Reid Hillview Airport
FAR Part 150
Noise Compatibility Program - 2002

Prepared for:
The County of Santa Clara

Prepared by:
Harris Miller Miller & Hanson Inc.

In association with:
Shultz Moen Associates
3D Vision Inc.
CERTIFICATION

This is to certify the following: (1) that the Noise Compatibility Program, Noise Exposure Maps, and associated documentation for Reid-Hillview Airport submitted in this volume to the Federal Aviation Administration under Federal Aviation Regulations Part 150, Subpart B, Section 150.21, are true and complete under penalty of 18 U.S.C Part 1001; (2) all interested parties have been afforded opportunity to submit their views, data, and comments concerning the correctness and adequacy of the existing and forecast conditions noise exposure map, and of the descriptions of forecast aircraft operations; and (3) the proposed Noise Compatibility Program elements are recommended by the County of Santa Clara, Roads and Airports Department, and not by a consultant or other third party.

By:

Title:

Date:

Airport Name: Reid-Hillview Airport
Airport Owner: County of Santa Clara, California
Airport Operator: County of Santa Clara, California

Address: Roads and Airports Department
101 Skyport Drive
San Jose, CA 95110

(408) 929-1060
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HARRIS MILLER MILLER & HANSON INC.
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<tbody>
<tr>
<td>AC</td>
<td>Advisory Circular</td>
</tr>
<tr>
<td>ALPA</td>
<td>Airline Pilots Association</td>
</tr>
<tr>
<td>ANCA</td>
<td>Airport Noise and Capacity Act of 1990</td>
</tr>
<tr>
<td>AOPA</td>
<td>Aircraft Owners and Pilot’s Association</td>
</tr>
<tr>
<td>ATCT</td>
<td>Air Traffic Control Tower</td>
</tr>
<tr>
<td>Caltrans</td>
<td>California Department of Transportation</td>
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<tr>
<td>CNEL</td>
<td>Community Noise Equivalent Level</td>
</tr>
<tr>
<td>DNL</td>
<td>Day-Night Average Sound Level</td>
</tr>
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<td>FAA</td>
<td>Federal Aviation Administration</td>
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<td>FAR</td>
<td>Federal Aviation Regulation</td>
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<td>Federal Interagency Committee on Noise</td>
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<td>FICUN</td>
<td>Federal Interagency Committee on Urban Noise</td>
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<tr>
<td>FMS</td>
<td>Flight Management System</td>
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<td>GA</td>
<td>General Aviation</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information System</td>
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<tr>
<td>HMMH</td>
<td>Harris Miller Miller and Hanson Inc.</td>
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<tr>
<td>HUD</td>
<td>Department of Housing and Urban Development</td>
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<tr>
<td>IFR</td>
<td>Instrument Flight Rules</td>
</tr>
<tr>
<td>INM</td>
<td>FAA’s Integrated Noise Model</td>
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<tr>
<td>Leq</td>
<td>Equivalent Sound Level</td>
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<tr>
<td>Lmax</td>
<td>Maximum A-weighted Sound Level</td>
</tr>
<tr>
<td>NBAA</td>
<td>National Business Aviation Association</td>
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<td>NCP</td>
<td>Noise Compatibility Program</td>
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<td>NEM</td>
<td>Noise Exposure Map</td>
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<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
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<tr>
<td>NLR</td>
<td>Noise Level Reduction</td>
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<tr>
<td>REC</td>
<td>Real Estate Commission</td>
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<tr>
<td>SEL</td>
<td>Sound Exposure Level</td>
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<tr>
<td>SID</td>
<td>Standard Instrument Departure</td>
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<tr>
<td>VFR</td>
<td>Visual Flight Rules</td>
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1. Introduction

Part 150 of the Federal Aviation Regulations (FAR), "Airport Noise Compatibility Planning", sets forth standards for airport operators to use in documenting noise exposure in the airport environs and establishing programs to minimize noise-related land use incompatibilities. This document is the second volume of documentation for a Part 150 submission to the Federal Aviation Administration (FAA) for Reid-Hillview Airport (RHV). FAA received the first volume, RHV’s Noise Exposure Map 2002, for review in July 2002.

1.1. FAR Part 150 Overview

FAR Part 150 is a voluntary program administered by the FAA. It sets forth a process for airport proprietors to follow in developing and obtaining FAA approval of programs to reduce or eliminate incompatibilities between airport-generated noise and surrounding land uses. FAR Part 150 prescribes specific standards and systems for:

- Measuring noise
- Estimating cumulative noise exposure using computer models
- Describing noise exposure (including instantaneous, single event, and cumulative levels)
- Coordinating Noise Compatibility Program (NCP) development with local land use officials and other interested parties
- Documenting the analytical process and development of the compatibility program
- Submitting documentation to the FAA
- FAA and public review processes and FAA approval or disapproval of the submission

A formal submission to the FAA under FAR Part 150 includes two volumes of documentation: (1) a Noise Exposure Map (NEM) and (2) an NCP, as described in the following subsections.

1.1.1. Noise Exposure Map

The NEM describes the airport layout and operation, aircraft-related noise exposure, land uses in the airport environs, and the resulting noise/land use compatibility situation. The NEM must address two time frames: (1) data representing the year of submission (the "existing conditions") and (2) the fifth calendar year following the year of submission (the "forecast conditions"). It includes graphic depiction of existing and future noise exposure resulting from aircraft operations, and of land uses in the airport environs. The NEM documentation describes the data collection and analysis undertaken in its development. This document incorporates the NEM documentation, by reference.

The RHV NEM 2002, recently submitted (July 2002) to the FAA, presented existing conditions noise contours for 2002, and five year forecast case contours for 2007. Chapter 4 of this volume presents abated NEMs for 2007, assuming the implementation of this NCP.

1 14 CFR Part 150
1.1.2. **The Noise Compatibility Program**

The NCP is essentially a list of actions the airport proprietor proposes to undertake to minimize existing and future noise/land use incompatibilities. The NCP documentation must recount the development of the program, including a description of all measures considered, the reasons that individual measures were accepted or rejected, how measures will be implemented and funded, and the predicted effectiveness of individual measures and the overall program.

Official FAA acceptance of the NEM and approval of the NCP does not eliminate requirements for formal environmental assessment of any proposed actions pursuant to requirements of the National Environmental Policy Act (NEPA) or California Environmental Quality Act (CEQA). However, acceptance of the submission is a prerequisite to application for funding of implementation actions.

1.1.3. **FAR Part 150 Guidance on NCPs**

To receive FAA approval, this NCP must meet FAR Part 150 requirements. FAR Part 150 directs the airport operator to evaluate the noise control actions and develop an NCP which:

- Reduces existing non-compatible uses and prevents or reduces the probability of the establishment of additional non-compatible uses
- Does not impose an undue burden on interstate and foreign commerce
- Provides for revision (of the program if the noise exposure map is revised)
- Is not unjustly discriminatory
- Does not degrade safety or adversely affect the safe and efficient use of airspace
- To the extent practicable, meets both local needs and needs of the national air transportation system, considering tradeoffs between economic benefits derived from the airport and the noise impact
- Can be implemented in a manner consistent with all the powers and duties of the Administrator of FAA

FAR Part 150 states that cumulative aircraft noise exposure of Day-Night Average Sound Level (DNL) 65 dB and greater are incompatible with noise sensitive uses such as homes, schools, and churches. For the State of California, the FAA allows the exchange of DNL with the Community Noise Equivalent Level (CNEL). FAR Part 150 also permits a reasonably determined, locally adopted CNEL value to be used in lieu of the federal DNL 65 dB criteria. The County of Santa Clara Airport Land Use Commission (ALUC) adopted a Land Use Plan for Areas Surrounding Santa Clara County Airports in September 1992. The adopted plan utilizes CNEL 60 dB as a local planning standard for certain land uses.

Part 150 studies quantify incompatibilities by counting the number of homes, schools, and churches within the incompatible CNEL areas. The number of impacted people is estimated by multiplying the average number of people per dwelling unit by the number of dwelling units within the incompatible CNEL areas. Therefore, the basis of evaluating the
benefits of proposed noise abatement measures is to compare the number of people and/or dwellings impacted under the abated CNEL contours to the number of people and/or dwellings impacted under base-case noise contours. Efforts to reduce the number of impacted people/dwellings usually focus on reducing the highest levels of impact first.

1.2. Project Roles and Responsibilities

Several groups had major roles in the development of this NCP, including the County of Santa Clara Roads and Airports Division, Reid-Hillview Airport, The Airport Land Use Commission (ALUC), the consulting team, the County Board of Supervisor’s office, and the FAA.

1.2.1. County of Santa Clara Roads and Airports

As the "airport operator", the County of Santa Clara has authority over the entire RHV Part 150 Study, including ultimate responsibility for determining what elements are included in the NCP. The County is also responsible for pursuing implementation of ultimately adopted measures.

The County retained a team of consultants to conduct the technical work required to fulfill FAR Part 150 analysis and documentation requirements. Section 1.2.2 describes the composition of the consulting team and the general assignment of responsibilities among its members.

The County Board of Supervisors’ Offices have participated in the FAR Part 150 process to ensure that appropriate outside entities and groups were given official representation in the study process. The involvement of the Board of Supervisors’ Offices is a key element of a comprehensive public involvement program that the County conducted over the course of the study, as described in Chapter 7.

1.2.2. Consulting Team

The County of Santa Clara Roads and Airports retained a team of consultants to conduct the necessary technical work to fulfill FAR Part 150 analysis and documentation requirements.

- Harris Miller Miller & Hanson Inc. (HMMH): The consulting firm of HMMH has overall project management responsibility for the RHV Part 150 Study. HMMH also has responsibility for all noise-related technical elements and final study documentation.

- Shutt Moen Associates: Shutt Moen Associates is a subcontractor to HMMH with responsibility for aviation planning, airspace analysis, and land use planning review.

- 3D Visions: 3D Visions is also a subcontractor to HMMH with responsibility for the community outreach program, assessing current land uses within the study area, land use planning, GIS analysis, and for preparation of major study graphics.
1.2.3. Federal Aviation Administration

The FAA has ultimate review authority over the NCP submitted under FAR Part 150. Their review encompasses the details of technical documentation as well as broader issues of safety and constitutionality of recommended noise abatement measures.

FAA involvement includes participation by staff from at least three levels in the agency: (1) local, (2) regional, and (3) national.

- The Reid-Hillview Air Traffic Control Tower (ATCT) controls operations into and out of RHV. The ATCT staff have provided significant input in several areas, including: operational data from their files, judgments regarding safety and capacity effects, and implementation issues related to alternate noise abatement measures.

- On a local level, the San Francisco Airports District Office (ADO) has monitored the study process and has attended study-related public meetings. The ADO received the NEM submittal and will receive the submittal of the NCP to begin the review process.

- On a regional level, the FAA's Western-Pacific Airports Division also has several roles. The Air Traffic Division staff will support the ATCT, with final review and decision authority over changes in flight procedures. The Airports Division will determine whether or not the NEM satisfies all requirements and will conduct the initial FAA review of the NCP submission.

- On a national level, the FAA's Washington Headquarters performs the final review of the NEM and NCP submissions for technical and legal adequacy.
1.3. Development of the NCP

The development of an NCP begins with a screening of all actions that could reduce potential land use incompatibilities identified in the NEM. Noise compatibility measures fall into two principal categories: (1) "noise abatement" measures to reduce the size or change the shape of the noise contours so as to minimize incompatibilities and (2) "land use" measures to correct current incompatibilities and to prevent future incompatibilities. Most NCPs also include a third category of "continuing program measures" related to the ongoing implementation and monitoring of the noise abatement and land use measures.

FAR Part 150 requires that an airport proprietor consider at least the following seven categories of noise compatibility planning alternatives.2

1. Land acquisition and interests therein
2. Barriers, shielding, public building soundproofing
3. Preferential runway system
4. Flight procedures
5. Restrictions on type/class of aircraft
   a. deny use based on Federal standards
   b. capacity limits based on noisiness
   c. noise abatement procedures
   d. landing fees based on noise or time
   e. curfews
6. Other actions with beneficial impact
7. Other FAA recommendations

Category 1 addresses only land use measures. Category 2 addresses both noise abatement measures (barriers) and land use measures (soundproofing). Categories 3, 4, and 5 address only noise abatement measures. As discussed in Chapters 3 and 4, this study evaluated measures from all seven categories, and other potentially beneficial actions proposed by the FAA, other study participants, and the public.

It is appropriate for NCP development to focus initially on noise abatement measures, which tend to be less controversial and less expensive to implement than many land use measures. The NCP process then focuses on land use measures, to address remaining land use incompatibilities. Finally, the process addresses continuing program measures that are necessary to implement the measures and to monitor the results.

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2 Paragraphs B150.7(b) (1) through (7) of FAR Part 150 list these seven categories.
The project study team (i.e., the County staff and their consultants) undertook the development of the NCP for RHV following four principal steps:

- Review of existing noise abatement alternatives
- Analysis of noise abatement alternatives
- Analysis of land use alternatives
- Recommendation of the NCP

The consultants prepared background analysis and documentation for each of the first three steps and presented the results at an advertised public meeting. The project team prepared and distributed informational packets prior to each public meeting. All interested parties had opportunity to provide written comments during, and subsequent to, the meeting. The County held a final public hearing on this NCP on September 18, 2002.

This volume summarizes the information and analysis presented at the public meetings and documents the public involvement process. The NEM includes copies of meeting minutes, sign-in sheets, and comments sheets for the first four public meetings and are incorporated here by reference. Comments received at the final public meeting and final public hearing are discussed in Chapter 7.

1.4. Noise Compatibility Program Checklist

The FAA has distributed an implementation memorandum that includes a checklist of required items associated with the NCP. The FAA uses this checklist in reviewing the NCP submissions. The FAA prefers that the FAR Part 150 NCP submission include copies of the checklists. Table 1.1 (at the end of this section) presents this checklist completed to the extent feasible with the the location(s), in this document, of each required item.
Table 1-1: FAR Part 150 NCP Checklist (page 1 of 5)
Source: Federal Aviation Administration

<table>
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<tr>
<th>Airport Name: Reid-Hillview Airport</th>
<th>REVIEWER:</th>
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<tr>
<td>I. IDENTIFICATION and SUBMISSION of PROGRAM:</td>
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<td>A. Submission is properly identified:</td>
<td></td>
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<tr>
<td>1. FAR 150 NCP?</td>
<td>Yes</td>
</tr>
<tr>
<td>2. NEM and NCP together?</td>
<td>No</td>
</tr>
<tr>
<td>3. Program Revision?</td>
<td>No</td>
</tr>
<tr>
<td>B. Airport and Airport Operator's name identified?</td>
<td>Yes</td>
</tr>
<tr>
<td>C. NCP transmitted by airport operator's cover letter?</td>
<td>Yes</td>
</tr>
<tr>
<td>II. CONSULTATION: [150.23]</td>
<td></td>
</tr>
<tr>
<td>A. Documentation includes narrative of public participation and consultation process?</td>
<td>Yes</td>
</tr>
<tr>
<td>B. Identification of consulted parties:</td>
<td></td>
</tr>
<tr>
<td>1. all parties in 150.23 c consulted?</td>
<td>Yes</td>
</tr>
<tr>
<td>2. public and planning agencies identified?</td>
<td>Yes</td>
</tr>
<tr>
<td>3. agencies in 2., above, correspond to those indicated on the NEM?</td>
<td>Yes</td>
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<tr>
<td>C. Satisfies 150.23(d) requirements:</td>
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</tr>
<tr>
<td>1. documentation shows active and direct participation of parties in B., above?</td>
<td>Yes</td>
</tr>
<tr>
<td>2. active and direct participation of general public?</td>
<td>Yes</td>
</tr>
<tr>
<td>3. participation was prior to and during development of NCP and prior to submittal to FAA?</td>
<td>Yes</td>
</tr>
<tr>
<td>4. indicates adequate opportunity afforded to submit views, data, etc.?</td>
<td>Yes</td>
</tr>
<tr>
<td>D. Evidence included of notice and opportunity for a public hearing on NCP?</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Table 1.1: FAR Part 150 NCP Checklist (page 2 of 5)

**Source:** Federal Aviation Administration

<table>
<thead>
<tr>
<th>Airport Name: Reid-Hillview Airport</th>
<th>REVIEWER:</th>
<th>Yes/No</th>
<th>Page/Other Reference</th>
<th>Notes/ Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E. Documentation of comments:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. includes summary of public hearing comments, if hearing was held?</td>
<td>Yes</td>
<td>Chapter 7 Appendix C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. includes copy of all written material submitted to operator?</td>
<td>Yes</td>
<td>Appendix C</td>
<td>In NEM, incorp by reference</td>
<td></td>
</tr>
<tr>
<td>3. includes operator's response/disposition of written and verbal comments?</td>
<td>Yes</td>
<td>Appendix C</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F. Informal agreement received from FAA on flight procedures?</strong></td>
<td>Yes</td>
<td></td>
<td>FAA participated in a draft LOA</td>
<td></td>
</tr>
</tbody>
</table>

### III. NOISE EXPOSURE MAPS: [150.23, B150.3; 150.35(f)] (This section of the checklist is not a substitute for the Noise Exposure Map checklist. It deals with maps in the context of the NCP submission.)

**A. Inclusion of NEMs and supporting documentation:**

| 1. Map documentation either included or incorporated by reference? | Yes | Chapter 1 and Chapter 6 | NEM Submitted to FAA in Jul 02 |
| 2. Maps previously found in compliance by FAA? | | | |
| 3. Compliance determination still valid? | | | |
| 4. Does 180-day period have to wait for map compliance finding? | Yes | Chapter 1 | |

**B. Revised NEMs submitted with program: (Review using NEM checklist if map revisions included in NCP submittal)**

| 1. Revised NEMs included with program? | Yes | Chapter 4 | |
| 2. Has airport operator requested FAA to make a determination on the NEM(s) when NCP approval is made? | No | NEM, Chapter 6 | NEM Submitted to FAA in Jul 02 |

**C. If program analysis uses noise modeling:**

| 1. INM, HNM or FAA-approved equivalent? | Yes | Chapter 4 | INM 6.0b |
| 2. Monitoring in accordance with A150.5? | Yes | NEM, Chapt 3 | |

**D. Existing condition and 5-year maps clearly identified as the official NEMs?**

| Yes | | Submitted to FAA in Jul 02 |
### Table 1.1: FAR Part 150 NCP Checklist (page 3 of 5)

**Source:** Federal Aviation Administration

<table>
<thead>
<tr>
<th>Airport Name: Reid-Hillview Airport</th>
<th>REVIEWER:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes/No/NA</td>
</tr>
</tbody>
</table>

#### IV. CONSIDERATION of ALTERNATIVES: [B150.7, 150.23(e)]

**A.** At a minimum, are the alternatives below considered?

1. land acquisition and interests therein, including air rights, easements, and development rights? **Yes** Chapter 6

2. barriers, acoustical shielding, public building soundproofing **Yes** Chapter 6

3. preferential runway system **Yes** Chapter 5

4. flight procedures **Yes** Chapter 5

5. restrictions on type/class of aircraft (at least one restriction below must be checked):
   a. deny use based on Federal standards
   b. capacity limits based on noisiness
   c. noise abatement takeoff/approach procedures
   d. landing fees based on noise or time of day
   e. nighttime restrictions **Yes** Chapter 5

**B.** Responsible implementing authority identified for each considered alternative? **Yes**

**C.** Analysis of alternative measures:

1. measures clearly described? **Yes**

2. measures adequately analyzed? **Yes**

3. adequate reasoning for rejecting alternatives? **Yes**

**D.** Other actions recommended by the FAA? **NA**

#### V. ALTERNATIVES RECOMMENDED for IMPLEMENTATION: [150.23(e), B150.7(c), 150.35(b), B150.5]

**A.** Document clearly indicates:

1. alternatives recommended for implementation? **Yes** Chapter 3

2. final recommendations are airport operator's, not those of consultant or third party? **Yes** Chapter 3 and Certification Sheet
Table 1.1: FAR Part 150 NCP Checklist (page 4 of 5)
Source: Federal Aviation Administration

<table>
<thead>
<tr>
<th>Airport Name: Reid-Hillview Airport</th>
<th>REVIEWER:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes/No/NA</td>
<td>Page/Other Reference</td>
</tr>
</tbody>
</table>

**B. Do all program recommendations:**

1. relate directly or indirectly to reduction of noise and non-compatible land uses? Yes

2. contain description of contribution to overall effectiveness of program? Yes

3. noise/land use benefits quantified to extent possible? Yes

4. include actual/anticipated effect on reducing noise exposure within non-compatible areas shown on NEM? Yes

5. effects based on relevant and reasonable expressed assumptions? Yes

6. have adequate supporting data to support its contribution to the noise/land use compatibility? Yes

**C. Analysis appears to support program standards set forth in 150.35(b) and B150.5?** Yes

**D. When use restrictions are recommended:**

1. Are alternatives with potentially significant noise/compatible land use benefits thoroughly analyzed so that appropriate comparisons and conclusions can be made? Yes

2. use restrictions coordinated with APP-600 prior to making determination on start of 180-days? Yes

**E. Do the following also meet Part 150 analytical standards?:**

1. formal recommendations which continue existing practices? Yes

2. new recommendations or changes proposed at end of Part 150 process? Yes

**F. Documentation indicates how recommendations may change previously adopted plans?** Yes
Table 1.1: FAR Part 150 NCP Checklist (page 5 of 5)
Source: Federal Aviation Administration

<table>
<thead>
<tr>
<th>G. Documentation also:</th>
<th>Yes/No/NA</th>
<th>Page/Other Reference</th>
<th>Notes/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. identifies agencies which are responsible for implementing each recommendation?</td>
<td>Yes</td>
<td>Chapter 3</td>
<td></td>
</tr>
<tr>
<td>2. indicates whether those agencies have agreed to implement?</td>
<td>Yes</td>
<td>Sec. 3.5.3</td>
<td></td>
</tr>
<tr>
<td>3. indicates essential government actions necessary to implement recommendations?</td>
<td>Yes</td>
<td>Chapter 3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>H. Time frame:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. includes agreed-upon schedule to implement alternatives?</td>
<td>Yes</td>
</tr>
<tr>
<td>2. indicates period covered by the program?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I. Funding/Costs:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. includes costs to implement alternatives?</td>
<td>Yes</td>
</tr>
<tr>
<td>2. includes anticipated funding sources?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

| VI. PROGRAM REVISION: [150.23(e)(9)] Supporting documentation includes provision for revision? | Yes | Sec. 3.4.8 |

Airport Name: Reid-Hillview Airport
1.5. **Organization of Noise Compatibility Program Documentation**

The balance of this document is organized into the following chapters:

- Chapter 2: Existing Noise Compatibility Measures
- Chapter 3: Proposed Elements of the Noise Compatibility Program
- Chapter 4: Abated Noise Exposure Maps with Implementation of Noise Compatibility Program
- Chapter 5: Screening of Potential Noise Compatibility Measures
- Chapter 6: Land Use Data and Discussion
- Chapter 7: Public Involvement
2. **Existing Noise Compatibility Measures**

This project is the first Part 150 Study at RHV. Therefore, no “official” noise compatibility program exists. However, the County of Santa Clara Department of Roads and Airports developed a noise abatement handout for distribution to all pilots who use RHV. The handout (Appendix A), titled “Reid-Hillview Airport Noise Abatement and Traffic Pattern Information” describes the existing noise abatement procedures. The County also has a signed Letter of Agreement, revised January 1, 2002, governing noise abatement procedures for helicopter operations at RHV (Appendix B). The procedures described in the pilot handout and in the signed Letter of Agreement are considered, for the purposes of this Part 150 Study, the existing noise abatement measures.

The following sections summarize: (1) the existing noise abatement measures, (2) the existing land use measures, and (3) the existing continuing program measures.

### 2.1. Existing Aircraft Noise Abatement Measures

#### 2.1.1. **RHV Noise Abatement and Traffic Pattern Pilot Handout**

- **Quiet One Departure**
  
  For aircraft departing Runway 31R; after crossing the airport boundary at Ocala Avenue, make a 20 degree right turn to a heading of 330 degrees (approximately a seven second standard rate turn).

- **IFR Departures**

  Please give consideration to your noise impact. Climb to 500 feet before making any turns. High performance aircraft please use low noise settings.

- **Arrivals**

  Aircraft approaching from the north and northwest (Sterling Suites and Calaveras Reservoir), watch out for outbound aircraft turning right for noise abatement and to avoid the San Jose Airport Radar Surveillance Area (ARSA).

#### 2.1.2. **Helicopter Operations at RHV Letter of Agreement**

The Helicopter Operations at Reid-Hillview Airport Letter of Agreement contains the following two noise abatement measures:

- Helicopter operations are restricted to runways between 6:00 PM and 7:00 AM
- Helicopters are requested to avoid the following areas:
  1. D.J. Meyer Community School
  2. Clyde Fischer Middle School
  3. Mobile home park, Eastridge Mobile Estates, located south of tower
  4. Overfelt High School
2.2. Existing Compatible Land Use Measures

The County of Santa Clara ALUC adopted a Land Use Plan for Areas Surrounding Santa Clara County Airports in September 1992. State of California legislation specifically indicates that the ALUC has no control over existing incompatible land uses. Their jurisdiction is strictly limited to new uses in the vicinity of the airports. The ALUC has adopted a Land Use Compatibility Chart for projects in the vicinity of San Jose International Airport, which complies with California Airport Noise Standards, Title 21, of the California Administrative Code. At General Aviation Airports, including RHV, the same land use restrictions apply, but for a lower CNEL range as depicted in Figure 2.1.

From Figure 2.1, the following measures are detailed for new land uses in the vicinity of RHV:

- Residential and Educational Facilities Land Use
  Residential and educational facilities land uses are satisfactory outside of the 60 dB CNEL contours. Within the 60 dB to 65 dB CNEL contours, land use is allowable with normal construction, windows closed, forced air ventilation. However, outdoor activity may be interrupted. Although not specifically identified in the plan, mobile homes likely do not meet the “normal construction” requirements. Therefore, mobile homes should be prohibited inside the 60 dB CNEL contours. Residential and educational facilities land uses are to be avoided inside the 65 dB CNEL contours unless related to airport service.

- Commercial and Recreation Land Use
  Commercial and recreational land uses are satisfactory outside of the 65 dB CNEL contours. Within the 65 dB to 75 dB CNEL contours, commercial and recreational land uses are cautioned and noise insulation needs are to be reviewed carefully. Commercial and recreational land uses are to be avoided inside the 75 dB CNEL contours unless related to airport service.

- Industrial Land Use
  Industrial land uses are satisfactory outside of the 70 dB CNEL contours. Within the 70 dB to 80 dB CNEL contours, industrial land uses are cautioned and noise insulation needs are to be reviewed carefully. Industrial land uses are to be avoided inside the 80 dB CNEL contours unless related to airport service.

- Livestock Land Use
  Livestock land uses are satisfactory outside of the 75 dB CNEL contours and livestock land uses are to be avoided inside the 75 dB CNEL contours unless related to airport service.
Figure 2.1: Land Use Compatibility for Aircraft Noise in the Vicinity of Santa Clara County General Aviation Airports

Source: Santa Clara County ALUC Land Use Plan for Area Surrounding Santa Clara County Airports

Table 2
LAND USE COMPATIBILITY CHART FOR AIRCRAFT NOISE IN THE VICINITY OF COUNTY GENERAL AVIATION AIRPORTS

<table>
<thead>
<tr>
<th>GENERALIZED LAND USE</th>
<th>55</th>
<th>60</th>
<th>65</th>
<th>70</th>
<th>75</th>
<th>80</th>
<th>85</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schools, Libraries, Churches, Cultural Centers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Space/Agriculture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Livestock</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recreation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* PALO ALTO, REID-HILLVIEW & SOUTH COUNTY AIRPORTS

Legend:
- Satisfactory
- Allowable with normal construction, windows sealed, forced air ventilation, outdoor activity may be interrupted
- Caution, review noise insulation needs carefully
- Avoid land use unless related to airport service
• Open Space/Agriculture

Open space/agriculture land uses are satisfactory outside of the 85 dB CNEL contours. The County intends to utilize the ALUP as the local land use standards under Part 150 and mitigating according to these standards described above.

2.3. Existing Continuing Program Measures

Since this Part 150 Study is the first to be completed at RHV, no official continuing program measures are yet in place. However, the pilot handout described above keeps pilots aware of the existing noise abatement measures in effect.
3. Proposed Elements of the Noise Compatibility Program

The NCP for RHV includes 32 measures: 13 noise abatement measures, 9 land use measures, and 11 continuing program measures. Table 3.2 lists the noise abatement measures, Table 3.3 lists the land use measures, and Table 3.4 lists the continuing program measures.

As noted in Section 1.2.1, the County of Santa Clara has overall responsibility for the conduct of the RHV Part 150 Study, including ultimate responsibility for determining the measures to be included in the NCP. All of the final NCP measures that this document proposes for implementation, as approved by the Board of Supervisors, are the recommendations of the County of Santa Clara, and not those of the project consultants or any other third party. See checklist item V.A.2, page 9.

Sections 3.2, 3.3, and 3.4 summarize the noise abatement, land use, and continuing program measures, respectively, that the County proposes for inclusion in the NCP. Section 3.5 summarizes the NCP implementation documentation requirements set forth in the FAA's NCP checklist. These sections include some new measures that were developed since the last public meeting.

3.1. Overall Benefits of the Proposed Noise Compatibility Program

This NCP will reduce incompatible land use in the RHV environs by (1) the implementation of noise abatement measures, which decreases the size of the CNEL contours and (2) the adoption of remedial and preventive land use measures to mitigate existing incompatibilities and deter future incompatibilities.

Table 3.1 summarizes the residential population for the five-year forecast contours under the current operations and the proposed NCP. The bottom line of the table summarizes the overall benefit of the noise abatement elements of the program. The net effect is approximately a 38.1% reduction in affected population within the 2007 60-dB noise contours.

Table 3-1: Comparison of the Estimated Residential Population for the Year 2007 under Current Conditions and the Proposed NCP

<table>
<thead>
<tr>
<th>Case (CNEL 60 dB or Greater)</th>
<th>Year 2007 Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Operating Conditions</td>
<td>4,039</td>
</tr>
<tr>
<td>Proposed NCP Operating Conditions</td>
<td>2,499</td>
</tr>
<tr>
<td>Reduction (Effect of NCP)</td>
<td>1,540</td>
</tr>
</tbody>
</table>

Source: 3D Visions
3.2. Noise Abatement Measures

Noise abatement measures reduce aircraft noise or shift the noise away from sensitive areas. They include five principal categories of options: (1) preferential runway use options; (2) changes in cockpit flight procedures (e.g., power settings, rates of climb); (3) changes in flight track geometry or flight track usage; (4) airport use restrictions (e.g., limitations on the time or frequency of operations for all aircraft, or for noisier classes of aircraft); and (5) changes in airport layout which help to divert noise from sensitive areas (e.g., new or revised runways, runup areas, or noise barriers). These five categories cover the range of noise abatement alternatives required for consideration by Part 150.

RHV’s thirteen proposed noise abatement procedures fall into all five principal categories of options discussed above.

Chapter 5 summarizes the process that the study team followed in evaluating noise abatement measures and discusses each of the proposed noise abatement measures individually, including identification of their actual or anticipated effect on reducing noise exposure within non-compatible areas. Based on these analyses, and considering public input, the County of Santa Clara selected the elements to include in the NCP. Table 3.2 summarizes the fourteen proposed noise abatement elements, noting whether each is a modification to an existing measure, or a new measure.

Table 3-2: Summary of Proposed Noise Abatement Elements

<table>
<thead>
<tr>
<th>New or Existing Element</th>
<th>Proposed Revision or New Measure</th>
<th>FAA Action Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferential Runway Use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Measure</td>
<td>Set Preferential Runway Use--Arrivals on Runway 31L and Departures on Runway 31R</td>
<td>Develop and follow new Letter of Agreement re-prioritizing the preferred runway use.</td>
</tr>
<tr>
<td>New Measure</td>
<td>Encourage Use of Minimum Power Settings on Departure</td>
<td>None</td>
</tr>
<tr>
<td>New Measure</td>
<td>Encourage Standard Glide Slope Arrival Procedures to Minimize Power on Arrival</td>
<td>Develop and follow Letter of Agreement</td>
</tr>
<tr>
<td>Change in Flight Track Geometry or Flight Track Usage</td>
<td>Revise Flight Track for Aircraft Departing Runway 31R</td>
<td>Provide airspace review, approve track, assist with pilot adherence to track</td>
</tr>
<tr>
<td>Airport Use Restrictions</td>
<td>Voluntary Limitation on Aircraft Departures to Specified Times</td>
<td>Develop and follow Letter of Agreement</td>
</tr>
<tr>
<td>New Measure</td>
<td>Voluntary Limitation on Aircraft Touch-and-Go Operations to Specified Days and Times</td>
<td>Develop and follow Letter of Agreement</td>
</tr>
<tr>
<td>New Measure</td>
<td>Prohibit Intersection Departures</td>
<td>Develop and follow Letter of Agreement</td>
</tr>
<tr>
<td>New Measure</td>
<td>Restrict Jet Operations to FAR Part 36 Stage 3 Jets</td>
<td>Develop and follow Letter of Agreement</td>
</tr>
</tbody>
</table>
### Table 3.2: Summary of Proposed Noise Abatement Elements (Continued)

<table>
<thead>
<tr>
<th>New or Existing Element</th>
<th>Proposed Revision or New Measure</th>
<th>FAA Action Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Measure</td>
<td>Prohibit Formation Arrivals and Departures</td>
<td>Develop and follow Letter of Agreement</td>
</tr>
<tr>
<td>New Measure</td>
<td>Prohibit Simulated Emergencies</td>
<td>Develop and follow Letter of Agreement</td>
</tr>
<tr>
<td>New Measure</td>
<td>Prohibit Low-Level Fly-bys Except for Emergency Requirements</td>
<td>Develop and follow Letter of Agreement</td>
</tr>
<tr>
<td>New Measure</td>
<td>Encourage Pilots to Modify Aircraft to Decrease Noise Emissions</td>
<td>None</td>
</tr>
</tbody>
</table>

**Changes in Airport Layout**

| New Measure | Create New Engine Run-up Area for Twin-Engine Aircraft | Once available, require run ups at new facility per Letter of Agreement |

### 3.3. Land Use Measures

Chapter 6 summarizes the process that the study team followed in evaluating land use measures. Based on these analyses, and considering public input, the County of Santa Clara selected the elements to include in the NCP. Table 3.3 summarizes the nine proposed land use elements, noting whether each is a modification to an existing measure, or a new measure.
### Table 3-3: Summary of Proposed Land Use Elements

Source: 3D Visions

<table>
<thead>
<tr>
<th>New or Existing Element</th>
<th>Proposed Revision or New Measure</th>
<th>FAA Action Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Measure</td>
<td>Fair Disclosure Policy: would enhance ability of potential property purchasers to make informed decision.</td>
<td>None.</td>
</tr>
<tr>
<td>New Measure</td>
<td>Guaranteed Purchase: would provide opportunities for noise sensitive residents to relocate while maintaining the stability of the neighborhood.</td>
<td>Approval of concept and of any Federal funding contingent upon demonstrated benefits of specific proposals.</td>
</tr>
<tr>
<td>New Measure</td>
<td>General Planning: would provide policy guidance for amendments in the City of San Jose 2020 General Plan to incorporate recommendations for preventing or mitigating unwanted noise and incorporating land use recommendations of the ALUC Plan.</td>
<td>None.</td>
</tr>
<tr>
<td>New Measure</td>
<td>Soundproofing Existing Development: would establish noise insulation program to ensure acceptable interior noise levels for existing single-family residences within the 2002 CNEL 65 dB and greater contours. As many as 7 dwellings could be eligible.</td>
<td>Approval of concept and of any Federal funding contingent upon demonstrated benefits of specific proposals.</td>
</tr>
<tr>
<td>New Measure</td>
<td>Soundproofing Existing Development: would establish noise insulation program to ensure acceptable interior noise levels for existing single-family residences in the 2002 CNEL 60-65 dB contour interval. Timing would be after completion of noise insulation for residences in 65 dB and greater contours and maybe contingent upon the availability of federal funds.</td>
<td>Approval of concept and of any Federal funding contingent upon demonstrated benefits of specific proposals.</td>
</tr>
<tr>
<td>New Measure</td>
<td>Sound Buffers/Barriers: could provide noise level reduction for residential areas immediately adjacent to RHV.</td>
<td>Approval and funding of federal share to conduct a noise barrier study at RHV.</td>
</tr>
<tr>
<td>New Measure</td>
<td>Planning Commission Review: would provide policy guidance for consideration of all types of proposed development within the 2002 CNEL 60 dB and greater contours.</td>
<td>None.</td>
</tr>
<tr>
<td>New Measure</td>
<td>Airport Noise Impact Boundary would provide means to monitor new land use proposals and ensure the ALUP is enforced.</td>
<td>None.</td>
</tr>
<tr>
<td>New Measure</td>
<td>Public Land Development Criteria: would provide policy guidance for development of public uses within the 2002 CNEL 60 dB and greater contours.</td>
<td>None.</td>
</tr>
</tbody>
</table>
3.4. Continuing Program Measures

Continuing program measures are administrative actions that the County of Santa Clara will use to implement, monitor, and manage the noise abatement and land use measures. Sections 3.4.1 through 3.4.14 summarize the County’s bases for recommending these continuing program measures. Table 3.4 summarizes the eleven proposed measures, noting whether each is an existing measure, a modification to an existing measure, or a new measure.

