April 5, 2013

Mr. Paul S. Cincotta, Vice President Westwood Marketplace Holdings LLC c/o New England Development, Inc. One Wells Avenue Newton, MA 02459-3295

Ref 3684

Re: University Station - Response to Additional Comments by Epsilon Associates

## Dear Paul:

This letter provides responses to the second round of comments from Robert D. O'Neal of Epsilon dated April 1 regarding the noise impact assessment done for University Station.

## **Operational Impact Assessment**

1. Maximum sound level impacts at the three residences ranged from 45.4 dBA to 46.2 dBA. These show an increase of up to 2.6 dBA over background; well below the MA DEP 10 dBA limit. These sound levels have changed somewhat from the levels presented in the January 2013 Draft sound report from TEI. It would be helpful to understand what the major changes are in the site plan layout from the January 2013 to the February 2013 sound level modeling.

There were no major changes to the overall site plan. The modeling analysis presented in the February Report includes loading dock activity at five loading dock areas closest to the residential neighborhood. In addition, site grading elevations in the rear of the retail area were corrected from the January modeling analysis. Site grading will provide a natural sound barrier to reduce sound from loading dock activities.

2. A key assumption in the impact analysis is the use of low-noise HVAC units on the two office buildings closest to NSA 1 (Office A and B), and on the three residential buildings closest to NSA 3 (Residential A1, A2, B). It is unclear which building(s) are labeled as A1, A2, and B in this analysis.

The attached figure shows the location of Buildings A1, A2 and B.

3. One question is whether full Build-out was assumed in the "Facility Operations" modeling. Was any credit taken for shielding from Office Buildings A, B and C in calculating expected future sound levels from the rooftop equipment on the retail buildings?

Yes, the acoustic modeling was performed for the full build scenario. This is the most conservative approach since there will far more roof top units operating in full build than during the operation of just the "Core Development Areas". The modeling analysis also assumed that all of the roof top units and loading activities occur simultaneously at their maximum load. Buildings A, B and C were included in the acoustic model. Subsequent sensitivity model runs removing those building structures reveal that they provide less than 1-dBA of shielding to the overall sound levels at the closest residential receptor (NSA-1). Thus, staging of the project does not produce noise impacts above the State and local limits.

If one adds a full 1 dBA to the predicted project maximum sound levels in Table 4 of the Noise Impact Analysis for University Station (to simulate the absence of those office buildings), the total project-generated sound levels are still safely below the Town of Westwood 50 dBA limit, and the predicted sound level increases above the ambient are still safely below the MassDEP 10-dBA incremental limit. Thus, in staging the development of University Station, both the initial Core Development and the final full build condition fully comply with the State and local noise regulations.

## **Roadway Impact Assessment**

4. The roadway modeled impacts were scaled from 2007 to 2013 by using revised trip generation rates. This is fine. However, we understand that the actual roadway layout within the University Station development has changed since 2007. Those roads and buildings should be modeled in their 2013 locations, or at least a figure presented showing the 2007 roadway segments as compared to the 2013 segments. A simple listing of which roads were modeled is not sufficient in this case.

The only difference between the roadway networks for the previously-proposed Westwood Station (WWS) Project (2007) and the current University Station (2013) is that WWS proposed relocating the main internal roadway, University Avenue, into an alignment much closer to the neighborhoods and renaming it Westwood Station Boulevard. The attached figure shows that proposed realignment and how much closer it would have been to the residential area versus the existing alignment for University Avenue, which will not be changed. Since University Station is not relocating University Avenue, the TNM acoustic modeling performed for WWS in 2007, when scaled with traffic volumes for University Station, over-predicts the roadway sound impacts of University Station. A reanalysis, which is not necessary, would show lower predicted sound levels from project traffic than are listed in the 2007 report.



