

TUCSON INTERNATIONAL AIRPORT (TUS) RESIDENTIAL SOUND INSULATION PROGRAM (RSIP) HOMEOWNER HANDBOOK



September 2022



TUCSONTM
AIRPORT AUTHORITY
TUCSON INTERNATIONAL AIRPORT • RYAN AIRFIELD

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Welcome!

You have been selected to participate in the Tucson International Airport (TUS) Residential Sound Insulation Program (RSIP). The TUS RSIP is designed to reduce the noise from aircraft making its way into your home and improve your quality of life.

Keeping you well informed is the key to the success of this project. This Homeowner Handbook is designed to provide detailed information about the TUS RSIP and serve as a comprehensive resource guide. Please take some time to review the Homeowner Handbook completely, and you will find the answers to most of your questions as well as details regarding how the TUS RSIP will work for you.

The Homeowner Handbook describes the typical methods of the TUS RSIP Team's procedures and interactions with participants. If the Center for Disease Control's (CDC) COVID Community Level reaches "medium" or "high", the TUS RSIP Team and/or Contractor will develop a COVID Safety Plan for safe interaction with homeowners. These plans will be communicated to homeowners when enacted. When necessary, COVID safety plans will be updated to be consistent with all federal, state, and local regulations and guidelines related to COVID-19.




Thank you for your participation and cooperation. We look forward to working with you!



Thank you for your participation and cooperation. We look forward to working with you!

Contact Information

If you cannot find the answers you need, or have comments or concerns, please contact the TUS RSIP office at:

 **Joe Chairez**
 **(520) 543-8581**
 **jchairez@jonespayne.com**

Residential Sound Insulation Program Overview



The Tucson International Airport (TUS) Residential Sound Insulation Program (RSIP), sponsored by the Tucson Airport Authority (TAA) is designed to reduce the impacts of aviation noise on residences located in impacted areas that are deemed eligible for treatment. One of the goals of the TUS RSIP is to achieve a noticeable reduction in the amount of noise that enters your home. While no home can be completely “sound-proofed,” the quality of life in your home can be improved by reducing how much sound enters your living areas. Best of all, there is no direct cost to you for the sound insulation treatments. This project is predominately funded by the Federal Aviation Administration (FAA) and TAA.

Residential Sound Insulation: The Basics



Sound insulation is achieved through designed treatments to noise paths into habitable spaces such as doors and windows and ventilation points. The FAA has specific guidelines and regulations that govern the implementation of any sound insulation project. Based on FAA design criteria in the Airport Improvement Program (AIP) Handbook, there are two ultimate goals of sound insulation projects. The guidelines state that:

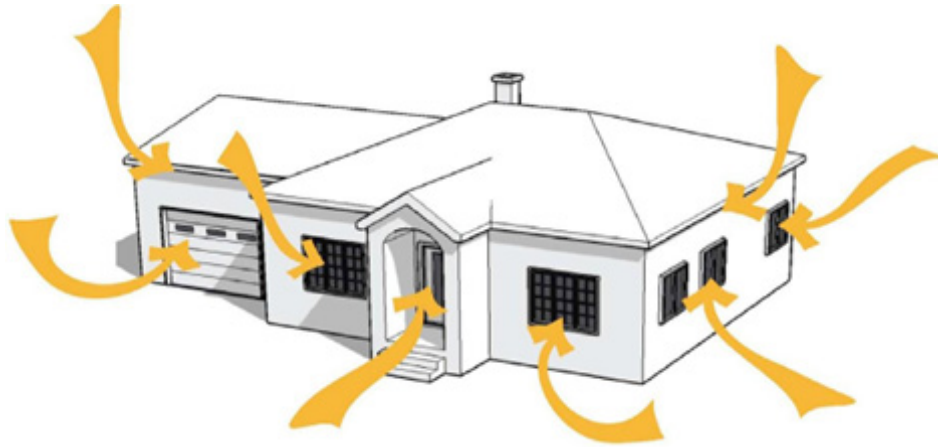
- 1** “The design objective in a residential noise insulation project generally should be to achieve the requisite Noise Level Reduction (NLR) when the project is completed. (This is mathematically equivalent to achieving a Designated Noise Level (DNL) of 45 dB in all habitable rooms.)”
- 2** “Since it takes an improvement of at least 5 dB in NLR to be perceptible to the average person, any residential noise insulation project should be designed to provide at least that increase in NLR as a marginal minimum.”

Some types of building structures provide better noise reduction than others. For example, masonry construction provides a better noise buffer than wood frame construction. However, since sound follows the path of least resistance, the most critical areas in sound insulating a home are openings in the home’s exterior surfaces such as doors and windows, as well as window air-conditioners. Professionals describe these as “noise paths.” Because sound travels through air, the most critical areas in sound insulating a home are penetrations through “noise paths” such as windows and doors. Replacement of your current windows and doors in habitable rooms with acoustically rated products will result in noticeable differences in interior noise levels in your home.

In less technical terms, sound insulation can include any acoustical treatment that reduces noise finding its way inside the home from outside that same home. The specific noise that the TUS RSIP is concerned with is aircraft noise. The noise level in the home is determined by:

- The source of noise, and
- The construction of the home, and how well the walls, roof, doors, and windows block noise from entering the interior spaces

Sound is measured in decibels, or dB, a scale that accurately describes the sound perceived by humans. The human ear can perceive differences in sound levels that vary just 3-5 decibels. For every 10-decibel decrease, the sound level is cut in half.



Noise Paths to Your Home

Specific FAA-approved sound insulation improvements to be made to your home are determined by your home's existing sound insulating characteristics. Each potentially eligible home will receive a pre-construction acoustical test. Because every home is different, sound insulation improvements are customized to your home's needs.

These improvements may include:

- Upgrading windows and doors
- Caulking and weather-stripping doors and windows
- Increasing attic insulation
- Improving air ventilation and/or providing air conditioning systems

Your Professional Sound Insulation Team

The TUS RSIP Team, led by The Jones Payne Group, Inc., includes specially trained managers, architects, engineers, and acoustical and environmental specialists, all working together to successfully determine, plan, and complete the sound insulation improvements to your home. Members of the TUS RSIP Team have completed sound insulation treatments in over 20,000 homes throughout the country. You will work closely with the TUS RSIP Homeowner Coordinator, who will be your primary point of contact throughout the sound insulation process.

