Volume 2: Noise Compatibility Program

Montgomery County Airpark Noise Compatibility Program

Montgomery County Revenue Authority

Submitted Under Federal Aviation Regulations, Part 150

Submitted to: Federal Avaiation Administration
Submitted by: Montgomery County Revenue Authority
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Hanifin Associates, Inc.

MONTGOMERY COUNTY AIRPARK
FAR PART 150 DOCUMENTATION

Prepared under Federal Aviation Regulations, Part 150

Volume 2: NOISE COMPATIBILITY PROGRAM

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Submitted to:

Federal Aviation Administration
Washington Airports District Office
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Falls Church, VA 22046

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Rockville, MD 20850

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1. INTRODUCTION

This volume presents the Noise Compatibility Program (NCP) and related information that comprise the second volume of required documentation for a Federal Aviation Regulation (FAR) Part 150 submission for Montgomery County Airpark (GAI[1]). The documentation has been developed under the provisions of FAR Part 150, Subpart B, Section 150.23, and Appendix B.

The discussion of noise compatibility measures in this volume builds on the Volume 1 Noise Exposure Map (NEM) documentation. Chapter 1 of the NEM provides an introduction to the objectives and requirements of FAR Part 150. That overall introduction is not repeated here.

This chapter summarizes the GAI project organization (Section 1.1), the development of the NCP (Section 1.2), the relationship of the NCP to the NEM (Section 1.3), NCP requirements and the locations in each of the two volumes where they have been addressed (Section 1.4), and the organization of the balance of this document (Section 1.5).

1.1 Project Organization

The consulting firm of Harris Miller Miller & Hanson Inc. (HMMH); in association with the LPA Group Inc. (LPA), and Hanifin Associates Inc. (HAI); conducted the Part 150 study that is the basis of the material presented in the two volumes of this report. HMMH performed this study for, and under the direction of, the Montgomery County Revenue Authority (MCRA), the proprietor of GAI.

The airport is managed by an Airport Manager who currently is licensed by the State of Maryland. The Airport Manager does not report to the MCRA.

Consultants to the MCRA monitored project progress for consistency with the policies of the MCRA. An Advisory Committee monitored the progress of the study and also provided technical input, as described in Chapter 5 of this volume and Chapter 15 of Volume 1.

1.2 Development of this Volume

This volume is based on an integration of technical information prepared and presented by HMMH and LPA. All of the information was distributed to the Advisory Committee members for review and comment, and formed the basis of discussions at Committee meetings.

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[1] GAI is the FAA's official three letter designation for Montgomery County Airpark.

1.3 Relationship of this Volume to the Noise Exposure Map

The MCRA has submitted the NEM in Volume 1 to the Federal Aviation Administration (FAA) for review under separate cover. That volume includes noise contours and associated documentation on operations, land uses, and noise/land use compatibility statistics for existing conditions in 1991 and forecast conditions for 1996. The Noise Exposure Map for GAI was found in compliance by the FAA in January 1992. The NEM Summary is included in Appendix J.

Minimal noise abatement measures existed at GAI prior to 1991. This NCP volume recommends certain additions to the noise abatement program. Noise contours are presented in Chapter 4 for 1996 operations that assume implementation of the overall program. In all other ways the assumptions on which these contours are based are identical to those incorporated in the NEM contours; these NCP contours were developed in a manner that is consistent with all Part 150 NEM requirements. Assuming FAA review and approval of the recommended noise abatement actions, and airport/FAA implementation of them, the 1996 abatement contours represent the forecast NEM for 1996.

1.4 NCP Documentation Requirements and Organization of Volume 2

FAR Part 150 includes very specific documentation requirements. Local interests, largely as defined in the Advisory Committee process, also establish other documentation requirements. The balance of this document is organized to comply with both types of requirements in a clear and concise fashion.

1.4.1 FAA Checklist

The FAA has summarized NCP documentation requirements in a checklist that the agency uses in its evaluation. To assist readers in reviewing this document, Table 1.1 presents this checklist and indicates the location(s) in this volume of each required item.

1.4.2 Organization of This Volume

The basic structure to this report is as follows:

- listing and description of NCP elements,
- recommended procedures for implementing the NCP,
- public consultation during the development of the NCP,
- summary of analyses of operational alternatives, and
- summary of analyses of compatible land use alternatives.

Table 1.1 Part 150 Noise Compatibility Program Checklist

		Location in this Document
I.	**IDENTIFICATION AND SUBMISSION OF PROGRAM:**	
A.	Submission is properly identified.	
1.	FAR 150 NCP?	Chapter 1
2.	NEM and NCP together?	Chapter 1
B.	Airport and Airport Operator's name identified?	Chapter 1.1
C.	NCP transmitted by airport operator cover letter?	see cover letter
II.	**CONSULTATION:**	
A.	Documentation includes narrative of public participation and consultation process?	Chapter 5
B.	Identification of consulted parties:	
1.	All parties in 150.23(c) consulted?	Chapter 5.4
2.	Public and planning agencies identified?	Chapter 5.4
3.	Agencies in 2., above, correspond to those indicated on the NEM?	Vol. 1, Chapter 15
C.	Satisfies 150.23(d) requirements:	
1.	Documentation shows active and direct participation of parties in B., above?	Chapter 5
2.	Active and direct participation of general public?	Chapter 5
3.	Participation was prior to and during development of NCP and prior to submittal to FAA?	Chapter 5
4.	Proves adequate opportunity afforded to submit views, data, etc.?	Chapter 5
D.	Evidence included of notice and opportunity for a public hearing on NCP?	Chapter 5.3 & Appendix F & G
E.	Documentation of comments:	
1.	Includes summary of public hearing comments?	Appendix G
2.	Includes copy of all written material submitted to operator?	Appendix G
3.	Includes operator's responses/disposition of written and verbal comments?	Appendix G
F.	Informal agreement received from FAA on flight procedures?	Chapter 5.4
III.	**NOISE EXPOSURE MAPS:**	
A.	Submittal type:	
1.	First time submittal?	Vol. 1, Chapter 1
a.	Submitted with program? (Review NEM first using NEM checklist)	Vol. 1, Chapter 1
2.	Previous determination?	not applicable (n/a)
a.	Still valid?	n/a
b.	Incorporated by reference?	n/a

Table 1.1 Part 150 Noise Compatibility Program Checklist (cont'd)

		Location in this Document
B.	Five-year map: (Review using NEM checklist if revisions included in NCP submittal)	
1.	FAA previous determination on 5-year NEM based on implemented NCP assumptions?	Chapter 1.3 & 4.4
2.	Revised 5-year NEM included with program?	Chapter 4.4
3.	Current year NEM need revising & included?	Chapter 1.3 & 4.4
4.	Will FAA be making a determination on the NEM(s) when NCP approval is made?	FAA Action
C.	Noise Modeling:	
1.	INM or FAA-approved equivalent?	Vol. 1, Chapter 1
2.	Monitoring in accordance with A150.5?	Vol. 1. Chapter 4
D.	Current and 5-year maps clearly identified as the official NEMs?	Vol. 1, Chapter 1
IV.	**CONSIDERATION OF ALTERNATIVES:**	
A.	At a minimum:	
1.	Land acquisition and interests therein	Chapter 7.1 & 7.2
2.	Barriers, shielding, public building soundproof	Chapter 6.1.5
3.	Preferential runway system	Chapter 6.2.3
4.	Flight procedures	Chapter 6.2
5.	Restrictions on type/class of aircraft	
a.	deny use based on Federal standards	Chapter 6.3.1
b.	capacity limits based on noisiness	Chapter 6.3.1
c.	noise abatement procedures	Chapter 6.3.1
d.	landing fees based on noise or time	Chapter 6.3.1
e.	curfews	Chapter 6.3.1
6.	Other actions with beneficial impact	Chapter 6 & 7
7.	Others FAA recommendations	n/a
B.	Responsible implementing authority identified for each recommendation?	Chapter 2 & 3
C.	Analysis of measures:	
1.	Measures adequately analyzed?	FAA Action
2.	Adequate reasoning for rejecting alternatives:	
a.	not arbitrary or capricious (needs to be more clearly described)	FAA Action
b.	not faulty technical analysis (needs more and accurate technical analysis)	FAA Action
c.	not based on flawed conclusions (needs more reasonable discussion of why rejected)	FAA Action
3.	Measures clearly described?	FAA Action
D.	Other actions recommended by the FAA:	
1.	Should other actions be added?	FAA Action
2.	List separately or on back of this form actions and discussions with airport operator to have them included prior to the start of the 180-day cycle.	FAA Action

Table 1.1 Part 150 Noise Compatibility Program Checklist (cont'd)

		Location in this Document
E.	Analysis of Use Restrictions:	
1.	All alternatives, including those rejected, thoroughly analyzed so that accurate comparisons and conclusions can be made?	Chapter 6.3.1
2.	Is the use restriction:	
a.	reasonably related to need to reduce noise/incompatible land use?	Chapter 6.3.1
b.	not imposing undue burden on commerce?	Chapter 6.3.1
c.	able to meet local/national air transportation system needs to extent practicable?	Chapter 6.3.1
3.	Lack of adequate analysis sufficient enough to warrant affecting the start of 180-days?	Chapter 6.3.1
4.	Sponsor notified of 3., above?	Chapter 6.3.1
5.	Coordinating the use restriction with APP-600 prior to making determination on start of 180-days?	Chapter 6.3.1
F.	Final program recommendations reflect the airport proprietor's Noise Compatibility Program?	Chapter 2.1
V.	**ALTERNATIVES RECOMMENDED FOR IMPLEMENTATION:**	
A.	Document clearly indicates:	
1.	Alternatives recommended for implementation?	Chapter 2
2.	Final recommendations are proprietor's, not those of consultant or third party?	see cover letter
B.	FAA review:	
1.	Do all program recommendations:	
a.	relate directly or indirectly to reduction of noise and incompatibility?	Chapter 4
b.	contain description of contribution to overall effectiveness of program?	Chapter 4
c.	noise/land use benefits quantified?	Chapter 4
d.	include actual/anticipated effect on reducing noise exposure within incompatible area shown on NEM?	Chapter 4
e.	effects based on relevant and reasonable expressed assumptions?	FAA Action
f.	have adequate supporting data to support its contribution to noise/land use compatib.?	FAA Action
2.	FAA recommendation for disapproval:	
a.	do any recommendations need further discussion or sponsor withdrawal?	FAA Action
b.	will FAA start 180-days?	FAA Action
c.	is it likely that any recommendation will be disapproved pending submission of additional information?	FAA Action
d.	disapproved for purposes of Part 150?	FAA Action
e.	contain faulty assumptions, lack quantification, etc.?	FAA Action
f.	consultation with APP-600 called for? (specify deficiencies hereon or on separate sheet)	FAA Action

Table 1.1 Part 150 Noise Compatibility Program Checklist (cont'd)

		Location in this Document
C.	Overview of analysis of recommendations:	
1.	Meets standards set forth in 150.35(b) & B150.5?	FAA Action
2.	FAA alerted proprietor to any potential problems--requirements for further analysis; recommendations clearly not approvable; violations of Part 150 program standards? (reference details on separate sheet or on back of this form)	FAA Action
3.	180-day formal review started? When?	FAA Action
D.	Do the following also meet Part 150 analytical standards:	
1.	Formal recommendations which continue existing practices?	FAA Action
2.	New recommendations or changes proposed by airport proprietor at end of Part 150 process?	n/a
E.	Documentation indicates how recommendations may change previously adopted plans?	n/a
F.	Documentation also:	
1.	Identifies agencies which are responsible for implementing each recommendation?	Chapter 2 & 3
2.	Indicates whether agencies in a., have agreed to implement?	Chapter 2 & 3
3.	Indicates essential government actions necessary to implement recommendations?	Chapter 3
G.	Timeframe:	
1.	Includes agreed-upon schedule to implement alternatives?	Chapter 3
2.	Indicates period covered by the program?	Chapter 3.2
3.	Includes costs to implement alternatives?	Chapter 3.3
4.	Includes anticipated funding sources?	Chapter 3.3
VI.	**PROGRAM REVISION:**	
A.	Supporting documentation includes provision for revision?	Chapter 2.15-2.16

Specifically, Chapter 2 of this document presents a summary of the recommended Noise Compatibility Program, including the operational, land use, and ongoing implementation, monitoring, and review elements. Effective, ongoing implementation of the NCP has been a major focus of the entire study. Chapter 2 identifies specific implementation actions which apply to each recommended NCP element.

Chapter 3 addresses *overall* program implementation, including the anticipated scheduling, identification of responsible parties, and other Part 150 requirements.

Chapter 4 describes anticipated program benefits, on an element-by-element and overall basis. It also presents Day-Night Average Sound Level (Ldn) contours for the 1991 and 1996 cases that assume implementation of the NCP, with associated land use compatibility statistics. In effect, these contours and statistics represent revised noise exposure maps that will apply if the FAA approves the recommended measures.

Chapter 5 summarizes the extensive public consultation program undertaken throughout the development of the NEM, building on the NEM-related consultation which is documented separately in that volume.

Chapter 6 summarizes the extensive process undertaken in analyzing operational alternatives, from the initial screening of candidate actions, through detailed analysis of the benefits and costs of those alternatives which showed promise. This summary includes the reasons that actions are recommended as part of the NCP, as well as the reasons that other alternatives were rejected. The list of alternatives considered includes all categories that Part 150 requires an airport proprietor to consider, as well as other actions identified in the Advisory Committee process.

Chapter 7 summarizes the evaluation of land use alternatives.

2. RECOMMENDED NOISE COMPATIBILITY PROGRAM

The GAI Noise Compatibility Program (NCP) includes 14 recommended elements: four (4) operational measures, two (2) land use measures, and eight (8) measures related to ongoing program implementation, monitoring and review.

Table 2.1 lists the recommended NCP elements. Sections 2.1 through 2.14 briefly summarize each element. Chapter 6 presents the evaluation of operational alternatives on which these recommendations are based. Land use alternatives were evaluated in Chapter 7.

Part 150 requires the NCP to clearly identify the person(s) or entity(ies) responsible for implementing each recommended element. According to the FAA's definition of implementation responsibility[2], the majority of the operational, land use, implementation, monitoring, and review measures listed in Table 2.1 are the responsibility of the airport proprietor, the Montgomery County Revenue Authority (MCRA). Montgomery County itself has the responsibility to undertake the two recommended land use alternatives. Clearly, however, the FAA, particularly the BWI Air Traffic Control Tower (ATCT), has a key role working with the airport to carry out the measures and implement them safely.

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2 As set forth in FAA Advisory Circular (AC) 150/5020-1, "Noise Control and Compatibility Planning for Airports", August 5, 1982. Chapter 2 discusses the FAA definitions of implementation authority in greater detail.

Table 2.1 Elements of GAI Noise Compatibility Program

Operational Elements:
1. Institute Noise Abatement Flight Tracks
2. Institute Preferential Runway Use
3. Modify Business Jet Departure Procedures
4. Restrict Nighttime Maintenance Runups
Land Use Elements:
5. Update Real Estate Disclosure Ordinance
6. Update Comprehensive Plan
Implementation, Monitoring, and Review Actions:
7. Program Publicity: Letters to Airmen
8. Program Publicity: Airside Signs
9. Program Publicity: ATIS/ATCT Advisories
10. Program Publicity: Informational Brochure
11. Appoint Noise Abatement Contact
12. Institute Noise Complaint Receipt Procedures
13. Evaluate (Quantitatively) Changes in Cumulative Noise Exposure
14. Assess NEM & NCP due to Airport Layout/Operation Changes and at Minimum Intervals of Time

2.1 Institute Noise Abatement Flight Tracks

2.1.1 Background

Existing noise abatement procedures for Runway 32 departures are presently designed to reduce overflights of the Hunters Woods residential area. An existing airside sign reminds pilots to turn right at least 20 degrees after departure. IFR departures on Runway 32 are also instructed to turn right after departure to the Westminster VOR (a turn of 60 to 80 degrees). However, due to the proximity of the residential area to the runway end and to pilot lack of knowledge of noise abatement procedures, overflights of the Hunters Woods area still frequently occur. Means to fine-tune and improve these procedures and their implementation, along with pilot awareness were probably the major focus of the Advisory Committee process, and of this study. The analysis of the abatement flight tracks was undertaken in Section 6.2.2.

Measures to reduce overflights caused by touch-and-go pattern operations are discussed in Section 6.2.1.

2.1.2 Recommended Procedures

Numerous recommendations were evaluated to increase the effectiveness of the existing noise abatement tracks, to utilize new noise abatement tracks, and to improve pilot awareness of all noise abatement procedures.

Specific recommendations for Runway 32 departures are listed below:

- **Due to the lack of local control, the BWI ATCT does not know the runway in use at GAI. They do for Runway 32, however, give instructions to turn right to the Westminster VOR to all IFR departures. Therefore, IFR pilots should be reminded, through the use of an airside sign and a Letter to Airmen, to initiate the right turn on Runway 32 departures to the Westminster VOR as soon as possible to minimize overflights on the Hunters Woods, Charlene, Goshen Village, and Goshen Estates area.**

- **VFR departures from Runway 32 should be directed to turn right at least 30 degrees, until two (2) nautical miles north of the airport.**

These departure turns will minimize overflights of the Hunters Woods, Charlene, Goshen Village, and Goshen Estates areas to the extent aircraft are able to reach a safe turning altitude before

crossing over the East Montgomery Village and other residential areas immediately north of the airport.

Recommendations for touch-and-go pattern operations are listed below:

- **Aircraft departing Runway 32 should turn onto the downwind as soon as safely possible to minimize overflights on the Hunters Woods/East Montgomery Village areas.**

- **Aircraft should keep the downwind portion of the pattern as close as safely possible to the airport to minimize overflights on the Edinburgh/Hadley Farms areas.**

2.1.3 Implementation

The recommended flight track procedures are described in additional detail in a proposed Letter to Airmen presented in Section 2.7. However, the Letter to Airmen will not be the only means of publicizing the recommended flight tracks. Existing Airport Regulations will be changed to reflect this change (see Section 2.10). The departure end of Runway 32 will have signs to remind VFR and IFR pilots to make the designated turns (see Section 2.8). In addition, workload permitting, the BWI ATCT should verbally advise pilots if they are not complying with the IFR departure procedures for a right turn to the Westminster VOR (see Section 2.9). IFR departures will be given appropriate instructions by BWI ATCT subject to approval and coordination by the FAA. None of the proposed changes in flight tracks or flight procedures will affect FAR Part 77 surfaces surrounding GAI.

2.2 Institute Preferential Runway Use

2.2.1 Background

The airport has an existing preferential runway use program which identifies Runway 14 as the preferred runway at night and Runway 32 as the preferred runway for large turbine aircraft during the day. Nevertheless, a reduction in overflights over the residential areas to the north/northwest of the Airpark was identified by several members of the Advisory Committee as an important element of the NCP. This can be achieved by minimizing the use of Runway 32 for departures. The analysis of this preferential runway use was undertaken in Section 6.2.3.

2.2.2 Recommended Program

It is recommended that an expanded informal preferential runway use program be undertaken at GAI. In calm wind conditions and during busier traffic periods Runway 14 should be utilized as much as possible for departures. The least desirable runway use is to have departures on Runway 32.

This preferential runway use will reduce departures of aircraft over the Hunters Woods, Charlene, Goshen Village, Goshen Estates, and East Montgomery Village residential areas north/northwest of the airpark.

