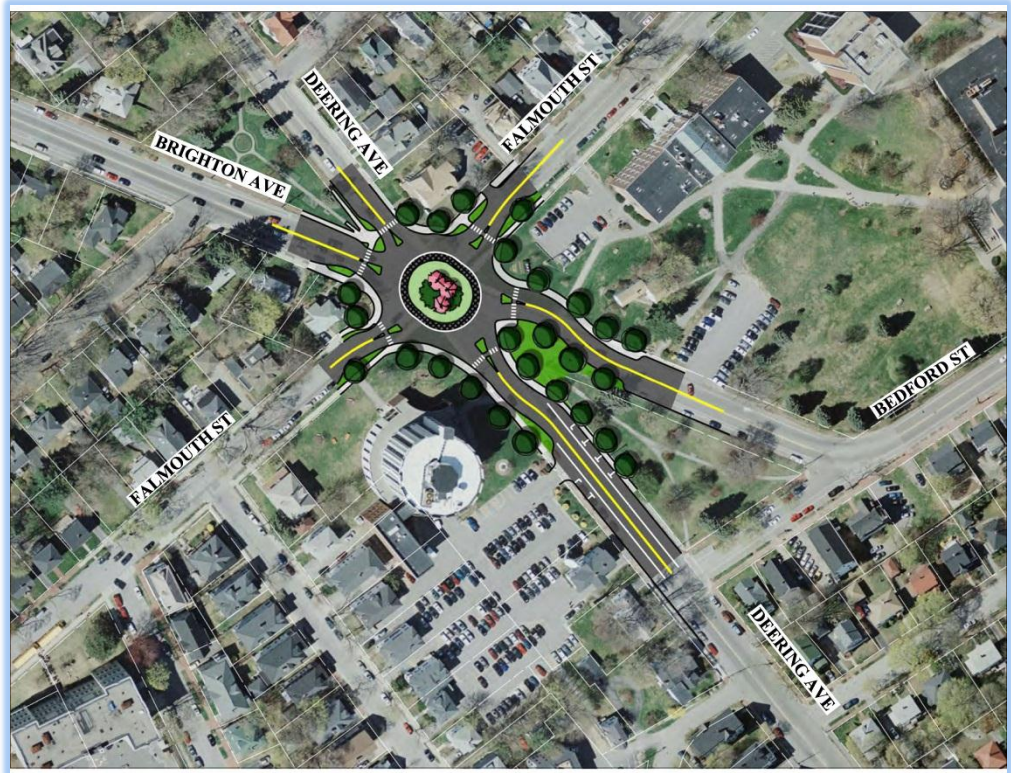


Figure 6 - 6 Leg Roundabout

Roundabouts are analyzed similar to unsignalized intersections where the turning movements and not the overall intersection operations are analyzed. The analysis shows that the Brighton Avenue southbound leg would operate at LOS F during the 2024 weekday morning peak and LOS E during the 2024 weekday evening peak. Due to maintaining all six existing legs of the intersection, the turning radii at many of the approaches are too tight to allow vehicles to turn right onto the desired leg. This would either force motorists to traverse the entire roundabout and then turn onto the desired leg or motorists would be forced to encroach on the opposing approach lane. Both of these maneuvers would increase congestion through the roundabout. Additionally, retaining the six legs to the intersection would be inconsistent with the University of Southern Maine's Master Plan. A graphic of the Master Plan can be found in the Appendix.

Table 4 - Alternative 3 - Roundabout Analysis Summary

	2014 Weekday Morning		2014 Weekday Evening		2024 Weekday Morning		2024 Weekday Evening	
	<u>Delay**</u>	<u>LOS***</u>	<u>Delay</u>	<u>LOS</u>	<u>Delay</u>	<u>LOS</u>	<u>Delay</u>	<u>LOS</u>
Deering Ave-NB	17	C	21	C	20	C	29	D
Brighton Ave- NW	8	A	20	C	9	A	27	D
Falmouth St- WB	8	A	18	C	9	A	24	C
Deering Ave- SB	10	B	20	C	12	B	27	D
Brighton Ave -SE	38	E	24	C	67	F	36	E
<u>Falmouth St - EB</u>	<u>12</u>	<u>B</u>	<u>11</u>	<u>B</u>	<u>13</u>	<u>B</u>	<u>12</u>	<u>B</u>
Overall	23	C	20	C	37	E	29	D

** Delay in seconds per vehicle.

*** Level of Service.

3.3.4 Alternative 4: 5-Leg Roundabout with Bedford St Signal

Alternative 4 has the southern leg of Brighton Avenue discontinued and the Brighton/ Deering/ Falmouth intersection converted to a five-leg roundabout. Bedford Street from Deering Avenue to the existing Brighton Avenue intersection would be converted from the existing eastbound one-way flow to a two-way operation with the intersection of Bedford Street at Deering Street converted to a signalized intersection. **Figure 7** shows the concept plan for Alternative 4.

For the Brighton/ Deering/ Falmouth intersection the roundabout would provide single lane approaches. The new signal at Bedford Street at Deering Avenue would operate independently from the Brighton Avenue signal system, but could potentially be tied to the Forest Avenue signal system.



Figure 7 - 5 Leg Roundabout with Bedford St Signal

Table 5- Alternative 4 - Roundabout Analysis Summary

	2014 Weekday Morning		2014 Weekday Evening		2024 Weekday Morning		2024 Weekday Evening	
	Delay**	LOS***	Delay	LOS	Delay	LOS	Delay	LOS
Deering Ave-NB	9	A	20	C	10	A	28	D
Falmouth St- WB	7	A	16	C	8	A	20	C
Deering Ave- SB	10	A	17	C	11	B	22	C
Brighton Ave -SE	36	E	22	C	64	F	33	D
<u>Falmouth St - EB</u>	<u>12</u>	<u>B</u>	<u>10</u>	<u>B</u>	<u>13</u>	<u>B</u>	<u>12</u>	<u>B</u>
Overall	21	C	19	C	34	D	27	D

** Delay in seconds per vehicle.

*** Level of Service.

Table 5 summarizes the analysis for the Brighton Avenue/ Deering Avenue/ Falmouth Street 5-legged roundabout. Under Alternative 4, the roundabout is expected to operate at LOS D through 2024 under both the weekday morning and weekday evening peak hours. Additionally, delay on each approach of the roundabout is significantly lower (by as much as 40 seconds) than the No Build condition. Note that the Brighton Avenue SE approach during the 2024 morning peak would operate at LOS F with a delay of 64 seconds. However, this level of delay (and the resulting vehicle queue is less than what motorists

experience under existing conditions. **Table 6** shows the signalized intersection capacity analysis for the Bedford Street intersection with Deering Avenue. Under Alternative 4 this traffic signal controlled intersection would operate at good levels of service (LOS B) through 2024 under both weekday morning and evening peak hours. The signal is anticipated to operate at LOS B. These results indicate that Alternative 4 will improve vehicle operations and reduce vehicle congestion. However, given the relatively short distance between the two intersections, vehicle queuing between the intersections could be problematic.

Table 6 - Alternative 4 – Signalized Capacity Analysis at Bedford Street with Deering Avenue Summary

2014 Weekday Morning			2014 Weekday Evening		
<u>v/ c*</u>	<u>Delay**</u>	<u>LOS***</u>	<u>v/ c</u>	<u>Delay</u>	<u>LOS</u>
0.58	16	B	0.62	16	B
2024 Weekday Morning			2024 Weekday Evening		
<u>v/ c</u>	<u>Delay</u>	<u>LOS</u>	<u>v/ c</u>	<u>Delay</u>	<u>LOS</u>
0.63	18	B	0.71	19	B

* Volume to Capacity Ratio.

** Delay in seconds per vehicle.

*** Level of Service.

2.3.5 Alternative 5: 5-Leg Roundabout with Bedford St Mini Roundabout

Given the relatively short distance between the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection and the Bedford Street/ Deering Avenue intersection, Alternative 5 considers dual roundabouts. **Figure 8** shows the concept plan of Alternative 5 with the mini roundabout at Bedford Street. The mini roundabout is not only smaller than a typical roundabout but it would be designed to restrict movements from Bedford Street to right-turn only. To complete the left turn, motorists would need to turn right onto Deering Avenue continue to the Brighton Avenue / Deering Avenue/ Falmouth Street roundabout, travel through the roundabout and complete the maneuver by turning onto Deering Avenue southbound (a U-turn type movement). The number of left turns from Bedford Street is projected to be low. The layout and operation of the Brighton Avenue/ Deering Avenue/ Falmouth Street roundabout would be similar to Alternative 4.



Figure 8 - 5 Leg Roundabout with Mini-Roundabout

Table 7 - Alternative 5 - Roundabout Analysis Summary

	2014 Weekday Morning		2014 Weekday Evening		2024 Weekday Morning		2024 Weekday Evening	
	Delay**	LOS***	Delay	LOS	Delay	LOS	Delay	LOS
Brighton Ave @Deering Ave & Falmouth St								
Deering Ave-NB	9	A	20	C	10	A	28	D
Falmouth St- WB	7	A	16	C	8	A	20	C
Deering Ave- SB	10	A	17	C	11	B	22	C
Brighton Ave -SE	36	E	22	C	64	F	33	D
<u>Falmouth St - EB</u>	<u>12</u>	<u>B</u>	<u>10</u>	<u>B</u>	<u>13</u>	<u>B</u>	<u>12</u>	<u>B</u>
Overall	21	C	19	C	34	D	27	D
Deering Ave @Bedford St								
Deering Ave SB	16	C	22	C	20	C	32	D
Bedford Ave WB	7	A	14	B	7	A	17	C
<u>Deering Ave NB</u>	<u>20</u>	<u>C</u>	<u>13</u>	<u>B</u>	<u>28</u>	<u>D</u>	<u>16</u>	<u>C</u>
Overall	18	C	16	C	24	C	22	C

** Delay in seconds per vehicle.

*** Level of Service.

The results of the operational analyses, as summarized in **Table 7**, show the Alternative 5 roundabout at the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection operating the same as under Alternative 4. The mini-roundabout at the Bedford Street/ Deering Avenue intersection shows an overall LOS C operation. However, by 2024 the Deering Avenue NB approach in the morning and the Deering Avenue SB approach in the evening would operate at LOS D.

3.3.6 Alternative 6: 5-Leg Roundabout with Full Roundabout

Alternative 6 is similar to Alternative 5 with the exception that the mini-roundabout at Bedford Street is replaced with a full roundabout. **Figure 9** shows the conceptual drawing of this alternative. Under this alternative, all movements are accommodated as motorists would be able to turn left from Bedford Street onto Deering Avenue at the intersection without using the Brighton/ Deering/ Falmouth Street roundabout.



Figure 9 - 5 Leg Roundabout with Full Roundabout

Table 8 - Alternative 6 - Roundabout Analysis Summary

	2014 Weekday Morning		2014 Weekday Evening		2024 Weekday Morning		2024 Weekday Evening	
	<u>Delay**</u>	<u>LOS***</u>	<u>Delay</u>	<u>LOS</u>	<u>Delay</u>	<u>LOS</u>	<u>Delay</u>	<u>LOS</u>
Brighton Ave @Deering Ave & Falmouth St								
Deering Ave-NB	9	A	20	C	10	A	28	D
Falmouth St- WB	7	A	16	C	8	A	20	C
Deering Ave- SB	10	A	17	C	11	B	22	C
Brighton Ave -SE	36	E	22	C	64	F	33	D
<u>Falmouth St - EB</u>	<u>12</u>	<u>B</u>	<u>10</u>	<u>B</u>	<u>13</u>	<u>B</u>	<u>12</u>	<u>B</u>
Overall	21	C	19	C	34	D	27	D
Deering Ave @Bedford St								
Deering Ave SB	16	C	22	C	20	C	32	D
Bedford Ave WB	7	A	14	B	7	A	17	C
<u>Deering Ave NB</u>	<u>21</u>	<u>C</u>	<u>14</u>	<u>B</u>	<u>30</u>	<u>D</u>	<u>17</u>	<u>C</u>
Overall	18	C	17	C	25	C	22	C

** Delay in seconds per vehicle.

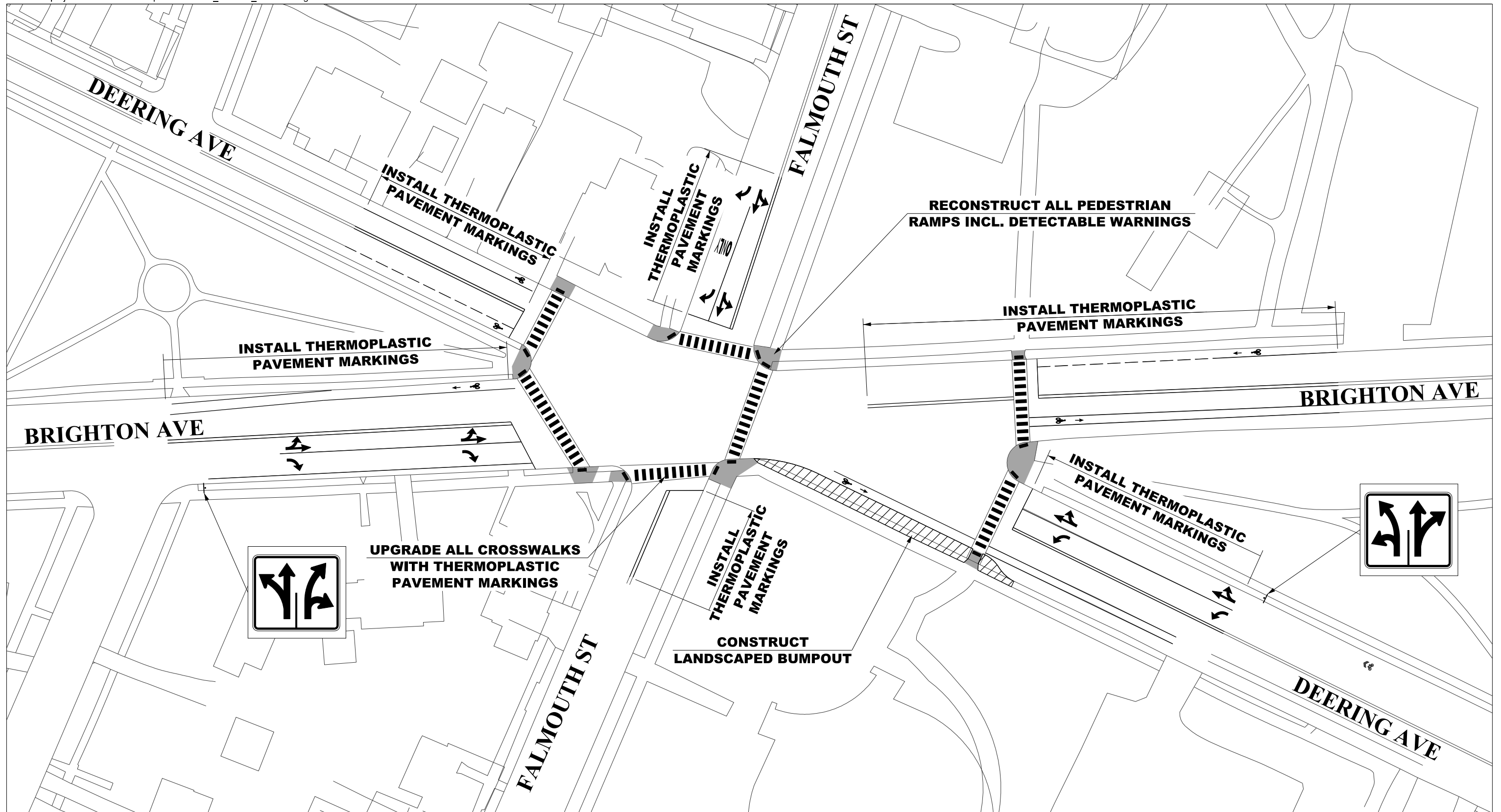
*** Level of Service.

The results of the operational analyses, as summarized in **Table 8**, show that Alternative 6 (Dual Roundabouts with Full Roundabout at Bedford Street) operates the same as Alternative 5 (Dual Roundabouts with Mini-Roundabout at Bedford Street). From a level of service and delay perspective, the full roundabout and the mini-roundabout at Bedford Street are similar. As with Alternative 5, Alternative 6 will improve vehicle operations by reducing congestion as compared to the No Build alternative.

3.2 Near-Term Plan

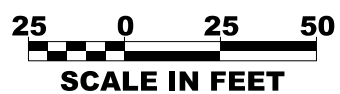
Other than the “do nothing” alternatives, the six alternatives discussed above will all require time to provide approvals, design plans and funding. As a result several actions have been recommended that can be implemented as near-term improvements. **Figure 10** shows the near term improvement plan.