At various times of this process, members of the TUS RSIP Team will:

- Be available to answer your questions and concerns throughout your participation in the TUS RSIP
- Meet with you to discuss the TUS RSIP and document existing conditions in your home
- Prepare a written scope of work with accompanying graphics and floor plans to illustrate the recommended acoustical treatments to your home, and discuss them with you
- Prepare final design and bidding documents for the selection of a contractor in a TAA publicly advertised bid process
- Provide daily observation and comprehensive inspection of the construction work in your home from start-up through completion
- If your home is selected, perform a post- construction acoustical test to see if the improvements perform as expected
- Provide warranties for all installed products and workmanship

Eligibility & Requirements

To be considered for participation in the TUS RSIP, a home must meet all the following criteria:

- Located within the FAA-approved noise exposure boundaries
- Zoned as residential property
- Have an average interior noise level DNL 45 dB or greater
- Free of major building code violations
- Built prior to October 1, 1998, unless the home is identified as being part of the airport's long-term implementation plan to provide noise mitigation measures to eligible residences within the FAA-approved project boundaries

Average Interior Noise Level

- TAA must demonstrate a home's interior noise level is above 45 dB. The TUS RSIP Project Team will conduct acoustical testing at a sample group of homes located within the FAA-approved noise exposure boundaries. The homes in this sample group to be tested will be identified based on architectural build style. If a sample of the homes within this group are determined ineligible to participate, based on acoustical measurement, then all of the homes in this group will be tested to determine eligibility.
- The acoustical consultant will take noise measurements inside and outside a home in all eligible spaces. The average of those measurements will determine the interior noise level.

Eligible Areas

Areas considered "habitable" spaces include spaces for living, sleeping, eating, or cooking.

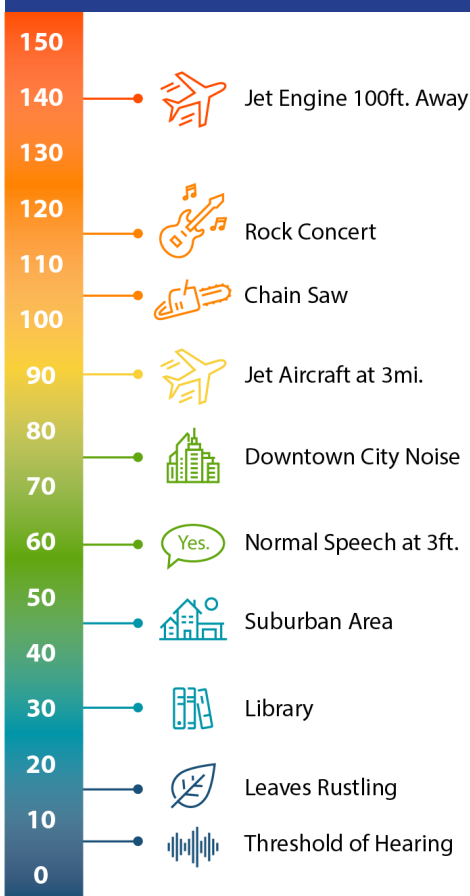
Other Non-Eligible Areas

All non-noise sensitive rooms including bathrooms, closets, laundry or utility rooms, halls, vestibules, foyers, stairways, storage areas, utility spaces, and garages are not considered habitable unless there is no practical way to isolate them acoustically from an eligible room.

These spaces are also not eligible for sound insulation:

- Incomplete and unfinished rooms or additions where there are exposed wall and ceiling framing members
- Non-complying or non-conforming rooms that fail to meet minimum building code and zoning standards
- Dwelling units or portions thereof determined to be structurally inadequate through design, rot, or structural damage. Eligibility can be achieved if, at the Homeowner's expense, all deficiencies are corrected as Pre-Work, which would otherwise prevent the installation of, or lessen the effectiveness of the noise treatments

SOUND LEVEL COMPARISON (DBA)



Sunrooms, enclosed porches, breezeways, etc. will be evaluated at the Assessment Design Visit to determine if they meet the following criteria for year-round habitability: adequate and permanent source of heat; minimum standard building construction; code-conforming assembly at foundation, wall, ceiling, and roof; and conformance with code requirements for room size and dimensions. If all these criteria are not met, the TUS RSIP will not provide acoustical treatments.



Availability

You must also agree to be available and allow access to your home during typical weekday working hours (Monday-Friday, 8:00 a.m. and 5:00 p.m.) for scheduled appointments, including but not limited to:

- Acoustical Testing
- Assessment Design Visits
- Design Review Meetings
- Legal Agreement Signings
- Pre-Construction Measurements
- Installation of Products
- Construction Inspections
- Post-Construction Acoustical Testing (if applicable)
- During the construction process, the Homeowner or designated representative present must be 18 years old.



Possible Costs to the Homeowner

The TUS RSIP only covers improvements that reduce noise levels in your home. Structural repairs, maintenance items, pre-existing code violations, rehabilitation work, abatement of hazardous materials, environmental remediation, and weatherization not directly related to sound reduction are not part of the project.

In some cases, there may be home improvements that must be completed by you before the sound insulation treatments can be installed. These items are referred to as homeowner pre-work. Pre-work items will be identified at the time of the initial assessment visit by the TUS RSIP Team and will be subsequently identified as part of the Homeowner Participation Agreement. You must address all pre-work items before the sound insulation construction. If the home is of standard construction and has been maintained, pre-work should not be required or minimal.



Required Documents

Application: This is a voluntary project. To indicate your interest in participating, you will need to complete the Application before the application deadline.

Homeowner Participation Agreement (HPA): The HPA is the agreement between you and the TAA. It outlines the responsibilities of each party related to the implementation of the sound insulation treatments. This document must be signed by all persons listed on the deed of the property. At the 50% design stage, homeowners are presented with the architectural plans, including recommended treatments. The homeowner accepts the design and signs the HPA and Avigation Easement. TAA achieves land use compatibility meeting FAA regulations.

Avigation Easement: The Avigation Easement will grant the use of airspace; the right of free, unrestricted, and unobstructed overflight, and the effects that may result from the over-flight of aircraft and aircraft taking off and/or landing at TUS. The easement must be signed by all persons listed on the deed of the property and will be recorded in the Assessor's Office of Pima County upon completion of the sound insulation treatments.

Sample Required Documents

The following are pages from the required documents

1. Application
2. Public Outreach Meeting Flyer
3. Pre-Construction Survey
4. Post-Construction Survey

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TUCSON INTERNATIONAL AIRPORT (TUS) RESIDENTIAL SOUND INSULATION PROGRAM (RSIP) APPLICATION

The deadline to apply for the TUS RSIP is [INSERT DATE].