2.2.3 Implementation

The proposed preferential runway use program would be informal and would be of a voluntary nature to pilots. The principal communication mechanism is the Letter to Airmen which is recommended as an element of the NCP, as presented in Section 2.7. Airside signs will also be used to remind pilots to use Runway 14 as much as possible (see Section 2.8). In addition, Airport Regulations should be changed to reflect the new priority in runway use (see Section 2.10).

2.3 Modify Business Jet Departure Procedures

2.3.1 Background

The closest residential area in Montgomery County is less than 7,000 feet from the brake release point for Runway 32 departures. Thus, corporate jet departures are a major concern of airport neighbors. To address this issue on a single-event basis, some manufacturers have developed noise abatement departure procedures which are designed to minimize noise close to an airport. However, noise abatement procedures do not exist for all aircraft nor are they flown by all pilots. Thus, the NCP includes recommended use of the National Business Aircraft Association (NBAA) Close-In Departure Procedure for turbojet aircraft. This generalized procedure (see Appendix A) calls for a power cutback on departures at 500 feet AGL until the aircraft reaches an altitude of 1,500 feet above ground level (AGL). The measure has been tested by NBAA and proven to reduce noise levels in noise sensitive areas within 10,000 feet of an airport. The measure cannot be made mandatory because, by FAA regulation, the pilot has ultimate responsibility for how the aircraft is flown. The FAA will also consider safety, feasibility, and noise benefit in its review of the NCP.

2.3.2 Recommended Procedure

Pilots of business jet aircraft are encouraged to fly noise abatement departure procedures developed by the manufacturer and published in the aircraft flight manual. In the absence of such procedures, pilots are strongly urged to fly the NBAA Close-In Departure Procedure for all departures from Runway 32.

The specific cockpit procedures are described in detail in the NBAA material reproduced in Appendix A. This modified business jet departure procedure will minimize noise levels on the Hunters Woods, Charlene, Goshen Village, Goshen Estates, and East Montgomery Village residential areas north/northwest of the airpark.

2.3.3 Implementation

The Airport Regulations should be modified to include a request that all business jet pilots consider use of the NBAA procedure on Runway 32 departures (see Section 2.10). An airside sign will also provide a last minute reminder to pilots to use the NBAA procedure. The costs of the sign are covered in Section 2.8.

A Letter to Airmen will include a request that corporate jet pilots use the NBAA procedures for Runway 32 departures (see Section 2.7). Publishing the Letter to Airmen is the additional cost for this recommendation.

2.4 Restrict Nighttime Maintenance Runups

2.4.1 Background

Engine maintenance runups have not been an issue at GAI. No major maintenance work is performed at the airport that would require the use of extended runups. No complaints have been noted and no particular issues have been raised by the Advisory Committee dealing with runups. However, ambient noise levels during nighttime periods between aircraft overflights are often quite low, often well below 50 dBA.

2.4.2 Recommended Measure

It is recommended that the airport adopt an informal voluntary rule prohibiting maintenance-related runups between 10:00 p.m. and 7:00 a.m. Such a limitation would apply only to maintenance runups and would not apply to pre-takeoff runups or engine checks. In addition, the Airpark should designate the taxiway holding apron at the approach end to Runway 32 as the approved runup area for daytime use. Aircraft also should be oriented towards the west at a heading of approximately 270 degrees such that the engine exhaust is directed to the east.

If maintenance runups become an issue, this measure would minimize impact on all nearby residential areas. If maintenance runups become a concern in the future, this measure could become a more formalized restriction which might then include reporting requirements and a fine structure.

2.4.3 Implementation

A voluntary limit on maintenance runups should be adopted by the MCRA by way of amending the Airport Regulations (see Section 2.10) and including it in a Letter to Airmen. The informal rule should prohibit runups between 10:00 p.m. and 7:00 a.m. and limit the location to the holding apron at the approach end to Runway 32 during other time periods. New and renewed leases negotiated with aircraft operators should also contain this voluntary use limit. The only cost associated with this requirement would be the publishing of the Letter to Airmen (see Section 2.7).

2.5 Update Real Estate Disclosure Ordinance

2.5.1 Background

A land use strategy with excellent potential as a meaningful preventive measure is the implementation of an effective real estate disclosure policy. This measure would ensure knowledge of potential aircraft noise impacts on the area to new residents. It was agreed by some members of the Advisory Committee that if local lending institutions, realtors, mortgage companies, developers and title companies were educated on the degree of concern that potential homeowners had regarding the Airpark's noise impacts, that these organizations would support the establishment of a program that would include the institution of real estate disclosure.

2.5.2 Recommended Ordinance

It is recommended that a real estate disclosure be enacted through an ordinance and that the Part 150 Study Area be used as the area boundary. The study area is defined as the total area as shown in Figure 7.1. The real estate disclosure should be included in the title of a property located within the designated area.

Sample real estate disclosure ordinances are presented in Appendix B.

2.5.3 Implementation

The implementation of the updated real estate disclosure ordinance would be the responsibility of Montgomery County with the technical assistance of the Maryland-National Capital Park and Planning Commission (MNCPPC). The MNCPPC has supported this measure (see correspondence in Appendix I). In addition, the County Council Liaison Committee is studying the issue for the Montgomery County Council. Such a disclosure will serve to inform the buyer about the potential for disruptive aircraft noise impacts if the real estate disclosure is included in the title of a property. Funding for updating the ordinance would come from local sources as part of normal governmental function. However, the MCRA made need to hire an outside consultant to assist in the development and update of the real estate disclosure ordinance. Consultant fees would be eligible for funding assistance from the FAA.

2.6 Update Comprehensive Plan

2.6.1 Background

The comprehensive plan is a policy guide to decisions on physical growth and development of a community. Comprehensive planning takes into account existing development and coordinates the compatibility of future development. Through an awareness of airpark/community relationships, goals and policies can be determined to stimulate proper development of areas subjected to airpark noise and to discourage sensitive land uses from developing in the impacted area.

The 1985 Upper Rock Creek Master Plan addresses growth and development in the community surrounding the Montgomery County Airpark.

2.6.2 Recommended Update

The Upper Rock Creek Master Plan should be revised to address the issue of aircraft noise on existing and proposed land uses and to incorporate the Part 150 Study findings into the plan. The recommendations of the noise compatibility program should be incorporated into the plan to increase awareness of the airport. This measure would be another means of ensuring knowledge of potential aircraft noise impacts on the area to new residents, developers and other local groups.

2.6.3 Implementation

Implementation for updating the local comprehensive plan would be the responsibility of Montgomery County with the technical assistance of the MNCPPC. The MNCPPC supports an enhanced notification process for prospective homeowners in the proximity to the Airpark (see correspondence in Appendix I). The update would be another means to inform the homebuyers, developers, and other local community or governmental groups about the potential for disruptive aircraft noise impacts within the study area. Funding for updating the local plan would come from local sources as part of normal governmental function.

2.7 Program Publicity: Letter to Airmen

2.7.1 Background

As discussed previously, significant attention in the Advisory Committee meetings also focused on mechanisms to maximize pilot awareness of the noise abatement program. One of the principal communication mechanisms recommended for operational abatement measures is the Letter to Airmen (See Sections 2.1 through 2.4).

Presently, no Letters to Airmen are in effect at GAI. However, existing Airport Regulations instruct pilots to fly traffic patterns for fixed-wing aircraft at 800 feet above ground level (AGL) or 1,340 feet above mean sea level (MSL). Rotorcraft are to fly traffic patterns at 600 feet AGL or 1,140 feet MSL. The existing regulations also address departures. Presently, Runway 14 is preferred for departures between 11:00 p.m. and 7:00 a.m., while Runway 32 is preferred for departures of larger, heavier, turbine-powered aircraft between 7:00 a.m. and 11:00 p.m. The new regulations will address some changes to the existing Airport Regulations.

The new Letter to Airmen will include some of the old procedures documented in the Airport Regulations as well as the new procedures analyzed and recommended in the NCP. This Letter to Airmen would result in a consolidation of all noise abatement procedures.

2.7.2 Recommendation

It is recommended that a Letter to Airmen be issued for implementing the recommended and existing noise abatement procedures at the airport. It should include notification of all operational noise abatement alternatives either existing or resulting from the Part 150 Study.

Recommended wording for the Letter to Airmen is provided on the following pages as Figure 2.1. The maps shown in the draft Letter to Airmen are presented as a sample only. They can be changed or enlarged to meet specific needs.

2.7.3 Implementation

The following steps should be taken in implementing the Letter to Airmen:

a) The FAA will review and revise the draft Letter to Airmen.

The submission of the NCP for FAA review will constitute the official request for review of all NCP elements including the draft Letter.

Figure 2.1 Recommended Letter To Airmen (page 1 of 3)

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
AIRPORT TRAFFIC CONTROL TOWER
BALTIMORE-WASHINGTON INTERNATIONAL AIRPORT
BALTIMORE, MARYLAND

ISSUED: <Date>

EFFECTIVE: <Date>

BWI TOWER LETTER TO AIRMEN NO. 93-#

SUBJECT: NOISE ABATEMENT PROCEDURES
MONTGOMERY COUNTY AIRPARK

REPLACES:

This Letter to Airmen identifies noise-sensitive areas in the vicinity of Montgomery County Airpark (GAI) and describes procedures to minimize noise impact in these areas. The Montgomery County Revenue Authority (MCRA) developed these procedures with the assistance of the FAA, pilots, other aviation businesses, community representatives, and other interested parties.

Questions regarding any of the items in this letter and the noise abatement program in general should be directed to the airport management at (***) ***-****.

Your cooperation with these noise abatement efforts is urged.

1. NOISE SENSITIVE LAND USES:

Whenever possible, please minimize overflights of the close-in noise sensitive areas shown in the figure below.

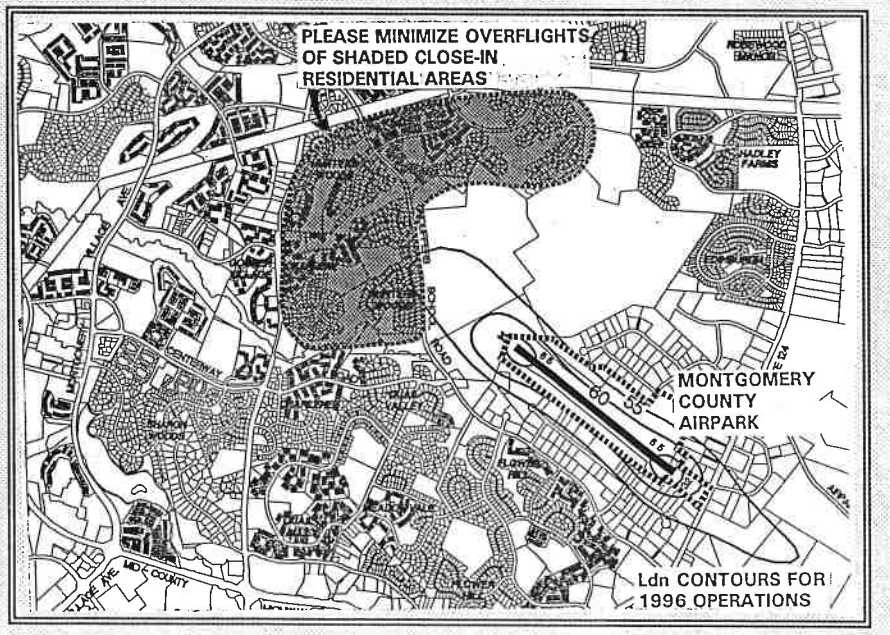

Figure 2.1 Recommended Letter To Airmen (page 2 of 3)

2. PRIORITY OF RUNWAY USE:

a. Runways are listed in the order of priority to be used at GAI. Pilots are requested to comply with the runway assignment, except where conditions dictate that in the interest of safety that the other runway be used.

b. Order of Priority:

	Takeoffs	Landings	
1.	Runway 14	Runway 14	Most Desirable
2.	Runway 32	Runway 32	Least Desirable

c. When issuing wind information, the BWI ATCT shall provide both wind direction and speed. The wind shall not be described as calm unless the wind speed is zero.

d. If a pilot determines in the interest of safety that another runway should be used, BWI ATCT shall assign the runway to the extent that air traffic and other conditions permit. The pilot shall be informed if the requested runway is noise sensitive.

3. FIXED-WING FLIGHT TRACK PROCEDURES

a. Runway 32 VFR Departures:
- traffic permitting, turn right at least 30 degrees and follow Snouffer School Road until two (2) nautical miles north of the airport.

b. Runway 32 IFR Departures:
- traffic permitting, turn right towards the Westminster VOR as soon as possible.

Figure 2.1 Recommended Letter To Airmen (page 3 of 3)

4. TURBOJET BUSINESS AIRCRAFT

Pilots of turbojet business aircraft departing Runway 32 are requested to use either manufacturer's published noise abatement takeoff procedures, or the NBAA recommended noise abatement departure procedures for takeoff over close-in residential communities. Published procedures should also be used for VFR and IFR approaches.

Copies of the full NBAA procedures manual are available at the Airport Manager's office.

5. AIRPORT RESTRICTIONS

The MCRA has adopted two restrictions related to operations at GAI.

a. Touch and go operations and practice instrument approaches are prohibited between 10:00 p.m. and 6:00 a.m. Monday thru Saturday and until 8:00 a.m. on Sunday. Aircraft are encouraged to turn onto a downwind as soon as safely possible and to keep the downwind as close as safely possible to the airport to minimize overflights on nearby residential areas.

b. Maintenance runups are prohibited between 10 p.m. and 7 a.m. unless prior approval has been provided by the airport management. Maintenance runups also restricted to the taxiway holding area adjacent to Runway 32 departures. Aircraft must also be oriented at a heading of 270 degrees.

Full descriptions of these restrictions can be obtained from the airport management.

b) The MCRA should arrange for the Letter to be printed in an attractive form and in an appropriate size

The size and appearance should be similar to that of a page in a Jeppesen manual.

c) The MCRA should distribute the Letter to airport users

The Letter should be distributed through the following means:

- distribute to based pilots and aircraft owners who can be identified;
- provide multiple copies to GAI FBOs, requesting that they be put in a common area where copies can be picked up, especially by itinerant pilots, offer to supply more when needed;
- mail multiple copies to FBOs (ask them to post a copy), airport managers, and tower chiefs at nearby airports likely to generate itinerant traffic at GAI (especially training);
- mail a copy to anyone identified as violating any of the airport rules, regulations, or use restrictions;
- mail a copy to any pilot who is identified as causing a noise complaint;
- mail copies to the Montgomery County Airpark Users Association and request that the Letter be included in their newsletter; and
- mail copies to operators identified as doing business at GAI.

d) The MCRA should distribute copies to publishers of aviation flight guides, such as the National Oceanic and Atmospheric Administration (NOAA) and Jeppesen-Sanderson, requesting that the publications include summaries of the procedures.

The most relevant publication is the NOAA Airport Facility Directory.

It is estimated that a budget of $3,000 will be required to arrange for the necessary graphics work and printing of approximately 2,000 copies of the Letter. This cost is eligible for FAA/MCRA (90%/10%) funding support. Figure 2.1 can be used as a guide for development of the Letter to Airmen. The MCRA made need to hire an outside consultant to assist in the development of the Letter to Airmen. Consultant fees would be eligible for funding assistance from the FAA.

2.8 Program Publicity: Airside Signs

2.8.1 Background

Airside signs are located directly on the airfield to serve as a last-minute reminder to pilots. Members of the Advisory Committee have suggested the use of additional signs at appropriate airport locations providing brief noise abatement instructions.

2.8.2 Recommendation

Prior to departure on Runway 32, pilots are reminded to turn right after departure and to refrain from night use of Runway 32. The sign presently reads "Noise Abatement - Runway 32, turn right to at least 340 degrees, refrain from night use of Runway 32".

Since the present airside sign does not meet FAA regulations, the sign should be redone and modified slightly to be consistent with the recommended procedures. Another sign would recommend use of Runway 14 as much as possible, especially in calm wind conditions. This sign should be located where the pilot can still make a choice about the departure runway. An additional sign would remind business jet pilots to use the NBAA noise abatement departure procedure for Runway 32 departures. This sign would be placed on the airfield prior to departure on Runway 32.

The MCRA will place signs at the two on-airfield locations mentioned above. These signs will provide brief summaries of noise abatement procedures, as discussed above under various alternatives.

The signs should be back-lighted. According to Standard Signs Incorporated of Cleveland, Ohio (a major supplier of airfield signage), the standards for such signs allow an overall height of 36 inches. The message area typically has a height of approximately 30 inches, and can be up to seven feet long.

The recommended wording for the signs is presented in Figure 2.2.

2.8.3 Implementation

Standard Signs estimates that a backlit sign, fully installed, would cost between $1,800 and $2,000, on average. A total budget of $6,000 should be included in the NCP to cover the cost of sign fabrication and installation (eligible for 90% FAA and 10% MCRA funding).

Figure 2.2 Recommended Wording For Noise Abatement Airside Signs

Proposed Wording for Runway 32 Departure Sign:

NOTICE
NOISE ABATEMENT PROCEDURES IN EFFECT
Departing Aircraft - Turn right at least 30 degrees,
as soon as safely possible after departure,
and maintain heading until two nautical miles
north of the airport.
Pattern Aircraft - Turn right onto downwind,
as soon as safely possible after departure.
KEEP IT QUIET!

Proposed Wording for Runway 32 Business Jet Departure Sign:

NOTICE
NOISE ABATEMENT PROCEDURES IN EFFECT
Business jet aircraft follow
NBAA Close-In Departure Procedure,
KEEP IT QUIET!

Proposed Wording for Maximized Runway 14 Use Sign:

NOTICE
NOISE ABATEMENT PROCEDURES IN EFFECT
Maximize use of Runway 14 for departures,
especially in calm wind conditions.
KEEP IT QUIET!

2.9 Program Publicity: ATIS/ATCT Advisories

2.9.1 Background

Until recently, the Air Terminal Information Service (ATIS) was prohibited from providing any sort of noise abatement message on the recording. The message would be a means of providing information on the noise abatement procedures to itinerant pilots who may not be familiar with the airport. However, the FAA is very concerned that the length of the ATIS message and has in the past very rarely permitted an addition of a noise abatement message.

The FAA defines the ATIS procedures in Section 9, "Automatic Terminal Information Service Procedures," of Order 7110.65E. These procedures do not specifically identify noise abatement messages as allowable content. The FAA has stated repeatedly that this service is for operational messages and will not be used for noise abatement messages. It was suggested that the NCP include a statement requesting that the FAA amend the procedures to allow noise abatement information. The recent and official response from the FAA has been that ATIS can be used to remind pilots that noise abatement procedures are in effect.

The message could be very brief, such as: "noise abatement procedures in effect, follow Letter to Airmen No. 93-( )" to alert pilots to the existence of the program. Proposed revisions to FAR Part 150 regulations would allow the use of ATIS transmissions as reminders to pilots to "follow noise abatement instructions per Letter to Airmen No. 93-( )".

Implementation of noise abatement flight tracks (Section 2.1) include many approaches to instruct, advise and remind a pilot to follow noise abatement procedures. The FAA can play an instrumental role in helping to make pilots aware of some noise abatement measures, even those of a voluntary nature. This can be accomplished through direct FAA Air Traffic Control Tower transmissions to pilots, reminding or advising them to follow certain noise abatement instructions.

2.9.2 Recommendation

-ATIS

The MCRA will request that the FAA consider including a noise abatement message, such as "noise abatement procedures in effect," to the ATIS. In the event that the FAA will not approve such a message, the MCRA will request that the FAA consider a change in the ATIS procedures.

