

November 27, 2018

Nell Donaldson, Senior Planner
City of Portland Planning Division
389 Congress Street
Portland, ME 04101



Re: MMC Congress Building | 22 Bramhall St | Level III Site Plan
Response to City Reviewer Comments 2

Dear Nell:

Thank you for coordinating the review of the Maine Medical Center Congress Building project located at 22 Bramhall with frontage on Congress St.. This letter provides a summation of our responses to the comments received from various reviewers as part of the Level III Site Plan process. The original comment in italics below, and our response follows each.

Comments from City of Portland Traffic Consultant – Tom Errico, TY Lin Dated November 9, 2018

1. 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.

Response: The following table compares the total entering volumes at the key intersection of St. John Street with Congress Street during both the peak hour of adjacent street traffic and the peak hour of MMC. The traffic volumes for the adjacent street traffic are based on the 2023 Postdevelopment volumes from the TIS for Phase 3. The traffic volumes for the peak hour of MMC traffic generation are based on the 2022 Postdevelopment traffic volumes from the memo dated June 19, 2018 for the proposed St. John Street parking garage (Phase 2) that have been adjusted to the Phase 3 build out year of 2023.

Intersection	Adjacent Street		Peak Hour MMC	
	AM	PM	AM	PM
St. John / Congress	2,271	2,413	1,795	2,499

As shown in the table, the AM peak hour of the adjacent street traffic volumes (approximately 7:30-8:30 AM) are higher than the AM peak hour of the generator (approximately 6:00-7:00 AM). The PM peak hours are similar, since the PM peak hour of the generator and PM peak hour of the adjacent street occur at approximately the same time for this intersection (start time between 4:00 and 4:30 PM). Since the AM traffic is higher during the adjacent street time period and the PM traffic is approximately equal, to be conservative, the adjacent street traffic was use for analysis

2. The Trip Generation estimate was based upon ITE methods and I find the estimate to be reasonable and meets MaineDOT TMP requirements.

Response: Comment acknowledged.

3. 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.

Response: Comment acknowledged.

4. 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.

Response: In the Traffic Impact Study, it was identified that the one crash pattern at this intersection involves left turning vehicles from Valley Street colliding with westbound Park Avenue vehicles. To address this pattern, we recommend restricting left turns from Valley Street. An additional review of the police reports showed that a contributing factor of one of the crash pattern collisions was limited sight distance due to a snowbank on Valley Street. Additional winter maintenance is recommended. It should be noted that the proposed expansion traffic is not expected to exacerbate the existing crash pattern.

5. 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.

Response: Comment acknowledged. Awaiting further comment.

6. 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.

Response: Comment acknowledged. Awaiting further comment.

7. 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.

Response: It is the understanding of GP that the DD mitigation items are anticipated to mitigate the northbound St. John Street crash patterns. The crash pattern that remains is westbound Park Avenue vehicles running a red light and colliding with northbound St. John Street vehicles. To aid in potentially reducing this type of crash, GP recommends the traffic signal heads be fitted with backplates that have retroreflective borders and that the timing of the yellow interval be field reviewed and extended if necessary.

8. 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.

Response: Recent counts are not available for this segment of Valley Street since it was not identified as part of the study area for in-depth analysis. However, as shown in the Traffic Impact Study on Figure 9, "Net Impact Phase 3" no impacts on this segment of Valley Street are forecast due to the proposed Phase 3 expansion. Additionally, as shown on Figure 15 in the Traffic Impact Study, "Net Impact due to Proposed Employee Garage" there is forecast to be a decrease of traffic through that section of Valley Street of 103 trip ends during the AM peak hour and 71 trip ends during the PM peak hour.

9. 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.

Response: To better evaluate this location and identify correctable crash patterns, the police reports provided by MaineDOT were used to create a collision diagram (provided in the Traffic Impact Study). Based on a review of the collision diagram, there are two crash patterns at the intersections; rear end collisions on St. John Street northbound and rear end collisions on St. John Street southbound. These may be mitigated with adjustments to the clearance times of the intersection. It should be noted that this intersection is proposed to be modified as part of the Dunkin' Donuts project mitigation, which may impact any crash patterns. In addition, the phasing of this intersection is proposed to be converted from exclusive pedestrian phasing to concurrent pedestrian phasing which is expected to improve the operations of the intersection.

10. 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 in-town 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 in-town 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.

Response: The MMC Team is working with City Staff on a design for the corridor that is intended to enhance safety along this section of Congress Street. This design is being refined.

11. 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.

Response: The 10 year history was described in the TIS under “Previously Approved Expansions”. A supplemental description was also submitted by MMC to the City under separate cover.

