

Nadia Khan

From: John Daghlian
Sent: Thursday, March 5, 2020 3:35 PM
To: Chris Markiewicz; councilornorton@gmail.com
Cc: Rick Lipof; Andrea W. Kelley; Jacob D. Auchincloss; Nadia Khan; Emily Norton; Louis M. Taverna; Shawna Sullivan; James Mcgonagle; Barney Heath; Neil Cronin
Subject: RE: Amendment to Ascent SP

Hi Chris, Et Al:

Right now the Riverside site has no stormwater controls, every catch basin discharges directly into the City's 60" pipe with not treatment and no control. Some of the existing Cb's do not have deep sumps and none have gas trap outlets so water quality coming off the site is nonexistent.

The applicants design takes all the stormwater runoff into new catch basins with 4' deep sumps & gas trap outlets and through a series of a pipe network directs the capture stormwater to three [3] on site infiltration systems. These systems do two things:

1. They detain the flow of water to the Charles River as required by DEP & DPW so there is less runoff.
2. Infiltration is one of the best methods to reduce/remove phosphorous loading to the river.

The systems have overflow connections to the 60" pipe, that are controlled, as the peak of the storm passes excess water is released and within 72 hours the systems drain so that there is capacity for the next storm as required by DEP.

In the table below you will see that in every storm event there is less runoff to the Charles River and recreation road, this is mandated by DEP, and in accordance to our policy. So the proposed drainage system is a vast improvement over what exists today.

In concert with their proposed connection, I am requiring that they perform Pre & Post CCTV inspections of our 60" pipe to have a record of pre & post conditions, I am also requiring that they build a connection chamber on the 60" pipe rather than a pipe to pipe connection as proposed; this will give our Utilities Crews a critical access point for future maintenance.

Table 4
Peak Discharge Rates (cfs*)

<i>Design Point</i>	<i>2-year</i>	<i>10-year</i>	<i>25-year</i>	<i>100-year</i>
Design Point 1: Charles River Marsh				
Existing	58.8	103.6	139.8	219.0
Proposed	39.4	99.0	131.9	207.7
Design Point 2: Recreation Road				
Existing	6.0	10.5	14.1	22.0
Proposed	1.5	3.6	5.3	9.4

Standard 3: Stormwater Recharge

The Project has been designed to comply with Standard 3.

Soil information utilized in the analysis includes data from the USDA Natural Resources Conservation Services (NRCS) National Cooperative Soil Survey, preliminary geotechnical borings conducted by Haley & Aldrich, Inc, and geotechnical boring logs conducted by Sanborn Head. According to the NRCS, surface soils are classified as Udorthents-Urban land complex (disturbed) as the Project Site was previously a gravel mining operation prior to the development of the MBTA station. Udorthents are not often assigned a Hydrologic Soil Group (HSG). In review of the surrounding soil classifications the predominant soil is HSG 'A'; therefore, 0.6-inch over impervious surfaces was utilized for the analysis. The proposed stormwater management system has been designed to consider plaza and sidewalk areas as impervious. Although the stormwater management design considered the plazas and sidewalks as entirely impervious, the total impervious area on site will not exceed existing conditions. In accordance with the Stormwater Handbook, based upon HSG Type 'A', the Required Recharge Volume for the Project is 5,772 cubic feet.

Recharge of stormwater has been provided using structured subsurface infiltration systems which have been sized using the Simple Dynamic Method. A majority of the Project Site is directed through Infiltration BMP P101 located beneath the garage at proposed Building 9. The bottom of the system is at elevation 51.0. This design is proposed for the stormwater to be recharged and infiltrated in an area with an infiltration rate of 8.27 inches per hour. The remainder of the Project Site is directed through Systems P102 and P103, which consist of SC-740 Chambers and are infiltrated at a rate of 1.02 and 2.41 inches per hour, respectively. Each infiltration BMP has been designed to drain completely within 72 hours. As discussed previously, infiltration rates are based on soil information in the general vicinity of the proposed systems or on boring logs performed at the system locations. Further subsurface investigation is to be performed prior to construction. Table 5 below provides a summary of the proposed infiltration BMPs utilized for the Project, and further calculations are provided in Appendix C.

I hope this cliff note explains the system in a nut shell. 😊

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From: Chris Markiewicz <cjmarkie@verizon.net>
Sent: Thursday, March 5, 2020 2:32 PM
To: councilornorton@gmail.com
Cc: Rick Lipof <rlipof@lipofres.com>; Andrea W. Kelley <akelley@newtonma.gov>; Jacob D. Auchincloss <jauchincloss@newtonma.gov>; Nadia Khan <nkhan@newtonma.gov>; Emily Norton <enorton@newtonma.gov>; John Daghlian <jdaghlian@newtonma.gov>
Subject: Re: Amendment to Ascent SP

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Emily et al,

When you have a chance take a look at the Sustainability documents sent as part of this week's Riverside Planning update. I read in the VHB response to the Peer Review that when an overflow of the 60 inch culvert occurs it will run into the Charles. The Peer review wanted to make sure the culvert would hold up in the event of a major storm. So what I think I understand from this is that stormwater runs off the site and eventually into the Charles. John, if you get a chance to read this - Is it reasonable to ask for stormwater to be kept on site regardless of storm level? Pardon my lack of full understanding of what is required, reasonable or possible.

See you all tonight.

Regards,

Chris

On Mar 5, 2020, at 1:53 PM, Emily Norton <councilornorton@gmail.com> wrote:

Dear Rick,

I will be in attendance at tonight's LU meeting. I will propose an amendment to the Ascend SP to require they install a trench drain across the driveway apron on Cross St. such that stormwater discharges to the proposed rain garden - doing this would keep all of the stormwater on site and provide the maximum benefit in terms of water quality to Cheesecake Brook and therefore the Charles River. I have a call into Attorney Michael Ross to let him know, as of 1:52PM I have not heard back.

Emily

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