Included as part of the recommended near-term improvements is the reconstruction of all pedestrian ramps including the installation of detectable warning fields. This would bring the existing crosswalks into compliance with Americans with Disabilities Act (ADA) requirements. Some of the existing crosswalks do not have curb ramps and the addition of the detectable warning fields would enhance safety and mobility for the blind or vision impaired.



Vanasse Hangen Brustlin, Inc.

Figure 10
Recommended
Near Term Improvements



The other recommended improvements for the near-term plan are to install thermoplastic pavement markings on all approaches as well as provide post mounted signs to indicate lane use on multi-legged approaches. These actions help to address some of the observed deficiencies at the existing intersection. Drivers have difficulty in identifying which lane they should be in especially on the Deering Avenue northbound approach. Clear lane markings and lane use signs would reduce motorist confusion and frustration while reducing delay. These short term improvements will help improve pedestrian mobility and enhance safety for both vehicles and pedestrians.

2.3 Multimodal

As important as vehicular flow is, other modes of travel are equally important. A well-conceived multimodal approach is needed to enhance and coordinate the safe and efficient movement of all travelers (pedestrians, bicyclists, and motorists). Therefore the improvement plan should both accommodate the movement of all users, and encourage the use of public transportation.

2.3.1 Pedestrian Mobility

In an urban environment with densely populated residential neighborhoods, commercial businesses, and academic institutions, the safe and efficient movement of pedestrians not only serves to enhance the overall transportation system, but also serves to enhance the quality of life for those who live, work, study and travel within the area. The existing networks of sidewalks, crosswalks, and multi-use paths are prevalent throughout the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection. Sidewalks will be maintained under all of the alternatives on both sides of the roadways. Crosswalks will also be maintained and enhanced.

Crossing streets for pedestrians will be improved with all six of the alternatives. With the traffic signal alternatives, several of the crosswalks would decrease in length which allows for less time that pedestrians are in the roadways. Exclusive pedestrian crossings would be provided at all of the signalized intersections to provide as much separation between pedestrians and vehicles as possible. With the roundabout alternatives, pedestrian crossings are also improved with only one lane of traffic needing to be crossed at a time. This simplifies where pedestrians need to look for vehicle conflicts.

During the evaluation phase, the Iris Network – a local non-profit agency that provides training, education, and support to the blind and visually impaired – raised a number of concerns with regard to how well the roundabout alternative can accommodate blind and visually impaired pedestrians. To address these concerns and to ensure that the roundabout alternative is configured for all users including the blind and visually impaired, the Study Team retained the services of Ms. Janet

Barlow of *Accessible Design for the Blind*. Ms. Barlow is a Certified Orientation and Mobility Specialist and a nationally recognized expert in the design of roundabouts for the blind and visually impaired.

Ms. Barlow's recommendations included the following:

- Set crosswalks back at least one car length from the yield line
- Provide raised crosswalks to better define crosswalks and improve yield to pedestrian compliance
- Provide splitter islands with a minimum 6' width at crosswalks
- Provide detectable warnings at crosswalks
- Provide a well-defined area between the sidewalk and the curb
- Locate bus stops close to crosswalks
- Provide direct crosswalk/ sidewalk/ pathway connectivity
- Remove bike ramps onto sidewalks.

In addition to the above recommendations, Ms. Barlow recommended that the implementation of the roundabout alternative should be accompanied with an educational campaign (information on how to traverse a roundabout on local government TV, newspapers, City website, etc.), enforcement and enhanced winter maintenance.

2.3.2 Public Transit

Consideration of public transportation is incorporated into all of the long-term alternatives. With daily bus service provided by METRO approximately every 30 minutes, bus loading/ unloading provides an additional layer of delay to vehicular traffic. The existing bus stops are located on Brighton Avenue near Falmouth Street for the outbound stop and near Bedford Street for the inbound stop. This section of Brighton Avenue has a single lane for traffic in each direction. When a bus is stopped for passengers, vehicle traffic is forced to queue behind the bus until all the passenger movements have been completed. This can increase delay for those vehicles. To prevent this type of delay, each of the alternatives would provide bus pull-outs on Deering Avenue, which would remove buses from the travel lane while making passenger transfers.

It should be noted that with any of the alternatives that include a traffic signal, transit priority preemption can be added to those intersection. If or when the transit priority is needed or wanted throughout Portland, the traffic signals can easily be modified to add transit priority preemption to the signal timings. Roundabout alternatives do not have the ability to have preemption for either emergency vehicles or transit vehicles.

3.4 Evaluation Summary

Based on the results of the alternatives evaluation, public input, and input from City staff, the full range of alternatives were narrowed to two final alternatives. Both alternatives consisted of discontinuing the segment of Brighton Avenue that runs between Bedford Street and Falmouth Street. Both alternatives would provide the same general street system layout of providing a 5-leg Brighton Avenue/ Deering Avenue/ Falmouth Street intersection and a 3-leg Deering Avenue/ Bedford Street intersection. The difference between the two alternatives was that one used traffic signal control at both intersections while the second alternative included the installation of roundabouts at both intersections.

The two final alternatives, along with the Do Nothing alternative, were evaluated as to how well each met the established objectives. The results of the evaluation are summarized in **Table 10** (on the following page). A green ball indicates that the alternative substantially meets the particular objective. A yellow ball indicates that the alternative moderately meets the objective, while a red ball indicates that the alternative minimally or fails to meet the objective.

In general, both the roundabout and the traffic signal alternatives would be expected to reduce traffic congestion and as a result reduce the likelihood of traffic diversion onto nearby neighborhood streets. Also, both alternatives would be expected to enhance safety for all users (motorists, pedestrians, and bicyclists). However, it is the roundabout alternative that would be expected to most dramatically transform the look and feel of the area by deemphasizing the dominance of the automobile and enhancing the safe and efficient mobility of all users.

The construction costs (not including the cost of right-of-way) for the two alternatives are comparable with the roundabouts alternative estimated at approximately \$1.5 million and the traffic signals alternative estimated at approximately \$1.3 million. However, the right-of-way impacts differ. **Table 9** summarizes the approximate right-of-way that would be needed for each alternative. The potential property impacts are classified under three categories: Private, University, and City.

Table 9- Property Impact Summary

	Traffic Signals	Roundabouts
Private Property	50 sf	2,600 sf
University Property	2,500 sf	8,300 sf
City Property	1,900 sf	3,900 sf

Table 10 – Evaluation Matrix

Alternatives Objectives	Do Nothing	Traffic Signals 	Roundabouts 
Enhance Safety			
Motorists	Maintains high crash patterns	Improved alignment	Reduced frequency and severity of crashes
Pedestrians	 Long and confusing crosswalk routes	 Shortened crosswalk, new curb ramps	 Reduce travel speeds, pedestrian crossing one lane at a time
Visually Impaired	 Long crosswalk routes, poor curb ramps	 Shortened crosswalk, new curb ramps, audible pedestrian signals	 Potential to substantially meet if Barlow recommendations are implemented
Bicyclists	 Discontinuous bike lanes, confusing alignment	 Opportunity to extend and better align bike lanes	 Reduced Vehicle speeds, bicyclists take the lane or use crosswalks
Improve Pedestrian Mobility	 Long and confusing crosswalk routes	 Shortened crosswalk, new curb ramps	 Reduced Pedestrian delay (no wait for signal), reduced crossing distance
Reduce Vehicle Congestion	 AM LOS E (63 sec) PM LOS F (102 sec)	 AM LOS C (32 sec) PM LOS C (32 sec)	 AM LOS C (21 sec) PM LOS C (19 sec)
Meeting Emergency Response Needs	 Status quo, long queues and congestion	 Reduced delay and congestion and emergency vehicle pre-emption potential	 Reduced delay and congestion
Minimize Neighborhood Traffic Diversion	 Current congestion creates high potential for diversion	 Reduced delay/congestion, signal provides opportunity to manage any diversion	 Reduced delay/congestion, small potential for diversion due to layout of approaches to roundabout
Enhance Bicycle Mobility	 Status quo maintained	 Opportunity to extend and better align bike lanes	 Reduced Vehicle speeds, bicyclists take the lane or use sidewalks and crosswalks
Enhance Transit Operations	 Status quo maintained	 Reduced congestion and delay, opportunity for transit-pre-emption	 Reduced congestion and delay, access/environment improved. no transit pre-emption
Enhance Aesthetics	 Status quo maintained	 Reduced pavement for areas of enhanced aesthetics	 Reduced pavement for areas of enhanced aesthetics, opportunity for gateway treatment
Consistent with USM Master Plan	 Status quo maintained	 Closure of Brighton Ave segment creating larger green space	 Closure of Brighton Ave segment creating larger green space with opportunity for gateway
Ease of Implementation	Low Difficulty	Moderate Difficulty Maintaining traffic difficult	High Difficulty Maintaining traffic very difficult
Construction Costs	\$0; Short-term \$35k	Approx \$1.3 M	Approx \$1.5 M
Substantially Meets Objective  Moderately Meets Objective  Minimally or Fails to Meet Objective 			

4

Study Findings

This study has been prepared with the purpose of developing a plan to enhance *mobility* at the Brighton Avenue/ Deering Avenue/ Falmouth Street intersection, and to do so in a *context sensitive* manner that considers *safety, accessibility, aesthetics* and compatibility with the *University of Southern Maine (USM) Master Plan*. This goal of enhancing mobility was not limited to enhancing the mobility of automobiles, but rather was to enhance the mobility of all users. In particular, this study incorporates the notion of “Complete Streets” in that any solution must consider and balance the needs of all ages, abilities and modes – including pedestrians, bicyclists, motorists, and transit users.

To ensure that the study considered the needs and desires of the community, the study was driven by an open and active public participation process. This process was critical in defining the study needs, defining the evaluation criteria, developing a range of conceptual alternative solutions, and ultimately arriving at a preferred solution.

A range of alternatives were narrowed to two final alternatives. Both alternatives consisted of discontinuing the segment of Brighton Avenue that runs between Bedford Street and Falmouth Street. Both alternatives would provide the same general street system layout of providing a 5-leg Brighton Avenue/ Deering Avenue/ Falmouth Street intersection and a 3-leg Deering Avenue/ Bedford Street intersection. The difference between the two alternatives was that one used traffic signal control at both intersections while the second alternative include the installation of roundabouts at both intersections.

Upon further consideration of how well each of the two remaining alternatives met the goal of enhancing the safe and efficient movement of all users (pedestrians, bicyclists, motorists, transit users), with particular consideration given to the accessibility needs of the blind and visually impaired, the potential property impacts, project costs, and potential diversionary impacts, City staff made a recommendation to advance the two roundabout alternative. The City Council’s Transportation Sustainability & Energy Committee accepted and endorsed that recommendation at its March 2013 meeting.



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Public Services Department

Michael J. Bobinsky

To: David Marshall, Chair and Members of the Transportation Sustainability and Energy Committee

From: Michael J. Bobinsky, Director of Public Services

John Peverada, Parking Manager

Sergeant Troy Bowden, Police Department

Date: May 13, 2013

Subject: Tow Rate Fee Adjustments

Departmental staff from Police, Parking and Public Services has been meeting with representatives of the tow operators over the past several months on a request to adjust the tow rates to better reflect operating costs of the private tow operators. A proposal was submitted to staff and we have been in negotiations with the operators over the past several weeks. We have reached an agreement and have discussed the proposals and process with Corporation Counsel. It is recommended that the proposals be first presented to the TSE Committee and then on to the City Council for final action. Therefore we want to present the proposal rate adjustments to the Transportation Sustainability and Energy Committee for the May 15 meeting.

The tow operators have explained that due to increases in operating costs, namely insurance and fuel, there is a need for an adjustment in the rates charged for tows. The City relies on the tow operators for emergency tows, accident tows, and tows during street sweeping services and during City wide parking bans. The City has not allowed a rate adjustment since 2008 and we are sensitive to their request. To that end the following is the proposed rate adjustment:

	Current	Proposed
Day/Night Tow	\$70	\$85
Dual Rear Wheels	\$90	\$105
Snow Tow	\$70	\$85
Accident Tow	\$75	\$95
Hooked-up/Drop	\$25	\$40
2 nd Re-tow	\$25	\$85
Storage/day	\$25	\$25

January 1, 2013

OUT of STATE TOW RATES

	Charge For City Authorized Tow	After Hours Pick Up Fee	Storage Fee	City Owned Tow Trucks	City Owned Impound Lot	Tow For Street Sweeping
New Bedford, MA (508)991-6336	\$90 (\$75+\$15)	not sure	\$20 a day	No	No	temporary signs
Cambridge, MA (617)349-4713	\$75.00	No	\$20.00/day	No	No	Yes
Hartford, CT (860)527-6300	\$67.00 - \$77.00 + potential \$4.00 per mile depending on Wrecker	Dependent on Wrecker	Dependent on Wrecker	No	No	Yes
Lowell, MA (978) 937-3225	\$90.00	no	\$35	No	No	temporary signs
Manchester, NH (603)668-8711	Day \$75 Night \$90	\$25.00 after 5:00PM	\$30.00	No	No	temporary signs
* Worcester, MA (508)799-8687	\$90, Fuel cost \$4-5	No	\$40.00 day max.	No	No	Yes
Fall River, MA (508)676-8511	\$90, Fuel cost \$4-5	No	\$35.00	No	no	no
Springfield, MA (413)787-6363	\$90, Fuel cost \$4-5 CJ towing 413-543-9100	No	\$35.00/pay	No	no	no
Boston, MA (617)635-4687	\$90, Fuel cost \$4-5	yes	\$15.00/day	Yes	Yes	no
PORTLAND, Maine	\$70 Non accident	\$25	\$25.00	No	No	Yes

Worcester - no change since January, but they are seeking new bids

State wide regualtion for Massachusetts, \$90.00 tow fee, \$3.00/mile charge after 5 miles, 6% fuel charge

Contact Dept of Public Utilities Trans. Oversight 617-305-3774 or 617-305-37888

TOW COMPANY PRICE ESTIMATES - January 2013

TOW COMPANY	ADDRESS	PHONE #	PRICE
AAA	425 MARGINAL WAY	780-6800	Free hook + 5 miles if member, if not member dependent on Garage
A & T TOWING	PORTLAND	797-6768	\$75
ADAMS TOWING	PORTLAND	797-2888	\$75
B & B TOWING	SOUTH PORTLAND	772-4236	\$65
BAYSIDE TOWING	PORTLAND	797-3221	\$80
CHARLIE'S AUTO TRANSPORT	PORTLAND	797-6004	\$75
COPP MOTORS	187 GRAY RD, CUMBERLAND	829-3843	\$125 sedan
THURLOW'S TRANSMISSION	243 SHAKER RD., GRAY	657-3902	\$50
INTOWN ROAD SERVICE	PORTLAND	799-9031	\$75
MAIETTA TOWING	PLEASANT HILL RD,	883-5554	\$75 in Portland
NAPPI'S TOWING	PORTLAND	797-4660	\$80
OCEAN ST. AUTO REPAIR	72 OCEAN ST, SO. PORTLAND	767-7073	\$70
OCEAN ST. AUTO REPAIR 2	730 CONGRESS ST	772-1438	\$70
PHILLIPS BODY SHOP	133 GRAY RD, GORHAM	839-4975	\$65
PLEASANT HILL AUTO SALES	PLEASANT HILL RD,	883-5554	\$75 in Portland
S&R TOWING	PORTLAND	775-6090	\$75
T&J TOWING	PORTLAND	773-2122	\$70
VARNEY'S AUTO BODY	RT 302, WINDHAM	892-9966	\$50
YARMOUTH AUTO SERVICE	253 RT 1, YARMOUTH	846-3316	\$30-\$70 depends on vehicle

The above tow companies were called and asked **"What would the towing charge be to tow a car 4-5 miles locally?"**

*ALL PRICES ARE ESTIMATES - TOW COMPANIES CANNOT GIVE FIRM PRICES W/O EXACT DETAILS OF TOW

NOTE: Presently the tow charge is \$70.00 for vehicles towed by private tow companies at the request of the City of Portland



**Maine Turnpike Authority
Greater Portland Area Major Maintenance
& Capital Improvement Projects for 2013 & 2014**

DRAFT-As of May 8th, 2013

On-Going Construction in 2013 & Projects That Will Carry Forward

Hurricane Road Over Piscataqua River Bridge Repair & Hurricane Road Underpass Bridge Repair – 2013:

The Hurricane Road Bridges over the Piscataqua River and the mainline will be closed for up to 12 weeks during the summer of 2013 for bridge joint, bridge deck and substructure repairs. Scott Construction of Falmouth, Maine was awarded a \$820,000 contract for this work.

Blackstrap Rd Bridge Rehabilitation & Falmouth Interchange Exit 52 Bridge – 2013:

Blackstrap Road Bridge will be raised and the existing concrete deck will be replaced. The bridge will be closed from June - November 2013. Exit 52 bridge will also be raised and the existing concrete deck will be partially replaced. The bridge and southbound on and off ramps are expected to be closed for a week in May 2013. The off ramp will remain closed until November. Any necessary detours will be coordinated with the City of Falmouth, the City of Portland, and the MaineDOT. CPM Constructors of Freeport, Maine was awarded a \$3.5 million contract for this work.