PROPERTY ADDRESS

Street City State Zip

PROPERTY OWNER INFORMATION

Last First Middle

MAILING ADDRESS ☐ Check if mailing address is same as property address

Street City State Zip

Home Phone: _____

Cell Phone: _____

Email Address: _____

May we contact you by text message? No ☐ Yes ☐

Is this a rental property? No ☐ Yes ☐

1

2



PUBLIC OUTREACH MEETING

TUCSON INTERNATIONAL AIRPORT (TUS)
RESIDENTIAL SOUND INSULATION PROGRAM (RSIP)

TUS Center Gallery
7250 S. Tucson Blvd., Tucson, AZ 85756

Locate the TUS Center Gallery on the ticketing level between Southwest Airlines and Delta Air Lines ticket counters behind the Arroyo Trading Post store.

[Insert dates], 2022

English @ 6 p.m. followed by Q&A
Spanish @ 7 p.m. followed by Q&A

Join us for a presentation to learn about the TUS RSIP. As an eligible participant, you will have the opportunity to learn about its purpose, the need for sound insulation, ask questions, and sign up.

Virtual Streaming Option: <https://www.TUSSoundInsulation.com>

CONTACT: Joe M. Chairez
Email: jchairez@jonespayne.com; Phone: 520.543.8581

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TUCSON INTERNATIONAL AIRPORT (TUS)
RESIDENTIAL SOUND INSULATION PROGRAM (RSIP)
PRE-CONSTRUCTION SURVEY

PROPERTY ADDRESS

Street City State Zip

PROPERTY OWNER INFORMATION

Last First Middle

Residential Status: ☐ Homeowner ☐ Tenant ☐

1. How many years have you lived at this address? _____

2. How many residents (including yourself) live at this address? _____

3. Are there people in your home with special needs?

☐ Health concerns ☐ Hearing-related problems

Does aircraft noise affect them? If so, please indicate the activity(ies) and time(s) of the day.

4. How well do you think your home is sound insulated at the present time?
☐ Below Average ☐ Average ☐ Above Average

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4



TUCSON INTERNATIONAL AIRPORT (TUS)
RESIDENTIAL SOUND INSULATION PROGRAM (RSIP)
POST-CONSTRUCTION SURVEY

PROPERTY ADDRESS

Street City State Zip

PROPERTY OWNER INFORMATION

Last First Middle

1. On a scale of 1 to 10, how has the sound insulation treatments reduced the noise in the home? (Please circle)

1 2 3 4 5 6 7 8 9 10
Not at all Some improvement Significantly

2. Now that your home is sound insulated, do you consider moving? (Please circle)
No Yes, not very seriously Yes, seriously

If you answered "Yes", what factors might cause you to move? (Check all that apply)

- ☐ Increased local taxes ☐ Increased/decreased in family size
- ☐ Job transfer ☐ Neighborhood deterioration
- ☐ Health/Disability ☐ Significant increase in auto traffic
- ☐ Jet fumes ☐ Increase in aircraft operations
- ☐ Significant increase in evening (<30 p.m. - 7:30 p.m.) aircraft noise
- ☐ Significant increase in night-time (11:00 p.m. - 7:00 a.m.) aircraft noise
- ☐ Encroachment of commercial/industrial development
- ☐ Other: _____

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The Sound Insulation Process ✈

The sound insulation process is more complex than typical home improvement projects. This multi-part process is designed to make sure that the plan for your home is the best possible one, and that the quality of construction work and materials is protected. The steps in this process include:

- 1 Application** - You will receive an invitation package in the mail. If you choose to participate in the design process, you must complete and return the Application to the TUS RSIP Team by the deadline listed in your invitation letter.
- 2 Eligibility Acoustical Testing (ATP)** – A measurement of a home's interior noise level. If the level is 45 dB or above the home is "eligible" for sound insulation.



The TAA must create an acoustical testing plan, which is approved by the FAA. This document describes how the acoustical tests will be performed. It also summarizes the physical features of the homes in the project area.

The homes are categorized according to the following building styles:

- Single family or multi-family
- Roof style (Gable or Flat)
- Construction type (Stucco, Brick, or Wood)

There are eight building styles in the project area. For each category, at least 10% of the homes have an acoustical test.

The acoustical test requires the TUS RSIP Team to set up a loudspeaker outside of the home. The speaker will project "pink noise", which sounds like static at habitable rooms where the measurement is to be taken. The technician uses a sound level meter to measure the sound level inside the room and outside the room. This process is repeated for all habitable rooms. The measurements are then calculated to determine the entire home's average interior noise level.

The final determination of eligibility for a category of homes is based on the following:

- **If more than 50%** of the tested homes in a category have a noise level of 45 dB or higher, all homes in that category are eligible for sound insulation.
- **If less than 50%** of the tested homes in a category have a noise level of 45 dB or higher, then all homes in the category must be tested. If the results of the test for a home is 45 dB or higher, then that home qualified for sound insulation. If the results are less than 45 dB, the home does not qualify for sound insulation.

Select homes will have an acoustical test to determine the interior noise level of the home. This information will be used to determine the eligibility of each category of homes to participate in the sound insulation project.

