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October 28, 2013

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Steven Landry, State Traffic Engineer
Ed Hanscom, Senior Transportation Engineer
Dan Stewart, Bureau of Planning, MaineDOT
State of Maine Department of Transportation
16 State House Station
Augusta, ME 04333-0016

Re: Libbytown Traffic Circulation and Streetscape Study – Sept 23, 2013 Response From
MaineDOT

Dear Herb, Steven, Ed, and Dan:

We appreciate your formal response dated September 23, 2013, following your review of the Draft Libbytown Traffic Circulation and Streetscape Study. However, the City of Portland and PACTS must respectfully disagree on a number of the issues and items relayed in your letter.

Overall, we believe that the work of DuBois & King, Inc. and the rest of the Consultant Team have professionally addressed the priorities identified in the Request for Proposal issued in 2012, including a revisiting of traffic circulation, a more inviting streetscape, and economic development. Their report represents the first step toward a transformational approach to an area long blighted by excessive interstate infrastructure, and we are puzzled by MaineDOT's statement that "we do not support further analysis".

We are also disappointed in the lack of communication by the Department during your nearly two-month review of the report, waiting until all questions were compiled and issuing a memorandum rather than contacting us and/or requesting additional meetings. This result does not appear to be in line with the 'collaborative approach' intent described at the end of your comment letter.

During the entire Study process, members of MaineDOT were kept apprised of the project and its goals. All information with regards to Public Advisory Committee meetings and meeting notes were sent to the then Assistant State Traffic engineer, and the Consultant Team and PACTS/City staff met with MaineDOT on three (3) separate occasions. It should be noted that during the second meeting with MaineDOT Planning Staff on March 21, 2013; no blanket statement as to removal of ramps being off the table was discussed. In fact, planning staff were quite helpful in their suggestions as to which metrics could be provided to support consideration of ramp removal based on safety concerns.

Additionally, the overarching statement that the Department “cannot envision a realistic scenario in which MaineDOT or FHWA would approve removal of the ramps in the study area, and do not support further analysis regarding their removal” suggests either a deficiency in the Department’s and FHWA’s commitment to creative problem solving and improving safety for all users, or a lack of follow-through in the collaborative work model envisioned by the Department and FHWA with cities and MPOs in Maine.

Working with the City and MaineDOT, PACTS identified the problems associated with the antiquated and redundant ramps and included the need to study and plan for ramp elimination in PACTS 2010 long-range transportation plan, Destination Tomorrow (2010). This plan was developed in partnership with the MaineDOT and accepted and adopted by both MaineDOT and FHWA (Appendix F, Destination Tomorrow 2010, Page F-1 Item 2.). The Libbytown Traffic Circulation and Streetscape Study, in which the MaineDOT and FHWA were involved throughout the process as indicated above, has been conducted and is consistent with this intent in PACTS’ long range plan.

Our letter will provide your comments in order followed by responses and additional discussion. In addition, attached with this letter is a response memorandum from DuBois & King, Inc. (D&K) which we feel adequately satisfies the technical questions raised during MaineDOT’s analysis.

***Comment 1:** The basic assumptions used to develop the recommendations to remove the Interstate ramp are based upon faulty travel-demand modeling tabulations, and faulty base-level intersection Levels of Service (LOS).*

Response: Please see attached memorandum from D&K. Additional comments follow in this letter as well.

***Comment 2:** The modeling tabulations in the study indicate both a reduction in Vehicle Miles Traveled (VMT), and Vehicle Hours Traveled (VHT) when the ramps are removed. This scenario is counter-intuitive to removal of roadway network segments, including ramps. MaineDOT findings indicate that the base VMT and VHT modeling tabulations were apparently made with incorrect base information, leading to skewed modeling results. The resulting tabulations apparently overestimated reductions and underestimated increases in travel time and distances. The fundamental reasoning for the recommended alternatives is thus evidently based on flawed data.*

Response: The memorandum from D&K does note that the change in both VMT and VHT should have been based upon a comparison to the enhanced model baseline, which actually results in the changes shown in their letter. Based on this updated comparison, it is important to note two things about the changes in miles and hours traveled. The first is that the overall changes show negligible changes in these measures, from a percentage standpoint. This trend speaks clearly to the belief of both the City of Portland and PACTS that the existing transportation network has significant redundancy, and that the urban street system can easily absorb these changes in travel due to ramp elimination.

Second, the single largest impact to reducing both VMT and VHT would be the conversion of Park Avenue and Congress Street east of I-295 to two-way traffic flow. This is completely understandable

from a layperson's perspective, as drivers would not have to use multiple streets not on a key desire line in order to reach a destination.

Even if the changes were found to be more on the order of a larger amount, say five or even ten percent (again, unlikely based upon the density of the street network and the availability of remaining highway access following possible ramp closure), it is our opinion that so long as the local street network remained viable, perhaps measured by a lack of queuing from one intersection to the next, for example, that this tradeoff would be satisfactory.

Comment 3: The intersections of St. John Street and Congress Street, and St. John Street and Park Avenue were rated at a LOS 'A' in the report, while an independent analysis on an existing transportation improvement project indicates that these intersections are currently functioning at LOS 'C' or 'D'. Since these intersections are part of the Synchro network used for modeling, and since the study data related to these intersections in the report do not match existing data, we are not confident that the entire network model is calibrated properly. In addition, the LOS at some of the other intersections does not match actual conditions on the ground.

Response: Please note the response from D&K noting an adjustment to phasing on the two intersections identified in this comment. Our review of the updated volumes and our own recent modeling of these intersections in Synchro confirm a LOS 'C'. However, we would be interested to know the origin of the volumes referenced by the Department in the "independent analysis." It is our understanding that these turning movement counts for Libbytown are the first conducted in a number of years, possibly even before the opening of Fore River Parkway (FRP), which would result in exaggerated total entering volumes for today's operational realities. We would also request the backup data from the Department for the other intersections, or even which intersections are being alluded to.

Comment 4: Importantly, MaineDOT has determined that even if these flaws in the modeling tabulations did not exist, and even if the conclusions regarding the effects on the study area network were correct, the adverse effects on the overall transportation system identified in the report, including the multiple intersections and roadway segments, far exceed the potential traffic calming and other benefits that are envisioned by the proposed removal of the ramps.

Response: The City and PACTS wish to request tabulation from the Department of the adverse effects, as they are not noted in this broad assertion. Are these effects pedestrian, bicycle, transit, or vehicular? This point is simply not supported by any specific data.