12. The Applicant shall provide specific sight distance measurements at the Congress Street/Drop-Off driveway according to Site Plan information.

Response: The speed limit on Congress Street along the site frontage is 25 mph. MaineDOT and the City require an available sight distance of 200 feet. Based on a field review, the available sight distances exiting the site looking left and right exceed 300 feet in each direction. In addition, proposed MMC sign locations have also been reviewed and will be outside of the public right of way and are not proposed within the sight triangle. When evaluating the sight distance, consideration was also given to potential roadway changes along Congress Street as described previously. A diagram illustrating the site triangles will be included in an updated sign plan submission.

13. 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.

Response: There are no traffic signal equipment modifications that are needed to accomplish the optimization. The optimization was completed by maintaining the existing signal phasing and adjusting the green time for each approach. GP recommends that once the hospital expansion is completed and occupied, the signal timing be field adjusted during peak hours of adjacent street traffic.

14. The Commercial Street/Valley Street intersection has improving levels of service and delay following project buildout. The Applicant should specifically note any traffic signal equipment modifications that are needed to accomplish the noted optimization.

Response: There are no traffic signal equipment modifications that are needed to accomplish the optimization. The optimization was completed by maintaining the existing signal phasing and adjusting the green time for each approach. GP recommends that once the hospital expansion is completed and occupied, the signal timing be field adjusted during peak hours of adjacent street traffic.

15. I continue to review traffic model output for vehicle queuing and will provide comments in the future.

Response: Comment acknowledged. Awaiting further comment.

16. 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).

Response: GP completed capacity and queue analyses for the 2023 AM and PM postdevelopment volumes with the geometry shown on the mitigation plan for Dunkin’ Donuts dated September 25, 2018, provided by Bruce Hyman. This plan proposes revised intersection geometry at the intersections of Congress Street with St. John Street and Park Avenue with St. John Street. The timing at the two intersections has been optimized. The following table summarizes the results of the capacity analysis for the two intersections. The levels of service criteria are the same as those listed in the Traffic Impact Study.

Capacity Analysis Results Summary – Using DD Lane Uses

Approach	Level of Service	
	2023 AM Post	2023 PM Post
Congress / St. John		
Congress EB	C	C
Congress WB	B	C
St. John NB	D	D
St. John SB	C	C
Overall	C	C
Park / St. John		
Park WB	C	D
St. John NB	C	C
St. John SB	C	C
Overall	C	C

As shown in the table, both intersections are forecast to operate at acceptable levels of service.

The following table summarizes the results of the queue analysis, rounded up to the nearest five feet:

Queue Analysis Results Summary – Using DD Lane Uses

Approach	Storage Length (ft)	95 th Percentile Queue Length	
		2023 AM Post	2023 PM Post
Congress / St. John			
Congress EB L		405	250
Congress EB T		690	405
Congress EB R	290	360	155
Congress WB L	80	90	95
Congress WB R		110	155
St. John NB T		370	675*
St. John NB R	175	150	240
St. John SB L	100	140	130

St. John SB T		220	260
Park / St. John			
Park WB L	95	135	175
Park WB T	95	180	270
Park WB TR		205	450
St. John NB L	175	200	250
St. John NB LT		295	740
St. John NB R	110	170	180
St. John SB LT		330	215
St. John SB R	55	105	100

*The queue length for this lane is forecast to extend past the adjacent intersection of St. John Street with Margarita's Driveway. Further discussion below.

As shown in the table, overall the 95th percentile queue lengths are forecast to exceed the available storage lengths by 2-3 vehicles, assuming a vehicle and the associated space between vehicles is 25 feet. The 95th percentile queue lengths of the Park Avenue westbound through lane are forecast to exceed the available storage length by 7 vehicles during the PM peak hour. Additionally, the 95th percentile queue length St. John Street northbound through lane at Congress is reported to be 675 feet during the PM peak hour. The queue was observed to extend past the intersection of St. John Street with Margaritas, which indicates that the actual 95th percentile queue length is longer than the reported 675 feet. The queue length may be reduced by adjusting the intersection timing, however it would be at the expense of the operation of other approaches.

17. The Applicant shall recommend pedestrian and vehicle improvements at the Congress Street/Valley Street intersection during post-traffic signal conditions.

Response: The MMC Team is working closely with City Staff on the design of Congress Street along the site frontage and immediate intersections such as Congress Street / Valley Street.

Comments from Fire Department – Robert Thompson, Division Fire Chief Dated October 31, 2018

18. Here's the standard for Fire Department access.
 - o Largest Fire Department Vehicle must be able to navigate through the parking lot to access building.
 - o Fire Department access shall have an unobstructed vertical clearance of not less than 13 ft. 6 in.
 - o Vertical clearance shall be permitted to be reduced, provided such reduction does not impair access by fire apparatus, and approved signs are installed and maintained indicating the established vertical clearance when approved.