-ATCT/Runway 32 Departures

Presently, almost all IFR traffic departing GAI are given instructions to "proceed direct to Westminster VOR". For Runway 32 departures at GAI, this requires a right turn of 60 to 80 degrees after departure to head towards the VOR. **Since pilots are instructed to turn right towards the VOR, it is recommended that, workload permitting, the BWI ATCT advise pilots who request a heading not consistent with noise abatement procedures (not a right turn towards the VOR), that they are "not complying with noise abatement procedures".**

2.9.3 Implementation

No cost or unusual implementation requirements.

2.10 Program Publicity: Informational Brochure

2.10.1 Background

An informational brochure would summarize all existing and proposed noise abatement procedures at GAI. It would be a convenient means to convey to pilots the methods by which they can "fly quiet" and be a good neighbor to the residents surrounding the airport. This brochure would be in addition to all other methods of publicity that are recommended in the NCP including the Letter to Airmen, Jeppesen Plates, airside signs, bulletin boards and notices in the offices of the FBOs. In addition, the existing airport regulations should be updated to reflect the change in noise abatement procedures.

2.10.2 Recommendation

It is recommended that the MCRA produce a noise abatement brochure for distribution to all pilots and FBOs. It is also recommended that the existing airport regulations be updated to reflect the new and revised noise abatement procedures at GAI.

The brochure and the updated regulations would outline the noise abatement flight track, preferential runway use, business jet departure procedure, runup limitations, and highlight noise sensitive areas around the airport. The brochure/regulations could also repeat the instructions a pilot could be expected to receive from the BWI Tower on IFR departures at GAI. They could also give the telephone numbers of the Noise Abatement Complaint Line and the Airpark manager, and who to contact should the reader have any further questions.

2.10.3 Implementation

The MCRA will put together this brochure and update the airport regulations. It is estimated that a budget of $5,000 will be required to arrange for the necessary art work and printing of approximately 2,000 copies of the brochure. The update to the regulations would be based on the information in the noise abatement brochure. This cost is eligible for FAA/MCRA (90%/10%) funding support. The MCRA made need to hire an outside consultant to assist in the development of the brochure and assist in the update to the regulations. Consultant fees would be eligible for funding assistance from the FAA.

2.11 Appoint Noise Abatement Contact

2.11.1 Background

The level of noise at GAI does not warrant the appointment of a full- or part-time Noise Abatement Officer. It would seem more appropriate to hire a part-time person or designate an existing Airpark or County employee to handle the position. Since the MCRA has limited staff and no Airpark employee works directly for the MCRA, the issue of staffing is critical. Therefore, the MCRA has decided to retain the services of an answering service to document incoming noise complaints. The documentation of noise complaints would help to determine the type and extent of noise problems at GAI and would serve to keep the public informed about those noise problems.

2.11.2 Recommendation

It is recommended that the MCRA retain the services of an answering service to document incoming noise complaints at GAI.

Specifically, the answering service would be responsible for the documentation of the noise complaints through the noise complaint form as outlined in Section 2.12. The forms would be multi-copied and would be distributed to the MCRA, the Airpark manager, the complainant, and other appropriate officials.

2.11.3 Implementation

Technical experience levels required for this position would be minimal as only a desire to educate and inform the community about the Airpark and noise is required. Good public participation skills would be required. Personnel at the answering service could pick up a basic knowledge of the airport and noise terminology by reviewing the NEM and through a guided tour and information session at the Airpark. The MCRA would budget $2,000 for the annual cost of the answering service (eligible for 90% FAA and 10% MCRA funding).

2.12 Institute Noise Complaint Receipt Procedures

2.12.1 Background

GAI presently does not have a well documented process where Airpark personnel receive and respond to airport noise complaints. However, several members of the Advisory Committee have expressed concerns about the follow-up investigations to determine the identity of the offending aircraft and why it causes the complaint.

2.12.2 Recommended Procedures

It is recommended that a core complaint system including an answering service for receipt of noise complaints, a noise complaint form, and documentation procedures, be instituted at GAI.

The recommended complaint form and complaint procedures are presented in Appendix C. The MCRA recommends that the responsibilities for receipt of noise complaints be undertaken by an answering service on a Noise Complaint Line (see Section 2.11). Follow-up on noise complaints shall be made at the discretion of the MCRA. Complaints that are recommended for followup should be pursued vigorously in an effort to determine the type of aircraft and reason for complaint.

2.12.3 Implementation

The purpose of the noise complaint system allows for the receipt, documentation, and response to specific noise complaints. The process includes the identification of the specific aircraft, so that the pilot could be contacted and made aware of the airport's noise abatement procedures, and identification of reoccurring offenders.

The best method to find out the owner/operator of an aircraft is to note its 'N' number. These numbers are difficult to identify during the daytime by residents and impossible at night. Thus, the Airpark manager, at the discretion of the MCRA would collect available information from the BWI air traffic control tower (ATCT) staff or Airpark staff on the next business day after receipt of a complaint. The BWI ATCT would be helpful only in identifying IFR aircraft. In some cases the ATCT or Airpark staff will be able to identify the aircraft based on a description of the event and aircraft. Since no ATCT is located at GAI, information on IFR aircraft will have to be obtained from the BWI ATCT during those hours. Flight strip data from the FAA at BWI may be helpful in obtaining the required information, but release of the strips may be delayed for at least 15 days by FAA regulation.

In including this proposal in the NCP, **it is further recommended that the MCRA fully utilize and**

report complaint data and follow-up responses to the appropriate officials. That information will give the MCRA a basis for developing recommendations regarding NEM and NCP update or revision requirements.

The only costs envisioned for the noise complaint receipt procedures would be for the printing of the noise complaint forms. These costs are expected to be minimal as the sample form in Appendix C could utilized. The noise complaint line would be handled by an answering service. These costs were discussed in Section 2.11.

2.13 Evaluate (Quantitatively) Changes in Cumulative Noise Exposure

2.13.1 Background

To put the review of changes in noise exposure on an objective, quantitative basis, the NCP includes provision for MCRA to compute the value of a noise measure, termed "EXP", on an annual basis.

The Connecticut Department of Transportation (ConnDOT) has adopted this metric for use at Groton-New London, Danbury Municipal, and Hartford-Brainard following Part 150 studies at those airports. The Massachusetts Port Authority has utilized EXP to monitor change at Hanscom Field (in Bedford, MA) over the past seven years and is using a slightly modified version at Boston-Logan.

EXP is a index of the total noise exposure at the airport. It is the measure that HMMH used to provide the Advisory Committee information on the effects of potential use restrictions at the airport. In very simple terms, EXP is a measure like the Consumer Price Index that provides an indication of changes in the total amount of noise produced by aircraft operating at the airport, without providing detailed information on the geographic distribution of that noise. If the runway and flight track use remain relatively constant, EXP is a rough adjustment that can be applied to previous noise contours to quantify expansion or contraction. Changes in EXP are directly related to changes in Ldn. The advantage of EXP is that it is a very simple and effective means of estimating changes in overall noise exposure without the expense and difficulty of the computer noise modeling.

In slightly more detailed terms, EXP is a summation of the noise produced by all operations at the airport over a year, assuming that all of those operations (arrivals and departures) passed over one evaluation location. It incorporates the ten decibel nighttime noise penalty, just as in the computation of Ldn. An accepted standard evaluation location is utilized: the FAR Part 36 departure measurement location 6,500 meters from brake release.[3]

2.13.2 Recommendation

Every few years after the Maryland Aviation Administration completes another aircraft activity study at GAI, and after acquisition of necessary computer software, the MCRA will compute the EXP for the preceding year of data.

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[3] FAR Part 36 is a federal regulation governing the noise levels that aircraft are permitted to make in order to receive "type certification" for production and use in the U.S. The certification testing is based on measurements of arrival, sideline, and departure noise at specific measurement locations. Part 36 is a complicated regulation whose details are not relevant here, except as a basis for selecting an evaluation location.

The information will be useful in several ways. First, the compilation of input data will provide the MCRA with a basis for discussing changes in airport operations. Second, the EXP results will provide a basis for tracking noise exposure over time. And, third, the computations will provide a quantitative basis for determining if revision of the NEM is appropriate.

Changes of less than one decibel in EXP are insignificant. It is very unlikely that changes less than 1.0 to 1.5 dB Ldn would be detectable, unless they are caused by dramatic changes in fleet mix or in the diurnal split of activity. Increases of 1.5 dB Ldn or greater are an indication of potentially significant change in noise exposure. When increases over this threshold are computed, the MCRA should consider developing new noise contours, revising the NEM, and reevaluating the NCP. This work would require outside services (see Section 2.14).

2.13.3 Implementation

HMMH has prepared a computer program that performs the necessary computations with minimal input requirements. This program would be internally tailored for GAI. Computation of EXP will require that the MCRA have an appropriate microcomputer set up to run this program, including a computer, printer, and software. The program is written to run on an IBM compatible computer with a hard disk drive, using the Quattro Pro spreadsheet software. Presently, the MCRA has a copy of Quattro Pro. Since the MCRA has all the necessary hardware and software to determine the annual EXP calculations, no additional costs are necessary.

The EXP program uses a simple worksheet approach to allow the airport to enter the necessary information, including total operations during the year of interest, the fleet mix (percentages for major aircraft type categories), and the percent of operations at night. To provide a basis for comparison, the values for the 1991 existing base case year used in the initial NEM development are provided on the worksheet. The worksheet is shown in Figure 2.3.

The worksheet allows the fleet mix to be described in terms of the five basic categories of aircraft currently operating at the airport. They include: (1) composite light single engine piston-powered aircraft, (2) composite light twin engine piston-powered aircraft, (3) light twin engine turbine-powered propeller aircraft, (4) turbine-powered jet corporate jets, and (5) helicopters. If the share of activity in another category of aircraft, not listed, increases to one percent or greater, the MCRA will have to have the worksheet revised to add the appropriate data and computations.

Figure 2.3 Input/Output Form For Annual EXP Analysis

MONTGOMERY COUNTY AIRPARK EXP WORKSHEET

Instructions:

1. Determine total annual operations from MAA activity analysis and enter
   HERE:-> 108653

2. Enter the estimated percentage of operations at night for each aircraft category -

Single pistons	<Base Year = 3.1%>	HERE:->	3.1
Twin Turboprops	<Base Year = 5.1%>	HERE:->	5.1
Twin pistons	<Base Year = 5.1%>	HERE:->	5.1
Corporate Jets	<Base Year = 8.1%>	HERE:->	8.1
Helicopters	<Base Year = 1.9%>	HERE:->	1.9

3. Enter revised fleet mix percentages in table below only if they are changed from those shown. Do not change for Base Year.

4. Enter current year HERE:->1991

AIRCRAFT TYPE	FLEET MIX PERCENT BY AIRCRAFT TYPE (Enter current year only) Base Year	CURRENT	NO. OF OPERATIONS PER AVERAGE ANNUAL DAY (Values are computed) Base Year	CURRENT
SINGLE PISTON	94.7	94.7 <--Enter	281.9	281.9
TWIN TURBOPROP	1.3	1.3 <--Enter	3.9	3.9
TWIN PISTON	2.0	2.0 <--Enter	6.0	6.0
CORPORATE JET	1.0	1.0 <--Enter	3.0	3.0
HELICOPTER	1.0	1.0 <--Enter	3.0	3.0
TOTAL	100%	100% (computed)	297.8	297.8

TOTAL OPERATIONS IN CURRENT YEAR	108,653	(As entered above)
TOTAL OPERATIONS IN 1991	108,653	(Do not change)
CHANGE IN ACTIVITY	0%	(Computed)
EXP FOR CURRENT YEAR	104.7	(Computed)
EXP IN BASE CASE YEAR	104.7	(Do not change)
CHANGE IN EXP	0.0	(Computed)

2.14 Assess NEM and NCP due to Airport Layout/Operation Changes and at Minimum Intervals of Time

2.14.1 Background

In addition to the quantitative EXP "trigger" to determining needs for updates and revisions, the NCP should provide for revising the NEM and revising the NCP if a major change in the airfield layout or operation is contemplated. This would encompass changes that affect runway use or flight paths, such as construction of a new runway or abandonment of an existing runway. This requirement does not apply to temporary changes in layout or operations required by maintenance activity or similar short-term conditions that might occur.

New noise contours, with local data collection, should be prepared at reasonable time intervals, even in the absence of an identified need for NEM review (as might be determined by Section 2.13, above). This exercise will not necessarily involve full NEM revision; the updated contours will serve as a comprehensive check on the EXP estimates, to ensure that they continue to adequately reflect overall changes in exposure.

2.14.2 Recommendation

The Airpark Manager should report to the MCRA on any contemplated changes in airport layout or operation that might affect noise exposure.

The MCRA should also prepare revised noise contours every five years (starting in 1997, to model calendar year 1996 actual operations). The MCRA should review the contours with the FAA to obtain their recommendations regarding NEM/NCP revision.

The changes to be reported include changes in the layout of runways and taxiways, landing or takeoff thresholds, and airport lighting and instrumentation. Some of these changes, such as those related to instrumentation and lighting, might be initiated by the FAA. The Airpark Manager will be aware of these changes. The Airpark Manager should also request that the FAA provide the MCRA early notice regarding changes in air traffic control procedures which might affect GAI flight paths or runway use. Any changes in airside layout would be severely limited due to the confined location at GAI. Industrial and commercial development on three sides of the Airpark would almost certainly restrict any major changes in airport layout that could result in a drastic change in the airport noise exposure. Major changes in operations would still be possible, although unlikely due to the operating limitations of the airport.

2.14.3 Implementation

By including this proposal in the NCP, the MCRA acknowledges they will report the required information to the Regional Office of the FAA. That information will give the MCRA and the FAA a basis for developing recommendations regarding NEM and NCP update or revision requirements. No unusual costs would be associated with this recommendation. However, five-year updates of the NEM/NCP contours will require outside consultant assistance. It is eligible for FAA (90%) funding support. The remaining 10% would be funded by the MCRA.

3. PROGRAM IMPLEMENTATION

Part 150 includes extensive requirements related to NCP implementation. These requirements include the following items:

(1) identification of person or entity responsible for implementation of each program measure,
(2) time period covered by the program,
(3) schedule for implementation of the program,
(4) essential government actions, and
(5) anticipated funding sources.

Chapter 2 summarized the specific implementation actions related to each individual NCP element. This chapter addresses Part 150 requirements related to overall NCP implementation with respect to each of the items listed above.

Table 3.1 summarizes all of these implementation details. As the listing of NCP elements in the table indicates, the abatement measures fall largely into three categories: operational measures; land use measures; and program publicity, monitoring, and review measures.

3.1 Implementation Responsibility

A fundamental NCP requirement is that the documentation clearly identify the party (or parties) which is (are) responsible for implementing each element of the NCP. The introduction to Chapter 2 discussed the overall distribution of implementation responsibility. Briefly, only one organization has this responsibility: the MCRA, as airport proprietor, must initiate implementation of all measures. Clearly, however, the FAA plays an instrumental role in assuring that measures such as flight track changes and use of ATIS/ATCT advisories are carried out. Land use measures, as recommended, are the responsibility of Montgomery County.

3.2 Time Period Covered by the Program

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 (1996).

The time period covered by any NCP depends upon future conditions. Sections 2.13 and 2.14 discuss provision within the program to identify the need for updating the program earlier.

3.3 Schedule for Implementing the Program, Essential Government Actions, and Anticipated Funding Sources

Table 3.1, on the following pages identifies anticipated implementation scheduling for each element in the proposed NCP. The following sections address implementation actions that are common within each of the three major categories of NCP elements: operational, land use, and monitoring and review functions.

3.3.1 Implementation of Operational Elements

Implementation of the operational elements of the NCP will require three basic steps: (1) a request by the MCRA that the FAA undertake a formal review of the procedures, (2) FAA review and approval, and (3) implementation and publicity.

- Request for FAA Review

The first of these three steps, a request for formal FAA review, is largely a procedural matter. The submission of the NCP for FAA review will constitute the official request for review of all NCP elements.

- FAA Review

The second step, FAA's review, is not expected to require a major or lengthy effort, because both the BWI Air Traffic Control Tower (ATCT) and the FAA's Washington Airports District Office (ADO) staff were either active members of the study's Advisory Committee or were consulted throughout this study. Operational procedures were developed through close coordination with the ATCT, and the ADO was informed of every step in the analysis process through the Advisory Committee mailings and briefings. Additional operational analyses and coordination with the ATCT were undertaken to ensure that the operational measures would be feasible and practical. However, the Flight Standards Division of the FAA will conduct a final, formal review of the recommended changes in the revised flight track procedures and the recommended preferential runway program.

- Implementation and Publicity

The third step in implementing the noise abatement procedures utilizes the following procedure. The MCRA will recommend adoption of each of the operational elements. Once the MCRA has consented to adopt the recommended alternatives, the publicity of the program is primarily the responsibility of the MCRA, with the cooperation of the Airpark Manager. Each of the operational elements and its recommended implementation mechanism is discussed in detail below. Publicity tools for the operational measures are discussed later after introducing each measure in detail.

Table 3.1 Summary Of Noise Compatibility Program Implementation

Proposed Action:	Implementation Actions and Responsible Entities:	Anticipated Costs and Funding Sources:	Anticipated Schedule:
1. Institute Noise Abatement Flight Tracks	FAA reviews the feasibility during the NCP review. The MCRA will distribute Letter to Airmen. BWI ATCT and airside sign will advise pilots.	$3,000 for publishing the Letter to Airmen and $2,000 for the airside signs; 90% FAA and 10% MCRA.	1993
2. Institute Preferential Runway Use	FAA reviews the feasibility during the NCP review. The MCRA will distribute Letter to Airmen. Airside sign will advise pilots.	Costs for publishing Letter to Airmen per item 1 and $2,000 for the airside sign; 90% FAA and 10% MCRA.	1993
3. Modify Business Jet Departure Procedures	FAA reviews the feasibility during the NCP review. The MCRA distributes Letter to Airmen. Airside sign advises pilots.	Costs for publishing Letter to Airmen per item 1 and $2,000 for the airside sign; 90% FAA and 10% MCRA.	1993
4. Restrict Nighttime Maintenance Runups	MCRA adopts voluntary use restriction and distributes Letter to Airmen.	Costs for publishing Letter to Airmen per item 1.	1993
5. Update Real Estate Disclosure Ordinance	MCRA requests that Montgomery County and the MNCPPC update and strengthen disclosure ordinance.	None. Funding from local sources as part of governmental function.	1993
6. Update Comprehensive Plans	MCRA requests that Montgomery County and the MNCPPC update the local comprehensive plans.	None. Funding from local sources as part of governmental function.	1993
7. Program Publicity: Letters to Airmen	MCRA publishes Letters to Airmen for items 1 - 4.	Costs for Letter to Airmen discussed in items 1 - 4 above.	1993
8. Program Publicity: Airside Signs	MCRA to erect signs for items 1 - 3.	Costs discussed in items 1 - 3 above.	1993

Table 3.1 Summary Of Noise Compatibility Program Implementation (cont'd)

Proposed Action:	Implementation Actions and Responsible Entities:	Anticipated Costs and Funding Sources:	Anticipated Schedule:
9. Program Publicity: ATIS/ATCT Advisories	NCP and MCRA will request FAA to place noise abatement language on ATIS. Pending NCP review by FAA, ATCT to instruct pilots per item 1.	None.	1993
10. Program Publicity: Informational Brochures	MCRA to publish a brochure and update airport regulations summarizing all noise abatement procedures at GAI.	$5,000 for printing; 90% FAA and 10% MCRA.	1993
11. Appoint Noise Abatement Contact	MCRA to retain the services of an answering service to document noise complaints at GAI.	$2,000 for annual service; 90% FAA and 10% MCRA.	1993
12. Institute Noise Complaint Receipt Procedures	MCRA to adopt use of noise complaint receipt and documentation procedures.	Minimal cost for development and copying noise complaint form.	1993
13. Evaluate (Quantitatively) Changes In Cumulative Noise Exposure	MCRA will review overall noise exposure on a regular basis using "EXP" and through interaction with County Council and County Executive.	None.	1993
14. Assess NEM & NCP Due To Airport Layout/Operation Changes And At Minimum Intervals Of Time.	MCRA will reassess the need to update the NEM & NCP in conjunction with the County Council and County Executive.	None.	1993

3.3.2 Implementation of Land Use Elements

The implementation of the two land use elements of the Noise Compatibility Program are the responsibility of Montgomery County, with technical and professional planning assistance from the Maryland-National Capital Park and Planning Commission (MNCPPC). The primary agency responsible for the implementation and enforcement of the land use measures is the Montgomery County Planning Board. The land use measures, institution of a noise disclosure ordinance and revision of the comprehensive plan, could be incorporated as more extensive requirements/revisions of existing procedures.