Presumpscot River Bridge Rehabilitation – 2013 (Continued):

The bridges over the Presumpscot River on the Falmouth Spur are being rehabilitated with a new concrete deck and other superstructure and substructure repairs. This 18 month project, which began in 2012, will have the Falmouth Spur down to one lane in both directions through fall 2013, though impacts to traffic should be minimal. In 2012, Lane Construction of Bangor, Maine was awarded the \$3.2 million contract for this work.

Toll System Upgrade Exit 47 & 42 Toll Plaza (not noted on map) - Fall 2013 to 2014:

Toll system upgrades will be performed at Exit 47 and Exit 42 starting in the fall of 2013.

Running Hill Road Bridge & Cummings Road/Spring Street Bridge Repair – 2013:

Running Hill Road and Cummings Road/Spring Street Bridges in the City of South Portland will have bridge joints repaired in the fall of 2013. Work at Running Hill Road will be performed at night with lane closures. Cummings Road/Spring Street will be closed at night and traffic will be detoured while its repairs are being made. This will be part of a contract to repair 6 different bridges with an estimated total cost of \$300,000.

Interchange 45 Pavement Rehabilitation – 2013:

In 2012, Lane Construction of Westbrook, Maine was awarded a \$2.6 million contract in which merge conditions on the acceleration lanes for both northbound and southbound on-ramps at Exit 45 were improved. Pavement rehabilitation of the ramps will be completed in the summer of 2013 with periodic ramp closures at night.

Interchange 44 Paving Rehabilitation – 2013:

Exit 44 Interchange will be repaved and receive guardrail upgrades. This contract will also include bridge repairs for the Authority bridges over Payne Road. The estimated cost of this contract is \$1 million.

Nonesuch River Culvert Repairs – 2013:

The Nonesuch River culvert in Scarborough will be repaired in summer 2013 during low-flow and will have a minimal impact to traffic. This work has an approximate cost of \$85,000 and was included in the \$1.3 million contract for Saco River Bridge that was awarded to CPM Constructors of Freeport, Maine.

New Projects Starting in Construction Year 2014

Gray Interchange Bridge – 2014:

The functionality of the Gray Interchange is currently under review. Between 2014 and 2016 the Gray Interchange Bridge will be repaired, replaced, or removed, depending on the outcome of the current study. A decision will be made by the Authority Board by the summer of 2013.

Center Street Bridge Repairs – 2014:

The scope of work for the Center Street Bridge in the Town of Gray is under review. At a minimum, bridge deck repairs, joint and backwall repairs, and repaving will be considered. The estimated cost for the repairs is \$450,000.

Mainline Pavement Rehabilitation (NB only) – 2014:

The northbound lanes from Mile Marker 57 to 59 will undergo a two month pavement rehabilitation that is estimated to cost \$600,000.

Clearing (Falmouth to Gray) – 2014:

This project consists of roadside clearing from mile marker 53 in the Town of Falmouth to mile marker 63 in the Town of Gray to increase visibility and safety along the Turnpike. The cost is estimated to be \$300,000.

Piscataqua River Bridge #28 & Piscataqua River Bridge #31 Rehab – 2014:

The two Piscataqua River Bridge locations in the Town of Falmouth will be reconstructed beginning in construction year 2014. The reconstruction is anticipated to take 15 months to complete and cost approximately \$3.5 million.

West Falmouth Road Bridge Repair – 2014:

West Falmouth Road Bridge on the Falmouth Spur will undergo substructure and deck repairs as well as replacing the waterproof membrane and wearing surface in 2014. The project is estimated to take 4 months to complete and cost \$450,000.

Bridge Repairs Various Locations City of Portland (noted on map by *)– 2014:

Riverside Street Overpass, Forest Ave Overpass, MCRR Overpass, and Stroudwater River Overpass in the City of Portland will be part of a \$2.2 million bridge repair project. Work will include bridge joint repairs/replacements, deck repairs, substructure repairs and wearing surface replacements. Traffic impacts will be coordinated with the City of Portland, City of Westbrook, and MaineDOT.

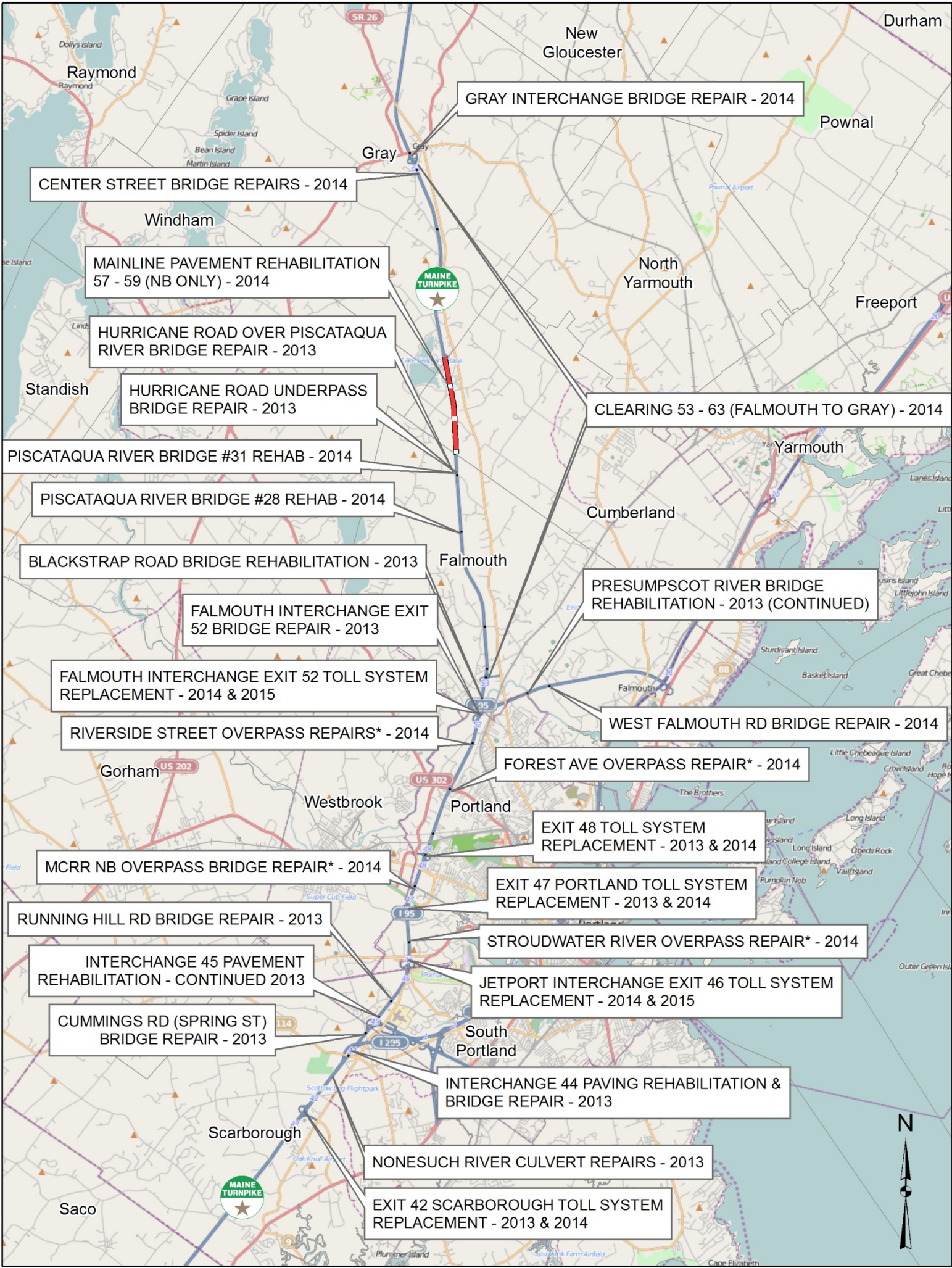
Toll System Upgrade Jet Port SB, Exit 48, & Exit 52 (Spur) Toll Plaza (not noted on map) - Fall 2014 to 2015:

Toll system upgrades will be performed at the Jet Port Exit 46 (SB), Exit 48, & Exit 52 (Falmouth Spur) starting in the fall of 2014.



**Maine Turnpike Authority
Greater Portland Area Major Maintenance
& Capital Improvement Projects for 2013 & 2014**

DRAFT-As of May 8th, 2013



Note: 2014 Projects are shown for coordination purposes only and are subject to public comment (July of 2013) and Board Approval (October 2013).



Maine Turnpike & MaineDOT Coordinated Investments

May 15, 2013



Peter Merfeld, PE
&
Sara Devlin
Maine Turnpike Authority

Heath Cowan, PE
Maine DOT



Presentation to City of Portland Transportation Committee



Introduction



- Continuous coordination between the Maine Turnpike Authority and the Department of Transportation
- MaineDOT 2013/2014/2015 projects
- Maine Turnpike Authority
 - 2013 Bridge and Highway projects
 - 2014 Bridge and Highway projects
 - On-going Planning efforts

2013 MaineDOT Paving Projects

- 19931.00 Baxter Blvd
- 19093.00 Veranda St.
- 19117.00 International Pkwy
- 19095.00 Eastern Prom.
- 19930.00 Lambert St.



2014 MaineDOT Paving Projects

- **20307.00 Danforth St.**
- **20303.00 Canco Rd.**
- **20252.00 Oxford St.**
- **19122.00 Fore St.**

2015 MaineDOT Paving Projects

- 20241.00 Union St.
- 20295.00 Temple St.
- 20256.00 Spring St.
- 20255.00 Spring St.
- 20305.00 Middle St.
- 20282.00 Commercial/Franklin



MTA Bridges 2013

- Exit 52 Interchange
Bridge repairs
 - SB off ramp closed until November
 - SB on one week closure in May
- Blackstrap Road Bridge-
Falmouth
 - 6 month closure (mid June-November)



FIGURE 4 – BLACKSTRAP ROAD DETOUR ROUTE MAP



MTA Bridges 2013

- Hurricane Rd-*Falmouth*
 - 12 week closure
(Summer)
- Running Hill Rd and
Cummings Rd/Spring St
Bridge- *South Portland*
 - Night closures (Fall)





MTA 2013 Paving Rehabilitation

- Exit 45-*South Portland*
 - Northbound and Southbound ramp paving (May-June)
 - Night closures
- Exit 44 Interchange-*South Portland/I-295*
 - Repaving (Fall)
 - Coordination with MaineDOT 295 NB work





MTA Bridges 2014

- Portland Area Overpass Bridge Repairs
 - Riverside Street
 - Forest Ave
 - MCRR
 - Stroudwater





Planning

- GOMAINE
- Park and Ride Survey
- 4 Year Plan
- 10 Year Plan
- Gorham East-West Corridor Study



Contact Information



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(207)871-7771x116

Sara Devlin

sdevlin@maineturnpike.com

(207)871-7771x111

Thank you!



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MEMORANDUM

TO: David Marshall, Chair, Transportation, Sustainability and Energy Committee
FROM: Jeremiah Bartlett, Transportation Systems Engineer, Dept. of Public Services
DATE: May 15, 2013
RE: **Libbytown Traffic Circulation and Streetscape Study**

DPS, Planning and PACTS staff have been working diligently with the Libbytown Public Advisory Committee, Councilor Suslovic, area businesses, and other operators in the area to begin evaluation of various circulation alternatives for this project. This study was charged to investigate ways to improve the environment for all modes of travel, create a stronger sense of place in Libbytown, and long term, foster the potential for economic development. This project is also being informed by as well as informing other adjacent projects, such as the previous streetscape study and the active EDA-related improvements associated with the Thompson's Point Project.

Project Status

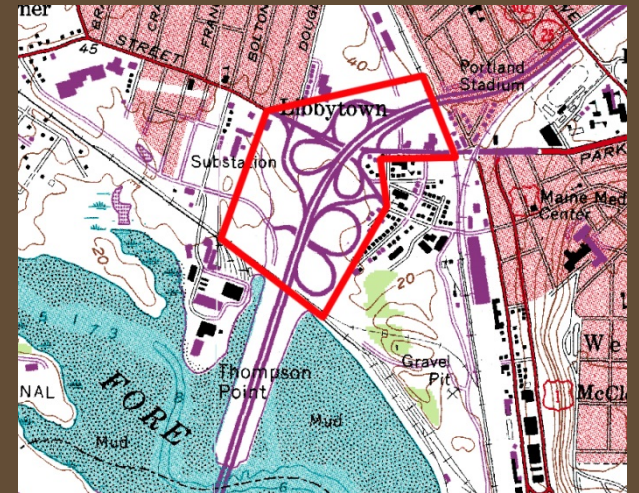
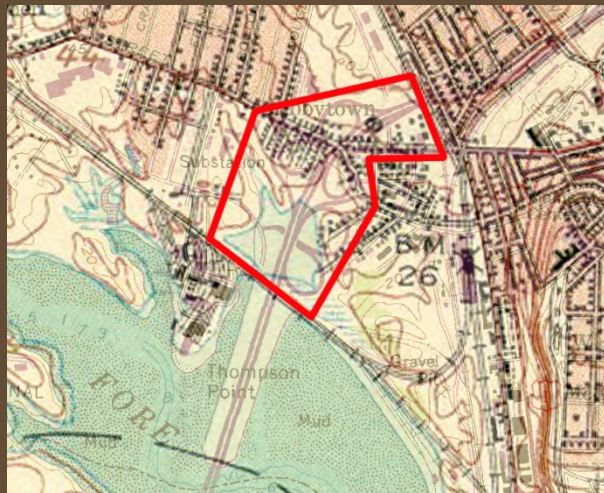
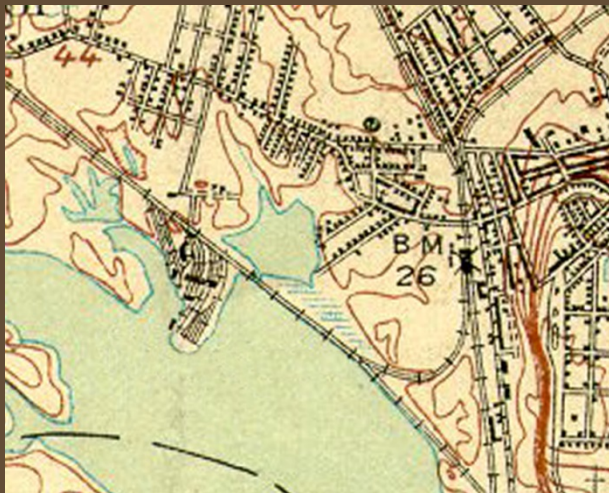
At this time, the project has had three Public Advisory Committee meetings, a public meeting with the business community, and a public open house at City Hall. The Consultant Team and staff have met with various stakeholders, most significantly, HP Hood, and have been to Augusta to meet with MaineDOT in order to discuss various metrics deemed important when examining the potential of highway ramp realignments or removal.

Initially starting with numerous alternatives, discussions with various parties, including MaineDOT, have reduced the number of potential alternatives to four, as identified on Page 11 and subsequent pages of the attached presentation. These alternatives would ultimately result in closure of some of the ramps determined to be redundant by the study, and making Park Avenue two-way in its entirety.

Future Steps

The project is slated to be complete by June 30. As such, a final presentation will be made discussing the Preferred Alternative at the June 19 TS&E meeting. Discussions will also be held with emergency operators, and Portland PD has already attended a public meeting. There will be one more Public Advisory Committee and public meeting in June to complete the public and input process. Lastly, City staff is working with HP Hood to determine a curbing configuration at their driveway that can accommodate trucks turning out of their driveway without requiring them to encroach upon an opposing lane of traffic; a test of a preliminary solution should be completed in late May.

