Residential Sound Insulation – SMART Program

Design Criteria

The following measures are general program design criteria. However, work is specified on a case by case basis to provide the most effective noise reduction for each home.

Attic Insulation

- Insulation will be added to attics over living spaces, as required to provide an insulation rating of R-30.
- Inaccessible attic areas and walls will not be insulated.
- Insulation will be batts or blown-in fiberglass.

Exterior Doors

- Doors from the living area to the exterior will be replaced with acoustically rated units.
- Doors from the living area to the garage will be treated or replaced as required.
- All new doors will receive new hinges, lockset and deadlock.
- All new and existing exterior doors will receive new soundseals, threshold and door shoe.
- Existing carved, panel and solid core doors may be retained if the noise consultant determines that the target noise reduction level can be attained with the addition of a storm door.
- Stain grade doors, glazing and/or surface applied moldings are available on new doors when replacing doors with similar features. The design details of these features are limited by product availability and acoustic characteristics.
- New doors will be painted or stained (if previously stained) and sealed. Paint or stain colors will be selected by the homeowner.

Windows and Sliding Glass Doors

- Windows and sliding glass doors in the living areas of the home will be replaced with acoustically rated units.
- Windows in garages, enclosed porch areas, outbuildings or lightly constructed additions will not be replaced.
- New windows will be fixed, vertical sliding, horizontal sliding or casement, depending on existing conditions and design requirements.
- All new windows and sliding glass doors will have screens.
- Mullions (window dividing bars), tinting and sunscreens are available on new windows when replacing windows with similar features.
- Interior and exterior trim will be provided or reapplied as necessary for new window installation.

Miscellaneous

- Through wall mail slots and pet doors will be acoustically treated.
- Tempered glass fireplace door assemblies will be installed if none exist.
- Top mount dampers will be installed on fireplace chimneys.
- Attic eave vents, gravity vents, dormer vents and gable end vents will be baffled.
- Kitchen exhaust vents, bathroom exhaust vents and whole house fans will be baffled.
- Existing ductwork, heating and cooling systems may be modified if required to meet noise reduction goals.
- Relief vents will be provided in homes that utilize an evaporative cooler for the primary source of cooling.

Safety

- Smoke alarms will be installed in each bedroom and hallway if none exist or they are inoperable.
- Window openings will be enlarged or modified as necessary to meet current building codes for secondary egress in bedrooms.
- Security bars will be removed and reinstalled as required for acoustic installations. Security bars in bedrooms, over windows or doors providing secondary egress, will be reinstalled only if they have code approved release mechanisms.
- Existing operable security alarms will be reconnected at new windows and doors.

Home Owner Responsibilities

- Execute and grant an Avigation Easement on the property to the City of Fresno.
- Execute an Owner Participation Agreement with the City of Fresno.
- Provide access and be available for design survey, construction, inspection, correction work and acoustic testing. An owner may designate a responsible person to be present if they are unavailable.
- Review and approve the plans prior to construction.
- Provide clear access to construction areas. (windows, doors, fireplace, attic access, etc.)
- Maintain all windows, doors and other items after construction is complete.