The Montgomery County Planning Board should coordinate with the MCRA in order to ensure that the spirit of the measures are effectively implemented. These agencies, with technical assistance from MNCPPC should be responsible for implementing the recommended land use actions within one year of FAA approval of the NCP. Since specific FAA approval of these measures is not required it is strongly encouraged that these measures be implemented as soon as possible.

The recommended land use actions, are functions of local government and therefore should be implemented by local government staff. Typically, sources of funding to maintain existing staff for updating and revising local rules and regulations include general revenues generated by local taxes and monies provided by the state. If it desires, Montgomery County should explore possible funding assistance from the Maryland Department of Transportation or other state agencies since the FAA has not historically funded salaries for existing staff. Consultant fees would, however, be eligible for funding assistance from the FAA.

3.3.3 Implementation of Monitoring and Review Actions

Much of the information provided in Section 3.3.1 applies to implementation, monitoring and review elements of the NCP. In particular, it applies to those elements which require FAA approval and/or funding[4]. These include all items under implementation, monitoring and review except: (1) Item 11 - Appoint Noise Abatement Contact, and (2) Item 12 - Institute Noise Complaint Receipt Procedures. These items can be implemented immediately regardless of the FAA approval process. Land use elements could also be implemented immediately, pending Montgomery County approval, regardless of the FAA approval precess.

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[4] All elements of the NCP in this category may be implemented without FAA review and approval, except the Letters to Airmen, airside signs, the change in the ATIS message, and the ATCT advisories, if MCRA would be willing to provide 100% funding.

4. ANTICIPATED PROGRAM BENEFITS

Part 150 requires that the NCP documentation provide two related pieces of information regarding anticipated program benefits: (1) "definition of the specific alternative program measures (actions) proposed and the relative contribution of each to program effectiveness", [Part 150 reference 150.23(e)(3)], and (2) "a statement of the actual or anticipated effect of the program on reducing noise to individuals and noncompatible uses", [Part 150 reference 150.23(e)(5)].

Because much of the focus of the noise abatement phase of this study was on the reduction of single event noise levels, the benefits cannot be defined solely in terms of population removed from different noise contour (Ldn) levels, which is the measure of improvement used in most Part 150 studies.

Moreover, most of the land use analysis in the study concentrated on the existing developments, since the area in the airport environs is highly developed. Even those are of limited benefit because of the relatively low noise levels attributable to the airport.

As a result of these issues, no single measure of benefit can be utilized to summarize overall program benefits or to identify the relative contributions of each measure. The discussion that follows uses measures that are best suited to each proposed NCP element. The measures range from quantitative counts of affected housing units to qualitative descriptions of general benefits.

4.1 Effect of Operational Elements

4.1.1 Flight Tracks

To evaluate the effectiveness of the various flight tracks, HMMH modelled the departure of a typical business turbine-powered jet aircraft in order to obtain Sound Exposure Level (SEL) contours (See Section 6.2.2). The resulting populations counts (See Table 6.1) reveal that right turn departures on Runway 32 significantly decrease the number of residents exposed to higher noise levels. Right turns as soon as possible onto a downwind would also decrease the number of residents exposed to aircraft overflights.

The benefits of the noise abatement flight tracks would be largely noticed in the noise exposure contours outside of the 60 Ldn contour, because of that contour's relatively small area. In fact the most benefit will be the reduction in single-event aircraft noise levels created at the residential areas closest to the runway. The benefits of reduced overflights of residences in Hunters Woods, Charlene, Goshen Village, Goshen Estate, and in other areas north/northwest of the Airpark would be substantial. In addition, stricter adherence to pattern tracks would minimize overflights in

Hunters Woods, East Montgomery Village, Edinburgh, and Hadley Farms.

Table 6.1 supports using the recommended noise abatement flight tracks.

4.1.2 Preferential Runway Use

To evaluate this order of priority, HMMH ran a specific point analysis for the preferential runway use program (Section 6.2.3). Table 6.3 presents the compatibility statistics of the base case compared to the base case with a preferential runway use program in effect.

The effect of the program would also be felt largely outside of the 60 Ldn noise contour, because of that contour's relatively small area. However, this preferential runway use program will reduce departures of aircraft over the Hunters Woods, Charlene, Goshen Village, Goshen Estates, and East Montgomery Village residential areas north/northwest of the airpark.

Table 6.3 supports implementation of a preferential runway use program.

4.1.3 Departure Procedures

Section 6.2.4 recommended the NBAA "Close-In Departure Procedure" for use by turbine-powered jet aircraft for Runway 32 departures. This procedure is recommended because NBAA has shown that it reduces noise levels around airports with communities less than 10,000 feet from brake release.

This procedure will minimize noise levels in the Hunters Woods, Charlene, Goshen Village, Goshen Estates, and East Montgomery Village residential areas north/northwest of the airpark.

4.1.4 Nighttime Maintenance Runup Restriction

Although maintenance runups are not considered a concern at the present time, it was recommended to include an informal limit (See Section 6.1.4 & 6.2.5) on nighttime runups. This rule, which sets both a limit on time of the runup as well as the location, could prove effective in dealing with a future problem at GAI. If maintenance runups become an issue, this measure would minimize impact on residential areas adjacent GAI.

4.2 Effects of Land Use Elements

4.2.1 Update Real Estate Disclosure Ordinance

An improved real estate disclosure ordinance would serve to make more people, who are thinking of purchasing real estate in the area, aware of the presence of the Montgomery County Airpark and the potential disturbance caused by aircraft overflights.

4.2.2 Update Comprehensive Plan

An update to the areawide Comprehensive Plan would serve to make more people, including potential homebuyers, real estate developers, and local groups, aware of the presence of the Airpark.

4.3 Benefits of Implementation, Monitoring, and Review Actions

These ongoing measures are essential to the success of the NCP, but do not by themselves have a quantifiable benefit. Mechanisms to enforce and monitor implementation of the noise abatement procedures, and to monitor overall airport activity are critical to the NCP's success. In that sense, the entire benefit of the NCP is shared by this category.

4.4 Total Effects of the NCP

The noise contours presented in the NEM volume do not reflect the implementation of the NCP described in this volume. Figure 4.1 presents the Ldn contours modelled with the 1996 future case operations prior to development of the NCP and with full implementation of the NCP.

Table 4.1 presents noise/land use compatibility statistics comparing the 1996 future case with and without implementation of the NCP. As the table shows, there are no residents or residential land uses within the 60 Ldn or higher noise contours. There are approximately 8 homes and 24 residents within the 55 to 60 Ldn contour prior to implementation of the recommended NCP. After implementation, no homes or residents would be located within the 55 to 60 Ldn contour. These will benefit as a result of implementation of the NCP.

Overall the Ldn noise exposure contours would show minimal change as a result of the NCP implementation. A minimal reduction in Ldn results in a minimal reduction in population exposed to the noise within those contours. However, the focus of this study, and the overall major benefit of the NCP, has been the reduction of single event noise levels. Populated areas north/northwest of GAI will experience fewer aircraft overflights and, therefore, reduced noise exposure.

MONTGOMERY COUNTY AIRPARK

FAR PART 150 STUDY

MONTGOMERY COUNTY REVENUE AUTHORITY

FIGURE 4.1

1996 FUTURE Ldn CONTOURS WITH NCP IMPLEMENTATION

— 1996 without NCP Implementation

------ 1996 with NCP Implementation

65 Ldn Contours have been removed for clarity

N

2000 1000 0 2000

SCALE IN FEET

HARRIS MILLER MILLER & HANSON INC.

THE LPA GROUP INCORPORATED

HANIFIN ASSOCIATES, INC.

Table 4.1 1996 Future Compatibility Statistics With NCP Implementation

Item	1996 Forecast Case	1996 Forecast Case w/ NCP Implementation
Residential Population Within Contour Interval (estimated)		
55 - 60 Ldn:	24	0
Greater Than 60 Ldn:	0	0
Total:	24	0
Residential Land Use Within Contour Interval (acres)		
55 - 60 Ldn:	2.2	0.0
Greater Than 60 Ldn:	0.0	0.0
Total:	2.2	0.0

5. CONSULTATIONS WITH PUBLIC, USERS, AND OUTSIDE AGENCIES

The development of this Noise Compatibility Program was undertaken with extensive consultation with all members of the airport public - including airport users, the interested general public, and local, State, and Federal officials. Four principal mechanisms were utilized in conducting this consultation:

(1) Part 150 Airport Noise Advisory Committee - written and oral presentations on, and discussions of, study progress;

(2) Informational newsletters - approximately 5000 were printed and distributed to area households and institutions within the airport environs, as well as to local neighborhood groups;

(3) Informational meetings/workshops - open to the general public for the dissemination of project information and to collect information regarding the concerns of the community;

(4) Official communication - used throughout the study process to communicate with officials of government agencies having jurisdiction over land in the airport environs, and over airport operation.

Each of these elements is discussed in detail below, as they relate to the NCP development[5].

5.1 Part 150 Study Advisory Committee Process

A GAI Airport Noise Advisory Committee was formed for the purpose of reviewing every phase of technical work undertaken in the Montgomery County study. This committee includes comprehensive representation from every component of the aviation "public" including airpark, local, State, and Federal officials. Other representatives include neighborhood groups, airpark users, and airpark businesses. The official membership list is presented in Table 5.1.

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5 Much of the information presented in this section is a duplication of discussion presented in Chapter 15 of Volume 1, the NEM documentation. This duplication was provided to ensure that each of the two documents could stand alone to the maximum practical extent.

Table 5.1 Membership Of The GAI Airpark Part 150 Noise Advisory Committee

Organization Represented	Name/Title	Address
1. Montgomery County Revenue Authority	F. Stuart Kenney - Executive Director	Montgomery County Revenue Authority 211 Monroe Street Rockville, MD 20850
2. FAA Eastern Regional Office	Frank Squeglia -	FAA Eastern Regional Office Planning and Program Branch, AEA 610 Fitzgerald Federal Bldg. JFK International Airport Jamaica, NY 11430
3. FAA Washington Airports District Office	Lori Lehnerd - Airport Engineer	FAA Washington Airports District Office 101 Broad Street, Suite 300 Falls Church, VA 22046
4. FAA Air Traffic Control Tower - Baltimore	Mr. Michael Sarli - Manager	FAA Air Traffic Control Tower BWI Airport, MD 21240
5. Flight Resources Inc.	Mr. Doug McNeeley - General Manager	Flight Resources Inc. 7940 Airpark Road Gaithersburg, MD 20879
6. Maryland Aviation Administration	Mr. Robert Talbert - Manager, Aviation Noise Program	Maryland Aviation Administration, 1'st Floor Terminal Bldg. BWI Airport, MD 21240
7. Montgomery County Department of Transportation	Mr. John Clark - County Executive Representative	Montgomery County Department of Transportation, 101 Monroe Street Rockville, MD 20850
8. Consultant to Montgomery County Revenue Authority	Mr. Clyde Pace - Aviation Consultant	TAMS Consultants 2101 Wilson Road Arlington, VA 22201
9. Montgomery County Department of Environmental Protection	Mr. Tom Ogle - Director, Noise Programs	Montgomery County Depart. of Env. Pro. 101 Monroe Street Rockville, MD 20850

Table 5.1 Membership Of The GAI Airpark Part 150 Noise Advisory Committee (continued)

Organization Represented	Name/Title	Address
10. Consultant to Montgomery County Revenue Authority	Mr. Norm Arnold - Aviation Consultant	988 Saigon Road McLean, VA 22102-2119
11. Montgomery County Council	Mr. Ralph D. Wilson Legislative Analyst/County Council Representative	Montgomery County Council 100 Maryland Avenue Rockville, MD 20850
12. Montgomery County Planning Board	Ms. Nellie Maskal/Ms. Melissa Banach - Planning Board Representative	Montgomery County Planning Board 8787 Georgia Avenue Silver Spring, MD 20910
13. Upcounty Citizens Advisory Board	Ms. Nancy Shenk - Advisory Board Representative	Upcounty Citizens Advisory Board 8720 Lochaven Drive Gaithersburg, MD 20879
14. Montgomery County Airpark Users Association	Mr. Robert Baumann - Users Association Representative	Montgomery County Airpark Users Association 8005 River Falls Drive Potomac, MD 20854
15. Gaithersburg & Upper Montgomery Chamber of Commerce, Inc.	Mr. Eugene S. Casey - Commercial Representative	Gaithersburg & Upper Montgomery Chamber of Commerce 9 Park Avenue Gaithersburg, MD 20877
16. Airpark Leaseholders	Mr. James E. Richardson - Leaseholder Representative	4315 Bill Moxley Road Mt. Airy, MD 21771
17. Airpark Business Interest	Mr. Peter Greenberg - Attorney	4400 Jenifer Street N.W. Suite 380 Washington, DC 20015
18. Neighborhood Representative	Ms. Anne B. Swain	20653 Beaver Ridge Road Gaithersburg, MD 20879
19. Neighborhood Representative	Ms. Rosemary Arkoian	20816 Bell Bluff Road Gaithersburg, MD 20879
20. Neighborhood Representative	Mr. Harry R. Schulte	24517 Etchison Drive Gaithersburg, MD 20882

Table 5.1 Membership Of The GAI Airpark Part 150 Noise Advisory Committee (continued)

Organization Represented	Name/Title	Address
21. Neighborhood Representative	Mr. Dominick L. Alberti	18708 Rocky Way Derwood, MD 20855
22. Neighborhood Representative	Mr. Howard P. Layer - President	Mill Creek Towne Civic Association 17600 Wheat Fall Drive Derwood, MD 20855
Non-Members		
23. Consultant Part 150 Study	Mr. Nicholas P. Miller - President Mr. Alan G. Hass - Senior Consultant	Harris Miller Miller & Hanson Inc. 429 Marrett Road Lexington, MA 02173 (617) 863-1401
24. Consultant - Part 150 Study	Ms. Linda M. Hanifin - President	Hanifin Associates, Inc. 14105 Yardarm Way Suite 1101 Laurel, MD 20707 (301) 317-9025
25. Consultant - Part 150 Study	Mr. Paul Puckli - Director of Airport Planning	The LPA Group Inc. 151 S. Warner Road Suite 307 Wayne, PA 19087 (215) 975-0960

The GAI Noise Exposure Map (NEM) and Noise Compatibility Program (NCP)[6] were developed in a series of technical phases. The Advisory Committee was generally provided with appropriate background information in printed form, prior to a meeting at which Harris Miller Miller & Hanson Inc. (HMMH), The LPA Group Inc. (LPA), and Hanifin Associates Inc. (HAI) made a verbal presentation. The meetings presented the information and allowed input and comments from the Committee members. All comments and letters received from the Advisory Committee members were noted and action taken as required, although direct written responses were not made.

Substantial discussions pertaining to the Noise Compatibility Program (Volume 2) began at the third Advisory Committee meeting and continued through the fifth and last meeting. These meetings dealt

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6 The Noise Exposure Map (NEM) is documented separately, in Volume 1.

principally with the development of the Noise Compatibility Program (Volume 2). Items discussed at these meetings included a review of the analysis of operational abatement alternatives, a review of land use abatement alternatives, and a discussion of the abatement alternatives selected and recommended for implementation. The first two Advisory Committee meetings dealt principally with the development of the Noise Exposure Maps (Volume 1). A draft of this NCP was mailed to Advisory Committee members in advance of the last meeting. Comments and concerns related to the technical analysis were received from Advisory Committee members at each of the meetings and were noted and the resulting changes were incorporated into the final Volume 2.

Appendix D presents copies of meeting notices, agenda, minutes, attendance lists, and other materials distributed prior to, and following the three Advisory Committee meetings that were held during the NCP development phase of the study. Copies of meeting notices, agenda, minutes, attendance lists, and other materials for the first two Advisory Committee meetings are presented in Appendix E of the Noise Exposure Map documentation (Volume 1).

The meeting minutes document verbal comments received from Committee members. Written comments received from the members on any issues after the meetings are also included.

5.2 Informational Newsletters

HMMH and HAI prepared and published two newsletters in the development process of the Noise Compatibility Program (NCP). Approximately 5000 newsletters were printed and distributed to residents or interested parties in the Airpark environs. In addition, multiple copies were given to neighborhood groups for distribution as well as placing copies at the Gaithersburg and Rockville Libraries, as well as 21 other local libraries. The mailing list was developed from several sources, including:

(1) All members of the Advisory Committee were included;

(2) All the names of any potentially interested parties submitted by the Montgomery County Revenue Authority or local governments were included;

(3) All mailing lists supplied by the business, user, and community groups represented on the Advisory Committee; the street addresses of the group mailing lists in the airpark environs was used to develop the bulk of the list;

(4) The newsletter itself was the fourth and final basis for developing the mailing list. The recipients were encouraged to inform their neighbors of the newsletters and that they could be added to the mailing list by contacting HAI.

A copy of the two remaining project informational newsletters are presented in Appendix E. Copies of the first informational newsletter is presented in Appendix F of Volume 1.

5.3 Community Workshops/Public Meetings

A second of three informational community workshops was held on 24 September 1991 at the Goshen Elementary School in Montgomery Village, MD from 6:00 p.m. to 10:00 p.m. The meeting was of an open workshop format, where HMMH, LPA, and HAI staff were available to answer questions on a one-on-one basis, with the assistance of appropriate graphics materials and handouts. After interested persons reviewed the data, they were encouraged to complete questionnaires which solicited their goals and comments with regard to the study process.

The information presented included a review of the Part 150 process and a summary of the data collection part of the study (also presented at the first workshop). The meeting also presented the preliminary results regarding the operational and land use abatement alternatives under consideration at GAI.

This meeting was announced in the second newsletter and through advertisements in the local newspapers; including the Montgomery County Gazette, the Gaithersburg Gazette, The Montgomery Journal, Comprint Inc., and the Chronicle Express Newspapers. The newspaper advertisement, minutes and sign-in sheets from that meeting are reproduced in Appendix F.

Approximately 41 individuals registered for the meeting. Individuals and groups attending the meeting were encouraged to submit written comments through the use of a questionnaire. The results of the questionnaire are included in Appendix F.

A last of three informational community workshops was held on 30 June 1992 at the Goshen Elementary School in Montgomery Village, MD from 6:00 p.m. to 10:00 p.m. The meeting was of an open workshop format, where HMMH, LPA, and HAI staff were available to answer questions on a one-on-one basis, with the assistance of appropriate graphics materials and handouts. After interested persons reviewed the data, they were encouraged to complete questionnaires which solicited their goals and comments with regard to the study process.