Libbytown Traffic Circulation and Streetscape Study

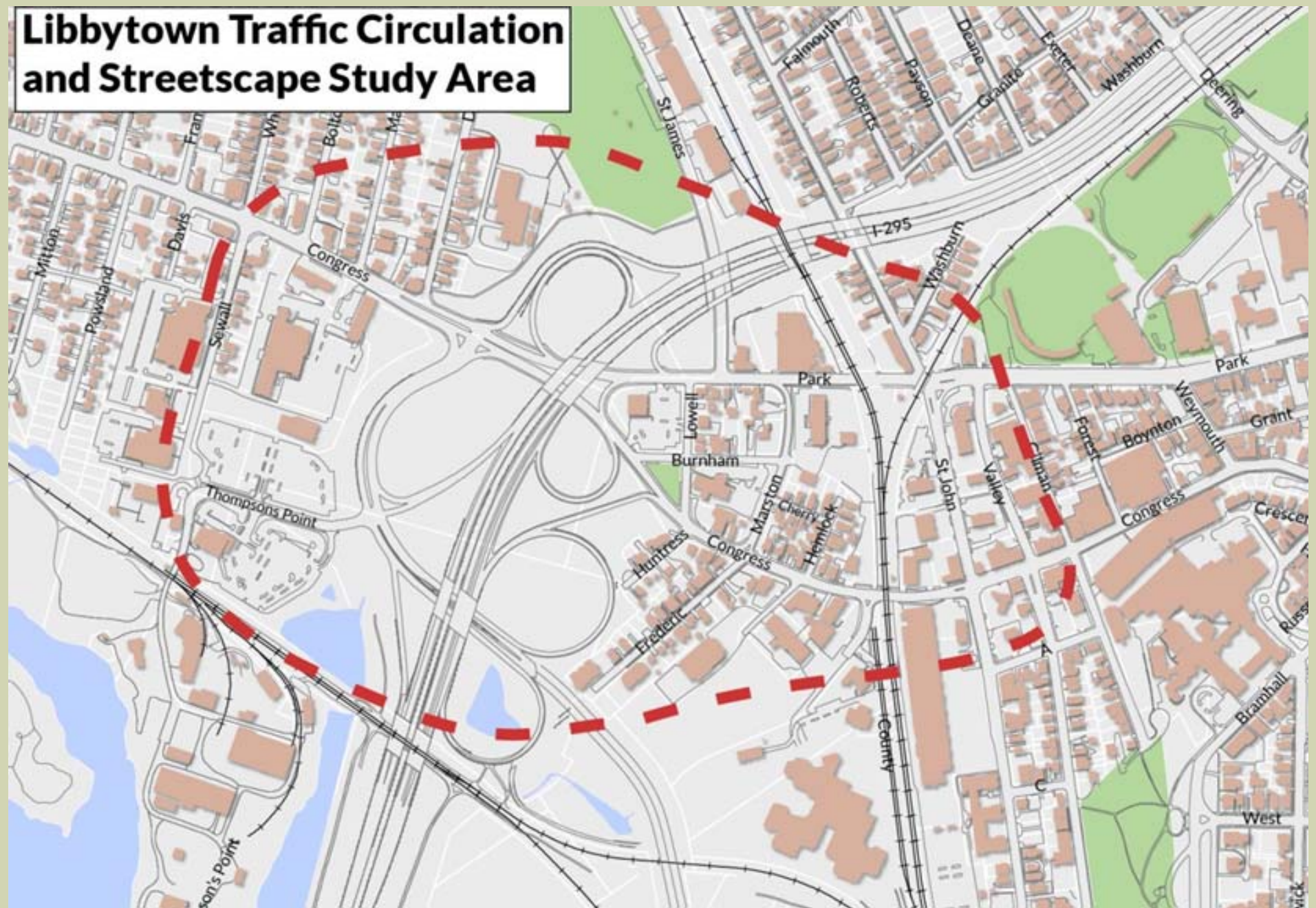


30 April 2013

Goals of the Project

- Improve safety and function for all users
- Improve the economic climate and vitality
- Create a sense of place and identity with an attractive streetscape

Libbytown Traffic Circulation and Streetscape Study Area



Project Team

- Portland Department of Public Services
 - Jeremiah Bartlett, Kathi Earley, Bruce Hyman
- PACTS Portland
 - Carl Eppich
- Consultants
 - DuBois & King
 - Ransom Engineering
 - TJD&A
 - Morris Communications

Project Schedule

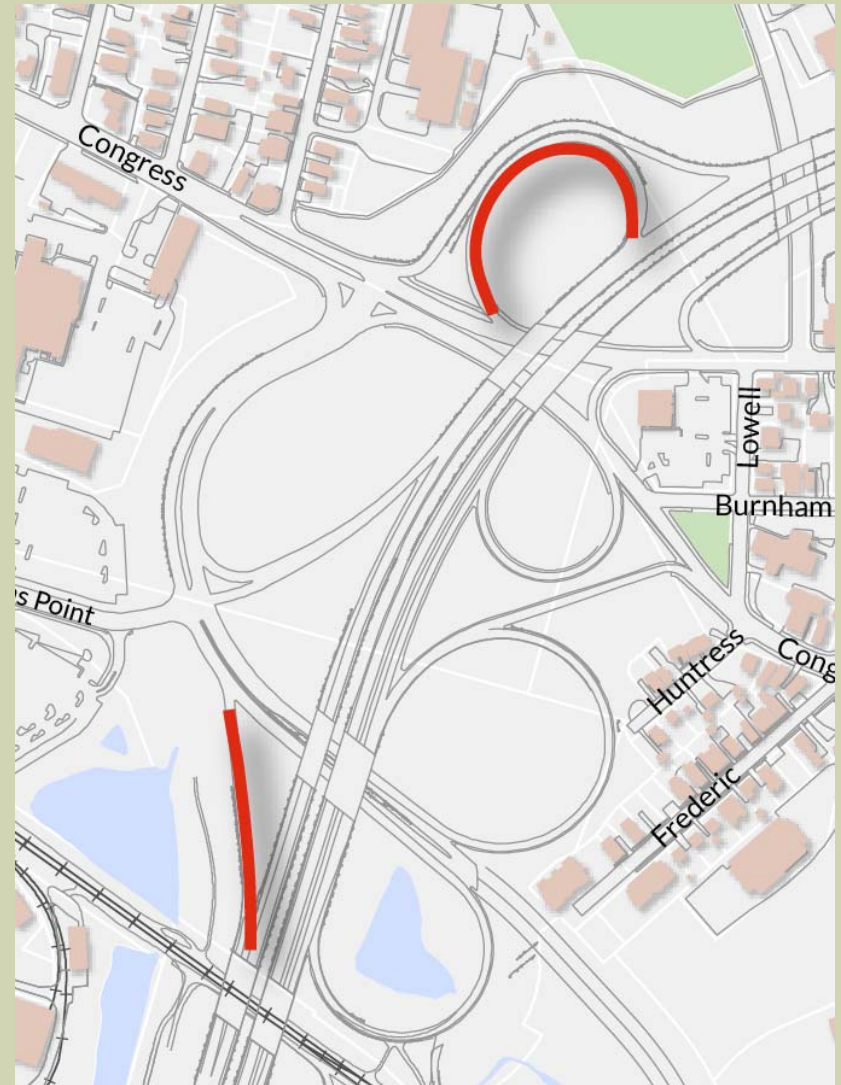
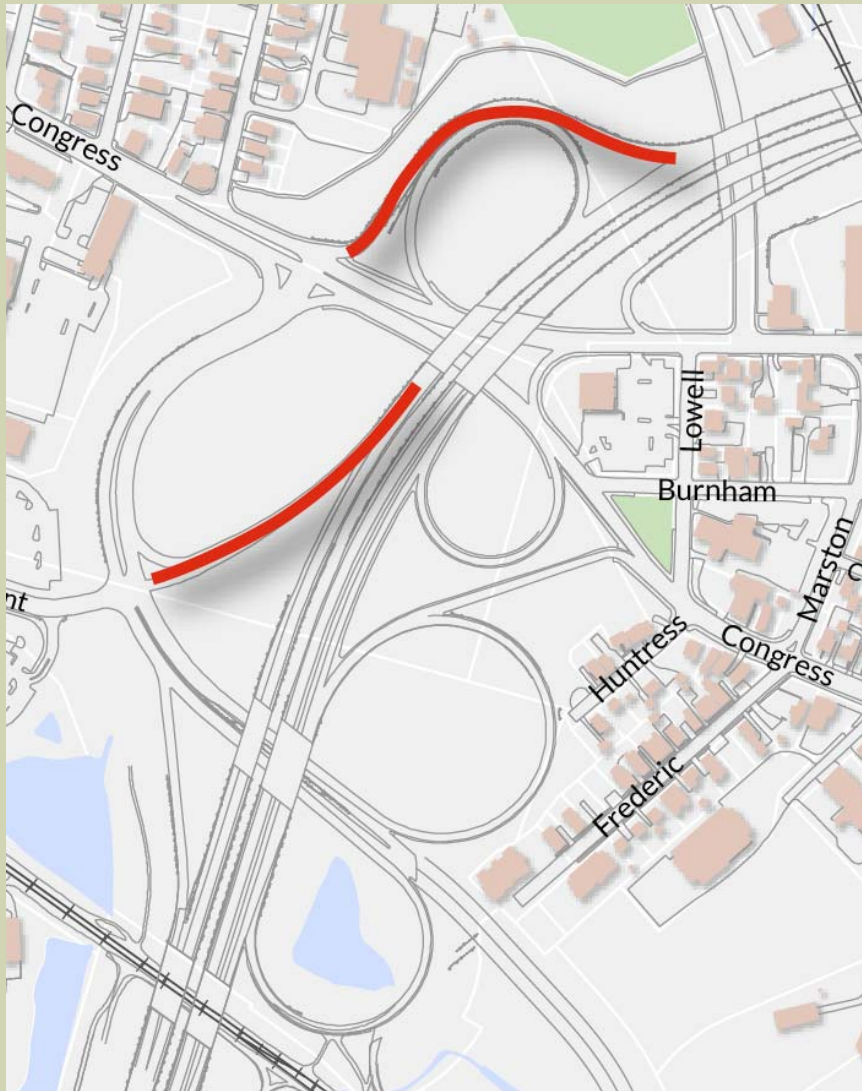
- PAC Meetings

- November: Introduction, assessment
- January: Brainstorm Alternatives
- April: Evaluate Alternatives
- June: Present Preferred Alternative, complete report

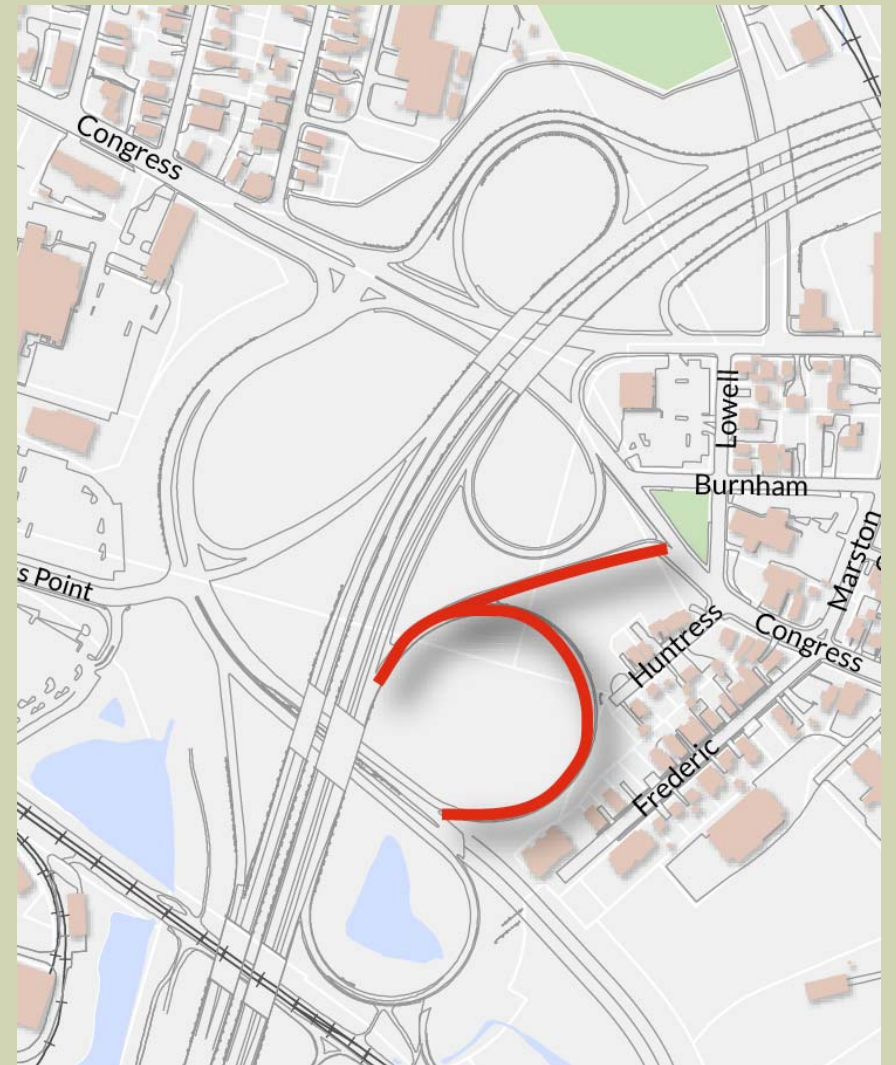
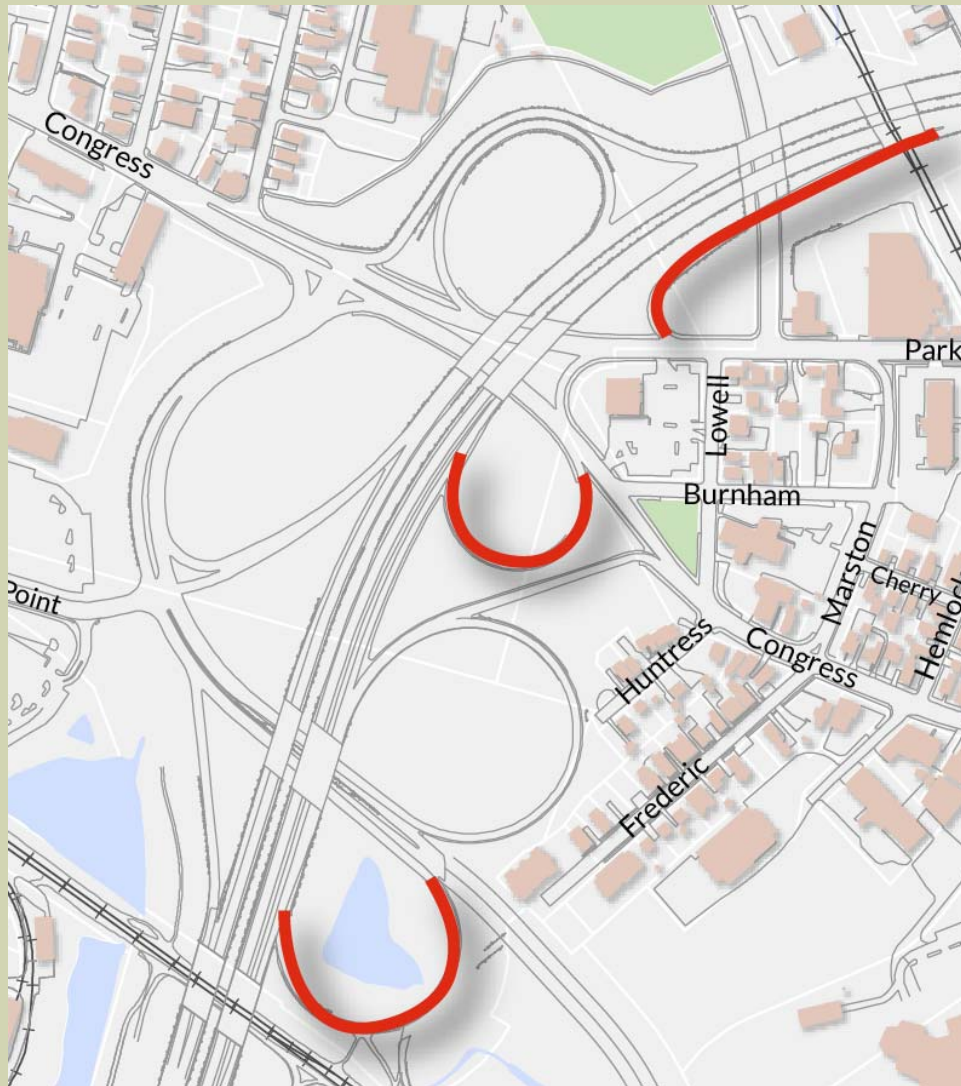
Strategies

- Reconsider I-295 Interchange design since the Fore River Parkway was constructed.
- Consider converting Park and Congress to Two-way Streets
- Develop safe and attractive pedestrian and bicycle routes
- Create a more attractive streetscape
- Address increasingly frequent railroad crossings of Congress Street