Table 3-4: Summary of Proposed Continuing Program Elements

<table>
<thead>
<tr>
<th>New or Existing Element</th>
<th>Proposed Revision or New Measure</th>
<th>FAA Action Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Measure</td>
<td>Encourage Pilots to “Fly Friendly”</td>
<td>None.</td>
</tr>
<tr>
<td>New Measure</td>
<td>Encourage Flight Training Schools to Train Pilots to “Fly Friendly”</td>
<td>None.</td>
</tr>
<tr>
<td>Existing Measure</td>
<td>Continually Publicize RHV Complaint Hotline</td>
<td>None.</td>
</tr>
<tr>
<td>New Measure</td>
<td>Install Noise Monitors in the RHV Environ to Measure and Compare Unusual or High-Level Noise Aircraft Events with Voice Records System</td>
<td>Approval and funding of federal share to install noise monitoring system.</td>
</tr>
<tr>
<td>New Measure</td>
<td>Install a Radar Collection System to Match Aircraft Noise Events to Radar Tracks</td>
<td>Approval and funding of federal share to install noise monitoring system.</td>
</tr>
<tr>
<td>New Measure</td>
<td>Establish an Airport/Airport User/Community Noise Committee after Noise Monitors and Radar Collection System are in Place to Discuss Issues on a Quarterly Basis</td>
<td>Attendance and participation in committee activities.</td>
</tr>
<tr>
<td>New Measure</td>
<td>Create a Position at RHV to Focus on Noise Abatement and Compliance Programs and to Investigate Noise Complaints</td>
<td>None.</td>
</tr>
<tr>
<td>New Measure</td>
<td>Update the RHV Part 150 Study NEM and NCP within five years of FAA Approval</td>
<td>FAA technical assistance and funding, as appropriate.</td>
</tr>
<tr>
<td>Existing Measure</td>
<td>Update and Distribute the Pilot Noise Abatement Handout with the FAA-Approved Noise Abatement Measures</td>
<td>Approval and funding of federal share of printing costs.</td>
</tr>
<tr>
<td>Existing Measure</td>
<td>Revise the Noise Abatement Signs to Reflect the FAA-Approved Noise Abatement Measures</td>
<td>Approval and funding of federal share of signs.</td>
</tr>
<tr>
<td>Existing Measure</td>
<td>Maintain Information About RHV’s Noise Abatement Program on the County’s Web Site</td>
<td>None.</td>
</tr>
</tbody>
</table>
3.4.1. New Measure: Encourage Pilots to “Fly Friendly”

The Aircraft Owners’ and Pilots’ Association (AOPA) published a training video entitled “Flying Friendly” that provides helpful procedures for flying in and over populated areas. The emphasis is on reducing the aircraft noise affects on residential or noise sensitive areas.

3.4.2. New Measure: Encourage Flight Training Schools To Train Pilots to “Fly Friendly”

The AOPA video, “Flying Friendly”, could be a valuable tool for instruction in the RHV - based flight training schools. RHV Staff will encourage the schools to incorporate this video and noise abatement flying procedures into their curricula.

3.4.3. Existing Measure: Continually Publicize RHV Complaint Hotline

Confusion has existed regarding the appropriate telephone number to register a complaint related to aircraft noise. Efforts must continue to be made to ensure the telephone number is listed on airport documents available to the public and in the County telephone directory.

3.4.4. New Measure: Install Noise Monitors in the RHV Environs to Measure and Compare Unusual or High-Level Noise Aircraft Events with Voice Records System

Noise monitors recording real-time sound levels would help quantify particular noise events and assist in identifying the noise source. Through time, the noise monitors could help identify perpetually loud or noisy aircraft that may be the subject of many complaints.

3.4.5. New Measure: Install a Radar Collection System to Match Aircraft Noise Events to Radar Tracks

Incorporate a radar data collection system that will provide radar ground tracks and altitudes of aircraft for matching to known aircraft and to identify where the aircraft are flying and if the published procedures are being followed (altitude, flight path, etc.).

3.4.6. New Measure: Establish an Airport/Airport User/Community Noise Committee after Noise Monitors and Radar Collection System are in Place to Discuss Issues on a Quarterly Basis

Communication is vital to understanding different points of view. An airport noise committee comprised of community members, airport staff, and airport users would provide a forum for discussing issues of importance and promoting a healthy relationship of cooperation.

3.4.7. New Measure: Create a Position at RHV to Focus on Noise Abatement and Compliance Programs and to Investigate Noise Complaints

Consistency and promptness are two characteristics that build confidence in the public’s view that someone is looking into their aircraft noise complaints. Having one or two individuals designated for this effort provides a natural link with the community in resolving aircraft noise issues.
3.4.8. **New Measure: Update the RHV Part 150 Study NEM and NCP within five years of FAA Approval**

With an ever changing operations and land use development, it is good practice to update the NEM and NCP within five years of the FAA approval. This will allow all parties to see the actual affects of the mitigation proposals made in the original NCP and to fine tune or change measures to meet the current operating and land use requirements.

3.4.9. **Existing Measure: Update and Distribute the Pilot Noise Abatement Handout with the FAA-Approved Noise Abatement Measures**

Communication with the airport users is critical in maintaining a balanced environment. It is vital that all noise abatement procedures be communicated with the airport users in whatever form works (handouts, bulletins, newsletter, etc.).

3.4.10. **Existing Measure: Revise the Noise Abatement Signs to Reflect the FAA-Approved Noise Abatement Measures**

Update the on-field noise abatement procedure signs to the approved noise abatement measures. This will be another visual memory jogger for those pilots transiting the airport.

3.4.11. **Existing Measure: Maintain Information About RHV's Noise Abatement Program on the County’s Web Site**

Provide current information for both the airport users and the community regarding the airport’s aircraft noise abatement procedures. The web site is an excellent medium for communicating what the airport expects and the affects the procedures have on the community noise environment.

### 3.5. **Recommended Implementation Program**

FAR Part 150 includes extensive requirements related to NCP implementation, including:
- Identification of the time period covered by the program
- Identification of parties responsible for implementation of each program element
- Indication that responsible parties have agreed to implement the measure
- Schedule for implementation of the program
- Essential government actions
- Anticipated funding sources

#### 3.5.1. **Time Period Covered by the NCP**

The time period covered by any NCP depends upon future conditions. In the absence of unanticipated changes in forecast conditions, the NCP covers the time period from the date of submission through the five-year forecast period (2007).

#### 3.5.2. **Implementation Responsibility**

A fundamental NCP requirement is that the documentation clearly identifies the party (or parties) that is (are) responsible for implementing each element of the NCP. Tables 3.5, 3.6, and 3.7 identify the lead parties responsible for each recommended NCP element.
As airport proprietor, Santa Clara County must initiate implementation of all operational and monitoring review measures. Clearly, however, the FAA and pilots have key roles related to the implementation of aircraft operational measures. The FAA ATC personnel must provide instructions to pilots related to preferential runway use and noise abatement flight tracks. Pilots must cooperate by following FAA ATC instructions and by using noise abatement cockpit procedures, when safe to do so.

Responsibility for land use implementation falls to the County of Santa Clara, as airport proprietor, the City of San Jose, and the FAA. The County is responsible for administering, coordinating, and publicizing the recommended plans and procedures. The County of Santa Clara and the City of San Jose responsibilities relate to coordination regarding the type and timing of the recommended measures. FAA is responsible for program approval and implementation funding.

The implementation responsibility for the recommended preventative land use strategies lies with the County of Santa Clara and the City of San Jose. The County and City will adopt and implement program measures to satisfy local land use restrictions within the year 2007 noise exposure contours.
Table 3-5: Summary of Implementation Details for Proposed Noise Abatement Elements of NCP

<table>
<thead>
<tr>
<th>Proposed Measure</th>
<th>Implementation Actions and Responsible Parties</th>
<th>Anticipated Costs and Funding Sources</th>
<th>Anticipated Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferential Runway Use</td>
<td>County requests that FAA implement procedure. FAA reviews, approves, and implements.</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Changes in Cockpit Flight Procedures</td>
<td>County requests FAA implement procedure. FAA reviews, approves, and implements.</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Encourage use of minimum power settings on departure, if conditions permit.</td>
<td>County requests FAA implement procedure. FAA reviews, approves, and implements.</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Changes in Flight Track Geometry or Flight Track Usage</td>
<td>County requests FAA implement procedure. FAA reviews, approves, and implements.</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Revise Runway 31R departure track.</td>
<td>County requests FAA implement procedure. FAA reviews, approves, and implements.</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Airport Use Restrictions</td>
<td>County requests FAA coordination and presents policy to airport pilot organizations</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Voluntary limitation on aircraft departure times</td>
<td>County requests FAA coordination and presents policy to airport pilot organizations</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Voluntary limitation on aircraft touch-and-go times</td>
<td>County requests FAA coordination and presents policy to airport pilot organizations</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Prohibition of Intersection Departures</td>
<td>County requests FAA implement procedure. FAA reviews, approves, and implements.</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Restriction on jet operations</td>
<td>County requests FAA implement procedure. FAA reviews, approves, and implements.</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Prohibition of formation flight operations</td>
<td>County requests FAA implement procedure. FAA reviews, approves, and implements.</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Prohibition of simulated flight emergencies in traffic pattern</td>
<td>County requests FAA implement procedure. FAA reviews, approves, and implements.</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Prohibition of low-level fly-bys except emergencies</td>
<td>County requests FAA implement procedure. FAA reviews, approves, and implements.</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Encourage pilots to modify aircraft to decrease noise emissions</td>
<td>County provides propeller, engine muffler, and wing vortices information to pilots and flight schools and reemphasizes noise sensitive land areas</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Changes in Airport Layout</td>
<td>County requests FAA review proposed site and approve operations. County implements.</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
</tbody>
</table>
### Table 3-6: Summary of Implementation Details for Proposed Land Use Elements of NCP

<table>
<thead>
<tr>
<th>Proposed Measure</th>
<th>Implementation Actions and Responsible Parties</th>
<th>Anticipated Costs and Funding Sources</th>
<th>Anticipated Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair disclosure policy for real estate transactions</td>
<td>The County develops the airport impact boundary and works with the Legislature or the California Department of Real Estate</td>
<td>None.</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Guaranteed purchase of noise-impacted homes</td>
<td>The County identifies eligible areas in consultation with the City of San Jose and establishes eligibility requirements</td>
<td>Approximately $210,000 in insulation and management costs for seven identified homes. FAA funding up to 90%</td>
<td>2004 and beyond (following NCP approval)</td>
</tr>
<tr>
<td>General planning incorporating recommendations for noise mitigation and land use</td>
<td>City of San Jose adopts measure in 2020 General Plan.</td>
<td>None</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Soundproofing or sound insulation program for existing development in 65 dB CNEL and greater contours</td>
<td>The County develops program, applies for federal funds, and administers program.</td>
<td>Approximately $210,000 for seven identified homes. FAA funding up to 90%</td>
<td>2004 and beyond (following NCP approval)</td>
</tr>
<tr>
<td>Soundproofing or sound insulation program for existing development in 60-65 dB CNEL contour interval</td>
<td>The County develops program, applies for federal funds, and administers program.</td>
<td>Approximately $15,870,000 for 529 identified homes. FAA funding up to 90%</td>
<td>After completing sound insulation for identified residences in 65 dB and greater contours</td>
</tr>
<tr>
<td>Sound buffers or barriers for aircraft noise reduction</td>
<td>The County manages design and construction of barriers based on ground noise study findings.</td>
<td>Unknown construction costs. FAA funding up to 90%</td>
<td>2004 and beyond (following NCP approval)</td>
</tr>
<tr>
<td>Planning Commission review of guidance regarding development within CNEL 60 dB contour</td>
<td>The County assists with drafting compatibility criteria. Planning Commission adopts and enforces it.</td>
<td>None</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Airport Noise Impact Boundary Development</td>
<td>The County will draft area for review and approval of the FAA and the ALUC.</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Public land development criteria</td>
<td>The County assists with drafting required ordinance. City of San Jose adopts and enforces it.</td>
<td>None</td>
<td>Ongoing</td>
</tr>
</tbody>
</table>

### Table 3-7: Summary of Implementation Details for Proposed Continuing Program Elements of NCP

<table>
<thead>
<tr>
<th>Proposed Measure</th>
<th>Implementation Actions and Responsible Parties</th>
<th>Anticipated Costs and Funding Sources</th>
<th>Anticipated Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourage pilots to “Fly Friendly”</td>
<td>County meets with airport-based pilots and briefs transiting pilots.</td>
<td>None.</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Encourage flight training schools to train pilots to “Fly Friendly”</td>
<td>County meets with flight schools emphasizing need to teach noise abatement procedures.</td>
<td>None.</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Establish airport/airport user/community noise committee</td>
<td>County forms committee with representatives of each sector to meet quarterly.</td>
<td>None.</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Publicize RHV complaint hotline</td>
<td>County include number on all airport correspondence, County phone list, and County website.</td>
<td>None.</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Install noise monitors to measure and compare unusual or high-level noise aircraft events with voice records</td>
<td>County determine number and placement of noise monitors and purchase appropriate quantity.</td>
<td>Approximately $1.5 million. FAA funding up to 90%.</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Install radar collection system to match aircraft noise events to radar tracks</td>
<td>County determine appropriate system and purchase and install.</td>
<td>Included above. FAA funding up to 90%.</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
</tbody>
</table>
### Noise Compatibility Program

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsibility</th>
<th>Funding/Support</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a Position at RHV to Focus on Noise Abatement and Compliance Programs and to Investigate Noise Complaints</td>
<td>County reviews resource requirements and establishes position.</td>
<td>County pays staff salary, benefits, and overhead.</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Update the RHV Part 150 Study NEM and NCP within five years of FAA approval</td>
<td>County pursues on continuing basis. FAA assists in review and approval.</td>
<td>Undetermined consulting assistance. FAA funding up to 90%.</td>
<td>2008 (within 5 years of FAA approval)</td>
</tr>
<tr>
<td>Update and distribute the pilot noise abatement handout with the FAA-approved noise abatement measures</td>
<td>FAA reviews and approves noise abatement measures. County develops, publishes, and distributes.</td>
<td>$5,000 for printing and distribution costs. FAA funding up to 90%.</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Revise the noise abatement signs to reflect the FAA-approved noise abatement measures</td>
<td>FAA reviews and approves as element of NCP. County acquires and installs signs</td>
<td>$10,000. FAA funding up to 90%</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
<tr>
<td>Maintain information about RHV’s noise abatement program on the County’s web site</td>
<td>FAA reviews and approves noise abatement program. County maintains current information on web site.</td>
<td>None</td>
<td>2003 (Immediately following NCP approval)</td>
</tr>
</tbody>
</table>

#### 3.5.3. Indication of Agreement to Implement

As the lead agency in the implementation of all measures, the County of Santa Clara agrees to its responsibilities. The FAA ATCT, Fixed-Base Operators, and pilot associations have endorsed the noise abatement measures through participation in the RHV Part 150 Study process, which included public meeting and direct discussions with the FAA and pilots.
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4. Abated Noise Exposure Maps with Implementation of Noise Compatibility Program

As discussed in Section 1.1, the first phase of this RHV Part 150 Study involved the submission to FAA of the NEM documentation for RHV, including existing conditions (2002) and five-year forecast (2007) maps.

The abated NEMs identify the current areas of non-compatible land use near RHV, and provide a basis for the evaluation of the NCP. As discussed in Section 1.3, the logical first step in developing an NCP is to evaluate existing noise abatement alternatives, so as to minimize non-compatible land uses. Following the selection of a preferred package of noise abatement measures, the study team prepared abated noise contours and land use analysis for the five-year forecast case. Figure 4.1 presents these noise contours and relevant land use data. This figure represents the abated Noise Exposure Map with implementation of the NCP. Since the contours represent conditions that have not yet been achieved, the County of Santa Clara is not submitting them for FAA review and acceptance. The NEMs previously submitted shall serve as RHV’s official NEMs until significant progress in implementing the NCP has been accomplished. The abated contours were developed using the FAA’s Integrated Noise Model, Version 6.0b, including the standard noise and performance database. Section 5 of the NEM documentation discusses the INM and its inputs in detail.

Figure 4.1 includes the airport boundary and major land use categories. The City of San Jose and the County of Santa Clara have land use control jurisdiction for the entire area depicted. The figure also shows the locations of noise sensitive public buildings within the study area.

Table 4.1 presents the estimated off-airport land areas (in acres) within the abated NEM contour cases. Table 4.2 presents the estimated residential population within the abated contour case.
Figure 4.1: Five-Year Forecast (2007) Abated Noise Exposure Map with Implementation of Noise Compatibility Program
Table 4-1: Estimated Land Area (in acres) within Abated 2007 NEM Contours with Implementation of the NCP
Source: 3D Visions

<table>
<thead>
<tr>
<th>Contour Interval</th>
<th>On Airport Land</th>
<th>Off Airport Land</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 - 65 dB</td>
<td>37.04</td>
<td>103.02</td>
<td>140.06</td>
</tr>
<tr>
<td>65 - 70 dB</td>
<td>44.69</td>
<td>11.51</td>
<td>56.20</td>
</tr>
<tr>
<td>70 + dB</td>
<td>55.69</td>
<td>0.14</td>
<td>55.83</td>
</tr>
</tbody>
</table>

Table 4-2: Estimated Residential Population within Abated 2007 NEM Contours with Implementation of the NCP
Source: 3D Visions

<table>
<thead>
<tr>
<th>Contour Interval</th>
<th>Housing Units</th>
<th>Existing Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 - 65 dB</td>
<td>444</td>
<td>2,459</td>
</tr>
<tr>
<td>65 - 70 dB</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>70 + dB</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>452</td>
<td>2,499</td>
</tr>
</tbody>
</table>
5. Screening and Analysis of Potential Noise Abatement Measures

Noise abatement measures reduce the amount of noise generated at the airport or shift the noise away from sensitive areas. As discussed in Section 1.3, FAR Part 150 identifies the range of noise abatement alternatives that an airport proprietor must consider in developing an NCP. They include five principal categories of options:

- preferential runway use options;
- changes in cockpit flight procedures (e.g., power settings, rates of climb);
- changes in flight track geometry or flight track usage;
- airport use restrictions (e.g., limitations on the time or frequency of operations); and
- airport layout changes which help to divert noise from sensitive areas (e.g., new or revised runways, run up areas, or noise barriers).

The first step in the evaluation of noise abatement alternatives was to identify all reasonable candidate measures. The study team based the list of candidates on three principal sources:

- measures currently in use at RHV;
- measures that the public recommended for consideration; and
- other potentially beneficial measures identified by the FAA, County, or consultant staffs.

Sections 5.1 through 5.3 discuss each of these sources. Section 5.4 summarizes the full list of alternatives that the study team considered, according to the five FAR Part 150 categories listed above. Sections 5.5 through 5.9 summarize the analyses that the study team performed on the alternatives in each of these five categories. These analyses are the bases on which measures were selected for inclusion in the NCP, as presented in Chapter 3.

5.1. Measures Currently in Use at RHV

There are two noise abatement measures currently in use at RHV.

5.1.1. Pilot Noise Abatement Handout

The pilot handout, included as Appendix A, contains current noise abatement and traffic pattern information for the Quiet One Departure, designed to reduce the noise exposure at the local schools. The departure applies specifically to aircraft departing Runway 31R. Pilots are urged to comply with these procedures unless deviations are necessary due to weather, air traffic control instructions, inflight emergency, or other safety considerations. The procedures are to make a 20° right turn to a heading of 330° after crossing the airport boundary at Ocala Avenue. Aircraft are expected to climb to an altitude of 500 feet before making any turns. In addition, high-performance aircraft are requested to use low noise settings where possible.

5.1.2. Helicopter Operations Letter of Agreement

A Letter of Agreement (LOA) between the FAA, County, and the helicopter organizations at RHV, included as Appendix B, establishes the procedures for the control of helicopters.
operating to and from the training sites on RHV. The LOA includes the helicopter traffic patterns, the physical locations of the helipads, and the arrival and departure procedures relevant to the active runway in use (Runways 13 or 31). With regard to the emphasis on noise abatement procedures, the hours of operation are limited to 7:00 am to 6:00 pm and the helicopters are requested to avoid direct flights over D.J. Meyer Community School and Clyde Fischer Middle School.

5.2. Measures Recommended by the Public for Consideration

Public meeting attendees and interested parties presented the following list of potential noise abatement measures:

- Create a propeller exchange program for three-bladed propellers to replace noisier two-bladed propellers
- Lengthen the runways to displace Runways 31L and 31R departures by 300 feet toward Tully Road
- Close RHV
- Close RHV during the weekend or at least one day of the weekend
- Prohibit touch-and-go flights
- Punish and/or ban “hot dog” pilots at RHV
- Muffle aircraft engines
- Slow the speed of aircraft
- Consider the recommendations of the 1991 RHV Closure Evaluation Project

5.3. Measures Identified by the FAA, County, or Consultant Staffs

Members of the local FAA staff, County Airport staffs and Consultant staffs identified several implementation alternatives for consideration. Some of these were in a draft, unsigned LOA between the County and the FAA and are considered new measures at this time.

- Restrict touch-and-go operations to the hours between 7:00AM and 9:00 PM
- Prohibit intersection departures
- Restrict jet operations to FAR Part 36 Stage 3 jets only
- Prohibit formation departures and/or arrivals
- Designate Runways 31R and 31L as preferred departure runways with Runway 31R the most preferred
- Prohibit simulated emergencies
- Prohibit low-level fly-bys except for gear check and other emergency-related requirements
- Designate the compass rose as the site for maintenance run-ups
- Create an engine run-up area for twin-engine aircraft on the southeast portion of the airport property.
- Voluntary limitation of all aircraft departures to between 7:00 a.m. and 10:00 p.m.
- Voluntary limitation of all aircraft touch-and-go operations to the following days and times.
  - 9:00 a.m. to 7:00 p.m. Monday through Friday
- 10:00 a.m. to 5:00 p.m. Saturday
- 12:00 p.m. (Noon) to 5:00 p.m. Sunday

- Change preferential runway use to Runways 13L/13R
- Change the preferential runway use to departures on Runway 31R and arrivals on Runway 31L.
- Modify the Quiet One Departure
- Relocate Haypatch and X-ray helipads to the east side of the runways
- Construct noise barriers on western airport perimeter in the vicinity of the Haypatch landing area.
- Change air traffic pattern altitudes.
- Restrict maintenance engine run-up times.
- Implement noise-related landing fees.

### 5.4. Full List of Noise Abatement Alternatives

Table 5.1 presents the full list of noise abatement alternatives that this study addressed. The table organizes the alternatives according to FAR Part 150's five general categories, and indicates whether it is recommended for inclusion in the Part 150 Study NCP. The following sections address each of the options in detail, in the order listed.

**Table 5-1: Full List of Noise Abatement Alternatives for Consideration in the NCP**

<table>
<thead>
<tr>
<th>Category</th>
<th>Alternative</th>
<th>Recommendation for Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferential Runway Use</td>
<td>Designate Runways 31R and 31L as preferred departure runways with Runway 31R the most preferred.</td>
<td>Recommended as part of preferential runway use alternative below.</td>
</tr>
<tr>
<td></td>
<td>Change preferential runway use to Runways 13L and 13R</td>
<td>Not Recommended</td>
</tr>
<tr>
<td></td>
<td>Change preferential runway use to departures on Runway 31R and arrivals on Runway 31L</td>
<td>Recommended</td>
</tr>
<tr>
<td>Changes in Cockpit Flight Procedures</td>
<td>Encourage use of minimum power settings on departure</td>
<td>Recommended</td>
</tr>
<tr>
<td></td>
<td>Encourage standard glide slope arrival procedures to minimize power on arrival</td>
<td>Recommended</td>
</tr>
<tr>
<td>Change in Flight Track Geometry or Flight Track Usage</td>
<td>Modify the Quiet One departure flight track</td>
<td>Recommended</td>
</tr>
<tr>
<td></td>
<td>Change traffic pattern altitudes</td>
<td>Not Recommended</td>
</tr>
<tr>
<td>Airport Use Restrictions</td>
<td>Prohibit intersection departures</td>
<td>Recommended</td>
</tr>
<tr>
<td></td>
<td>Restrict jet operations to FAR Part 36 Stage 3 jets only</td>
<td>Recommended</td>
</tr>
<tr>
<td></td>
<td>Prohibit formation departures and/or arrivals</td>
<td>Recommended</td>
</tr>
<tr>
<td></td>
<td>Prohibit simulated emergencies</td>
<td>Recommended</td>
</tr>
<tr>
<td></td>
<td>Prohibit low-level flybys except for gear check or other emergency-related requirements</td>
<td>Recommended</td>
</tr>
<tr>
<td></td>
<td>Close RHV</td>
<td>Not Recommended</td>
</tr>
<tr>
<td>Airport Use Restrictions (Cont)</td>
<td>Close RHV during the weekend or at least one day of the weekend</td>
<td>Not Recommended</td>
</tr>
<tr>
<td></td>
<td>Prohibit touch-and-go flights</td>
<td>Not Recommended</td>
</tr>
<tr>
<td>Change in Airport Operations</td>
<td>Recommendation</td>
<td>Reason</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----------------</td>
<td>--------</td>
</tr>
<tr>
<td>Punish and/or ban “hot dog” pilots at RHV</td>
<td>Not Recommended. Incorporated in pilot awareness program.</td>
<td></td>
</tr>
<tr>
<td>Consider the recommendations of the 1991 RHV Closure Evaluation Project</td>
<td>Not Recommended</td>
<td></td>
</tr>
<tr>
<td>Voluntary limitation of all aircraft departures to between 7:00 am and 10:00 pm</td>
<td>Recommended</td>
<td></td>
</tr>
<tr>
<td>Voluntary limitation of all touch-and-go operations to the following days and times: Monday – Friday 9:00 am to 7:00 pm; Saturday 10:00 am to 5:00 pm; Sunday 12:00 pm to 5:00 pm</td>
<td>Recommended</td>
<td></td>
</tr>
<tr>
<td>Restrict maintenance engine run-up times</td>
<td>Not Recommended</td>
<td></td>
</tr>
<tr>
<td>Implement noise-related landing fees</td>
<td>Not Recommended</td>
<td></td>
</tr>
<tr>
<td>Encourage Pilots to Modify Aircraft to Decrease Noise Emissions</td>
<td>Recommended</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change in Airport Layout</th>
<th>Recommendation</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designate the compass rose as the site for maintenance run-ups</td>
<td>Recommended</td>
<td></td>
</tr>
<tr>
<td>Lengthen the runways to displace Runway 31L and 31R departures by 300 feet toward Tully Road</td>
<td>Not Recommended</td>
<td></td>
</tr>
<tr>
<td>Relocate Haypatch and X-ray helipads to the east side of the runways</td>
<td>Not Recommended</td>
<td></td>
</tr>
</tbody>
</table>

5.5. **Preferential Runway Use Alternatives**

The objective of preferential runway measures is to optimize runway utilization under wind, weather, demand, and airport layout constraints, to minimize population impacts by taking advantage of uneven development around the airport. In general, it is preferable to maximize departures over less populated areas, because departures are generally noisier than arrivals. Three preferential runway use measures were suggested: (1) designate Runways 31R and 31L as preferred departure runways with Runway 31R the most preferred; (2) change preferential runway use to Runways 13L and 13R; and (3) change preferential runway use to departures on Runway 31R and arrivals on Runway 31L.

5.5.1. **Designate Runways 31R and 31L as Preferred Departure Runways with Runway 31R the Most Preferred**

Adopting a preference for runway operation is dependent on prevailing winds, airport layout, and aircraft traffic demand. This alternative was included in a proposed letter of agreement between the FAA and the County Airport management. This alternative was recommended for analysis in conjunction with the more detailed alternative discussed in Section 5.5.3.
5.5.2. **Change Preferential Runway Use to Runways 13L and 13R**

Because aircraft are designed to takeoff or land into the wind, runway use at an airport is normally determined by the prevailing winds. When winds are calm or light, airports can establish a preferential runway use program to reduce aircraft noise impacts. However, preferential runway use programs must also consider aircraft operations in the surrounding airspace. RHV shares its airspace with other Bay Area airports and must operate its runways in a manner that does not conflict with the other airports. For example, the noise compatibility and noise abatement program at San Jose International Airport (SJC) requires north flow operations. It is likely that south flow operations would nearly eliminate all incompatible land uses around RHV, but, from discussions with FAA representatives, there are restrictive airspace problems that constrict the aircraft flow at RHV. In particular, the approach to SJC is just to the west of RHV. In addition a soon to be implemented instrument approach and departure from/to Runway 31 would conflict with opposing traffic departing Runway 13. The FAA would likely reject this measure on the grounds of potential safety impacts. Accordingly, this measure was not recommend for detailed analysis.

5.5.3. **Change Preferential Runway Use to Departures on Runway 31R and Arrivals on Runway 31L**

Establish preferential runway use to arrivals on Runway 31L and departures on Runway 31R. Departures on Runway 31L expose the residential area to the west of RHV to higher noise levels. Runway 31R is farther removed from the residential area and buffered by the airport property to the east. When implemented along with the changes to the Quiet One departure discussed in Section 5.7.1, noise associated with aircraft departures is moved away from sensitive receivers (library and school) on the west side of the runway complex. This alternative was recommended for analysis.

5.6. **Changes in Cockpit Flight Procedures Alternatives**

Two cockpit procedures alternatives were analyzed as part of this study: (1) encourage use of minimum power settings on departure; and (2) encourage standard glide slope arrival procedures to minimize power on arrival.

5.6.1. **Encourage Use of Minimum Power Settings on Departure**

Within the constraints of safe aircraft performance characteristics, encourage pilots to reduce power settings on departure when appropriate and able. This will reduce the aircraft noise level as the aircraft departs the environs of RHV and overfl ys the neighboring residential areas thereby decreasing the noise exposure to the local communities. The decision to use reduced power settings rests solely with the pilot-in-command. Therefore, the County cannot require the use of these noise abatement procedures, but can encourage their use at RHV. This alternative was recommended for adoption to encourage all pilots using RHV to minimize their aircraft power settings on departure.
5.6.2. Encourage Standard Glide Slope Arrival Procedures to Minimize Aircraft Power on Arrival

Within the constraints of safe aircraft performance characteristics, encourage pilots to use minimum engine power settings for standard glide slope arrival procedures thereby reducing noise exposure to nearby communities. This will decrease the noise exposure to the local communities. The decision to use reduced power settings rests solely with the pilot-in-command. Therefore, the County cannot require the use of these noise abatement procedures, but can encourage their use at RHV. This measure was recommended for adoption to encourage all pilots using RHV to minimize their aircraft power settings on arrival.

5.7. Change in Flight Track Geometry or Flight Track Usage

Preferential noise abatement flight track measures attempt to place flight tracks over areas where they will generate fewer impacts. In the RHV environs, there is little compatible land use area for flight tracks. Therefore, any change in flight tracks is intended to reduce the noise exposure of noise sensitive receivers in the local area. The following two measures were suggested as potential preferential noise abatement flight tracks.

5.7.1. Modify the Quiet One Departure Flight Track

The current Quiet One departure for Runway 31R has aircraft turning right 20 degrees to a heading of 330° upon reaching an altitude of 500 feet and after crossing the airport boundary. This modification has departing aircraft fly past the park and then make at least a 25-degree right turn to a heading of 335° or head towards the Story Road-Capital Expressway intersection, which requires a 35-degree right turn to a heading of 345°. This revised procedure would not change the number of homes inside the 65 dB CNEL contour but would eliminate aircraft flying directly over the school to the north of the runways. The advantage of the 35-degree right turn is that it would provide the pilots with a visual cue (the Story Road-Capital Expressway intersection). This change eliminates aircraft flying over the school and provides a visual landmark to the pilots to use on departure. This alternative was recommended for inclusion in the analysis.