The meeting presented the operational and land use abatement alternatives recommended at GAI. Details about implementation, responsibility, schedule, funding, and benefit were provided.

This meeting was announced in the third newsletter and through advertisements in the local newspapers. The newspaper advertisement, minutes and sign-in sheets from that meeting are reproduced in Appendix F.

Approximately 68 individuals registered for the meeting. Individuals and groups attending the meeting were encouraged to submit written comments through the use of a questionnaire. The results of the questionnaire are included in Appendix F.

5.4 Official Communications

Throughout the study process, HMMH, LPA, and HAI staff had numerous formal and informal contacts with officials representing a wide range of private and public entities who had potential interest in the Part 150, who had information that was of use in the study process, and who had jurisdiction over the operation of the airpark.

The Advisory Committee membership lists include responsible officials representing all of the institutions that Part 150 requires the Noise Exposure Map's preparer(s) to contact, including:

(1) Local officials of land use planning agencies with authority over land uses within the 60 Ldn contour. This includes representatives from Montgomery County, the municipality most affected by the airpark;

(2) Airpark Businesses and Users. The representatives included airpark officials, air taxi operators, aviation users, and maintenance concerns at the airpark. These individuals represented both users and businesses;

(3) Other Agencies. Other major agencies contacted and included in the study process included FAA Air Traffic Control Tower personnel at BWI, and the Maryland Aviation Administration.

6. EVALUATION OF OPERATIONAL ALTERNATIVES

FAR Part 150 require a certain number of alternatives be analyzed, providing they are appropriate to the airport. The selected operational alternatives as outlined in Section 2 represent alternatives chosen after a detailed analysis. This section comprises the results of the preliminary analysis distributed to the Advisory Committee at the third Advisory Committee meeting and released to the public during the second Community Workshop. In some cases, additional information has been added in response to comments to further bolster the recommendations in Section 2.

6.1 Airport Plan Alternatives

6.1.1 Runway Relocation/New Runway

Part 150 Reference B150.7 (b)(6)
- Other actions with beneficial noise impacts

Relocating or adding a runway is a basic noise control tool, because it directly affects the noise from operations using the runway. However, there is seldom a need to add a runway just for noise abatement purposes. In fact, the most recent Airport Layout Plan Report does not identify any airfield improvements required to meet capacity or safety needs[7]. In addition, the Montgomery County Council has adopted a "no-build" policy toward any future runway development.

The primary noise impact at Montgomery County Airpark (GAI) is from aircraft departing on Runway 32. Secondary impacts result from aircraft arriving on Runway 14. Although a new runway or a runway relocation could provide substantial noise reduction for specific areas around an airport, these options are not considered appropriate noise abatement measures at GAI for two reasons; (1) feasibility and, (2) cost.

The area north and west of the Airpark is highly developed. Changes in the runway orientation and/or location would decrease noise exposure in existing areas, while increasing noise exposure in other areas.

Any new runway or runway relocation would effectively involve the destruction and relocation of some on-airpark facilities. In addition, numerous commercial/industrial buildings located off-airpark would undoubtedly have to be relocated.

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7 "Airport Layout Plan Report - Montgomery County Airpark (Draft)", Dynaplan International Corporation, September 1989.

The cost to pave a new runway would be in excess of several million dollars. This estimate does not include the costs to repave apron and taxiways, remove and relocate commercial/industrial buildings, rebuild airpark facilities, relocate utility lines, and to relocate lighting and navigational aids.

The relocation or construction of a new runway would undoubtedly involve major changes relating to navigational aids and airspace procedures. This would involve a thorough review by the FAA.

The effective wind coverage for a reoriented runway would also change. Most airports are designed to have a minimum wind coverage of at least 95 percent. That is, small aircraft (less than 12,500 pounds) should be able to land or takeoff with less than a 10 knot (12 m.p.h.) crosswind. Large aircraft should be able to land or takeoff with less than a 12 knot (15 m.p.h.) crosswind. If a single runway cannot provide the necessary coverage, a second runway or crosswind runway is usually required. At GAI, the existing wind coverage of Runway 14-32 is greater than 97 percent during all weather conditions. If the runway were reoriented, one would expect the runway use coverage to change. However, the minimum 95 percent coverage would still have to be provided.

Due to the extraordinary cost of reorienting a runway or constructing a new runway, coupled with a marginal noise tradeoff, this measure does not appear to be warranted. It is recommended that no further consideration be given to this alternative.

6.1.2 Runway/Taxiway Extension

Part 150 Reference B150.7 (b)(6)
- Other actions with beneficial noise impacts

The extension of a runway is sometimes used as a noise control tool. The extension allows aircraft to achieve a higher altitude before overflying noise sensitive areas. In the case of GAI, a proposed taxiway extension or a back-taxi requirement for all aircraft might also be used to allow aircraft to achieve a higher altitude after departure. Aircraft at a higher altitude would create lower noise levels on the residential areas under the approach and departures paths to the Airpark.

Presently, the taxiway to Runway 32 is approximately 270 feet short of the runway departure end. It has been estimated that 80% of all business jets, 50% of all twin-engine aircraft, and 30% of all single-engine aircraft must back-taxi to the runway end for departures to take advantage of the full 4,196 feet of runway length. It has been proposed either that all aircraft be required to back-taxi to the end of Runway 32 for departure, or that the taxiway be extended 270 feet to the end of the runway. The back-taxi requirement or the extension of the taxiway would, in theory, allow aircraft departing on Runway 32 to attain a higher altitude prior to overflying the residential area to the

northwest of the Airpark.

Residents northwest of the Airpark are impacted primarily by noise from aircraft departing on Runway 32. A 270 foot displacement in the start of the takeoff roll would raise the altitude of aircraft approximately 50 feet higher over residential areas and result in a decrease of less than 0.5 dB in the overall noise level - an unnoticeable decrease in level.

Another option considered is a Runway 32 extension to the southeast of at least 500 feet. The additional 770 foot increase of the runway length (including the existing 270 foot back-taxi section of runway) would raise the altitude of aircraft approximately 150 feet over residential areas producing a one dB decrease in the overall noise level. It is assumed that the extension could be considered only with a displaced landing threshold on the approach to Runway 32 such that Route 124 would not interfere with the approach slope to the runway.

In addition, one must consider the to cost to pave the additional length of taxiway/runway. Additional costs incurred also include the lighting systems, terrain preparation, and any property acquisitions needed.

Both the increase in taxiway length/back-taxi requirement and the runway extension would result in an insignificant decrease in the noise levels in noise-sensitive areas located to the north/northwest of the Airpark. Due to the minimal noise benefit, it is recommended that no further consideration be given to these alternatives.

6.1.3 Displaced or Relocated Landing/Takeoff Thresholds

Part 150 Reference B150.7 (b)(6)
- Other actions with beneficial noise impacts

A displaced threshold is a runway marking short of the physical runway end that defines the touchdown point for landing aircraft. If a runway threshold is displaced, aircraft cannot use pavement beyond the displaced threshold for landings. If a runway threshold is relocated, aircraft cannot use pavement beyond the relocated threshold for takeoffs or landings. A displaced/relocated landing threshold shifts the touchdown point farther down a runway, effectively raising the approach path of an aircraft as it descends to land. A general rule of thumb is that for every 1,000 feet of displaced/relocated threshold, a larger aircraft will be approximately 50 feet higher on its approach path, while smaller aircraft will be almost 75 feet higher. The noise benefit is derived from the increased altitude of the aircraft. Normally, this noise benefit is quite small.

Presently, there is a displaced landing threshold on Runway 14 (200 feet). The approach end of

Runway 14 is elevated above the surrounding terrain. Therefore, the displaced threshold is there to provide a safety area should aircraft land short of the touchdown point on the runway.

Several displaced landing thresholds were considered. As mentioned in Section 6.1.2, a displaced landing threshold on the approach to a lengthened Runway 32 was considered as a means to keep aircraft at a safer altitude over Route 124. This displacement was not evaluated further per the recommendation in Section 6.1.2 to not consider lengthening Runway 14/32.

Another landing threshold to consider is for the approach end of Runway 14. The Hunters Woods residential area is located immediately to the northwest of the runway end and directly under the extended runway centerline. Residents are impacted by noise from aircraft arriving on Runway 14. An additional 1,000 foot displacement in the Runway 14 landing threshold would raise the altitude of aircraft approximately 75 feet, resulting in a 1.2 dB decrease in the single-event aircraft noise levels at the closest residential area. This decrease would not likely be noticed and should be considered insignificant. In addition, the total 1,200 foot displaced landing threshold (a combination of the existing 200 foot threshold plus an additional 1,000 feet) would result in a total runway length for landing of 3,050 feet. This would result in a decrease in safety associated with the shortened landing distance.

The taxiway extension/back-taxi requirement could also be considered a relocated takeoff threshold for Runway 32 departures. This option was not considered further, in accordance with the recommendation not to lengthen the taxiway and not to consider the back-taxi requirement further.

The minimal benefit in terms of noise level reduction, in addition to a decrease in safety due to a shortened runway length for landing, does not warrant displacing or relocating any of the landing or takeoff thresholds. Therefore, it is recommended that this alternative should be dropped from further consideration.

6.1.4 Isolating Maintenance Runup Activity

Part 150 Reference B150.7 (b)(6)
- Other actions with beneficial noise impacts

This action is aimed at accomplishing, by planning, what the regulation of maintenance runups (see Section 6.2.5) accomplishes by restricting the actual runup. The overall goal is to reduce the noise from maintenance operations.

Fixed Based Operators (FBOs) are companies located on an airport that conduct flight training, service and fuel aircraft, and provide other aviation-related services. As part of their work, FBOs

occasionally need to conduct engine runups in connection with major engine maintenance, and runups can produce significant noise levels.

For the most part no major maintenance that requires extended engine runups is undertaken at GAI. No complaints have been noted and no issues have been raised at Advisory Committee meetings or at the Community Workshop that concern runups.

Before problems related to this activity arise in the future, consideration should be given to implementing a voluntary use restriction limiting runups to daytime or to early evening hours and to a specific location on the field. The time-specific maintenance use restriction is discussed in Section 6.2.5. The location-specific restriction is addressed below.

Engine runup noise is highest at points approximately 45 degrees from the centerline of the aircraft's exhaust. Therefore, the ideal location for maintenance runups would be the taxiway holding apron at the approach end to Runway 32. Aircraft should be restricted to this location and must be oriented towards the west at a heading of approximately 270 degrees such that the engine exhaust is directed to the east. The resulting noise impact from maintenance runups would be minimized on any nearby noise-sensitive areas.

It is recommended that a maintenance runup area be designated and that the desired orientation of the aircraft during runups be specified.

6.1.5 Noise Barriers

Part 150 Reference B150.7 (b)(2)
- Construction of barriers and shielding, including the soundproofing of public buildings

Noise barriers can often provide a means for reducing the noise produced by ground-based sources at an airport. Relevant ground noise may include the noise produced during takeoff and landing roll (particularly start-of-takeoff roll and reverse-thrust noise), aircraft ground movements (on taxiways and aprons), engine idle noise, engine pre-flight noise and engine maintenance runup noise. There may also be cases where noise from ground or auxiliary power units used to start aircraft or provide power during maintenance can also be reduced.

To be effective, barriers must block the line of sight between a noise source and a listener, and the higher the barrier and the closer it is to either the source or the listener, the more effective it can be. Barriers must be heavy and solid to eliminate sound transmission through the structure, and should have a surface weight of at least four pounds per square foot. The FAA has also established obstruction-clearance requirements which can limit the construction of barriers immediately adjacent

to the runway ends. Therefore, noise barriers must generally be installed very close to the receivers, or residences.

Presently, no noise-sensitive land uses are located adjacent to the Airpark that could benefit from a noise barrier. In addition, discussions with nearby residents, and County/Airpark officials have not identified noise from maintenance/pre-flight runups or start-of-takeoff roll as a major problem at GAI. Therefore, it is recommended that the noise barrier alternative be dropped from further consideration.

6.2 Aircraft Operational Alternatives

6.2.1 Change in Pattern or Approach Altitudes

Part 150 Reference B150.7 (b)(4)
- Modification of flight tracks and flight procedures

- Pattern Altitudes

The existing traffic pattern altitude at GAI is 800 feet above ground level (AGL) or about 1,340 feet above mean sea level (MSL) for single-engine and light twin-engine propeller aircraft performing touch-and-go pattern operations. The pattern altitude for helicopters is 600 feet AGL (1,140 MSL). Generally, if the pattern altitude is raised, the increased distance to the aircraft would result in lower noise levels.

Operations by aircraft performing touch-and-go pattern operations have been an issue at GAI. A review of the comments received at Advisory Committee meetings and at the Community Workshop has identified a concern about the constant pattern operations, especially on weekends.

Raising the pattern altitude 200 feet (up to 1,000 AGL) for fixed-wing aircraft would decrease the single-event aircraft noise level one dB in the residential areas under the downwind section of the traffic pattern. However, the aircraft would require a higher power setting for a longer period of time to reach that altitude. As a result, residences under the initial takeoff and crosswind segment of the pattern would experience higher noise levels. In addition, a higher pattern results in larger patterns with longer takeoff segments and extended final approaches, thereby exposing more people to noise.

The benefits of increasing pattern altitudes do not outweigh the consequences of increased noise over a larger area. In addition, the aircraft performing touch-and-go operations are generally only the quieter single- and light twin-engine aircraft.

However, pilots performing touch-and-go pattern operations should be encouraged to turn onto the downwind as soon as safely possible and to keep downwinds as close as safely possible to the runway so as to minimize overflights on the East Montgomery Village, Hadley Farms, and Edinburgh residential areas.

- Approach Altitudes

Standard instrument approach systems have glide slopes which provide electronic vertical guidance on approach to pilots; these glide slopes are usually set at three degrees. However, GAI has visual approach runways which pilots, particularly those flying touch-and-go patterns, generally approach using a higher glide slope of approximately five degrees. The VASI on the approach to Runway 14 is set at a three degree glide slope.

Pilots generally oppose increased glide slopes for safety reasons and because even slight increases in angle can be very discomforting to passengers. The FAA does not allow increasing glide slopes for environmental purposes. Waivers to the three degree glide slope are granted only for the purposes of clearing safety obstruction. Glide slopes are usually increased only up to 4.5 degrees. Quantitative analysis reveals that increased slopes have relatively little effect on noise level. For example, Noise Exposure Map Measurement Site No. 1 is almost under the extended centerline for Runway 14 approaches, approximately 3,250 feet from the landing threshold. Increasing the approach slope to 4.5 degrees, from the existing three degrees, would reduce the single-event aircraft noise level by just under two dB. These reductions are too small to be considered significant and would not likely be noticed on the ground. Reductions at sites off the runway centerline would be even less.

The majority of the operations at GAI are by single piston and light-twin piston engine aircraft flying touch-and-go pattern operations. The landing approaches by these aircraft are already generally at a glide slope higher than three degrees. Increasing approach altitudes does not provide the benefit of decreased noise over a large area. In addition, the FAA would not approve the change solely for environmental reasons.

Based on these factors, it is recommended that the aforementioned alternatives be given no further consideration.

6.2.2 Noise Abatement Flight Tracks

Part 150 Reference B150.7 (b)(4)
- Modification of flight tracks and flight procedures

Noise abatement flight tracks can offer significant opportunities for noise abatement where incompatible land use is unevenly distributed. However, opportunities for noise abatement flight tracks are usually restricted to departures, because approaching aircraft generally must fly runway centerline long before reaching the airport vicinity.

Flight tracks in and around GAI overfly major residential areas especially to the north/northwest of the Airpark. The flight tracks to Runways 14/32 cross noise-sensitive sections of Montgomery County. Aircraft using these flight tracks include the larger turbine-powered propeller and jet aircraft that often have higher, more disturbing, single event noise levels than the smaller single- and light twin-engine propeller aircraft.

Due to the dense residential development off the approach end to Runway 14, relief through a change in departure flight tracks seems minimal. However, it is possible that some of these flight corridors and/or procedures could be modified to mitigate noise exposure in populated communities. Two possibilities addressed include: (1) changes to departures on Runway 32; and (2) changes to arrivals to Runway 14.

- Runway 32 Departures

Presently departures are subject to a noise abatement departure procedure. Airport Regulations assign aircraft departing on Runway 32 a right turn to a heading of 340 degrees. The Airport Regulations were presented in Appendix E of Volume 1 - NEM. An airside sign, located near the departure end of Runway 32, reminds pilots to turn right after departure.

Most VFR and IFR departures on Runway 32 presently fly straight out, at a runway heading of 320 degrees or attempt to make a right turn to at least 340 degrees, per the present Airport Regulations. These departures fly over populated sections of the Hunters Woods/Goshen Estates areas of Montgomery County. Residential areas on the extended centerline of a straight-out departure from Runway 32 receive overflights before any other residential areas. If instead, it were possible for departures to make a right turn of at least 10 degrees or as much as 50 degrees, aircraft might then follow the Snouffer School Road corridor overflying sparser populated residential areas, or generally attain a higher altitude before overflying other residential areas (See Figure 6.1). By avoiding overflying close-in
residential areas, flying the road corridor or flying over the open area of the Green Park (off the

MONTGOMERY COUNTY AIRPARK

FAR PART 150 STUDY

MONTGOMERY COUNTY REVENUE AUTHORITY

FIGURE 6.1

PROPOSED NOISE ABATEMENT FLIGHT CORRIDOR

N

2000 1000 0 2000

SCALE IN FEET

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THE LPA GROUP INCORPORATED

HANIFIN ASSOCIATES, INC.

approach end of Runway 14), the noise over the existing populated areas might be significantly reduced, while increasing noise minimally over other community areas.

This impact has been quantified by looking at the number of people exposed to various aircraft single event SEL noise levels for various noise abatement turns. SEL contours for several aircraft types departing straight out on Runway 32 are presented in Appendix G. The proposed noise abatement flight corridor for Runway 32 departures are illustrated in Figure 6.1. Right turns are assumed to be initiated at 500 feet AGL using the standard FAA departure profile for the Lear 35-type business jet. Since weather conditions and pilot and aircraft efficiency are different, the point at which each aircraft reaches the 500 foot altitude will vary widely. Conversations with pilots using GAI reveals that almost all aircraft reach the 500 foot altitude before crossing Snouffer School Road. Pilots familiar with GAI are initiating a right turn, per the present noise abatement procedure, well before the crossing of Snouffer School Road and in some cases just after crossing the runway end.

The SEL levels are from a typical Runway 32 departure of a Lear 35 business jet. The Lear 35 business jet, the noisiest aircraft operating at GAI, has noise and performance characteristics typical of the IAI Westwind 1124, British Aerospace 125-800, and the Dassault Falcon 50 business jet using GAI. The population counts are summarized in Table 6.1. These numbers should not be compared to the population counts as presented in the draft Volume 1: Noise Exposure Maps. The population counts in Table 6.1 result from the SEL contours created by the departure of a single jet aircraft and are used for comparison purposes only. The population counts in Volume 1 are based on the Ldn contours resulting from all operations at GAI.

The purpose of the right turn for Runway 32 departures is to minimize the impact on nearby residential areas. A right turn, between 30 and 50 degrees, provides the best opportunity to minimize impacts on adjacent residential areas. Assuming that all departures would depart straight-out or turn right 10 or 20 degrees, the table indicates that between 12,760 and 13,840 residents in Montgomery County would experience high SEL noise levels as a result of the departure of a single Lear 35 business jet. Increasing the runway heading on departures succeeds in decreasing the number residents exposed to the higher noise levels. Depending on the degree of right turn (30 to 50 degrees), the number of residents exposed to the significant jet departure noise would decrease to between 10,140 and 11,570.

