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To: Julie Meyer, Wellesley Wetlands Administrator

From: Peter D. Crabtree

RE: Resource Area Information
135 Great Plain Avenue
Wellesley, MA

Date: May 16, 2018

This memorandum was prepared to provide additional information to the Wellesley Wetlands Protection Committee (WPC) following a site walk conducted on May 14, 2018 at 135 Great Plain Avenue, Wellesley, MA.

Identification of Trees Located Along the Edge of the 100-foot Wetland Buffer Zone and/or in Close Proximity to the Resource Areas

REQUEST: The WPC requested the Applicant provide a “Tree Chart” listing the identification of the trees (Tree #), species of trees, DBH and any relevant notes regarding the trees located in the aforementioned areas.

RESPONSE: A Tree Chart (Attachment A) listing the Trees measuring 10” DBH, or greater has been provided with this memo. In addition, Figure 1 graphically shows the location and identification of the trees on the site.

Trees Located Outside the 200’ Riverfront Area as Defined under WPA Regulations but Inside the 200’ Riverfront Area as Defined under Local Bylaw Regulations

REQUEST: The WPC requested that existing trees located in the area described above be preserved provided the trees are in good health and that required construction nearby will not harm it.

RESPONSE: As depicted on the attached Figure 1, there are seven (7) trees measuring 10”, or greater DBH that are located Outside the 200’ Riverfront Area as Defined under WPA Regulations but Inside the 200’ Riverfront Area as Defined under Local Bylaw Regulations. Trees #26, 27 & 28 will need to be removed due to construction conflicts. Trees #24, 838, 858 & 872 will be preserved and protected during construction. Should any of these four preserved trees fail to survive, WRLLC will plant replacement trees. The total DBH of the replacement trees shall equal 50% of the tree(s) that fail to survive. Each replacement tree shall have a minimum DBH of 2” and shall be a tree native to New England.

Proposed Grading Near the 100-foot Wetland Buffer Zone & Within the 200-foot Riverfront Area as defined by Local Bylaw Regulations

REQUEST: The WPC inquired whether proposed grading activities near the 100-foot Wetland Buffer Zone (BZ) and within the 200' Riverfront Area as defined by Local Bylaw Regulations could be performed in a sensitive manner in order to reduce potential negative impacts to existing trees located along the inside edge of the BZ. More specifically, the WPC expressed concern that adding additional fill above the existing grade contours along the edge of the BZ could smother the root systems of certain species of trees.

RESPONSE: (For graphical information, please refer to the attached Figures 1 & 2. The 100-foot BZ and 200-foot Riverfront Area as defined under WPA Regulations is highlighted in yellow. The 200-foot Riverfront Area as defined by Local Bylaw Regulations is shown by a heavy dashed line.) In most areas of the site behind the proposed Duplex buildings #5 - 7, there is sufficient space and the existing topography is gentle enough that we can end grading activities so they are no closer than 20 feet to the BZ.

- **Zone L1:** In "Zone L1" (behind Duplex #4), the limit of grading will terminate approximately 5 feet from the 100-foot BZ. If you refer to Figure 1, the existing trees (Trees #19, 22, 23 & 42) on the inside of the BZ are approximately 15 – 20 feet away from the BZ. Therefore, grading activities will be limited to within 20 – 25 feet uphill from the trunk of these trees.
- **Zone L2:** In "Zone L2" (behind Duplex #5), the proposed limit of grading will be adjusted so that it terminates approximately 10 – 20 feet outside the BZ. This coupled with the fact that the trees within the BZ in this area are roughly 20 – 30 feet from the 100-foot BZ line allows the distance from the adjusted grading to the existing protected trees within the BZ to total 30 – 50 feet. Therefore, grading activities in this area should have little, if any impact on the existing trees within the BZ.
- **Zone L3:** In "Zone L3" (behind Duplex #6 & 7), the limit of grading will be adjusted so that it terminates approximately 20 feet from the BZ. This should provide additional protection to the trees that border the BZ.
- **Zone L4:** "Zone L4" (behind Duplex #8) is entirely outside the 200-foot RA as defined under the WPA Regulations and outside FEMA Zone A. We are proposing to preserve approximately 15 trees within this Zone to maintain a buffer. Most of these trees are located roughly 15 – 20 feet from the limit of proposed grading. If any of these trees are closer than 20 feet to proposed grading, a tree well on the uphill side will be constructed using on site boulders, if deemed necessary.

