

VIA EMAIL ONLY Greg.Scovitch@hillwood.com

22 September 2020

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Re: Acoustical Impact of Proposed Distribution Facility - Project Panda
Detroit, MI
OAA File 4235B

Dear Mr. Scovitch:

As requested, I have prepared a non-technical executive summary of the acoustical impact of your project. A technical report and supporting figures are included in the Appendix.

Your client is proposing to build a warehouse/distribution facility on the site of the former State Fairgrounds in Detroit, Michigan. A drawing of the proposed facility is shown on Attachment 2. Your client asked us to compare the current noise levels to noise levels if a warehouse/distribution facility is located on the site. We measured current noise levels 24/hours a day for 6 days at the 3 locations shown on Attachment 1. Locations 3 and 2 are most important since they are closest to residences. A berm 16' tall and 80' long is proposed near Location 3 to further minimize sound. At both Locations 3 and 2, sound from your client's trucks would be significantly less than the nearby commercial rail line and less than noise from a car driving along W. State Fair.

Based on these results, we do not believe that this site will have any negative acoustical impact on the surrounding receptors.

I trust that this is useful.

Sincerely,

OSTERGAARD ACOUSTICAL ASSOCIATES



Benjamin C. Mueller, P.E., Principal

APPENDIX: Technical Report

The proposed warehouse/distribution facility is located approximately in the center of the site with parking on all sides; the site will operate around the clock. Noise sources are steady HVAC sound and intermittent semi-truck arrivals and departures. Sound emissions from the facility were evaluated against applicable noise code limits as well as an ambient sound level survey carried out in the vicinity of the site.

Attachment 1 is an aerial image obtained from Google Earth outlining the parcel in red. This and all subsequent figures are located at the end of this report. The site accommodates the former State Fair Grounds. Properties surrounding the site accommodate various uses in different jurisdictions. Immediately north and west of the site are not particularly noise sensitive and comprise commercial or industrial uses or property associated with the State Fair Grounds. The site borders a freight rail line right-of-way to the east with single-family residences beyond. Along the southern border of the site is West State Fair Avenue; occupied single family dwellings are on this street. Southwest of the site is a multi-story multi-family residential building.

Sound in the area is expected to be dominated by local traffic from West 8 Mile Road with distant steady sound contribution from Interstate-75 and sporadic intermittent maximum sound levels from local motor vehicle and trains. There are also public bus routes on West 8 Mile Road, Woodward Avenue, and West State Fair Avenue of which some operate on a 24-hour basis. Based on experience, the nearby commercial rail line can produce sound levels in excess of 75 dB(A) at distances of 200 feet from a moving train, with train horns producing levels approaching 95 dB(A) at this distance.

Plans call for the site to be redeveloped and any existing structures removed. The proposed site plan and improvements are shown Attachment 2. The distribution facility plans call for the construction of an 823,173ft², 85-foot tall building located centrally on the parcel. Two 35-foot tall water tanks are proposed along the southern part of the property. Access to the site will predominately provided from a newly constructed North-South connector street and West 8 Mile Road to the north. Truck activity will be concentrated at the dock areas along the south and east sides of the building. Trailer parking is outboard of the docks. Trucks will generally enter and exit the site from the primary driveway in the southwest corner of the site via the newly constructed North-South connector street. There is a secondary truck driveway exit from the northeast

driveway as well. A parking lot for personnel vehicles is located north and west of the building. Earthen berms are proposed along the south, east, and northeast sides of the building to further shield nearby residential receptors from semi-truck activity.

Although a noise study is not required by the municipality in connection with the development and construction of the proposed facility, a variety of noise codes – State, County and City - were reviewed as part of our analysis. The State of Michigan has quantitative limits on vehicle noise which are delineated in Code Section 257.707c – Noise limitations; prohibitions. Motor vehicles with a gross weight rating of 8,500 pounds or more must not exceed 86 dB(A) at a distance of 50 feet when traveling at a speed of 35 mph or lower. At speeds higher than 35 mph, the limit is 90 dB(A) at 50 feet. Semi-trailers at the proposed site, which will average a gross weight rating in excess of 8,500 pounds, will be traveling at approximately 10 mph. As noted in Figures 1, 2, and 3, the noise emitted by such semi-trailers was projected to residences and will be less than 65 dB(A), which complies with the State code requirement and is significantly less than the average and maximum current ambient noise documented at Locations 1, 2, and 3. Wayne County code does not apply within City limits and thus is inapplicable. The City of Detroit Code discusses noise in Chapter 16: Environment, Article I: Noise. Motor vehicle noise is exempt on public rights-of-way and discussed qualitatively throughout the code. Specific sounds are restricted for specific non-motor vehicle sounds. No specific City limits are provided.