Response: Design conforms to required standards. New Connector Bridge over Service/Crescent Drive will be 13'-6" at a minimum allowing for access to Congress St. and Bean Buildings.

19. Because the drop off area is, for the most part, under the structure, I'd approve the 12 ft. clearance if signage indicating the clearance at the entrance of the drop off area is provided with a sign indicating passenger vehicles only.

Response: The drop-off area consists of (2) levels of soffit and in turn differencing clearance. MMC is working with design consultants to ensure proper signage for passenger vehicles. The lower height immediately adjacent to the entry vestibule is approximately 10'-0" clear which is above required clearances for American Emergency Vehicles (ambulances) and associated ADA Access for Vans.

The larger height that covers the majority of the drop-off is 20'-0" clear. Fire department access will be best served from along Congress St., Gilman St., or Crescent St. providing coverage to all sides of the building.

20. Also, considering the location of the sprinkler room and fire pump room, the fire department connections shall not be located where fire department hose may block, or impede, egress. If the fire department connections are in the drop off area the required height will be 13 ft. 6 in. If the connections are on the Gilman Street side, near the fire pump room, they would have to be away from the exit stairs at the exit discharge.

Response: Fire Department connections and test headers are on Gilman directly outside of the Fire pump room. These are south of the egress stairs and not in the path.

Comments from Department of Public Works – Jeremiah Bartlett, Transportation Systems Engineer Dated November 8, 2018

21. I concur with Tom's comments. In particular, I share concerns with the non-urban nature of a three-lane cross section fronting MMC and implications for vehicle speed, as well as a need to evaluate and recommend future pedestrian accommodations with an unsignalized Congress at Valley.

Response: Acknowledged.

Comments from Parks, Recreation & Facilities Department – Jeff Tarling, City Arborist Dated November 1, 2018

22. Wanted to see if we could meet up or we can discuss via email the tree and landscape plan for the Maine Medical Center project. We would like to see when possible a higher degree of 'native' plant types in our city landscapes. The use of 'native' plants and we know that this is a general term, should fit well into the overall MMC goal. Tree and landscape values could be an theme for MMC and future project that consider landscape greenery and how it relates to human health and well being.
- o The web links below are interesting background information:
 - o <http://lhl.illinois.edu>
 - o http://www.naturewithin.info/New/ISA_prcdngs.Ecosystem_Social_Capital_Wolf.pdf
 - o <http://www.naturewithin.info/UF/PsychBens-FS1.pdf>

Response: The MMC landscape architect has attempted to contact the City Arborist to discuss this comment. The City Arborist has not been available since this comment was received.

23. Street trees - knowing that the project frontage will have a bus stop and bring in a tall vehicle close to the curb, a more upright cultivar of Honeylocust like the 'Streetkeeper' might be a good selection. 'Princeton' or 'Accolade' Elm could work as well. The web links below offer some comparison values on the attributes that can help select what works best for this site. (Open to other suggestions also)
- o <http://www.jfschmidt.com/introductions/streetkeeper>
 - o <http://www.mortonarb.org/trees-plants/tree-plant-descriptions/accolade%E2%84%A2-elm>
 - o <http://www.mortonarb.org/trees-plants/tree-plant-descriptions/princeton-elm>
 - o <http://www.jfschmidt.com/introductions/streetkeeper>
 - o <http://www.streetkeeper.net>

Response: The street trees on Congress Street will be specified as 'Streetkeeper' Honeylocust.

24. New England Native Plant suggestions - There could be options in this phase to consider woody and herbaceous plant options....

- <https://extension.umaine.edu/gardening/manual/plants-for-the-maine-landscape>
- <https://wildseedproject.net/comprehensive-plant-list/>

Response: The MMC landscape architect will discuss this comment with the City Arborist.

Comments from City Surveyor, William Scott, City Surveyor Dated October 31, 2018

25. A note should be added to Sheet 2 of the EC plan that defines the elevation datum for this project. It was listed as NAVD88 on the 2009 version of these plans.

Response: The requested note has been added to Sheet 2.

26. A note should also be added to Sheet 2 of the EC plan and to both of the Utility Plan sheets that warns people that this elevation datum (NAVD88) is not the same as "City Datum" (NGVD29). A conversion formula should also be noted.

Response: The requested note has been added to Sheet 2 and the Utility Plans.

27. A note should be added to the EC plan that refers the reader to the Utility Plan sheets for sewer and drain pipe invert elevations, sizes and materials.