Underground Infiltration Structure

REQUEST: The WPC requested information regarding the depth to groundwater of the Underground Infiltration Structure (UIS) and if dewatering would be required during construction.

RESPONSE: VHB, the civil engineers for the Project, have designed the UIS so there will be four feet minimum separation to groundwater. The construction of the UIS will not require dewatering.

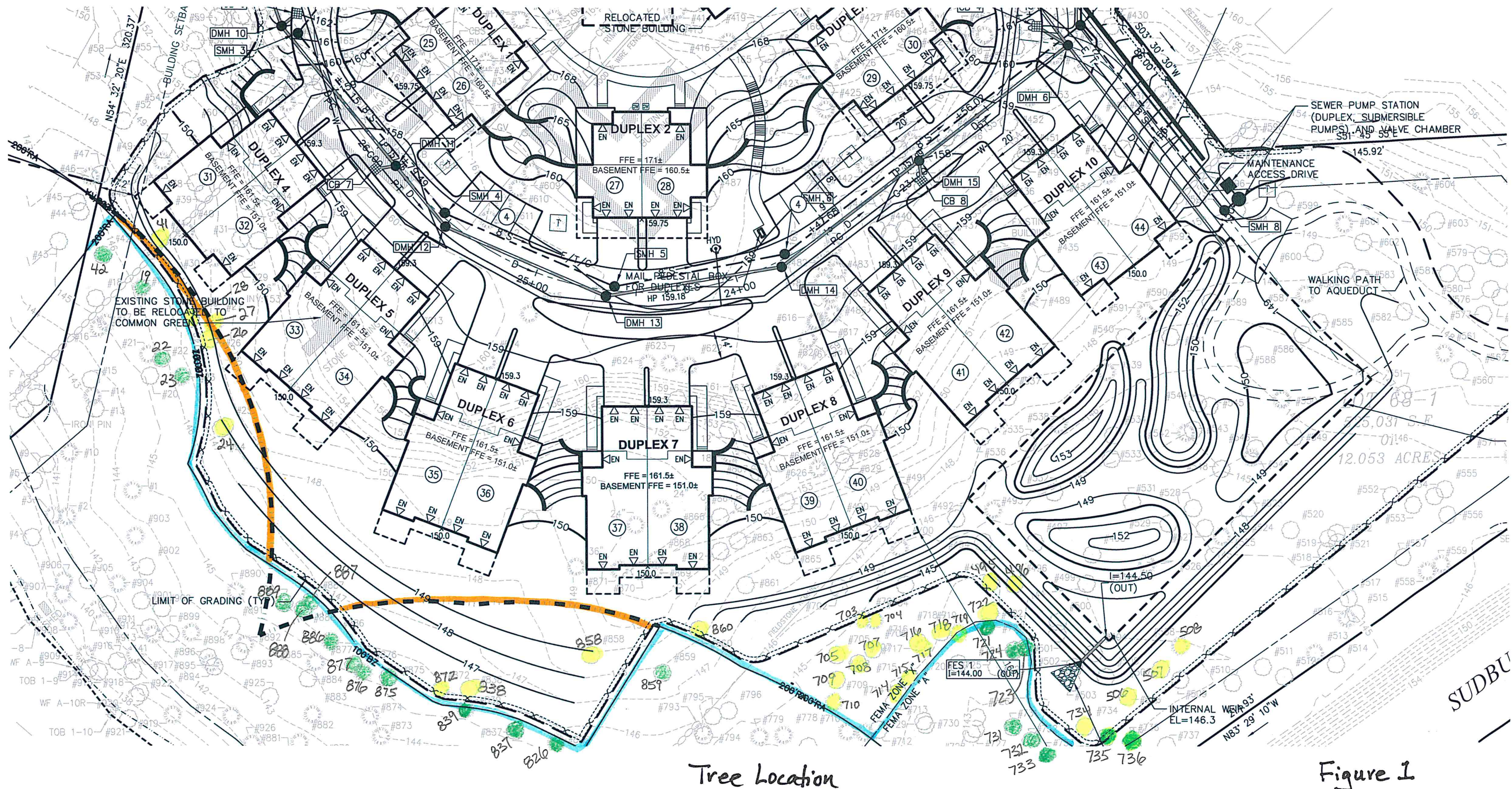
REQUEST: The WPC requested information on what size storms will result in water flowing out the Flared End Section (FES) of the UIS.