Comment 5: The report itself concludes that many intersections and streets will see increased traffic levels and degradation of LOS. This increase in traffic at intersections and on roadways can be expected to cause a degradation of pedestrian and bicycling safety at several intersections, and an overall reduction in quality of life in neighborhoods outside the study area. The increased traffic at these intersections can be expected to cause safety issues for all users, including motor vehicles, pedestrians, bicyclists and transit vehicles.

Response: The City and PACTS would be interested to see the documentation showing a positive relationship between both vehicular delay and decreased safety for all modes of traffic. Decreased vehicular delay can generally be linked with increased vehicular speed, thus greatly increasing the

potential for severe injury or fatality. While we would not endorse creating conditions with significant amounts of time where a location or corridor are operating over capacity, in this case, we believe that the network can continue accommodating vehicular traffic, and can better accommodate other modes, with the potential for two-way street conversions and ramp removal.

Comment 6: MaineDOT and FHWA are very concerned about the potential increase in crashes at the remaining ramps that will see increased use. The Fore River Parkway northbound on-ramp is an existing High Crash Location, and the proposed removal of Ramp C would increase the volume of traffic on the weave of the I-295 collector-distributor. MaineDOT has serious concerns about the potential for increased traffic at this location.

Response: The City of Portland and PACTS concur that safety is of the utmost concern for this and all areas in the local and regional transportation network. It is our opinion that part of the deficiency of the FRP northbound on-ramp where it meets the collector-distributor is a lack of channelization features at the initial access point at the southern end of this feature. As such, while there are two travel lanes at this point, vehicles often cross immediately into one or the other. Placement of a small, relatively short median (say 100 feet) would largely eliminate this initial conflict and leave 400 feet for the actual weave maneuver. It is also recommended that this collector-distributor be evaluated for a reduced speed limit, such as 40 or 45 mph.

However, this Comment creates broader concerns on the part of the City and PACTS, as it in no way speaks to the other safety concerns at the other ramps, which are generally not constructed to current FHWA design criteria with regards to curvature and ramp separation. The draft report shows that MaineDOT's crash data indicates a high rate of crashes at the four ramps discussed for potential removal, with severe injury crashes at two of these locations.

Comment 7: MaineDOT also has serious concerns with the potential ramifications for incident management due to increase travel distances and congestion. MaineDOT has received feedback from Maine Medical Center, indicating concern for the increased time it will take emergency responders to get to the Trauma Center.

Response: The City, PACTS and the Consultant Team do not agree with this assessment on the part of MMC, and believes that a fairly simple evaluation of travel distances bear out our reasoning. For emergency vehicles headed north on I-295 traveling past the Exit 4 off-ramp, the current use of Exit 5 to Congress Street results in a distance of approximately 2.1 miles to the intersection of Congress Street and Bramhall Street, which leads directly to the ER access to MMC's Trauma Center. Use of Exit 4, the Veteran's Bridge, and Valley Street result in a distance of approximately 2.2 miles to get to the Trauma Center. This is a difference of five percent, which should be easily accounted for in response times. Furthermore, Congress Street is frequently impacted by the at-grade Pan Am crossing which carries significant freight, and now an increasing volume of passenger traffic, which makes response times unpredictable. The full recommendation from the Study would allow for access by this route as well as Park Avenue, another corridor not impacted by rail, as Pan Am's mainline has an overpass at this location.

MaineDOT has not indicated that they agree with MMC's assessment, and further, appears to have specially selected their organization out of all constituents near the Libbytown area. We were disappointed that at our final meeting with the Department that we were in no way informed of the

decision to include MMC, and to exclude all other parties. As such, the City was given no choice but to respond to other interested parties' frustrations that they were not included in the final meeting. We would hope that any future meetings with the Department would be more collaborative.

Comment 8: Regarding the two-way concepts for Congress Street and Park Avenue, MaineDOT recommends that any future analysis include a properly calibrated Synchro network and a remodeling of existing and future scenarios.

Response: Both the City and PACTS anticipate that any final plan to adjust intersection geometries and convert Congress Street and Park Avenue to two-way flow would be accompanied by counts, updated Synchro modeling, and design plans. Again, this study was completed in order to determine if changes to street flow and ramp adjustments were worth additional consideration. Actual construction would require an additional process.

Comment 9: The stated goal of the study is "to comprehensively assess and make recommendations regarding the multimodal transportation network, circulation pattern and supporting streetscape within the eastern portion of the Libbytown neighborhood." MaineDOT recommends that future analysis be initiated to identify streetscape measures that could meet the objectives of the study, potentially including bike lanes, sidewalks, improved crossings, rectangular rapid-flashing beacons, traffic calming, and other options.

Response: As discussed in D&K's response memo, the report itself makes numerous recommendations for street amenities, going so far as to provide photo simulations to illustrate these changes. In addition, the off-site work associated with Thompson's Point, administered by MaineDOT, will make street improvements to about a dozen streets, ranging from RRFB installation, a multi-use pathway, traffic calming, and ADA upgrades. MaineDOT is also improving the streetscape through a paving project on St. John and Park Avenues this fall, and the City is updating streetscapes on other parts of St. John Street and Valley Street as this letter is being written. The City has an additional streetscape improvement going out to bid for Park Avenue west of St. John Street that includes improved and widened sidewalk and bollard lighting underneath the Pan Am overpass. Lastly, a project will likely be out to bid next year that will provide a path connection from Fore River Parkway Trail to Frederick Street, which includes an RRFB. This area remains a top priority for Portland to improve streetscapes, which was a large reason that PACTS funded this very study.

Comment 10: MaineDOT strives to work collaboratively with communities across Maine on initiatives that improve the transportation system for all users. The Department is supportive of efforts that improve transportation safety and mobility, and preserve the rural, urban and neighborhood contexts in which they exist. In the case of the Libbytown study, we at MaineDOT have concluded that the recommendations in the draft report, most notably including removal of Interstate ramps, are not supported by available data. Further, we cannot envision a realistic scenario in which MaineDOT or FHWA would approve removal of the ramps in the study area, and we do not support further analysis regarding their removal. However, the Department stands ready to work with the City of Portland and PACTS to address the transportation safety and livability in Libbytown and other neighborhoods in the City.