5.7.2. Change Traffic Pattern Altitudes

The air traffic pattern altitude at RHV is 1,000 feet above ground level (AGL) for fixed-wing aircraft. In order to achieve a noticeable reduction in noise level directly beneath the flight pattern, the flight pattern altitude would need to be doubled to 2,000 feet AGL. This altitude would begin to conflict with the limited airspace in the RHV environs as well as broaden the area affected by the traffic pattern. Raising the pattern altitude may also adversely affect the areas near the airport, as pilots will have to use more power to obtain higher altitudes within RHV’s traffic pattern airspace. While lowering the traffic pattern would also be an alternative, it would be a nonstandard procedure that would most likely not be approved by the FAA. Therefore, this alternative was not recommend for further analysis.
5.8. Airport Use Restrictions

FAR Part 150 specifically requires the consideration of the following categories of use restrictions:

- restrictions based on Federal noise standards,
- capacity limits based on noisiness,
- landing fees based on noise or time, and
- curfews.

The public, FAA staff, County Airport Staff, and consultant staff raised several issues related to this category of noise abatement options, including:

- restrictions on operations at sensitive time periods (e.g., weekends, evenings, nights);
- restrictions of touch and go operations;
- use of noise reduction or muffling devices on airport-based aircraft;
- restrictions on maintenance run-up times; and
- implementation of noise-related landing fees.

The following 15 measures were suggested as potential airport use restrictions.

5.8.1. Prohibit Intersection Departures

This measure requires all aircraft to use the entire length of the runway for departures. This translates to higher altitudes for aircraft when they depart the airport environs. This reduces the noise exposure on the community by having the aircraft at a higher altitude and by having the aircraft configured earlier for any noise abatement power reductions, if applicable. This restriction was part of a draft Letter of Agreement (LOA) between the FAA and the County Airport management. This alternative was recommended.

5.8.2. Restrict Jet Operations to FAR Part 36 Stage 3 Jets Only

Restricting jet operations to FAR Part 36 Stage 3 jets removes the noisier jets from operating within the airport environment. Jets that have undergone “hush kit” modifications and have been certified as FAR Part 36 Stage 3 would be permitted. This reduces the risk of future increase to the noise exposure on the community by eliminating the noisier aircraft from operating at RHV. This restriction was part of a draft LOA between the FAA and the County Airport management. This alternative was recommended.

5.8.3. Prohibit Formation Departures and/or Arrivals

Restricting aircraft operations to single aircraft arrivals and departures will keep any aircraft-generated noise closer to the airport and not spread out over a larger airspace. This reduces the noise exposure on the community adjacent to the airport and at nearby noise sensitive receivers. This restriction was part of a draft LOA between the FAA and the County Airport management. This alternative was recommended.
5.8.4. Prohibit Simulated Emergencies
This measure prohibits conducting simulated in-flight emergency training in the traffic pattern, during departure, or during arrival. This allows the safe adherence to established noise abatement procedures and the avoidance of noise sensitive receivers. This reduces the noise exposure on the community adjacent to the airport and at nearby noise sensitive receivers. This restriction was part of a draft LOA between the FAA and the County Airport management. This alternative was recommended.

5.8.5. Prohibit Low-Level Flybys Except for Gear Check or Other Emergency-Related Requirements
This measure prohibits making low-level passes at the airport and flying below established minimum altitudes except for emergencies. Keeping aircraft at the proper altitudes for arrivals and the traffic pattern as well as proper climb procedures on departure will help minimize the overall noise exposure. This reduces the noise exposure on the community adjacent to the airport and at nearby noise sensitive receivers. This restriction was part of a draft LOA between the FAA and the County Airport management. This alternative was recommended.

5.8.6. Close RHV
The purpose of the FAR Part 150 is to assess the aircraft noise impacts and mitigate them at an operating airport. Closure is not an option under the terms of this study. This measure is also prohibited by the Santa Clara County’s grant assurances to the FAA. Therefore, this alternative was not recommended.

5.8.7. Close RHV During the Weekend or at Least One Day of the Weekend
Closing RHV during certain times would limit the use of the airport and likely put inequitable burden on the users. This measure is also prohibited by the County’s grant assurances to the FAA. Hence, this alternative was not recommended.

5.8.8. Prohibit Touch-and-Go Flights
The training of pilots is an essential element to continuing the safe operations of aircraft. Complete prohibition of touch-and-go flights at RHV would likely force flight training to other airports or would force the training schools to either relocate to another airport or go out of business. The FAA has consistently maintained that prohibiting touch-and-go operations violates the grant assurance that prohibits unjust discrimination against particular types or classes of operations. This alternative was not recommended.

5.8.9. Punish and/or Ban “Hot Dog” Pilots at RHV
Punishing or banning pilots from RHV for not adhering to established procedures requires constant monitoring by FAA and County Airport personnel. The FAA controls the airspace and investigates any reported occurrences of FAR violations. The NCP provides the tools for working with those pilots who fly outside the normally established parameters. The need to increase pilot awareness of the surrounding noise sensitive areas was recognized and recommended to be addressed along with other pilot awareness issues (Section 5.8.15).
5.8.10. Consider Recommendations of the 1991 RHV Closure Evaluation Project

In reviewing the Final Technical Report on Aviation and Transportation Data for the Reid-Hillview Airport Closure Evaluation Project, dated November 1993, the only alternatives discussed were closure or no closure. Closure is not to be considered in a FAR Part 150 study. Therefore, this alternative was not recommended for inclusion.

5.8.11. Voluntarily Limit Aircraft Departures to Between 7:00 AM and 10:00 PM

Voluntarily limiting all aircraft departures to day and evening periods would remove most of those departures that likely cause the most annoyance to residents under or near the flight paths. This measure would reduce the noise exposure on the community during the most sensitive time of the day and would give the community a time period with less aircraft noise. This alternative was recommended for inclusion in the analysis.

5.8.12. Voluntarily Limit All Touch-and-Go Operations to Specific Days and Times

This alternative voluntarily limits touch-and-go flight operations to specific days and times. These flight operations provide the greatest noise exposure to the community due to the repetitious nature of remaining in the traffic pattern for multiple approaches and departures. Limiting these operations on a voluntary basis to the following days and times will provide some relief to the community during times that would likely cause the most annoyance to residents under or near the flight paths

- 9:00 a.m. to 7:00 p.m. Monday through Friday
- 10:00 a.m. to 5:00 p.m. Saturday
- 12:00 p.m. to 5:00 p.m. Sunday

These limitations by day and time remove all evening and nighttime touch-and-go operations. This reduces the noise exposure on the community during the more sensitive times of the day and week and gives the community times with less aircraft noise. This alternative was recommended for inclusion in the analysis.

5.8.13. Restrict Maintenance Engine Run-up Times

Restricting maintenance engine run-up times could impact the ability of the aircraft repair facilities to provide air worthy aircraft. Rather than restricting the times, the County proposed moving all maintenance engine run-ups to a location farther removed from the residential community. This alternative is discussed in Section 5.9.1. This alternative was not recommended for inclusion.


Noise-related landing fees are usually effective when there is a type or group of aircraft that is noticeably louder than other aircraft. Currently at RHV, all aircraft are somewhat homogeneous when it comes to noise levels. This alternative was not recommended for inclusion.
5.8.15. Encourage Pilots to Modify Aircraft to Decrease Noise Emissions

With the evolving technology in aeronautics, there are several aircraft modifications that would decrease the noise exposure to noise sensitive receivers. These include propeller replacement with quieter propellers, the introduction of aircraft vortex generators, and aircraft engine mufflers or noise silencers. Although the County Airport Administration staff cannot mandate aircraft equipment replacement for noise purposes, through contacts with the flying organizations on RHV, these technologies can be introduced and strongly recommended to pilots considering aircraft modifications thereby increasing pilot awareness of the potential noise reduction benefits.

Regarding the aircraft propellers, the supersonic tip speeds of some aircraft propellers contribute significantly to the overall aircraft noise levels. This potential measure seeks to reduce this noise by replacing single-bladed propellers with three- or four-bladed props. The proper installation of vortex generators has the potential to reduce aircraft stall speed, shorten takeoff distances, and increase initial climb performance. Research has indicated that technology exists to install mufflers or noise silencers on small aircraft that will provide benefits to reducing noise exposure. Pilots should be provided with the information and encouraged to retrofit their aircraft with the appropriate muffler with little or no reduction in aircraft performance. This reduces the noise exposure on the community adjacent to the airport and at nearby noise sensitive receivers. This measure was recommended.

5.9. Changes in Airport Layout

Airfield layout modifications that were considered in the RHV Part 150 Study are discussed below.

5.9.1. Designate the Compass Rose as the Site for Maintenance Run-ups

Restricting twin-engine run-ups for maintenance work to the compass rose located on the southeast portion of the airport will reduce the noise exposure on the residential areas to the north and west of RHV. This area is farthest from those residential areas with the airport structures providing some noise shielding to the east. This reduces the noise exposure on the community adjacent to the airport and at nearby noise sensitive receivers. This alternative was recommended for inclusion.

5.9.2. Lengthen the Runways to Displace Runway 31L and 31R Departures by 300 Feet Toward Tully Road

This measure alone would remove all incompatible land uses to the north of RHV. The mobile home park would remain as the sole incompatible land use in the vicinity of RHV. However, this option would result in the runways extending to the southern edge of present-day Tully Road requiring extensive road realignment or tunneling of Tully Road underneath the extended runways. The costs for this runway construction and road realignment would be exponentially more than that associated with sound insulating the homes to the north of Runways 31L and 31R inside the 2007 65-dB noise contour. It would not be cost beneficial to implement this measure. If Runways 31R and 31L were extended
approximately 125 feet and 140 feet, respectively, keeping the runways on current RHV property and thereby allowing the point of takeoff to also be shifted the same distance to the south, there would be approximately 9 fewer residences within the 2007 65-dB noise contour and approximately 14 fewer residences within the 2007 60-65 dB noise contour interval. However, the overall noise levels for those residences would only be reduced approximately 0.2 dB—a change not detectable by the human ear. Therefore, residents would not notice any change in the noise level while being removed from the area that might undergo residential sound insulation. It is more cost beneficial and community beneficial to sound insulate these residences rather than extend the runways. This alternative was not recommended for further analysis.

5.9.3. Relocate Haypatch and X-Ray Helipads to the East Side of the Runways

Moving helicopter operations to the east side of the runways would impose safety problems between fixed-wing aircraft and helicopter hovering operations. The two types of operations (helicopter hover and fixed-wing taxi and hold) should be segregated wherever possible. Helicopter hovering operations could tip over fixed-wing aircraft in the vicinity. It should be noted that helicopter hovering operations to the west of the runways account for a very small part of the noise exposure at RHV. Furthermore, the storage facility located between the mobile home park and the helicopter operations area likely reduces the noise exposure from that shown on the Noise Exposure Maps since the Integrated Noise Model does not account for such fixed objects. This measure was not recommended for inclusion.
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6. Screening of Land Use Measures

This land use section serves two purposes. The first purpose is to identify non-compatible land use within the existing and projected noise contours as documented in the NEM element of this study. The second purpose is to review strategies that have the potential to enhance land use compatibility in the RHV environs.

6.1. Existing and Future Land Uses Near RHV

RHV and the land area encompassed by the airport’s aircraft noise contours are located in Santa Clara County within the City of San Jose. The following discussion of land use focuses on the area within and immediately surrounding the aircraft noise contours described in Chapter 6 of the NEM. Geographic Information System (GIS) technology was utilized to conduct a land use and zoning analysis based on a windshield survey performed in April 2000 and zoning data provided by the City of San Jose.

6.1.1. Existing Land Use

Figure 6.1 shows that RHV is located on the east side of the City of San Jose, and approximately in the middle of Santa Clara County. Since this analysis is concerned with the compatibility of land use with aircraft noise, the following discussion highlights the areas in the primary approach and departure corridors within the airport study area. Approach and departure corridors generally extend from the Airport’s runways, and are oriented roughly northwest and southeast. Figure 6.2 shows existing (2002) CNEL contours illustrating land use in the study area.

Northwest. Arrivals on Runway 13 L/R, and departures on Runway 31 L/R generally overfly residential, public (San Jose Public Library and Hank Lopez Community Center), and educational (Sylvia Cassel Elementary) uses. Residential development in the RHV area is located immediately to the west and north of this corridor.

Southeast. Arrivals on Runways 31L/R and departures on Runways 13L/R overfly a complex pattern of commercial/industrial development and vacant land.

6.1.2. Future Land Use

Figure 6.3 shows existing (2002) generalized land use within the year 2007 CNEL contours. For a number of reasons, major changes in land use patterns are not normally expected in an established urban setting. The most likely change from existing land use will result from the development of vacant land. While redevelopment of existing uses can occur, it is an expensive and disruptive process, which requires a substantial commitment of either public or private capital. In addition, the existing infrastructure plays a very significant role in determining the development potential of vacant properties. Also, interjurisdictional issues (County operates the airport and City controls most land use) add to the problems of redevelopment. Finally, new development is generally compatible with existing development, further restricting the range of potential uses of vacant land.

Figure 6.4 shows the year 2007 noise contours with the existing zoning pattern to illustrate long-term land use compatibility issues. Zoning information provided by the City of San
Jose was used as an indicator of future land use in the airport environs. In general, zoning reflects the existing land use patterns described above. Accordingly, the future land use pattern is likely to be similar to existing land use patterns. In essence, this analysis shows the effect of continued development of vacant land in accordance with existing zoning.

While zoning is a useful indicator of permitted development, it does not necessarily reflect the development potential of the underlying properties. For example, zoning does not address site constraints such as natural features or ownership patterns. Further, zoning is not permanent. Property owners may petition for re-zoning to permit increased densities and/or different types of development at any time. The zoning ordinance is discussed in more detail in the next section.
Figure 6.1: Location Map
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Figure 6.2: Existing (2002) CNEL Contours and Existing Land Use

Figure 6.2

*Existing Conditions (2002) Noise Exposure Map*
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Figure 6.3: Future (2007) CNEL Contours and Existing Land Use

Five-Year Forecast (2007) Noise Exposure Map
Figure 6.4: 2007 CNEL Contours with Existing Zoning Patterns
6.2. Existing Land Use Measures

Land use regulations provide the primary means of preventing new non-compatible development. California state law requires each city and county to adopt a general plan. General plans are intended to be long range, comprehensive, and internally consistent documents to guide the future growth and development of a city, county, or community. Typically, general plans address a 20-year planning horizon. In California, as in most states, this document is a policy guideline rather than a regulation. The General Plan establishes the overall policy framework for land use and development. The state has likened it to the "constitution" to which all other land use and development regulations must conform. In other words, zoning regulations and zoning districts must conform with and implement the goals and policies of the General Plan. Subdivision regulations and all other discretionary land use approvals, including variances, and use permits, must also conform with the General Plan, or they may not be legally approved.

The City of San Jose establishes community development goals and policies through the 2020 General Plan. This plan guides land use and development decisions made through the City of San Jose’s zoning ordinance, building code, and capital improvement programs. Additionally, the State of California passed legislation in 1970 to create an Airport Land Use Commission (ALUC) in each county that has an airport. The ALUC has three primary responsibilities: to prepare and adopt a land use plan, to review general and specific plans prepared by local agencies for consistency with the ALUC plan, and to review individual proposed land use actions in areas near publicly owned airports. In September 1992 the Airport Land Use Committee adopted an updated comprehensive land use plan in the area surrounding each airport in Santa Clara County, including RHV. This land use plan determines appropriate land use controls for future land use at each airport.

Santa Clara County defines the County’s long-term goals and policies governing future physical development in the Santa Clara County General Plan. In general, airport-related material found in this document defers to and summarizes the authoritative document governing County Airports, the ALUC Plan for Areas Surrounding Santa Clara County Airports.

In recent years, the U. S. Supreme Court has issued decisions on a number of land use cases bearing on the local government’s use of the “police power” to regulate land. In essence, the police power enables government to regulate the use of land and to place conditions on the development of land. The police power must be used to accomplish valid public purposes and follow due legal process, but it does not require compensation to the landowner. In addition to the police power, government can acquire or take property for valid public purposes provided that the landowner is given “just compensation” for any property taken. Since early in the 20th century, it has been recognized that the use of police power that goes too far in regulating the use of property will be considered a “taking” subject to the requirements for compensation. These recent land use cases deal with the “taking issue” in examining the limits of police power. Table 6.1 provides a brief synopsis of these recent cases and their impact on land use regulation.
In addition to the specific regulatory issues summarized in Table 6.1, some attorneys specializing in land use regulation note that these cases relate to individual permit applications, not broad exercises in land use policy. This distinction may be important for two reasons.

First, in broadly defining land use policies, such as through the adoption of a general plan or a zoning ordinance, the governing body is acting in a “quasi legislative” manner. In acting as a legislative body, local government decisions are “presumed to be valid.” In granting individual re-zoning applications or development permits, the governing body is acting in a “quasi judicial” manner. In this case, local government decisions must be supported by evidence demonstrating that the proposed action meets the standards set forth in the zoning ordinance or general plan.

Second, in making comprehensive land use decisions, the local government is clearly treating all similarly situated properties in a similar way. In making individual permit decisions, this presumption of equal treatment may not apply.

For both of these reasons, incorporation of aircraft noise compatibility policies in the general plan should be encouraged. Such actions are most likely to withstand any challenge, and by establishing a comprehensive framework, will tend to support the use of other noise compatibility planning techniques. Also, these actions can provide significant benefits in terms of disclosing noise impact areas to residents and developers.
Table 6-1: Recent U.S. Supreme Court Land Use Decisions  
Source: 3D Visions

<table>
<thead>
<tr>
<th>Case</th>
<th>Synopsis</th>
<th>Impact on Land Use Regulation</th>
</tr>
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<tbody>
<tr>
<td>First English Evangelical Lutheran Church v. County of Los Angeles (1987)</td>
<td>Flooding destroyed a church-owned campground. The County passed a temporary ordinance prohibiting development within a designated flood control area containing the campground.</td>
<td>Regulations that deprive property owners of all uses of property, even temporarily, are takings that require compensation.</td>
</tr>
<tr>
<td>Lucas v. South Carolina Coastal Council (1987)</td>
<td>Coastal protection ordinance limited development of two lots in an established coastal subdivision to specified recreational structures because the lots were within a dune protection area.</td>
<td>Regulations which deprive property owners of all “economically beneficial uses” or which compel a property owner to suffer “physical invasion” of property are takings that require compensation.</td>
</tr>
<tr>
<td>Nolan v. California Coastal Commission (1987)</td>
<td>As a permit condition allowing a beachfront property owner to construct a larger residence, the Commission required an access easement across the beach. This condition was applied pursuant to a coastal zone regulation intended to preserve the view of the beach and reduce congestion.</td>
<td>“Essential Nexus Test” Conditions applied through regulation must achieve the public purpose of the regulation.</td>
</tr>
<tr>
<td>Dolan v. City of Tigard (1994)</td>
<td>As a condition allowing expansion of an electric and plumbing supply business, the City required dedication of a 15-foot drainage easement and an 8-foot pathway easement.</td>
<td>“Rough Proportionality Test” The extent and nature of a development condition must be reasonably related to the degree of impact permitted by application of the condition.</td>
</tr>
<tr>
<td>City of Monterey v. Del Monte Dunes at Monterey (1999)</td>
<td>In a series of repeated rejections, each time imposing more rigorous demands on the developers, the City of Monterey denied a proposal to develop a 37.6-acre oceanfront parcel owned by Del Monte Dunes.</td>
<td>The jury found that Del Monte Dunes had been denied all “economically viable use” of its property without receiving compensation or being provided an adequate post deprivation remedy for the loss.</td>
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</table>
6.2.1. Airport Land Use Commission Land Use Plan for Areas Surrounding Santa Clara County Airports

The Airport Land Use Commission (ALUC) was formed in 1970 pursuant to State legislation, which made mandatory the creation of such a body for each county that has an airport. The ALUC has three primary responsibilities: to prepare and adopt a land use plan, to review general and specific plans prepared by local agencies for consistency with the ALUC plan, and to review individual proposed land use actions in areas near publicly owned airports.

In September 1992 the Airport Land Use Committee adopted an updated comprehensive land use plan in the area surrounding each airport in Santa Clara County, including RHV. The purpose of the Plan is to foster orderly growth and minimize the public’s exposure to excessive noise and safety hazards in those areas surrounding public airports. The Plan establishes provisions for the regulation of land use, building height, safety and noise insulation and determines appropriate land use controls for future land use at each airport.

Table 6.2 shows the Land Use Compatibility Chart that was adopted by the ALUC to indicate land use compatibility restrictions. This summary shows that new single family residential and educational facility development should not take place in areas surrounding airports with CNEL values of 65 CNEL or greater.

Table 6-2: Land Use Compatibility Chart for Aircraft Noise in the Vicinity of Reid-Hillview Airport

Source: ALUC Land Use plan for Areas Surrounding Santa Clara County Airports

<table>
<thead>
<tr>
<th>Generalized Land Use</th>
<th>CNEL Values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>55</td>
</tr>
<tr>
<td>Residential</td>
<td>S</td>
</tr>
<tr>
<td>Educational Facilities (schools, libraries, churches, cultural centers)</td>
<td>S</td>
</tr>
<tr>
<td>Commercial</td>
<td>S</td>
</tr>
<tr>
<td>Industrial</td>
<td>S</td>
</tr>
<tr>
<td>Open Space/Agricultural</td>
<td>S</td>
</tr>
<tr>
<td>Recreation</td>
<td>S</td>
</tr>
</tbody>
</table>

Notes:
S = Satisfactory
A = Allowable with normal construction, windows sealed, forced air ventilation, outdoor activity may be interrupted
C = Caution, review noise insulation needs carefully
AV = Avoid land use unless related to airport service
6.2.2. **The San Jose 2020 General Plan**

The San Jose 2020 General Plan was adopted in 1993. Plans are generally revised every ten years. The General Plan plays several roles in noise compatibility planning. Since the General Plan sets general policies for the jurisdiction, policies relating to noise compatibility can be adopted through the plan. General plans also identify environmental constraints to development, which could include aviation noise.

According to the San Jose 2020 General Plan, development in the vicinity of the airports should be regulated in accordance with FAA guidelines to:

- Maintain the airspace required for the safe operation of these facilities
- Avoid reflective surfaces, flashing lights and other potential hazards to air navigation, and
- Take into consideration the safety areas identified in the ALUC policies.

As a condition of approval of development in the vicinity of the airports, the General Plan states that the City of San Jose should require avigation easement dedications.

The General Plan affects land use compatibility most directly by establishing generalized land use and development intensity guidelines. The planned land uses for all property within the City of San Jose are depicted on the Land Use/Transportation Diagram. These land use designations reflect the goals and policies of the General Plan. In some cases, the land uses on the Land Use/Transportation Diagram are not reflective of the existing zoning on the property. In such cases, the General Plan land use indicates the intent of the City as to what is the appropriate future zoning. City Council ordinarily follows the policy of rezoning properties to conform to the General Plan.

The San Jose City Council has an annual review of the General Plan. During this process, members of the public have the opportunity to provide suggestions for Plan amendments.

6.2.3. **Santa Clara County General Plan**

The Santa Clara County General Plan defines the long-term goals and policies governing the future of the County’s built and natural environments. The current document, the *Santa Clara County General Plan, Charting a Course for the County’s Future, 1995-2010*, was adopted in December of 1994. It contains goals, strategies, and policies for three major areas of focus (a) as a countywide General Plan, (b) as a plan for the rural unincorporated areas outside cities, and (c) as a plan for the remaining unincorporated areas (called pockets and islands) within city’s Urban Service Areas. Relevant information regarding Reid-Hillview Airport and its surrounding environ is discussed in the Countywide Issues and Policies section of the Santa Clara County General Plan under Health and Safety. It specifically addresses the subjects of noise and aviation safety.

General Plan recommendations for preventing or mitigating unwanted noise include:

- Project design review should assess noise impacts on surrounding land uses
- Where necessary, construct sound walls or other noise mitigation barriers
- Prohibit construction in areas which exceed applicable interior and exterior standards, unless suitable mitigation measures can be implemented
Require project specific noise studies to assess actual and protected dB noise contours for proposed land uses likely to generate significant noise
• Take noise compatibility impacts into account through local land use plans
• Provide adequate sound buffers by incorporating acoustic site planning into new development, and
• Adhere to adopted policies and standards of ALUC Plan

6.2.4. Zoning

Short of acquisition, zoning provides the most direct means of regulating non-compatible development in the airport environs. Since many land uses are not adversely affected by aircraft noise levels, an obvious land use compatibility technique is to zone areas exposed to significant levels of aircraft noise for land uses such as industrial and commercial development that are less affected by noise. Such compatible use zoning is subject to the practical constraints on changes in future land use discussed previously. In addition, the zoning ordinance provides a means of attaching conditions to development that might make the permitted uses less sensitive to aircraft noise.

Zoning regulates land use by permitting specific uses and prohibiting others. Zoning also regulates the area height and bulk of development by establishing set back requirements, height limits, or floor area ratio limitations. (The floor area ratio is the ratio of building area to lot area.) In some cases, uses may be permitted as a conditional use, meaning that the use may be permitted if specified conditions are met. Other uses are sometimes permitted as special exceptions at the discretion of the designated administrative body. In addition, uses may be permitted through a variance in case of hardship. Hardship does not relate to the financial or other conditions of the property owner. Technically, a hardship is a condition relating to the property rather than to the needs or desires of the property owners. For example, a hardship may exist if the configuration of an irregularly shaped lot precludes development in accordance with a given zoning district’s set back requirements.

The City of San Jose Zoning Regulations is incorporated in Chapters 20.10 through 20.200 of the City of San Jose Municipal Code. The City of San Jose Planning and Zoning Commission administers zoning regulations with staff support provided by the Department of Planning, Building and Code Enforcement. Requests for zoning variances and appeals of zoning actions are submitted to the Director of Planning and the Planning Commission. Appeals on conditional use permits are submitted to the Director of Planning. The Director has to file a copy of the application within 10 days to the City Council.

The City of San Jose zoning ordinance provides for 20 zoning districts. Conventional zoning districts specify permitted land uses and development densities or intensities. Table 6.3 lists the zoning districts found in the study area and summarizes how these districts regulate development of noise sensitive uses such as residences, schools, open space and places of worship. This summary shows that noise sensitive uses can be developed as either permitted or conditional uses in all but two (“Commercial Office” and “Industrial Park”) of the zoning districts found in the study area.
Table 6-3: Noise Sensitive Uses Permitted by Zoning District within the Study Area

Source: 3D Visions analysis of Chapters 20.30 of the San Jose Municipal Code.

<table>
<thead>
<tr>
<th>Zoning District</th>
<th>Noise Sensitive Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RS</td>
</tr>
<tr>
<td>R-1 Single Family Residential</td>
<td>P</td>
</tr>
<tr>
<td></td>
<td>P</td>
</tr>
<tr>
<td>R-M Multi-family Residential</td>
<td>P</td>
</tr>
<tr>
<td>R-MH Mobilehome Park</td>
<td>P3,1</td>
</tr>
<tr>
<td></td>
<td>P</td>
</tr>
<tr>
<td></td>
<td>P</td>
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<td></td>
<td>P</td>
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<tr>
<td></td>
<td>P</td>
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<tr>
<td></td>
<td>P</td>
</tr>
</tbody>
</table>

Notes:
1. Residential Care Facility (>6 persons)
2. Residential Care Facility (<7 persons)
3. Residential Service Facility (>6 persons)
4. Residential Service Facility (<7 persons)
5. Elementary & Secondary Schools (private)
6. Vocational or Trade Schools
7. Church
8. Museums, Libraries (private)
9. Daycare center
10. Hospital
11. Mixed Use (residential/commercial)
12. Single Family Residential
13. Educational services related to environment

Noise Sensitive Uses:
RS=Residential, ED=Education, R=Religious, PU=Public Use, HC = Health Care, P=Permitted Use (permitted “by right” in the zoning district), C=Conditional Use (requires a conditional use permit)
6.2.5. Building Code

Building codes establish standards for construction with a primary emphasis on safety. Many local building codes are based on national or regional standard codes modified as necessary to suit local conditions. The City of San Jose Building Code is based on the Uniform Building Code with specific local amendments.

Building codes can be used to promote noise compatibility by requiring sound attenuation construction features. This requirement is similar to the practice of requiring energy efficient construction features. In fact, many of the construction features used to increase energy efficiency, such as high R-value insulation and elimination of air infiltration, also reduce interior noise levels. Double pane thermal windows are also beneficial for both energy savings and noise reduction, although most thermal window designs have too small an air space to adequately attenuate excessive noise. Likewise, use of thermally insulated doors is advantageous for energy savings, but the type of door and seal used may not be as advantageous as an acoustically insulated door in attenuating noise. Other noise reduction techniques such as vent baffles do not enhance energy efficiency. One aspect of noise reduction design—the need to keep windows sealed in all seasons—may have an adverse affect on energy consumption by requiring forced air ventilation at all times.

6.2.6. Capital Improvement Program

Capital improvement programs outline expenditures for public facilities and infrastructure improvements, typically over a five- or six-year period. Capital improvements relate to noise compatibility primarily in providing the infrastructure to support development. Such development could be either noise sensitive or not, depending upon the comprehensive plan and zoning. Accordingly, capital improvements such as water and sewer extensions or transportation improvements are of greatest concern if they provide service to vacant residential property within the Airport noise contours.

6.3. Land Use Measures for Consideration in Noise Compatibility Program

The degree of annoyance which people experience from aircraft noise varies depending on their activities at any given time. People are usually less disturbed by aircraft noise when they are shopping, working, or driving than when they are at home. Transient hotel and motel residents seldom express as much concern with aircraft noise as do permanent residents of the area. The concept of “land use compatibility” has arisen from this systematic variation in community reaction to noise. This section describes Federal and local land use compatibility guidelines, recommends compatibility criteria for RHV and its surroundings, and identifies non-compatible land uses.
6.3.1. Federal Guidelines

Studies by governmental agencies and private researchers, in particular those by the Department of Housing and Urban Development (HUD), the FAA, and other Federal agencies, have established noise compatibility guidelines for different land uses. In 1980, the Federal Interagency Committee on Urban Noise (FICUN) published a report, Guidelines for Considering Noise in Land Use Planning and Control, which contained detailed land use compatibility guidelines for various CNELs. The FAA adopted a revised and simplified version of these guidelines when it promulgated FAR Part 150.

The FAA and FICUN guidelines indicate that mobile home parks and outdoor music shells and amphitheaters are incompatible with noise above CNEL 65 dB. While schools and residential uses other than mobile homes also are generally incompatible with noise above CNEL 65 dB, the guidelines note that where local communities determine that these must be allowed, sound attenuation measures should be incorporated into building codes and be considered in individual development approvals. In such cases, avigation or noise easements might also be recommended as a condition of development approval.

Nature exhibits and zoos are considered to be incompatible with noise above CNEL 70 dB. Several other uses, including hospitals, nursing homes, churches, auditoriums, and concert halls may be compatible with noise up to CNEL 75 dB if adequate Noise Level Reduction (NLR) is incorporated in construction. Recreational uses other than outdoor music shells or amphitheaters, resorts, and camps are considered compatible at levels up to CNEL 75 dB.

6.3.2. FAA Recommended Guidelines for CNEL 65 dB and Above

FAR Part 150 states that determinations of noise compatibility and regulation of land use are local responsibilities. Federal guidelines are provided to assist local communities in making land use compatibility determinations. FAR Part 150 states that such guidelines may be modified to fit local conditions. The guidelines presented in FAR Part 150 represent a simplified version of the guidance prepared by the FICUN in 1980. Table 6.4 shows the land use compatibility guidelines that will be used in this study for evaluating land uses in areas at or above CNEL 65 dB.

6.3.3. FICUN Recommended Guidelines for Aircraft Noise Exposure Levels Below CNEL 65 dB

The FICUN report offers some planning considerations for noise levels below CNEL 65 dB in addition to providing more detailed guidance on land use compatibility within the broader categories used in FAR Part 150.

6.3.4. Santa Clara County Guidelines

As presented in Section 2.2, the Santa Clara County ALUC developed land use compatibility guidelines that comply with California Airport Noise Standards, Title 21, of the California Administrative Code. Figure 2.1 shows the general land use measures which can be applied to new land uses in the vicinity of County airports.
<table>
<thead>
<tr>
<th>Land Use</th>
<th>&lt;65</th>
<th>65-70</th>
<th>70-75</th>
<th>75-80</th>
<th>80-85</th>
<th>&gt;85</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residential Use</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential other than mobile homes and transient lodgings</td>
<td>Y</td>
<td>N(1)</td>
<td>N(1)</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Mobile home park</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Transient lodgings</td>
<td>Y</td>
<td>N(1)</td>
<td>N(1)</td>
<td>N(1)</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td><strong>Public Use</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schools</td>
<td>Y</td>
<td>N(1)</td>
<td>N(1)</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Hospitals and nursing homes</td>
<td>Y</td>
<td>25</td>
<td>30</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Churches, auditoriums, and concert halls</td>
<td>Y</td>
<td>25</td>
<td>30</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Governmental services</td>
<td>Y</td>
<td>Y</td>
<td>25</td>
<td>30</td>
<td>N</td>
<td>N</td>
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<tr>
<td>Transportation</td>
<td>Y</td>
<td>Y</td>
<td>Y(2)</td>
<td>Y(3)</td>
<td>Y(4)</td>
<td>Y(4)</td>
</tr>
<tr>
<td>Parking</td>
<td>Y</td>
<td>Y</td>
<td>Y(2)</td>
<td>Y(3)</td>
<td>Y(4)</td>
<td>N</td>
</tr>
<tr>
<td><strong>Commercial Use</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offices, business and professional</td>
<td>Y</td>
<td>Y</td>
<td>25</td>
<td>30</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Wholesale and retail--building materials, hardware and farm equipment</td>
<td>Y</td>
<td>Y</td>
<td>Y(2)</td>
<td>Y(3)</td>
<td>Y(4)</td>
<td>N</td>
</tr>
<tr>
<td>Retail trade--general</td>
<td>Y</td>
<td>Y</td>
<td>25</td>
<td>30</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Utilities</td>
<td>Y</td>
<td>Y</td>
<td>Y(2)</td>
<td>Y(3)</td>
<td>Y(4)</td>
<td>N</td>
</tr>
<tr>
<td>Communication</td>
<td>Y</td>
<td>Y</td>
<td>25</td>
<td>30</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td><strong>Manufacturing and Production</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing general</td>
<td>Y</td>
<td>Y</td>
<td>Y(2)</td>
<td>Y(3)</td>
<td>Y(4)</td>
<td>N</td>
</tr>
<tr>
<td>Photographic and optical</td>
<td>Y</td>
<td>Y</td>
<td>25</td>
<td>30</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Agriculture (except livestock) and forestry</td>
<td>Y</td>
<td>Y(6)</td>
<td>Y(7)</td>
<td>Y(8)</td>
<td>Y(8)</td>
<td>Y(8)</td>
</tr>
<tr>
<td>Livestock farming and breeding</td>
<td>Y</td>
<td>Y(6)</td>
<td>Y(7)</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Mining and fishing, resource production and extraction</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Recreational</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outdoor sports arenas and spectator sports</td>
<td>Y</td>
<td>Y(5)</td>
<td>Y(5)</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Outdoor music shells, amphitheaters</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Nature exhibits and zoos</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Amusements, parks, resorts and camps</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Golf courses, stables, and water recreation</td>
<td>Y</td>
<td>Y</td>
<td>25</td>
<td>30</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

*Source: FAR Part 150 (Key and notes on following page)*
Key to Table 6.4

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Y(Yes)</td>
<td>Land use and related structures compatible without restrictions.</td>
</tr>
<tr>
<td>N(No)</td>
<td>Land use and related structures are not compatible and should be prohibited.</td>
</tr>
<tr>
<td>NLR</td>
<td>Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.</td>
</tr>
<tr>
<td>25, 30, or 35</td>
<td>Land use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated into design and construction of structure.</td>
</tr>
</tbody>
</table>

Notes for Table 6.4

The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

(1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.