Southbound Ramps

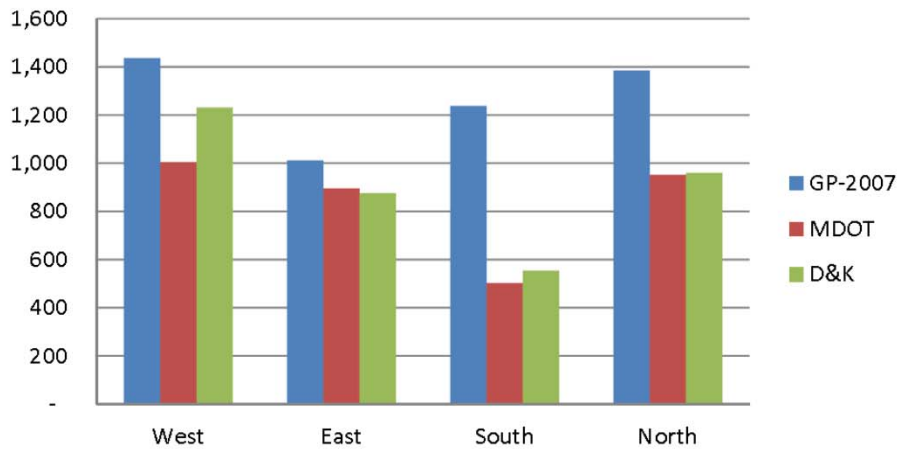


Northbound Ramps

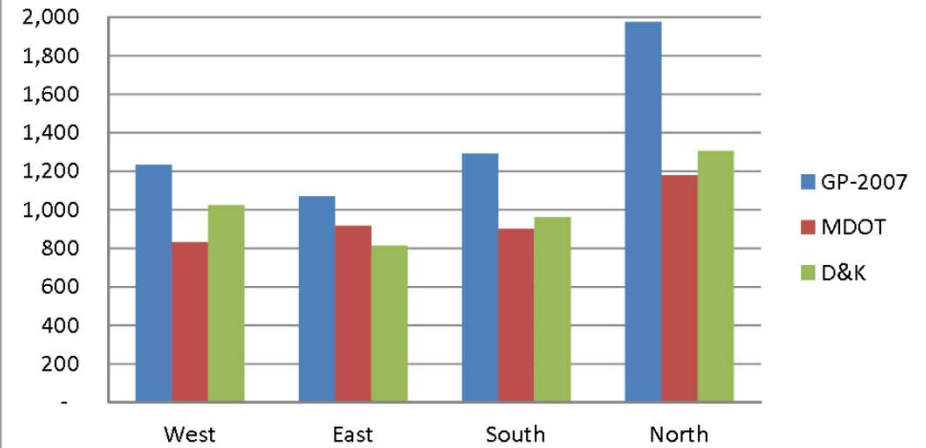


Consider Changes in Traffic Patterns

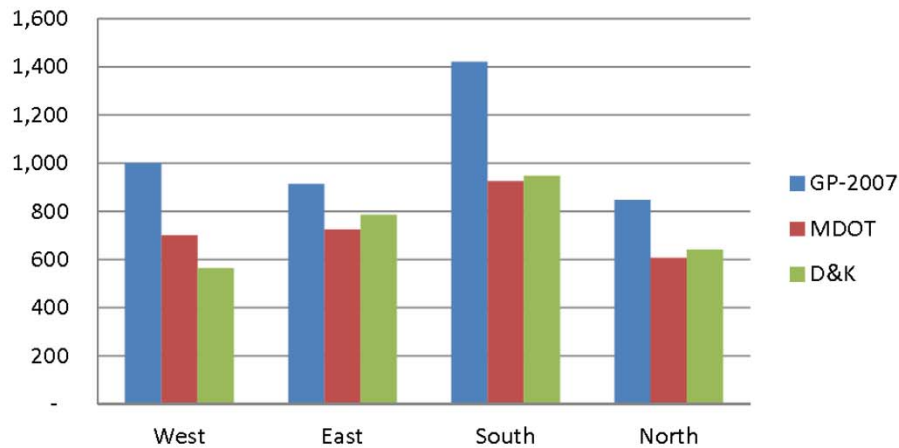
AM Peak-Congress/St John



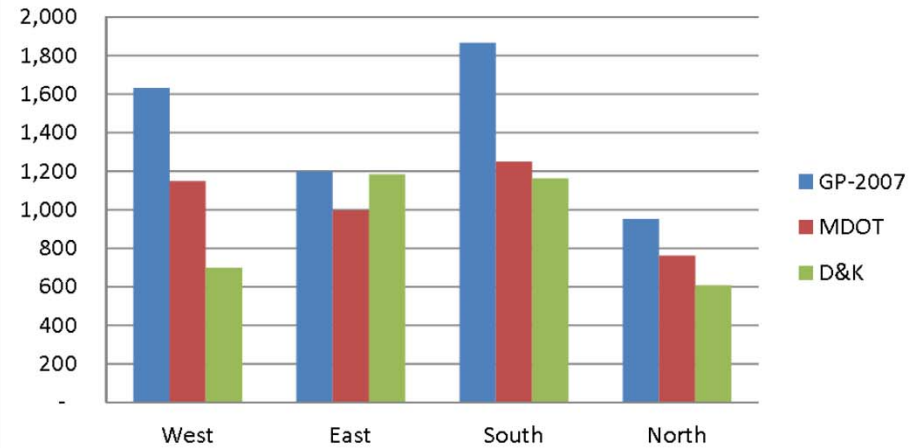
PM Peak-Congress/St John



AM Peak-Park/St John



PM Peak-Park/St John



Libbytown Traffic Circulation and Streetscape Study

City of Portland and PACTS

Crashes and High Crash Locations

Legend

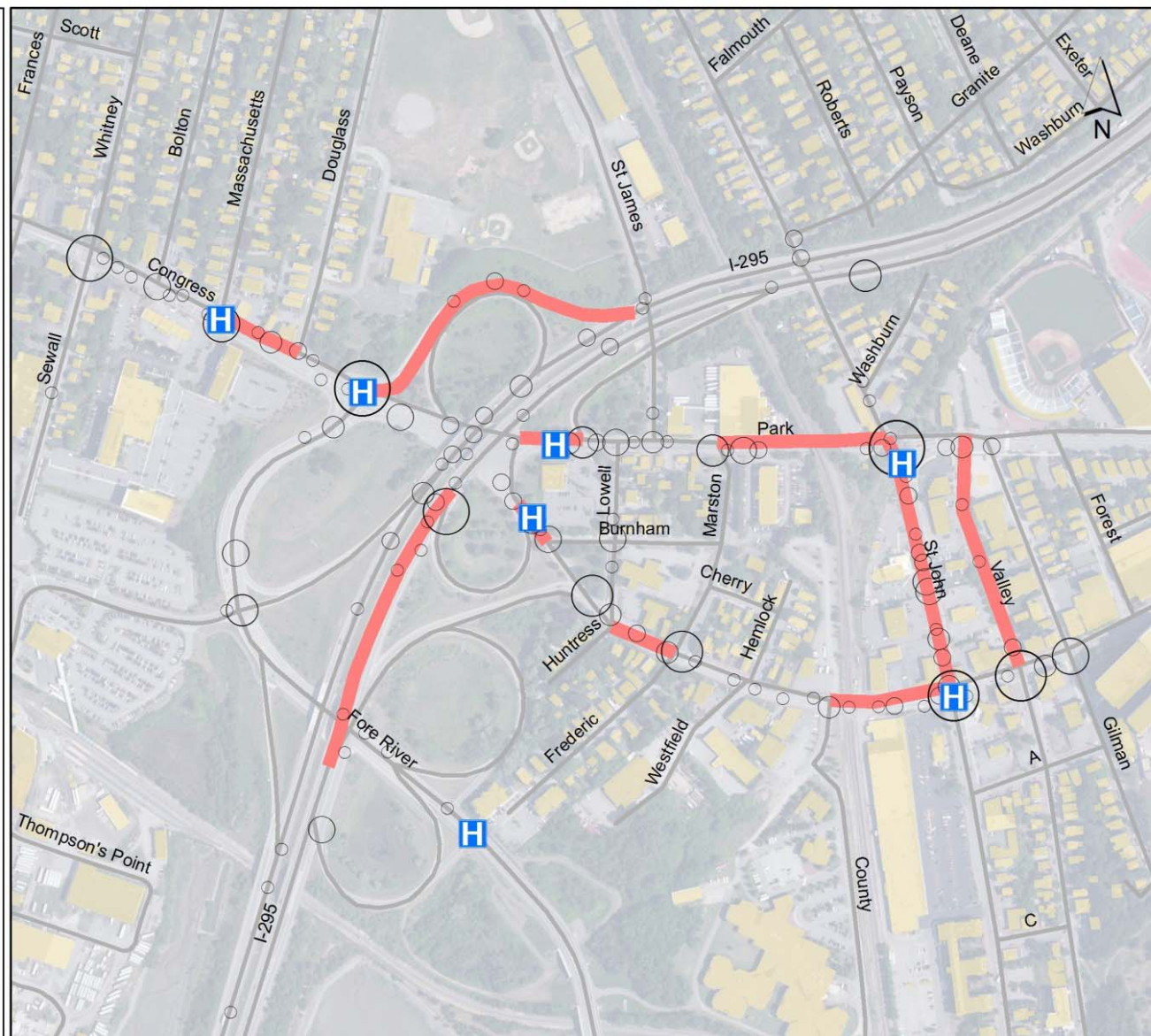
Number of Crashes (2009-2011)

Source: Maine DOT

- 1
- 2
- 3-4
- 5-7
- 8-9
- 10-11
- 12-16
- 17-20
- 21-23
- 24 or more

— High Crash Segments

H Severe Injury Crashes



1,000 500 0 1,000 Feet

Alternatives

	Interchange Configuration	a) Park-2 way Congress 1-way	b) Park-2 way Congress 2-way
Alternative 1	- Close 5 ramps: A,B,C,D,F - Directs all interstate traffic to Fore River Parkway Interchange	- Park is major route into downtown - Congress is major bicycle route	- Both routes serve traffic - Park is major bicycle route - Congress provides on-street parking
Alternative 2	- Close 4 ramps: A,B,C,D - Eastbound access to Ramp F - Less traffic on Fore River Parkway Interchange	- Congress 2-way between Marston and St. John - Congress provides on-street parking - Park is traffic and bicycle route	- Equal emphasis for traffic, bicycles and parking on Congress and Park - Larger signal at Congress/Park/I-295 NB

Libbytown Traffic Circulation and Streetscape Study

PACTS and City of Portland



Alternative 1a

April 17, 2013

prepared by:



DuBois & Kind

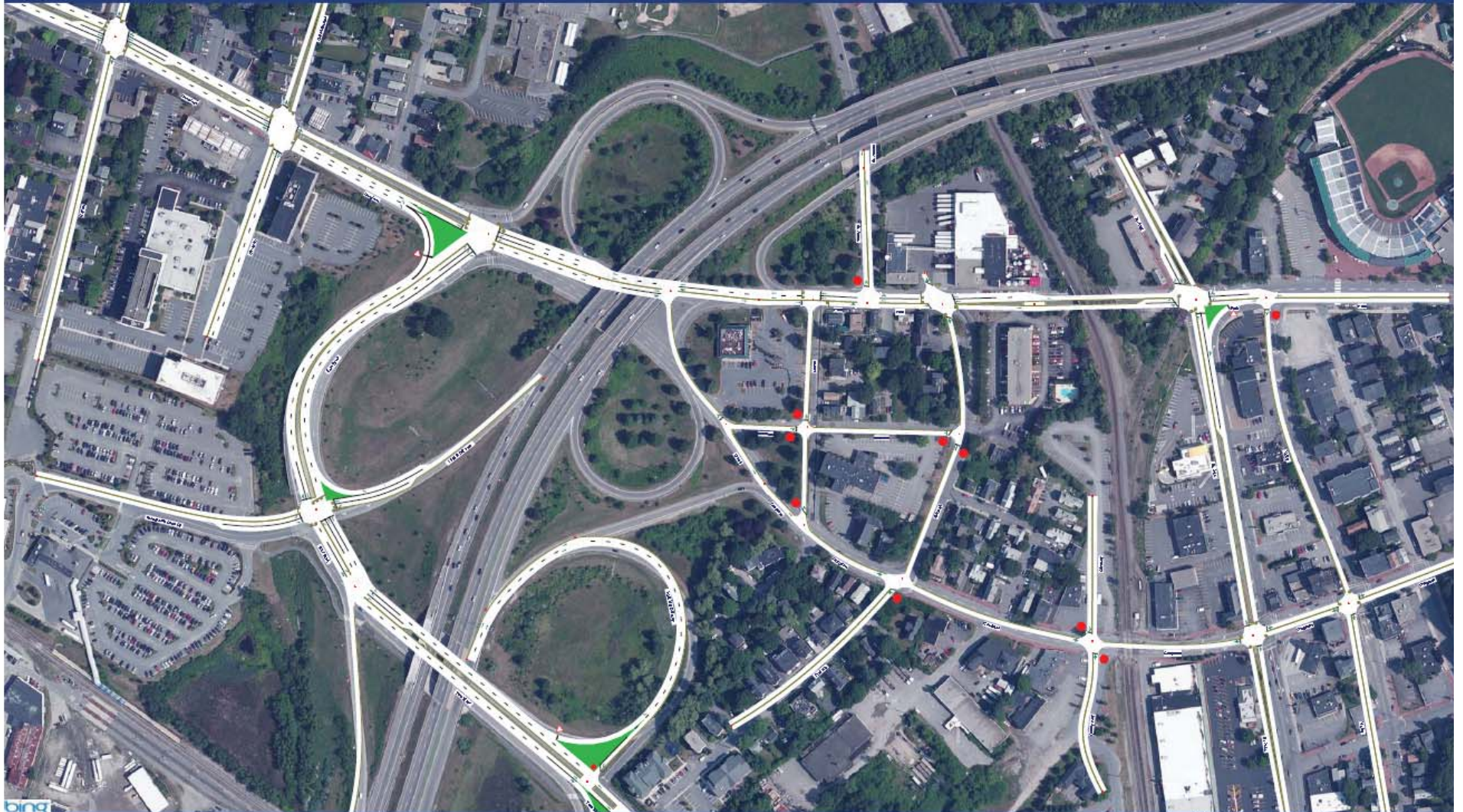
with: Ransom Consulting Engineers & Scientists