A variety of tasks were undertaken to evaluate potential site sound emissions from the facility as well as determine the acoustical impact. Tasks include projecting site sound emissions from proposed roof-mounted HVAC equipment and semi-truck activity to various residential vantage points. Analyses are based on similar facilities and take into account mitigation provided by distance and the proposed earthen berms. Three general areas of existing residences were scrutinized and are shown as Locations 1 through 3 in Figures 1, 2, and 3. These locations represent nearby receptors to the northeast, southwest, and southeast, respectively. Results at each location vary for truck noise as these sources are mobile and dynamic in nature; HVAC sound in contrast is steady in nature. A summary of sound pressure level ranges produced at off-site receptors are given in the following table.

	Location 1	Location 2	Location 3
HVAC Sound Levels	44 dB(A)	44 dB(A)	43 dB(A)
Truck Sound Levels	52-to-59dB(A)	48-to-60 dB(A)	54-to-62 dB(A)

To determine the acoustical impact of the above sound emissions from the proposed warehouse/distribution facility in comparison to existing ambient sound levels, ambient sound levels across a six day period, nominally from 10-to-15 September, were obtained at Locations 1 through 3. This was done using long-term sound level monitors that recorded statistical sound levels each minute and include a weekend period. Results from the table above are superimposed over the average ambient sound survey data in Figures 1 through 3 to provide a visual aid. This analysis clearly shows that HVAC sound will be well below existing minimum conditions in the area and as a result will be difficult to hear at off-site vantage points. Semi-truck noise will be comparable to existing average sound levels in the area and will also be far below existing documented maximum sounds. It is our opinion the proposed site, which will include extensive earthen berms for additional buffering, will not have a negative acoustical impact on the area and will blend in with existing sounds presently in the area.

