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KCIA's Sound Insulation Program

To Amanda Wyma-Bradley <amanda.wyma-bradley@mail.house.gov>

Good morning Amanda,

Before our telephone conversation at noon today, I thought I would jot down some comments in response to your questions; and we can speak in more detail later. (King County International Airport at Boeing Field: KCIA--aka BFI--Boeing Field International.)

Background: In 1985, SEA initially used what is termed in FAA literature as the "single parcel" approach to install a noise insulation system, consisting of double-pane windows, solid core wood doors, and attic insulation. Homeowners were provided with a list of contractors to choose from and then select their choice for a contractor. Inconsistent workmanship and poor quality control were common using this approach; not to mention that the window contractor the airport selected went bankrupt in the process. Not surprising, this approach has not been adopted by any other airport but SEA.

leaving homeowners who warranties for their windows.

In today's mitigation systems, attic fans or other fresh air ventilation, 3-ply glass and vinyl acoustical windows, and tests of "air balance"

within the home at the completion of construction are now part of the insulation package. Over time, it was discovered that—without the installation of a fresh-air intake system, mold and mildew would accumulate because the interior space in a home was tightly sealed since all areas where noise leaks occurred would be closed off. Also, in SEA's early program, sometimes only the areas of a home facing the airport would be sound proofed! Fortunately, their program is now streamlined and consistent with what other airports have researched and developed over the years.

King County (KC) used a bidding method —where residents were “bundled” to include between 5-50+ homes) all ready-to-go, and noise-qualified homes--into bid “packages.” At any given time, there might be 2-4 bid packages being bid and under construction. KCIA purchased building permits from local jurisdictions where noise-qualified homes were located (Seattle and Tukwila) who followed-up at the conclusion of construction by conducting inspections of completed homes. KCIA could not “close-out” a bundled package until all homes were signed off by homeowners, contractors, and local building inspectors. KCIA also hired an architectural firm that performed oversight responsibilities listed below:

1. Conducted on-site home assessments,

then produced drawings of each individual home and revealed locations and types of windows, doors, electrical and mechanical improvements (if any), attic insulation, fireplace dampers, replacement of knob-and-tube attic electrical systems, and placement of an attic ventilation system or other fresh air in-take device.

2. Held frequent meetings (sometimes weekly, always bi-weekly) with construction contractors that monitored the progress and success of timeliness (two weeks construction assigned to each home); and would trouble-shoot any obstacles or discovery of unknown issues.
3. Conducted quality control inspections (pre and post-) of construction work, punch-lists of outstanding, unresolved issues, continuous communication with homeowners to insure satisfaction with quality of work completed.

The Sound Insulation Program Manager attended all construction meetings, conducted all homeowner briefings, met with homeowners when legal contracts, including when avigation easements were signed, and arranged for translators to work with homeowners for complete program understanding and published all program materials in six languages.

Questions: In the event construction work is

inferior, who is liable for poor workmanship: airport or the contractor? The answer is neither because architects, jurisdictional inspectors, and contractors had to sign off on the quality of workmanship, along with the homeowner throughout the entire construction process. First, there are scope-of-work contracts between King County and homeowners that detail what work will be completed, along with blueprints of each residence attached. These contracts include an indemnity clause that holds King County "harmless" for any defects or workmanship. Also, workmanship is subject to building permits and jurisdictional inspections. KCIA communicated continuously with homeowners whenever any construction issue occurred; and resolved any outstanding issues at the time of construction. In other words, quality control occurred every step of the construction process so that there would be no "surprises" at the end.

This is common and architectural firm oversight. One incident of mold; KCIA spent \$12,000 to remediate.

NOTE: King County procurement within KC Finance Dept. conducted all phases of bidding process and the airport was not involved with a construction contractor until the County had concluded its contractor selection process; therefore, KCIA did not actually select any of the construction contractors and were required to accept the low-bidder who had "qualified" applying KC bidding regulations.

Consequently, KCIA was protected from claims of "cozy" relationships with contractors and a weakened oversight process.

Question: Who mediated disputes between contractors and homeowners? With

assistance and advice from architectural firm hired by KCIA, KCIA staff resolved any outstanding construction issues. As described above, it was KCIA's intent to avoid any conflicts between homeowners and contractors. Because KCIA staff (program manager--me--and our contract administrator) met with the architectural firm (who performed oversight) and contractors regularly (every-other-week or weekly), issues would be discussed and resolution confirmed at those meetings. Tight and constant oversight was critical to avoid lingering construction issues; and KCIA took a "generous" posture when construction difficulties arose; meaning the homeowner's position was favored unless it represented a legal conflict for the airport.

NOTE: The strategy that KCIA employed was "no surprises," meaning the close relationship we had with homeowners, contractors, and our architectural "oversight" team kept conflicts at a minimum. When problems did arise, we immediately responded to resolve issues because to do otherwise, upset our construction schedule and delayed everything (particularly homeowners) under construction. If necessary and in consultation with KC procurement, if we had a difficult or non-responsive contractor, KCIA would impose a "stop work order" that required a contractor to stop work until construction problems were resolved. Stop work orders are very serious incidents and could cause a contractor to be ineligible for future KC

Homeowners were provided with window, door, and other warranty documents at the conclusion of construction as well as EPA brochure describing how homeowners could eliminate the possibility of mold, etc.

contracts!

Sorry this is so long, but thought if you had a chance to review it in advance of our telephone conversation, we would have a more productive discussion.

Sharyn