tjd&a Landscape Architects and Planners

Morris Communications

Libbytown Traffic Circulation and Streetscape Study

PACTS and City of Portland



Alternative 1a

April 17, 2013

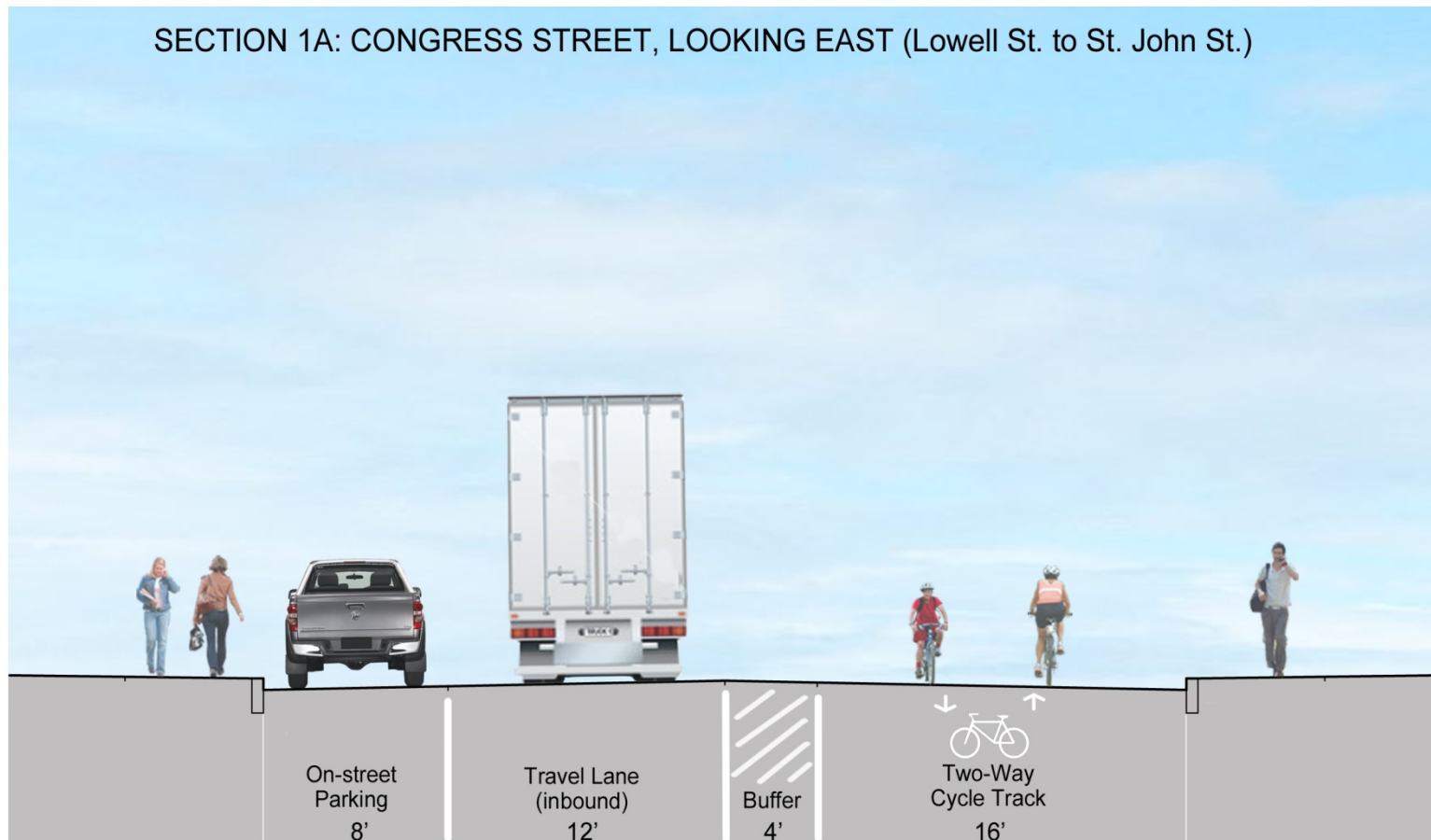
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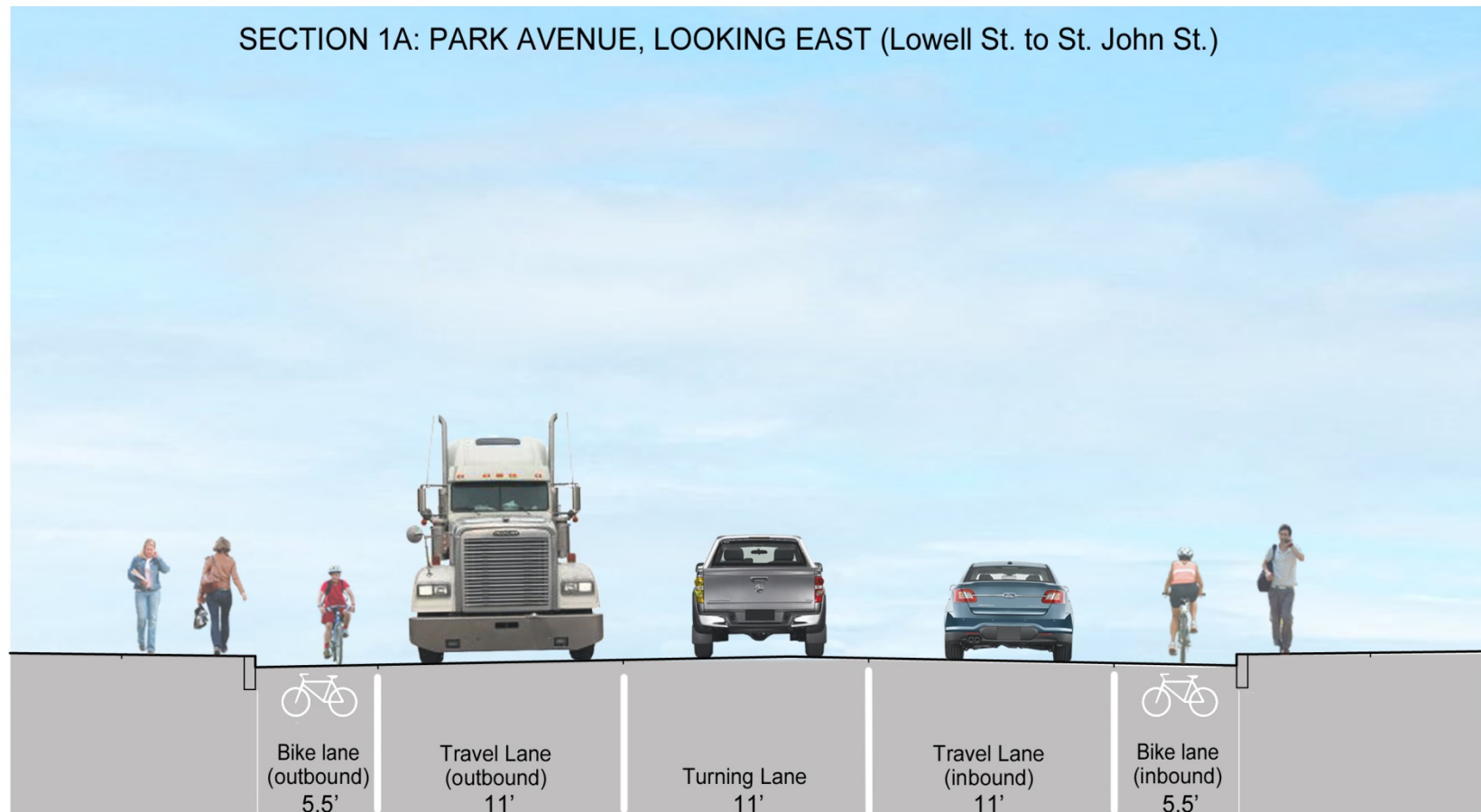
**DuBois
& King**

with: Ransom Consulting Engineers & Scientists
tjd&a Landscape Architects and Planners
Morris Communications
Smart Mobility

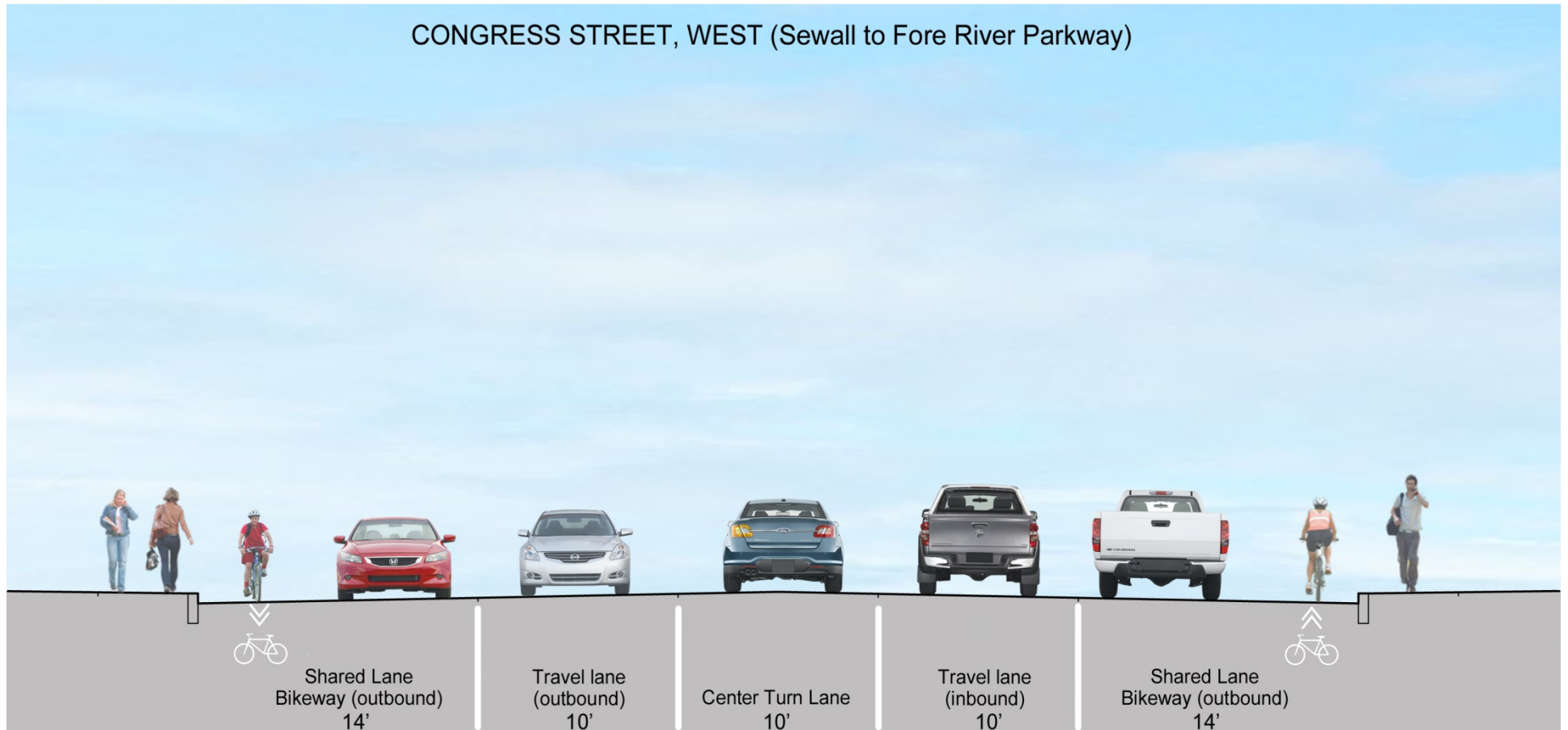
SECTION 1A: CONGRESS STREET, LOOKING EAST (Lowell St. to St. John St.)



SECTION 1A: PARK AVENUE, LOOKING EAST (Lowell St. to St. John St.)



CONGRESS STREET, WEST (Sewall to Fore River Parkway)



Libbytown Traffic Circulation and Streetscape Study

PACTS and City of Portland



prepared by:



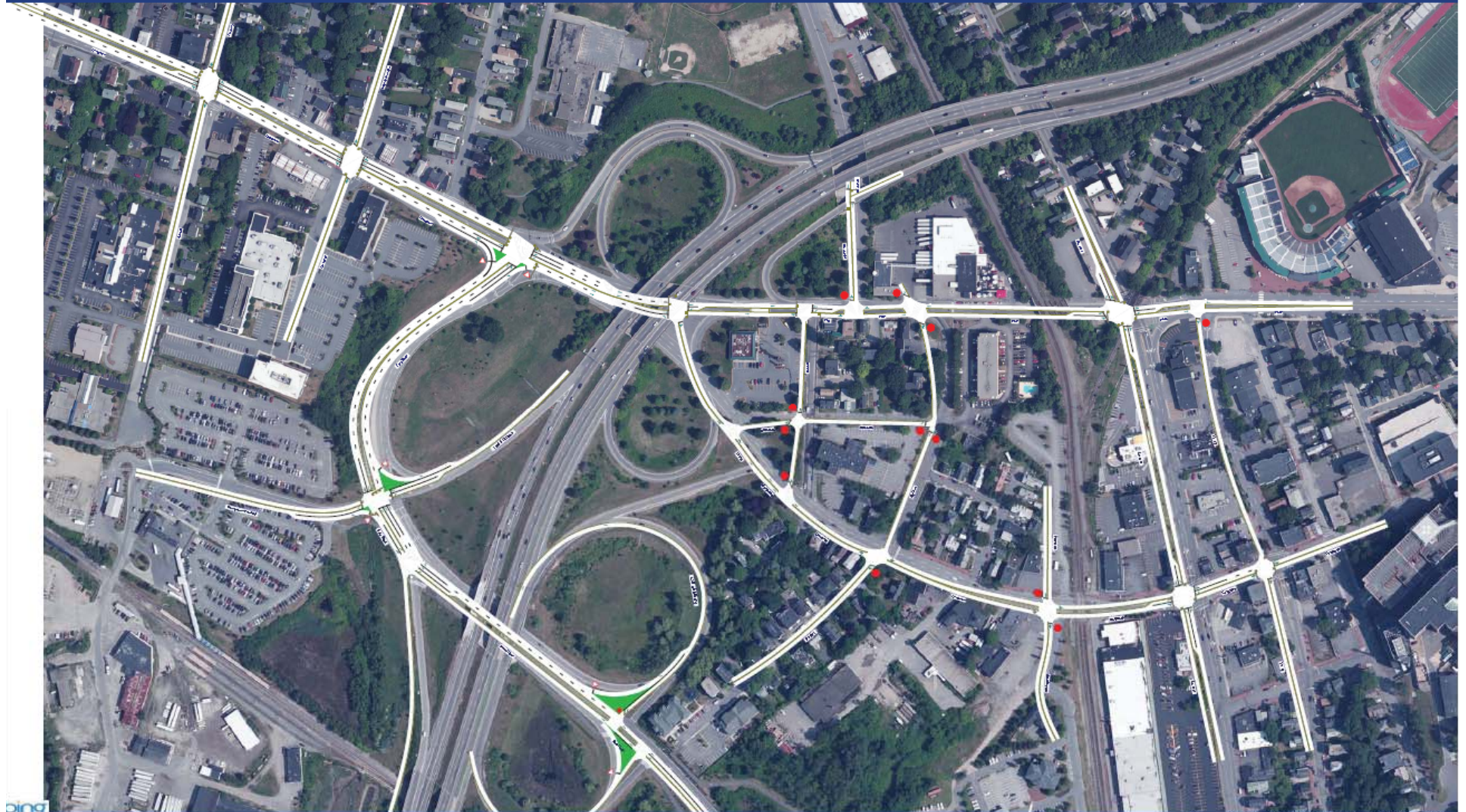
DuBois & King
INC.

with:

Ransom Consulting Engineers & Scientists
tjd&a Landscape Architects and Planners
Morris Communications
Smart Mobility

Libbytown Traffic Circulation and Streetscape Study

PACTS and City of Portland



Alternative 1b

April 17, 2013

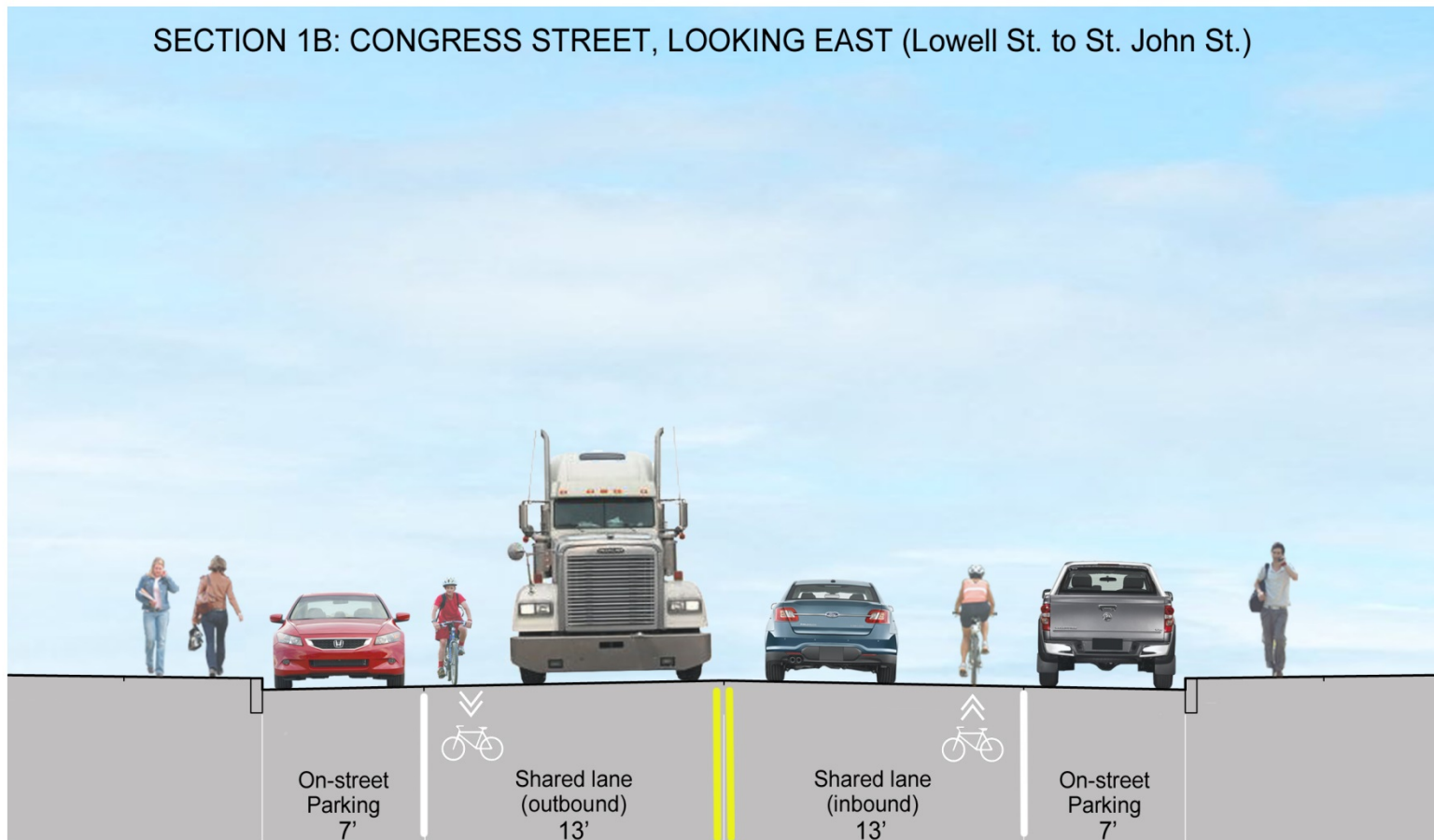
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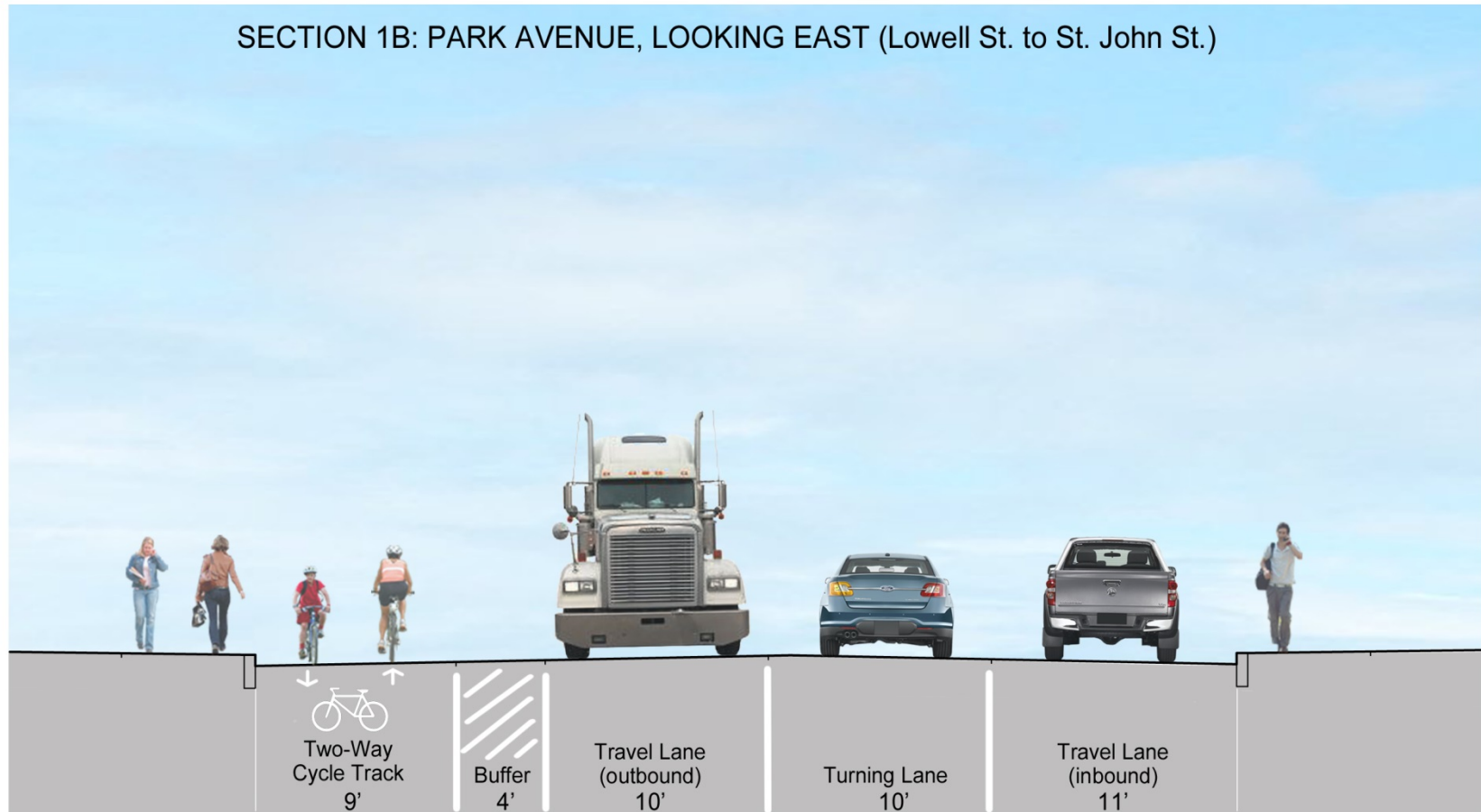
**DuBois
& King**