Attachment 1 – Locations of Sounds Monitors 1, 2, and 3



Attachment 2 — Proposed Warehouse/Distribution Facility

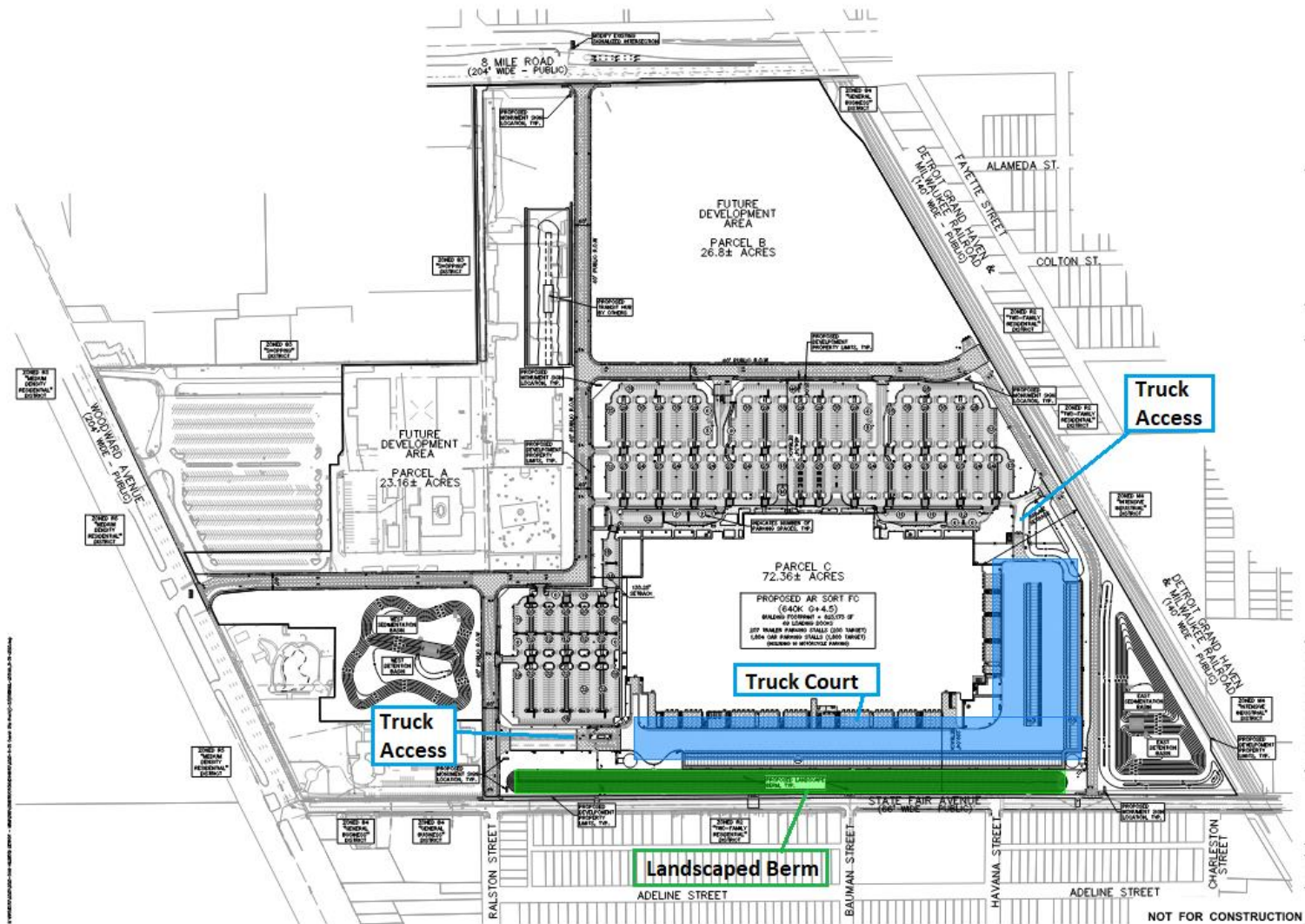
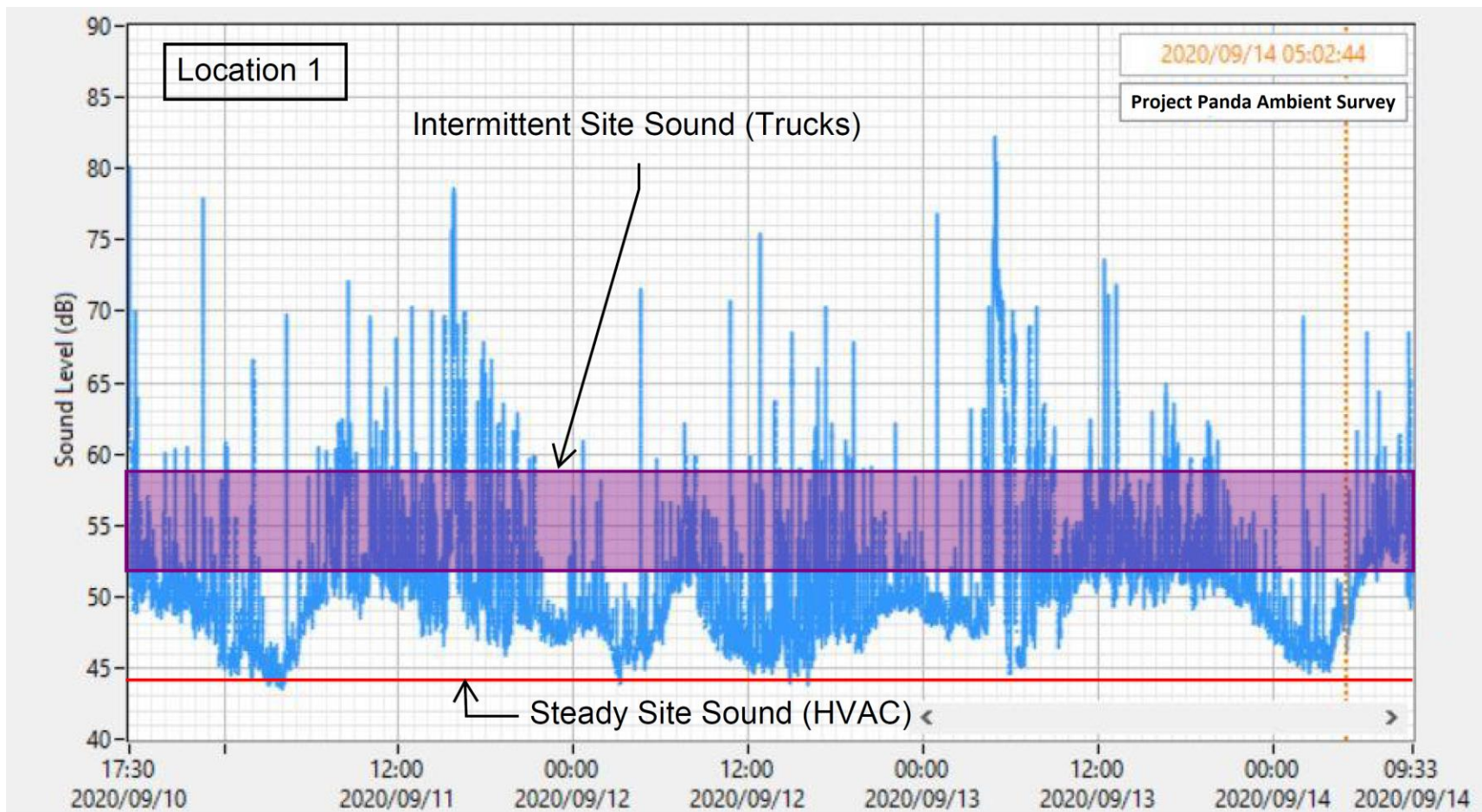
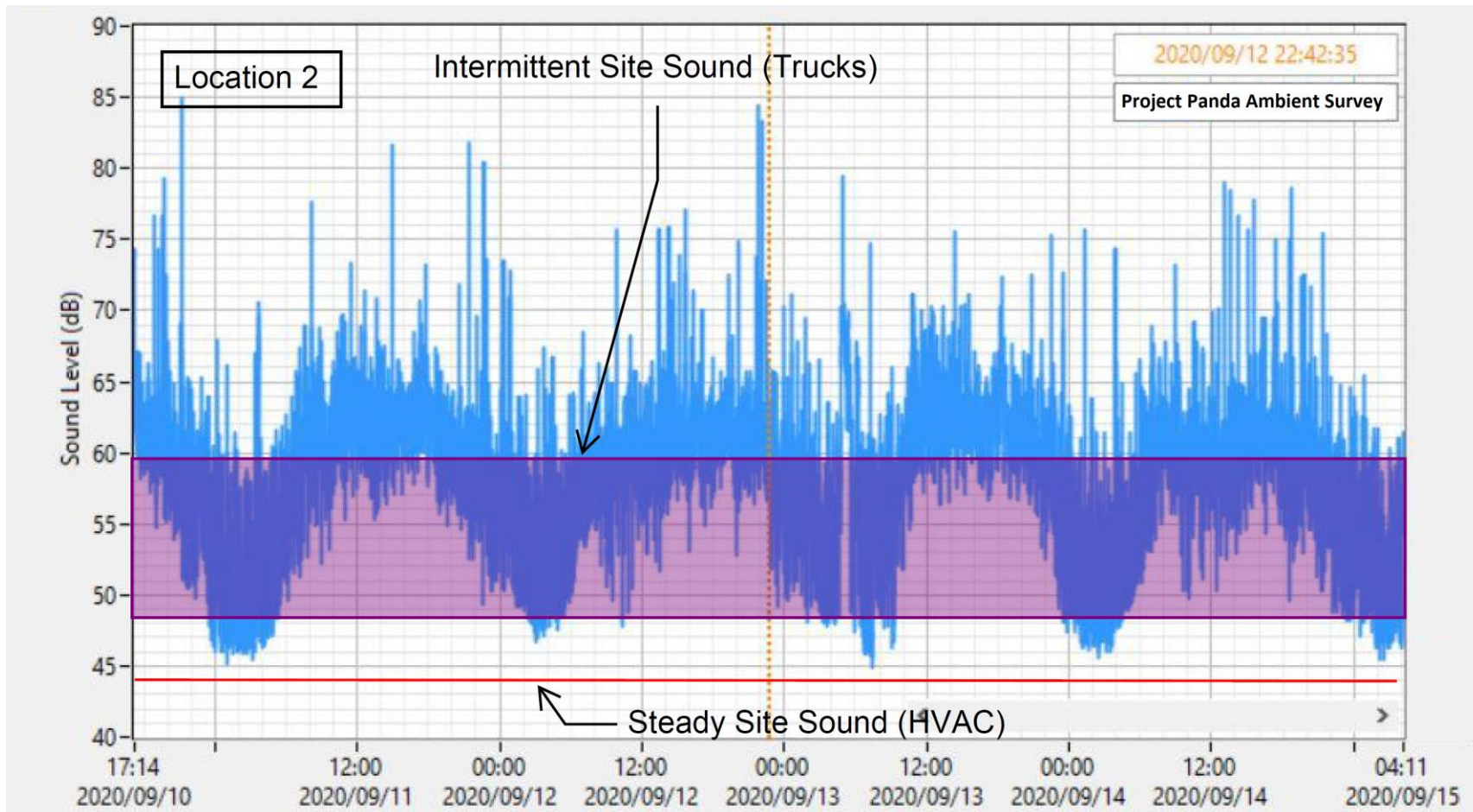