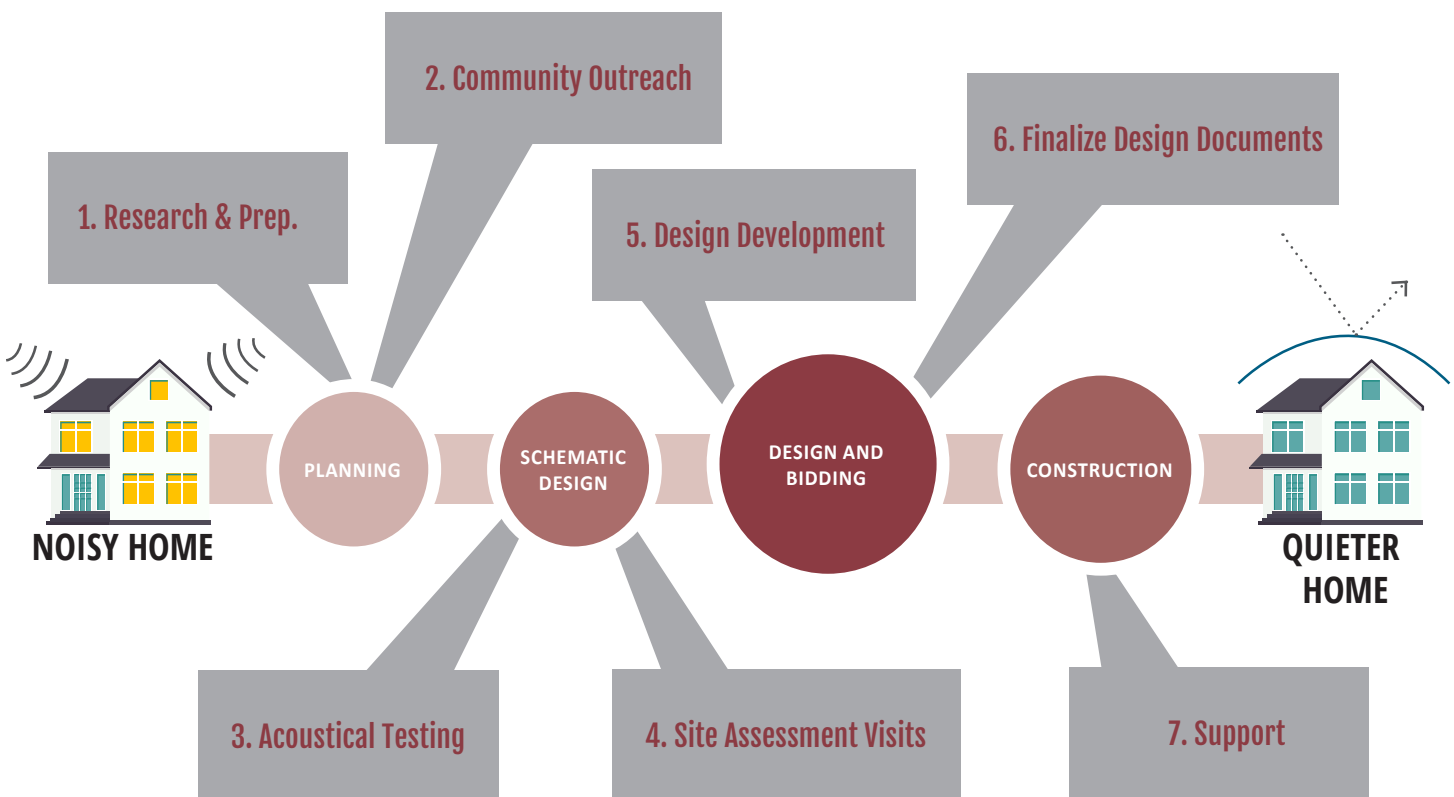
- **Assessment Design Visits** – Eligible properties will be contacted to schedule an assessment visit. This visit happens at your home/residence with members of the TUS RSIP Team. During the visit, the TUS RSIP Team will explain the RSIP process, document your home's existing conditions, draw floor plans, and measure all windows and doors. The mechanical/electrical engineer will conduct a detailed evaluation of your home, including existing heating and air conditioning systems, electrical service, and potential safety or code issues. Since the TUS RSIP will be evaluating sound paths into the home, please be aware that the TUS RSIP Team will be investigating all rooms, including attics and closets. You will be asked about the age, construction, and maintenance of the home and its systems. The Assessment Visit takes approximately two hours.
- **Design Review Meeting** - The TUS RSIP Team will meet with you to review the recommended construction plans and scope of work for your property. This meeting takes approximately an hour.
- **Homeowner Participation Agreement** - Once you have agreed to the recommended scope of work, you will execute the Homeowner Participation Agreement and Avigation Easement. After these documents have been signed, your construction plans will be finalized and placed into a bid package.
- **Construction Documents and Bidding** - The final design and bid package will be prepared and released to interested contractors for public bidding. The bids will be evaluated, and the work will be awarded to the most responsive, qualified contractor. The bidding process takes approximately four to six months. The TAA will select the contractor performing the work on your home.
- **Pre-Construction Measurements** - The selected contractor and members of the TUS RSIP Team will schedule an appointment with you at your property to review the specific scope of work for your home. The contractor will measure each window and door opening for the custom fabrication of the products. This visit takes approximately an hour. The manufacturing process takes approximately four months.
- **Construction Schedule** - Once the contractor has submitted a schedule and the TUS RSIP Team has confirmed the product for your home is in inventory, you will be notified of your construction start date in writing.



Top to bottom: Window measurement; tablet work; HVAC measurement

- **Pre-Construction Walk-Through** - The contractor and the TUS RSIP Team will visit your home 48 hours before the start of construction. During this 30–60-minute visit, the contractor will review with you the scope of work for your home, take pre-construction photographs, and ensure the property has been prepared for construction. The TUS RSIP Team will also review the “What to do Before Construction Begins” and “What to Expect During Construction” sections (located on Pages 8-9) with you.
- **Construction Process** - The TUS RSIP Team will notify you of your construction start date. The contractor will need access to your property during weekdays between the hours of 8:00 a.m. and 5:00 p.m. There will not be any work on weekends, holidays, or evenings.

The contractor will be required to reach substantial completion on the scope of work for your property within 10 consecutive working days. After substantial completion, the contractor will be given additional time to finalize the scope of work and conduct the necessary permit inspections. While most of the work will be completed within 10 working days, you can expect the total construction process to take approximately 30-40 days.



- **Final Construction Inspection** - You and the TUS RSIP Team will conduct a final inspection of the residence. Upon final inspection and approval, you will receive a warranty package for all work performed.
- **Homeowner Survey** - After the work has been completed, you will be asked to complete a satisfaction survey rating the work and materials received from the TUS RSIP.
- **Post-Construction Acoustical Testing** - Your home may be selected for a post-construction acoustical test. The post-testing verifies the acoustical treatments are performing to meet the goals of the TUS RSIP.
- **Warranty** - Once the improvements to your residence have been completed, you will receive a warranty package. The contractor that performs the work is required to provide a one-year warranty on products and labor for the work.

performed in your home. The warranty package includes operation and maintenance manuals for all installed products, information about the product manufacturer and description, the scope and time of the warranty coverage for each item, and a contact phone number for repairs.



What to Expect During Construction

As with any home-related construction, you can expect some disturbance. Contractors will be very careful to perform the work in the least intrusive manner possible. However, some disruptions are necessary, including noise, construction-related dust, and contractors and inspectors in and out of your home during the day.

During construction, the contractors' responsibilities include:

- Taking every precaution to protect your home and its contents
- Using drop cloths and runners in construction areas and along access routes
- Cleaning-up construction areas at the end of each workday, including but not limited to, vacuuming and removal of all construction debris from residence
- Ensuring that no exterior wall openings are left open overnight without installing a door or window that can be secured
- Mounting temporary window coverings each evening until construction is completed
- Ensuring there are no overnight outages of electrical power or air conditioning related to construction
- Designating, if needed, a "room of refuge" for the homeowner, which will be weather-tight and free of any construction materials, debris, or equipment for the duration of the TUS RSIP. The "room of refuge" location may change during construction to accommodate the contractor's schedule and progress.