Response: The requested note has been added to the EC Plan.

28. State Plane coordinate pairs should be labeled for at least two of the property corners on the EC plan.

Response: State Plane coordinate pairs have been added to two property corners along Congress Street.

Comments from City's Sewer & Stormwater Consultant, Wright Pierce Dated November 8, 2018

1. Level III Site Plan applications with the City of Portland must submit a stormwater plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules. This includes conformance with the Basic, General, and Flooding Standards (Ref: Technical Manual, Section 5. II. Applicability in Portland. C. a.; and Ref: City of Portland Code of Ordinances Sec. 14-526. Site Plan Standards, (b). 3. b.)

1. Basic Standard: Plans and application material should be provided to address erosion and sedimentation requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with MaineDEP Chapter 500, Appendix A, B, and C. The applicant has provided information that the project will be subject to the Basic Standard. The applicant has provided:

1. Erosion and Sedimentation Control Details and Notes (C30-07). This item has been resubmitted with additional details including temporary slope stabilization, construction entrances, perimeter erosion controls, dewatering, and other standard erosion and sedimentation details. This item has been reviewed and accepted.

Response: Acknowledged.

2. Location of Erosion and Sedimentation Control best practices have been indicated on Sheet C04-01. This item has been reviewed and accepted.

Response: Acknowledged.

2. General Standard: The applicant has provided information regarding the size and scope of the project indicating the project is subject to the Redevelopment Standard within the City of Portland. It is understood the City's redevelopment standard is more stringent than the Chapter 500 requirements for redevelopment. The City requirements indicate that greater than 50% of the proposed impervious surfaces must receive stormwater quality treatment pursuant to the MaineDEP Chapter 500 requirements. The applicant has provided information indicating that greater than 50% of the project's impervious surfaces, and greater than 50% of the total developed area, are conveyed to a Subsurface Sand Filter. The applicant has removed pretreatment credits that were included in the initial submission calculations, including the HIL unit credit. The applicant shall clarify the following and provide responses:

1. The applicant will be required to inspect, maintain, and report on the filter in accordance with the Chapter 32 stormwater requirements. The applicant has provided inspection, maintenance, and housekeeping information in Section 23 of the application. The applicant has indicated that a stormwater maintenance agreement will be provided for the proposed stormwater treatment units upon project approval.

Response: Acknowledged.

2. The MaineDEP Stormwater BMP manual indicates that, "The surface area of the filter must be no less than the sum of 5% of the impervious area and 2% of the landscaped area draining to the system."

1. The applicant has asked for a waiver of this principle to allow additional surface flows to be conveyed to the treatment system, as requested by the City.

Response: Acknowledged

2. The revised calculations indicate that the proposed sand filter surface area is approximately 80% of the minimum required surface area. The applicant shall provide an understanding of how providing less than the minimum surface area is anticipated to impact TSS, nutrient loading, temperature, and other stormwater loading criteria.

Response:

As we presented to the Planning Board on November _ 2018:

The stormwater system presented in the application has been designed to provide treatment for all of the areas required under the City's Ordinance and the Chapter 500 rules. The system was expanded at the City's request to add capacity to the extent practicable to detain and treat runoff from the existing Visitor's Garage. It is our opinion that the system as designed will not create a negative impact on TSS removal, nutrient loading or temperature in receiving waters based on several factors specific to this project.

Based on the City/Chapter 500 standards, the site is required to treat 0.8 acres of developed area. The system provides treatment for approximately 1.95 acres of developed area (approximately 2.5 times the required area).

The system as designed provides approximately 80% of the surface area required based on the expanded tributary area. The system's pretreatment (isolator row) is oversized by approximately 17% to provide added pretreatment to compensate in part for a reduced footprint. The Visitors' Garage includes an existing hydrodynamic separator unit which provides additional pre-treatment that is not accounted for in the sizing criteria.

We also note that the MDEP Chapter 500 surface area criteria is based solely on the tributary impervious and landscaped area, requiring an area equal to 5% of the tributary impervious area and 2% of tributary landscaped areas. This criteria does not differentiate between high pollutant load impervious area such as high turnover parking or gravel surfaces compared to lower pollutant load areas such as rooftops. Presumably the standard is conservative, assuming all impervious areas are higher TSS/pollutant load sources. For this project, the anticipated TSS/pollutant load is expected to be lower than an average site.

Approximately 55% of the impervious area tributary to the system is rooftop reducing potential pollutant load.

The garage parking surface comprises only 31% of the impervious area treated. Runoff from this area is pre-treated by the existing separator unit and the oversized isolator row.

