



March 29, 2021

Mr. John D. Small
Department of Public Works
Town of Ashland
20 Ponderosa Road
Ashland, MA 01721

RE: A&M Project # 2604-01
Arbella at Ashland, Memorial Drive
Response to Peer Review Comments

Dear Mr. Small:

On behalf of our Client, UA Senior Manager LLC, Allen & Major Associates Inc. (A&M) would like to provide responses, summarized below as related to a peer review memo prepared by Gregory J. Eldridge, PE, of Haley & Ward, Inc., dated January 5, 2021.

The responses to the comments are shown below in **bold** preceded by the original comment shown in *italics*.

Sewer Capacity

Comment 1: The Project narrative document indicated the proposed estimated average daily flow to the existing Memorial Drive gravity sewer is 29,728 gallons per day (gpd). This can be peaked to approximately 89,182 gpd.

- a. We reviewed the previous sewer capacity information included in Phase 1, Cirrus Apartments, of the RTD development site peer review. That review included Phase 2 & 3 proposed estimate peak sewer flow at 330,000 gpd, which Arbella is part of those phases. The previous capacity analysis on the existing gravity sewer and the West Union transmission sewer indicated there was adequate capacity for Phase 2 & 3, which is part of the Arbella Development.*

Response 1: Noted. No additional response required.

Sewer Design

Comment 1: In the Project Narrative, page 11, the sanitary sewer flows discussion indicates 98 one-bedroom units and 164 two-bedroom units, totaling 262 total bedrooms. 164 two-bedroom units would create 328 bedrooms.

- a. We contacted Phil Cordeiro of Allen & Major Associates and he confirmed the 164 number was incorrect and the total bedroom number of 262 was correct.*

Response 1: Noted. The bedroom count is confirmed at 262 (98 1-bed and 82 2-bed).

Comment 2: Drawing C-502: Precast Concrete Sewer Manhole Detail:

- a. Detail shows a rubber gasket. Please confirm the pipe to manhole connection will be a flexible coupling with stainless steel clamp.*

- i. *Drawing C-503 has a detail with the recommended watertight connection.*

Response 2: The sewer manhole detail has been revised to reflect a flexible coupling with a stainless steel band clamp.

Water Capacity

Comment 1: The developers engineer conducted hydrant testing last October and confirmed that there is adequate water for fire and domestic needs at the site entrance, however the water pressure is not adequate for the buildings. Therefore, a water booster station is required.

- a. *The documents indicate a common water booster station designed for domestic and fire protection needs.*
- b. *The documents also indicate the station will be a privately owned station.*
- c. *The location of the station has not been determined; this should be discussed with the town during the final peer review process.*
- d. *The developer must obtain Massachusetts Department of Environmental Protection (MassDEP) approval for the water booster station.*

Response 1: The native water pressure is insufficient to provide adequate domestic and fire flow demand. A water booster pump is proposed to be located within an allocated maintenance bay of Building 11 (garage). The booster will be equipped with an external gas powered emergency generator in the event of power failure. Details of the booster will be coordinated with the DPW as the project advances. The booster will remain under private ownership.

Comment 2: Ashland maintains a Water Management Act permit for their water supplies. That permit limits the amount of water that can be withdrawn from the ground on a daily and annual basis. In review of Ashland's historical withdraws there is capacity available for this development.

- a. *It is worth noting that under drought conditions Ashland had difficulty meeting system demands. This condition will be rectified with the completion of the MWRA supplemental water connection, which will allow use of the MWRA water should their intown water supply capacity be limited due to groundwater levels.*

Response 2: Noted. No response by the applicant at this time. Water availability will continue to be reviewed with the DPW.

Water Design

Comment 1: Drawing C-503: Water details should indicate restraint glands required on all fittings regardless of thrust block installation.

Response 1: The details have been revised to reflect restraint glands on all fittings as suggested.

Comment 2: Drawing C-503: Gate Valve detail: Recommend adding concrete encasement under gate box cover flange to prevent settling.

Response 2: The detail has been revised to reflect the concrete encasement under the gate box cover flange on C-503 as suggested.

Comment 3: Drawing C-503: Sewer, Water/Drain Crossing Detail: In accordance with MassDEP guidelines, water pipes crossing sewer, must be above sewer and must have a minimum 18" vertical separation from bottom of water pipe to top of sewer pipe. Detail callouts indicates 4" minimum and 18" maximum. Detail indicates bottom utility will be encased in concrete, this is an acceptable option to maintaining 18" vertical separation. In all cases we recommend water crossing over sewer pipe.

Response 3: A&M has revised the site utility layout to reflect an 18" vertical clearance between the water and sewer lines. Where the clearance cannot be maintained, concrete encasement is specified.

Comment 4: Drawing C-110: There are a number of 6" building sewer services crossing the water main, with the sewer pipe listed at approximately 5 feet. We recommend increasing the depth of the sewer main to allow the gravity main and sewer service pipe to have a greater vertical separation from the water main above.

Response 4: The site utility plan has been revised to address these crossings and apply the recommended depth.

Comment 5: Drawing C-110: We did not locate water valves in the loop around the development. We recommend adding in main line valves at each hydrant to allow main isolation during a break or to allow uni-directional flushing of the water mains.

Response 5: Water valves have been added at every hydrant location as suggested.

Comment 6: Drawing C-100: We recommend the developer analyze the possible by-pass connection around the water booster pump station. Analysis would be to determine resulting pressure at the buildings should the booster station fail. If water pressure is available to maintain positive pressure in the buildings, we recommend a bypass connection be made with a check valve or manual valve to open should the booster station fail.

a. Additionally, a hydrant should be installed on the suction and discharge side of the booster station building to allow connection of a temporary pump should the booster station be down for a prolong period of time. This is a requirement of MassDEP also.

Response 6: The drawings have been revised to reflect a cross connection that can be engaged if there is a disruption in booster service.

A&M believes these responses will provide sufficient information for the final review of this application.

If you require any additional information, please feel free to contact me.

Very truly yours,

ALLEN & MAJOR ASSOCIATES, INC.

A handwritten signature in blue ink, appearing to read 'P. Cordeiro', with a long horizontal flourish extending to the right.

Philip Cordeiro, P.E.

Branch Manager

pcordeiro@allenmajor.com

cc: J. Smetana, UA Senior Manager, LLC.
File

Enclosure: Site Development Drawings – Revision 1