What to Do Before Construction Begins

To prepare for the start of construction in your home, you should:

- Remove all curtains, draperies, rods, and other decorative treatments including shades or blinds from windows and doors.
- Move furniture a minimum of 48 inches (4 feet) away from window and door areas to allow adequate working space in front of and on each side.
- Remove belongings stored in attics and other areas that are to receive treatments. These areas will be described in your design.
- Remove all valuables to protect them. Remove fragile items from walls or shelves and store them in a safe place. Vibrations from construction may cause items to fall.
- Clear the area around the electrical panel.
- Remove any window air conditioning units and/or through window vents. Window air conditioners are not recommended to be reinstalled upon completion of project work.
- Arrange for pets to be crated or removed from the home during construction.
- Ensure disconnection of window and/or door security systems prior to the start of construction.

Residential Sound Insulation Design

The TUS RSIP offers a variety of acoustical treatments that are used by the TUS RSIP Team to reduce interior noise levels in eligible spaces. Spaces considered eligible for treatment must be livable, occupied year round, and meet all code and standard building construction requirements. Since each home is unique, the recommended treatments will be specifically designed to achieve the recommended noise level reduction for your home. Your treatment plan will include a variety of the following:

Windows and Exterior Doors

Windows and doors are the primary sound paths into a home. To reduce interior noise levels, existing windows and exterior doors in habitable spaces may be replaced with acoustically rated windows and doors.

If you currently have hung or sliding windows in your home, your new replacement windows will be the same type of operation. If you currently have jalousie or awning style windows, the TUS RSIP Team will recommend a different style that best fits each window opening and provides better sound insulation. Skylights or unique windows can be treated by the installation of a secondary window on the interior of the window.

Doors leading to the exterior of your home are typically the weakest or most open noise reduction paths into your home. For this reason, exterior doors that lead from a habitable room directly to the outside are replaced.

The TUS RSIP Team will provide an overview of the window and door styles, colors, and materials available for your selection. Please note the colors of windows and doors provided from different manufacturers may not be an exact match.

Attics, Walls, and Ceilings

Attic pull-down stairs and attic/roof hatches may be sound insulated as noise paths if they are in treatment-eligible spaces. If located in an eligible space, pull-down stairs and attic/roof hatches may be weather-stripped or replaced, depending on their condition.

Air Conditioning and Ventilation

For the sound insulation treatments to work properly, the windows and doors must remain closed. An air conditioning and/or ventilation system will be offered to participating homeowners as part of the acoustical treatment for homes where a central air conditioning system does not currently exist. If you currently utilize through-the-wall air conditioning units or fans, they will be removed, and the penetration sealed to match the existing wall.

If you currently have a central air conditioning system, an evaluation of your system will be conducted to determine if it is of sufficient capacity. Existing central air conditioning systems will not be replaced due to condition, age, or inoperability.

Electrical Service

As part of installing the recommended air conditioning systems, modifications to the electrical systems in residences may be required. Typical modifications include installation of new service panels, installation of new circuits, and removal and reinstallation of lights/outlets where wall/ceiling treatments are recommended.

Smoke Alarms and Carbon Monoxide Detectors

The TUS RSIP will also be installing hard-wired smoke alarms and/or carbon monoxide detectors as required by code.

Frequently Asked Questions

Q. Who decides what work will be done in my home?

- A. Acoustical treatments are determined by the TUS RSIP Team, which evaluates the needs of each home individually, on a house-by-house basis. These treatments will be reviewed with TAA staff to ensure their consistency with FAA reimbursement guidelines. Proposed treatments will then be reviewed with each homeowner before bid documents are prepared for construction.

Q. What if I want to make other repairs to my house during construction?

- A. We request you do not undertake any repairs or remodeling while the home is in the construction phase of the TUS RSIP. Improvements that are not directly related to noise reduction are outside of the project scope, are NOT covered by the project, and may NOT occur from the time TUS RSIP construction begins in your home until it is officially completed.

Q. How long will work take?

- A. Homeowners are required to be present for 10 working days (excluding weekends and holidays) once construction begins, as most homes are substantially completed within this timeframe. Substantial completion is achieved when all products required under the base contract are installed, but it does not include “punch list” time (construction review, inspection, and follow-up modifications). Any work required to be completed after the initial 10-working-day period will be scheduled with the homeowner. From start to finish, it generally requires 30-40 days to finish all the work.

Q. Are there any costs to me?

- A. The TAA and FAA pay for the basic costs for labor and materials to install sound insulation treatments. Typical costs to the homeowner would be to adjust or replace window dressings (blinds, draperies, etc.), store materials removed from the home, or prepare the home for installation of the treatments, if needed.

Q. Who does the work?

- A. The work is bid out by the TAA to insured, licensed, and bonded general contractors. Contractors bid for the work, and the contractor with the lowest, most responsive bid is awarded the job.

Q. My new windows fog up! My old ones did not. Are the new windows defective?

- A. No. The new windows are tighter-fitting, insulated windows that provide a weather-tight, energy-efficient seal. Sealing your home makes it more comfortable and quieter, but also keeps normal household moisture in. Any condensation (“fog”) on the windows is a sign of the windows’ effectiveness at restricting the escape of moisture and heat from your home.

Q. I recently installed new windows and doors. Will I be reimbursed for these improvements?

- A. Sorry, no. Improvements completed by the homeowner are not eligible for reimbursement.

Q. Will air conditioning be provided?

- A. Each home will be evaluated to determine the necessary treatments. An air conditioning system may be installed with the sound insulation package if your home does not already have one.

Q. Can I keep my old windows and doors?

- A. No. Your old windows and doors will become the property of the contractor.

Q. Do I need to be home during the construction process?

- A. Yes, you or a designated representative over the age of 18 will need to be present during the construction process. You can expect the contractor to be in your home the entire day for the first 10 days. After they have reached substantial completion, the contractor will schedule appointments with you to finish the punch-list items or, if applicable, schedule the City of Tucson Planning and Developments to conduct a permit inspection of the work undertaken on your home.

Glossary Terms

Acoustical Test Plan: The document that describes the types of homes located in the project area and the process to conduct the acoustical test that will be used to document the interior noise level.

Acoustical: Conditions or products related to hearing, noise, or sound.

Avigation Easement: The Avigation Easement will grant the use of airspace; the right of free, unrestricted, and unobstructed overflight, and the effects that may result from the over-flight of aircraft, aircraft taking off and/or landing at TUS. The easement will run in perpetuity with the property.

Bid Package: A group of houses assembled together into one construction contract.

Condensation: The result of high humidity (moisture in the air) that produces a “fog” when it hits a colder surface such as a glass window.