RESPONSE: VHB responded that 10-year storms and greater will result in water exiting the FES.

REQUEST: The WPC requested information on the peak rates of stormwater that will flow out of the FES during storms.

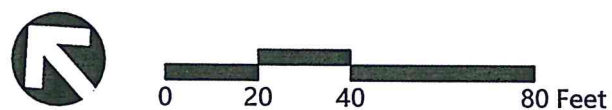
RESPONSE: VHB responded that during 2-year storms, all stormwater is infiltrated by the UIS. The peak rate for stormwater flowing out the FES for 10-year storms is 0.8 cfs; 25-year storms is 2.8 cfs; and 100-year storms is 10.0 cfs. The FES stone protection was sized based on the 100-year peak rate to prevent potential erosion.

We trust this additional information will be helpful in assisting with the review of the Project. Thank you.



Tree Location

Figure 1
5/16/2018



Grading Areas

Proposed Conditions
Fieldstone Way
135 Great Plain Avenue
Wellesley, MA

Figure 2

May 2018

Fieldstone Way
135 Great Plain Avenue
Wellesley, MA

Attachment A

May 15, 2018

Tree #	Type	DBH (inches)	Remove/Protect	Outside Local Jurisdiction?	Outside WPA Jurisdiction?	Inside Local Jurisdiction?	Inside WPA Jurisdiction?	Notes
19	Conifer	10	Protect			Y	Y	
22	Oak	24	Protect			Y	Y	
23	Pine	20	Protect			Y	Y	
24	Crabapple	11	Protect		Y	Y		
26	Oak	24	Remove		Y	Y		Limbs will be over house.
27	Pine	18	Remove		Y	Y		
28	Deciduous	12	Remove		Y	Y		Dead
41	Deciduous	30	Remove	Y	Y			
42	Deciduous	16	Protect			Y	Y	
495	Maple	18	Remove	Y	Y			
496	Deciduous	18	Remove					Poor Health/Dying
506	Deciduous	10	Remove	Y	Y			
507	Deciduous	18	Remove	Y	Y			
508	Conifer	30	Remove	Y	Y			
703	Cedar	12	Remove	Y	Y			Dead
704	Conifer	22	Remove	Y	Y			
705	Deciduous	10	Protect	Y	Y			
707	Deciduous	14	Protect	Y	Y			
708	Deciduous	15	Protect	Y	Y			
709	Deciduous	12	Protect	Y	Y			
710	Conifer	12	Protect	Y	Y			
714	Deciduous	10	Remove	Y	Y			Dead
715	Deciduous	10	Protect	Y	Y			
716	Deciduous	12	Protect	Y	Y			
717	Conifer	10	Protect	Y	Y			
718	Maple	15	Protect	Y	Y			
719	Conifer	10	Protect	Y	Y			
721	Deciduous	20	Protect			Y	Y	
722	Deciduous	10	Protect	Y	Y			
723	Deciduous	10	Protect			Y	Y	
724	Deciduous	12	Protect			Y	Y	
731	Deciduous	12	Protect			Y	Y	
732	Deciduous	18	Protect			Y	Y	
733	Deciduous	10	Protect			Y	Y	
734	Deciduous	15	Protect	Y	Y			
735	Deciduous	10	Protect	Y	Y			
736	Deciduous	12	Protect	Y	Y			
826	Conifer	30	Protect			Y	Y	
837	Deciduous	12	Protect			Y	Y	
838	Oak	15	Protect		Y	Y		
839	Conifer	15	Protect			Y	Y	
858	Oak	36	Protect		Y	Y		Nice tree.
859	Oak	24	Protect			Y	Y	Covered in vines.
860	Oak	18	Protect	Y	Y			Nice tree.
872	Conifer	24	Protect		Y	Y		
875	Deciduous	14	Protect			Y	Y	
876	Conifer	10	Protect			Y	Y	
877	Deciduous	12	Protect			Y	Y	
886	Conifer	24	Protect			Y	Y	
887	Maple	10	Protect			Y	Y	
888	Deciduous	12	Protect			Y	Y	
889	Cherry	12	Protect			Y	Y	