Figure 1 —Current (Ambient) and Potential Sound at Location 1



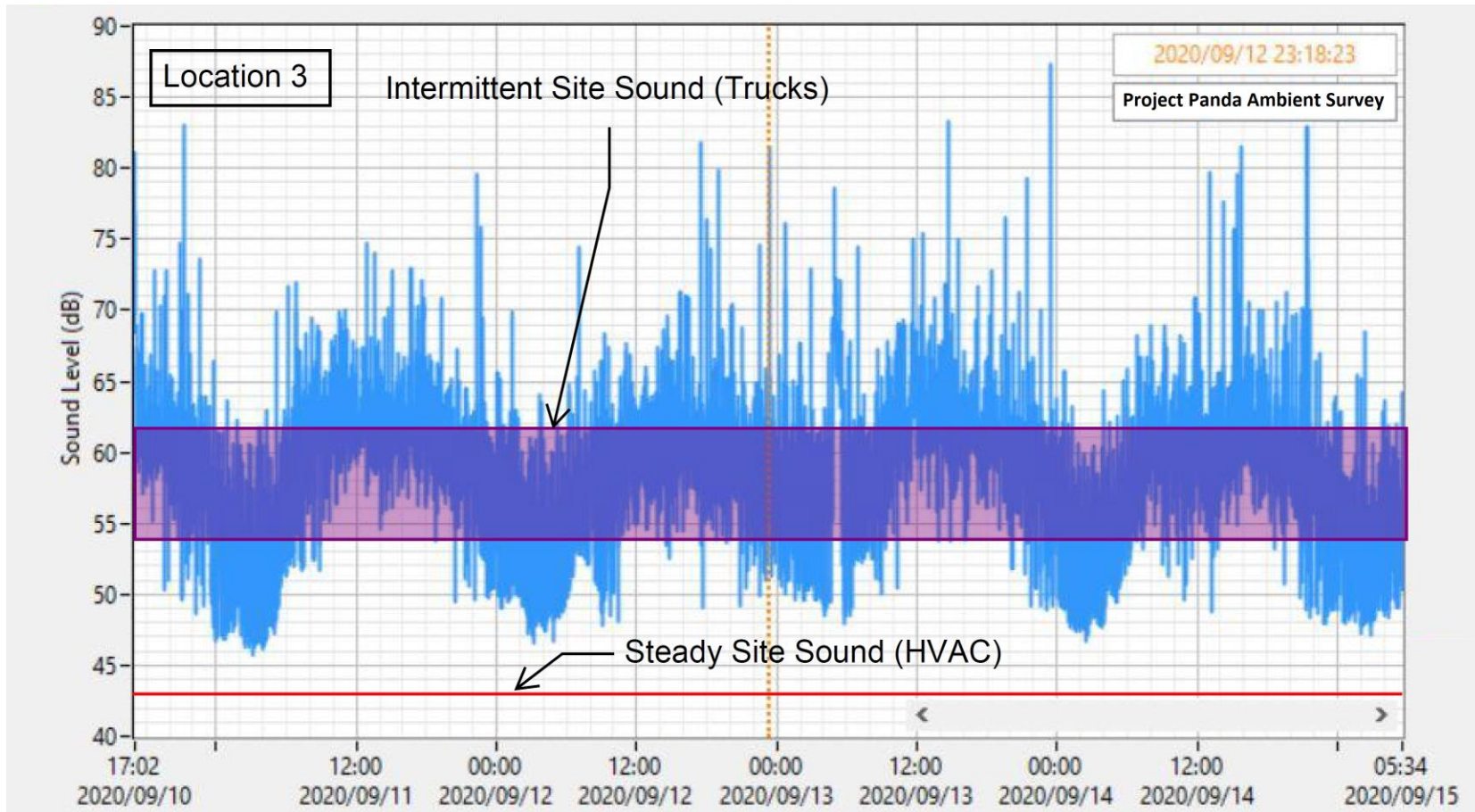
Ambient survey data obtained over 10-14 September 2020 at Location 1, compared to maximum HVAC and truck site sound emissions. HVAC sound is shown in red; truck sound range is shown in purple. Ambient sound is shown in blue.

Figure 2 —Current (Ambient) and Potential Sound at Location 2



Ambient survey data obtained over 10-15 September 2020 at Location 2, compared to maximum HVAC and truck site sound emissions. HVAC sound is shown in red; truck sound range is shown in purple. Ambient sound is shown in blue.

Figure 3 —Current (Ambient) and Potential Sound at Location 3



Ambient survey data obtained over 10-15 September 2020 at Location 3, compared to maximum HVAC and truck site sound emissions. HVAC sound is shown in red; truck sound range is shown in purple. Ambient sound is shown in blue.