Day-Night Level (DNL): Average annual sound levels that represent the sound levels over a 24-hour period, while considering quiet periods as well as aircraft over-flights. For flights that occur after 10:00 p.m. and before 7:00 a.m., these events receive a 10 dB penalty. The DNL noise exposure contours in the affected residential neighborhoods are 75 DNL to 65 DNL.

Decibel (dB): A unit of measure for the vibration (low rumble or high whistle) and strength (soft or loud) of sound waves. The higher the decibel level (vibration and strength), the louder the sound. Most sounds we experience in our day-to-day lives vary between 30 dB (a typical bedroom at night) and 100 dB (inside a nightclub).

Eligibility: Qualified to participate in the TUS RSIP by having a home or property located in the project area.

Homeowner Participation Agreement: An agreement between a homeowner and TAA that authorizes the installation of specific sound insulation treatments at a given residential property.

Federal Aviation Administration (FAA): The branch of the federal government that provides funding and oversight of the TUS RSIP.

Project Team: All personnel, including program managers, architects, and engineers representing the TUS RSIP who will go to each home to gather information and make treatment recommendations.

Noise Level Reduction (NLR): Noise level reduction is measured in decibels and is defined as a constant numerical value between the interior noise level and the exterior noise level. This measurement is taken before and after acoustical treatments to determine the overall improvement in noise level reduction. This value will be used to compare the post-construction interior noise levels in the home to the FAA goal of below 45 DNL (Day-Night Level).

Noise Paths: The areas where environmental noise can travel from the outside through the home’s construction, with the greatest flow through doors, windows, vents, and/or lightly constructed wall and ceiling assemblies.

Punch List: A “to do” list made near the completion of construction work indicating the items that remain unfinished, or that do not meet the quality requirements specified in the scope of work. The Punch List must be satisfied prior to 100% completion.

RSIP: Residential Sound Insulation Program.

Sound Insulation: The application of residential sound insulation can include some or all of the following: replacing or supplementing windows and doors; installing attic insulation; caulking; and sealing. FAA residential sound insulation projects, including the TUS RSIP, are voluntary projects. Project participation is not a requirement.

Sound Level Meter: The instrument used by the acoustical consultant to measure the sound or “noise” that is occurring inside and outside the home.

TAA: Tucson Airport Authority, sponsor of the TUS RSIP.

TUS: Tucson International Airport.

Residential Sound Insulation Program

HOMEOWNER PARTICIPATION AGREEMENT

This Agreement, effective this _____ day of _____, 20____, by and between the Tucson Airport Authority (“TAA”) and _____ (“Homeowner”), owner(s) of record of the residence at _____, Arizona (“Property”), (collectively the “Parties”).

WHEREAS, the Property is owned by Homeowner and is more particularly described in Exhibit B attached hereto;

WHEREAS, the Property meets certain interior noise level criteria established by the Federal Aviation Administration (“FAA”), which qualifies it for certain sound insulation treatments to be performed at the TAA’s expense;

WHEREAS, the TAA is administering the Residential Sound Insulation Program (RSIP);

WHEREAS, such sound insulation treatments, which typically include replacement of windows and doors as well as potential installation or upgrades to the mechanical and electrical systems and additional attic insulation;

WHEREAS, the Parties have agreed on terms regarding the construction including (i) access to the Property; (ii) performance of any preliminary work necessary to prepare the Property for sound insulation treatments; and (iii) restrictions on work outside the scope of this Agreement; and

WHEREAS, the Parties acknowledge that this Agreement includes certain provisions required under the FAA grant agreement with the TAA.

NOW THEREFORE, the Parties hereto agree as follows:

I. SOUND INSULATION TREATMENTS TO THE PROPERTY

1. The TAA will contract with a qualified building contractor (“Contractor”) to perform the sound insulation treatments (“Treatments” or “Contracted Work”), as described in the Exhibit A (Sound Insulation Treatments Scope of Work) of this Agreement, at the TAA’s expense.
2. The Homeowner acknowledges that they have been shown and given a choice of Treatments and has agreed to the Treatments set forth in Exhibit A. The design of these treatments (“Design Specifications”) has been developed by the TAA’s consultant, The Jones Payne Group, Inc. (“Consultant”), to reduce interior noise to a level established by the FAA for the Tucson International Airport (TUS) RSIP in accordance with the Airport Improvement Program (AIP) Handbook, FAA Advisory Circular 5100.38d. These program requirements are located on the FAA website at the following address: http://www.faa.gov/airports/aip/aip_handbook/
3. The Homeowner has reviewed and agreed to the Design Specifications. The TAA’s Consultant will provide supervision and inspection of the Contracted Work to ensure the quality of the work and compliance with the Design Specifications. The Homeowner agrees to cooperate with Contractor in obtaining any necessary permits for the Contracted Work, the cost of which will be incurred by the Contractor. The Homeowner will be provided with a copy of the Building Permit secured for the Contracted Work prior to any work being done in accordance with the Permit and this Agreement.
4. The Homeowner agrees that all paneled wall treatments, window/door casings, moldings, trim, and other fixtures shall be finished as described in the Design Specifications. The Contractor will paint new trim and wallboard to match existing and, where work is being done on part of a wall, the full wall will be repainted to match the existing paint color.

5. The Contractor will be required to accept responsibility for carrying out the Contracted Work according to the Design Specifications. As required under Arizona law, the Contractor will be required to post bonds and carry insurance, including liability coverage for personal injury and property damage in amounts no less than \$1,000,000 per occurrence.
6. The Homeowner shall hold the Contractor solely responsible for any damage during the course of the Contracted Work. Any problems, deficiencies, or damage in connection with the Treatments must be brought to the attention of the Contractor and the TAA's Consultant as soon as possible in writing. The Homeowner must provide documentation of such problems, deficiencies, or damage in writing. The Contractor and the TAA's Consultant will respond to all reported problems and exercise all reasonable measures to resolve problems in a timely and satisfactory manner. Problems that cannot be resolved by the Contractor and the TAA's Consultant will be referred to the TAA under the provisions of Paragraph 23 hereof.
7. When all the Contracted Work is complete in accordance with the Design Specifications; all permits have been closed; Contractor certifies the "punch list" items have been completed; Homeowner has been instructed on the operation, adjustment, and maintenance of the projects, equipment, and systems; Contractor submits all warranties and operation and maintenance manuals and construction photographs; the TAA's Consultant will give final approval ("Final Approval") to the Contractor. The Contractor and the TAA's Consultant will address any incomplete work to ensure compliance with the Design Specifications. In the event the Homeowner feels that the work does not comply with the Design Specifications, the TAA's Consultant will refer the issue to the TAA under the provisions of Paragraph 23 hereof.