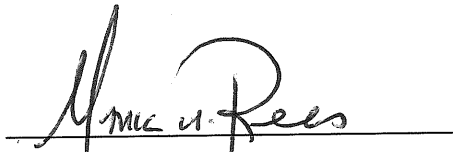
Response: A large part of the initiative behind the Libbytown study was the destruction of neighborhood context by the I-295 ramps. We find that the Department's statements in this comment

are self-conflicting in this regard. The City and PACTS are well underway with various streetscape improvements.

This response, and the opinions to date from MaineDOT do not strike PACTS and the City as collaborative, as they indicate that the Department wishes for substandard and unsafe interstate ramps bisecting a neighborhood to remain, and has no interest in revisiting the topic. We simply find this viewpoint unacceptable and will continue to work toward our goals in whatever channels or manner we find feasible.

In closing, we feel that despite our differences, we generally continue to have positive dialogue with the Department, as was most recently made clear in our quarterly meeting in Augusta on October 24, 2013. We are hopeful that we can work in the short-term on local street changes in the Libbytown with input from the Department, and revisit the topic of the I-295 ramps in the longer term.

Respectfully,



Mark Rees, City Manager

City of Portland



John Duncan, Executive Director

PACTS

Cc: Michael Bobinsky, Director of Public Services
Katherine Earley, Engineering Services Manager
Jeremiah Bartlett, Transportation Systems Engineer
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16 October 2013

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Re: MaineDOT comments on Libbytown Draft Report dated September 23, 2013

Dear Jeremiah and Carl,

Throughout the Libbytown Traffic Circulation and Streetscape Study process, we have been striving to coordinate and engage in discussion with MaineDOT and FHWA. We participated in three meetings with MaineDOT and FHWA staff, and endeavored to provide the data and analysis that they requested. We are in receipt of a copy of a letter from the Maine DOT that provides their comments on our draft report, and offer the following in response.

Maine DOT Comment #1:

The basic assumptions used to develop the recommendations to remove the interstate ramps are based on faulty travel-demand modeling tabulations, and faulty base-level intersection Levels of Service (LOS).

The recommendations contained in our report were not based on travel-demand modeling tabulations and level of service analysis. This data was provided in our study at MaineDOT's request, but this data was not the basis for our recommendations. This study focused on improving conditions for non-auto modes, livability and economic vibrancy. The report's recommendations were derived from community input, multimodal analysis and the urban and streetscape design expertise of our project team. Travel demand modeling was conducted to assess the effects on the regional transportation system, and level of service analysis was conducted at key intersections in the study area to assess the future operations and capacity. Our draft report did contain several inconsistencies in the base year modeling, which are discussed in more detail in the next two responses. Our final report will include corrected travel demand tabulations

and base levels of service. However the report's overall recommendations and conclusions will remain the same as those in the draft report.

Maine DOT Comment #2:

The modeling tabulations in the study indicate both a reduction in Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT) when the ramps are removed. This scenario is counter-intuitive to removal of roadway network segments, including ramps. MaineDOT findings indicate that the base VMT and VHT modeling tabulations were apparently made with incorrect base information, leading to skewed modeling results. The resulting tabulations apparently overestimated reductions and underestimated increases in travel times and distances. The fundamental reasoning for the recommended alternatives is thus evidently based on flawed data.

The model results of VMT and VHT were not the “fundamental reasoning” for the recommended alternative. Rather, the recommendations were based on the project goals to improve multimodal transportation, livability and economic vibrancy of the study area. The travel demand modeling was conducted to provide supplemental information on the effects that these recommendations would have on the regional transportation network. The PACTS model was significantly enhanced as part of this work so that it better reflects the complexity and multimodal patterns currently observed in Portland. Using the enhanced model, the ramp removals and two-way street conversions were tested, as were the alternative scenarios that included various combinations of ramp removals and two-way conversions. The Draft report contained erroneous VMT and VHT base volumes in several tables, and this will be corrected in the final report. The corrected tabulations show that the reports recommended alternative will have a very minor increase of 0.2% in VMT, a small reduction of 0.01% in VHT. However, to reiterate, our recommendations were not based on model results, but rather were based on design recommendations to meet the project's primary goals. Revised VMT and VHT results are attached to this letter, and will be included in the final report.

Maine DOT Comment #3:

The intersections of St. John Street and Congress Street, and St. John Street and Park Avenue were rated at a LOS A in the report, while an independent analysis on an existing transportation improvement project indicates that these intersections are currently functioning at LOS C or D. Since these intersections are part of the Synchro network used for modeling, and since the study data related to these intersections in the report do not match existing data, we are not confident that the entire network model is calibrated properly. In addition, the LOS at some other intersections does not match actual conditions on the ground.

The Synchro results cited in the report utilized incorrect assumptions on the intersection signals current phasing and timing pattern. This will be corrected in the final report. Our revised analysis indicates that the AM and PM peak hour LOS is C for both intersections, which is consistent with other recent studies. Our results for other intersections, including the Fore River Parkway/Congress and Fore River Parkway/Thompson's Point analyses are consistent with recent independent studies of these intersections associated with the Thompson's Point development. We conducted the Synchro analysis following the

Highway Capacity Manual methodology, so these results are not affected by calibration assumptions. We have provided our Synchro files for the report recommendations to MaineDOT.

Maine DOT Comment #4:

Importantly, MaineDOT has determined that even if these flaws in the modeling tabulations did not exist, and even if the conclusions regarding the effects on the study-area network were correct, the adverse effects on the overall transportation system identified in the report, including on multiple intersections and roadway segments, far exceed the potential traffic-calming and other benefits that are envisioned by the proposed removal of the interstate ramps.

It is not clear how the Maine DOT has reached this determination as they did not provide any supporting analysis. Our report includes a multimodal analysis that shows very significant improvement for pedestrian and bicycle modes of transportation which justifies possible minor adverse effects on vehicular traffic. Our modeling of V/C ratios of the study area network indicates that there will be sufficient vehicular capacity if the recommendations are implemented. The MaineDOT comment illustrates a vehicular-centric view that gives more weight to vehicular conditions than to bicyclists, pedestrians, transit users, and the community priorities.

Maine DOT Comment #5:

The report itself concludes that many intersections and streets will see increased traffic levels and degradation of LOS. This increase in traffic at intersections and on roadways can be expected to cause a degradation of pedestrian and bicycling safety and comfort at several intersections, and an overall reduction in quality-of-life in neighborhoods outside the study area. The increased traffic at these intersections can be expected to cause safety issues for all users, including motor vehicles, pedestrians, bicyclists and transit vehicles.