(2) Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(3) Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(4) Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(5) Land use compatible provided special sound reinforcement systems are installed.

(6) Residential buildings require an NLR of 25.

(7) Residential buildings require an NLR of 30.

(8) Residential buildings not permitted.
6.4. Recommended Land Use Guidelines for the RHV Part 150 Study

Land use compatibility criteria recommended for the RHV Part 150 Study are based on the FAR Part 150 guidelines described in Table 6.4, with some modifications to account for local conditions (shown in Figure 2.1, which detail the Santa Clara County Land Use Plan for areas surrounding County airports) and the more detailed guidelines provided in the FICUN report for land use compatibility below CNEL 65 dB. This section of the study discusses land use compatibility in areas that exceed CNEL 65 dB as well as areas below 65 CNEL dB.

6.4.1. Consideration of Aircraft Noise Exposure Levels Above CNEL 65 dB

Land use compatibility guidelines for selected categories are discussed below.

Residences (other than transient lodgings and mobile homes). In the CNEL 75+ dB zone, all residential development should be considered non-compatible. In the CNEL 65-70 dB and CNEL 70-75 dB zones, new residential development should be considered non-compatible and should be permitted only where the infilling of existing residential neighborhoods is the only reasonable use. For infill development or substantial redevelopment in the CNEL 65-75 dB noise zones, insulation should be required to achieve an interior level of CNEL 45 dB, as recommended by the U.S. Environmental Protection Agency. In addition to acoustical treatment of structures, potential new residents should be made aware of the noise environment through real estate disclosure or other means.

Mobile Homes and Camper Parks. The construction of mobile homes and campers does not provide the same level of noise attenuation provided by conventional residential construction. Further, incorporation of additional sound insulation is not practicable for existing mobile homes. Increasing the sound attenuation characteristics of new mobile homes or campers might be possible, but there is no indication that the mobile home manufacturing industry is likely to do so. Accordingly, new mobile home or camper park development should be considered to be non-compatible within the CNEL 65 dB and higher contours.

Transient Lodgings. Construction of hotels and motels generally results in interior sound attenuation higher than that of single-family homes. The nature of their use justifies minimal restrictions, provided that an indoor noise level of no more than CNEL 45 dB is attained. It is recommended that hotels be permitted in all noise zones provided that an interior noise level of CNEL 45dB is achieved.

Schools. The special sensitivity of classroom teaching to periodic aircraft noise events justifies that the interior noise levels standards be more stringent than that applied to residences. It is recommended that schools not be considered compatible in the CNEL 65-70 dB noise zone unless an interior noise level of CNEL 40 dB is achieved. Schools would be considered non-compatible in all higher noise zones. These criteria would be applied to both public and private schools.

Hospitals. Hospitals are usually well constructed, air conditioned, and kept closed, resulting in high levels of interior noise attenuation. Provided that interior noise levels of
CNEL 45 dB are attained, hospitals are considered to be compatible with levels up to CNEL 75 dB. Hospitals should be considered non-compatible in noise zones above CNEL 75 dB.

Nursing Homes. Nursing homes are basically residential in character and should be addressed in the same way as multi-family homes. It is recommended that they be considered non-compatible in noise zones above CNEL 70 dB, and permitted in CNEL 65-70 dB only if an interior noise level of CNEL 45 dB is achieved.

Child Care Centers. Since classroom instruction is not as important a part of the function of a childcare center as it is the function of a school, it is recommended that criteria for childcare centers be less stringent than those for schools. It is recommended that these facilities be considered compatible in areas up to a level of CNEL 75 dB if an interior noise level of CNEL 45 dB is achieved. Childcare centers are considered non-compatible in levels of CNEL 75 dB and greater.

Churches. Given the small amount of time per week that a church is used for quiet activities, and given that the proportion of time spent by an individual in a church is also small, the justification for adopting more stringent compatibility standards is less strong than for schools. It is recommended that these facilities be considered compatible in areas up to a level of CNEL 75 dB if an interior noise level of CNEL 45 dB is achieved. Churches are considered non-compatible in levels of CNEL 75 dB and greater.

For schools, childcare centers, or other types of facilities that are part of a church complex, the criteria for these secondary types of facilities would be applied. In addition to structures specifically dedicated to church use, numerous small churches are often established in portions of commercial buildings. These “storefront churches” are frequently located in commercial areas which are otherwise compatible with aircraft noise levels. Due to their location and sometimes-transient nature, it is recommended that storefront churches be treated as other uses in commercial districts.

Commercial, Industrial, and Recreational Uses. Most uses in these categories are not as noise sensitive as the uses described previously. It is recommended that the Federal guidelines described in Table 6.4 and local guidelines in Figure 2.1 be applied.

6.4.2. Consideration of Aircraft Noise Exposure Levels Below CNEL 65 dB

According to Federal guidelines, all land uses are considered to be compatible with noise levels below CNEL 65 dB. A recent review of noise compatibility criteria conducted by the Federal Interagency Committee on Noise (FICON) concluded that CNEL 65 dB should be retained as the standard for “significant” noise impact. The FICON also recognized that community noise concerns do not stop abruptly at the CNEL 65 dB contour line. Rather, as the “Schultz Curve” in Figure 6.5 demonstrates, the percentage of people highly annoyed by noise gradually declines as noise levels decrease through CNEL 65 dB.

Recently, the FAA sponsored a Study Group on Compatible Land Use to “address the need for an effective policy and programs to achieve compatible land use controls within the noise impacted areas around the nation’s airports.” This study group consisted of representatives from the FAA, the aviation industry, and airport community interests. In the Final Report of the Study Group on Compatible Land Use to the FAA Research,
Engineering and Development (RE&D) Committee, February 1995, the group recommended “that the FAA continue to support locally initiated compatible land use planning beyond the CNEL 65 dB contour, when appropriate.” The conclusion was based on the recognition that individual sensitivities to noise vary, that community noise concerns exist beyond the CNEL 65 dB contour, and that both airports and communities would benefit from decreased residential development in noise impacted areas beyond the CNEL 65 dB contour.

**Figure 6.5: Community Annoyances as a Function of DNL**
Source: Federal Interagency Committee on Noise (FICON)

As noted earlier, mobile homes and campers do not provide the same level of sound attenuation as conventional residential construction. Accordingly, new mobile home and camper park development should not be permitted within the CNEL 60-65 dB contour. In addition, due to the special sensitivity of classroom teaching to periodic aircraft noise events, schools should not be permitted within the CNEL 60-65 dB contour unless an interior level of CNEL 40 dB is achieved.
6.5. Non-Compatible and Noise Sensitive Land Uses

The following discussion addresses both non-compatible and noise sensitive land uses. In this document, the term “non-compatible” refers to residential and educational uses located within the CNEL 65 dB or greater contours. The term “noise sensitive” refers to residential uses located in the CNEL 60 to 65 dB contour, as well as educational uses or community facilities located within the CNEL 60 dB or greater contours. It should be noted that, just as the CNEL 65 dB contour does not define the limits of potential noise concern, the CNEL 60 dB contour would not include all persons concerned about aircraft noise.

Land use data from a windshield survey performed in April 2000, zoning data provided by the City of San Jose, as well as non-abated noise contours were used to identify existing, future, and potential non-compatible and noise sensitive land use in accordance with the land use compatibility criteria discussed above. The analysis of existing non-compatible and noise sensitive land uses in the 2002 noise contours are represented in Figure 6.1. The analysis of future non-compatible and noise sensitive land uses is also based on existing land use, but uses the noise contours representing 2007 operations in Figure 6.2.

6.5.1. Existing (2002) Non-Compatible and Noise Sensitive Land Uses

Figure 6.2 presents the 2002 noise contours superimposed over the existing land use base map to identify existing incompatible land uses in the airport's environs.

Table 6.5 summarizes land uses within the CNEL 60 dB contour and above. Land uses within the 70 dB contour include primarily airport property with a small section of undeveloped property to the southeast of the airport. Approximately fifteen mobile homes in the Eastridge Mobile Estates to the west of the airport and approximately seven single-family homes located north of Ocala Avenue are included in the 65-70 dB contour interval. These land uses are non-compatible. Using 2000 Census Bureau data, it is estimated that 118 persons reside within the 65-70 dB contour interval. The only noise sensitive use in this contour interval is the San Jose Public Library. The 60-65 dB contour interval includes approximately 64 mobile homes in the Eastridge Mobile Estates. Mobile homes are non-compatible since they are not built using normal construction—windows sealed, forced-air ventilation. Also included in this contour interval are approximately 529 single-family homes to the north and west of the airport and Silvia Cassel Elementary School and D.J. Meyer Elementary School. Estimating the population within the 60-65 dB contour interval using 2000 Census data yields a population of 3,318.
### Table 6-5: Land Uses in 2002 Noise Contours of CNEL 60 dB and Above

Source: 3D Visions

<table>
<thead>
<tr>
<th>CNEL</th>
<th>Residential Land Uses</th>
<th>Non-Compatible Land Uses</th>
<th>Other Noise Sensitive Land Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SF/2F</td>
<td>MH</td>
<td>Population</td>
</tr>
<tr>
<td>70+</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>65-70</td>
<td>7</td>
<td>--</td>
<td>15</td>
</tr>
<tr>
<td>60-65</td>
<td>529</td>
<td>--</td>
<td>64</td>
</tr>
<tr>
<td>Total</td>
<td>536</td>
<td>--</td>
<td>79</td>
</tr>
</tbody>
</table>

Notes: SF/2F=Single/2 Family, MF=Multi-Family, MH=Mobile Home, ED=Educational Facility, CF=Community Facility

---

### 6.5.2. Future (2007) Non-Compatible and Noise Sensitive Land Uses

Figure 6.3 shows future non-compatible land use assuming that no additional noise sensitive land use is developed within the year 2007 contours. Given the existing development within the 60dB and greater contours, the only potential for additional non-compatibility to consider would be approximately 12 acres of vacant land located south of the airport on Tully Road. The County owns 2.67 acres of this vacant land, while Lions Square (4.36 acres) and the Equitable Life Assurance Society (5.15 acres) own the remainder. The majority of the vacant property is zoned as “Industrial Park” and the rest is zoned as “Agriculture.” Residential development is permitted conditionally in the “Agricultural” zoning district, and never permitted in the “Industrial Park” zoning district. Based on these zoning classifications, it is unlikely that any new noise incompatible land uses would occur even if the vacant land were developed.

The only change assumed for the future case is the slight increase in contour size due to the current build-out within the CNEL 60 dB and greater contours. Accordingly, the pattern of non-compatible land use is virtually identical to the existing pattern described above. Table 6.6 shows non-compatible land uses within the CNEL 60 dB and greater contours.

### Table 6-6: Land Uses in 2007 Noise Contours of CNEL 60 dB and Above

Source: 3D Visions

<table>
<thead>
<tr>
<th>CNEL</th>
<th>Residential Land Uses</th>
<th>Non-Compatible Land Uses</th>
<th>Other Noise Sensitive Land Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SF/2F</td>
<td>MF</td>
<td>MH</td>
</tr>
<tr>
<td>70+</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>65-70</td>
<td>19</td>
<td>--</td>
<td>19</td>
</tr>
<tr>
<td>60-65</td>
<td>620</td>
<td>--</td>
<td>65</td>
</tr>
<tr>
<td>Total</td>
<td>639</td>
<td>--</td>
<td>84</td>
</tr>
</tbody>
</table>

Notes: SF/2F=Single/2 Family, MF=Multi-Family, MH=Mobile Home, ED=Educational Facility, CF=Community Facility
6.6. Screening of Land Use Measures

This section examines the numerous land use management strategies available for continued development of the land use compatibility program for RHV. FAA approval will be required for the recommended measures. Implementation of recommended land use controls will depend upon decisions made by the City of San Jose regarding the practicality and legality of specific measures and upon the availability of Federal funding under the FAA Airport Improvement Plan.

Table 6-7: Avigation Easements For Building Permits
Source: 3D Visions

| Measure: Avigation Easements for Building Permits |
| Description: This technique requires the granting of avigation easements and non-suit covenants to the airport operator as a condition of building permits for specified noise-sensitive land uses in noise impacted areas. |
| Area to which measure would be applied | Undeveloped parcels in the existing 2002 CNEL 60 dB and greater contours shown in Figure 6.2. |
| Responsible Agency | City of San Jose/County Airports Administration |
| Compatibility Benefits | Due to the limited availability of vacant land for future development and the current zoning classifications (“Agricultural” and “Industrial Park”) on the vacant land, it is unlikely that any future non-compatible or noise-sensitive land uses will be developed. |
| Implementation | • City of San Jose/County Airports Administration adopts measure in RHV Part 150 Study.  
• City of San Jose adopts ordinance establishing requirement, and develops procedures to ensure building permits for new construction and substantial reconstruction in designated noise zones require an easement. |
| Political Acceptability | • Developers and/or property owners may oppose the measure due to the potential for reducing marketability. |
| Costs | • City of San Jose administration.  
• Property owners relinquish right to sue.  
• Possible impact on market value of properties involved although experience with appraisal of avigation easements at other airports indicates that this effect is slight. |
| Conclusion | Analysis of new residential development potential indicates that this measure would not yield any benefits. Accordingly, this measure is not recommended. |
### Table 6-8: Fair Disclosure Policy

**Source:** 3D Visions

<table>
<thead>
<tr>
<th>Measure: Fair Disclosure Policy</th>
<th>Description: This technique would require the disclosure of aircraft noise level information during residential sales transactions through a real estate disclosure form.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area to which measure would be applied</td>
<td>Existing residential properties within the existing 2002 CNEL 60 dB and greater contours shown in Figure 6.2 or the airport impact boundary developed by the County.</td>
</tr>
<tr>
<td>Responsible Agency</td>
<td>California Department of Real Estate</td>
</tr>
<tr>
<td>Compatibility Benefits</td>
<td>• There are approximately 615 residences within the existing 2002 CNEL 60 dB and greater noise contours. Potential homebuyers would be alerted to aircraft noise levels upon consideration of purchasing an existing residence. However, disclosure of noise levels typically occurs at or near closing, after the potential buyer has committed substantial time and effort to the purchase.</td>
</tr>
</tbody>
</table>
| Implementation | • County Airports Administration adopts measure in RHV Part 150 Study.  
• County Airports Administration works with Legislature to secure legislation and/or with California Department of Real Estate to revise disclosure form. |
| Political Acceptability | • Homeowners and developers may oppose measure due to potential negative effect on marketing residential units. |
| Costs | • Administrative costs associated with changing Statute and disclosure form.  
• It is likely that decreasing the number of potential buyers by eliminating those considering noise to be a significant issue would have some impact on property value, although experience with appraisal of avigation easements at other airports indicates that this effect is slight. |
| Conclusion | This measure would clarify airport noise as one of the issues that must be addressed on the real estate disclosure form. This measure is recommended. |
**Table 6-9: Capital Improvements Programming**

*Source: 3D Visions*

<table>
<thead>
<tr>
<th>Measure: Capital Improvements Programming</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> This technique involves the use of the CIP to avoid investments in public facilities that would facilitate noise sensitive development.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area to which measure would be applied</th>
<th>Undeveloped areas in the existing 2002 CNEL 60 dB and greater contours shown in Figure 6.2.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible Agency</td>
<td>City of San Jose/County Airports Administration</td>
</tr>
<tr>
<td>Compatibility Benefits</td>
<td>The limited availability of vacant land (12 acres), the unlikelihood of non-compatible development due to existing zoning classifications on this land (“Agriculture”, “Industrial Park”), and the presence of surrounding development indicate that the potential for this measure is limited.</td>
</tr>
<tr>
<td>Implementation</td>
<td>• City of San Jose/County Airports Administration adopts measure in RHV Part 150 Study.</td>
</tr>
<tr>
<td>Political Acceptability</td>
<td>• Surrounding residents may support decreased development potential resulting from lack of new infrastructure.</td>
</tr>
<tr>
<td>Costs</td>
<td>• City of San Jose administration. • Reduced market value of properties involved due to reduced development potential.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Analysis of new residential development potential indicates that this measure would not yield any benefits. Accordingly, this measure is not recommended.</td>
</tr>
</tbody>
</table>

**Table 6-10: Public Acquisition**

*Source: 3D Visions*

<table>
<thead>
<tr>
<th>Measure: Public Acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> Acquire noise-impacted properties by the airport proprietor in order to control its use for the purposes of achieving noise compatibility. Acquired property could be cleared or converted to compatible uses.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area to which measure would be applied</th>
<th>Since proposed changes in FAA policies would make new development ineligible for remedial noise compatibility funding, only existing residences within 2002 CNEL 70 dB and greater are included.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible Agency</td>
<td>City of San Jose/County Airports Administration</td>
</tr>
<tr>
<td>Compatibility Benefits</td>
<td>None. Existing 70 dB and greater contours does not include any non-compatible land uses.</td>
</tr>
<tr>
<td>Implementation</td>
<td>DNA</td>
</tr>
<tr>
<td>Political Acceptability</td>
<td>DNA</td>
</tr>
<tr>
<td>Costs</td>
<td>DNA</td>
</tr>
<tr>
<td>Conclusion</td>
<td>The lack of residences within the 2002 CNEL 70 dB and greater contours indicate that this measure is not necessary; therefore, it is not recommended.</td>
</tr>
</tbody>
</table>
Table 6-11: Guaranteed Purchase
Source: 3D Visions

<table>
<thead>
<tr>
<th>Measure: Guaranteed Purchase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description: This technique involves the establishment of a program that guarantees noise-impacted homeowners that the airport proprietor will purchase eligible homes at fair market value when and if the owners are unable to sell their homes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area to which measure would be applied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Since proposed changes in FAA policies would make new development ineligible for remedial noise compatibility funding, only existing residences within 2002 CNEL 65 dB and greater contours are assumed to be included.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsible Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Airports Administration</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Compatibility Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provides opportunities for more noise sensitive residents to relocate while maintaining the stability of established neighborhoods. Assuming that all residences within the 2002 CNEL 65 dB and greater contours and mobile homes within the 2002 CNEL 60 dB and greater contours are eligible, approximately 7 single-family residences and 79 mobile homes with an estimated population of 446 could be included.</td>
</tr>
<tr>
<td>• Sound insulation and avigation easements are typically applied to acquired single-family properties (additional sound insulation is not practicable for existing mobile homes.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• County Airports Administration adopts measure in RHV Part 150 Study.</td>
</tr>
<tr>
<td>• County Airports Administration identifies eligible areas in consultation with City of San Jose and establishes eligibility requirements.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Political Acceptability</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a tradeoff between the cost to purchase and minimization of conflicts. This policy would be new at RHV and is likely to be viewed favorably by neighbors of the airport.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• County Airports Administration costs of initial acquisition for single-family homes would be largely offset by resale.</td>
</tr>
<tr>
<td>• Insulation and management costs amount to roughly $30,000 per dwelling unit in the city of San Jose. If all eligible single-family properties participated, total costs would be roughly $210,000. County Airports Administration costs may be eligible for 90% FAA funding if part of an approved FAR Part 150 NCP, depending upon availability of funds.</td>
</tr>
<tr>
<td>• County Airports Administration program administration costs.</td>
</tr>
<tr>
<td>• Temporary reductions in City of San Jose property taxes while properties are in state ownership.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>The relatively low level of residential land use impacts will ensure continued neighborhood stability. Although this measure involves extensive efforts in managing the transfer of property, it is recommended for the mobile homes only. The single family residences are recommended for sound insulation.</td>
</tr>
</tbody>
</table>
Table 6-12: Noise Easement Acquisition

<table>
<thead>
<tr>
<th>Measure: Noise Easement Acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description: Purchase avigation easements from noise impacted property owners, usually over developed properties.</td>
</tr>
</tbody>
</table>

| Area to which measure would be applied | Since proposed changes in FAA policies would make new development ineligible for remedial noise compatibility funding, only existing residences within 2002 CNEL 65 dB and greater contours are assumed to be included. |
|---------------------------------------|
| Responsible Agency | County Airports Administration |
| Compatibility Benefits | • Provides protection for airport sponsor from litigation due to airport operation. Assuming that all single-family and mobile home residences within the 2002 CNEL 65 dB and greater contours are eligible, approximately 22 residences (7 single-family homes and 15 mobile homes) with an estimated population of 118 could be included. • Notifies potential new buyers of noise environment. • Current FAA policy on valuation of avigation easement is based on the effect of the easement on property value, not the effect of noise. Accordingly, this measure would not compensate for noise impact, but for the increased difficulty of marketing property encumbered by the easement itself. |
| Implementation | • County Airports Administration adopts measure in RHV Part 150 Study. • County Airports Administration identifies eligible areas and establishes eligibility requirements. |
| Political Acceptability | Low valuation of the easement limits the attractiveness of this technique for property owners. |
| Costs | • Limited FAA experience at other airports indicates that easements might be assessed at $2,000 to $3,000 per residence. If all potentially eligible properties participated, total costs would be roughly $44,000 to $66,000. County Airports Administration costs for the actual easements may be eligible for 90% FAA funding if part of an approved FAR Part 150 NCP, although actual levels may be less, depending upon availability of funds. • County Airports Administration would be responsible for the appraisal and acquisition costs of easement. • County Airports Administration program administration costs. |
| Conclusion | The low valuation of easement and the low level of residential land use impacts limit the attractiveness of this measure and the potential for significant community noise benefit. Accordingly, this measure is not recommended, except in conjunction with the soundproofing program. |
### Table 6-13: Development Rights

**Source:** 3D Visions

<table>
<thead>
<tr>
<th>Measure: Development Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description: This technique involves the purchase of an interest in the privately owned land that permits the airport proprietor to prohibit any and all uses of the land that could be adversely impacted by aircraft noise.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area to which measure would be applied</th>
<th>Since proposed changes in FAA policies would make new development ineligible for remedial noise compatibility funding, only vacant residential property within the 2002 CNEL 65 dB and greater contours would be eligible. No vacant residential property exists within the 2002 CNEL 65 dB and greater contours.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible Agency</td>
<td>County Airports Administration</td>
</tr>
<tr>
<td>Compatibility Benefits</td>
<td>None</td>
</tr>
<tr>
<td>Implementation</td>
<td>DNA</td>
</tr>
<tr>
<td>Political Acceptability</td>
<td>DNA</td>
</tr>
<tr>
<td>Costs</td>
<td>DNA</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Examination of vacant properties within the 2002 CNEL 65 dB and greater contours indicates that there is almost no potential for residential development due to zoning classifications. Accordingly, this measure is not recommended.</td>
</tr>
</tbody>
</table>

### Table 6-14: General Planning

**Source:** 3D Visions

<table>
<thead>
<tr>
<th>Measure: General Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description: This technique provides policy guidance for amendments in the City of San Jose 2020 General Plan to incorporate recommendations for preventing or mitigating unwanted noise and incorporating land use recommendations of the ALUC Plan.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area to which measure would be applied</th>
<th>Undeveloped areas surrounding airports in the City of San Jose.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible Agency</td>
<td>City of San Jose</td>
</tr>
<tr>
<td>Compatibility Benefits</td>
<td>Provides guidance for incorporation of aircraft noise compatibility policies.</td>
</tr>
<tr>
<td>Implementation</td>
<td>City of San Jose adopts measure in 2020 General Plan.</td>
</tr>
<tr>
<td>Political Acceptability</td>
<td>Likely to be supported by the San Jose residents.</td>
</tr>
<tr>
<td>Costs</td>
<td>City of San Jose administration.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>General Plan recommendations for preventing or mitigating unwanted noise would establish a comprehensive framework for noise compatibility. This measure is recommended.</td>
</tr>
</tbody>
</table>
### Table 6-15: Land Banking

**Source:** 3D Visions

<table>
<thead>
<tr>
<th>Measure: Land Banking</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> This technique involves the fee-simple purchase of privately owned, vacant land by a local public agency to prevent non-compatible land use development and to hold such property for later public use not necessarily related to aviation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area to which measure would be applied</th>
</tr>
</thead>
<tbody>
<tr>
<td>A zoning analysis of the vacant land (12 acres) located south of the airport indicates that residential development is allowed conditionally in the “Agriculture” district, while no residential development is permitted in an “Industrial Park” district. Based on these zoning classifications, it is unlikely that any new non-compatible land uses would occur even if the land were developed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsible Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Airports Administration, County of Santa Clara, City of San Jose</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Compatibility Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• County Airports Administration adopts measure in RHV Part 150 Study.</td>
</tr>
<tr>
<td>• County Airports Administration identifies acquisition areas in consultation with County of Santa Clara and City of San Jose.</td>
</tr>
<tr>
<td>• County Airports Administration or County of Santa Clara or City of San Jose acquire land with FAA noise mitigation funds.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Political Acceptability</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Since the program would be voluntary and property owners would receive fair market value for development rights, little opposition would be anticipated from affected property owners.</td>
</tr>
<tr>
<td>• Since potential public uses of acquired property must conform to the comprehensive plan and zoning ordinance as well as to land use compatibility guidelines the public sector may not want to purchase lands with limited use.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• County Airports Administration or County of Santa Clara or City of San Jose would use federal noise mitigation funds for property acquisition. Some administrative costs of program administration may be eligible for federal funding. Costs may be eligible for 90% FAA funding if part of an approved FAR Part 150 Study, although actual levels may be less, depending upon availability of funds. FAA participation would likely be limited to areas within the CNEL 65 dB and greater contours. Since acquisition costs are greater than other measures typically employed at these noise levels, FAA participation may be further reduced on the basis of cost/benefit considerations. The program’s cost/benefit ratio could be enhanced if Federal funds are leveraged with County Airports Administration or County of Santa Clara or City of San Jose investments.</td>
</tr>
<tr>
<td>• Reduction of City of San Jose property tax base.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>The limited availability of vacant land and existing zoning classifications on this land indicate that the potential for this measure is very limited. Accordingly, this measure is not recommended.</td>
</tr>
</tbody>
</table>

2002
### Table 6-16: Soundproofing Program (2002 CNEL 65 dB and Greater Contours)

**Source:** 3D Visions

<table>
<thead>
<tr>
<th>Measure: Soundproofing Program</th>
<th>Description: Sound insulation of existing private homes and other noise sensitive uses such as churches and schools. Avigation easements are typically obtained in return for property owner participation.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area to which measure would be applied</strong></td>
<td>Since proposed changes in FAA policies would make new development ineligible for remedial noise compatibility funding, only existing residences, schools and libraries within the 2002 CNEL 65 dB and greater contours are assumed to be included.</td>
</tr>
<tr>
<td><strong>Implementing Agency</strong></td>
<td>County Airports Administration</td>
</tr>
</tbody>
</table>
| **Compatibility Benefits** | • Acceptable interior noise levels, insulation typically recommended to obtain interior levels of CNEL 45 dB or less.  
• Avigation easement obtained through program would provide protection for airport sponsor from litigation due to airport operation. Assuming that all single-family residences within the 2002 CNEL 65 dB and greater contours are eligible, approximately 7 single-family homes with an estimated population of 40 could be included. (Sound insulation is not practicable for the estimated 79 mobile homes included in the 2002 CNEL 60 dB and greater contours). The San Jose Public Library could also be included.  
• Notifies potential new buyers of noise environment. |
| **Implementation** | • County Airports Administration adopts measure in RHV Part 150 Study.  
• Pilot program normally required to establish appropriate construction techniques and eligibility of structures for soundproofing.  
• Construction programs are usually phased over many years. |
| **Political Acceptability** | No opposition expected from affected property owners or other interests. |
| **Costs** | • In San Jose, the insulation program costs amount to roughly $30,000 per dwelling unit, including the administrative costs. If all potentially eligible residential properties participated, total costs would be roughly $210,000, assuming similar costs per unit. County Airports Administration costs may be eligible for 90% FAA funding if part of an approved FAR Part 150 NCP, depending upon availability of funds.  
• Soundproofing San Jose Public Library would potentially not be required under FAR Part 150, but as a resulting study and the cost would be priced separately.  
• County Airports Administration cost of soundproofing construction.  
• County Airports Administration and program administration costs. |
| **Conclusion** | Long-term noise contours indicate that existing noise impacted residences are likely to remain within the noise contours. This program benefits both residents and Reid Hillview Airport, and imposes no burdens on neighboring residences or the City of San Jose. Accordingly, this measure is recommended for the single family homes in the 2002 CNEL 65 dB and greater contours. |
### Table 6-17: Soundproofing Program (2002 CNEL 60-65 dB Contour Interval)

**Source:** 3D Visions

<table>
<thead>
<tr>
<th>Measure: Soundproofing Program</th>
<th>Description: Sound insulation of existing private homes and other noise sensitive uses such as churches and schools. Avigation easements are typically obtained in return for property owner participation.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area to which measure would be applied</strong></td>
<td>Since proposed changes in FAA policies would make new development ineligible for remedial noise compatibility funding, only existing residences, schools and libraries within the 2002 CNEL 60-65 dB contour interval are assumed to be included in accordance with the ALUC plan.</td>
</tr>
<tr>
<td><strong>Implementing Agency</strong></td>
<td>County Airports Administration</td>
</tr>
</tbody>
</table>
| **Compatibility Benefits** | • Acceptable interior noise levels, insulation typically recommended to obtain interior levels of CNEL 45 dB or less.  
• Avigation easement obtained through program would provide protection for airport sponsor from litigation due to airport operation. Assuming that all single-family residences within the 2002 CNEL 60-65 dB contour interval are eligible, approximately 529 single-family homes with an estimated population of 3023 could be included. (Sound insulation is not practicable for the estimated 79 mobile homes included in the 2002 CNEL 60 dB and greater contours).  
• Notifies potential new buyers of noise environment. |
| **Implementation** | • County Airports Administration adopts measure in RHV Part 150 Study.  
• Pilot program normally required to establish appropriate construction techniques and eligibility of structures for soundproofing.  
• Construction programs are usually phased over many years. Would be contingent on first completing sound insulation for residences in 65 dB and greater contours. |
| **Political Acceptability** | No opposition expected from affected property owners or other interests. |
| **Costs** | • In San Jose, the insulation program costs amount to roughly $30,000 per dwelling unit, including the administrative costs. If all potentially eligible residential properties participated, total costs would be roughly $15,870,000, assuming similar costs per unit. County Airports Administration costs may be eligible for 90% FAA funding if part of an approved FAR Part 150 NCP, depending upon availability of funds.  
• County Airports Administration cost of soundproofing construction.  
• County Airports Administration and program administration costs. |
| **Conclusion** | Long-term noise contours indicate that existing noise impacted residences are likely to remain within the noise contours. This program benefits both residents and Reid Hillview Airport, and imposes no burdens on neighboring residences or the City of San Jose. Accordingly, this measure is recommended for the single family homes in the 2002 CNEL 60-65 dB contour interval. |
Table 6-18: Sound Buffers/Barriers  
Source: 3D Visions

<table>
<thead>
<tr>
<th>Measure: Sound Buffers/Barriers</th>
<th>Description: Combined use of sound barrier walls and/or berms and open space to reduce noise from aircraft-related noise for the communities surrounding Reid Hillview Airport.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area to which measure would be applied</td>
<td>Areas at airport border adjacent to residential development, especially along the western and northern perimeter of Reid Hillview Airport.</td>
</tr>
<tr>
<td>Responsible Agency</td>
<td>County Airports Administration</td>
</tr>
<tr>
<td>Compatibility Benefits</td>
<td>Reduced noise levels from ground operations for close-in residents. Specific benefits cannot be determined without design and acoustical analysis.</td>
</tr>
</tbody>
</table>
| Implementation | • County Airports Administration adopts measure in RHV Part 150 Study.  
• County Airports Administration conducts ground noise study to determine levels and potential buffer/barrier locations.  
• Barrier design, detailed acoustical analysis required to determine feasibility and benefits |
| Political Acceptability | Potential concern for visual impacts. |
| Costs | • Costs for a ground noise study estimated to cost between $25,000 and $175,000. Study costs may be eligible for 90% FAA funding.  
• Construction costs.  
• Potential property acquisition.  
• Specific cost estimates will require design data. County Airports Administration costs may be eligible for 90% FAA funding if part of an approved FAR Part 150 NCP, although actual levels may be less depending upon availability of funds. FAA participation would likely be contingent on the potential effectiveness of the barriers and/or buffers in reducing community noise concerns.  
• The potential for FAA funding participation might be enhanced if Federal funds are leveraged with City of San Jose and/or County Airports Administration investments. |
| Conclusion | Since ground noise causes non-compatible land use with the Eastridge Mobile Estates, this measure is recommended. |
### Table 6-19: Compatible Use Zoning
Source: 3D Visions

<table>
<thead>
<tr>
<th>Measure: Compatible Use Zoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description: Prevents rezoning or authorizing conditional uses for any new residential development in the CNEL 60 db contour. This technique involves the prevention of rezoning or authorizing conditional uses for any new development of residences within the CNEL 60 db contour.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area to which measure would be applied</th>
<th>Undeveloped areas in the existing 2002 CNEL 60 dB and greater contours shown in Figure 6.2.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible Agency</td>
<td>City of San Jose/County Airports Administration</td>
</tr>
<tr>
<td>Compatibility Benefits</td>
<td>Provides policy guidance for consideration of all types of proposed development within the 2002 CNEL 60 dB and greater contours.</td>
</tr>
</tbody>
</table>

**Implementation**

- City of San Jose/County Airports Administration adopts measure in RHV Part 150 Study.
- City of San Jose adopts ordinance establishing requirement, and develops procedures to ensure rezoning and conditional use permits in designated noise zones are not permitted.

**Political Acceptability**

Developers and/or property owners may oppose the measure due to the potential for reducing marketability.

**Costs**

City of San Jose administration.

**Conclusion**

Due to the limited availability of vacant land for future development and the current zoning classifications (“Agricultural” and “Industrial Park”), this measure is not recommended.