with: Ransom Consulting Engineers & Scientists
tjd&a Landscape Architects and Planners
Morris Communications
Smart Mobility

SECTION 1B: CONGRESS STREET, LOOKING EAST (Lowell St. to St. John St.)



SECTION 1B: PARK AVENUE, LOOKING EAST (Lowell St. to St. John St.)



Libbytown Traffic Circulation and Streetscape Study

PACTS and City of Portland



Alternative 2a

April 17, 2013

prepared by:



**DuBois
& King**

with: Ransom Consulting Engineers & Scientists
tjd&a Landscape Architects and Planners
Morris Communications
Smart Mobility

PACTS and City of Portland

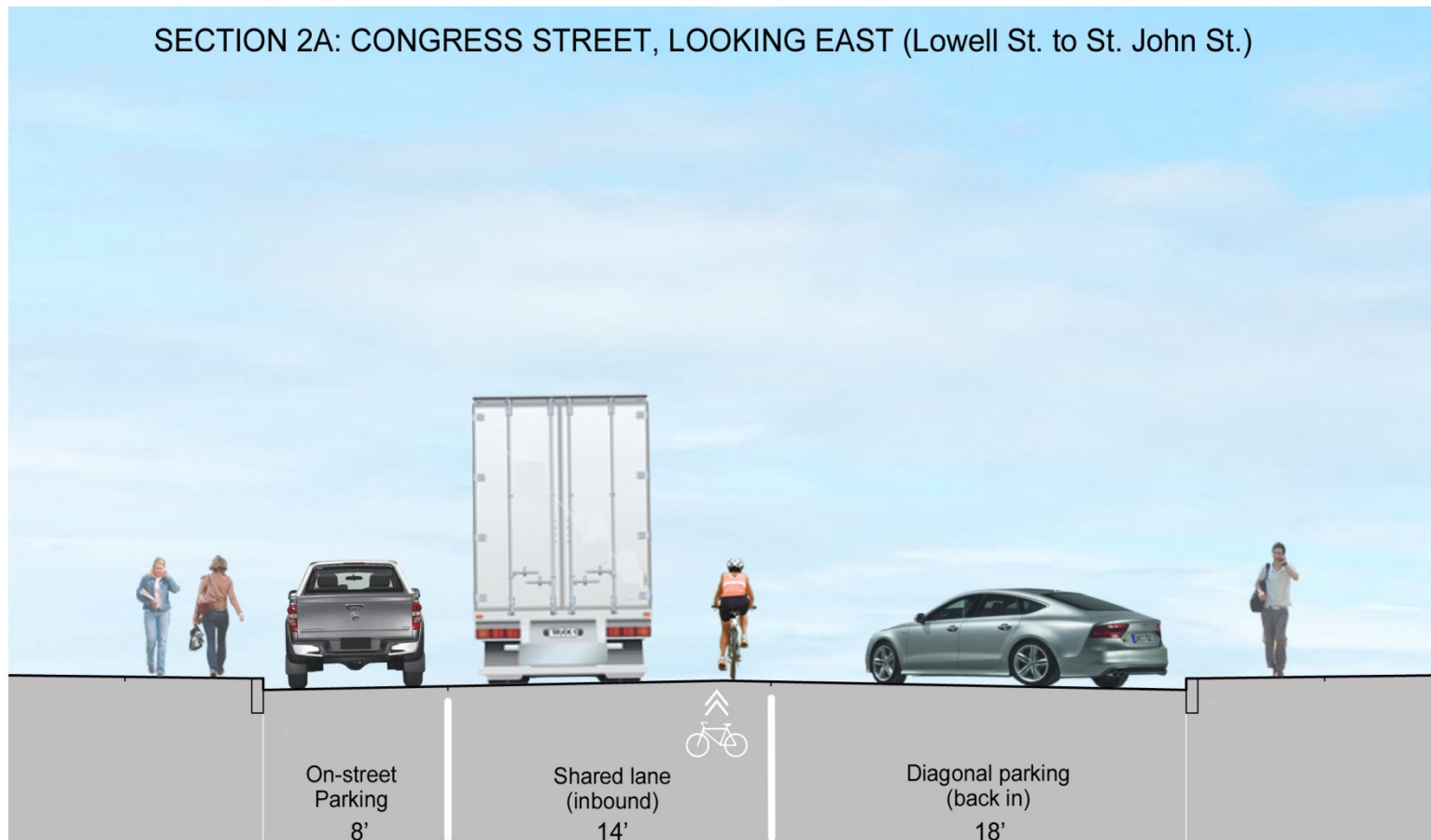


April 17, 2013

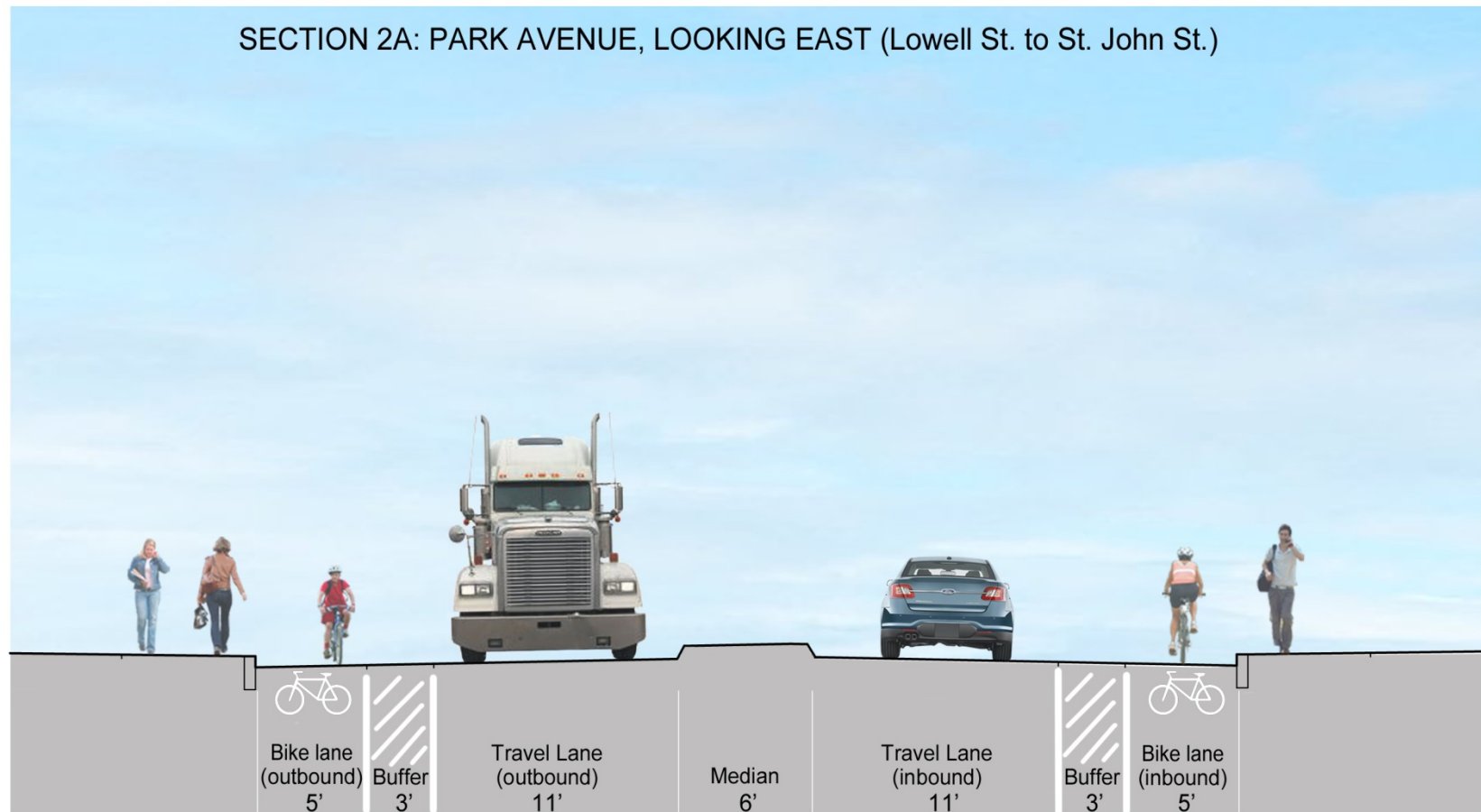
DuBois & King

with: Ransom Consulting Engineers & Scientists
tjd&a Landscape Architects and Planners
Morris Communications
Smart Mobility

SECTION 2A: CONGRESS STREET, LOOKING EAST (Lowell St. to St. John St.)



SECTION 2A: PARK AVENUE, LOOKING EAST (Lowell St. to St. John St.)



Libbytown Traffic Circulation and Streetscape Study

PACTS and City of Portland



Alternative 2b

April 17, 2013

prepared by:



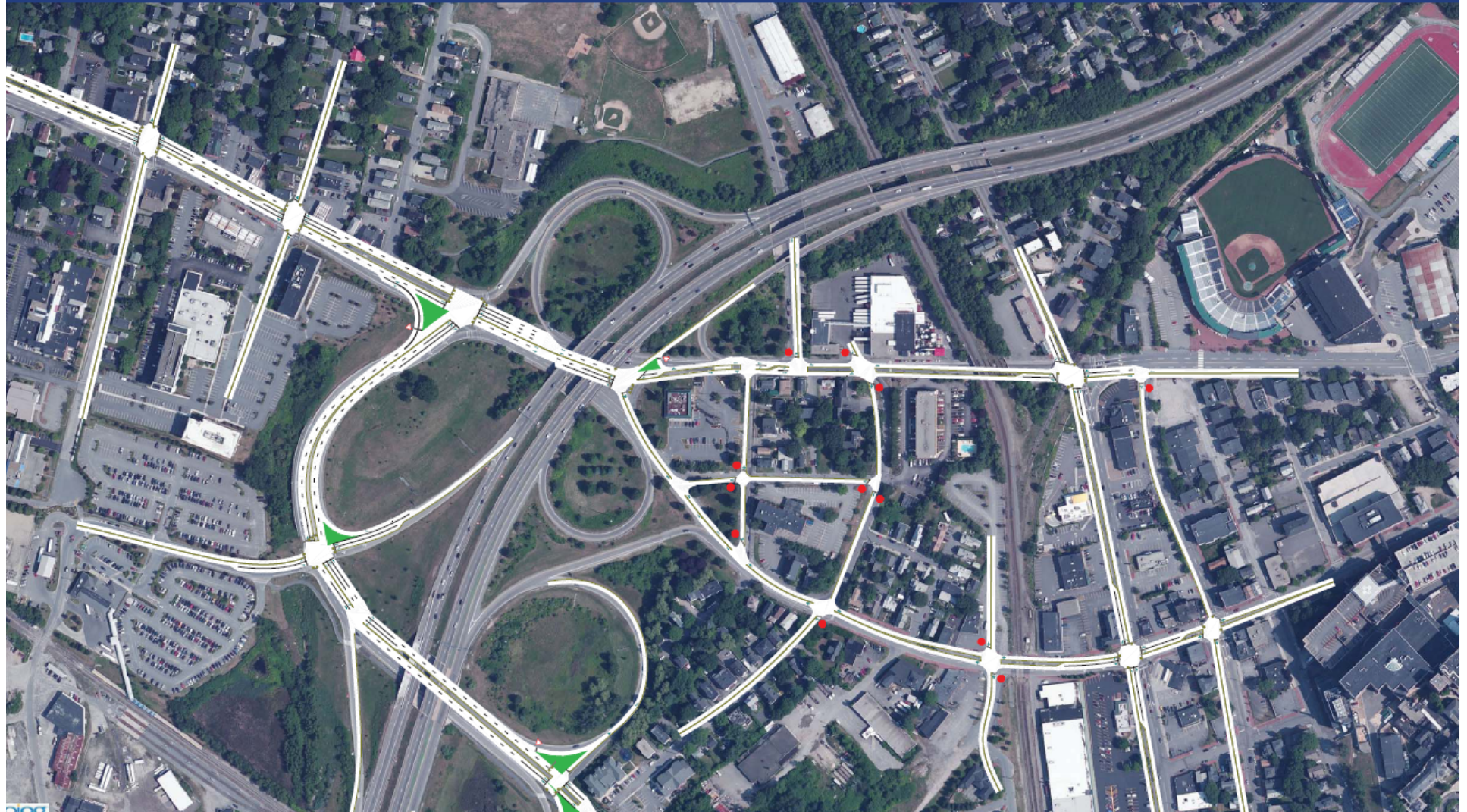
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& King**