The scope of our traffic analysis was limited to the area that would be most affected by the changes proposed. The regional modeling of the preferred alternative showed increased volumes on other corridors, notably Park Avenue, lower St John St, and Veteran's Bridge. Recent traffic counts and model results for St. John Street indicates that this corridor is underutilized and over designed, and should be able to absorb additional traffic without undue congestion. Park Avenue is currently the subject of other studies, which could incorporate the volume changes as they go forward. St. John and Park Avenue are major commercial corridors. The modeling does not show any pattern of increased volume on neighborhood residential streets.

This comment also suggests that higher traffic volumes are correlated with degradation of pedestrian and bicycling traffic. This assertion is not supported by any data, nor by current understanding and practice of bicycle and pedestrian design. Higher traffic volumes on urban streets typically result in lower speeds, and lower speeds are safer for pedestrians and bicyclists. Some of the most congested cities in the world are also the most walkable, safe and welcoming to pedestrians. Furthermore, the City of Portland is undertaking a variety of projects to improve safety of all users on corridors that might see increased volumes from the implementation of the report's recommendations.

Maine DOT Comment #6:

MaineDOT and FHWA are very concerned about the potential increase in crashes at the remaining ramps that will see increased use. The Fore River Parkway northbound on-ramp is an existing high crash location, and the proposed removal of Ramp C would increase the volume of traffic on the weave of the I-295 collector-distributor. MaineDOT has serious concerns about the potential for increased crashes at this location.

Safety for all users should be the highest priority when considering the alternatives, and was a primary factor in the development of the study recommendations. The removal of ramps will essentially eliminate a number of existing high crash locations, although some other high crash locations may see increases in volume. In regards to the Fore River Parkway northbound on-ramp, the model shows an overall decrease in volume, not an increase as asserted by MaineDOT. The model shows that the on-ramp will increase, but the collector-distributor decreases by a larger amount, such that the volume in the weave section, which is also a high crash location, decreases. More details on how the report recommendations could affect HCLs are attached to this letter.

Maine DOT Comment #7:

MaineDOT also has serious concerns with the potential ramifications for incident management due to increase travel distances and congestion. MaineDOT has received feedback from Maine Medical Center, indicating concern for the increased time it will take for emergency responders to get to the Trauma Center.

The Maine Medical Center was a member of the Project Advisory Committee, and representatives attended several of the group's meetings. Unfortunately these concerns were not expressed to the committee, nor to City, nor to the consultant team, so we were unable to address them during the study's public outreach process. In our discussions with the representatives attending the Project Advisory Committee meetings, reliability of response times is as important as length of response time. Emergency responders are currently affected by the at-grade railroad crossing on Congress Street which can make response times highly unpredictable. Converting Park Avenue to two-way operation is of great benefit to the consistency and reliability of response times. A response route along St John Street could be established that would include signal preemption to assure more consistent and faster response times. It is also important to weigh the response times against the overall safety benefits for the roadway network that will result from the elimination of numerous high crash locations, and the slower steadier traffic flow that result from two-way conversion.

Maine DOT Comment #8:

Regarding the two-way concepts for Congress Street and Park Avenue, MaineDOT recommends that any future analysis include a properly calibrated Synchro network and a remodeling of existing and future scenarios.

Our existing conditions have been remodeled with the correct signal timings and phasing for the St. John corridor intersections. Our analysis relies on Synchro's Highway Capacity Manual methodology to assess the volume-to-capacity, potential delay and other measures, and does not as such require calibration. It should be noted that we would expect significant changes in behavior and driver perception with a two-

way street conversions and the other changes proposed. A model that is calibrated for simulating one-way operation and higher speeds would be of limited value in testing conversion to two-way operation.

Maine DOT Comment #9:

The stated goal of the study is “to comprehensively assess and make recommendations regarding the multimodal transportation network, circulation patterns, and supporting streetscape within the eastern portion of the Libbytown neighborhood.” MaineDOT recommends that future analysis be initiated to identify streetscape measures that could meet the objectives of the study, potentially including bike lanes, sidewalks, improvement crossings, rectangular rapid-flashing beacons, traffic calming and other options.

We agree that these measures can help to address the stated goals of the study. Our recommendations include design features such as bike lanes, sidewalks, improved crossings, RRFBs, traffic calming and other options.

Maine DOT Comment #10:

MaineDOT strives to work collaboratively with communities across Maine on initiatives that improve the transportation system for all users. The department is supportive of efforts that improve transportation safety and mobility, and preserve the rural, urban and neighborhood contexts in which they exist. In the case of the Libbytown study, we at MaineDOT have concluded that the recommendations in the draft report, most notably including removal of Interstate ramps, are not supported by available data. Further, we cannot envision a realistic scenario in which MaineDOT or FHWA would approve the removal of the ramps in the study area, and we do not support further analysis regarding their removal. However, the department stands ready to work with the city of Portland and PACTS to address transportation safety and livability in Libbytown and other neighborhoods in the city.

The street network in the Libbytown area is broken. This area is a vital corridor that connects the Portland Transportation Center and Thompson’s Point with Portland’s downtown core on the peninsula. The uncontrolled interstate ramps are incompatible with multimodal street activity. The recommendations in our report are supported by the following:

- The multimodal level of service analysis that indicates dramatic improvement in the conditions for pedestrians and bicyclists.
- Two way street operation will reduce speeds, improving the safety of the street network’s most vulnerable users: pedestrians and bicyclists. Two way streets will also have significant improvement for transit routes and users.
- The streetscape improvements recommended in the report will greatly enhance safety, character, and livability in the Libbytown neighborhood.
- The traffic analysis shows that that the projected volumes can be accommodated with the proposed improvements, with reasonable conditions in terms of level of service, delay, and volume-to-capacity ratios as calculated by the Highway Capacity Manual.

October 16, 2013

- Conditions at HCL locations within the study area would be expected to improve due to either reductions in volume or elimination of conflicts. HCL locations outside the study area have not been addressed and may warrant additional consideration, but any impacts should be weighed against the substantial safety benefits that are shown in the study area.

The limitations of the project scope and budget do not allow us to address every question and concern of MaineDOT and FHWA. The following additional analysis may be warranted:

- Extend the traffic analysis beyond the existing study area to include the corridors that may see significant increases in traffic, such as Park Ave and lower St John.
- Conduct a more detailed analysis of HCL's that may see an increase in volume. Develop design recommendations for any locations that are not already being addressed in planned projects.
- Analysis of emergency response times and consideration of design measures, such as signal pre-emption along Park Avenue or St. John Street that would improve response times.