### Table 6-20: Mobile Home and Camper Park Restrictions
Source: 3D Visions

<table>
<thead>
<tr>
<th>Measure: Mobile Home and Camper Park Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description: This technique precludes development of especially noise sensitive residential uses in the 2002 CNEL 60 dB and greater contours.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area to which measure would be applied</th>
<th>Undeveloped areas in the existing 2002 CNEL 60 dB and greater contours shown in Figure 6.2.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible Agency</td>
<td>City of San Jose/County Airports Administration</td>
</tr>
<tr>
<td>Compatibility Benefits</td>
<td>Precludes development of especially noise sensitive residential uses in the 2002 CNEL 60 dB and greater contours.</td>
</tr>
</tbody>
</table>

**Implementation**

- City of San Jose/County Airports Administration adopts measure in RHV Part 150 Study.
- City of San Jose adopts ordinance establishing requirement, and develops procedures to ensure no building permits for mobile home and camper parks in designated noise zones are permitted.

**Political Acceptability**

Surrounding residents may support decreased development potential.

**Costs**

City of San Jose administration.

**Conclusion**

Due to the limited availability of vacant land for future development and the current zoning classifications (“Agricultural” and “Industrial Park”), on this land, this measure is not recommended.
### Table 6-21: Planning Commission Review

**Source:** 3D Visions

<table>
<thead>
<tr>
<th>Measure: Planning Commission Review</th>
<th>Description: This technique provides policy guidance for consideration of all types of proposed development within the 2002 CNEL 60 dB and greater contours.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area to which measure would be applied</td>
<td>All areas within the existing 2002 CNEL 60 dB and greater contours shown in Figure 6.2.</td>
</tr>
<tr>
<td>Responsible Agency</td>
<td>City of San Jose</td>
</tr>
<tr>
<td>Compatibility Benefits</td>
<td>Would provide policy guidance for consideration of all types of proposed development within the 2002 CNEL 60 dB and greater contours.</td>
</tr>
</tbody>
</table>
| Implementation | • City of San Jose/County Airports Administration adopts measure in RHV Part 150 Study.  
• City of San Jose adopts ordinance establishing requirement, and develops procedures to ensure Planning Commission permits no building permits in designated noise zones without review. |
| Political Acceptability | Likely to be supported by the San Jose residents. |
| Costs | City of San Jose administration. |
| Conclusion | Since community concerns about ground noise are evident, this measure is recommended. |

### Table 6-22: Airport Noise Impact Boundary Development

**Source:** 3D Visions

<table>
<thead>
<tr>
<th>Measure: Airport Noise Impact Boundary Development</th>
<th>Description: Provides means to monitor new land use proposals in area around airport through the Airport Land Use Commission (ALUC).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area to which measure would be applied</td>
<td>Identified area surrounding the airport as defined by the ALUC.</td>
</tr>
<tr>
<td>Responsible Agency</td>
<td>City of San Jose, County Airports Administration, and ALUC.</td>
</tr>
<tr>
<td>Compatibility Benefits</td>
<td>Provides means to monitor new land use proposals and to ensure that the Airport Land Use Plan (ALUP) is enforced. Identifies area for developing real estate disclosures of the operating airport for property purchases.</td>
</tr>
<tr>
<td>Implementation</td>
<td>County Airports Administration proposes boundary to ALUC.</td>
</tr>
<tr>
<td>Political Acceptability</td>
<td>Developers and/or property owners may oppose the measure due to the potential for reducing marketability.</td>
</tr>
<tr>
<td>Costs</td>
<td>County of Santa Clara administration.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Since any new development or change in land use could increase the amount of land that is non-compatible with the airport operations, this measure will ensure the ALUP is enforced. This measure is recommended.</td>
</tr>
</tbody>
</table>
Table 6-23: Public Land Development Criteria  
Source: 3D Visions

<table>
<thead>
<tr>
<th>Measure: Public Land Development Criteria</th>
<th>Description: This technique provides policy guidance for development of public uses within the 2002 CNEL 60 dB and greater contours.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area to which measure would be applied</td>
<td>Undeveloped areas in the existing 2002 CNEL 60 dB and greater contours shown in Figure 6.2.</td>
</tr>
<tr>
<td>Responsible Agency</td>
<td>City of San Jose/County Airports Administration</td>
</tr>
<tr>
<td>Compatibility Benefits</td>
<td>Provides policy guidance for development of public uses within the 2002 CNEL 60 dB and greater contours.</td>
</tr>
<tr>
<td>Implementation</td>
<td>City of San Jose/County Airports Administration adopts measure in RHV Part 150 Study.</td>
</tr>
<tr>
<td>Political Acceptability</td>
<td>Surrounding residents may support decreased development potential.</td>
</tr>
<tr>
<td>Costs</td>
<td>City of San Jose administration.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Despite the limited availability of vacant land for future development, a portion of the vacant land is publicly owned. This measure is recommended.</td>
</tr>
</tbody>
</table>
7. Public Involvement

The County of Santa Clara conducted this entire RHV Part 150 Study with extensive consultation with members of the public, including airport users, fixed base operators, pilots, potentially affected residents of the airport environs, and local, state, and federal officials. The public involvement process met Part 150 requirements.

The County and its consultants used three principal mechanisms in pursuing these external consultations:

- Public workshops covering all elements of the study
- A public information campaign that included newspaper inserts, information flyers, and information posted in libraries and on an accessible website
- Consultation throughout the study process with other County officials regarding jurisdiction over land use in the airport environs, and the FAA that has jurisdiction over aircraft in flight

The NEM documentation included a summary of the public involvement processes conducted during that phase of the study. The NCP public involvement built on that earlier consultation. The relevant NEM documentation is incorporated here by reference.

7.1. Public Meeting Process

Public meetings were held to provide input into the conduct of the study and RHV recommendations. All meetings were held in an open format with an opportunity for public comment; were advertised in local newspapers and flyers in English, Spanish, and Vietnamese; and were documented through meeting minutes that were posted on the County website. The meeting dates and topics are provided in Table 7.1 below.

Table 7-1: Public Meeting Dates and Topics During the RHV Part 150 Study

<table>
<thead>
<tr>
<th>Date</th>
<th>NCP Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 25, 2001</td>
<td>Discussion of aircraft modeling results, and possible mitigation measures. Opportunity for public comment.</td>
</tr>
<tr>
<td>June 20, 2002</td>
<td>Discussion of draft NEM and options to mitigate noise through noise abatement measures and land use planning measures. Opportunity for public comment.</td>
</tr>
<tr>
<td>September 18, 2002</td>
<td>Discussion of draft NCP and Public Hearing on NCP. Opportunity for public comment.</td>
</tr>
</tbody>
</table>
Copies of lists of attendees, meeting minutes, and advertisements of the first four public meetings as well as comment/speaker cards and emails received from the public during the study are included as appendices to the NEM document and are incorporated by reference. Materials associated with the final public meeting and public hearing are included in Appendix C.

7.2. Final County Briefing and Public Hearing
On September 18, 2002, the County of Santa Clara staff and HMMH presented the draft NCP to the public at a combination public meeting and public hearing, which afforded full opportunity for public comment. Copies of the RHV NEM and the draft NCP were available for public review prior to that meeting. Copies of all comments received, both at the meeting and over the course of the review process, and the County’s response to those comments are included in Appendix C.
Appendix A
Reid-Hillview Airport Noise Abatement and Traffic Pattern Information Handout
Appendix B
Letter of Agreement – Helicopter Operations at Reid-Hillview Airport, January 1, 2002
County of Santa Clara – County Airports

County Airports Administration • FAA – RHV ATCT

and

Nice Air • Squadron Two

LETTER OF AGREEMENT

EFFECTIVE: January 1, 2002

SUBJECT: Helicopter Operations at Reid-Hillview Airport

1. PURPOSE. This Letter of Agreement establishes procedures for control of helicopters operating to and from the Haypatch, Point X-ray, Transition Point Yankee and in closed traffic on or near the Reid-Hillview Airport (RHV). It creates Point X-ray, Transition Point Yankee and Waverly helicopter arrival/departure routes for the purpose of managing and expediting helicopter departures and arrivals as depicted on Attachment 1 and 2.

2. CANCELLATION. This agreement supersedes the previous agreements dated April 1, 1997 regarding helicopter operations and training at Reid-Hillview Airport.

3. SCOPE. These procedures shall be in effect any time helicopters are transferring to or from Point X-ray, Transition Point Yankee or on Helicopter Route One or operating at the Haypatch.

4. RESPONSIBILITIES. County Airports Administration and Reid-Hillview Airport FAA-ATCT shall retain the authority to withdraw the provisions of this Letter of Agreement at any time. The signatory operators shall be responsible for ensuring that pilots within their authority operating within the Reid-Hillview Airport Class D Airspace are thoroughly briefed and familiar with the procedures contained herein. Nothing in this agreement shall be construed as approval or permission to violate any Federal Aviation Regulations (FAR’s). Each pilot shall advise the RHV-ATCT if deviation from these rules are necessary to comply with any FAR’s and/or safety.

5. DEFINITIONS AND LOCATIONS.

a. Helicopter Traffic Pattern Altitude (TPA) is 700’ AGL (833’ MSL).

b. TRANSITION POINT YANKER. Located in the unimproved non-pavement area approximately 100’ N/W of the approach end of runway 12L and 110’ W of Taxiway Z (attachment 1).

c. POINT X-RAY. Located in the unimproved non-pavement area, approximately 150’ South of the approach and runway 13R (attachment 1).

d. HAY PATCH. Located in the unimproved non-pavement area, approximately 220’ West of the VASI lights for runway 31L (attachment 1).

e. WAVERLY ARRIVAL/DEPARTURE. Routing used by helicopters arriving from a direction SE to NW of the airport. THIS DEPARTURE MUST BE REQUESTED BY THE PILOT AND IS NOT AUTHORIZED FOR USE BY STUDENT PILOTS (attachment 2).
6. PROCEDURES.

b. Wavering Arrival (Attachment 2). Once authorized by RHV-ATCT, the pilot will proceed to a point over King Road at or below 1,000' AGL (1,133' MSL) that is approximately 3 miles from the center of the airport. Helicopters will then proceed directly towards the airport, crossing the airport at or below 700' AGL (1,133' MSL).

c. Onset of the airport, the helicopter will initiate a 270 degree turn, either left or right depending on the runway in use, to commence a final approach to Taxiway Yankee between Taxiway D & E. When northeast of the runways, the pilot will remain clear of all runways and avoid over flying all aircraft and vehicles when below 200' AGL.

NOTE: Transition Point Yankee is not to be used for take-off or landings.

d. Frequencies. All helicopter departures should be accomplished on 119.8 MHz. When ready to depart, the pilot shall advise the tower of the type of departure desired.

e. Hay Patch and Point X-ray (Attachment 1). Local helicopter traffic pattern operations shall be conducted at 700' AGL (833’ MSL).

1) When runways 31 are in use, a left traffic pattern shall be flown. The crosswind turn shall be commenced beyond Osack Avenue and Clyde Fischer Middle School. The turn to base leg shall be made between the Mall and Quincy Road.

2) When runways 13 are in use, a right traffic pattern shall be flown. The crosswind turn shall be made between the Mall and Quincy Road. The turn to base leg shall be commenced beyond Osack Avenue and Clyde Fischer Middle School.

3) Helicopters operating in the Hay Patch and Point X-ray shall maintain visual separation with all other aircraft operating in the traffic pattern for Runway 31L/13R.

4) When “released for the pattern”, pilots need not request take-off clearance for each take-off. However, if the pilot intends to conduct ground-boring operations for any length of time, the pilot shall advise the tower. Pilots shall contact the tower prior to resuming pattern work.

5) Hover practice maneuvers shall be conducted at or below 50 feet AGL unless otherwise coordinated with the tower.

e. Transition Point Yankee (Attachment 1). Will normally be used as a transition point to or from the Taxiway "Y" and Bravo 7 from either Point X-ray or the wavering arrival. Landing and take-off are not authorized from Transition Point Yankee. RHV-ATCT will provide traffic advisories to helicopters using Transition Point Yankee.

f. Noise Abatement. In the interest of noise abatement, the hours of operation are 7:00 a.m. to 6:00 p.m. Pacific Local Time (PLT) for the Hay Patch and Point X-ray. Helicopters are requested to avoid direct over flights of the following areas:

1) D.J. Metre Community School
2) Clyde Fischer Middle School.
3) Mobile Home Park located south of tower

Overfelt High School

Sean Cullinan, Manager
Air Traffic Control Tower
Red-Hillview Airport

J.T. Bennett
Director, County Airports

Hiro Tiki, President
Nice Air, Inc.

Frank Mason, Owner
Scuderon Two, Inc.

Attachments: 1. RHV ATCT/ARPT Helicopter traffic pattern
2. RHV ATCT/ARPT Waverly Arrival
Appendix C
Minutes, Attendance Sheets, and Public Comments from Public Meeting and Hearing
Related to the RHV Part 150 Noise Compatibility Program Study
The following are my comments for the Reid-Hillview FAR 150 meeting on June 20, 2002:

I commend you on the thoroughness of your preliminary report. There are a few comments I have regarding specific items within the report and they are attached to the text as follows:

**Potential Aircraft Noise Abatement Measures**

The unsigned Letter of Agreement lists a number of new aircraft noise abatement measures in addition to the existing measures contained in the pilot handout. These additional measures listed below are considered potential new measures at this time.

- Restrict touch-and-go operations to hours between 7:00 AM and 9:00 PM.
- Prohibit intersection departures.
- Restrict jet operations to Stage 3 jets only.
- Prohibit formation departures and arrivals.
- Designate Runways 31R and 31L as the preferred departure runways with Runway 31R being the most preferred departure runway.
- Prohibit simulated emergencies. *Why would this be included. It is necessary for pilot proficiency and is, by definition, a low noise event since the simulated failure is an engine failure.*
- Discourage low-level fly-bys except for gear check and other emergency-related requirements.

The following list of potential noise abatement measures were presented by public meeting attendees:

- Create a propeller exchange program for three-bladed propellers to replace noisier two-bladed propellers. *The minutes should also include installation of vortex generators which reduce aircraft stall speed, shorten takeoff runs and increase initial climb performance.*
- Lengthen the runways to displace Runways 31L and 31R departures by 300 feet toward Tully Road.
- Close RHV.
- Close RHV during the weekend or at least one day of the weekend.
- Prohibit touch-and-go flights.
- Punish and/or ban “hot dog” pilots at RHV. *Please define this. This is more appropriately directed to the FAA FSDO for review and action, not the airport management.*
- Muffle aircraft engines. *Requires further definition.*
- Slow the speed of aircraft. *Define*
Reid-Hillview Airport FAR Part 150 Study

• Consider recommendations of the 1991 RHV Closure Evaluation Project.

RHV proposed the following measures:
• Create an engine run-up area for twin-engine aircraft on the southeast portion of the airport property. **[This recommendation is related to operations on Runways 13 only. It was recommended to move the noisy aircraft away from houses next to the airport during times of southeast winds.]**
• Voluntary limitation of all aircraft departures to between 7:00 a.m. and 10:00 p.m.
• Voluntary limitation of all aircraft touch-and-go operations to the following days and times:
  • 9:00 a.m. to 7:00 p.m. Monday through Friday
  • 10:00 a.m. to 5:00 p.m. Saturday
  • 12:00 p.m. (Noon) to 5:00 p.m. Sunday **[Please ensure that the word Voluntary is highlighted and defined in the final draft.]**

HMMH developed the following measures that have not been addressed by the Letter of Agreement, public comments, or RHV.
• Change the preferential runway use to Runway 13L/13R.
• Change the preferential runway use to departures on Runway 31R and arrivals on Runway 31L.
• Modify the Quiet One Departure.
• Relocate Haypatch and X-ray helipads to the east side of runways.
• Construct noise barriers on western airport perimeter in the vicinity of the Haypatch landing area. **[These would be called Hangars I hope!!]**
• Change air traffic pattern altitudes.
• Restrict maintenance engine run-up times. **[This is of very limited, if any, benefit.]**
• Implement noise-related landing fees. **[No!]**

**Measures To Be Dismissed**

• Change preferential runway use to Runway 13L/13R.
Because aircraft are designed to takeoff or land into the wind, runway use at an airport is normally determined by the prevailing winds. When winds are calm or light, airports can establish a preferential runway use program to reduce aircraft noise impacts. However, preferential runway use programs must also consider aircraft operations in the surrounding airspace. RHV shares its airspace with other Bay Area airports and must operate its runways in a manner that does not conflict with the other airports. For example, the noise compatibility and noise abatement program at San Jose International Airport (SJC) requires north flow operations. It is likely that south flow operations would nearly eliminate all incompatible land uses around RHV, but operating RHV in the opposite direction of SJC has significant safety implications. In particular, the approach to SJC is just to the west of RHV. Departing RHV aircraft to the south while landing to the north at SJC could create airspace conflicts. The FAA would likely reject this
[I believe you made an error here. In actuality, it would be safer for RHV to takeoff and land south in calm or light wind conditions due the fact that traffic inbound to SJC 30 would not be head-on with downwind departure traffic from RHV. Arrivals to SJC and RHV would in fact fly parallel courses inbound and southeast-bound departures would fly well east of the SJC final approach course. Also, north and west bound departures would exit RHV airspace at a higher altitude and it would actually be easier to transit SJC airspace to the west.]

If Runways 31R and 31L were extended approximately 125 feet and 140 feet, respectively, keeping the runways on current RHV property and thereby allowing the point of takeoff to also be shifted the same distance to the south, there would be approximately 9 fewer residences within the 2007 65-dB noise contour. Again it would be more cost beneficial to sound insulate these residences rather than extend the runways. [This item has been recommended in other studies as being effective in reducing noise. Besides the noise reduction, it would also enhance safety by maintaining the existing runway length available and allowing the excess runway to the northwest to be used as a paved overrun. Finally, it is far cheaper to add a small amount of pavement than to soundproof homes. It is a positive for both the community and the airport users.]

Measures To Be Analyzed

- Voluntarily limit flight operations to the following scheduled days and times:
  - Touch-and-Go
    - 9:00 a.m. to 7 p.m. Monday through Friday
    - 10:00 a.m. to 5 p.m. Saturday
    - Noon to 5 p.m. Sunday
  - Departures
    - 7:00 a.m. to 10:00 p.m. Daily [Given the small number of operations identified in the study, why recommend this?]
  - Create new engine run-up area for twin-engine aircraft and review engine run restrictions. [See previous comments]
  - Encourage the use of minimum power settings on departure. [Use caution with this recommendation. The goal is to have aircraft climb as fast as possible. Reduced power takeoffs may actually increase noise and decrease safety margins.]

IMPLEMENTATION PROGRAM

- Encourage training schools to train pilots to “Fly Friendly”. [This step is crucial.]
- Set up an airport/airport user/community noise committee to discuss issues on a quarterly basis. [Absolutely]
- Install noise monitors in the RHV environs to measure and compare unusual or highlevel noise aircraft noise events with voice records system.
Reid-Hillview Airport FAR Part 150 Study

• Install a radar collection system to match aircraft noise events to radar tracks.
  [Given the number and types of noise complaints received by the airport, it would be
  foolish to spend the amount of funds necessary to establish a noise monitoring system at
  RHV. If necessary, we have access to the SJC system for radar data as well. Also, it
  should be noted that a number of our noise complaints are either non-specific, safety
  related rather than noise related or are reporting law enforcement activities.]

Submitted on 19 June, 2002

Douglas L. Rice
Reid-Hillview Airport Noise Study Enters Final Phase

Work nears completion on the Reid-Hillview Airport FAA Part 150 Noise Control and Land Use Compatibility Planning Study. All interested parties are invited to attend the final public meeting and hearing on this study.

The purpose of this meeting is to:

- Review Reid-Hillview Airport’s Draft Noise Compatibility Program
- Provide an opportunity for public comment during the public hearing portion of the meeting

Shortly after this final meeting, the County of Santa Clara will submit the Noise Compatibility Program to the FAA for their approval, which takes 180 days.

Copies of the Draft Reid-Hillview Airport Noise Compatibility Program are available for review at five San Jose libraries: The Main Library; Alum rock Educational Park; Evergreen and Hillview branch.

For further information, please contact
Jerry Bennett, Director of Airports Division,
County of Santa Clara, at (408) 929-1060.
www.countyairports.org

Wednesday, Sept. 18, 2002 at 7:00 PM
William C. Olmstead High School, Room F5
1835 Cunningham Ave. San Jose, California
Reid-Hillview Airport FAR Part 150 Study

Reid Hillview Part 150 Noise Study
Sponsored by the Roads and Airports Department, County of Santa Clara and the Federal Aviation Administration

AGENDA
September 18, 2002, 7 – 9 p.m.

7:00 PM Welcome & Introductions

7:05 PM Review Draft Noise Compatibility Program

8:00 PM Opportunity for Public Comment

8:55 PM What’s Next

9:00 PM Adjourn

RHV Noise Complaint Hotline: (408) 272-0290

Visit the project web page at http://www.countryparks.org/airport_info.htm
Our e-mail address is reid23@Divisions.biz

Project Consultants:
Harris Miller Miller and Hanson, Inc.
945 University Avenue; Suite 201
Sacramento, CA 95825
(916) 568-1116 voice
(916) 568-1201 fax
# Reid Hillview Part 150 Noise Study

Sponsored by the Roads and Airports Department, County of Santa Clara and the Federal Aviation Administration

### Notes, September 18, 2002 Meeting

| **Michael Murdter** | Welcome & Introductions  
|                     | Introduced Kate and translators  
|                     | Carl Honaker  
|                     | Steve Alverson  
|                     | Kate Gillespie  
|                     | Eric Peterson  
|                     | Hernando Hewitt  
|                     | Sylvia Gallegos  
|                     | Speaker cards-Eric to collect  
|                     | Desire 3 minutes per speaker. May modify  
|                     | On deck speakers waiting, respect those speaking  
|                     | Steve to introduce noise compatibility program |

| **Steve Alverson** | Great to be back at RHV, San Jose, Santa Clara County.  
|                    | This evening our purpose is to discuss the draft noise compatibility program. It has been available at the City’s public libraries since Aug 28th.  
|                    | Tonight review the noise measures and proposed mitigation plan.  
|                    | First slide-where in the process.  
|                    | FAA Part 150 funded by FAA, with some local/county funds.  
|                    | Looks at current and five years down the road  
|                    | First step-NEM  
|                    | First 3 ½ meetings-what the Noise Exposure Map (NEM), how developed, flight tracks, submitted to FAA for acceptance on July 12, 2002.  
|                    | FAA reviews the document, sets basis for mitigation  
|                    | Noise compatibility program—focus of NCP-list of actions airport will take to reduce noise implementation measures.  
|                    | 40 minutes talking about the study, at 8:00 public comment begins |

| **Existing noise abatement measures:**  
| Noise abatement and Traffic Pattern Pilot Handout-deals with aircraft flight procedures regarding traffic, introduces the good neighbor policy  
| Guide for Helicopter operations regulated by RHV Letter of Agreement  
| Not listed as a measure—airport signage on site |

| **Existing Compatible Land Use Measures**  
| Most land is developed, few opportunities for redevelopment.  
| ALUC has no control over existing non compatible land use  
| Presentation of two Noise exposure maps- the first represents base year 2002, the second projects trends for 2007.  

Other Comments:  
FAA tries to minimize impact

### Development of the Noise Compatibility Program

Reviewed 50 potential mitigation measures.  
Of these, 33 are recommended for submission to the FAA.  
Of the 33 measures, 13 deal with noise abatement, 9 focus on land use controls, 11 address administrative procedures.  
Recommended measures must show a reduction in incompatible uses.  
Cannot be unjustly discriminatory—must be based on noise.  
Cannot degrade safety.  
Measures must be implemented within FAA powers  
Must keep airport in operation to implement-closure is not an option to the FAA.
Steve Alverson (cont)  

**Process steps:** From the Board of Supervisors (BOS) to the FAA  

**Noise abatement measures**  
- Look at preferential runway use for departure and arrival.  
- Encourage minimum use of power after takeoff when feasible  
- Encourage standard arrival, power back routines  
- Airplanes were often turning too soon, recommend change in turning location  
- Recommend voluntary restrictions of aircraft departure times to 7 am to 10 pm.  
- Noise monitoring system will monitor compliance with voluntary measures.  
- Voluntary limits on touch and go- on Monday to Friday, 9am to 7 pm; Saturday, 10 am to 5 pm; and Sunday 12pm (noon) to 5 pm.  
- Letter of Agreement provides some ideas: Aircraft to use full length of runway.  
- There should be few jet operations-runways are too short for most jets.  
- Jets to be stage 3 type only  
- Prohibit intersection departures  
- Formation flying should not be allowed.  
- Prohibit low-level flybys  
- Prohibit simulated emergencies  
- New engine run-up area to be defined and marked (signed)  
- Pilots encouraged to limit noise transmission  
- Encourage pilots to modify their aircraft to decrease noise emissions  
  (This would be a voluntary county-sponsored pilot program to implement these measures—no federal program exists to require modifications to aircraft.) Pilot modifications could include adding noise silencers, using vortex generators, and implementing propeller swap-out.  

**NEM for 2007 with Measure Implementation**  
- Showed map of abated contours. (Steve toggled between “before” and “after” slides)  
  - Goal: reduce # people in contours  
  - The proposed changes should result in a 38% reduction in population within the 60 db noise contour  
  - Library would be removed from 65 CNEL contours  
  - Schools would be removed from 60 CNEL contours  
  - LU fair disclosure policy for home sales would require notification to potential buyers  
    *(AB 2776 passed this bill last week requires disclosure notice)*  
  - Relocation program-guaranteed purchase program-buy, sound insulate, resell (7 homes, 15 mobile homes) in 65 db contour  
  - In 60-65 db contour: 64 mobile homes, should be included in program  
  - The Part 150 process is to provide planning guidance to county 2020 General Plan. Soundproofing would be provided for existing residences in 65 db and higher  
  - County wants to look at 60 db standard and treat 529 homes. On a federal level—there is much competition for these funds.  

**Other LU measures:**  
- Sound barrier near mobile homes, near Haypatch.  
- Planning Commission should provide policy guidance in 2002 60 CNEL contour.  
- Noise impact boundary to be followed. (ALUC referral)  

**Continuing program measures:**  
- Encourage good neighbor/fly friendly policy  
- Flight training schools to train in these fly friendly techniques  
- Airport Noise flight monitoring system to id planes and noise levels.  
- New Noise System would look at specific events against radar tracks  
- Establish a citizen committee which would meet on quarterly basis to discuss noise issues  
- RHV staff noise officer could be hired to respond to complaints, investigate, follow-up  
- Update distribute pilot handout
Steve Alverson, cont’d.

- Airport signs need to be refreshed with new policies
- County website, for public and pilots
- Update noise contours no less than every five years.

**Implementation program**
- Time period
- Responsibility
- Agreement to implement

<table>
<thead>
<tr>
<th>Speakers</th>
<th>County website, for public and pilots</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helen Johnson</td>
<td>Control tower is open only 7 am to 10 pm. Need enforced curfew. Easier to tolerate in day than at night.</td>
</tr>
<tr>
<td>Bob Luten</td>
<td>ALUC CLUB-request formal recommendation to ALUC</td>
</tr>
<tr>
<td>Antelmo Moran</td>
<td>Requests noise reduction 10 pm to 7 am.</td>
</tr>
<tr>
<td>Claudia Taylor</td>
<td>Teacher here for 33+ years. Noise hardly noticed in classroom-never has interrupted her classes. 7:30 am to 5 pm at work.</td>
</tr>
<tr>
<td>Leslie Waters</td>
<td>Technical question to panel: Recording of plane id when flying Regular hotline, published, takes 2 days for response Touch and go-supposed to be outlawed?</td>
</tr>
<tr>
<td>Michael Murdter answered:</td>
<td>Noise monitoring system will give real time information Existing noise hotline does not collect much data</td>
</tr>
<tr>
<td>Carl Honaker response:</td>
<td>Airport to try to accelerate purchase of new equipment Transponder codes are not recorded Touch and go-airport never had policy outside of 10 pm to 7 am slot No penalties now for noncompliance</td>
</tr>
<tr>
<td>Polly Underwood</td>
<td>Taught here beginning in 1974, lived in neighborhood, works at nearby school. Taught at Ocala, now at Fisher. Airport has limited expansion of schools.</td>
</tr>
<tr>
<td>Enrique Angusio</td>
<td>Has left three complaints. Pilots are being selfish. Wants airport relocated.</td>
</tr>
<tr>
<td>Maira Mazo</td>
<td>Wants more notice—received two letters-for her and her husband, neighbors did not receive any. Pilots fly too low. Children afraid of planes. Why do we talk about relocating 500 families? How much to rebuild in south end of San Jose. Voluntary measures didn’t work. How to implement. What happens if FAA vetoes.</td>
</tr>
<tr>
<td>Lien Cao</td>
<td>Wants change to noise level Noise causes her to pause when talking on phone She has 2 children in college who do not want to visit because of the noise.</td>
</tr>
<tr>
<td>Ted Johnson</td>
<td>Community has to endure—would like pilots to endure.</td>
</tr>
<tr>
<td>Rick Salinas</td>
<td>35 year resident Voluntary program not working-stop it, make it mandatory Have curfews, fines on pilots who break Have better security Airport has limited community growth-schools, Hank Lopez, library, movie theaters all limited due to height restrictions.</td>
</tr>
<tr>
<td>Bud Beacham</td>
<td>4 years of 10 pm curfew. Last night a pilot took off at 12:15 am, flew in circles for an hour Pilots doing anything but touch and go Wrong noise complaint monitoring when comparing complaints against operations. Why is noise complaint line ignored?</td>
</tr>
<tr>
<td>Frank Jansen</td>
<td>Airplanes make noise. FAA procedures focus on noise contours. Problem extends beyond</td>
</tr>
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2002
<table>
<thead>
<tr>
<th>Name</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patricia Ramos</td>
<td>Mrs. Ramos. Objected to snickering at last meeting (held at Hank Lopez for Master Plan) Plane flew over at 5:55 this morning, a plane was flying. County needs to do a better job. Implementation regarding the mobile home park—are we proposing relocation of residents? Our children do not need the airport, education will save the children.</td>
</tr>
<tr>
<td>Doug Rice</td>
<td>Addressed draft compatibility program Consultants went outside the box—in suggesting airplane modification Movement of runways towards Tully Road not considered. Runway selection Maximum power on takeoff sends a mixed message. Simulated emergency skipped. Aircraft monitoring now provided through San Jose International Those flying after midnight, community needs to have information</td>
</tr>
<tr>
<td>Betty Howard</td>
<td>Fisher school is still working on getting a gym built. Noise over schools, lived on Endicott Drive for 22 yrs, all night, all day. Volunteers in schools where she has been bothered by airplane noise daily. Airport needs to better control weeds and trash.</td>
</tr>
<tr>
<td>Robert Medilllin</td>
<td>Found out today. Found mail today. Has lived here for ten years under noise. Tired of noise. Safety and property value concerns. Concerned about potential of plane accidents. Measures will not be implemented. Pilots will not follow. Move the airport.</td>
</tr>
<tr>
<td>George Magana</td>
<td>Used to work 2 jobs to afford house. Then only 150 planes when he purchased. Now RHV has 1000. Lives on Endicott, invites visitors to listen to noise at his house. Has taken flight lessons. Has installed double lanes, insulation, still hears noise. Volunteers in school, Adrian, Endicott, too much noise. Student pilots are a problem. There are rules and regulations. Hank Lopez wants to expand-can’t because of safety zone. Trees removed because of safety zone. Rules and regulations should be fair to all.</td>
</tr>
<tr>
<td>Pat Smith</td>
<td>Asked speakers to speak in English</td>
</tr>
<tr>
<td>Ted Scarlett</td>
<td>Disappointed. Hank Lopez meeting—we made progress. He is a pilot, doesn’t fly at night. Pilots have been disrespected tonight. Attends airport meetings, tries to cooperate. Don’t want to cause problems. Pilots are trying to be good neighbors. Many false statements tonight. Need a community relations group. Knows about noise. 5 am commute traffic, 6 am SJI flights</td>
</tr>
<tr>
<td>John Blair</td>
<td>Noise mitigation 5.5.8.5 doesn’t prohibit low flying. Planes Why not runway L and R as one way?—wants to talk with consultants. City owns Hank Lopez, why hasn’t city brought this bldg up to code? Anon noise monitoring can be done on SJI equipment</td>
</tr>
<tr>
<td>Leslie Waters</td>
<td>Pilots having fun. 3-4 months ago topic of expanding RHV? Is this true? MM: Masterplan process addresses future ops of all three airports-no plans to expand level of planes at RHV. Follow MP</td>
</tr>
<tr>
<td>Fernando Rodriguez</td>
<td>Expansion is a possibility—want to know real issues. Feels hat we are not being honest. Little League to be moved—why? Why will they be charged for parking? Little League losing trees if they move. What about hotel idea?</td>
</tr>
<tr>
<td>Bob Luten</td>
<td>Question for community. “Touch and Go” definition. Different from flying in circles. Touch and go, landed, took off immediately. These are not counted as night landings. Not done at night. Need bilateral education for public and pilots. Pilots want to work with community.</td>
</tr>
</tbody>
</table>
Mike Murdter | Steve will wrap up his presentation now.
---|---
Steve Alverson | Thanked all for input. Comments go into final noise compatibility study.
---|---
---|---
? from audience member | When does county report back to community? Noise advisory committee could seek public input. Board of supervisors to hold a public hearing, could modify recommendations. Public asked about notice to community.
---|---
Steve Alverson | Gave reminder of additional ways to provide feedback to the team
---|---
Contact Information | **Project e-mail address:** reid@3divisions.biz  
**Project Meeting Notices:** www.countyairports.org  
**Project mail:** Kate Gillespie, 3D Visions  
3661 Buchanan Street, Suite 200  
San Francisco, CA 94123-1708  
**Project fax line:** 415-409-9612
---|---
| **Noise Complaint Hot Line:** 408-272-0290
<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Phone Number</th>
<th>Fax Number</th>
<th>Email</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jill Smith</td>
<td>123 Main St, Anytown, USA</td>
<td>123.456.7890</td>
<td>123.456.789</td>
<td><a href="mailto:jsmith@email.com">jsmith@email.com</a></td>
<td></td>
</tr>
<tr>
<td>Bob Johnson</td>
<td>456 Oak Ave, Anytown, USA</td>
<td>234.567.8901</td>
<td>234.567.890</td>
<td><a href="mailto:bjohnson@email.com">bjohnson@email.com</a></td>
<td></td>
</tr>
<tr>
<td>Sarah Williams</td>
<td>789 Pine Dr, Anytown, USA</td>
<td>345.678.9012</td>
<td>345.678.901</td>
<td><a href="mailto:swilliams@email.com">swilliams@email.com</a></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Mailing Address</td>
<td>Day Phone Ext</td>
<td>Room</td>
<td>Week of  Report/Briefing Date/Event</td>
<td>Comments</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------------</td>
<td>---------------</td>
<td>------</td>
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</tr>
<tr>
<td>Mary Smith</td>
<td>123 Maple St, CA 90210</td>
<td>555-1234</td>
<td>5432</td>
<td>2023-01-01</td>
<td></td>
</tr>
<tr>
<td>Winky Lim</td>
<td>456 Oak Ave, CA 90101</td>
<td>666-5432</td>
<td>1234</td>
<td>2023-02-02</td>
<td></td>
</tr>
<tr>
<td>Bob Lien</td>
<td>789 Pine Rd, CA 90301</td>
<td>777-6543</td>
<td>3210</td>
<td>2023-03-03</td>
<td></td>
</tr>
<tr>
<td>Sharon Smith</td>
<td>101 Cedar Ln, CA 90401</td>
<td>888-7654</td>
<td>4321</td>
<td>2023-04-04</td>
<td></td>
</tr>
<tr>
<td>Bob Bire</td>
<td>222 Elm St, CA 90501</td>
<td>999-8765</td>
<td>5432</td>
<td>2023-05-05</td>
<td></td>
</tr>
<tr>
<td>George Maginn</td>
<td>333 Oak Ave, CA 90601</td>
<td>111-4567</td>
<td>6543</td>
<td>2023-06-06</td>
<td></td>
</tr>
<tr>
<td>Allen Craig</td>
<td>444 Pine Rd, CA 90701</td>
<td>222-7654</td>
<td>4321</td>
<td>2023-07-07</td>
<td></td>
</tr>
<tr>
<td>Gary Curtis</td>
<td>555 Cedar Ln, CA 90801</td>
<td>333-8765</td>
<td>5432</td>
<td>2023-08-08</td>
<td></td>
</tr>
<tr>
<td>Jack Black</td>
<td>666 Oak Ave, CA 90901</td>
<td>444-7654</td>
<td>6543</td>
<td>2023-09-09</td>
<td></td>
</tr>
<tr>
<td>Sue White</td>
<td>777 Pine Rd, CA 91001</td>
<td>555-8765</td>
<td>7654</td>
<td>2023-10-10</td>
<td></td>
</tr>
<tr>
<td>Joe Green</td>
<td>888 Cedar Ln, CA 91101</td>
<td>666-7654</td>
<td>8765</td>
<td>2023-11-11</td>
<td></td>
</tr>
<tr>
<td>Bob Brown</td>
<td>999 Oak Ave, CA 91201</td>
<td>777-8765</td>
<td>5432</td>
<td>2023-12-12</td>
<td></td>
</tr>
</tbody>
</table>
Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2001
Name: Helen Johnson
Spoken Language: ☑ English
☑️ Spanish
☐ Vietnamese
Subject: 

Time limit of 3 minutes (may be shortened if necessary)

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2002
Name: [Redacted]
Spoken Language: ☑ English
☐ Spanish
☐ Vietnamese
Subject: 

Time limit of 3 minutes (may be shortened if necessary)

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2002
Name: [Redacted]
Spoken Language: ☑ Spanish
☐ Vietnamese
Subject: 

Time limit of 3 minutes (may be shortened if necessary)
Noise Compatibility Program -- Appendix C

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2001

Name: Claudia Taylor

Spoken Language: [X] English
[ ] Spanish
[ ] Vietnamese

Subject: Noise impact on bedroom

Time limit of 3 minutes (may be shortened if necessary)

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2002

Name: Leslie Waters

Spoken Language: [X] English
[ ] Spanish
[ ] Vietnamese

Subject: Touch & go?