II. ADDITIONAL WORK OUTSIDE THE SCOPE OF THE CONTRACTED WORK

8. The Homeowner agrees not to hire the Contractor, or any other contractor, to perform any supplementary work on the Property until Final Approval of the Contracted Work.
9. Routine maintenance activities or emergency repair needed to maintain habitability within the home shall not be restricted, but the Homeowner must give reasonably advanced, written notification to the TAA, the TAA's Consultant, and the Contractor of any such work.
10. The Homeowner agrees that any work performed by any contractor or by the Homeowner subsequent to the completion of the Contracted Work that intentionally or unintentionally affects the sound insulation of the Property shall invalidate any warranties, which may be provided by the Contractor.
11. Wallpapering and window treatments shall be the Homeowner's responsibility.
12. If existing casings, moldings, trim, or paneling are damaged, they will be replaced by matching replacements if commercially available, or the closest matching substitute that is available. Woodwork, trim, and paneling beyond that required for effective sound insulation treatment will not be included in the Contracted Work.
13. The Homeowner agrees not to conduct any finish work, such as painting or wall papering or any other interior modifications until the Contracted Work has received Final Approval.

III. ACCESS TO THE HOME

14. The Homeowner agrees to provide reasonable access to the Property to the TAA's Consultant, the Contractor, and TAA representatives. Access may be required to evaluate existing conditions and to take noise measurements before and after the construction. Access may also be required 1) for measuring by contract bidders during the pre-Construction phase, 2) for Construction-related activities by the Contractor, TAA's Consultant, and TAA representatives and 3) for post-Construction quality assessment by the Contractor, TAA's Consultant, and TAA representatives during Construction.
15. All access to the Property will be at reasonable times and only by appointment with the Homeowner. The Contractor will only enter the Property with the Homeowner's express consent. The Homeowner agrees that the Homeowner or another responsible adult will be present at all times when the TAA's Consultant or Contractors are in the Property.

Homeowner, Contractor, and TAA's Consultant will follow COVID-19 safety protocols as designated by the local, state, or federal agencies.

16. The Contractor will provide the Homeowner with a schedule for Construction. The Homeowner agrees to be available for ten (10) consecutive business days from 8:00 a.m. to 5:00 p.m. for the Contracted Work to occur. In addition, the Homeowner will provide access to the Contractor as needed to correct and finish any punch list items in the ten (10) business days following Construction.

IV. PREPARATION AND PROTECTION OF PROPERTY

17. The Homeowner agrees to correct existing Building Code violations, if any, identified on Exhibit A before the start of the Contracted Work. The cost of correcting these violations shall be solely the Homeowner's responsibility. The TAA's Consultant will verify the correction of code violations before any Contracted Work begins.
18. The Homeowner agrees to perform any and all preliminary work necessary to prepare the home for Construction, such as removing all draperies, blinds or shades, and associated hardware, fittings, and dressings, and moving furniture, as directed by the TAA's Consultant.
19. The TAA's Consultant and Contractor shall take reasonable precautions to safeguard the home against damage resulting from their work. The Homeowner agrees to cover all furniture, appliances, and electronic equipment such as televisions, entertainment systems, or computers, to protect them from dust and debris and to remove and store all valuables in a safe, secure location. The Homeowner agrees to maintain homeowner's insurance coverage for personal injury and property damage for the duration of Construction on the Property.
20. If lead paint or asbestos is observed within the Property in a location such that the Contractor will come in contact with the hazard in the performance of Contracted Work, the Contractor will be responsible for removing all lead paint and asbestos required for Contracted Work to continue and said removal shall be included in the Contracted Work. The cost of the abatement shall be the responsibility of the TAA. All abatement, sealing, removal, containment, and disposal shall be done by a Contractor licensed by the State of Arizona, and in accordance with U.S. Environmental Protection Agency, State of Arizona, and local government rules, regulations, and laws, as amended.

V. AIR COOLING/VENTILATION SYSTEM

21. The Homeowner understands that the approved Design Specification may include changes or additions to the existing heating, air-cooling, and/or ventilation system. The Homeowner understands that implementation of these changes or additions may alter (increase or decrease) the home's operating costs, and that any such operating expenses shall be solely the Homeowner's responsibility. The Homeowner also understands that there may be maintenance costs associated with the proper functioning of any installed system. The Homeowner hereby assumes full responsibility for the maintenance, operation, and utility cost of all cooling or ventilation system components installed, purchased, or constructed as part of this Agreement. Neither the FAA nor the TAA bears any responsibility for the maintenance, operation, or utility cost of these systems.
22. The Homeowner hereby acknowledges that the Contracted Work performed under this Agreement may increase the tax-assessed value of the home. The Homeowner agrees that the Homeowner is solely responsible for any such increase in tax-assessed value and will not hold the FAA or the TAA responsible for any increased property tax or assessment.

VI. NON-RECOURSE AND INDEMNITY PROVISIONS

23. In the event of a dispute between the Homeowner and the Contractor as to the Contracted Work or the Treatments, including, but not limited to, the extent, quality, and/or completion of the work, the TAA's Consultant shall refer the issue in writing to the TAA for resolution. TAA representatives may meet with the Homeowner, the TAA's Consultant, and the Contractor, separately or together, to negotiate a resolution in the best interest of the Parties. The TAA may, 1) subject to availability of funding, authorize additional work, 2) confirm Final Approval of the Treatments without additional work, or 3) in its sole discretion, take such other steps deemed to be necessary and appropriate. The

decision of the TAA as to the remedy to be provided and the date of Final Approval shall be final. The provisions of this Section shall survive termination of this Agreement.

24. The Contractor will be required to provide a warranty covering its work for a period of one (1) year from Final Approval. The Homeowner will be provided with any manufacturer warranties for installed products at the time of Final Approval. If the Homeowner detects a fault in the Contracted Work within the warranty period, it shall be the Homeowner's responsibility to inform the Contractor at once in writing, with notice given to the TAA. The Homeowner shall deal directly with the Contractor with respect to warranty claims.
25. The TAA's responsibility is limited to implementing an FAA grant for a RSIP within certain residences in the vicinity of TUS. To implement said RSIP, the TAA has hired the Consultant to manage, design, and supervise the Contracted Work. The Homeowner agrees and acknowledges that the extent of the recourse they have against the TAA is limited to claims arising from the fault or negligence of the TAA itself and not that of either the Contractor or Consultant. Any TAA liability with respect to the RSIP is limited to one (1) year after Final Approval of the Contracted Work at the Property.
26. The Homeowner hereby agrees to reimburse the TAA for any costs, expenses, or damages affiliated with Contracted Work arising from the Homeowner's fault or negligence. Such costs, expenses, or damages include, but are not limited to, claims arising out of failure to provide access to the Property, delaying Contracted Work, and damaging any materials or equipment during Contracted Work.
27. The TAA and the TAA's Consultant have confidence in the ability of the RSIP to improve the quality of life in your home. However, no representation is made, and the Homeowner understands that the sound insulation improvements will achieve any specific noise level reduction or will meet any recommended FAA noise standard.

