



Case Study: Car Dealership Development, Buena Park

Wieland Acoustics had the pleasure of working with the City of Buena Park on the preparation of a noise study for a new car dealership. Car dealerships are always interesting projects because of the wide variety of noise sources involved and the various techniques that are available to mitigate them.

A Variety of Noise Sources

We began the study by visiting several existing dealerships in Buena Park and Anaheim to gather data on the typical activities that occur there. Beyond the obvious service bay noise sources that one would expect (e.g., air impact wrenches, hammering, etc.) there are several less obvious ones to consider.

For example, people talking in the sales lots, car doors slamming as potential buyers examine the cars, engines starting, cars driving by, tire squeals, public announcement systems, new car deliveries, car alarms, etc. All these issues must be considered when assessing the potential impact that the car dealership may have on its residential neighbors.

Analyzing the Noise Impact

Once noise levels were determined for each activity or noise source that could occur at the dealership, we developed a computer model for the facility. The computer model identified the location of each noise source, the noise level it generates, the location of any barrier that could mitigate the noise level, and the location of the residential receptors.

After applying all the necessary data to the model, it was a straightforward matter to determine the noise levels that would be experienced at the adjacent residential properties, and whether these levels would comply with the City's standards.

Noise Control

Our analysis indicated that the project would exceed the standards unless mitigation measures were included in the design. After analyzing various alternatives, and after discussions with the City and the project proponents, it was determined that the most feasible and practical noise control for the project would include a soundwall on the project's property line, an overhang at the service building, and some administrative restrictions on operations.

Because of the careful attention paid by the City and the project's proponent during the planning phase, the potential neighborhood noise impacts were minimized, resulting in a new car dealership that is a benefit to the community.