Thank you for your consideration of the above, and please let me know if you would like to discuss this further,

Very Truly Yours,
DUBOIS & KING

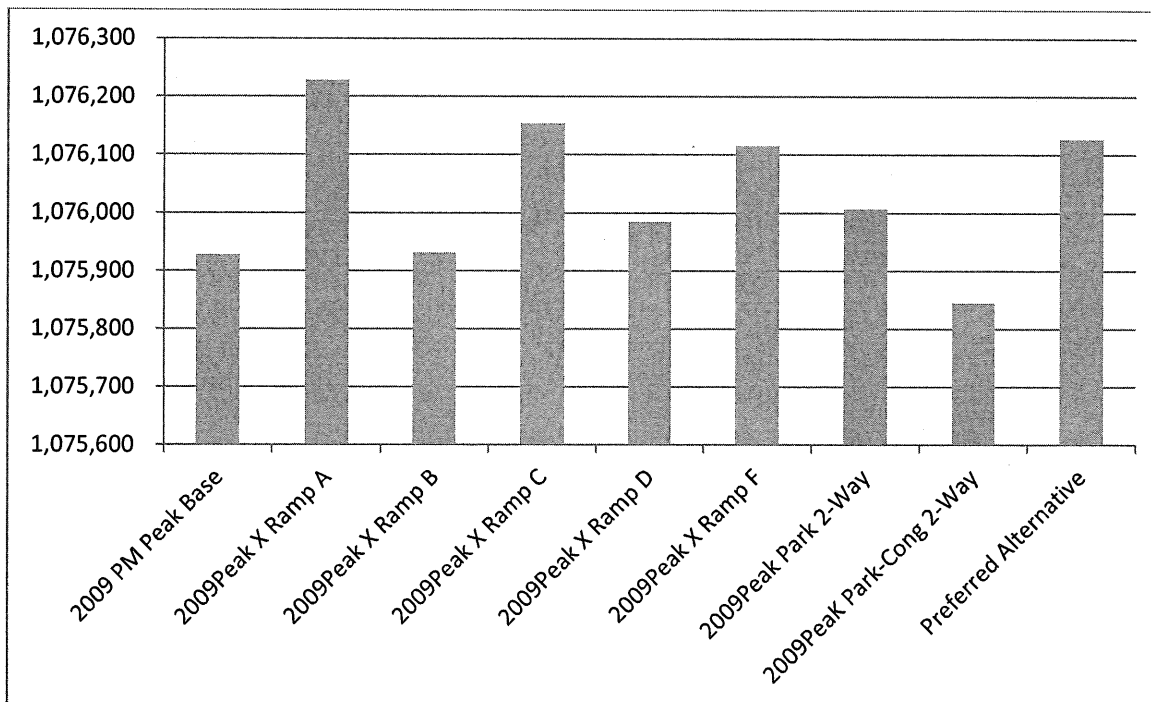


Lucy Gibson, P.E.

Attachment 1: Revised VMT and VHT Tabulations

The following table and graph are revised to reflect the correct base VMT data. .

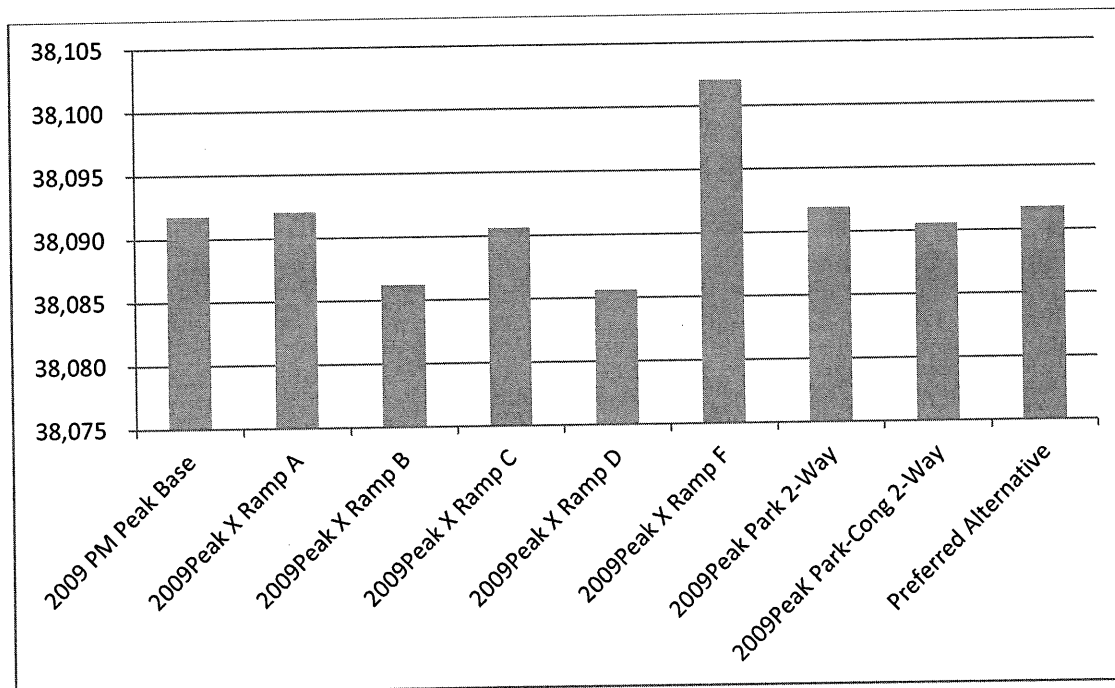
Scenario	VMT	% Change from Base
2009 PM Peak Base	1,075,928	
2009Peak X Ramp A	1,076,228	0.0279%
2009Peak X Ramp B	1,075,931	0.0003%
2009Peak X Ramp C	1,076,154	0.0211%
2009Peak X Ramp D	1,075,985	0.0053%
2009Peak X Ramp F	1,076,115	0.0175%
2009Peak Park 2-Way	1,076,007	0.0074%
2009PeaK Park-Cong 2-Way	1,075,845	-0.0076%
Preferred Alternative	1,076,127	0.0186%



These show that most of the study recommendations would individually result in small increases of regional vehicle-miles-traveled, with the exception of converting both Park and Congress to two-way streets, which results in a small reduction. The preferred alternative is modeled to increase regional VMT by 0.019%, which is very small given the accuracy of the model.

Vehicle-hours traveled (VHT) was also derived from the model, and the results are shown in the table and chart that follows.