Time limit of 3 minutes (may be shortened if necessary)

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2001

Name: Bennett Underwood

Spoken Language: [X] English
[ ] Spanish
[ ] Vietnamese

Subject: School Safety

Time limit of 3 minutes (may be shortened if necessary)
Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2002

Name: Emilia Ed. Anzuo
Spoken Language: ☐ English
☐ Spanish
☐ Vietnamese

Subject: Time limit of 3 minutes (may be shortened if necessary)

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2002

Name: Maria Maza
Spoken Language: ☐ English
☐ Spanish
☐ Vietnamese

Subject: Time limit of 3 minutes (may be shortened if necessary)

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2002

Name: Lien Cao
Spoken Language: ☐ English
☐ Spanish
☑ Vietnamese

Subject: Time limit of 3 minutes (may be shortened if necessary)
Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2002

Name: Tereuncha Rodriguez
Spoken Language: ☑ English
☑ Spanish
☐ Vietnamese

Subject: Airport
Time limit of 3 minutes (may be shortened if necessary)

-----------

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2002

Name: TCD Johnson
Spoken Language: ☑ English
☐ Spanish
☐ Vietnamese

Subject: Noise
Time limit of 3 minutes (may be shortened if necessary)

-----------

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2001

Name: Leslie Waters
Spoken Language: ☑ English
☐ Spanish
☐ Vietnamese

Subject: Expansion of RHV?
Time limit of 3 minutes (may be shortened if necessary)
Reid-Hillview Airport FAR Part 150 Study

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2001
Name: Rick Salvas
Spoken Language: English
Subject: Noise

Time limit of 3 minutes (may be shortened if necessary)

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2001
Name: BVD Beckman
Spoken Language: English
Subject:

Time limit of 3 minutes (may be shortened if necessary)

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2001
Name: Frank Jansen
Spoken Language: English
Subject: RV

Time limit of 3 minutes (may be shortened if necessary)
Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2002

Name: Patricia Roman

Spoken Language:

- English
- Spanish
- Vietnamese

Subject:

Time limit of 3 minutes (may be shortened if necessary) [Start]

[End]

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2002

Name: Douglas Rice

Spoken Language:

- English
- Spanish
- Vietnamese

Subject: [Blank]

Time limit of 3 minutes (may be shortened if necessary) [Start]

[End]

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2002

Name: Betty A. Schierard

Spoken Language:

- English
- Spanish
- Vietnamese

Subject: [Start]

[End]
Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2002
Name: Robert Modellin
Spoken Language: ☑️ English
☐ Spanish
☐ Vietnamese
Subject: Noise Environment
Time limit of 3 minutes (may be shortened if necessary)

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2002
Name: Mauri Cortez
Spoken Language: ☑️ English
☐ Spanish
☐ Vietnamese
Subject: Noise Environment
Time limit of 3 minutes (may be shortened if necessary)

Speaker Card
Reid-Hillview Part 150 Noise Study
September 18, 2001
Name: George McAvoy
Spoken Language: ☑️ English
☐ Spanish
☐ Vietnamese
Subject: General
Time limit of 3 minutes (may be shortened if necessary)
SUMMARY OF PUBLIC COMMENTS RECEIVED

Introduction

To provide for adequate opportunity for interested parties to comment on the Part 150 project, five public meetings were held throughout the study. The last two meetings (June 20, 2002 and September 18, 2002) allowed the public to provide both oral and written comments about the Airport noise exposure maps, and the proposed noise compatibility program. The June 20th meeting addressed the Noise Exposure Map and the solicitation of alternatives to mitigate any aircraft noise and the September 18th meeting presented the Draft Noise Compatibility Program and received public comments during a public hearing. Comments were also received through the project email site (reid@3divisions.biz) and the U.S. mail system.

Information on the following topics was presented at the meetings:

- The Study Process
- Assessment of Existing and Potential Noise Abatement Alternatives
- Assessment of Land Use Compatibility Alternatives
- Recommended Noise Compatibility Program
- Benefits of Noise Compatibility Program Implementation
- Continuing Program Measures
- Next Steps
- Contacts for Providing Input

Responses to written and oral comments are provided in the following paragraphs. Comments have been grouped by similar topic area to facilitate the response process. In addition, a complete set of comments is included in this Appendix. The response to each group of comments is provided at the end of all comments within the topic area.

Comments on the Noise Compatibility Program

Closure of RHV

1. Move airport operations elsewhere.

2. Airport is preventing growth.

3. Close the airport.

4. Don’t want an airport here.

Response: As stated in Section 5.8.6, airport closure is not an option under the terms of a FAR Part 150 study. The purpose is to assess aircraft noise and determine the best ways to mitigate them at an operating airport.

Increase in Operations and Associated Noise
5. Increase in basing and operations of turboprop and turbojet aircraft relocating from other Bay Area airports.

Response: Based on market forces resulting in a reduction in aircraft based at San Jose International Airport, forecasts indicate a slight rise in the number of operations and aircraft based at RHV. Nearly all of these increases are expected to be by aircraft similar to those currently based at RHV. These increase were modeled for the future year (2007) and included in the analysis of noise mitigation measures.

Land Use

6. Development of zoned commercial land use (Eastridge Center) into more “noise sensitive” use within the airport safety zone.

Response: With the development of an Airport Noise Impact Boundary, the ALUC and governing municipalities can enforce the compatible land use plan thereby limiting the expansion of noncompatible land uses.

Airport Use Restrictions

7. Since the Air Traffic Control Tower is only operational from 7:00 am to 10:00 pm, need an enforceable curfew.

8. Restrict the operating time of the airport.

9. Voluntary program is not working. Need curfews with fines.

Response: Before implementing mandatory curfews and airport operating hours, voluntary programs are usually implemented and results noted. The objective is to attempt to reduce noise exposure without unduly restricting access to the airport. If the voluntary measures are unsuccessful at controlling noise, more restrictive measures can be examined in subsequent studies.

Airport Flight Operations

10. Designate preferential runway as Runway 13 versus Runway 31 maximizing departures over less populated areas.

11. Why not use Runway 13L and 13R?

12. Clarify use of minimum power on departure so that it is not interpreted as reduced power for takeoff.
13. For maintaining the glide slope, FARs are clear that an aircraft, when approaching to land on a runway served by a VASI, maintain an altitude at or above the glide slope until a lower altitude is necessary for safe landing.

14. Simulated emergencies on departures should be banned, but practicing simulated emergencies on approach is safe and necessary.

15. For Runway 31R Departures, why send the aircraft to the east?

Response: Preferential Runway Use was discussed with FAA representatives as discussed in Section 5.5.2. Minimum power refers to noise abatement procedures; adjustments made to text. For approaches, emphasis is being on or above the specified glide slope altitude and not below. Due to other air traffic and the area surrounding the airport, simulated emergencies should not be conducted in the traffic pattern. Departures from Runway 31R turn east to avoid the noise sensitive receivers (schools) off the end of the runway and for air traffic control.

Noise Monitoring Systems

16. For the noise monitoring system and radar tracking system, should contract with City of San Jose for radar data and minimize costs to installation of noise monitoring system.

Response: The possibility of sharing data with the City of San Jose could be explored during the implementation phase of this measure.

Administrative Measures

17. For the additional staff position to deal with noise issues, the one constant in dealing with noise issues is the staff’s failure to act. The upfront and on-going expenses of this new position would be overbearing on the airport users and, based on the last 12 months, amount to almost $1,500 per noise complaint. Who is going to pay?

18. For implementation, do not believe that the airport organizations have fully reviewed the recommendations with intent to implement them.

19. Want a Joint Community Relations Group to work out problems and educate both the pilots and community members.

Response: The new position on staff will permit the staff to: be more proactive in working noise related issues, focus on reducing the number of persons exposed to incompatible noise levels, and work with airport organizations and the community to foster a better understanding of the issues affecting each sector.
Sound Insulation Measures

20. The County of Santa Clara should be able to use Passenger Facility Charges from San Jose International Airport for sound insulation. County should talk with the City of San Jose.

Response: Federal law requires that Passenger Facility Charges are restricted for use by the Airport Operator who generated them. Since the County of Santa Clara operates RHV, they are prohibited by federal law from using Passenger Facility Charges generated by the City of San Jose.

Airport Configuration

21. A runway extension toward Tully Road could result in the removal of seven houses from 65 dB CNEL contour.

Response: As addressed in Section 5.9.2, extending the runways and thus moving the start of takeoff point approximately 125 feet would reduce the aircraft noise exposure level at the affected residences by approximately 0.2 of a dB. This would technically remove the seven residences from the 65 dB CNEL contour thereby making them ineligible for sound insulation within the 65 dB contour. The noise exposure reduction provide by the runway extension would not be noticeable, but the sound insulation would provide a noticeable (+5 dB) reduction in the CNEL. Therefore, extending the runway for noise reduction would not noticeably benefit the community.
In regard to the FAR 150 noise study at Reid-Hillview I have a couple of comments, and some suggestions for improvements.

First, I would like to comment on two areas.

Currently, runways 31L and 31R allow pilots to both takeoff and land. Pilots using 31L fly a pattern to the west of the airport, while pilots using 31R fly a pattern to the east of the airport. The study recommends that only 31R be used for takeoffs.

By limiting pilots to only 31R, the residents to the East of the airport will be subjected to 100% of all flight activity. This recommendation as it stands is unacceptable since it will increase noise exposure to all residents East of the airport. However, below I offer a solution to this recommendation.

The 2nd comment relates to the recommendation that “touch and goes” be restricted to certain days and times.

At the May 2001 FAR 150 meeting, the consultants provided FAA data stating that 67% (154,000) of year 2000 operations were from pilots flying in circles at RHV practicing takeoffs and landings. On page 44 of the “Draft Noise Compatibility Program 2002” it states, “These flight operations provide the greatest noise exposure to the community due to the repetitious nature of remaining in the traffic pattern for multiple approaches and departures.” This statement is 100% correct. However, the proposal to restrict “touch and goes” to limit this practice will have ABSOLUTELY NO EFFECT on this activity.

The reason why there will be no effect is because the consultants are using “touch and go” as a synonym for pattern practice. As you know, “touch and goes” are currently banned after 9 PM. However, pilots still fly around in circles after 9 PM at RHV practicing takeoffs and landings. This is because a “touch and go” is a specific type of flight operation. To circumvent this restriction, pilots do “stop and go”, or “taxi-back and go”, or “touch, slow-down, and go”. They obey the letter of the law but not the spirit of the law.

Once again, the proposal to restrict “touch and goes” to limit pattern practice and reduce noise will have ABSOLUTELY NO EFFECT on this activity.

Alternatives:

In this section I would like to propose improvements and alternatives to the FAR 150 proposals.

First, I would like to state the premise upon which my suggestions are based. That premise is that airplane operations are the source of noise and the only way to mitigate that noise is to reduce and/or eliminate operations.
Reid-Hillview Airport FAR Part 150 Study

Alternative 1:

First, I would like to suggest a modification to the study’s proposal that only runway 31R be used for takeoffs. As stated above, in its current form this proposal is unacceptable. However, with a minor modification this proposal can be made very acceptable.

The modification I suggest is that, on alternate weeks, pilots fly alternate patterns. For example, on week 1 all takeoffs fly a pattern to the East, on week 2 all takeoffs fly a pattern to the West, week 3 fly a pattern to the East, week 4 fly a pattern to the West, and continue all year.

This simple modification will reduce noise exposure to residents by 50 percent! This will give residents a cumulative total of 6 months of the year when there are no aircraft operations going overhead. Currently, there are zero days a year when this occurs.

This is the simplest, easiest, and most cost effective method to reduce the noise exposure from Reid-Hillview to East San Jose residents.

Alternative 2:

The second suggestion is to modify the text in the FAR150 study to state that the term “touch and go” applies to all forms of techniques (“stop and go”, “taxi-back and go”, etc.) used for pattern practice. In other words, the proposal is designed to limit the hours of pattern practice. Only by limited pattern practice will noise reduction be achieved. Limiting “touch and go” operations will accomplish nothing.

Alternative 3:

There needs to be a fee associated with every aircraft operation at Reid-Hillview. Every takeoff and every landing needs to be charged. Other airports charge fees for aircraft operations, so there is no reason why this cannot be done at RHV. I cannot go to a county park without paying, yet pilots use RHV for free. By charging a fee for all operations at RHV the county is insuring that there is no discrimination in its fee structure. There is no discrimination between aircraft operations and there is no discrimination between the aviation community using RHV and the rest of the community using the other county recreational facilities. The money collected from these fees can go to the East San Jose school system.

Thank you.

Bud Beacham
Frank Hansen has asked me to read this in his absence and on his behalf.

Good evening,

My name is Frank Hansen. I am a homeowner in Santa Clara County and I regret that I couldn't attend this meeting to present the topic of noise pollution is very important to me and my family. I apologize for my absence due to business elsewhere but am very pleased that I can have my voice heard in another way.

It is an unspoken fact that airplanes make noise, lots of noise. The cities of Santa Clara County anywhere are filled with airplanes noise from the early morning to the late evening. Just go outside and listen for yourself.

By complying with the FRA noise abatement control measurement procedure, lots of time and money was spent on studying the noise contours around Moffett Field Airport. The noise measurements and the location of the 90 db contours would suggest that this noise pollution problem is localized to Moffett Field, right?

People, wake up, this is nonsense. What the studies are telling about is the averaged measurements, averages that have absolutely no bearing in the impact of noise on people, either close to the airports or far away. All this talk about noise contours is like talking about measuring the thickness of cell. It doesn't matter what the number is, but my deep sympathy is with the people who are living close to Moffett Field Airport.

Please don't insult people by saying that noise pollution in Santa Clara County is the unavoidable result of some people, some cars and commercial aircraft flying overhead. Here is another fact: most private airports over Santa Clara County cause noise pollution and disturb more people than any other form of transportation or entertainment, including recreational aircraft transporting hundreds of people. That Society allows the frivolous activities of a few hundred pilots to degrade the quality of life of hundreds of thousands of county residents is a clear statement of our tolerance, and (of) that I can only call anti-social behavior.

Please think about the mindset of a pilot who wants to take off, accelerate in and sound suppressors over his ears. He doesn't care that he is about to spew his noise over a good portion of the County, and that is what I call anti-social. He doesn't want to invest in sound mufflers because it decreases the performance of his plane. You know what? Take the muffler off a motorcycle to get more performance and you will get arrested.
The airport should be closed and transferred to other areas where the community is not impacted. We have not received any previous notices of the meetings, Previous years our residence was not on the flight path and then maybe around three years ago we noticed the plane path is directly on our residence, its flying so low, more frequency of flying and the noise affects the quality of our life, our neighbors and the community as a whole. Flight schools are potential targets of terrorist attacks which puts the community at risk. Other reasons why it should be closed are the following: environmental safety, poses health hazard, possible crashes of planes on residences. I hope Mr. Jerry Bennett, the SJ board of supervisors, city officials will pay attention of the concern of the residents affected. The city approved this area as residence so we expect our city officials to provide us the quality of life that we deserve.

To whom it may concern,
My problem is the Airport. You see I have been living under the flight path of Reid Hillview for the last 2 years, and now I am ready to file a claim with the Airport. The planes are so loud that the car alarms on my street go off. The planes fly 24 hours 7 days a week. Please Please Please Help Me. I need to know what I can do to stop this noise pollution. Any information would be much apprititated. Cant the planes take off over eastridge thus eliminating all the noise over the residential area. Thanks in advance for your research on this matter.

THANK-YOU
CINDY MARTINEZ
408 363-7856
MBR
Hi Nora,
I was at an SNI meeting a few days ago and saw a presentation by the City of San Jose entitled "Strong Neighborhoods Home Improvement Program". My understanding is that the City has allocated several million dollars for external and internal improvements to homes in SNI neighborhoods with per-house grants (not loans) in the amounts of $25,000 for external improvements (including roofs and doors) and $15,000 for internal improvements (including double-paned windows). My understanding was that money would be allocated by the City "as needed" to fund the project. I specifically asked the presenter if "noise attenuation" would be a legitimate use of these grants, and was told "yes".

I believe that a large number of homes in the noise-impacted areas around Reid-Hillview Airport are within adopted Strong Neighborhoods areas and would thus be eligible for such grants, whether-or-not they would be eligible for FAA grant funding.

San Jose International already has a noise attenuation program in place for properties around that airport, and I seem to recall that the total costs of attenuation are less than the $40,000 per residence provided by the SNI Home Improvement Program.

I was wondering if you would further investigate this source of income for noise-insulating residences around Reid-Hillview which could provide immediate relief for many people.

Regards,
John Blair
Vice President
Coalition for Responsible Airport Management and Policy
If this Business is Operated by the County of Santa Clara and does not provide any Benefit to the community in which it operates, perhaps the best thing to do is to move it elsewhere. Other places that have space available are the Gilroy Airport/ San Martin etc. We, the Residents and taxpayers are entitled to have more say on the impact it has on our kids who attend schools in the area. Every year, the Noise level increases as more planes are added to the airport. The safety of the Community is a priority, the taxpayers/Home Owners are now suffering the consequences due to lower Prices for resale of homes in the area. Most planes at the Airport belong to people or corporations outside the city or the Community, so the community has no benefit from all the noise or traffic but greater risk of accidents as traffic increases.

Regards, Concerned Resident...
Several of you have asked about using curfews to reduce noise around RHV at night. Here is my understanding of how they work.

Enforceable Curfews:
Only the FAA can enact enforceable rules concerning flight operations. The FAA is very reluctant to grant a curfew at an airport. A lot of this was formalized in the Airport Noise And Capacity Act (ANAC) of 1990 and is also written into airport grant assurances. A curfew is considered to be an undue burden to interstate commerce (long haul flights are most affected by curfews), and is also considered to just shift noise from one airport to another, which is also considered inappropriate. To my knowledge, no enforceable curfew has been granted by the FAA to any US airport since the enactment of ANAC.

Voluntary Flight Guidelines:
While it is pretty much impossible for an airport to obtain a formal, enforceable FAA curfew, there is nothing to stop pilots from *voluntarily* following flight restrictions on hours of operation, touch and goes, etc. It of course makes sense to be a good neighbor and avoid late night or early morning operations that create noise in residential areas. However "avoid" does not and should not mean "forbid". If you leave LA at 10:00pm you'll probably arrive at RHV after midnight. By the same token, if you have an 10:00am meeting in LA, you'll probably be wheels-up before 7:00am. On the other hand, it is terribly inconsiderate to go out at 5:00am or midnight and do touch and goes just because you like to fly the pattern when no one else is flying. As pilots, we should use good judgement when we have discretion on when we need to fly so as to minimize the inconvenience to others.

The airport's flight schools are the most important user-group for implementing good voluntary flight restrictions since the handful of flight schools account for a good percentage of airport operations. The schools can institute policies on when their aircraft can be used for pattern work. They can teach students and renters the best departure techniques for their particular airplanes and airport noise-sensitive areas.

The best way to establish and promulgate voluntary flight restrictions is
Reid-Hillview Airport FAR Part 150 Study

through good airport-neighborhood dialog (as opposed to diatribe). A good forum for such dialog is a Joint Community Relations Committee (JCRC) such as they have in Palo Alto.

The Problem of Nomenclature:
Unfortunately, most non-pilots don't understand the FAA's role in managing flight operations. As a result they expect that cities and counties have the authority to establish rules and punish those who violate those rules. As mentioned above, this is just not the case. A poor choice of terms can exacerbate this misunderstanding. Calling something a "voluntary curfew" tends to create problems because "curfew" implies something enforceable. Voluntary or not, the neighbors tends to react with "Some &*%@# pilot was flying in violation of _The Curfew_ so why doesn't the airport punished him/her." For this reason I prefer using a phrase such as "Voluntary Flight Guidelines" which doesn't imply enforceability.

Establishing a good set of voluntary flight guidelines helps strike a balance between being a good neighbor and maintaining the utility of the national airport system.

John Blair
Vice President
CRAMP

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HARRIS MILLER MILLER & HANSON INC.
DISTRICT TWO - COUNTY OF SANTA CLARA
MEMORANDUM

TO: Eugene Reindel
FROM: Thomas Lloyd
SUBJECT: Noise Reduction Equipment
DATE: August 21, 2002

Mr. Reindel,

After a conversation with Sylvia Gallegos, I was asked to solicit your opinion on the following issue. Our office is working with Airport staff to possibly implement a pilot program at Reid-Hillview Airport that would involve installing hush kits on the airplanes based there. Michael Murrer suggested that we could possibly expand our pilot program to include propeller swap-outs, which are also part of the Part 135 Study. The information I gathered from research leads me to believe that the cost-effectiveness of propeller swap-outs are not as beneficial as hush kits because they seem to only offer, in comparison, a modest reduction in noise. After reading the attached documents, I am very interested in any insight and opinions you may have on this issue.

Thomas Lloyd
Policy Aide,
Supervisor Blanca Alvarado
County of Santa Clara

Included is: 1) a Gomulleg product description; 2) an independent online magazine’s write-up on the product; and 3) an e-mail from Nick Jackson, the North American representative for Gomulleg.

Summary of the main points:
1. This technology is the most cost effective way of reducing noise
2. Gomulleg claims that there is no performance reduction
3. The pilots benefit due to a decrease in cabin noise
4. The spectrum of homes affected by air traffic is drastically reduced

Extended Summary

Noise Reduction Equipment (HUSH KITS)
The exhaust systems of airplanes are seen as a means to reduce the dB levels of the aircraft. In this emerging field, there is one vendor that has been located in Michigan that distributes a product line by Gonoiz, a German Aeronautical Company. Gonoiz specializes in exhaust hush kits for piston engine aircraft. The hush kit connects to the end of the conventional exhaust system and alters its frequency without compromising the performance of the aircraft.

There are two primary sources of noise emanating from piston engine powered general aviation aircraft: the propeller and the engine exhaust. A general misconception is that propeller noise is so predominant that reducing noise in other areas does not produce significant results. This is not the case.

Gonoiz silencer systems minimize piston-engine-exhaust noise-related problems faced by the general aviation industry. Most of the noise experienced by ground observers during aircraft approach and departure is from the engine exhaust. In some situations, a propeller change by itself has little influence on noise heard by people on the ground. The company's standard silencer device, mounted under the nacelle, can be added to the aircraft's original exhaust system.

Boasting a 4 to 10 dB reduction, implementing a program to require hush kits on all RAV aircraft would benefit neighbors and pilots alike. An aircraft equipped with a hush kit will provide a quieter environment for the occupants of the plane itself. This technology would at the same time reduce the number of residents that are affected by overhead noise. Aircraft equipped with hush kits limit the range the noise is spread over the ground below.
Reid-Hillview Airport FAR Part 150 Study

Gomolzig Flugzeug und Maschinenbau, GmbH
Piston Engine Aircraft Exhaust Silencer Systems

GENERAL AVIATION AIRCRAFT NOISE AND SILENCER OPTIONS
INFORMATION SHEET

BACKGROUND

Gomolzig was founded in 1992 as an aircraft maintenance facility and exhaust system developer and manufacturer. This work evolved into other components in general aviation aircraft, including landing gear, power plants, and others, but their main focus continued to remain with in-depth work on exhaust systems.

Gomolzig began its work on engine exhaust noise silencers for general aviation aircraft in the early 1990s. At that time, there were several complaints about older burning aircraft noise coming up to the home area. To avoid unacceptable consequences to the airport, it was decided that noise emissions had to be significantly reduced. Gomolzig silencers helped resolve noise-related problems at these airports. This has since evolved into over 3000 aircraft installations at numerous airports throughout Europe.

Many airports, regardless of location, often face a great deal of pressure and receive numerous complaints from local residents and authorities about aircraft noise. These all influence the survivability of the airport, and the flexibility pilots have when operating in and out of airports. Noise mitigation must be a high priority to mitigate these noise-related problems.

PRIMARY SOURCES OF NOISE

There are two primary sources of noise emanating from piston engine powered general aviation aircraft.

1. Power up on takeoff and landing
2. Engine idling

The propeller produces a significant amount of noise, as shown in Figure 1. The intensity of this noise is a direct function of propeller tip speed (the higher the power setting, the higher the propeller tip speed). This is especially true at altitudes. When the tip speed approaches sonic conditions, the pilot has the ability to influence propeller noise levels, by reducing the propeller speed to below sonic. Figure 1 also shows the difference in the propeller noise profile due to reduced power setting propeller rpm.

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HARRIS MILLER MILLER & HANSON INC.
To minimize propeller noise, it's also possible to use lower noise with options such as multi-blade and/or variable pitch propellers. However, these options are relatively expensive and increase aircraft operating complexity.

Engine exhaust noise is the second predominant source of noise that can be controlled/reduced.

A general misconception is that propeller noise is the predominant that reducing noise in other areas does not produce significant results. This is not the case.

Figure 2 illustrates how noise from an over-flying aircraft is heard by observers on the ground in the immediate beginning with 20 seconds before and up to 20 seconds after the aircraft has flown over, and the influence from the propeller and exhaust system silencers.

![Figure 2: Noise from an over-flying aircraft as heard by observers on the ground.](image)

This figure illustrates that a propeller change by itself has little influence on noise heard by people on the ground and that the biggest influence is due to the addition of silencers systems. Noise from an over-flying aircraft is heard much later as it is approaching and is not heard much sooner after it has flown by.

This should significantly reduce complaints by the public to authorities, etc.

The local noise is a combination of reduced propeller noise and the addition of an engine exhaust silencer system, as shown in Figure 3 and 4.

![Figure 3: Noise Profile of Doppler 72B (G1) with fixed pitch propellers and engine exhaust system of a paradise aircraft equipped with fixed propellers and with a high rate of rotation. The propeller noise level is very low compared to that of the aircraft.](image)

![Figure 4: Noise Profile of Doppler 72B (G1) with variable pitch propellers and engine exhaust system of a paradise aircraft equipped with variable propellers and with a high rate of rotation. The propeller noise level is very low compared to that of the aircraft.](image)

In addition to the above, an indirect benefit of Doppler engine exhaust silencers are reduced cabin noise. These resultant changes in engine exhaust frequency and intensity improve the comfort levels inside the aircraft for the pilots and their passengers.

The information contained in this document is proprietary to Doppler and these figures are provided solely by permission of its authorized representative. This document shall not be distributed to other entities without the prior written permission by the above mentioned representative.

*Doppler Noise & Silence Industries*  
January 23, 2002
GOMNZIO SILENCER SYSTEMS

Gomnzio silencers operate based on the combination of two principles to achieve noise reduction over the entire operating range of an aircraft (taxing, takeoffs & landings, and cruising): Reflection and Absorption. These principles operate in combination to reduce noise over the operating frequencies and pressures found in engine exhaust, and each offers its own benefits depending on engine operating mode.

Gomnzio silencers are developed to ensure the best possible exhaust system performance. Gomnzio "QUIETFLIGHT" silencers normally result in more balanced exhaust systems than most original exhausts, due to an improvement in exhaust gas flow. As a result, changes in exhaust backpressures and aircraft performance are within the normal operating specifications of the aircraft, and always within the requirements of FAR 23. Changes in aircraft performance are always seen due to a variety of reasons including engine performance, weight, and instrumentation tolerances. Gomnzio silencers fall within these tolerances.

To confirm aircraft performance, climbing tests up to 60,000 feet are conducted during every new silencer system application.

All Gomnzio silencers and exhaust system components are made of high quality stainless steel to ensure long life, and trouble-free operation. Silencer maintenance procedures are simple and easily integrated into regularly scheduled aircraft procedures.

GOMNZIO SILENCER INSTALLATION OPTIONS

The following describes general installation options available from Gomnzio:

AddOn Under-the-Fuselage Silencer Systems

A standard silencer, the specific type based on engine used, is added to the original exhaust system. This is an inexpensive and effective solution. Other components, such as new mufflers, etc., are available to optimize original exhaust system performance. Under-the-Fuselage systems provide up to 10 dB(A) reductions in engine exhaust noise.

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Aircraft Noise & Emissions Information Sheet

January 23, 2009

HARRIS MILLER MILLER & HANSON INC.
In-Cowl Silencer Systems

In-Cowl silencers offer the benefit of being invisible from the outside of the aircraft. However, since these systems are more specific to the aircraft and are not adaptable to other engines, they are more expensive than the in-flight silencer systems. Generally, in addition to a new silencer, these systems replace the original exhaust systems.

These systems offer noise reductions of 7 to 10 dB(A).

Ceramic Silencer Systems

A new, noise-reducing technology undergoing final development is the ceramic silencer. This proprietary technology utilizes a ceramic sleeve to reduce noise levels by 5 dB(A) when compared to the original exhaust system.

This patented technology was first applied with the new Cessna T206H. An aircraft noise reduction of 5 dB(A) was achieved, based on ICAO Chapter X measurements.

Other tests resulted in engine exhaust noise reduction of up to 10 dB(A).

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Received Noise & Source Information Sheet
January 31, 2002
Gomolzisch provides noise reduction options

Gomolzisch Flugzeug und Maschinenbau GmbH has expanded its efforts to offer silencer systems to minimize piston-engine-exhaust noise-related problems faced by the general aviation industry. Such noise concerns include pilot fatigue and public complaints.

The silencers, which are made of stainless steel, can reduce noise in most general aviation aircraft from 4 to 10 dB(A), and are necessary for some areas in Europe, especially in Germany, to meet increasingly stringent regulations. Without the silencers, most aircraft are forced to operate under restricted flight patterns and flying hours (in some cases, no flying on weekends) and are subjected to higher airport landing, storage, and fuel fees.

Although there are no government regulations in the U.S. or Canada for noise, says Gomolzisch, complaints by the non-flying public are causing a concern from pilots, small airports, and general aviation aircraft operators.

A general misconception about aircraft noise is that the propeller is the predominant source of noise in an aircraft, says Gomolzisch. Although this is true when the aircraft is almost directly overhead, most of the noise experienced by ground observers during aircraft approach and departure is from the engine exhaust.

This silencer device, which is mounted under the fuselage, can be added to the aircraft's original exhaust system, providing up to 10 dB(A) reductions in engine exhaust.
According to the company, aircraft propellers produce eye-shaped noise-waves, which are a direct function of propeller tip speed. The noise intensifies when the tip speed approaches sonic conditions. Pilots are able to control propeller noise levels by adjusting the propeller speed during climb and cruise. This type of noise can also be minimized using multi-blade and/or variable pitch propellers. However, Gomolitz believes these options are relatively expensive, as well as increase aircraft operating complexity.

In some situations, a propeller change by itself has little influence on noise heard by people on the ground. However, when combined with silencer systems, noise can be reduced significantly.

Gomolitz silencers operate based on the combination of two principles to achieve noise reduction over the entire operating range of an aircraft—reflection and absorption. These principles operate in combination to reduce noise over the operating frequencies and pressures seen in engine exhaust, and each offers its own benefits depending on engine operating mode.

The company’s standard silencer device, which is mounted under the fuselage, can be added to the aircraft’s original exhaust system. This solution can be inexpensive and effective, providing up to 10 dB(A) reductions in engine exhaust noise.

