
TO:	Helen Donaldson, Senior Planner	DATE:	8/6/2018
FROM:	Michael Guethle, PE; Ryan Wingard, PE	PROJECT NO.:	13982B
SUBJECT:	St. John St. - 222; MMC Parking Garage (PL-000207-2018)		

Wright-Pierce has reviewed the Level III Site Plan Application information provided for the Employee Parking Garage redevelopment proposed at 222 St. John Street, including the response to initial reviewer comments. The project will include redeveloping an existing parking lot into a nine-level parking garage with approximately 2,400 parking spaces; redeveloping another existing parking surface to provide a pedestrian access and vehicle access to levels 1-8 of the building; and redeveloping a third parking surface to provide 52 additional spaces of surface parking. Off-site improvements to St. John Street and D Street are also included in the proposed work. The work will reduce the total impervious surface area on the property.

Documents Reviewed by Wright-Pierce:

- Level III Site Plan application, dated (most recent) July 26, 2018.
- Engineering Permitting Plans, dated (most recent) July 24 2018.
- Construction Management Plan, dated July 24, 2018.
- Response to Public Comments, dated July 24, 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. General Standard: The applicant has provided information regarding the size and scope of the project and has indicated the project is subject to the Redevelopment Standard within the City of Portland. This standard is more stringent than the

Chapter 500 requirements for redevelopment. The following items have been reviewed:

- i. The HydroCAD Subcatchments and Table 12-1 have been updated to report a total drainage area of 160,921 square feet (SF) conveyed to the stormwater treatment unit and the applicant has confirmed this value as the correct area. This value differs slightly from a preliminary calculation provided in Section 12, Attachment 3. However, the 160,921 SF area is still smaller than the maximum volume supported by the treatment system, and no additional action on this item is necessary unless this value changes.
- ii. The MaineDEP approval letter dated January 21, 2015 for the Jellyfish Filter requires manufacturer approval for each design, as noted in item 7 of this letter (page 14 of Section 12, original submission). The applicant has noted this letter has been requested and will be forwarded upon receipt.
- iii. The applicant will be required to inspect, maintain, and report on the filter in accordance with the Chapter 32 stormwater requirements. The applicant has indicated a stormwater maintenance agreement will be provided following Site Plan approval, therefore, this item may require a condition of approval.

2) Connection to Existing System:

The existing facility currently discharges to an 18-inch private storm drain. The proposed condition includes retaining surface runoff in order to allow flows from a 25-year, 24-hour design storm event to be conveyed by an 18-inch pipe. Flows from the eastern stormdrain network are proposed to connect to the existing 30-inch pipe in St. John Street.

- a. The applicant has provided revised calculations for pipe flows to the 18-inch private stormdrain, which are now in agreement with the HydroCAD model's dynamic flow modeling. Review of this information indicates the project is in conformance

with City of Portland Code of Ordinances section 14-526 (b) 3.a subsection ii regarding downstream private drainage and the proposed rate of stormwater leaving the site is less than the existing condition in this location.

It is understood that the model is limited to conditions where 1) the R-Tank system is empty prior to the storm, 2) down-gradient pipe or tailwater conditions are not impacting flow, and 3) dynamic tailwater conditions allow for the outlet to exceed the Manning Equation standard flow rate. Off-site and down slope impacts or saturated conditions may prevent the system from conveying a 25-year 24-hour design storm event.

- b. As there is no existing connection from the property to the St. John Street stormdrain, any new connection results in an increase of flow. The applicant has provided correspondence from the City of Portland Public Works that the storm drain within St. John Street has capacity to accept the additional peak flow of 3 cubic feet per second (CFS) from a 25-year, 24-hour design storm event. Therefore, this connection is in conformance with City of Portland Code of Ordinances section 14-526 (b) 3.a, subsection iii and iv, which refers to requirements for new connections and increased flow rates to City-owned infrastructure.

3) Proposed Drainage Design

- a. The applicant has provided data indicating the inlet capacities of proposed catch basins grates can adequately convey flows from the 25-year, 24-hour design storm event for the most limiting subcatchment. No further action on this item is necessary.
- b. The applicant has provided a statement confirming the HydroCAD Pond P-1 was developed in consonance with information provided by the manufacturers for the RTank units. Review of major items such as inverts, tank surface area, pond void ratios, and outlet elevations have confirmed that the HydroCAD model reflects the design. No further action on this item is necessary.

- c. The applicant has confirmed the pipe exiting CB21 on sheet C-103 is an 18” pipe. No further action on this item is necessary.
 - d. Pipe 22 has a 0.0% slope. The applicant has coordinated with the manufacture and confirmed this is typical of inlets to a JellyFish Filter. No further action on this item is necessary.
 - e. CB12 has 1.37 feet of drop between the in and out inverts. The applicant has confirmed this is intended due to a large drop in grade.
 - f. The HydroCAD output files reference 24-hour design rainfall amounts of 3.1”, 4.6” and 5.8” for the 2-, 10-, and 25-year events, respectively. The applicant has indicated these data are from Appendix H of MaineDEP’s Chapter 500 for rainfall amounts. No further action necessary.
- 4) Capacity to Serve:
- a. The applicant has sent Capacity to Serve Letters to Utilities. Responses to these letters are required parts of the application, and the applicant has indicated they will be provided to the City as these letters are received. A wastewater capacity review form has been provided by the Department of Public Works indicating down-slope sewers have the capacity to serve the proposed project. Any outstanding capacity to serve letters may become a Condition of Approval for Site Plan Approval.
- 5) Parking Garage Drainage:
- a. The applicant has provided confirmation that the top deck of the parking lot garage conveys rain event flows to the stormwater detention system. The applicant has provided additional detailing of an oil/water separator and has indicated that interior parking surfaces not exposed to rain events will convey flows to this oil/water separator.

6) Site Grading

- a. The applicant has confirmed site grading will not be affected by future information regarding soil management, as that information will only be used by the contractor for their own management.
- b. Grading review identified that Pipe 14 between CB15-CB16 has a negative slope. Please revise or provide explanation.
- c. Top of Curb and Bottom of Curb information at CB-18 appears to be inverted. Please revise or provide explanation.
- d. Much of the proposed storm drain has between 4 feet and 3 feet of cover. Detail on C-202 indicates rigid insulation shall be provided in these locations. No further action necessary.

7) Sheet 17: St. John Street and D Street Intersection

- a. Catch Basin at intersection of D Street and St. John Street was previously located in a transition ramp next to flat curb. The applicant has provided additional notation to the plans to confirm the intent of the catch basin being located outside of the transition ramp, and with a granite inlet stone.