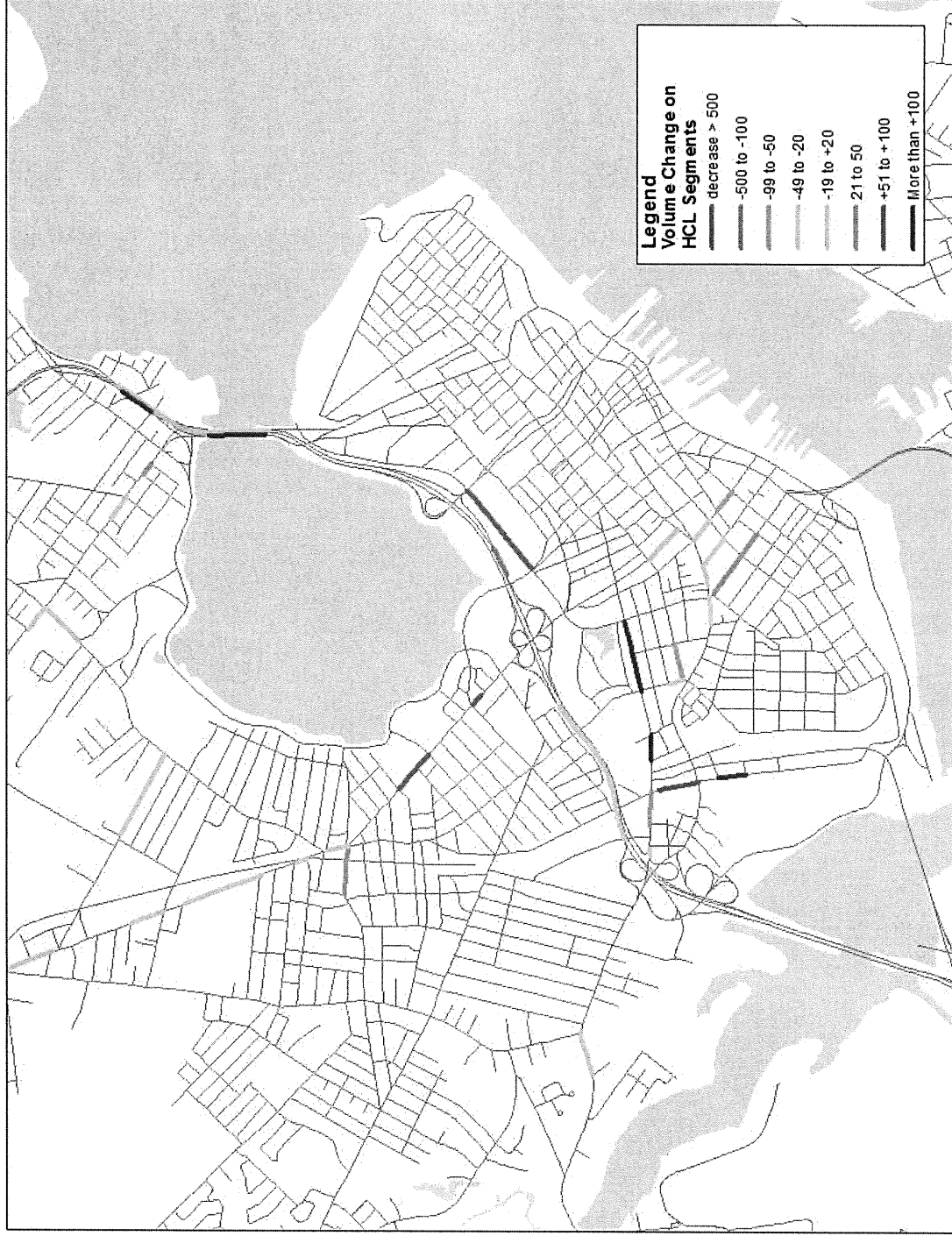
2009 PM Peak Scenario	VHT	% Change from Base
Base	38,092	
X Ramp A	38,092	0.0006%
X Ramp B	38,086	-0.0146%
X Ramp C	38,091	-0.0030%
X Ramp D	38,086	-0.0162%
X Ramp F	38,102	0.0270%
Park 2-Way	38,092	0.0003%
Park & Cong 2-Way	38,091	-0.0033%
Preferred Alternative	38,092	0.0000%



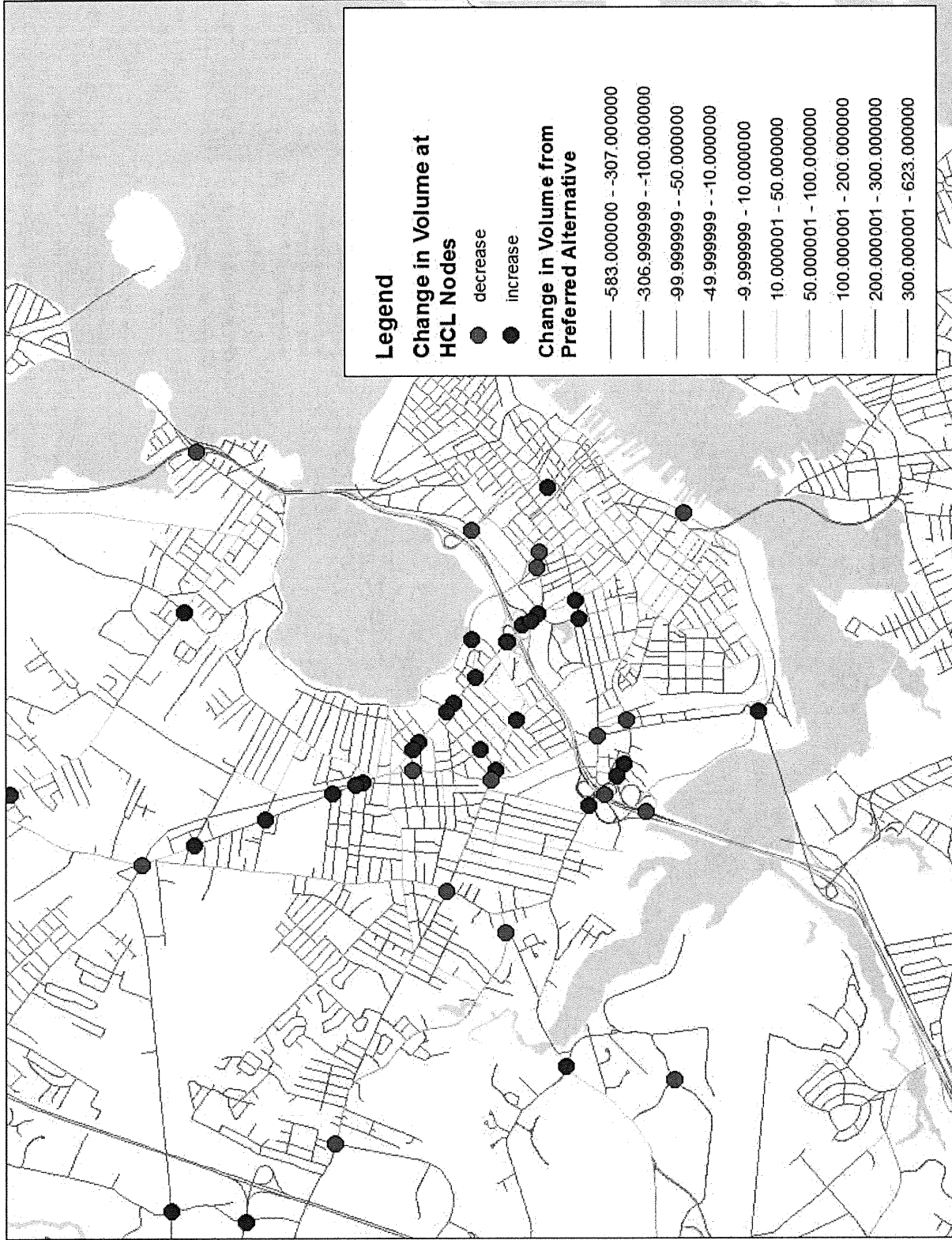
These results show that most scenario components as well as the preferred alternative result in either little change or a slight decrease in VHT. Removal of ramp F has a slight increase in VHT. These changes in VHT shown by the model are very minor relative to the model's accuracy, and indicate little change in the performance of the regional transportation network will result from implementation of the preferred alternative.