Aircraft able to initiate a right turn after crossing the end of the runway and before crossing Snouffer School Road will minimize noise levels on the residential areas of the Hunters Woods/Goshen Estates areas of Montgomery County. These residential areas are on the extended centerline of a straight-out departure from Runway 32 and receive overflights before any other residential areas. An early right turn before crossing Snouffer School Road would result in aircraft overflying undeveloped area or the Green Park located off the end of the runway before overflying other residential areas.

Presently aircraft are reminded to turn right at least 20 degrees after departure. This procedure would require a right turn of at least 30 degrees after departure. Realizing that all aircraft and all pilots have different performance levels, the point at which each aircraft could safely execute this turn will vary widely. The alternative should be presented so that each aircraft turn as soon as possible after departure so that they overfly the undeveloped parkland/industrial area off the runway end if possible. This will result in minimal noise impact to residences in this area.

Table 6.1 Population Exposed To Noise Levels Resulting From a Lear 35 Jet Aircraft Departure

Runway 32 Departure Heading	Estimated Population Within SEL Contours, dBA[1]			
	80-90[2]	90-100[2]	>100	Total
straight out at 320°	9,410	4,070	10	13,490
right turn(10°) to 330°	10,060	3,760	20	13,840
right turn(20°) to 340°	8,190	4,550	20	12,760
right turn(30°) to 350°	7,300	4,250	20	11,570
right turn(40°) to 360°	7,030	3,090	20	10,140
right turn(50°) to 370°	6,190	4,250	20	10,460

1) Developed from 1987 Montgomery County census data and estimated to be representative of current population. Estimates are rounded to the nearest 10 people.
2) Within planning area of Figure 7.1.

If this turn were determined to be effective in reducing residential noise impact, it would still have to be proved workable from an air traffic control perspective. Departure clearances from the BWI ATCT for IFR traffic at GAI could include instructions to turn right after departure and thereby increasing the possibility of compliance with this recommendation.

- Runway 14 Arrivals

Arrivals on Runway 14 generally fly straight-in on runway heading over residential areas in Montgomery County or at a radial to a downwind leg of a touch-and-go pattern. Approaches typically consist of VOR/DME instrument (IFR) approaches or visual (VFR) approaches. An aircraft flying the Very High Frequency Omnidirectional Range (VOR) IFR procedure approaches the airport from the Frederick VOR which is located approximately 20 miles north-northwest of the

Airpark. The RNAV approach uses the Westminster VORTAC which is located approximately 25 miles north-northeast of the Airpark. Both approaches allow straight-in approaches to Runway 14. The NDB, which was located on the Airpark but is temporarily unavailable, allows a circling approach to the runways.

The closest residential area to the Airpark is the Hunters Woods neighborhood. This area is located less than 3,000 feet from the edge of Runway 14 (3,200 feet from the landing threshold). In formulating a noise abatement approach procedure, the concept is to have aircraft make an approach to Runway 14 that avoids overflying these homes. In theory, aircraft could fly a curved approach before being stabilized on the centerline prior to touchdown, or could use the Visual Approach Slope Indicator (VASI) system on the Runway 14 approach to avoid residential areas.

For a curved approach to Runway 14, pilots prefer being in a stabilized situation with wings level on the extended runway centerline at least one mile before touchdown. The proximity of the Hunters Woods residential area to the Runway 14 threshold (less than 3,200 feet) thus precludes a curved approach from providing any real benefit.

It has also been suggested that pilots fly the VASI approach as much as possible. The VASI is a visual aid often used by pilots on final approach to a runway threshold. It is only one of many other approach aids available to a pilot. VASIs are usually installed at airports where one or more of the following conditions exist: (1) use of the airport by turbojet aircraft; (2) inadequate or deceptive visual references on approach; (3) unusual turbulence; and (4) the existence of hazards should an aircraft fall below the glide path or undershoot/overshoot the runway.

A VASI installation consists of bars of lights on both sides of a runway. A pilot too high on approach sees only white lights from the VASI. A pilot too low sees only red lights, while a pilot on the correct glide slope sees both red and white lights from the VASI.

Aircraft performing touch-and-go pattern operations would generally fly a much higher approach than the VASI approach. A VASI approach is generally flown by itinerant VFR or IFR pilots. Requiring all pilots to fly the VASI would actually decrease the overall approach altitude thereby increasing the noise levels on the ground. However, if the VASI were offset from the runway centerline, keeping aircraft more over Snouffer School Road, pilots could avoid overflying the close-in Hunters Woods residential area.

Presently, the FAA permits a VASI to be offset only for operational purposes such as the existence of an obstruction in the glide path. Offsetting is not permitted under any circumstances for environmental purposes. However, a VASI system has a visible arc of at least 20 degrees. Therefore, it is visible at least on a 10 degree offset from the centerline and pilots could approach on an angle more over Snouffer School Road.

Pilots wishing to avoid overflying the Hunters Woods residential area could fly the outer limits of the VASI visual range. However, it is recommended that no further consideration should be given to an offset VASI at GAI.

The suggested change in the aforementioned arrival flight track would not be feasible due to the closeness of the residential areas to the runway end. In addition, an offset of the VASI system would not be feasible. Therefore, it is recommended that changing arrival flight tracks be given no further consideration.

However, the suggested change in the Runway 32 departure flight track would seem to provide the benefit of decreased noise over existing residential areas as anticipated. Based on these factors, it is recommended that changing departure flight tracks on Runway 32 be given further consideration.

6.2.3 Preferential or Rotational Runway Use

Part 150 Reference B150.7 (b)(3)
- Implementation of a preferential runway use program

A preferential runway use program is designed to alter the use of the runways from that occurring naturally due to weather, demand, physical constraints, navigational aids, and pilot preference. Altering the use is intended to decrease the frequency with which aircraft overfly the most highly exposed areas and to shift overflights to less noise-sensitive areas.

Optimal runway use for traffic flow at GAI includes arrivals and departures on Runway 32. This is primarily due to the wind conditions and the accessibility of the ramp area to the departure end of Runway 32. GAI is very unique in that it has a fairly even but dense distribution of population off the approach end of Runway 14 and agricultural/park land off the approach end to Runway 32. Given this situation, it is appropriate to maximize use of Runway 32 for arrivals and Runway 14 for departures. Therefore, we have investigated three preferential runway use alternatives, including: (1) bidirectional runway use at night; (2) maximizing Runway 32 arrivals; and (3) maximizing Runway 14 departures. Each is discussed below.

- Nighttime Bidirectional Runway Use

The bidirectional runway use concept involves operating the Airpark such that arrivals and departures both overfly the same area. For example, at night it would be acoustically beneficial to have arriving aircraft approach from the southeast and land on Runway 32 and to have departing aircraft take off to the southeast on Runway 14. This concept can only be considered at periods of very low traffic and light winds due to the operational problems of having aircraft operating with conflicting flows. Only late night hours are most likely to meet these criteria. However, a major obstacle to such a program is the lack of local FAA control since GAI does not have a control tower.

This item is discussed further in Section 6.3.2.

Even so, a decision was made to evaluate the possibility of instituting a preferential runway program that would direct aircraft to land on Runway 32 and to depart on Runway 14 during periods of low traffic. For the most part this would occur only at night, when in fact the impact of arrivals on Runway 14 and departures on Runway 32 would be greatest felt in the residential areas to the north-northwest of the Airpark. Using FAA Order 8400.9 "National Safety and Operational Criteria for Runway Use Programs", dated 9 November 1981, an analysis was carried out using the wind rose data from the Airport Layout Plan for the Montgomery County Airpark, dated September 1989. The wind data for all-weather conditions is based on observations acquired by the National Oceanic and Atmospheric Administration (NOAA) and taken at Dulles International Airport between January 1965 and December 1974. The FAA Order is presented in Appendix A of Volume 1 - NEM, and the All-Weather Wind Rose for GAI is presented in Appendix H.

The Order indicates that, with clear and dry runways and in the absence of anemometers near the touchdown zone, a crosswind component of 20 knots and a tailwind component of five knots are the limits for active runway designation for large turbine powered jet aircraft. With runways not clear or not dry, the crosswind limit is 15 knots and there must be no effective tailwind. In the interest of safety, a 15 knot crosswind and a 5 knot tailwind were used as criteria to identify runway availability during clear and dry weather for all corporate jet aircraft. The general aviation aircraft used a limit of a 5 knot crosswind and tailwind.

Using the All-Weather Wind Rose and the FAA Order, the percent of time was calculated when an aircraft could use Runway 14 for departures and Runway 32 for arrivals. The analysis determined that this condition could occur slightly over 70 percent of the time for the larger corporate jet aircraft and slightly over 55 percent of the time for smaller general aviation aircraft. Since lower wind conditions generally occur at night, this runway use could be expected to occur only at night. During the remaining time the runway use would be determined as it presently exists (without the preferential use program). Table 6.2 presents the runway use (in percent) for the 1996 future case and for bidirectional runway use (at night only). The bidirectional percentages presented in the table are a composite of the time aircraft could use a bidirectional flow and the time runway use is determined by normal means.

- Maximize Runway 32 Arrivals

This preferential runway use concept is designed to reduce the arrivals of aircraft on Runway 14 by maximizing the arrivals on Runway 32. The closest residential areas under the approach end to Runway 14 are within 3,000 feet of the runway end. The approach to Runway 32 brings aircraft over large undeveloped agricultural/park land. This concept is studied for both day and night operations.

Table 6.2 presents the 1996 future runway use percentages. Since no formal runway use statistics are logged at GAI, the use percentages were developed from interviews with Airpark management. In addition, an analysis of the wind rose reveals that Runway 32 is used almost 60 percent of the time for arrivals. The wind rose indicates that Runway 32 could not accommodate arrivals on a larger basis than is currently flown. Therefore, this option should be dropped from further consideration.

- Maximize Runway 14 Departures

This preferential runway use concept is designed to reduce the departures of aircraft on Runway 32 by maximizing the departures on Runway 14. The closest residential areas on departure from Runway 32 are within 3,000 feet of the approach end of Runway 14. Runway 14 departures would be primarily over large undeveloped agricultural/park land. This concept is studied for both day and night operations.

Table 6.2 presents the 1996 future runway use percentages. Runway 14 is used almost 40 percent of the time for departures. The wind rose indicates that Runway 14 could accommodate departures up to 55 percent of the time, 15 percent more than is currently flown.

- Results

The NOISEMAP computer model was used to compute Ldn values at several locations off the approach ends to Runways 14 and 32. This reflects the change in the noise levels as a result of the shift in arrivals from Runway 14 to 32 and departures from Runway 32 to 14 at night. In addition,

the change of noise levels are presented from increasing the use of Runway 14 for departures during the day and night.

The locations of the analysis points are represented by noise measurement Sites 1 and 3, which were located to the north/northwest and south/southeast of the Airpark (see Figure 4.1 in Volume 1 - NEM). Table 6.3 presents the results of the single point analysis. The table gives the resulting Ldn at each location, as well as the decibel difference when compared with the future 1996 base case.

A bidirectional use program at night (see Case 1 in Table 6.3), would decrease Ldn noise levels by 0.2 dB adjacent to the approach end of Runway 14. However, noise levels adjacent the approach end of Runway 32 would increase almost one dB. Less than 10 operations occur during nighttime hours (10:00 p.m. to 7:00 a.m.) at GAI (existing 1991). None of the noise level changes would be considered significant.

Table 6.2 Runway Utilization Percentages

1996 Future Case (Day & Night) (departures/arrivals)			
Runway	Corporate Jets	Twin Turboprop	Single/Twin Piston
14	40/40	40/40	40/40
32	60/60	60/60	60/60
Total	100/100	100/100	100/100
Bidirectional Runway Use (Night Only) (departures/arrivals)			
Runway	Corporate Jets	Twin Turboprop	Single/Twin Piston
14	77/14	66/23	66/23
32	23/86	34/77	34/77
Total	100/100	100/100	100/100
Maximized Runway 14 Use (Day & Night) (departures/arrivals)			
Runway	Corporate Jets	Twin Turboprop	Single/Twin Piston
14	55/55	55/55	55/55
32	45/45	45/45	45/45
Total	100/100	100/100	100/100

Table 6.3 Specific Point Analysis of Preferential Runway Use Alternatives

Measurement Site	1996 Ldn	Case 1 - Bidirectional Runway Use		Case 2 - Maximized Runway 14 Use		Case 3 - Bidirectional & Maximized Runway 14 Use	
		Ldn	Change in Ldn	Ldn	Change in Ldn	Ldn	Change in Ldn
1	55.5	55.3	-0.2	54.9	-0.6	54.5	-1.0
3	53.5	54.4	+0.9	54.8	+1.3	55.0	+1.5

Maximizing operations on Runway 14 would put fewer of the departure operations, but more of the arrival operations, over the residential areas to the north/northwest of the Airpark. Maximizing Runway 14 operations, both in the day and nighttime periods, would decrease noise levels off the Runway 14 approach end by 0.6 dB, while noise levels would increase adjacent the Runway 32 end by slightly over one dB (see Case 2 in Table 6.3). None of the changes in the noise levels would be considered significant.

Case 3 presents the results of the point analysis for the combined preferential runway use program (see Table 6.3). This combines the bidirectional runway use program at night with the maximizing of operations on Runway 14 during the day and during nighttime periods when bidirectional flow is not possible. Noise levels adjacent to the approach end to Runway 14 would decrease one dB, while the noise levels off the approach end to Runway 32 would increase 1.5 dB. The 1.5 dB increase would be considered significant. However, the increased noise levels would only impact the commercial and industrial properties located immediately off the runway end. Most of the area off the runway end is undeveloped agricultural/park land. The combined preferential runway use program would result in a minimal change in the Ldn noise exposure contours when compared to the future 1996 case. The potential benefit of all or part of the preferential runway use program could provide an improvement in the areas under the approaches to Runway 14. This would come however, at the cost of increasing noise levels on the approach to Runway 32.

Two measures were initially recommended including a bidirectional runway use program and maximizing use of Runway 14 for departures. Since a FAA ATCT presently does not exist at GAI the bidirectional runway use program could not be safely undertaken. Even without an FAA Tower, a bidirectional runway use program should be considered should a Tower be opened at some future date.

The maximized use of Runway 14 for departures should be actively pursued during periods when operating conditions permit. Airpark Regulations should be changed to reflect the priorities in the preferential use. Letters to Airmen, Airpark noise abatement pamphlets, pilot association meetings, flight instructors, and airside signs could all be used to educate pilots on the preferential runway use. Therefore, it is recommended that a preferential runway use program that maximizes departures on Runway 14 be considered.

6.2.4 Modification to Departure Procedures

Part 150 Reference B150.7 (b)(5)
- Restrictions on the use of the airport by a type/class of aircraft based on its noise characteristics.

The modification to aircraft departure procedures pertains only to business jets at GAI. For business jets (weighing generally less than 75,000 pounds), this measure would remind the pilot to use either the manufacturer's recommended noise abatement departure for the specific turbojet aircraft or the National Business Aircraft Association (NBAA) Close-In Departure Procedure.

This generalized procedure (see Appendix A) calls for a power cutback on departure for turbojet aircraft at an altitude of 500 feet AGL until the aircraft reaches an altitude of 1,500 feet AGL. The measure has been tested by NBAA and proven to reduce noise levels in noise sensitive areas within 10,000 feet of an airport. The measure cannot be made mandatory because the pilot always maintains ultimate responsibility for how the aircraft is flown. The recommended procedure can, however, be communicated to pilots through the use of a Letter to Airmen, other informational handouts, as well as signs in the offices of the FBO's, or on the taxiways prior to takeoff.

It is recommended that this measure be given further consideration. Business jet aircraft should be encouraged to follow the NBAA Close-In Departure Procedure for departures on Runway 32. Airpark Regulations should be changed to reflect this recommended procedure. Letters to Airmen, Airpark noise abatement pamphlets, pilot association meetings, flight instructors, and airside signs could all be used to educate pilots on this procedure.

6.2.5 Control of Engine Maintenance Runups

Part 150 Reference B150.7 (b)(6)
- Other actions with beneficial noise impacts

This action is aimed at accomplishing, by regulation, what the planning for the location of maintenance runups (see Section 6.1.4) accomplishes by physical changes to the airport. The overall

goal is to reduce the noise from maintenance operations.

For the most part no major maintenance is undertaken at GAI that requires the use of extended runups. No complaints have been noted and no issues have been raised dealing with runups.

Before problems related to this activity arise in the future, consideration should be given to a voluntary use restriction limiting runups to daytime or early evening hours and to a specific location on the field. Such a restriction would normally apply only to runups above a specified power setting. As a means of tracing the level of activity, the restriction could require each FBO to submit a monthly report to the Airpark Manager summarizing basic data including aircraft type, registration number, date and times of the test, maximum power setting, and time at maximum power.

Unless runups become a major problem in the future, a voluntary runup restriction could be undertaken and initiated immediately by the Montgomery County Revenue Authority, by way of a letter to the FBO's or a Letter to Airmen. The informal restriction could prohibit runups between 10:00 p.m. and 7:00 a.m.

Should maintenance runups become a bigger concern in the future, the voluntary restriction could become a formalized restriction with a designated area for runups to be performed. The rule should contain a provision that would permit the Airpark Manager to waive the restriction to accommodate legitimate hardships, on a case-by-case, preapproved basis. The restriction could contain a fine structure for violations. A recommended structure could include a warning on the first offense and $50 for the second violation. Each subsequent violation would increase $50 up to a maximum fine of $350 in any calendar year.

Although a restriction on runups would be ineffective in reducing current noise levels, it could prove effective in dealing with future problems. This alternative should be included as part of the overall program. The recommended procedure could be communicated to pilots and the FBO's through Airport Regulations, Letter to Airmen, and other informational handouts as well as signs in the offices of the FBO's, or on apron areas.

6.3 Airport Use Restrictions

6.3.1 Flight Restrictions Based on Noise

Part 150 Reference B150.7 (b)(5)
- Restrictions on the use of the airport by a type/class of aircraft based on its noise characteristics.

There are several categories of use restrictions that must be considered under FAR Part 150. These include:

(1) Restrictions on aircraft not meeting FAA noise standards,
(2) Capacity limitations based on relative noisiness,
(3) Partial or complete curfews,
(4) Landing fees based on noise or time of arrival, and
(5) Required use of noise abatement takeoff/approach procedures.

The first four of these categories are evaluated below. The fifth category, noise abatement operating procedures, was discussed in Section 6.2.1 and 6.2.4.

- Noise Exposure, EXP, Methodology Used to Investigate Use Restrictions

The "EXP" technique involves the computation of incremental changes in total noise exposure, in terms of Ldn, that might result from abatement actions that affect total noise emissions at the airport. It screens out operational variables, such as runway use and flight track use.

The analysis is conducted for a representative point around the airport. The output, estimated change in Ldn, is a reasonable index of change for all points in the airport's environs. The EXP increment is an estimated correction that can be applied throughout the contours.

For many airports, identification of the appropriate noise limit is based on long-term noise measurement data by aircraft type obtained from a permanent noise monitoring system. For airports without a permanent system, one alternative is to use published data by aircraft type. One source of the noise data is the FAA's Advisory Circular 36-3F entitled Estimated Airplane Noise Levels in A-Weighted Decibels, dated 10 August 1990. The Advisory Circular is reproduced in Appendix B. The publication is updated periodically when data for new aircraft become available, but the document rank orders numerous aircraft types from large air carrier jets to single engine propeller aircraft based on their maximum sound levels (Lmax) both during takeoff and on approach. The ranking permits a means of setting a noise limit and determining which aircraft can or cannot operate

with respect to the limit.