VII. COMPLIANCE WITH THE FAA GRANT AGREEMENT

28. Funds for the Contracted Work are provided under a grant from the FAA. This Agreement between the TAA and the Homeowner is subject to the terms and provisions of the FAA Grant Agreement including:
 - (1) The Homeowner must inspect the work during and after completion, as the FAA or the TAA may reasonably request, and inform the TAA's Consultant in writing of any work that does not comply with the Design Specifications.
 - (2) The Homeowner is responsible for maintenance and operation of the items installed, purchased, or constructed under this Agreement. Neither the FAA nor the TAA bears any responsibility for the maintenance, operation, or replacement of these items.
 - (3) If federal funds for the Contracted Work are transferred by the TAA to the Homeowner or the owner's agent, the Homeowner shall agree to maintain and make available to the FAA or the TAA, upon reasonable request, records disclosing the amount of funds received and the disposition of those funds. *(NOTE: Funds will not be transferred directly to the Homeowner by the TAA on this project, but this clause is required under the FAA Grant Agreement.)*
 - (4) Any right to sue or otherwise make a claim against the TAA for adverse noise impact will be abrogated if the Homeowner or his family members, agents, invitees, heirs, or successors in interest deliberately or willfully reduce the effectiveness of the Treatments during the useful life of such Treatments. This obligation shall remain in effect through the useful life of the Treatments, but not to exceed 20 years from the date of the TAA's acceptance of the FAA grant for the project.

VIII. MISCELLANEOUS

29. This Agreement contains the entire agreement between the Parties and supersedes any prior or inconsistent agreements, negotiations, representations, and promises, written or oral.
30. This Agreement and the rights and obligations of the Parties hereto shall be governed in accordance with the laws of the State of Arizona.

31. The Parties hereto hereby waive trial by jury as to any and all claims, disputes, and causes of action arising out of this Agreement.
32. If any term of this Agreement is held by any court or other judicial tribunal with competent jurisdiction to be illegal, invalid or otherwise unenforceable, it shall be severed from the remaining terms which shall remain in full force and effect.
33. All the covenants, stipulations, agreements, and obligations set forth in this Agreement shall extend to and be binding upon the legal representatives, heirs, successors, and assigns of the respective Parties hereto.
34. This Agreement may be executed in several counterparts and so executed shall constitute one Agreement binding on all the Parties hereto, even though all the Parties may not be signatory to the original or the same counterpart. Facsimile, electronically scanned, and digital signatures shall be deemed to be as valid as original signatures for purposes of execution of the Agreement.

IX. EXHIBITS

- A. Exhibit A: Sound Insulation Treatments Scope of Work
- B. Exhibit B: Legal Description

In Witness Whereof, the parties have executed this Agreement as of the date first above written.

HOMEOWNER(S)

Signature

Name

Signature

Name

TUCSON AIRPORT AUTHORITY

[INSERT NAME]

[INSERT TITLE]

Sample Avigation Easement

DECLARATION OF AVIGATION EASEMENT

THIS DECLARATION OF AVIGATION EASEMENT ("Declaration"), is made this day _____ of _____, 20____, a(n)_____ ("Declarant").

- A. Declarant is the sole record owner in fee simple of certain real property (the "Property") located in Pima County, Arizona which is more particularly described in Exhibit "A" attached hereto; and
- B. The Property is located in the proximity of Tucson International Airport (TUS) (as it now exists or may hereafter be enlarged and/or developed, the "Airport"); and
- C. The Property is now and in the future will be subject to noise and other effects emanating from aircraft operating at or departing from or arriving at the Airport, and changes in airport layout or operating procedures could result in increased noise influences.

NOW THEREFORE, for good and sufficient consideration, the receipt and adequacy of which Declarant hereby acknowledges, Declarant hereby covenants and declares that all of the Property shall be held, sold, used, and conveyed subject to the following avigation easement, which shall run with the Property and be binding on all occupants thereof and on all parties having any right, title or interest in the Property or any part thereof, their heirs, successors and assigns, grantees, invitees, and tenants.

DECLARANT HEREBY DECLARES, ESTABLISHES, GRANTS AND CONVEYS to the Tucson Airport Authority, the City of Tucson and all persons lawfully using the Airport ("Benefited Parties") the right to operate aircraft in and the right to cause in the airspace above or near the Property such noise, vibrations, fumes, vapors, smoke, deposits of dust or other particulate matter, fuel particles and all other effects as may be inherent in the operation of aircraft, now known or hereafter used, while landing on, taking off from, or operating at the Airport, as long as such operations are in compliance with applicable federal, state, and local regulations concerning operation of aircraft and use of the Airport.

As used herein, the term "aircraft" shall mean any and all types of aircraft, whether not in existence or hereafter manufactured and developed, to include without limitation, jet aircraft, propeller driven aircraft, civil aircraft, military aircraft, commercial aircraft, helicopters, and all types of aircraft or vehicles now in existence or hereafter developed, regardless of existing or future noise levels, for the purpose of transporting persons or property through the air.

Nothing contained herein shall be construed to restrict Declarant from building any structure on the Property, which complies with all applicable laws of the governmental agencies having jurisdiction regarding said construction, so long as any such structure does not, because of its height or function, restrict or impede usage of the Airport by aircraft landing or taking off in the same manner as if the structure were not in existence.

This Declaration of Easement shall bind Declarant, its successors, assigns, invitees and tenants, and their respective successors and assigns, and all persons from time to time occupying or using the Property or any portion thereof. The acceptance by any person or entity of any right of use, deed, lease, mortgage, or conveyance of any interest in or privilege pertaining to the Property whatsoever shall constitute acknowledgment of the terms of this Declaration and agreement to be bound by all terms hereof.

This Declaration of Easement shall be a covenant running with the land described in Exhibit A and shall run to the benefit of the above-described Benefited Parties, their successors and assigns.

DECLARANT:

By: _____

Name: _____

Title: _____

STATE OF ARIZONA)
)
ss, COUNTY OF PIMA)

The foregoing instrument was acknowledged before me this _____ day of _____,
20_____ by _____, the _____ of
_____ for and on behalf of Declarant.

Notary Public

My commission expires: _____

EXHIBIT A

(Legal Description)