The entrance plaza area tributary to the system is planned as heated concrete requiring limited sand and salt applications further reducing potential pollutant load.

The system storage and release rate is designed to maximize the detention of rainfall events up to 1". The entire volume of this storm is released through the filter surface at a minimal discharge rate extending over a 24 hour period mitigating temperature impacts.

These smaller, "first flush" storms typically account the majority of a watershed's annual pollutant load. At this site, the runoff from these first flush events is conveyed by combined sewer to the wastewater treatment plant prior to discharge to Casco Bay, further mitigating TSS and temperature concerns with a smaller footprint.

The site is located with a watershed that is tributary to an entirely closed drainage system, tributary to either the treatment plant during small storms or directly to Casco Bay during a CSO event. Runoff is not tributary to any freshwater stream, wetland or pond where temperature is a more significant concern.

Based on these factors it is our opinion that the system will function as intended with are reduced surface area.

3. Flooding Standard: The applicant has provided information indicating the project is required to meet the Flooding Standard of Chapter 500. The applicant has submitted the following:
 - Subcatchment Plans for Pre- and Post-Development
 - Hydrology computations of these conditions

- Summary of Pre- and Post-Development Flow Rates

1. HydroCAD outputs for the 2-year, 10-year, and 25-year, 24-hour storm events have been provided. Applicant has provided additional pipe and structure detail to confirm that plan and design information matches model information. The model indicates the post-development flow rates for the proposed project do not exceed flow rates for the pre-development condition, and therefore meets the flooding standard.

Response: Acknowledged

2. Discharge to Combined Sewer Overflow (CSO) Locations

1. The applicant has provided information for pre-development and post-development flow rates to the combined sewer system for a 1-inch, 24-hour rain event. This storm event has been mentioned in previous discussions with the applicant and City Department of Public Works (DPW). The applicant has requested written confirmation from City DPW to ensure that all involved parties agree with evaluating this storm event for the CSO location. This confirmation will be provided as it becomes available.

Response: Acknowledged

2. Table 2, generated from HydroCAD reports, has been updated by the applicant to compare pre-development and post-development flow rates in a 1-inch rain event. These modifications indicate that the post-development conditions result in a reduction in flows and flow rates when compared to the pre-development condition.

Response: Acknowledged.

3. Connection to Existing System:

1. The applicant has asked for a written or e-mail confirmation from the Department of Public Works that proposed connections to existing drainage and sewer systems are being completed in accordance with City of Portland Code of Ordinances section 14-526 (b) 3.a, subsection iii and iv. The applicant has indicated that this confirmation will be provided as it becomes available.

Response: Acknowledged.

4. Proposed Drainage Design

1. Additional information has been provided on Sheet C30-01, C11-01, C40-01, and C30-04 to indicate site grading and pipe information. The following shall be clarified:

1. SD-2 References two different pipes. Please clarify.

Response: Pipe labels have been revised to clarify that the two pipes as SD-2 and SD-2.1

2. SD-3 is a 12-inch pipe that accepts flow from a 15" pipe and conveys flow to a 15" pipe. Please revise or indicate the need for this size change.

Response: The pipe labels have been clarified. SD-3 is a 15" pipe that receives flow from a 15" upstream pipe. SD-3.1 is a 12" pipe that is the outfall from CB-3 with no upstream tributary pipe.

3. Several of the slopes indicated in the “STORM DRAIN PIPE DATA” table do not match the slopes calculated from the invert and length data indicated in the “STORM DRAIN STRUCTURE DATA” table. Please revise.

Response: The discrepancies appear to be related to rounding the length of the pipes and the precision of the slope value reported in the pipe tables. The length of pipe in the tables were rounded to the nearest whole foot measured from inside face to inside face of the structures. The slope calculation in the tables was calculated without rounding on a center-to-center of structure length. On short pipes this can result in the noted apparent discrepancies. The inverts on the structure tables are correct.

The pipe tables have been revised to reduce the precision of the reported slope and to calculate the slope of the pipe based on an inside face-to-inside face dimension. Some small variations may remain, based on rounding up pipe lengths to a whole foot.

4. A 1% cross-slope is shown for the sidewalk locations of Congress Street, whereas the technical manual indicates a 2% cross-slope. Please indicate why a 1% cross-slope is being proposed or revise.

Response: The cross slope grade in the Technical Manual is a maximum allowable grade. The selected 1% grade is appropriate with the 5.5% longitudinal slope along Congress Street.

2. Isolator row detail on C30-04 indicates a 12” maximum inlet pipe. Please confirm with manufacturer if this inlet is large enough facilitate maintenance/cleaning access to the isolator row.