Since aircraft noise levels may vary widely with differences in operational circumstances, it may be preferable to establish single event noise levels independent of Part 36 certification data. Therefore, the FAA suggests consideration of a restriction based on estimated noise levels that take operational variations into account. In the analysis which follows, SEL noise data have been used in conjunction with operations data by aircraft type to quantify the implications of setting alternative limits.

Operations data by specific aircraft type at Montgomery County is based on the 1996 annual average daily operations as presented in Table 11.3 of Volume 1 - NEM. EXP is then calculated exactly as Ldn is, combining the noise of a single operation with the number of times during the day or night that the aircraft actually operates. The calculation for each aircraft type is:

```
EXP = SEL + 10*Log(number of daytime operations+(10*number of nighttime operations))
```

The "partial" EXPs for individual aircraft can then be added together to get a total EXP for the entire set of operations. We can then evaluate numerous alternative scenarios, re-adding different sets of partial EXPs to reflect the presence or absence of various aircraft types as they are left in or taken out of the fleet through different variations of a noise rule.

The principal advantage of the EXP technique is that it allows the effects of noise abatement measures that influence total noise exposure to be evaluated without the cost and complexity of full Ldn contour computer runs.

The EXP computations for the 1996 Future Case are presented in Table 6.4. The table lists the average daily operations by the aircraft in the Montgomery County fleet mix. Each aircraft is ranked from loudest to quietest, at a single location on the ground -- the FAR Part 36 departure measurement point (6,500 meters from break release)[8]. This sum is equal
to the single SEL that represents the same amount of noise energy to which that point would be exposed if both the takeoff and landing of the listed aircraft flew directly over it.

The first column of the table lists the aircraft types observed in the complete sample (the base or 1996 future case). The second through fifth columns list the noise level information of each aircraft. The higher the value in this column, the more the aircraft type is contributing to total noise exposure even though it may not be the noisiest aircraft in the fleet. The sixth through ninth columns list

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[8] Departure and approach SELs were calculated using the FAA's INM 3.9 data base that is being used to generate Ldn contours for this study.

Table 6.4 1996 EXP Noise Exposure

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		SEL [1] at		SEL Energy	Operations per Average Day - 1996					Approx. Cumulative Reduction in Ldn Increasingly Severe SEL Restrictions		
	INM A/C	P. 36 Dept. Meas. Pt.		Sum for one LTO	Departures		Arrivals		% Total	Restrict All	Restrict All	Restrict All
Aircraft Type	#	T/O	Appr.	[2]	Day	Night	Day	Night	Op'ns	Operations	Night Op'ns	Night Dep's
Bchjet 400 (MU3001)	60	87.7	80.3	88.4	0.230	0.021	0.230	0.021	0.246	0.1	0.1	0.1
Das. Falcon (LEAR35)	54	87.8	77.0	88.1	0.015	0.001	0.015	0.001	0.016	0.1	0.1	0.1
Brit. Aero (LEAR35)	54	87.8	77.0	88.1	0.215	0.019	0.215	0.019	0.229	0.2	0.1	0.1
IAI WestWind(LEAR35)	54	87.8	77.0	88.1	0.613	0.055	0.613	0.055	0.653	0.5	0.2	0.2
King Air (DHC6)	69	79.9	87.0	87.8	1.046	0.056	1.046	0.056	1.078	1.0	0.4	0.3
Twin Pist (BEC58P)	76	84.7	78.7	85.7	2.982	0.160	2.982	0.160	3.073	1.9	0.6	0.5
Citations (CNA500)	57	81.8	77.0	83.0	0.460	0.041	0.460	0.041	0.490	2.0	0.7	0.5
Conquest (CNA441)	73	74.4	77.4	79.1	1.046	0.056	1.046	0.056	1.078	2.1	0.7	0.5
Sing. Pist. (GASEPF)	75	76.9	69.5	77.6	92.266	2.952	92.266	2.952	93.137	---	0.7	0.5

NOTES: [1] SEL at FAR Part 36 departure measurement point: 20000' from brake release for departures and 15000' from landing threshold for arrivals. Derived from INM data base.
[2] LTO = Landing and Takeoff Cycle

average daily operations to be used for computing the effects of imposing noise limits over different times of the day or night. The tenth column presents the percent of total operations by that aircraft. The eleventh through thirteenth columns list the approximate reductions in EXP, and hence Ldn, that would be achieved by eliminating aircraft from the fleet at various times of the day. The cumulative noise reduction increases going down each of these last columns reflecting the assumption that each aircraft, in turn, is eliminated from operation as a hypothetical noise limit gets more and more restrictive.

- Interpretation of EXP Results for Base Case Fleet Mix

In reviewing the results of EXP calculations, a useful rule of thumb to remember is that the current FAA environmental regulations (Order 1050.1D) set a 1.5 dB increase in noise exposure, within the 65 Ldn noise contour at a noise sensitive receiver, as the threshold above which detailed noise analyses are required; i.e., a 1.5 dB change is considered potentially "significant".

Restrictions applied to aircraft operations specifically at night, are designed to reduce or eliminate operations during the most noise-sensitive periods of the day. Typical nighttime restrictions cover hours ranging from 10:00 p.m., 11:00 p.m., or 12:00 midnight through 6:00 or 7:00 a.m. the next morning. Not only do these hours protect periods of sleep, they also potentially offer substantial

reductions in noise exposure because between the hours of 10:00 p.m. and 7:00 a.m. all noise events are penalized by the 10 dB weighting applied in the calculation of Ldn. As discussed earlier in the draft Noise Exposure Map, this penalty is equivalent to counting each night operation as 10 daytime operations of the same aircraft.

To be most legally acceptable, a use restriction of this nature must be based on a noise limit applied to individual aircraft, making it illegal and/or costly for noisier types to operate, while permitting operations by quieter aircraft. Selection of the appropriate noise limit should include consideration of the anticipated noise benefit balanced by the cost of compliance. The process leading to the selection of a limit is always complex.

Prohibiting **all** nighttime operations would constitute a full curfew. Few airports have these true curfews, and from experience in developing use restrictions at other airports, it is not likely that the FAA would support such a measure in its review of Montgomery County's noise compatibility program if it were proposed. Such restrictions are often tested in court and have been found to be "over broad", "unjustly discriminatory", to impose "undue burden" on interstate commerce, or to be "arbitrary and capricious", thereby infringing on Constitutionally protected rights. If the Montgomery County Revenue Authority, as operator of GAI, chose to adopt such a restriction regardless of FAA support, the Authority would assume a potential liability of having to justify the restriction in Federal court, perhaps even against the FAA. Thus, the analysis here focuses on a noise-based use restriction that could allow some nighttime activity by quieter aircraft.

The columns to the right in the tables in Table 6.4 give the approximate reductions in overall noise exposure (Ldn) that would result if the listed aircraft ***plus all those louder than the listed type*** were prohibited from operating during the times specified. For example, read down the fifth and twelveth column in the table to see the effect of a noise limit imposed on <u>all</u> arrival and departure operations during the hours of 10:00 p.m. to 7:00 a.m. (nighttime). Note that only 0.7 dB of improvement in noise exposure could be expected. Restricting <u>only</u> all night departures would provide 0.5 dB of improvement in the noise exposure. If the SEL noise limit were set at 87.5 dBA, just below the 87.7 and 87.8 dBA produced by a Beechjet 400, Dassault Falcon 50, British Aerospace 125-800, or a IAI Westwind 1124 on takeoff. Then the noisiest four business jets operating at GAI and all other aircraft types louder, such as the older Sabreliners, Gulfstreams and Lear business jets, would be prohibited from operating at GAI at night, while quieter aircraft could continue to operate. The overall noise level improvement would be minimal resulting in only a 0.2 dB reduction if the aircraft were prohibited from departing at night. Only about 0.1 nighttime flights would be reduced or eliminated on an average day or about one operation (takeoff) every ten days. This would encompass less than one percent of the annual operations at GAI.

This 0.2 dB decrease in the overall Ldn at GAI would not produce a potentially "significant" change

in the noise levels. However, the noisiest nighttime operations at GAI would be reduced. Although not considered significant, the absence of exceptionally loud aircraft overflights at night would prove to be an important factor to reduce disturbance, especially sleep disturbance, to local residents.

Note from the same columns of numbers, that if the SEL noise limit were lowered to 84.5 dBA, some twin piston aircraft would be prohibited from operating at night.

The eleventh column lists the estimated reduction in Ldn that would occur if all operations were prohibited throughout the entire day. This form of the noise rule is discussed later.

Clearly, from this table it is now possible to examine the potential effects of numerous variations to a nighttime rule. However, consideration of a particular combination of noise limit and applicable hours must include not only the degree of improvement expected but also the potential effects on users.

A complete 24-hour noise-based use restriction simply broadens the application of the nighttime restriction described above and limits operations throughout the entire day. However, because people are less sensitive to daytime noise, airports having 24-hour restrictions normally set daytime limits higher than those at night. At Tweed-New Haven Airport, for example, the daytime limit is 10 dB more lenient. This is also consistent with the rationale behind the 10 dB penalty applicable to nighttime noise in the calculation of Ldn -- the noise is more intrusive, more disturbing at night.

If this same principle were applied to the table of operations shown earlier, then, for example, given a nighttime limit of 87.5 dBA SEL, a likely choice for a daytime limit might be 97.5 dBA. This would prohibit nighttime operations by the older Sabreliners, Lears, GIIs, Falcons, Westwinds, and British Aerospace business jets, providing about 0.2 dB improvement in noise exposure. During the day, the limit of 97.5 dBA SEL would not prohibit any operations by the aircraft that presently operate at GAI. In fact, the noise limit could not be reasonably set to prohibit some aircraft at night while allowing some during the day, without severely restricting the operation of the Airpark.

Only a full elimination of operations by the first six aircraft categories, both day and night, would result in a significant reduction of Ldn, on the annual average day. A significant reduction (greater than 1.5 dB) in Ldn on the annual average day, could not be achieved by only restricting aircraft operations at night.

These EXP results should not be interpreted to imply that use restrictions do not have potential usefulness at GAI. Public concern regarding particularly noisy individual events in the Montgomery County environs does not focus on "annual average day" activity. Rather, comments made during the noise measurement program, at Advisory Committee meetings, and at the Community Workshop

clearly indicate that most concerns are generated by particularly loud events or corporate jets, and that the problem is most significant at night.

With this information as background, the following section addresses potential limitations to the adoption of a use restriction, followed by consideration of each of the categories of use restriction that the FAA requires the airport to consider.

- Limitations to the Adoption of Use Restrictions

Use restrictions at an airport can be extremely controversial actions to consider, and are frequently challenged in court. Such challenges normally are based on Constitutional issues.

Airport use restrictions have been tested in court on several occasions. The courts have used three principal criteria in determining the legality of the restrictions, including: (1) whether or not the restrictions have an "undue burden on interstate commerce"; (2) whether or not the restrictions are "discriminatory"; and (3) whether they are "arbitrary and capricious".

The issue of burden on interstate commerce deals with the issue of whether the benefits of the restriction are in line with the costs, and, in broader terms, the absolute effect on commerce overall. Any restriction that has a noise benefit will have some effect on commerce. The full effect on commerce cannot be determined because any restriction affects future, as yet unplanned, operations. The effect on commerce also has much to do with the availability of reasonable alternatives to the aircraft operators.

Discrimination concerns whether the restriction applies equally to all aircraft that have similar noise emission characteristics. A hypothetical discriminatory ordinance would be one that restricted operations according to the type of powerplant, such as prohibiting operations by jet aircraft, but that allowed louder propeller-driven aircraft to operate.

The arbitrary and capricious test relates to whether or not the restriction can be justified in terms of its noise benefits.

- Restrictions on Aircraft Not Meeting FAA Noise Standards

FAR Part 36 prescribes noise standards that aircraft must meet in order to obtain "type certificates". Aircraft which are not compliant with these standards are termed "Stage 1", those meeting original Part 36 noise standards are "Stage 2", and those meeting the most recent and stringent standards are

"Stage 3"[9].

The form of restriction contemplated under this category is one that restricts aircraft based on their FAR Part 36 status. To fully understand the potential benefits and costs of such a restriction, details regarding the Part 36 classification of aircraft operating at the airport must be considered, particularly the classification of corporate jets.

All air carrier jets that are over 75,000 pounds are classified Stage 2 or 3. All aircraft must meet these standards. However, Stage 1 business jet aircraft or private aircraft under 75,000 pounds are still allowed to operate. There are very few, if any, Stage 1 "non-Part 36" aircraft flown at GAI today. The aircraft listed in Table 6.4 that do not meet the Stage 2 or 3 standards may include the aircraft under the IAI Westwind/British Aerospace HS125 series aircraft. However, only a few versions of these aircraft are Stage 1; most are Stage 2. Overall, a majority of the corporate jets operating at GAI are either Stage 2 or 3 types.

There is little, if any, benefit to be derived from a restriction on Stage 1, non-Part 36 aircraft, because their use at the Airpark is so infrequent. Moreover, the information presented in Table 6.4 indicates that such a restriction may not accomplish the desired results, because the IAI Westwind/British Aerospace HS125 series aircraft flown at GAI may well be the Stage 2 type. In addition, their use is infrequent compared to the other business jet aircraft and the total fleet mix at GAI.

There is potential benefit from a restriction on Stage 2 aircraft. However, this could not be an outright ban on Stage 2 types, since such a significant portion of the aircraft operating at the airport fall into this category. A Stage 2 restriction would prohibit a majority of all jet operations at the airport. Such a restriction would probably be challenged by individual operators, aviation interest groups, and the FAA, acting on behalf of the Department of Commerce, on the grounds of interference with interstate commerce. The forthcoming National Noise Policy as outlined in the Airport Noise and Capacity Act of 1990 has proposed to prohibit all Stage 2 aircraft weighting greater than 75,000 pounds after December 31, 1999. However, the applicability of phasing out Stage 2 aircraft under 75,000 pounds is currently under review.

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9 Another federal regulation, FAR Part 91, required that essentially all aircraft with maximum gross takeoff weights over 75,000 pounds be in compliance with Stage 2 standards by January 1, 1988. In addition, the National Noise Policy has set regulations that are to phase out the Stage 2 fleet (weighing greater than 75,000 pounds) by December 31, 1999. Presently there is no such rule for aircraft under this weight. This includes aircraft in the GAI fleet. However, regulations for the phaseout of Stage 1 and 2 aircraft weighing under 75,000 pounds are currently under review.

- Capacity Limitations Based on Relative Noisiness

The FAA identifies two ways of implementing this type of limit: (1) restrictions based upon certificated noise levels and (2) restrictions based upon estimated single event noise levels.

The certification levels to which the first of these two categories refers are noise levels at the FAR Part 36 measurement locations in terms of Effective Perceived Noise Level (EPNL), which is basically the same type of cumulative single event measure as SEL, based on the "Perceived Noise Level" rather than the A-weighted level. Measured or estimated noise levels are presented for most civil aircraft types in a series of Advisory Circulars.

The second implementation approach, "based upon single event noise levels", refers to the use of FAA-published noise estimates for the A-weighted maximum levels produced by aircraft at the Part 36 departure and approach measurement locations or from noise level data produced under actual operating conditions[10]. Estimates for most civil aircraft types currently in operation in the U.S. are presented in AC 36-3F. The FAA developed AC 36-3F specifically for the purpose of providing airports with a consistent A-weighted basis for rating aircraft. It is preferable to the EPNL Circulars because it lists all aircraft, in decreasing order of noise level, regardless of their Part 36 status. The EPNL Circulars split aircraft into two documents (one for Stage 1 aircraft, and one for Stage 2 and 3 aircraft) and into several tables within each document, depending on aircraft weight.

Appendix B presents a copy of AC 36-3F. This Advisory Circular would provide the most straightforward basis for developing and implementing a restriction of the types of aircraft.

- Partial or Complete Curfews

The preceding discussion of use restrictions focused on the effects of night operations in particularly noisy aircraft types; i.e., on a "partial curfew". We also can look at the potential effects of a full curfew[11].

A full nighttime curfew was evaluated using the EXP methodology. Using EXP, all nighttime operations were eliminated outright. This alternative did not result in a significant noise reduction. The outright elimination alternative reduced EXP by 0.7 dB. If the restricted operations were shifted

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10 The departure measurement point is 6,500 meters from break release; the approach measurement point is 2,000 meters from the landing threshold.

11 Part 150 requires the Airpark to consider a full curfew. However, to our knowledge, there are no full curfews in effect at any U.S. airport and no full curfew has ever survived a legal challenge. In fact, the most recent precedent regarding a full curfew was at nearby Westchester County Airport, in White Plains, New York.

to the daytime, the noise reduction would be slightly less.

- Landing Fees Based on Noise or Time of Arrival

This option is a mechanism for implementing use restrictions rather than a type of restriction. A noise-based landing fee is intended to encourage the use of quieter aircraft through the use of economic incentives: the higher the noise of an aircraft, the more it would cost to fly into GAI. However, Montgomery County currently does not have any landing fee structure at GAI. To achieve the desired noise abatement effect, the fee would have to be high enough to eliminate the undesired operations. A noise-based landing fee is not intended to collect additional money, but is intended to get compliance with the noise rule. Therefore, the fee or penalty should be structured to get compliance. Structured correctly, the disproportionate fee would decrease the number of noisier operations, while still providing the necessary revenues to operate and maintain the Airpark. Alternatively, noise surcharges totally unrelated to a landing fee formula could be applied as an operating penalty to noisy aircraft.

In principle, a supplementary noise-based fee could be based on the same published noise data as a use restriction -- FAA Advisory Circular 36-3F. A typical fee structure might incorporate the following strategies:

- Using the earlier concept of a 87.5 dBA SEL noise limit as an example, an aircraft producing more than that level might be charged $2 for every decibel or part thereof over the limit; thus, a Dassault Falcon 10/20 with an SEL level of 88.1 dBA would pay an additional $2 to land.

- To account for the increased intrusiveness of night operations, landings between 10:00 p.m. and 7:00 a.m., for example, might be charged starting at a level 10 dB lower than the daytime threshold -- 77.7 dBA in this case. Then a Dassault Falcon 10/20 with an SEL level of 88.1 dBA would pay a $2 surcharge for a daytime landing and a $22 surcharge at night. All aircraft paying a daytime surcharge would pay an additional $20 to land at night.

- Variations of this schedule might include starting the surcharges at a different level, charging a rate other than $2 per decibel, reducing the landing fee for quieter aircraft, charging the fee only at night, and so on.

Although it is difficult to predict the effectiveness of a particular fee structure, the measure is believed to be an effective means of changing patterns of operations.

- Potential Form of Use Restriction at GAI

In order to pass the discrimination test, a restriction must be based on objective noise rankings. Table 6.4 provides such a basis.

A use restriction that prohibited all night operations in aircraft noisier than 87.5 dBA SEL would appear to be effective at GAI. The 87.5 dBA limit represents the SEL level of the MU300 and the Lear35 business jet aircraft modelled at GAI. These are the INM equivalent of the Beechjet 400, Dassault Falcon 50, British Aerospace HS125-800 and the IAI Westwind 1124 jet aircraft assumed to be operating at GAI. To determine the best possible form of a use restriction at GAI, the FAA's AC36-3F should be evaluated and the noise limit for the aforementioned aircraft set based on the metric used in the publication - maximum A-weighted sound level or Lmax.

