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Subject: 330 Montague Expressway – Milpitas, California
CSA Project No. 11-0229

Dear Chris:

The attached report summarizes our assessment of environmental noise at the 330 Montague Expressway site in Milpitas, relative to applicable regulations. However, simply complying with the applicable regulatory criteria may not result in a satisfactory noise environment for future residents. This letter contains additional information that may be useful in the project design.

Day/Night Average Noise Levels

As indicated in the attached report, City and State standards require an interior noise level of DNL 45 dBA or lower, due to exterior noise sources. For residential units described as "market-rate", we typically recommend an interior noise level of DNL 40 dBA: 5-decibels quieter than required by code. Reducing interior noise levels to meet this criterion would require specifying windows and doors with sound insulation ratings approximately 5 STC points higher than those indicted in the Environmental Noise Assessment.

Single-Event Noise Levels

Environmental noise at the site is dominated by vehicle traffic on Montague Expressway and Trade Zone Boulevard. However, future residents are likely to occasionally hear intermittent noise from adjacent businesses including P&C Auto Wreckers to the east (e.g., forklifts, impact wrenches, saws, etc.). We suggest that you disclose this to potential residents, particularly for homes in the easternmost portion of the site.

The City of Milpitas does not currently regulate maximum instantaneous interior noise levels from singe-events outdoors, such as vehicles. However, because of its potential effects on sleep, and because of the site's proximity to Montague Expressway and Trade Zone Boulevard, this letter discusses the potential impact of noise from individual vehicles. Some cities do have guidelines for addressing maximum interior noise levels due to individual outdoor events. The most common present a goal of 50 dBA or lower in bedrooms, and 55 dBA or lower in other habitable rooms.

- The loudest noise levels measured at the long-term monitor locations were generated by vehicles and sirens passing the site. Typical maximum noise levels were 87 to 88 dBA at the long-term monitor locations.[1]
- Achieving the maximum noise level criteria adopted by some cities (L_{max} 50 dBA in bedrooms and 55 dBA in other rooms) would likely require adding an additional layer of gypsum board and resilient channels or clips to the resident side of exterior walls, and selecting windows with sound insulation ratings in the range of STC 40 to 45 or higher for units along Montague Expressway and Trade Zone Boulevard. Details should be determined during the design phase, when the site plan, floor plans and elevations have been finalized.
- For reference, sound insulation ratings of up to STC 36 can typically be achieved using high quality insulated windows with glazing selected to meet the required ratings. Sound insulation ratings between STC 36 and 39 can be achieved by some specialty window manufacturers by using 1-inch or 1-½ inch glazing sections. Ratings above STC 39 typically require dual sash or "four track" windows with frames that are 5 to 6 inches deep.

Please call with any questions.

Sincerely,
CHARLES M. SALTER ASSOCIATES, INC.

Joshua M. Roper, LEED AP
Principal Consultant

[1] Greene, Rob, "Max Level Intrusive Noise Limit", 1982 National Conference on Environmental and Occupational Noise. Typical maximum is the L_{max30}, obtained by logarithmically averaging the loudest 30-percent of maximum sound levels for 15-minute intervals.