Response: The detail callout has been revised to 24” based on the size of the chamber specified. A 12” pipe size is a typical size for this system and is adequate for the water jet/vacuum equipment used to clean the isolator rows.

3. An updated catch basin detail with a 3’ sump has been submitted. No further action necessary.

Response: Acknowledged.

4. Additional spot grades have been provided to confirm grading at curb and drainage locations. Locations and details of granite headstone curb and gutterline “dishpan” grading at catch basins should be provided on construction documents for clarity.

Response: Typical City standard curb inlet and gutter grade details have been added to the detail sheets. The headstone details are only applicable to catch basins in the public right of way that may be reset at the corner of Gilman Street and Congress Street as part of a the revised streetscape plan This plan is currently in progress and under review by the City. Callouts related to these structures will be included in a subsequent submission.

Catch basins in the private plaza areas are placed against sloped curbs along tipdowns or are installed as area drains, they do not include a headstone.

5. Soils: The applicant has provided information from an NRCS Web Soil Survey indicating the proposed soils. No further action necessary.

Response: Acknowledged.

6. Additional Utility Infrastructure:

1. Electrical and Communications Infrastructure

1. Electrical and Communications manholes, pull boxes, and duct banks are proposed. Details were provided for utility manholes. Utility duct bank details were not observed on the proposed details. Please provide information or details on duct bank size and material; and approximate duct bank elevations in locations where utility crossings are proposed.

Response: Utility duct banks will be constructed meeting CMP standards. A typical duct bank detail with minimum cover requirements have been added to the plans.

A duct bank schedule identifying conduit count is presented on the utility plans.

Maine Medical Center is currently coordinating the final number of conduit in each duct bank with the utility providers and seeking to reduce the number of required private MMC owned conduit by using existing conduit on the Medical Office building bridge. More specific duct bank details can be provided in subsequent submittals if required.

2. A transformer is scheduled to be removed on the Demolition Plan under item U-4. Please confirm if the transformer is to be relocated, as well as the location of any new transformer. Above-ground utility infrastructure shall be sited and screened in accordance with City standards.

Response: There are no transformers scheduled to be removed. The Demolition Plan Sheet C04-01 has been revised so that callout U-4 now reads "NOT USED". An existing pole mounted transformer on Pole #6.5 serves MMC buildings and is to be removed by CMP prior to the project.

2. Sewer Infrastructure

1. Sewer manhole, steps, frame and cover details, as well as pipe slopes, have been included on Sheet C11-01 and C30-03. Pipe design and slopes and in accordance with the City of Portland Technical Manual.

Response: Acknowledged

3. The applicant has indicated that capacity to serve letters from utilities will be provided as they become available. This may be considered a condition of approval for the project.

1. The Capacity to Serve process will require a level of coordination between the applicant and utility companies and typically includes compliance with applicable utility standards and details. Central Maine Power and Consolidated Communications should review the plan and verify the depiction of changes to primary electrical and communication lines, respectively.
2. Modifications to utility layout and design from the capacity to serve process shall be confirmed by the City prior to construction.

Response: Acknowledged. Coordination of the overhead utility relocations with the utility providers is ongoing. The location shown on the current plans is generally accepted. Remaining coordination is related to the final number and size of conduit required.

Comments from Planning Department, Helen Donaldson, Received November 9, 2018 and supplemented on November 16, 2018

Transportation:

- 1) Impact to Surrounding Street Systems: There are a number of places in the application where the old employee trip gen figures are being cited still, and thus the trip generation is not figures are incorrect. Please review and revise.

Response: Based on discussions at the meeting held on November 19, 2018, it was identified that further review of trip generation numbers in the TIS is required. GP has reviewed and revised numbers that were based on previous evaluations and adjusted the TIS accordingly.

- 2) Access and Circulation:
 - a. Further discussion on the street layout pending. At the least, a climbing bike lane should be shown on Congress Street.
 - b. The Congress Street sidewalk should be widened as possible to provide better pedestrian access along the site frontage
 - c. Gilman sidewalk waiver is not supported by staff or the consulting traffic engineer. Please show this sidewalk on revised plans.
 - d. Congress Street curblin still under review, pending additional discussion with DPW.
 - e. Revise ramps as described by others.
 - f. Move crosswalk to west side of Forest, proximate to bus shelter

Response: The MMC Team is working closely with City Staff on the design of Congress Street along the site frontage and immediate intersections such as Congress Street / Valley Street.

- g. Provide additional information on mechanical areaway as well as electrical infrastructure in the Gilman ROW.

Response: Mechanical areaway was conceived of as a flush hatch within the sidewalk that would allow for very rare equipment replacements required during the life of the building. Subsequent to the submission, the design team has reassessed means and methods and have found the ability to remove panels on the building to allow for replacement, keeping this necessary function completely on MMC property.

