

## Acoustical Report

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Mike Morris  
510 Lawrence Expressway, Suite 221  
Sunnyvale, CA 94085  
408-386-4497

### Acoustical Report

Thursday April 16<sup>th</sup>, 2015, I was on site at 510 Lawrence Expressway , Suite 221 and the adjacent suite in question for leasing in Sunnyvale, CA. These office locations are at one end of the building over a restaurant. The location of these offices would be ideal for the client and other tenants. The following acoustical recommendations are for these two spaces to improve the acoustics within and between each room.

The architectural design is typical of standard office spaces. The walls between these spaces are not full height. The walls go up to the lay-in drop ceiling, and/or slightly above leaving what is commonly referred to as "plenum space", or an open area above where sound can trespass freely from one room to the next. The rooms have little to no acoustical treatment currently aside from standard carpet and acoustic tile. Additional acoustical treatment within the space is recommended to help isolate and improve sound within and between offices.

The primary acoustical issue is that the rooms are not properly finished or "capped" at the ceiling to stop sound from trespassing within the space between rooms. Other issues are lack of acoustical absorption in current ceiling tiles as well as lack of sufficient acoustical wall treatments. Interior doors are not acoustically sealed, so the doors should be sealed and should allow no air passage below, and be properly gasketed at all edges.

As far as economically practical considerations go, most applications similar to this one in particular will use LMV barrier above the ceiling tiles overlapping seamlessly. This helps keep sound in the space. The existing ceiling tiles will fail to function properly once the barrier is laid down because they require the plenum airspace to function properly. Besides, they are not adequate for the use of the space as is described.

#### Recommendations

1. A Minimum 0.80 NRC material at a Type A Mount (direct mount) ceiling tiles should replace the existing ones, preferably closer to two inches thick than one.
2. 1/8" thick non-reinforced LMV like Pinta Prospect Barrier should be cut and laid above new ceiling tiles so that the pieces overlap and leave no air gaps or spaces between. Sometimes taping overlaps may be needed, but careful cutting by a trained contractor is advised. Tobias Construction has this experience.

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3. Minimum 0.80 NRC wall panels preferably two inch thick but most one inch Type A (direct mount) panels. Upper wall areas to be covered with acoustic panels one to two inch thick minimum 0.80 NRC at Type A mount. I estimate roughly twenty-four, four foot by four foot panels may fit on the upper wall areas of each room, or some subset of sizes comparable. These can be Class A acoustical foam like Pinta Contour or Sonex tiles or a fabric wrapped fiberglass panel which can be provided from many sources.
4. Visco-elastic damping compound should be applied appropriately to new sheet rock wall board and installed over existing wall board with butt-joint and perimeter sealed with non-hardening acoustical caulking. It is imperative an experienced contractor provides and installs this acoustical system. The details are very important to the functionality of the system once installed.
5. Sound masking or "white noise" (preferably pink noise) should be introduced into non critical spaces adjacent to session areas to help mask some of the sound that will still trespass between spaces. These systems, installed correctly, cannot only mask sound and decrease the perception of noise in surrounding areas, but can help with speech and information privacy as well.

### Other vendor recommendations-

- Softdb is a fine Sound Masking system and can be demonstrated after a budgetary quotation is approved. Lencore is a suitable substitute to Softdb.
- MBI or LBI Boyd fabric fiberglass acoustic panels for walls.
- Green Glue is a suitable substitute to Prospect Decibel drop.

Please do not hesitate to call or email regarding any questions or concerns you may have. I am confident we can implement these recommendations expertly and as affordably as anyone else.

Thank you,

Tavius Aiton

Architectural Acoustics  
959 Riche Ave. #12  
Mountain View, CA 94040  
408-813-2106