Attachment 2: HCL Analysis

The following figure shows the projected modeled traffic volume changes on HCL road segments. Segments in shades of green and yellow will have decreases in volumes, and segments with orange and red will have increases in volumes.

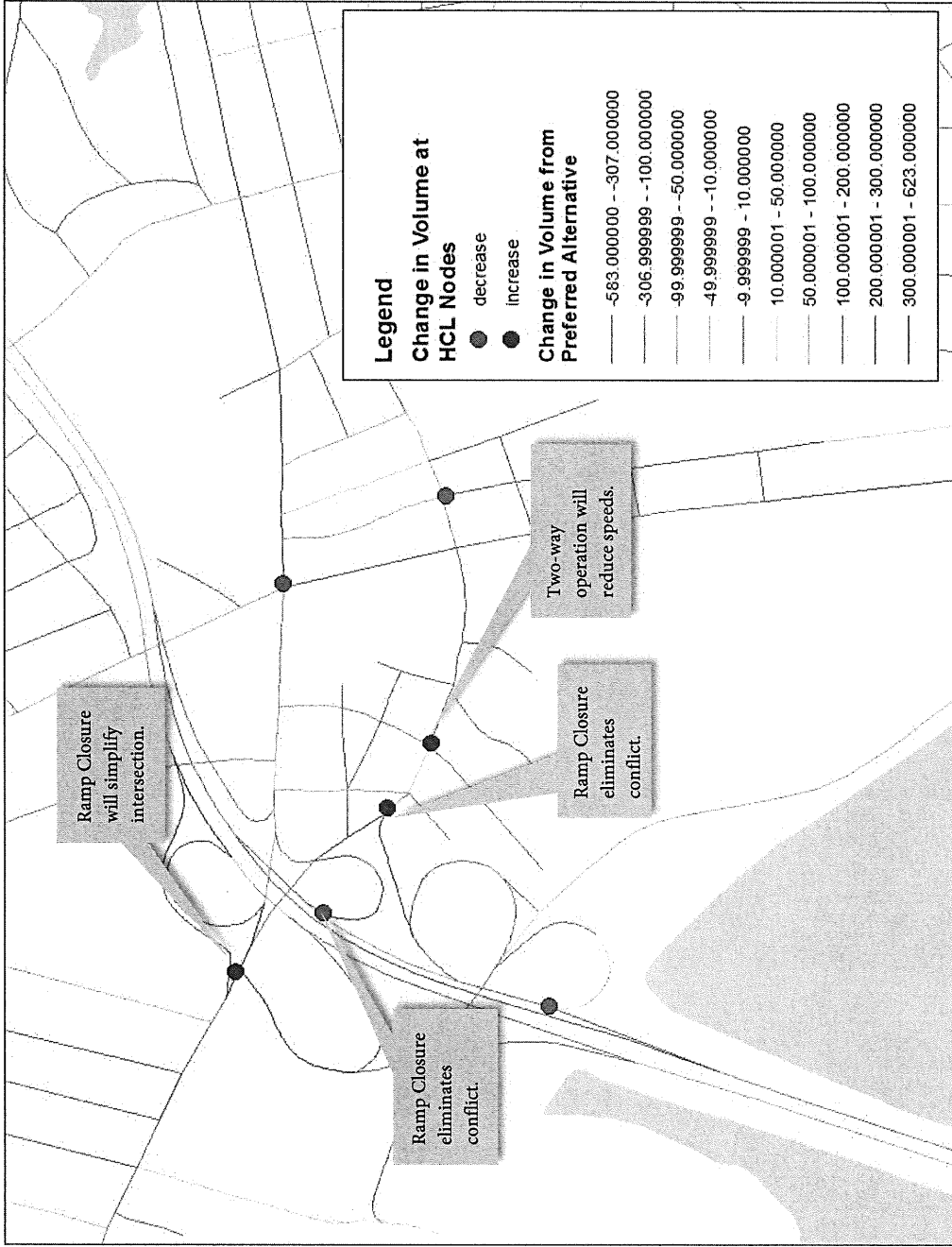


The following figure shows HCL nodes that our preliminary analysis indicates will see increase (red) or decreases (green) in modeled traffic volumes.