- 3) Public Transit Access: Please show shelter on south side of Congress in revised plans, as well as stop on north side of Congress.

Response: A shelter on the south side and a stop on the north side of Congress St will be included in revised drawings.

- 4) Parking: Please clarify how bicyclists will know how to access the bicycle parking.

Response: The primary users of the bicycle facilities adjacent to the Congress St entrance are expected to be employees and staff who will be familiar with the location and use of those facilities. For the occasional non-employee, there will be wayfinding signs visible to both on-street bicyclists as well as those who used the drop off area to identify how to access the bicycle parking. In addition, the valets will be able to direct bicyclists as needed should they not see the signs.

Environmental Quality

- 5) Landscaping and Landscape Preservation:
- a. Provide street trees on Gilman St.

Response: Acknowledged. Street trees will be added to Gilman St.

- b. See comments from others.
- c. Install curb at ROW line on Congress St. planting bed

Response: Acknowledged.

- d. Further discussion pending on rounded tree wells.

Response: Please see response to joint design comment at the end of this document.

- e. Clarify street trees on Gilman Street and make sure plans are coordinated

Response: MMC's landscape architect is awaiting a return call from the City's arborist.

Public Infrastructure and Community Safety

- 6) Public Safety and Fire Prevention:
- a. Further review of islands at driveway pending from Fire.
 - b. Please verify vertical clearances within the turnaround area.
 - c. Further review of islands at driveway pending from Fire

Response: Acknowledged, awaiting further comment. Please review responses to comments from the Fire department earlier in this document.

- 7) Availability and Adequate Capacity of Public Utilities: Please clarify extent of utility infrastructure in Gilman Street ROW, particularly electrical infrastructure?

Response: Response pending.

Site Design

- 8) Exterior Lighting:
- a. Lighting plan requires waiver from TM re maximum and average illumination levels.
 - b. Show correct profile of lights on site plan and doublecheck to make sure that site plan matches others.

Response: Please clarify waiver determination.

- 9) Signage and Wayfinding:
- a. Please provide revised sign plan per prior comments.
 - b. Provide sight line analysis.

Response: A revised sign master plan has been submitted.

- 10) Zoning Related Design Standards: Please provide rendering of main entrance from ground plane if possible.

Response: Image submitted.

Other Submittals Required

11) Please confirm that the bike rack diagram and detail sheets have been uploaded to ePlan.

Response: An email conversation between MMC and Bruce Hyman, COP transportation manager, regarding a potential bike rack style has been uploaded to eplan.

12) Utility capacity letters

Response: Acknowledged. Capacity to serve letter will be shared with the City once received.

13) Plan edits

- a. -include distances to property lines on site plan
- b. -add height calculation from average grade on elevations (Still under review)
- c. -Tree well irrigation should be shown on plans.
- d. -Doublecheck location of main entrance as shown on site plan. I think the notation may be slightly misleading?

Response: Comment acknowledged.

14) RTI

- a. Encroachments (building encroachment, 'mechanical areaway', potentially electrical/other utility infrastructure) are shown in the Gilman ROW. These will require license agreements

Response: A mechanical areaway in the public ROW is no longer proposed.

- b. The Gilman Street sidewalk is proposed to extend onto private property. A public pedestrian easement is generally required in this type of instance.

Response: Comment acknowledged.

15) Other Permits/Reviews Required

- a. Site Location of Development (under review)
- b. FAA

Response: Acknowledged. Please refer to previous response regarding FAA requirements.

16) Waivers

- a. Sidewalk material waiver is recommended by staff.
- b. Gilman sidewalk waiver is not recommended by staff. Please show sidewalk on revised plans.
- c. Driveway width waiver still under review.