In-cowl silencers offer the benefit of being inviolate from the outside of the aircraft. However, since these systems are aircraft-specific and influenced by packaging room inside the crowwing area, very few off-the-shelf components are possible, according to the company. As a result, this type of silencer can be more expensive than the under-the-fuselage system. Generally, in addition to a new silencer, these systems replace the original exhaust system and offer noise reductions of 7 to 10 dB(A).

A new, patent-pending noise-reduction technology undergoing final development at Gomolitz involves the use of proprietary ceramic slices to provide optimized exhaust-gas flow. This technology, which integrates reflection and absorption properties into one unit, was first applied on the new Genesia T230D. An aircraft noise reduction of 5 dB(A) was achieved, again on ICAO Chapter X measurements. Other tests resulted in engine-exhaust-noise reduction of up to 11 dB(A).
Noise from an above aircraft as heard by observers on the ground is illustrated by contour.

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Subject: Gomolzig Aircraft Noise Reduction Systems

Date: Monday, July 15, 2002 8:22 AM

From: Njaks@aol.com

To: <thomas.lloyd@bcs.ca.santa-clara.ca.us>
Cc: <info@gomolzig.com>, <michael.amm@gomolzig.de>, <McHlZm@aol.com>

Please confirm receipt of this message and attached files.

Thanks for your call on Friday inquiring about noise reduction system options for the aircraft at Reid-Hillview airport.

You will find attached the following PDF files:

1. Aircraft Noise Reduction and Silencer System Options Information Sheet. This will give you an overview about engine exhaust noise and the options offered by Gomolzig.

2. Cessna, Piper, and Beech Data Sheets. These data sheets are provided as samples of some of the systems we offer, and the configuration of the installations. There are many other systems for a large variety of aircraft made by most of the general aviation manufacturers.

For clarification, Gomolzig silencer systems offer the following benefits, most of which cannot be truthfully claimed by potential competitors:

- No degradation in aircraft flight performance: This is usually the first question asked by people interested in our systems, and one Gomolzig takes very seriously. Since Gomolzig has been in the aircraft exhaust system business since 1952, they know how to minimize exhaust system problems.

- Noise reduction at all levels of engine power. This is important since noise is generated whenever the engine is running. During cruise, a quieter engine results in much more pilot and passenger comfort.

- Very high quality and long life; Gomolzig’s systems are made from the highest quality stainless steel materials, which reduce maintenance, and improve system life.

- All Gomolzig systems are STC’d in Europe. Our first US FAA STC’s have just been awarded for several Cessna 172 and 182 models. Other FAA STC’s will follow shortly. For those systems without FAA STC’s, FAA Field Approvals have not been a problem.

- Within the next 30 to 60 days, we will have a US based distribution center. This will help with inventories of systems, spare parts, etc.

Once we have additional information about the specific aircraft and how many of each there are, we can provide aircraft specific data sheets as well as prices. Please note that if it’s possible to do this as a higher volume program, the pricing will be much better.

In addition, if it will help ease your pilots’ anxiety about using our systems, I will be happy to visit you for a training/educational session to discuss noise and the Gomolzig systems. We can schedule this at your convenience.

After searching the Internet, I can see your airport faces some serious aircraft noise related issues. With our noise reduction systems, you will find that aircraft noise will be much less of a problem and public pressure related to noise should be significantly reduced.

As you may know, silencer systems are much more common in Europe, primarily due to congestion and proximity of airports to residential areas. After the introduction of all quieters, and other steps taken by airports, these problems have greatly subsided.

Please let me know any information you have about the type of aircraft that could benefit from noise reduction, and if any information sent is of any interest to you.
Upon reviewing the Draft Noise Compatibility Program document, I offer the following comments for the record:

The consultant has clearly heard the concerns from both the users and the community in developing the recommendations in this draft. I am particularly pleased that he has included new ideas, some of which would be considered "outside the box," for inclusion. (Reference Section 5.8.6) Similarly, the recent breakthrough of the political obstacles and commitment on a rapid timetable for the establishment of a Reid Hillview Joint Community Relations Committee as recommended in the report is a positive step as well. (Reference Section 3.4.6)

There are, however, some issues, mostly technical in nature, which the study either did not recommend for further consideration or dismissed out-of-hand that deserve additional consideration. One of these is the extension of the runways within the current noise lines toward Tully Road. While this distance may seem small, it would move seven houses outside of the 2007 65db CNEL. (Reference Sections 8.5 and 8.9.2) Also, the safety benefit of even this small amount of pavement cannot be ignored.

Another is the designation of Runways 31 as the Preferential Runways. (Reference Section 5.5) This recommendation ignores the purpose of designating a preferential runway, which is to minimize population impacts by taking advantage of unoccupied development around the airport. In general, it is preferable to maximize departures over less populated areas, because departures are generally noisier than arrivals." The consultant also states that "it is likely that south flow operations would nearly eliminate all incompatible land uses around RHW." The concerns expressed by FAA representatives about restrictive airspace problems are, in my opinion as both a general aviation and airline pilot, in error. Finally, the comment regarding the soon to be implemented instrument approach and departure from Runway 31 and the conflict with opposing traffic departing Runway 13 is most unlikely. The minimums for the approach are above traffic pattern altitude, it may require a circling maneuver prior to landing, and in most cases, when the instrument approach is being used, the surface winds will dictate the use of Runways 13 anyway. We should continue to consider this issue until it is rejected by the FAA.

Next, two items are proposed under Cockpit Procedures. (Section 5.6) One is a recommendation to use minimum power on departure and encourage pilots to reduce power settings when appropriate and able. Pilots do this as a normal procedure when they reach a safe altitude and it is addressed in the recommended noise abatement procedure provided by the manufacturer. Please clarify this recommendation so that it is not misinterpreted to mean the use of reduced power for takeoff. As for the second recommendation, the FARs are very clear that an aircraft, when approaching to land on a runway served by a VASL, maintain an altitude at or above the
glide slope until a lower altitude is necessary for safe landing. (FAR 91.129 (c) (3))

My previous comment regarding Simulated Emergencies (Section 3.3) should be changed to state that simulated emergencies on departure should be banned. It is still my opinion that practicing simulated emergencies on approach (simulated dead stick landings) is safe and necessary.

The Agreement to Implement (Section 3.5.3) is not complete. As indicated, the FAA has not signed off on the proposed Letter of Agreement. In addition, I do not believe that the airport organizations have fully reviewed the recommendations with an intent to implement them.

Finally, the recommendation that concerns me the most is the proposal to install a Noise Monitoring and Radar Tracking system and create a staff position solely to deal with noise issues. (Reference Sections 3.4.4, 3.4.5, and 3.4.7)

The one constant in the failure to address noise issues is staff's failure to act. In 1998, the Airports Commission drafted the following resolution regarding noise issues:

Resolution adopted by the Santa Clara County Airports Commission on 11/17/98:

Whereas, community concern has been expressed to the commission regarding noise from Touch and Go operations at Reid Hillview Airport after 9 P.M., and

Whereas, the Board of Supervisors HLUET Committee has also informed staff of similar concerns, And

Whereas, the Airports Commission recognizes the efforts made by the Reid Hillview Airports Assn. and the pilots who are based at Reid Hillview to be noise conscious neighbors,

Therefore, the Airports Commission recommends that staff begin a campaign to make all pilots who might operate out of Reid Hillview aware of those operational restrictions on Touch and Go landings after 9 P.M. and the noise sensitivity of the area, and

That such recommendations be transmitted to the Board of Supervisors HLUET Committee as action items recommended by the commission.

As a follow up to these recommendations, his item was placed on the July 18, 2006 agenda for discussion with staff. Staff reported that they had been unable to act due to staffing problems and that no outreach had been attempted.
In addition to the significant up front cost (even with FAA grant funds, it would be $150,000), the users would bear the ongoing expenses of over $100,000 per year for facilities, salaries and benefits. Based on the last 12 months figures, this works out to almost $1,500 per noise complaint! (Appendix) Who is going to pay?

There is, however, a faster, better, less expensive way to address this issue. The City of San Jose has this type of system already in place and operational. We don’t need to reinvent the wheel. Why not contract for the services we need? The initial costs are minimized to the installation of the noise monitoring microphones, access to Air Traffic Control audio, and installation of telephone lines and recording equipment. The SJC noise center is conveniently located across the street from the County Department of Roads and Airports administrative offices. We benefit by contracting only for those services we really need and can add to, remove from, or even terminate services if necessary. Among the information available is static data (non-motion) back to 1998 and real time data from July, 2002. And soon, the radar tracks will be available (with a short time delay for security reasons) on the agency website.

Clearly, what is needed is a process which is open, non-political and representative of both the users and the community. The JCRC is the backbone of this effort. It will take time to develop the trust and understanding of each others positions and to communicate those concerns to their respective constituencies. They will have a great deal of knowledge to digest and only then will they be able to fully address the issues at hand.

Respectfully submitted,

Douglas L. Rice
September 18, 2002
3.3. Land Use Measures

Soundproofing Existing Development would establish noise insulation programs to ensure acceptable interior noise levels for existing single-family residences within the 2002 CNEQ65 dB and greater contours. As many as 7 dwellings could be eligible.

3.4. Continuing Program Measures

3.4.1. New Measure: Install Noise Monitors in the RHV Environ to Measure and Compare Unusual or High-Level Noise Aircraft Events with Voice Records System

Noise monitors recording real time sound levels would help quantify particular noise events and assist in identifying the noise source. Through this, the noise monitors could help identify perpetually loud or noisy aircraft that may be the subject of many complaints.

3.4.2. New Measure: Install a Radar Collection System to Match Aircraft Noise Events to Radar Tracks

Incorporate a radar data collection system that will provide radar ground tracks and altitudes of aircraft for matching to known aircraft and to identify where the aircraft are flying and if the published procedures are being followed (altitude, flight path, etc.).

3.4.3. New Measure: Establish an Airport/Airport User/Community Noise Committee after Noise Monitors and Radar Collection System are in Place to Discuss Issues on a Quarterly Basis

Communication is vital to understanding different points of view. An airport noise committee comprised of community members, airport staff, and airport users would provide a forum for discussing issues of importance and promoting a healthy relationship of cooperation.

3.4.4. New Measure: Create a Position at RHV to Focus on Noise Abatement and Compliance Programs and to Investigate Noise Complaints

Consistency and promptness are two characteristics that build confidence in the public's view that someone is looking into their aircraft noise complaints. Having one or two individuals designated for this effort provides a natural link with the community in resolving aircraft noise issues.

3.4.5. Existing Measure: Maintain Information About RHV’s Noise Abatement Program on the County’s Web Site

Provide current information for both the airport users and the community regarding the airport's aircraft noise abatement procedures. The web site is an excellent medium for communicating what the airport expects and the affects the procedures have on the community noise environment.
Guaranteed purchase of noise impacted homes:
The County identifies eligible areas in consultation with the City of San Jose and establishes eligibility requirements. Approximately $210,000 in insulation and management costs for seven identified homes.

Soundproofing or sound insulation program for existing development in 65 dB CNEL and greater contours:
The County develops program, applies for federal funds, and administers program. Approximately $210,000 for seven identified homes.

Soundproofing or sound insulation program for existing development in 60-65 dB CNEL contour interval:
The County develops program, applies for federal funds, and administers program. Approximately $15,870,000 for 529 identified homes. This would be considered after completing sound insulation for identified residences in 65 dB and greater contours.

3.5.3. Indication of Agreement to Implement
As the lead agency in the implementation of all measures, the County of Santa Clara agrees to its responsibilities. The FAA ATCT, Fixed-Base Operators, and pilot associations have endorsed the noise abatement measures through participation in the RHV Part 150 Study process, which included public meeting and direct discussions with the FAA and pilots.

5.3. Measures Identified by the FAA, County, or Consultant Staffs
Members of the local FAA staff, County Airport staffs and Consultant staffs identified several implementation alternatives for consideration. Some of these were in a draft, unsigned LOA between the County and the FAA and are considered new measures at this time.

- Prohibit simulated emergencies

Airport Use Restrictions
Voluntary Limitation on Aircraft Departures to Specified Times

Voluntary limitation of all aircraft departures to between 7:00 am and 10:00 pm

5.5. Preferential Runway Use Alternatives
The objective of preferential runway measures is to optimize runway utilization under wind, weather, demand, and airport layout constraints to minimize population impacts by taking advantage of uneven development around the airport. In general, it is preferable to maximize departures over less populated areas, because departures are generally noisier than arrivals. Three preferential runway use measures were suggested: (1) designate Runways 31R and 31L as preferred departure runways with Runway 31R the more preferred; (2) change preferential runway use to Runways 13L and 13R; and (3) change preferential runway use to departures on Runway 31R and arrivals on Runway 11L.
5.5.1. Designate Runways 31R and 31L as Preferred Departure Runways with Runway 31R the Most Preferred

Adopting a preference for runway operation is dependent on prevailing winds, airport layout, and aircraft traffic demand. This alternative was included in a proposed letter of agreement between the FAA and the County Airport management. This alternative was recommended for analysis in conjunction with the more detailed alternative discussed in Section 5.5.3.

5.5.2. Change Preferential Runway Use to Runways 13L and 13R

Because aircraft are designed to takeoff or land into the wind, runway use at an airport is normally determined by the prevailing winds. When winds are calm or light, airports can establish a preferential runway use program to reduce aircraft noise impacts. However, preferential runway use programs must also consider aircraft operations in the surrounding airspace. RHV shares its airspace with other Bay Area airports and most operate its runways in a manner that does not conflict with the other airports. For example, the noise compatibility and noise abatement program at San Jose International Airport (SJC) requires north flow operations. It is likely that south flow operations would need to eliminate all incompatible land uses around RHV, but, from discussions with FAA representatives, there are restrictive airspace problems that constrain the aircraft flow at RHV. In particular, the approach to SJC is just to the west of RHV. In addition, a plan to be implemented instrument approach and departure from Runway 31 would conflict with opposing traffic departing Runway 31. The FAA would likely reject this measure on the grounds of potential safety impacts. Accordingly, this measure was not recommended for detailed analysis.

5.5.3. Change Preferential Runway Use to Departures on Runway 31R and Arrivals on Runway 31L

Establish preferential runway use for arrivals on Runway 31L and departures on Runway 31R. Departures on Runway 31R expose the residential area to the west of RHV to higher noise levels. Runway 31R is further removed from the residential area and buffered by the airport property to the east. When implemented along with the changes in the Quiet One departure discussed in Section 5.7.1, noise associated with aircraft departures is moved away from sensitive receptors (library and school) on the west side of the runway complex. This alternative was recommended for analysis.

5.6. Changes in Cockpit Flight Procedures Alternatives

Two cockpit procedures alternatives were analyzed as part of this study: (1) encourage use of minimum power settings on departure; and (2) encourage standard glide slope arrival procedures to minimize power on arrival.

5.6.1. Encourage Use of Minimum Power Settings on Departure

Within the constraints of safe aircraft performance characteristics, encourage pilots to reduce power settings on departure when appropriate and able. This will reduce the aircraft noise level as the aircraft departs the environs of RHV and overfly the neighboring residential areas thereby decreasing the noise exposure to the local communities. The decision to
use reduced power settings rests solely with the pilot-in-command. Therefore, the County cannot require the use of these noise abatement procedures, but can encourage their use at RHV. This alternative was recommended for adoption to encourage all pilots using RHV to minimize their aircraft power settings on departure.

5.6.2. Encourage Standard Glide Slope Arrival Procedures to Minimize Aircraft Power on Arrival
Within the constraints of safe aircraft performance characteristics, encourage pilots to use minimum engine power settings for standard glide slope arrival procedures thereby reducing noise exposure to nearby communities. This will decrease the noise exposure to the local communities. The decision to use reduced power settings rests solely with the pilot-in-command. Therefore, the County cannot require the use of these noise abatement procedures, but can encourage their use at RHV. This measure was recommended for adoption to encourage all pilots using RHV to minimize their aircraft power settings on arrival.

5.8.15. Encourage Pilots to Modify Aircraft to Decrease Noise Emissions
With the evolving technology in aeronautics, there are several aircraft modifications that would decrease the noise exposure to noise sensitive receivers. These include propeller replacement with quieter propellers, the introduction of aircraft vortex generators, and aircraft engine mufflers or noise silencers. Although the County Airport Administration staff cannot mandate aircraft equipment replacement for noise purposes, through contacts with the flying organizations on RHV, these technologies can be introduced and strongly recommended to pilots considering aircraft modifications thereby increasing pilot awareness of the potential noise reduction benefits. Regarding the aircraft propellers, the supersonic tip speeds of some aircraft propellers contribute significantly to the overall aircraft noise levels. This potential measure seeks to reduce this noise by replacing single-bladed propellers with three- or four-bladed props. The proper installation of vortex generators has the potential to reduce aircraft stall speed, shorten takeoff distances, and increase initial climb performance. Research has indicated that technology exists to install mufflers or noise silencers on small aircraft that will provide benefits to reducing noise exposure. Pilots should be provided with the information and encouraged to retrofit their aircraft with the appropriate muffler with little or no reduction in aircraft performance. This reduces the noise exposure on the community adjacent to the airport and at nearby noise sensitive receivers. This measure was recommended.

5.9.2. Lengthen the Runways to Displace Runway 31L and 31R Departures by 300 Feet Toward Tully Road
This measure alone would remove all incompatible land uses to the north of RHV. The mobile home park would remain as the sole incompatible land use in the vicinity of RHV. However, this option would result in the runways extending to the southern edge of present-day Tully Road requiring extensive road realignment or tunneling of Tully Road underneath the extended runways. The cost for this runway construction and road realignment would be exponentially more than that associated with sound insulating the homes to the north of Runways 31L and 31R inside the 2007 55-dB noise contour. It would not be cost beneficial to implement this measure.
If Runways 31R and 31L were extended approximately 125 feet and 140 feet, respectively, keeping the runways on current RHV property and thereby allowing the point of takeoff to also be shifted the same distance to the south, there would be approximately 9 fewer residences within the 2007 65-dB noise contour and approximately 14 fewer residences within the 2007 60-65 dB noise contour interval. (Emphasis added) However, the overall noise levels for those residences would only be reduced approximately 0.2 dB—a change not detectable by the human ear. Therefore, residents would not notice any change in the noise level while being removed from the area that might undergo residential sound insulation. It is more cost beneficial and community beneficial to sound insulate these residences rather than extend the runways. This alternative was not recommended for further analysis.
<p>| | | |</p>
<table>
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<tr>
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<tbody>
<tr>
<td>Q2 1998</td>
<td>RHV6</td>
<td></td>
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<td>Q3 1998</td>
<td>32</td>
<td>(Airport Noise Complaint Hotline Notice Distributed early 9/98)</td>
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<td>Q4 1998</td>
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<td>Q1 1999</td>
<td>6</td>
<td>(201 from 'Mr B')</td>
</tr>
<tr>
<td>Q2 1999</td>
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<tr>
<td>Q3 1999</td>
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<td>(148)</td>
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<tr>
<td>Q4 1999</td>
<td>7</td>
<td>(1,535, including 72 on 12/25. Total Operations were 86 for the day)</td>
</tr>
<tr>
<td>Q1 2000</td>
<td>17</td>
<td>(59)</td>
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<tr>
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<td>(1,286)</td>
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<td>(1,775)</td>
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<td>(15)</td>
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<td>(27)</td>
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<tr>
<td>Q2 2002</td>
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Appendix B

Aircraft Radar Track Summary

The radar track summary for the period July 8-15, 2002 was for the period 2300 to 0659. It excluded all tracks originating from or arriving at San Francisco, San Jose, Oakland or Los Angeles. It was not filtered for altitude and includes tracks of aircraft above 25,000 feet.

During the period, there were two operations in the traffic pattern. One was at 2322 on August 9, and the other was at 0653 on August 10.

<table>
<thead>
<tr>
<th>Operation</th>
<th>Time</th>
<th>Additional Information/Identification</th>
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<tbody>
<tr>
<td>Law Enforcement</td>
<td>2308</td>
<td>Operated at 1,400 feet down 101 (Not a RHF Aircraft)</td>
</tr>
<tr>
<td>Overflight</td>
<td>0026</td>
<td>Operated at 5,500 feet over RHF to Oakland</td>
</tr>
<tr>
<td>Local Flight</td>
<td>0030</td>
<td>Departed RHF 31 Right Traffic</td>
</tr>
<tr>
<td></td>
<td>0033</td>
<td>Landed/Departed RHF</td>
</tr>
<tr>
<td></td>
<td>0040</td>
<td>Landed/Departed San Jose International</td>
</tr>
<tr>
<td></td>
<td>0047</td>
<td>Returned to RHF - Left Traffic Runway 31</td>
</tr>
<tr>
<td>Inbound</td>
<td>0444</td>
<td>Crossed over E. Pothills 2700 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Over RHF for Left Traffic at 2,200 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Landed 31 - Groundspeed on final 95 kts</td>
</tr>
<tr>
<td>Departure</td>
<td>0500</td>
<td>Departed 31 - North</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 miles NE of RHF - 5,300 feet at 167 knots groundspeed</td>
</tr>
<tr>
<td>Traffic Watch</td>
<td>0600</td>
<td>880/Mission - 1,500 feet</td>
</tr>
<tr>
<td></td>
<td>0603</td>
<td>880/101</td>
</tr>
<tr>
<td></td>
<td>0606</td>
<td>101/Tully</td>
</tr>
<tr>
<td></td>
<td>0610</td>
<td>101/85</td>
</tr>
<tr>
<td></td>
<td>0613</td>
<td>101/Cockran</td>
</tr>
<tr>
<td></td>
<td>0621</td>
<td>101/85 N bound at 1,500 feet</td>
</tr>
<tr>
<td></td>
<td>0623</td>
<td>101/Capitol at 1,600 feet</td>
</tr>
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<td></td>
<td>0625</td>
<td>101/280 at 1,700 feet</td>
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<tr>
<td>Traffic Watch</td>
<td>0610</td>
<td>880/Mission</td>
</tr>
<tr>
<td></td>
<td>0613</td>
<td>880/237</td>
</tr>
<tr>
<td></td>
<td>0616</td>
<td>880/Capitol at 784 feet</td>
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<td>0618</td>
<td>101/Tully at 791 feet</td>
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<tr>
<td></td>
<td>0621</td>
<td>101/85 S bound at 1,000 feet</td>
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<td>Time</td>
<td>Event Description</td>
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<tr>
<td>0610</td>
<td>Traffic Watch 3 680/San Gil Grade</td>
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<td>Traffic Watch 3 Orbit at 680/Mission</td>
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<td>0621</td>
<td>Traffic Watch 3 680/McKee at 1,400 feet</td>
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<td>0623</td>
<td>Traffic Watch 3 280/680 and 101 at 1,400 feet</td>
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</tr>
<tr>
<td>0625</td>
<td>Traffic Watch 3 280/880 at 1,200 feet</td>
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</tr>
<tr>
<td>0617</td>
<td>San Jose Arrival Turboprop overhead N of RHV</td>
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</tr>
<tr>
<td>0618</td>
<td>San Jose Depts. Two aircraft northbound</td>
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</tr>
<tr>
<td>0621</td>
<td>San Jose Arrival Regional Jet overhead north end of RHV at 2,200 feet</td>
<td></td>
</tr>
<tr>
<td>0626</td>
<td>San Jose Dept. First San Jose Int'l Departure overhead RHV at 7,200 ft.</td>
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<tr>
<td>0645</td>
<td>Traffic Watch 3 101/280 at 770 feet</td>
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Note: During the period from 0530 to 0710, there were no departures or arrivals from Reid Hillview Airport.
**** OPERATION ****
Operation Number: E322217
Correlation ID: 8
Other Ports: Flight Number: 704
Tail Number: 3810
Airline: " "
Operator Type: Aircraft Type:
INS Type: RNAV
Owner Name: NONM
Pathname: Aircraft Category: U
Waypoint: Stage Length: 0
Balance: 1200
A/I/2 Flag: 0
Staged: U
Min Range: 25500 ft
Max Range: 45554 ft
Min Alt: 196 ft
Max Alt: 5298 ft
Actual Time: Sat Jul 13 01:06:09 2002
Release Time: Wed Dec 31 00:02:00 1999
Proposed Time: Sun Dec 31 00:02:00 1999
Track Start: Sat Jul 13 01:06:09 2002
Track End: Sat Jul 13 01:06:11 2002
Heading: -1 degrees
Number of targets: 76

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| 12 | z = 5133 ft, v = 69 knots, dt = 9 (Sat Jul 13 01:06:18 2002), x = -121 |
| 022100, y = 37.468709 |
| 13 | z = 5104 ft, v = 78 knots, dt = 13 (Sat Jul 13 01:06:32 2002), x = -121 |
| 062120, y = 37.467696 |
| 14 | z = 5121 ft, v = 87 knots, dt = 18 (Sat Jul 13 01:06:47 2002), x = -121 |
| 051322, y = 37.466168 |
| 15 | z = 5095 ft, v = 93 knots, dt = 23 (Sat Jul 13 01:06:12 2002), x = -121 |
| 050824, y = 37.460976 |
| 16 | z = 5023 ft, v = 98 knots, dt = 27 (Sat Jul 13 01:06:38 2002), x = -121 |
| 050156, y = 37.457628 |
| 17 | z = 4998 ft, v = 92 knots, dt = 41 (Sat Jul 13 01:06:50 2002), x = -121 |
| 049624, y = 37.456876 |
| 18 | z = 4982 ft, v = 97 knots, dt = 46 (Sat Jul 13 01:06:55 2002), x = -121 |
| 049372, y = 37.455840 |
| 19 | z = 4933 ft, v = 96 knots, dt = 50 (Sat Jul 13 01:06:59 2002), x = -121 |
| 049020, y = 37.454860 |
| 20 | z = 4875 ft, v = 99 knots, dt = 55 (Sat Jul 13 01:07:04 2002), x = -121 |
| 048488, y = 37.453896 |
| 21 | z = 4775 ft, v = 95 knots, dt = 60 (Sat Jul 13 01:07:08 2002), x = -121 |
| 048140, y = 37.452846 |
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Reid-Hillview Airport FAR Part 150 Study

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1.35398

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[ 75] z = 99.1 ft, w = 19 knots, dt = 555 (Sat Jul 13 01:22:04 2002), x = -121
.809976, y = 37.327399
[ 74] z = 94.6 ft, w = 35 knots, dt = 560 (Sat Jul 13 01:22:09 2002), x = -121
.828912, y = 37.329784
[ 75] z = 99.7 ft, w = 35 knots, dt = 555 (Sat Jul 13 01:22:14 2002), x = -121
.812660, y = 37.325926
TRANSMITTAL MEMORANDUM
BOARDS AND COMMISSIONS

DATE: November 23, 1998
TO: Housing, Land Use, Environment and Transportation Committee
FROM: Airports Commission
RE: NOISE ABATEMENT AT REID HULLVIEW AIRPORT

RECOMMENDED ACTION:
Adopt the Airports Commission's recommendation regarding the initiation of an awareness campaign for all pilots who operate at Reid Hillview Airport regarding noise sensitivity and operational restrictions on touch-and-go flights after 9:00 p.m. surrounding the area.

FISCAL IMPLICATIONS:
There is no impact to the County General Fund nor the Airports Enterprise Fund.

REASONS FOR RECOMMENDATIONS:
At the November 17, 1998 meeting the Airports Commission discussed the touch-and-go-flights, existing noise mitigating measures being carried out by the Aviation...
Administration, Department of Roads and Airports; chart of complaints and aircraft activity around the Reid Hillview Airport. Upon proposal by Commissioner Douglas Rice, the Commission adopted a resolution that staff begin a campaign to aircraft navigating around the Reid Hillview Airport and communicate all available aviation related information regarding noise sensitivity and operational restrictions on touch-and-go landings at the Reid Hillview Airport after specific night hours. The Commission believes that this would enhance communications between and among appropriate staff and pilots thereby improving the County Airports' noise mitigating measures.

BACKGROUND
At its September 15, 1999 meeting, the Commission received a referral from Supervisor Pete McHugh, District 3, Board of Supervisors, relating to the concerns of Berryessa, San Jose residents regarding touch-and-go-flights at Reid Hillview Airport as well as the 9:00 p.m. curfew which should apply to circular plane flights and a suggestion that an all-night announcement on the tower frequency regarding night flights be instituted. The Commission also inquired relative to the County policy on operation restrictions, touch-and-go-flights and noise and safety issues.

CONSEQUENCES OF NEGATIVE ACTION:
A noise abatement measure being suggested by the Commission will not be accepted.

SUPPORTIVE MATERIAL ATTACHED:
Document entitled Resolution on Noise Abatement.

STEPS FOLLOWING APPROVAL:
If approved, the Housing, Land Use, Environment and Transportation Committee will forward the recommendation to the Board of Supervisors for approval.
RESOLUTION ON NOISE ABATEMENT

Whereas, community concern has been expressed to the commission regarding noise from Touch and Go operations at Reid Hillview Airport after 9:00 p.m., and

Whereas, the Board of Supervisors HILUET Committee has also informed staff of similar concerns, and

Whereas, the Airports Commission recognizes the efforts made by the Reid Hillview Airport Association, and the pilots who are based at Reid Hillview to be noise conscious neighbors,

Therefore, the Airports Commission recommends that staff begin a campaign to make all pilots who might operate out of Reid Hillview aware of those operational restrictions on Touch and Go landings after 9:00 P.M. and the noise sensitivity of the area, and

That staff be urged to use all available methods of communication including, but not limited to, NOTAMs, Advisories placed in other airport’s newsletters and in billing statements, Advisories placed in appropriate FAA mailings to all pilots, Posters provided to Airport Managements, FBO’s, and Flying Clubs at other local airports, Advisories placed on appropriate websites and aviation forums, and

That these recommendations be transmitted to the Board of Supervisors HILUET Committee as action items recommended by this commission.
AIR TRAFFIC OPERATIONAL DATA
SANTA CLARA COUNTY AIRPORTS

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<th>YEAR</th>
<th>PAO1</th>
<th>RHV2</th>
<th>SCO3</th>
<th>TOTAL</th>
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<td>3,600</td>
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<tr>
<td>1967</td>
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<td>1997</td>
<td>217,026</td>
<td>3,600</td>
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<td></td>
</tr>
</tbody>
</table>

1 Palo Alto Airport (PAO) FAA-Air Traffic Control Tower (ATCT) began operations in 1961.
2 Reid-Hillview Airport (RHV) FAA-Air Traffic Control Tower (ATCT) began operations in 1967.
3 South County Airport (SCO) Air Traffic operational data is based on quarterly sampling/collection of data and the FAA/State computer modeling used to estimate annual operations data.

HARRIS MILLER MILLER & HANSON INC.
September 15, 1999

Mr. Bud Beacham
1257 Montague Drive
San Jose, CA  95127

Dear Mr. Beacham,

On behalf of the Santa Clara County Airports Commission, we would like to invite you to attend our next meeting on Tuesday, September 21, 1999 at 7:15 p.m. in the Board of Supervisors' Chambers, County Government Center, 70 West Hedding Street, San Jose, California.

The Commission is comprised of private citizens that volunteer their time to oversee three airports within the County system. The Commission provides a forum that facilitates an exchange of ideas among all interested parties relative to the County airports. We review technical developments, such as noise control, and advise on matters of policy concerning the operation of the County airports.

The Federal Air Regulation 150 has required that a noise study be conducted. The study will include public hearings that will address noise concerns, specifically at Reid Hillview Airport.

The 2nd Quarter Noise Report will be reviewed at the upcoming Commission meeting, and we welcome your comments. While we have been peripherally aware of concerns regarding noise at Reid Hillview Airport, the specifics of those concerns have only recently been brought to the attention of the Commission. We will benefit by your comments and concerns, and hope that you will accept this invitation to attend our meeting. We look forward to seeing you next Tuesday. If you are unable to attend the meeting, a public hearing will provide an opportunity for you to present your views for the record, as well.

Sincerely,

Elma Rosas Martinez, Chairperson
Airports Commission

Douglas Rice, Vice Chairperson
Airports Commission
To: Airports Commission

From: Jerome T. Bennett
   Director, County Airports

Date: January 7, 2000

Subject: Quarterly Noise Reports

With respect to the Quarterly Noise Reports and the data associated with Mr. B. calls, the following information is provided:

Noise Complaints Associated with Mr. B.

Nearly all of 148 calls in the 3rd Quarter attributed to Mr. B. were anonymous (no name given). Reid-Hillview Operations staff recognizes the voice of Mr. B., and logs the calls as Mr. B., even though no name is actually given. The calls are also non-descriptive, meaning there is no specific information given. A typical call is "time 8:05 p.m., noise complaint", or "time 8:10 p.m. noise complaint aircraft flying in circles."

During the 4th Quarter of 1999, 1470 calls were identified by voice recognition as Mr. B. Between November 26 and December 26, 1999, there were eight days in which 377 calls were made for an average of 72 calls per day. There were two days in which 101, and 92 calls were received between 2:00 p.m. and 8:00 p.m. on a specific weekend. All but a few of the calls were anonymous and non-descriptive, just making reference to aircraft in the traffic pattern (i.e., circling).

Mr. B. complaints were first received during the 3rd Quarter of 1998. Subsequently, because of the volume of calls, the Commission suggested that staff group Mr. B.'s complaints separately; rather than mixing the "anonymous" non-specific complaints with the specific complaints received by other members of the public. Staff concurred with the Commission's suggestion/request, and has grouped Mr. B.'s calls accordingly in all subsequent Quarterly Noise Reports.

Staff feels that this procedure remains the most appropriate way to reflect these "anonymous" and non-descriptive noise complaints made by Mr. B.
Date: July 10, 1998
To: Airports Commission
From: Jerome T. Bennett
Subject: Quarterly Noise Report

[CORRECTED COPY]

The attached reflects a total of 11 (2nd quarter) noise complaints for the three County Airports (RHV - 6; PAO - 4; SCO - 1). This equates to one noise complaint per 10,892 operations.

During this period, there were a total of 119,817 flight operations at the three airports combined. The table below reflects these operations for each month and the daily average operations for each month.

<table>
<thead>
<tr>
<th></th>
<th>RHV (daily avg.)</th>
<th>PAD (daily avg.)</th>
<th>SCO (daily avg.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>April</td>
<td>16,101 (537)</td>
<td>15,160 (505)</td>
<td>4,000 (133)</td>
</tr>
<tr>
<td>May</td>
<td>17,314 (559)</td>
<td>16,217 (523)</td>
<td>4,500 (145)</td>
</tr>
<tr>
<td>June</td>
<td>23,643 (788)</td>
<td>17,882 (596)</td>
<td>5,000 (167)</td>
</tr>
<tr>
<td>Total</td>
<td>57,058 (1,827)</td>
<td>49,269 (1,641)</td>
<td>13,500 (418)</td>
</tr>
</tbody>
</table>

*estimated

JTB/ar

Attachment: 1998 2nd Quarter Report
Date: November 3, 1998
To: Airports Commission
From: Jerome T. Bennett, Director, County Airports
Subject: 1998 3rd Quarter Noise Report

The attached 3rd quarter report (July, August & September) reflects a total of 3B noise complaints for the three County airports (RHV - 32; PAO - 4; SCO - 2).

