WRIGHT-PIERCE
Engineering a Better Environment

MEMORANDUM

TO:	Helen Donaldson, Sr. Planner	**DATE:**	11/8/2018
FROM:	Michael Guethle, PE; Ryan Wingard, PE	**PROJECT NO.:**	13982C
SUBJECT:	Gilman St. - 22; MMC Parking Building (PL-000331-2018)		

Wright-Pierce has reviewed the Level III Site Plan Application information provided for the Congress Street Patient Care Building proposed at 22 Gilman Street. The project will include redeveloping an existing parking garage into 64 modern patient rooms and 19 procedure rooms.

Documents Reviewed by Wright-Pierce:

- Level III Site Plan application, dated (most recent) October 31, 2018.
- Engineering Permitting Plans, dated (most recent) October 30, 2018.
- Construction Management Plan, dated September 25, 2018.

Comments:

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.)
    a. 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:
        i. 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.

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

b. 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:

i. 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.

ii. 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.

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.

c. 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

   i. 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.

2) Discharge to Combined Sewer Overflow (CSO) Locations
   a. 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.

b. 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.

3) Connection to Existing System:
   a. 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.

4) Proposed Drainage Design
   a. 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:
      i. SD-2 References two different pipes. Please clarify.
      ii. 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.
      iii. 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.
      iv. 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.
   b. 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.

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

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

6) Additional Utility Infrastructure:
   a. Electrical and Communications Infrastructure
      i. 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.
      ii. 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.
   b. Sewer Infrastructure
      i. 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.
   c. 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.
      i. 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.

ii. Modifications to utility layout and design from the capacity to serve process shall be confirmed by the City prior to construction.