5. An analysis of truck backup alarms is presented.... Unless it can be demonstrated that the short-term sound levels from the backup alarms tonal frequency (1000 Hz) are at least 10 dB below the quietest 1000 Hz existing nighttime levels, it is recommended that delivery hour restrictions be imposed. In addition, it would be useful to know if any credit was taken in the modeling for the terrain shielding between the loading docks and the residential neighborhood due to the elevation grade and rock cuts.

Mr. O'Neal's comments suggest that a commercial development should be held to a standard of inaudibility for its operations, which is clearly unreasonable. Neither the Town of Westwood noise regulation nor the MassDEP Noise Policy requires inaudibility.

The truck backup alarm modeling analysis presented in the report "Noise Impact Analysis for University Station" was overly conservative by assuming the simultaneous operation of five backup alarms emitting sound at night. Terrain shielding between the loading docks and residential neighborhood was properly taken into account in the modeling analysis.

The truck backup alarm analysis was redone without the usage factor and examining just the 1000-Hz band, as requested by Mr. O'Neal. The analysis was also revised to consider only the short-term event of a single backup alarm, placed at the loading dock closest to the most sensitive residential receiver NSA-1. The modeling results are compared to the nighttime, background 1000 Hz sound levels in Table 1. The predicted 1000-Hz sound levels at the three residential receivers are 10 to 20 dB below the nighttime background level in that band. The site has been designed to shield residences from loading dock noise, including a backup alarm, and no time restrictions on deliveries are warranted.

TABLE 1
SHORT-TERM EVENT BACKUP ALARM SOUND ANALYSIS

Receptor Location	Existing Nighttime 1000 Hz L <sub>90</sub> Sound Levels (dBA)	Predicted Future 1000 Hz Sound Level from Backup Alarm (dBA)	Difference Between Existing and Predicted Sound Level (dBA)
NSA-1: Partridge Drive	44	34	-10
NSA-2: Endicott Street	44	24	-20
NSA-3: Whitewood Road	48	28	-20



Please call if you have any questions regarding these responses.

Sincerely yours,

TECH ENVIRONMENTAL, INC.

Petn.H. Guldburg

Peter H. Guldberg, INCE, CCM

Managing Principal

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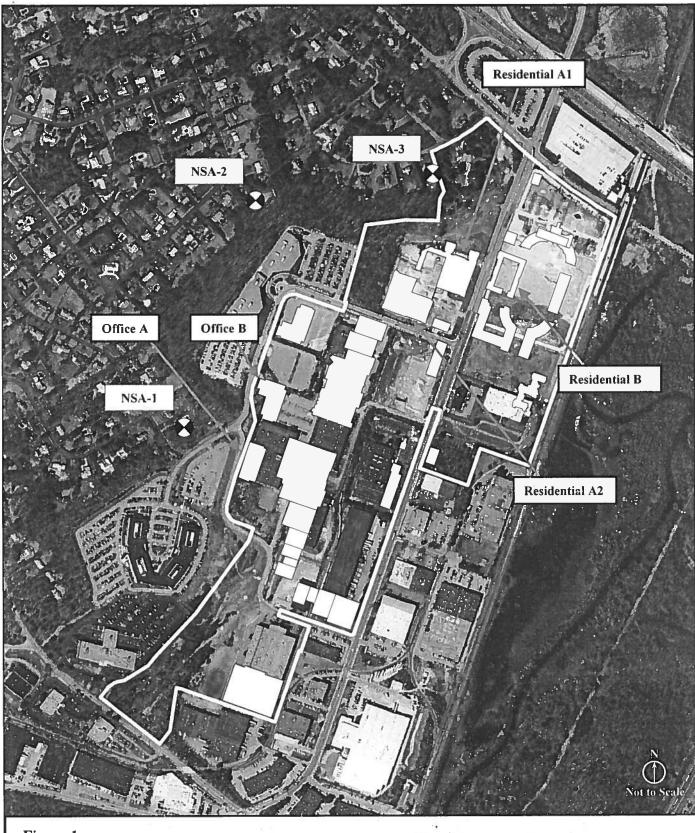


Figure 1.

Buildings with Low Noise RTUs University Station Westwood, MA





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