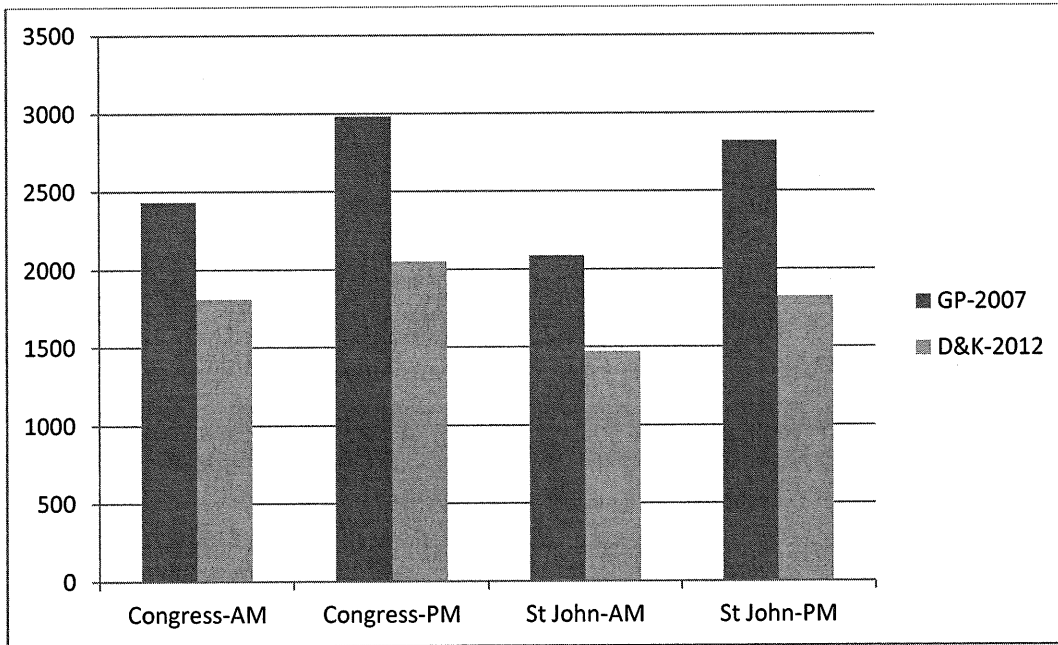
The following figure provides the same information, but focused on the study area. Of particular note is that the HCL that is located at the merge point of the I-295 northbound on ramp from Fore River Parkway will actually see a decrease in volume. The model shows a higher volume on the ramp, but lower volumes on the Collector-distributor more than compensate, so that this HCL node has an overall decrease in volume.

While a conclusive analysis of all of these locations is not within our current scope, this screening analysis indicates that there will be mixed effects on volumes at HCL nodes. In particular, the model results indicate that the Fore River Parkway on-ramp would have lower overall volumes due to lower collector-distributor volumes. It is recommended that a more detailed analysis of the effects of traffic changes on HCL locations be conducted as further implementation steps are undertaken.

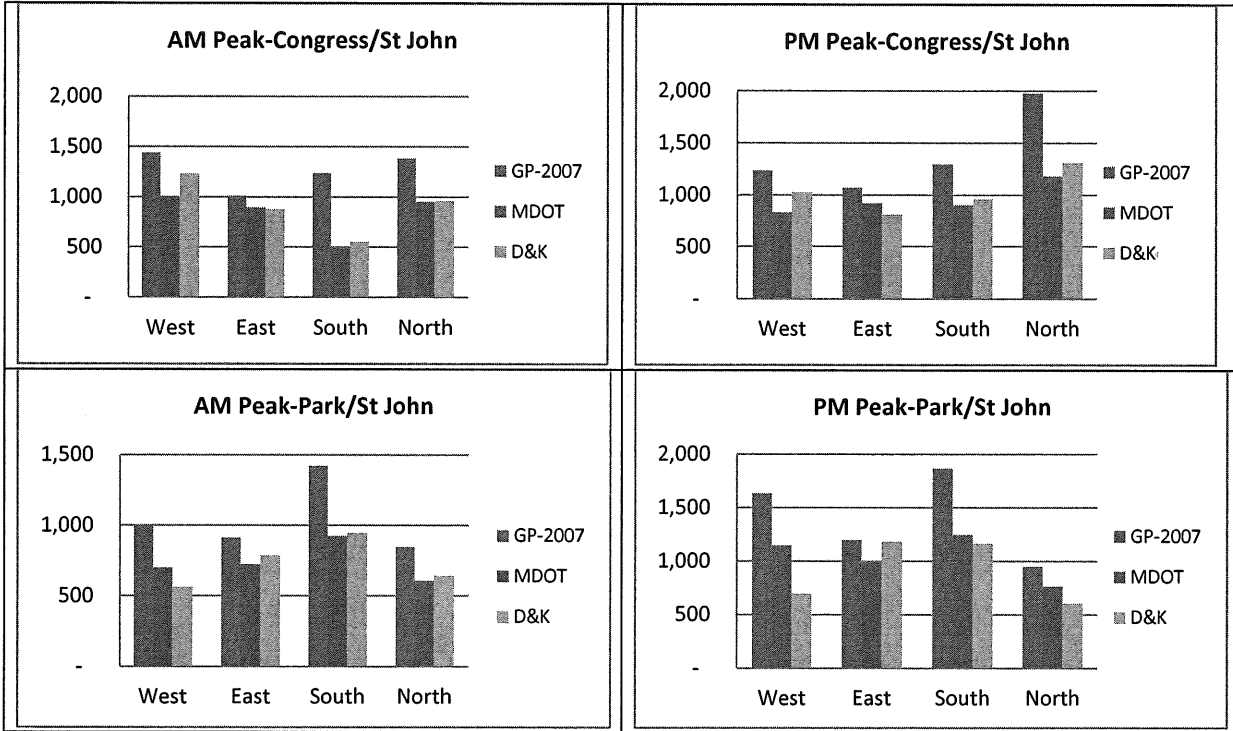


Attachment 3: Base year LOS Analysis

The levels of service for the a.m. and p.m. peak hour were recalculated for the intersections of Congress-St. John and Park-St. John with signal timing and phasing that more closely reflects existing operations. It should be noted that our investigation of traffic counts and trends shows that traffic has declined at these intersections since the construction of the Fore River Parkway, as shown in the charts below.



In addition, we validated our counts with recent Maine DOT ATR Counts that were conducted on each approach, which showed our counts were consistent with the MaineDOT data. The following charts show this comparison.



The revised level of service results for the base year are summarized below and attached to this document. The primary changes were related to signal phasing.

Intersection	AM Peak LOS	PM Peak LOS
Congress-St. John	C	C
Park-St. John	C	C

The draft report had higher levels of service reported for the base year.