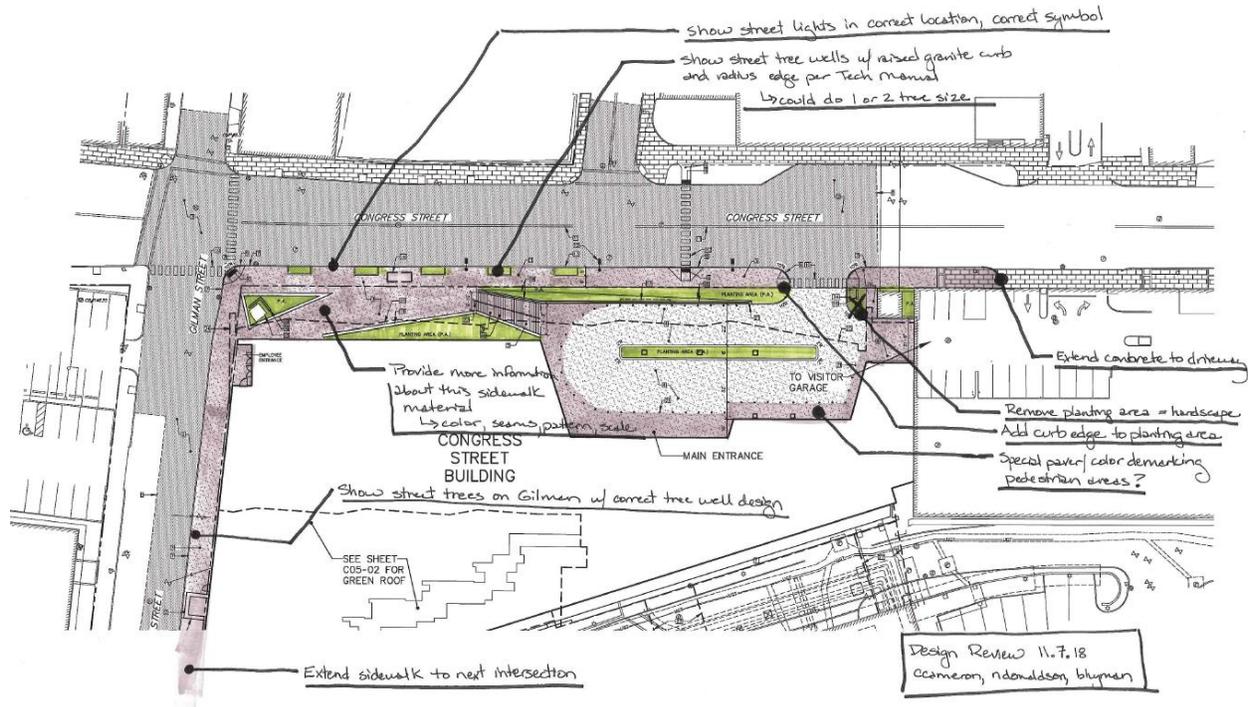
Response: Acknowledged.

17) Outstanding Items from Earlier Reviews

- a. Pedestrian Network Plan (requirement of IDP, included as condition of approval on East Tower) - That the applicant shall develop a long term public Pedestrian Network Plan (both on and off the ROW) showing the integration of the upper level MMC campus with the Congress Street corridor, including measures to address CPTED principles, for implementation when the retail space beneath the Visitors Garage is available for lease or sale; such plan to be submitted for review and approval by the Planning Authority prior to the issuance of a building permit for the Congress Street Hospital Entrance"). (Under review by city)

Response: Pedestrian network plan has been submitted to the City. MMC has received preliminary comments and will follow up with the City to continue the conversation.

Comment from City design reviewers, Caitlin Cameron, Helen Donaldson, Bruce Hyman dated November 7, 2018.



Response:

7. Street lights
 - Submitted plans for spacing of streetlights correspond to submitted photometric calculations. Spacing and light levels meet city technical standards.
 - Unsure comment on symbol. Symbol is per our standard documentation and illustrates intent of scope.
8. Street Trees
 1. Raised granite curbs are indicated in submitted materials
 2. MMC and design team feel strongly against radius curb for multiple reasons including:
 1. Design team could not find specific language requiring radius curbs within the technical manual or standards. Please direct to specific language so we may review and properly respond.
 2. Uniform aesthetics are critical for a location that has continually been indicated as a gateway building and site. Owner and design team believe that design as submitted aesthetically connects the amenity of the urban plaza being provided by MMC to the public seamlessly with the required design of the city ROW.
 3. MMC has traditionally taken responsibility for snow and maintenance of this location due to hospital functions.
 3. Design will provide single trees at rhythm that connects ROW with design and layout of plaza including raised planter beds and plaza patterning.
9. Planting Area near Accessible Route/Pedestrian Bridge Pier
 1. Design team believes that maintaining this as planted material is important to first allow for additional natural materials connecting planting areas while providing a buffer between pedestrians and the vehicular entrance to the new entry plaza.
10. Requested Paver Color Variation

1. MMC and the design team believe strongly that maintaining a more holistic approach to paving, regardless of pedestrian or vehicular is critical to a uniform design linking the lower plaza to the upper plaza.
2. Separating modes of transportation with literal demarcation will emphasize vehicular importance as opposed to a more uniform plaza welcome to all modes of arrival to this new entry.
3. Bollards and tactile detection is utilized to further help delineate key separation and provide enhanced pedestrian safety.
4. Initial comments from City Planning Board supported currently documented design intent when asked during workshop.