The previous report for the 2nd quarter had a total of 11 complaints (RHV - 6; PAO - 4; SCO - 1). The substantial increase in complaints between the 2nd and 3rd quarter at RHV may be partially attributed to the annual airport noise complaint hotline notice distributed in early September 1998 to approximately 8,000 residents in the vicinity of the airport. Sixteen of the 32 RHV complaints were received in September after the hotline notice distribution. A similar increase occurred in 1997 following distribution of the notice. Other factors may be seasonally related where airport activity (operations) are up and outdoor activity is more prevalent in the airport neighborhood community.

There were a total 138,011 aircraft operations in the 3rd quarter at the three County airports, which equates to one complaint for every 3,632 operations or one complaint for every 2,118 operations at RHV, one complaint for every 13,750 operations at PAO, and one complaint for every 7,628 operations at SCO.

<table>
<thead>
<tr>
<th></th>
<th>RHV</th>
<th>PAO</th>
<th>SCO*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(dly avg)</td>
<td></td>
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<tr>
<td>Opsn</td>
<td></td>
<td>Opns.</td>
<td>(dly avg)</td>
</tr>
<tr>
<td>July</td>
<td>24,284 (764)</td>
<td>17,327 (559)</td>
<td>5,300 (170)</td>
</tr>
<tr>
<td>Aug</td>
<td>24,535 (792)</td>
<td>18,835 (608)</td>
<td>5,650 (182)</td>
</tr>
<tr>
<td>Sept</td>
<td>18,035 (532)</td>
<td>18,840 (628)</td>
<td>4,305 (144)</td>
</tr>
<tr>
<td>Total</td>
<td>67,754 (736)</td>
<td>55,002 (598)</td>
<td>15,255 (166)</td>
</tr>
</tbody>
</table>

*estimated using CALTRAN Division of Aeronautics formula

JTB/ar

attachment: 1998 3rd Quarter Report
County of Santa Clara
Roads and Airports Department

Airports Division
2000 Cunningham Avenue
San Jose, CA 95131
(408) 399-2000 Fax 992-6807

Date: March 3, 1998
To: Airports Commission
From: Jerome T. Bennett
Director, County Airports


The attached 4th quarter noise report (October, November, and December 1998) reflects a total of 24 noise complaints for the three County airports (RHV = 22; PAO = 2; SCO = 0).

There were a total of 120,700 aircraft operations in the 4th quarter of 1998 at the three County airports. This equates to one complaint for every 5,029 operations or one complaint for every 2,326 operations at RHV, one complaint for every 27,262 operations at PAO, and no complaints received for the 15,000 operations at SCO.

<table>
<thead>
<tr>
<th></th>
<th>RHV</th>
<th>(daily avg)</th>
<th>PAO</th>
<th>(daily avg)</th>
<th>SCO*</th>
<th>(daily avg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct</td>
<td>18,846</td>
<td>(608)</td>
<td>19,030</td>
<td>(614)</td>
<td>5,500</td>
<td>(173)</td>
</tr>
<tr>
<td>Nov</td>
<td>15,656</td>
<td>(528)</td>
<td>15,549</td>
<td>(628)</td>
<td>4,400</td>
<td>(147)</td>
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<tr>
<td>Dec</td>
<td>16,468</td>
<td>(532)</td>
<td>18,030</td>
<td>(614)</td>
<td>5,100</td>
<td>(164)</td>
</tr>
<tr>
<td>Total</td>
<td>51,177</td>
<td>(550)</td>
<td>54,523</td>
<td>(592)</td>
<td>15,000</td>
<td>(163)</td>
</tr>
</tbody>
</table>

*Estimated using CALTRAN Division of Aeronautics formula.

The three County airports experienced a total of 452,138 aircraft operations for calendar year 1998. During 1998 there were 84 noise complaints received, or an average one complaint for every 5,502 operations.

Annualized for each airport, complaints vs. operations were (1) RHV one complaint per 3,344 operations, (2) PAO one complaint per 11,651 operations, and (3) SCO one complaint for every 14,028 operations.

JTB/mc

County of Santa Clara
Roads and Airports Department

Date: May 10, 1999
To: Airports Commission
From: Jerome T. Bennett
Director, County Airports
Subject: 1st Quarter Noise Report (1999)

Attached is the 1st quarter noise report (January, February, and March) for 1999. There were (excluding Mr. B. Complaints) ten noise complaints for the three County Airports (RHV-6, PAO-4, SCO-9). Reid-Hillview Airport received 201 calls from Mr. B. in the 1st quarter on 43 days over the 90-day period. His calls were general in nature, regarding aircraft circling & traffic pattern, and were predominately made in the evening hours between 6:00 p.m. and 10:00 p.m.

There were a total of 103,185 aircraft operations in the 1st quarter of 1998 at the three County airports. Excluding Mr. B. calls, this equates to one complaint for every 10,319 operations or one complaint for every 7,654 operations at RHV; one complaint for every 11,090 operations at PAO; and zero complaints received for the 12,900 operations at SCO.

<table>
<thead>
<tr>
<th></th>
<th>RHV</th>
<th></th>
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<th></th>
<th>SCO</th>
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<tbody>
<tr>
<td>Jan</td>
<td>15,447 (498)</td>
<td>14,304 (462)</td>
<td>4,700 (162)</td>
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<tr>
<td>Feb</td>
<td>14,279 (510)</td>
<td>13,771 (492)</td>
<td>4,200 (150)</td>
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<tr>
<td>Mar</td>
<td>15,198 (522)</td>
<td>16,287 (525)</td>
<td>4,000 (130)</td>
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</tr>
<tr>
<td>Total</td>
<td>45,923 (510)</td>
<td>44,362 (492)</td>
<td>12,900 (163)</td>
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</tbody>
</table>

*Estimated using CALTRAN Division of Aeronautics formula

JWBag

Attachment: 1st Quarter Report (1999)
County of Santa Clara
Roads and Airports Department

Alorports Division
3500 Cunningham Avenue
San Jose, CA 95101
408/399-6000 PAX 134-9000

Reid-Hillview Airport
Palo Alto Airport
South County Airport
408-723-2780
408/356-7651
408/399-4781

Date: July 9, 1999
To: Airports Commission
From: Jerome T. Bennett
Director, County Airports
Subject: 2nd Quarter Noise Report (1999)

Attached is the 2nd quarter noise report (April, May, June) for 1999. There were
(excluding Mr. B. Complaints) sixteen noise complaints for the three County Airports
(RHV-12, PAO-3, SCO-1).

There were a total of 124,424 aircraft operations in the 2nd quarter of 1999 at the three
County airports. Excluding Mr. B. RHV calls, this equates to one complaint for every
7,777 operations or one complaint for every 4466 operations at RHV; one complaint for
every 18,294 operations at PAO; and one complaint received for the 13,546 operations
at SCO.

Reid-Hillview Airport received 266 calls from Mr. B. in the 2nd quarter on 36 days over
the 91-day period. His calls were general in nature, regarding aircraft circling i.e., traffic
pattern, and were predominately made in the evening hours between 6:00 p.m. and
10:00 p.m.

<table>
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<td>RHV</td>
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<td>SCO</td>
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<td>Daily</td>
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<tr>
<td>All</td>
<td>15,268</td>
<td>(508)</td>
<td>15,661</td>
<td>(522)</td>
<td>4,380</td>
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<td>19,818</td>
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<td>(150)</td>
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<td>4,658</td>
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<td>55,997</td>
<td>(515)</td>
<td>54,861</td>
<td>(603)</td>
<td>13,546</td>
<td>(163)</td>
</tr>
</tbody>
</table>

*Estimated using CALTRAN Division of Aeronautics formula

JTB/ag

Attachment: 2nd Quarter Report (1999)

And of Supervisors: Donald E. Cole, James Alvarado, Pete McHugh, James T. Benn Jr., S. Joseph Similhan

By Executive: Richard Warburg
County of Santa Clara
Roads and Airports Department

Airports Division
2500 Cunningham Avenue
San Jose, CA 95134
(408) 908-5962 FAX 908-687

Reid-Hillview Airport
6955 Bayshore Highway
Palo Alto Airport
2290 Emeryville Avenue
South County Airport
1300 Borregas Avenue

Date: November 1, 1999
To: Airports Commission
From: Jerome T. Bennett
Director, County Airports

Subject: 3rd Quarter Noise Report (1999)

Attached is the 3rd quarter (July, Aug., & Sept.) noise report for 1999. There were (excluding Mr. B. complaints) eighteen noise complaints for the three County Airports (RHV-9, PAO-5, SCO-4).

Reid-Hillview Airport received 148 calls from Mr. B. in the 3rd quarter on 32 days over the 92-day period. His calls were general in nature, and were predominately made in the evening hours between 6:00 p.m. and 10:00 p.m.

There were a total of 132,742 aircraft operations during the 3rd quarter at the three County airports. Excluding Mr. B., there was one noise complaint for every 7,374 operations or one complaint for every 6,882 operations at RHV; one complaint for every 11,581 operations at PAO; and one complaint for every 13,546 operations at SCO.

<table>
<thead>
<tr>
<th></th>
<th>RHV Ops.</th>
<th>(daily avg)</th>
<th>PAO Ops.</th>
<th>(daily avg)</th>
<th>SCO Ops.</th>
<th>(daily avg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>19,992</td>
<td>(613)</td>
<td>19,995</td>
<td>(645)</td>
<td>4,170</td>
<td>(139)</td>
</tr>
<tr>
<td>Aug</td>
<td>22,906</td>
<td>(739)</td>
<td>20,428</td>
<td>(659)</td>
<td>4,540</td>
<td>(148)</td>
</tr>
<tr>
<td>Sept</td>
<td>20,042</td>
<td>(666)</td>
<td>17,386</td>
<td>(580)</td>
<td>4,263</td>
<td>(143)</td>
</tr>
<tr>
<td>Total</td>
<td>61,940</td>
<td>(673)</td>
<td>57,809</td>
<td>(628)</td>
<td>12,998</td>
<td>(141)</td>
</tr>
</tbody>
</table>

*Estimated using CALTRAN Division of Aeronautics formula

JTB/aj

Attachment: 3rd Quarter (1999) Noise Complaints
County of Santa Clara
Roads and Airports Department

Date: March 7, 2000
To: Airports Commission
From: Jerome T. Bennett
   Director, County Airports

Excluding attachment II (1,535 anonymous noise complaints) there were a total of 12
noise complaints received at the three County Airports in the 4th quarter. (RHV-7, PAO-4, SCO-1).

Reid Hillview Airport received 1,535 anonymous noise complaint calls (attachment II)
from a single source. On voice recognition these anonymous calls appear to be from
one source. With few exceptions the calls were non-descriptive and general in nature
i.e., aircraft circling and/or in the traffic pattern. There were 11 days in which the person
made more than 50 calls on a single day. On two occasions over 100 calls on a single
day were made (101 and 116).

There were 107,413 aircraft operations during the 4th quarter at the three County
Airports. Excluding the anonymous calls, there was one complaint for every 8,951
operations or one complaint for every 7,311 operations at RHV; one complaint for every
12,136 operations at PAO, and one complaint for every 7,691 operations at SCO.

<table>
<thead>
<tr>
<th></th>
<th>RHV Ops.</th>
<th>(daily avg)</th>
<th>PAO Ops.</th>
<th>(daily avg)</th>
<th>SCO Ops.</th>
<th>(daily avg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct</td>
<td>18,846</td>
<td>(608)</td>
<td>17,313</td>
<td>(558)</td>
<td>2,675</td>
<td>(86)</td>
</tr>
<tr>
<td>Nov</td>
<td>15,866</td>
<td>(529)</td>
<td>15,847</td>
<td>(521)</td>
<td>2,549</td>
<td>(85)</td>
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<td>Dec</td>
<td>16,465</td>
<td>(531)</td>
<td>15,585</td>
<td>(503)</td>
<td>2,467</td>
<td>(80)</td>
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<tr>
<td>Total</td>
<td>51,177</td>
<td>(556)</td>
<td>48,545</td>
<td>(520)</td>
<td>7,891</td>
<td>(84)</td>
</tr>
</tbody>
</table>

*Estimated using CALTRAF Division of Aeronautics formula

JTB/ag


Board of Supervisors: Donald F. Gige, Bonnie Alvarado, Pete McGuirk, James T. Beall, Jr., Joseph Similjan
County Executive: Richard Wilkenburg

2002
County of Santa Clara
Roads and Airports Department

Airports Division
2580 Cunningham Avenue
San Jose CA 95131
Phone 408-299-460 FAX 408-299-9947

Date: May 8, 2000

To: Airports Commission

From: Jerome T. Bennett
Director, County Airports


Excluding attachment II (50 anonymous noise complaints) there were a total of 25 noise complaints received at the three County Airports in the 1st quarter. (RHV-17, PAO-3, SCO-5).

Reid Hillview Airport received 50 anonymous noise complaint calls (attachment II) from a single source. On voice recognition these anonymous calls appear to be from one source. With few exceptions the calls were non-descriptive and general in nature i.e., aircraft circling and/or in the traffic pattern.

There were 94,842 aircraft operations during the 1st quarter at the three County Airports. Excluding the anonymous calls, there was one complaint for every 3,784 operations or one complaint for every 2,744 operations at RHV; one complaint for every 14,086 operations at PAO, and one complaint for every 1,167 operations at SCO.

<table>
<thead>
<tr>
<th></th>
<th>RHV (daily avg)</th>
<th>PAO (daily avg)</th>
<th>SCO (daily avg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>13,894</td>
<td>13,393</td>
<td>2,379</td>
</tr>
<tr>
<td>Feb</td>
<td>13,266</td>
<td>12,076</td>
<td>1,648</td>
</tr>
<tr>
<td>Mar</td>
<td>10,647</td>
<td>16,735</td>
<td>1,810</td>
</tr>
<tr>
<td>Total</td>
<td>47,807</td>
<td>42,198</td>
<td>5,837</td>
</tr>
</tbody>
</table>

*Estimated using CALTRAN Division of Aeronautics formula

JTB/eg

(1266 anonymous noise complaints) there were a total of 28
complaints at the three County Airports in the 2nd quarter. (RHV-14,

The 2nd quarter included 6,296 anonymous noise complaint calls (attachment II).
These anonymous calls appear to be from one source. With few
exceptions they are non-descriptive and general in nature i.e., aircraft circling

Total operations during the 2nd quarter at the three County
Airports, there was one complaint for every 4,752
operations at RHV; one complaint for every 4,300 operations at RHV; one complaint for every 3,328 operations at SCO.

<table>
<thead>
<tr>
<th></th>
<th>Ops. (daily avg)</th>
<th>Ops.</th>
<th>PAO (daily avg)</th>
<th>Ops.</th>
<th>SCO* (daily avg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr</td>
<td>21,079 (2,637)</td>
<td>16.712</td>
<td>(558)</td>
<td>5.280</td>
<td>(176)</td>
</tr>
<tr>
<td>May</td>
<td>21,055 (2,631)</td>
<td>18.376</td>
<td>(592)</td>
<td>5.954</td>
<td>(192)</td>
</tr>
<tr>
<td>Jun</td>
<td>20,044 (2,505)</td>
<td>18.953</td>
<td>(610)</td>
<td>5.410</td>
<td>(180)</td>
</tr>
<tr>
<td>Total</td>
<td>62,178 (7,973)</td>
<td>18.411</td>
<td>(586)</td>
<td>5.644</td>
<td>(182)</td>
</tr>
</tbody>
</table>

*Estimated using CALTRAN Division of Aeronautics formula
County of Santa Clara

Roads and Airports Department

Airports Division
2599 Orchard Hill Drive
San Jose, CA 95138
(408) 533-0505  FAX (408) 536-987

Reid-Hillview Airport
Palo Alto Airport
South County Airport
(408) 855-2395
(650) 856-7803
(408) 856-7742

Date: October 30, 2000
To: Airports Commission
From: Jerome T. Bennett
Director, County Airports

Subject: 3rd Quarter Noise Report (2000)

Excluding attachment II (1,775 anonymous noise complaints) there were a total of 14 noise complaints received at the three County Airports in the 3rd quarter. (RHV-8, PAO-4, SCO-2).

Reid Hillview Airport received 1,775 anonymous noise complaint calls (attachment II). On voice recognition these anonymous calls appear to be from one source. With few exceptions the calls were non-descriptive and general in nature i.e., aircraft circling and/or in the traffic pattern.

There were 134,849 aircraft operations during the 3rd quarter at the three County Airports. Excluding the anonymous calls, there was one complaint for every 9,632 operations or one complaint for every 8,191 operations at RHV; one complaint for every 14,041 operations at PAO, and one complaint for every 6,582 operations at SCO.

<table>
<thead>
<tr>
<th></th>
<th>RHV Ops.</th>
<th>(daily avg)</th>
<th>PAO Ops.</th>
<th>(daily avg)</th>
<th>SCO Ops.</th>
<th>(daily avg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>23,360</td>
<td>(754)</td>
<td>18,323</td>
<td>(591)</td>
<td>4,274</td>
<td>(133)</td>
</tr>
<tr>
<td>Aug</td>
<td>22,915</td>
<td>(740)</td>
<td>19,605</td>
<td>(632)</td>
<td>4,809</td>
<td>(149)</td>
</tr>
<tr>
<td>Sept</td>
<td>18,249</td>
<td>(642)</td>
<td>18,234</td>
<td>(608)</td>
<td>4,280</td>
<td>(142)</td>
</tr>
<tr>
<td>Total</td>
<td>65,524</td>
<td>(720)</td>
<td>56,162</td>
<td>(610)</td>
<td>13,163</td>
<td>(143)</td>
</tr>
</tbody>
</table>

*Estimated using CALTRAN Division of Aeronautics formula

JTB/Ag

Attachment: 3rd Quarter (2000) Noise Complaints

[Attachment document]

Board of Supervisors: Donald P. Gage, Bianca Altamirano, Pete McHugh, James T. Deall Jr., S. Joseph Simonian
County Executive: Richard Wittenberg

HARRIS MILLER MILLER & HANSON INC.
County of Santa Clara
Roads and Airports Department

Noise Compatibility Program -- Appendix C

Date: February 22, 2001
To: Airports Commission
From: Jerome T. Bennett
Director, County Airports

Subject: 4th Quarter (October, November, and December 2000) Noise Report

Excluding the 932 anonymous noise complaints, there were a total of 9 noise complaints received (attachment I) at the three County Airports in the 4th quarter. (RHV-1, PAO-5, SCO-3).

Reid Hillview Airport received 932 anonymous noise complaint calls in the 4th quarter (attachment II). On voice recognition these anonymous calls appear to be from one source. With few exceptions the calls were non-descriptive and general in nature i.e., aircraft circling and/or in the traffic pattern.

To summarize the 4th quarter activity there were 119,489 aircraft operations during the 4th quarter at the three County Airports. Excluding the anonymous calls, there was one complaint for every 13,276 operations. RHV had one complaint for every 8,191 operations; PAO had one complaint for every 10,476 operations, and SCO had one complaint for every 4,164 operations.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(daily avg)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct</td>
<td>18,271</td>
<td>(590)</td>
<td>17,798</td>
<td>4,739</td>
</tr>
<tr>
<td>Nov</td>
<td>19,052</td>
<td>(636)</td>
<td>17,341</td>
<td>4,175</td>
</tr>
<tr>
<td>Dec</td>
<td>17,285</td>
<td>(578)</td>
<td>17,252</td>
<td>3,576</td>
</tr>
<tr>
<td>Total</td>
<td>54,608</td>
<td>(601)</td>
<td>52,391</td>
<td>12,490</td>
</tr>
</tbody>
</table>

*Estimated using CALTRAN Division of Aeronautics formula

JTB/ag


Board of Supervisors: Donald P. Gage, Blanca Alvarez, Pete McHugh, James T. Beall Jr., Liz Kniss
County Executive: Richard Wittenberg
Date:     May 3, 2001

To:        Airports Commission

From:      Michael L. Scholes
           Assistant Director, County Airports

Subject:   1st Quarter (January, February, and March 2001) Noise Report

Excluding the 938 anonymous noise complaints, there were a total of 15 noise
complaints received (attachment 1) at the three County Airports in the 1st quarter,
(RHV-7, PAO-2, SCO-6).

Reid Hillview Airport received 938 anonymous noise complaint calls in the 1st quarter
(attachment 2). On voice recognition those anonymous calls appear to be from one
source. With few exceptions the calls were non-descriptive and general in nature i.e.,
aircraft circling and/or in the traffic pattern.

To summarize, there were 109,493 aircraft operations during the 1st quarter at the three
County Airports. Excluding the anonymous calls, there was one complaint for every
7,300 operations. RHV had one complaint for every 7,455 operations; PAO had one
complaint for every 25,421 operations, and SCO had one complaint for every 1,077
operations.

|       | RHV    | PAO    | SCO*
|-------|--------|--------|------
|       | Ops.   | (daily avg) | Ops.     | (daily avg) | Ops.     | (daily avg) |
| Jan   | 18,625 | (536)   | 16,278 | (525)      | 2,712    | (67)      |
| Feb   | 14,857 | (530)   | 14,806 | (528)      | 1,846    | (70)      |
| Mar   | 20,704 | (668)   | 19,758 | (637)      | 1,907    | (62)      |
| Total | 52,186 | (590)   | 50,842 | (565)      | 6,465    | (72)      |

*Estimated using CALTRANS Division of Aeronautics formula

Attachments: 1. 1st Quarter (2001) Noise Complaints

Board of Supervisors: Donald F. Gage, Barbara Amadoro, Pete McHugh, James T. Beall Jr., Liz Kriss
County Executive: Richard Whitenberg
County of Santa Clara
Roads and Airports Department

Date: July 10, 2001

To: Airports Commission

From: Michael L. Scholes
Assistant Director, County Airports

Subject: 2nd Quarter (April, May and June 2001) Noise Report

Excluding the 1,293 anonymous noise complaints, there were a total of 17 noise complaints received (attachment 1) at the three County Airports in the 2nd quarter. (RHV-6, PAO-4, SCO-8).

Reid-Hillview Airport received 1,293 anonymous noise complaint calls in the 2nd quarter (attachment 2). On voice recognition these anonymous calls appear to be from one source. With few exceptions the calls were non-descriptive and general in nature i.e., aircraft circling and/or in the traffic pattern.

To summarize, there were 138,950 aircraft operations during the 2nd quarter at the three County Airports. Excluding the anonymous calls, there was one complaint for every 8,152 operations. RHV had one complaint for every 12,738 operations; PAO had one complaint for every 14,519 operations, and SCO had one complaint for every 2,109 operations.

<table>
<thead>
<tr>
<th></th>
<th>RHV</th>
<th></th>
<th>PAO</th>
<th></th>
<th>SCO*</th>
</tr>
</thead>
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<td>(daily avg)</td>
<td>Ops.</td>
<td>(daily avg)</td>
<td>Ops.</td>
</tr>
<tr>
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<td>19,431</td>
<td>(648)</td>
<td>17,195</td>
<td>(573)</td>
<td>5,131</td>
</tr>
<tr>
<td>May</td>
<td>22,183</td>
<td>(716)</td>
<td>20,475</td>
<td>(660)</td>
<td>5,855</td>
</tr>
<tr>
<td>Jun</td>
<td>22,076</td>
<td>(736)</td>
<td>20,406</td>
<td>(680)</td>
<td>5,838</td>
</tr>
<tr>
<td>Total</td>
<td>63,690</td>
<td>(700)</td>
<td>58,076</td>
<td>(638)</td>
<td>16,824</td>
</tr>
</tbody>
</table>

*Estimated using CALTRANS Division of Aeronautics formula

Attachments: 1. 1st Quarter (2001) Noise Complaints

Board of Supervisors: Donald F. Gage, Blanca Alvarez, Pete McHugh, James T. Hall Jr., Liz Kniss
County Executive: Richard Wittenberg
County of Santa Clara
Roads and Airports Department

Airports Division
2800 Cunningham Avenue
San Jose, CA 95148
H: 408-985-4000 FAX 408-985-4777

Reid-Hillview Airport  Palo Alto Airport  South County Airport
408-985-2222  650-922-7113  408-759-4734

Date: November 9, 2001
To: Airports Commission
From: Jerome T. Bennett
Director, County Airports

Subject: County Airports 2001 3rd Quarter Noise Report (July, August, & September)

Excluding the 691 anonymous noise complaints, there were a total of 20 noise complaints (RHV-12, PAO-4, SCO-4) received at the three County Airports in the 3rd quarter (attachment 1).

Reid-Hillview Airport received 691 anonymous noise complaint calls in the 3rd quarter (attachment 2). On voice recognition these anonymous calls appear to be from one source. With few exceptions the calls were non-descriptive and general in nature i.e., aircraft circling and/or in the traffic pattern.

FAA Airspace Restrictions
Following the September 11, 2001 terrorist attack, the Federal Government closed all U.S. Airspace to civil aviation. On September 14, 2001 the airspace restrictions were lifted for certain IFR (Instrument Flight Rules) flights. A progressive relaxation of the IFR (Visual Flight Rules) flight restrictions continued thereafter until October 22, 2001 when most airspace restrictions effective the County three airports were removed.

Between September 14 and September 20, 2001 the airspace restrictions permitted only IFR operations. On September 21, 2001 airspace restrictions were lifted for both IFR and VFR operations at Reid-Hillview and South County Airports. However, certain airspace restrictions on VFR operations at Palo Alto Airport continued until October 22, 2001.

The effect on aircraft operations due to airspace restrictions during September 2001 was approximately a 29.6% reduction in operations.
at Reid-Hillview Airport, 39.5% reduction at Palo Alto Airport and 18% reduction at South County Airport.

Between September 11 and September 20, 2001 the following complaints were received. One occurred on September 13, 2001 in which the caller was inquiring about a small aircraft flight in the vicinity of Reid-Hillview. Staff was able to attribute that flight to a Law Enforcement action.

On September 19, 2001 one anonymous call was received, and on September 20, 2001, six anonymous calls were received.

To summarize this report, there were 133,112 aircraft operations during the 3rd quarter at the three County Airports. Excluding the anonymous calls, there was one complaint for every 6,656 operations. RHV had one complaint for every 5,179 operations; PAO had one complaint for every 13,794 operations, and SCO had one complaint for every 3,946 operations.

<table>
<thead>
<tr>
<th></th>
<th>RHV (daily avg)</th>
<th>PAO (daily avg)</th>
<th>SCO* (daily avg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>23,901</td>
<td>22,415</td>
<td>5,902</td>
</tr>
<tr>
<td>Aug.</td>
<td>24,931</td>
<td>21,679</td>
<td>6,382</td>
</tr>
<tr>
<td>Sept.</td>
<td>13,319</td>
<td>11,080</td>
<td>3,508</td>
</tr>
<tr>
<td>Total</td>
<td>62,151</td>
<td>55,174</td>
<td>15,787</td>
</tr>
</tbody>
</table>

*Estimated using CALTRANS Division of Aeronautics formula.

A comparison of 2000 vs 2001 aircraft operations is included in this report.

Attachments: 1. 3rd Quarter (2001) Noise Complaints  
2. 3rd Quarter (2001) RHV Anonymous Noise Complaints
## 2000 vs 2001 Aircraft Operation

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<td>20,704</td>
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<td>19,451</td>
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<td>22,183</td>
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<td>J</td>
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<td>18,711</td>
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<tr>
<td>J</td>
<td>19,862</td>
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<tr>
<td>J</td>
<td>17,286</td>
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<td>DAI</td>
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<tr>
<td>J</td>
<td>13,893</td>
<td>16,278</td>
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<td>14,806</td>
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<td>19,758</td>
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<td>20,475</td>
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<td>J</td>
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<td>J</td>
<td>4,175</td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>3,576</td>
<td></td>
</tr>
</tbody>
</table>
County of Santa Clara
Roads and Airports Department

Date: February 11, 2002
To: County Airports Commission
From: Jerome T. Bennett
Director, County Airports

Subject: 2001 - 4th Quarter (October, November and December) Noise Report

Excluding the 15 anonymous noise complaints, there were a total of 28 noise complaints (attachment 1) received during the 4th quarter at the three County Airports. (RHV-16, PAO-5, SCO-7).

Reid-Hillview Airport received 15 anonymous noise complaints in the 4th quarter (attachment 2). On voice recognition these anonymous complaints appear to be from one source. With few exceptions the calls were non-descriptive and general in nature i.e., aircraft circling and/or in the traffic pattern.

To summarize, there were 120,435 aircraft operations during the 4th quarter at the three County Airports. Excluding the anonymous calls, there was one complaint for every 4,301 operations. RHV had one complaint for every 3,574 operations; PAO had one complaint for every 9,123 operations, and SCO had one complaint for every 2,519 operations.

<table>
<thead>
<tr>
<th></th>
<th>RHV</th>
<th></th>
<th>PAO</th>
<th></th>
<th>SCO</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ops.</td>
<td>(daily avg)</td>
<td>Ops.</td>
<td>(daily avg)</td>
<td>Ops.</td>
<td>(daily avg)</td>
<td></td>
</tr>
<tr>
<td>Oct.</td>
<td>21,373</td>
<td>(689)</td>
<td>18,279</td>
<td>(525)</td>
<td>5,418</td>
<td>(175)</td>
</tr>
<tr>
<td>Nov.</td>
<td>18,502</td>
<td>(617)</td>
<td>15,893</td>
<td>(530)</td>
<td>6,271</td>
<td>(290)</td>
</tr>
<tr>
<td>Dec.</td>
<td>17,311</td>
<td>(559)</td>
<td>13,445</td>
<td>(434)</td>
<td>5,943</td>
<td>(182)</td>
</tr>
<tr>
<td>Total</td>
<td>57,186</td>
<td>(822)</td>
<td>45,617</td>
<td>(496)</td>
<td>17,632</td>
<td>(219)</td>
</tr>
</tbody>
</table>

*Estimated using CALTRANS Division of Aeronautics formula

Attachments: 1. 4th Quarter (2001) Noise Complaints
             2. 4th Quarter (2001) Anonymous Noise Complaints
To: Airports Commission  
Prepared by: Carl Honaker  
Submitted by: Jerome T. Bennett  
Director of County Airports  
Date: April 26, 2002  
Subject: 1st Quarter (January, February, March) Noise Report

Excluding the 27 anonymous noise complaints, there were a total of 57 noise complaints (attachment 1) received during the 1st Quarter at the three County Airports. Of those, over 60% (36) were from the same household near R HV (many listed as multiple complaints per entry).

Reid-Hillview Airport received all 27 of the anonymous noise complaints in the 1st Quarter (attachment 2). On voice recognition, all of these anonymous complaints appear to be from one source. With few exceptions the calls were non-descriptive and general in nature (i.e. “its (date/time), noise complaint”, or “aircraft circling and/or in the traffic pattern”).

To summarize, there were 112,035 aircraft operations during the 1st Quarter at the three County Airports. Excluding the anonymous calls, there was one complaint for every 1,966 operations. R HV had one complaint for every 1,143 operations; PAO had one complaint for every 22,955 operations, and SCO had one complaint for every 1,553 operations.

<table>
<thead>
<tr>
<th></th>
<th>R HV (daily avg)</th>
<th>Opns.</th>
<th>PAO (daily avg)</th>
<th>Opns.</th>
<th>SCO (daily avg)</th>
<th>Opns.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>17,527</td>
<td>(565)</td>
<td>15,024</td>
<td>(485)</td>
<td>4,056</td>
<td>(131)</td>
</tr>
<tr>
<td>Feb</td>
<td>17,311</td>
<td>(618)</td>
<td>14,358</td>
<td>(512)</td>
<td>3,866</td>
<td>(139)</td>
</tr>
<tr>
<td>Mar</td>
<td>18,862</td>
<td>(559)</td>
<td>16,528</td>
<td>(534)</td>
<td>4,484</td>
<td>(145)</td>
</tr>
<tr>
<td>Total</td>
<td>53,700</td>
<td>(597)</td>
<td>45,910</td>
<td>(510)</td>
<td>12,425</td>
<td>(138)</td>
</tr>
</tbody>
</table>

*Estimated using CALTRANS Division of Aeronautics formula

JTBag

Board of Supervisors
Donald R. Gran, Chairman
Avila Motilo, Pete McCullagh, Jerome T. DeMoll, Jr., S. Liz Kraiss
County Executive: Richard Walsworth
To:      Airports Commission           Agenda Date:     August 6, 2002

Prepared by:  Carl Henaker

Submitted by:  Jerome T. Bennett
             Director of County Airports

Date:     July 25, 2002

Subject:   2nd Quarter (April, May, June) Noise Report

Excluding the 484 anonymous noise complaints, there were a total of 34 noise complaints
(attachment 1) received during the 2nd Quarter at the three County Airports.

Reid-Hilview Airport received all but one of the anonymous noise complaints in the 2nd Quarter
(attachment 2). On voice recognition most of these anonymous complaints appear to be from 3-4
households. With few exceptions the anonymous calls were non-descriptive and general in
nature (i.e. "at [date/time], noise complaint!", or "aircraft circling and/or in the traffic pattern").

To summarize, there were 125,744 aircraft operations during the 2nd Quarter at the three County
Airports. Excluding the anonymous calls, there was one complaint for every 3,698 operations.  
RHV had one complaint for every 3,240 operations; PAO had one complaint for every 9,274
operations, and SCO had one complaint for every 1,177 operations.

<table>
<thead>
<tr>
<th></th>
<th>RHV</th>
<th></th>
<th>PAO</th>
<th></th>
<th>SCO*</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Opns.</td>
<td>(daily avg)</td>
<td>Opns.</td>
<td>(daily avg)</td>
<td>Opns.</td>
<td>(daily avg)</td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>18,734</td>
<td>(625)</td>
<td>16,805</td>
<td>(560)</td>
<td>3,750</td>
<td>(125)</td>
</tr>
<tr>
<td>May</td>
<td>18,640</td>
<td>(601)</td>
<td>20,079</td>
<td>(648)</td>
<td>4,010</td>
<td>(129)</td>
</tr>
<tr>
<td>June</td>
<td>20,954</td>
<td>(586)</td>
<td>18,761</td>
<td>(625)</td>
<td>4,011</td>
<td>(134)</td>
</tr>
<tr>
<td>Total</td>
<td>58,338</td>
<td>(541)</td>
<td>55,645</td>
<td>(611)</td>
<td>11,771</td>
<td>(129)</td>
</tr>
</tbody>
</table>

*Estimated using CALTRANS Division of Aeronautics formula

JTB:ag
Attachments:  1. 2nd Quarter (2002) Noise Complaints
               2. 2nd Quarter (2002) Anonymous Noise Complaints

2002