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Alternative 2b

April 17, 2013

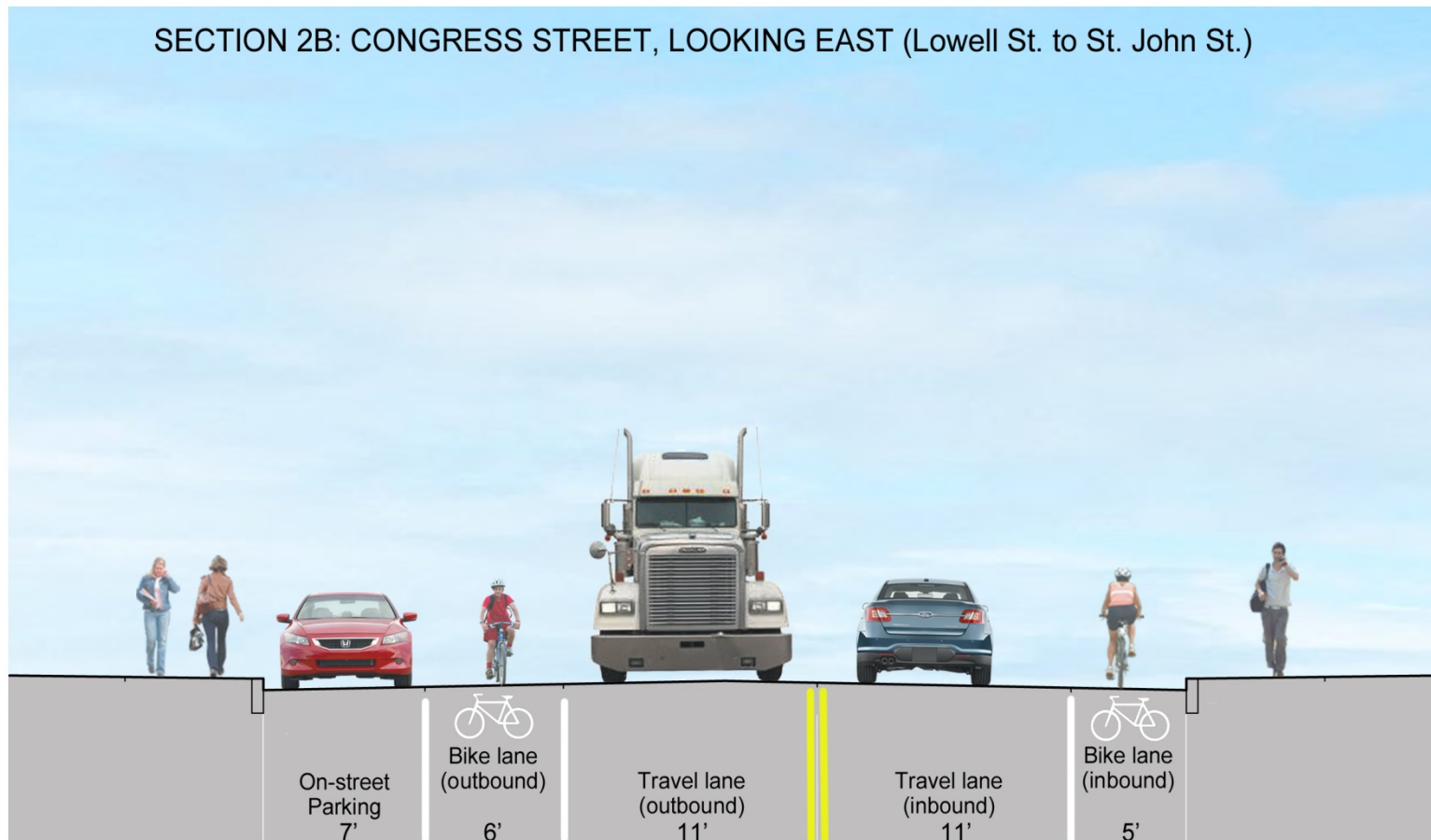
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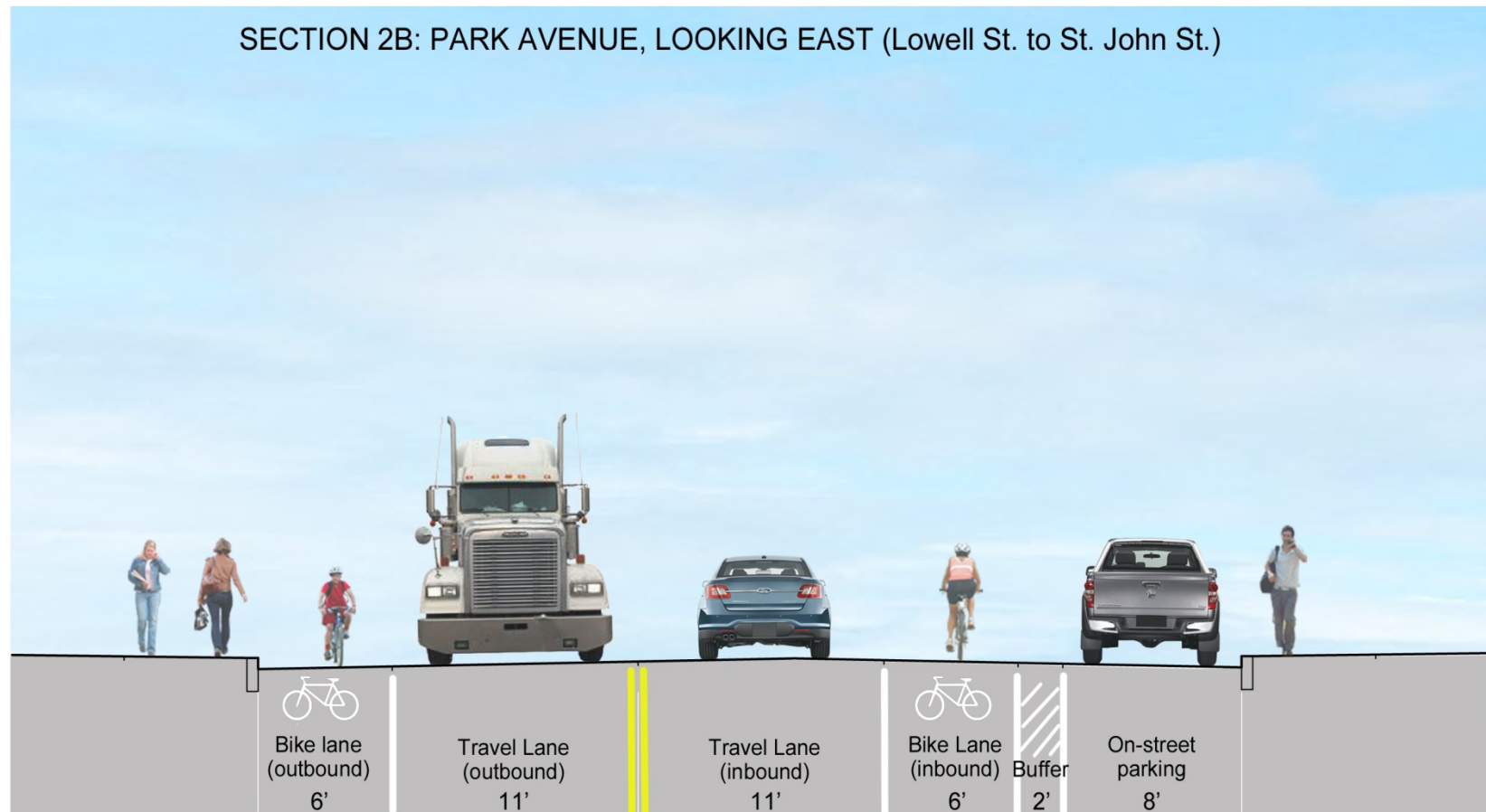
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& King**

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SECTION 2B: CONGRESS STREET, LOOKING EAST (Lowell St. to St. John St.)



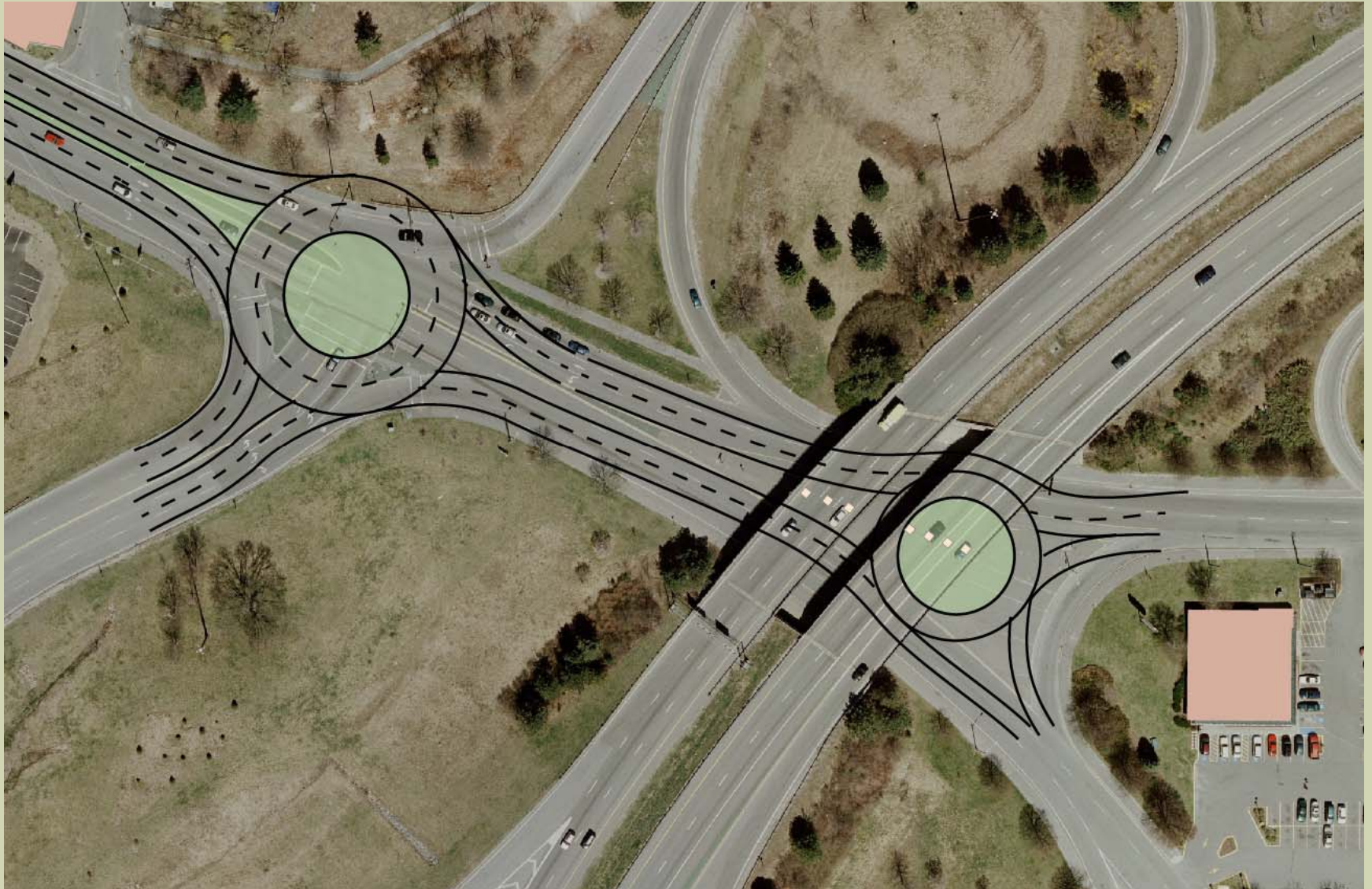
SECTION 2B: PARK AVENUE, LOOKING EAST (Lowell St. to St. John St.)



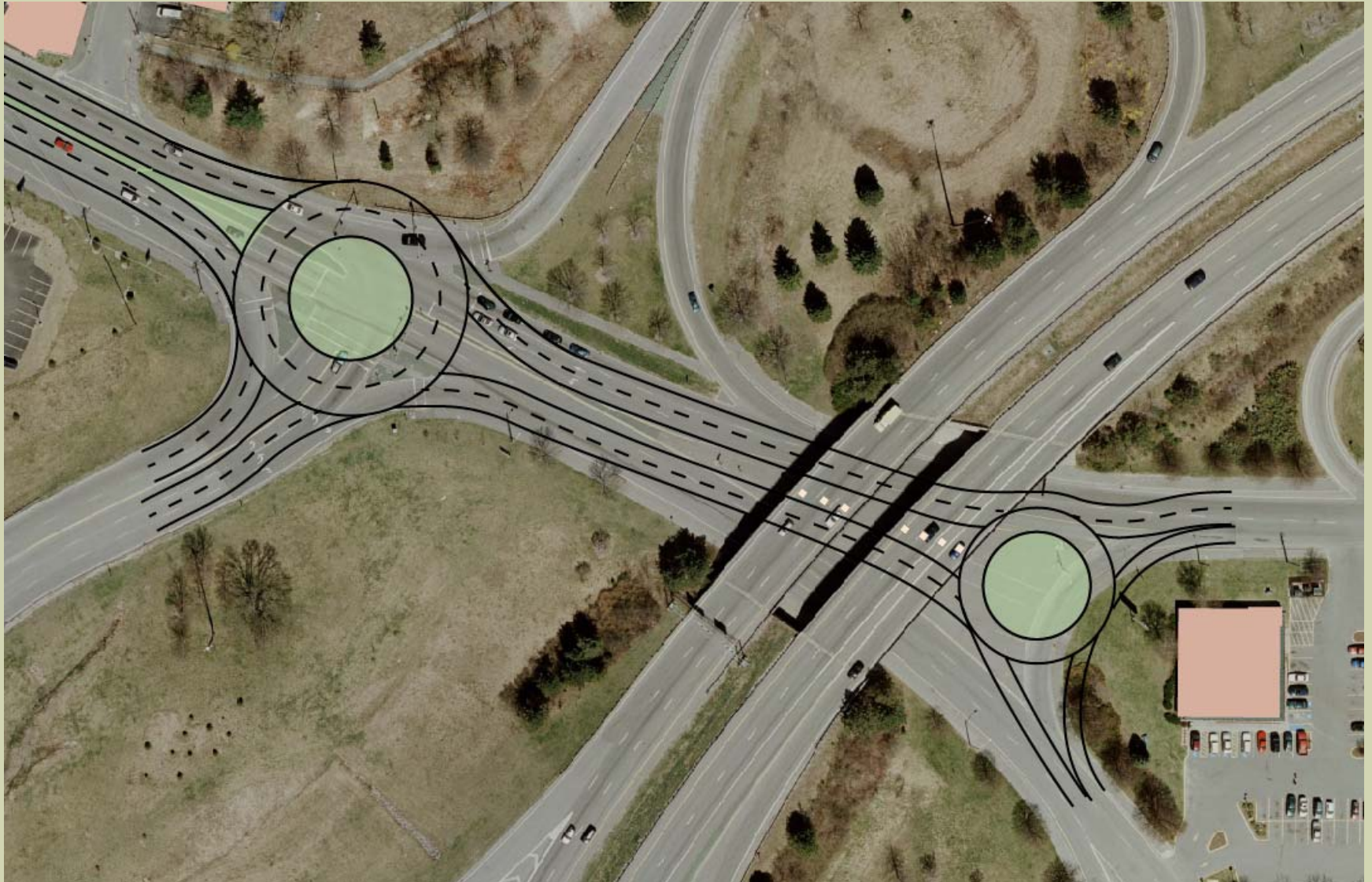
Roundabouts

- Roundabouts could replace signals, but would:
 - substantially increase the costs
 - require right-of-way acquisition
 - need to address pedestrian and bicycle concerns
- Short term: close ramps, install/adapt signals
- Long term: consider redevelopment of available land, and roundabouts as a higher capacity and more attractive alternative, funded by development.

Roundabout Alternatives



Roundabout Alternatives



Multimodal Level of Service

- Pedestrians: Considers streetscape comfort (i.e. trees, buildings or parking), crosswalk frequency, delays at crosswalks, exposure to travel lanes
- Bicycles: Considers traffic volumes, traffic speed and facility types: shared lane, bicycle lane, or separated facility (cycle track or shared use path)
- Vehicles: Considers vehicle delay at intersections
- Transit: Considers pedestrian score, and two-way versus one-way streets

Pedestrian LOS

	Existing	1A	1B	2A	2B
Outer Congress	E	C	C	C	C
Congress	E	B	C	B	C
Park	D	C	B	C	B

Bicycle LOS

	Existing	1A	1B	2A	2B
Outer Congress	F	E	E	E	E
Congress	F	B	C	D	C
Park	E	C	B	C	C

Vehicle LOS

2015 PM Peak

	Existing	1A	1B	2A	2B
FRP/Thompsons Point	B	D	D	C	C
Congress/FRP	C	C	C	C	C
Congress/ St John	A	B	B	B	B
Park/St John	A	C	B	C	B

Summary

- Bicycle and Pedestrian LOS improve in all scenarios
- Vehicle LOS is slightly reduced but acceptable at all intersections
- Fore River Parkway/Thompson's Point becomes critical intersection under Alternative 1 scenarios

Activating the Underpass

- Wide Sidewalk with gentle curve to edge
- Attractive Lighting
- Seating





Space can be programmed with events to encourage pedestrian activity, such as this Farmers Market



There are cheap, simple, fun ways to activate the space and make people feel welcome



Skate park under freeway in Portland (OR)

Public Meeting

May 8, 2013, Portland City Hall

Open House 5:00 to 6:30

Presentation 6:30 to 7:15

Open House 7:15 to 8:00