

April 27, 2016

Lars Unhjem
Sr. Director of Development
AvalonBay Communities, Inc.
51 Sleeper Street
Boston, MA 02110

RE: **Avalon Hingham Shipyard II**
Revised Shadow Analysis

Dear Lars:

Attached please find our revised shadow analysis for the referenced project, dated April 27, 2016. We have incorporated revisions pursuant to the recommendations made by Dore and Whittier Architects, Inc. in their Shadow Study Peer Review, dated April 22, 2016.

Please note that the revised shadow analysis does not include any change to the proposed building or proposed shadow. Consistent with the Dore & Whittier findings, we have confirmed that the proposed new building shadows indicated in our April 6, 2016 analysis are correct. Below we have restated Dore & Whittier's specific recommendations in italicized text and noted, in bold text, our response and proposed revision, where applicable.

- *Model more accurate roof articulation on abutting building B-S.*
We have revised the computer model of the identified surrounding existing buildings and existing roofs to the best of our ability, based on photographs and satellite imagery. We do not have survey information describing the surrounding existing buildings to represent them accurately.
- *Confirm height assumptions regarding all buildings, for accurate comparative analyses.*
We have revised the computer model to represent the height of the surrounding existing buildings to the best of our ability based on photographs and satellite imagery. As noted above, we do not have survey information describing the surrounding existing buildings to represent them accurately.
- *Confirm software is set to cast shadows "on faces".*
We have confirmed that our software is set to cast shadows "on faces", including the roofs of surrounding existing buildings.
- *Confirm model is set to correct time zone.*
We have confirmed the model is set to the correct time zone: Coordinated Universal Time, UTC-05:00.
- *Indicate whether Daylight Savings Time is accounted for or ignored.*
Daylight Savings time is accounted for in the shadow analysis.
- *Once revised, share the base model and the site context model (with scenes) for additional peer review.*
We will share the revised computer model, with updated existing surrounding buildings, for additional peer review by Dore & Whittier.

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The shadow analysis presents the existing shadow and new shadow that would be created by the proposed project, illustrating the incremental impact of the project. The results of the shadow analysis show that the new shadow from the proposed project is generally limited to the area internal to the project site and the existing Avalon Hingham Shipyard I parking lot, located just north of the project site. No new shadow will be cast east of USS Amesbury Drive during 9 of the 11 time periods studied. The new shadow cast across USS Amesbury Drive reaching existing properties on the east side of the street is limited to the early evening (5:00 PM) in the spring (March 21) and fall (September 21), when new shadow is cast onto the rear yard of 9 Juniper Road, and late afternoon (3:00 PM) in the winter (December 21), when new shadow is cast onto 7 and 9 Juniper Road. Note that our shadow analysis does not indicate the impact of existing trees as our computer model does not include trees.

Please contact me with any questions.

Very truly yours,
THE ARCHITECTURAL TEAM, INC.



Edward R. Bradford, AIA LEED AP
Associate

Cc:

Michael Roberts/AvalonBay Communities, Inc.