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MMC - Initial Traffic Movement Permit Comments

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Cc: Bruce Hyman <bhyman@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>

Hi Nell – I have reviewed Traffic Impact Study (Section 7 of the TMP) prepared by Gorrill Palmer transmitted on November 1, 2018. My initial comments are noted below.

- I generally find the methods used in the development of the base traffic volumes to be reasonable and acceptable. It should be noted that the volume timeframe for the analyses was the peak hour of the roadway system, which does not correspond to employee peaking in the morning (employees arrive before the peak hour). The Applicant should provide documentation noting traffic volumes on roadways during both the peak hour of the system and peak hour of traffic generation from MMC.
- The Trip Generation estimate was based upon ITE methods and I find the estimate to be reasonable and meets MaineDOT TMP requirements.
- The Trip Assignment of trips was based upon both localized turning movement volumes and MMC employee information. I find the methods used to be reasonable.
- The Park Avenue/Valley Street intersection is a High Crash Location. The Applicant shall provide specific recommendations with implication of such changes for review and consideration.
- The Congress Street/Gilman Street intersection is a High Crash Location. The Applicant suggests that the future removal of the traffic signal at Congress Street/Valley Street may mitigate crashes. I continue to review this, but a monitoring requirement post signal conditions may be suggested.
- The St. John Street/A Street is a High Crash Location. The Applicant suggests that traffic volume reductions may mitigate crashes. The new employee parking garage will increase traffic volumes in the area and may negatively impact conditions. I continue to review this, but a monitoring requirement after the employee parking garage is open may be suggested.
- Park Avenue/St. John Street is a High Crash Location. The Dunkin Donuts project on St. John Street will likely be implementing improvements to the northbound St. John Street approach. The DD scope of this work is not expected to mitigate all crash patterns. The Applicant shall specifically recommend strategies for mitigating all crash patterns that are correctable by improvements.
- Valley Street between and A Street and C Street is a High Crash Location. The Applicant noted at the TMP Scoping Meeting that traffic volumes will be declining on Valley Street in this area and thus may reduce collisions. The Applicant shall document specific before/after traffic volumes changes on Valley Street as part of assessing mitigation of crash rates.

- The Congress Street/St. John Street intersection is not a High Crash Location but experienced 25 crashes over the reported three-year period. The Applicant shall conduct a safety review of the intersection.
- Congress Street is a High Crash Location between Forest Street and Weymouth Street. To assess potential mitigation strategies, I conducted a review of police reports. The Applicant has suggested the provision of a three-lane roadway with a center left-turn lane. There were 10 crashes reported over the most recent three-year period with a Critical Rate Factor of 1.45. The following summarizes each reported collision.
 - January 10, 2015 at 8:40pm – Vehicle struck bicyclist in slushy roadway conditions. (Crash not likely to be mitigated with center turn lane)
 - May 11, 2015 at 4:35pm – A vehicle pulled over for an ambulance and was struck when re-entering travel lane. (Crash not likely to be mitigated with center turn lane)
 - June 1, 2015 at 4:55pm – Rear End Collision eastbound. During a congested time period a motorist applied vehicle brakes, but mechanical problems prevented an immediate stop. Not related to a turning movement (Center turn lane not likely to mitigate this crash)
 - August 12, 2015 at 3:02pm – Rear End Collision westbound. Drive Inattention. (Crash may be mitigated with center turn lane)
 - January 7, 2016 at 4:28pm - Rear End Collision eastbound. Drive Inattention during congested traffic period. (Unknown if related to a turn movement. Given time of day it may be related to congested traffic conditions. Crash may be mitigated with center turn lane)
 - September 27, 2016 at 10:36am – Westbound vehicle collided with parked vehicles near Weymouth Street. Drive error was likely contributing factor. (crash not likely to be mitigated with center turn lane)
 - January 4, 2017 at 1:50pm - Rear End Collision eastbound. Drive Inattention. (Unknown if related to a turn movement. Crash may be mitigated with center turn lane)
 - April 19, 2017 at 8:01am - Rear End Collision eastbound. Drive Inattention. (Unknown if related to a turn movement. Crash may be mitigated with center turn lane)
 - June 20, 2017 at 8:00am - Rear End Collision with right-turning vehicle. Drive Inattention. (Crash not likely to be mitigated with center turn lane)
 - September 25, 2017 at 8:20pm – Turning Collision Failed to yield right of way. (Crash not likely to be mitigated with center turn lane)

Based upon my review of the data, at most 50% of the crashes could be mitigated with the introduction of a center turn lane. I would note again that some of the rear end collisions may not have been related to a left-turn movement, but to congested dense slow-moving vehicle conditions. The center turn lane would not mitigate those crashes. City staff is concerned about changing the roadway context of Congress Street (particularly in comparison with nearby intown Congress Street conditions) and how it has the potential for dangerous increased vehicle speeds. I would note that the Applicant's traffic simulation model of Congress Street in this area depicts a roadway with little to no vehicle delay suggesting limited turning vehicle conflict opportunities. Lastly, it is my professional opinion that this section of Congress Street will change contextually when the project is completed, functioning more like an urban street (similar to intown Congress Street), due to changes to the building activity, enhanced streetscape, increased pedestrian/bicycle activity, slower vehicle speeds, thus creating a Complete Street serving all users. In my professional opinion this change to a Complete Street would result in safe conditions for all users.

- Traffic Movement Permit regulations requires Applicants to document incremental changes to a site over the prior 10 years to determine factors that have influenced traffic generation from the site. In my professional opinion, the Applicant has not provided documentation that adequately addresses historical changes at MMC.
- The Applicant shall provide specific sight distance measurements at the Congress Street/Drop-Off driveway according to Site Plan information.
- The Park Avenue/St. John Street intersection has improving levels of service and delay following project build-out. The Applicant should specifically note any traffic signal equipment modifications that are needed to accomplish the

noted optimization.

- The Commercial Street/Valley Street intersection has improving levels of service and delay following project build-out. The Applicant should specifically note any traffic signal equipment modifications that are needed to accomplish the noted optimization.
- I continue to review traffic model output for vehicle queuing and will provide comments in the future.
- The Congress Street/St. John Street intersection was modeled assuming existing roadway conditions. The Applicant shall also conduct an analysis assuming the Dunkin Donuts improvements on St. John Street are implemented (converting St. John Street from four lanes to three lanes).
- The Applicant shall recommend pedestrian and vehicle improvements at the Congress Street/Valley Street intersection during post-traffic signal conditions.

If you have any questions, please contact me.

Best regards,

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