An evaluation of AC36-3F reveals that a maximum permitted noise level on takeoff of 71.5 dBA would be an acceptable level for use at GAI. This would prohibit, voluntarily, all night departures by older noisier corporate jets. Jets still permitted to operate at night would include the Cessna Citation I, II, and some versions of the III; the Gulfstream IV; the Dassault Falcon 10 and 900; the Challenger 600 and 601; the Lear 55 and some models of the Lear 35/36 with the Century III engines; and only the IAI Westwind 1124 model, not the 1124A or 1124IW model.

The proposed use restriction would result in a 0.2 dB decrease in the overall Ldn at GAI. The information presented in EXP analysis indicates that these operations would not produce a potentially "significant" change in the noise levels but that the noisiest nighttime jet operations would be reduced, on average, by one operation every ten days. The elimination of <u>all</u> other nighttime operations would only result in a decrease in the Ldn of an additional 0.5 dB. Although not considered significant, in terms of overall operations, the reduction in exceptionally loud aircraft overflights at night would prove to be an important factor to reduce disturbance, especially sleep interference, to local residents.

The restriction would probably meet several of the legality issues discussed previously. The restriction is not arbitrary or capricious, because Table 6.4 clearly indicate its benefits. The restriction is not discriminatory because it is based on accepted operational noise data. However, the potential effects on interstate commerce would still be questioned. The impact on interstate commerce would be minimal for several reasons: (1) the restriction would not affect any daily scheduled operations; (2) it would affect aircraft types that are only responsible for less than one percent of the total daily operations at GAI (less at night); and (3) the restriction would not impact an important portion of the daily operations at GAI.

The number of restricted operations would have an insignificant impact on the size of the contours

modelled for the Airpark. However, community input provides strong evidence that the benefits of the restriction would be substantial. The goal of the restriction is to set the noise limit at a level that maximizes noise benefits with the minimum limitation on airpark use. The use restrictions could be modified to include different time limits (10:00 p.m. to 11:00 p.m. or midnight).

The FAA would almost certainly not approve a nighttime use restriction at GAI due to the low levels of noise impact surrounding GAI and the resulting limited noise benefit from a night use restriction. However, a voluntary noise-based use restriction on behalf of GAI can provide some noise benefits to the surrounding community and would eliminate some of the late night operations by particularly disturbing aircraft. Despite the relatively low number of operations affected, it is recommended that this voluntary nighttime use restriction for the noisiest aircraft operating at GAI be considered for inclusion in the noise compatibility program.

The MCRA Board rejected this recommendation at their meeting on 28 October, 1992. The inability to include enforcement with this measure and the lack of cooperation with pilots and FBO's with a voluntary measure was the reasoning behind this decision.

6.3.2 Air Traffic Control Tower

Part 150 Reference B150.7 (b)(6)
- Other actions with beneficial noise impacts

It has been discussed in several of the aforementioned operational abatement alternatives that an air traffic control tower (ATCT) is needed to implement several of the elements discussed. The overall purpose of such a ATCT would be to provide positive local direction to pilots operating at GAI. This could in fact increase compliance with noise abatement measures at the Airpark.

The two ATCT options that are considered include a full time FAA-operated ATCT and a non-FAA ATCT operated by a private firm (contract tower).

The FAA, until early 1991, had established general criteria which an airport must meet to "qualify" for an FAA-operated ATCT. The most important criteria was the activity level at the airport. The activity level required to establish an FAA-operated ATCT was approximately 200,000 annual operations. At that level, the FAA would construct and equip the tower and pay all operational cost (equipment maintenance and staffing costs). Presently, Montgomery County Airpark has existing annual operations of just over 108,000 which is expected to increase by 1996 to just over 122,000 annual operations.

The actual number of operations that the FAA would count towards the criteria level would likely

be somewhat higher. Any ATCT staff at GAI would also count overflights and other local traffic which they might handle. However, it is very unlikely that these additional traffic sources would add sufficiently to local traffic counts to justify an FAA-operated ATCT.

The FAA can also authorize the operations of ATCT by private firms. The FAA has approved two firms to provide such services. The firms operate the ATCTs either under contract to the FAA or to the local airport proprietor. Prior to early 1991, the FAA required that an airport have 125,000 annual operations to be eligible for an approved contract ATCT. However, FAA approval does not mean FAA funding. Approval for FAA funding is a separate issue, with a higher operational requirement, as noted above. Annual operations at GAI are presently just over 108,000 and are projected to increase to just over 122,000 operations within five years. However, since GAI is a non-towered airport, no operations records have been kept over the years. Therefore, over the past year the Maryland Aviation Administration undertook a study to determine the annual operations at the Airpark. The operations data is accurate within a 95 percent confidence level or ($\pm$12.27 %). Therefore, 1991 existing operations could range up to 121,000 operations and the 1996 future operations could range up to 137,000 operations. Although operational levels would not warrant FAA approval for existing operations under any scenario, the future operations could warrant the approval of a non-FAA contract ATCT. In addition, the operational criteria levels are not absolute numbers. The FAA Regional Director may also approve a contract ATCT at his discretion.

A contact at Barton-ATC, one of the two firms the FAA has approved to operate contract ATCTs, provided the following information on approximate costs.

Operating and capital costs for a ATCT which is open ten hours a day, seven days a week would be approximately $300,000 per year under a five year contract. For this amount, Barton would provide and install the tower and all associated equipment. Under this scenario, the tower and equipment remain the property of Barton. The company would remove the tower and equipment at the end of the contract.

Barton will sell and install a fully-equipped ATCT that would meet requirements for service at GAI for approximately $750,000. Barton will operate such a ATCT for approximately $150,000 to $225,000 per year for 14-15 hours a day, seven days per week. Twenty-four hour operation would cost approximately $300,000 per year.

As previously mentioned, the FAA early in 1991 changed the criteria necessary to operate and fund a ATCT. The new criteria are not based entirely on the activity levels but are subject to a benefit/cost (b/c) analysis.

The benefits and costs of an ATCT are based on a complicated formula with numerous variables.

In addition to the activity levels, the new formula takes into account the type and number of specific aircraft types, value of aircraft, accident potential, amount of scheduled and air taxi service, community benefit, fuel savings, aircraft spacing, and numerous other items. If the benefit/cost ratio is greater than one (1), than the airport is eligible for approval and funding of an ATCT. However, if approved the ATCT may still not be operated by the FAA, due to a lack of personnel. The ATCT would than be included in the contract tower program and would be eligible for Federal funding. However, in the past, the ATCT would be eligible for funding of only operational costs, not the costs of the tower and related equipment.

The new FAA guidelines for a ATCT installation are very unclear. The determination of whether an FAA ATCT or a contract ATCT should be installed are also very unclear. It is anticipated that the FAA will have clear guidelines regarding the complete tower program sometime near the end of 1991.

To determine if the airport meets the new guidelines, the airport or airport proprietor must apply to the FAA Regional Administrator and request consideration for an ATCT. The airport must request Federal assistance in funding and supporting an ATCT. The FAA will generally undertake a study and determination of the need for an ATCT by the analysis of the benefit/cost ratio.

Although a ATCT may increase local direction and control of pilots and stricter adherence with noise abatement procedures, this is not covered under Part 150 guidelines and is not recommended as part of this study. However, Montgomery County may chose to pursue any further consideration for installation of an ATCT at GAI with the FAA.

6.4 Miscellaneous

6.4.1 Airside Signs

Part 150 Reference B150.7 (b)(6)
- Other actions with beneficial noise impacts

To educate and remind pilots of the various voluntary and mandatory noise abatement rules at GAI, various means to convey the information must be considered. Some of the information may be conveyed by use of the Airport/Facility Directory, Letters to Airmen, and Jeppesen Plates. Informational brochures and notices or bulletin boards located in the offices of the FBOs would also serve this purpose.

Another method could be the installation of additional noise abatement signs located directly on the airfield to serve as a last minute reminder to pilots. GAI already has one airside sign on the taxiway

for departures on Runway 32. The sign states "Noise Abatement Runway 32 - Turn right to at least 340 degrees, refrain from night use of Runway 32". Based on the aforementioned discussions, analysis, and recommendations the additional or updated signs could be used as a reminder to pilots to; (1) maximize departures on Runway 14, (2) use the NBAA Close-In Departure Procedure (business jet aircraft only) for Runway 32 departures, (3) turn right on Runway 32 departures, and (4) restrict operations by noisy aircraft after 10:00 p.m..

Installation of noise abatement signs would be an integral part of noise abatement procedures at GAI. Signs would tend to remind pilots that noise abatement procedures are in effect and that in fact there are sensitive noise areas surrounding the Airpark. It is recommended that noise abatement signs be given serious consideration as an integral part of the Noise Compatibility Program.

6.4.2 Noise Complaint Receipt and Response Procedures

Part 150 Reference B150.7 (b)(6)
- Other actions with beneficial noise impacts

Noise complaints received by Airpark personnel are presently not subjected to any formal logging process. It is suggested that the Airpark designate a telephone line for the purpose of receiving and logging noise complaints from the community. In addition, a telephone answering machine could be used to record messages from callers 24-hours per day. Every day, or the first day after a weekend or holiday, the messages from the previous day should be taken and transferred to a standard complaint form. The form (see Appendix D) should note the following information, providing it was given by the caller:

- date of the call;
- the name, address and telephone number of the caller;
- the nature of the complaint; and
- remarks relating to the complaint.

Every complaint should be reviewed by the Airpark manager or a member of his staff, and logged. Airpark personnel should attempt to determine the owner (operator) or 'N' number of the aircraft in question, through discussions with FAA tower personnel at BWI, FBO personnel, or through their own observation. A full investigation may not be undertaken if minimal information is provided. If ownership is determined, a letter is sent or a telephone call is made to the owner of the pilot of the aircraft. The pilot is asked for his/her cooperation in reducing noise over the noise-sensitive areas around the Airpark, providing the complainant has a legitimate complaint.

Comments from pilots which are relevant to the complaint are also logged. Every caller should be

contacted by a member of the Airpark staff within 15 days of the call (providing the callers telephone number was given) or in writing to acknowledge receipt of his/her call (providing the address was given). The caller should be told the disposition of the original complaint. Periodically, all complaints are summarized and follow-ups are discussed. A summary of noise complaints would prove beneficial in the identification and evaluation of future problem areas.

The procedures as outlined above and in Appendix D should be an effective method for dealing with noise complaints as received at GAI. It is recommended that the responsibility for the complaint review process be delegated to one specific Airpark employee. Every effort should continue to be made to identify the source of each complaint and to encourage greater pilot awareness when needed. It is recommended that this measure be included formally in the noise compatibility program.

6.4.3 Noise Monitoring System

Part 150 Reference B150.7 (b)(6)
- Other actions with beneficial noise impacts

A noise and operations monitoring system is often considered a noise abatement tool because of its capability to collect and analyze noise data. It can also play an integral part of a monitoring and implementation program. Any system would initiate a data base of all aircraft-related noise events at the Airpark. Analysis would be able to disaggregate the loud events and help determine if aircraft are following noise abatement flight tracks or help to identify an especially loud aircraft. Noise complaints could be tied to noise events to help correlate aircraft operation/location with type of complaint. The system would also be able to detect changes in the noise exposure to determine if an update of the exposure maps should be undertaken. It could be an effective tool for monitoring the noise environment around GAI.

A permanent noise monitoring system for GAI would be a system to collect long-term cumulative Ldn and SEL noise data. However, system cost could easily be $200,000 to $300,000. Another option to consider would be the purchase of several portable noise monitors. These monitors would be used during different periods throughout the year monitoring noise levels at different locations within the community. This would serve to collect the same base of information as the permanent system. It is estimated that two portable noise monitors would cost approximately $30,000 ($15,000 each).

The size of the Airpark and the resulting noise levels are too low to warrant the funding of this system at GAI. FAA would almost certainly not approve or fund the system. In addition, funding of this magnitude from the MCRA is also highly unlikely.

It is recommended that no further consideration be given to including a noise monitoring system in the noise compatibility program.

6.4.4 Public Information Program/Review and Implementation

Part 150 Reference B150.7 (b)(6)
- Other actions with beneficial noise impacts

A continuing public information program should be undertaken to inform the public about aircraft noise, impacts, and compatible land use. This public information is usually in the form of a noise abatement committee. Presently, no such committee exists. The group would meet to discuss items related to the noise problems at GAI, and the discussion would include a summary of the noise complaints registered since the last meeting, progress on the Part 150 study, and items relating to old problems and new ideas on noise abatement.

The noise committee should meet on a regularly scheduled basis. This committee would be made up of Airpark users, County officials, Airpark representatives, and concerned citizens. The committee would result in a public information program that could inform the public about noise and work on additional noise problems at the Airpark. The committee should stay in contact with the local population by periodically developing small informational handouts to be mailed to interested citizens or by releasing information to the press. Handouts could include a telephone number of a member of the committee that could be contacted should interested parties have any questions. The committee could have the responsibility of overseeing the implementation of the Noise Compatibility Program. This would include overseeing the implementation of the NCP measures and the periodic updating of the overall program.

Information about the Airpark noise environment should be available for public review at locations such as at county offices or at public libraries. As part of this program the Airpark should advise the public of its desire to be a good neighbor and inform them of the Airpark's efforts to control noise. As part of maintaining or improving relationships between the aviation community and Airpark neighbors, it is recommended that a strong public involvement program be included as an element in the Noise Compatibility Program.

6.4.5 Noise Abatement Contact

Part 150 Reference B150.7 (b)(6)
- Other actions with beneficial noise impacts

A Noise Abatement Officer's typical duties include handling noise complaints, collecting and

compiling noise measurement data, serving on local noise abatement committees, and keeping the public informed. A Noise Abatement Officer must be able to quickly handle complaints and trouble-shoot the complaint review system from the time of the actual complaint through the final report to the public.

The level of noise at GAI does not warrant the appointment of a full- or part-time Noise Abatement Officer. It would seem more appropriate to designate an existing Airpark employee to handle the position. This employee would become the official "contact" for all noise related items concerning the Airpark. Specifically, the noise contact would be responsible for the noise complaint review process and would participate in the public information program through attendance at noise abatement committee meetings.

It is recommended that a noise contact be designated at GAI. This noise contact should be considered as part of the overall Noise Compatibility Program.

6.4.6 ATIS/ATCT Advisories

Part 150 Reference B150.7 (b)(6)
- Other actions with beneficial noise impacts

The FAA can play an instrumental role in helping to make pilots aware of some noise abatement measures, even those of a voluntary nature. This could be accomplished both through the use of the Automatic Terminal Information Service (ATIS) or direct FAA Air Traffic Control Tower (ATCT) transmissions to pilots, reminding or advising them to follow certain noise abatement instructions. The ATCT option is evaluated should GAI eventually receive a Tower, although the BWI ATCT which controls IFR departures at GAI could relay procedural information to IFR pilots.

The ATIS is a continuous recording relaying non-control information in areas of high activity. ATIS procedures outlined in Section 9, "Automatic Terminal Information Service Procedures," of Order 7110.65E do not specifically identify noise abatement messages as allowable content. The FAA has stated repeatedly that this service is for operational messages and will not be used for noise abatement messages.

Proposed revisions to FAR Part 150 regulations have recently been evaluated by FAA in Washington to include approval of ATIS transmissions as reminders to pilots to "follow noise abatement instructions per Letter to Airmen No. ". Subsequent correspondence from the FAA has indicated that ATIS transmissions can be used to remind pilots that noise abatement procedures are in effect.

The FAA also discourages day-to-day advisories between the pilots and tower personnel other than

those necessary for the safe control and separation of aircraft. This is done to protect interests of safety and to reduce transmissions during busy air traffic control periods. An ongoing program to remind all pilots to "follow noise abatement procedures," would almost certainly not be approved by FAA. However, another possibility might be for air traffic controllers to give noise abatement advisories only to those pilots who fly itinerant business jet aircraft and who are generally believed to be unfamiliar with the operations at GAI. In addition, pilots who request headings not consistent with noise abatement procedures, would be reminded that noise abatement procedures are in effect.

Presently, almost all IFR traffic departing on Runway 14 or 32 at GAI are given instructions to "proceed to the Westminster VOR". It is recommended that the BWI and the FAA continue giving aircraft instructions upon departing Runway 32 to "proceed to the Westminster VOR".

Increased ATIS radio transmissions should be encouraged, at least on a minimal advisory level. These would be especially helpful for reminding VFR aircraft to follow noise abatement procedures. Instructions from the BWI ATCT could play a part an important role in advising local IFR traffic. It is recommended that these alternatives should be given strong consideration in the noise compatibility program.

6.4.7 Informational Brochures

Part 150 Reference B150.7 (b)(6)
- Other actions with beneficial noise impacts

A informational brochure that summarizes all existing and proposed noise abatement procedures should be considered at GAI. It would be another means to convey to pilots the methods by which they can "fly quiet" and be a good neighbor to the residents surrounding the airport. The brochure would be in addition to the Letters to Airmen, Jeppesen Plates, airside signs, bulletin boards and notices in the offices of the FBO's.

The brochure would outline all use restrictions, preferential runways, departure procedures, and would highlight noise sensitive areas around the Airpark. The brochure could also give information on the noise abatement committee, and whom they should contact if they have any questions.

Although the brochure would be an additional method to remind and instruct pilots to follow noise abatement procedures, it would contain a short summary that would be useful for pilots to have. It is recommended to give further consideration of publication of a informational brochure in the Noise Compatibility Program.

7. EVALUATION OF LAND USE ALTERNATIVES

FAR Part 150 regulations require that a certain number of alternatives be analyzed, providing they are appropriate to the airport. The selected land use alternatives as outlined in section 2 represent alternatives chosen after a detailed analysis. This section comprises the results of the preliminary analysis distributed to the Advisory Committee at the fourth committee meeting and released to the public during the second Community Workshop. Additional information may have been added to further bolster the recommendations in Section 2.

7.1 Remedial Strategies

Remedial land use measures for airport noise compatibility planning are generally implemented to correct or alleviate existing land use compatibility concerns. As identified in the NEM, there are no incompatible land uses located within the noise contours according to FAA guidelines. Therefore, the following is a listing of the remedial measures with a recommendation regarding inclusion in the implementation plan as a preferred land use alternative.

7.1.1 Land Acquisition and Relocation

Part 150 Reference B150.7 (b)(1)
- Acquisition of land and interests, including but not limited to air rights, easements, and development rights.

A land acquisition and relocation assistance program could be instituted to eliminate certain incompatible uses in areas subject to higher noise levels (Ldn 70) or areas that will experience adverse social impacts. Land acquisition through fee-simple purchase and subsequent relocation or residences and businesses that could not otherwise be made compatible would enable specific development control over the land purchases.

Land acquisition and relocation should follow the procedures identified in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), which identifies the provision of moving and related expenses, length of time allowed to find suitable replacement, housing payments, relocation assistance, advisory shares and federal share of the cost of such payments and services. In general, any property that is subject to acquisition is appraised by a certified appraiser. Prior to negotiations with the owner, a just compensation amount is established for the property and improvements, excluding relocation cost.

Each property subject to acquisition is required to have at least one appraisal completed and reviewed by the airport sponsor. The sponsor will establish just compensation for each property under review

prior to negotiation. Property acquisition is then carried out by reasonable negotiation and by condemnation only if all other reasonable efforts fail. Once the property under review is acquired, the regulation of the Uniform Act for relocation assistance are implemented. The Uniform Act is designed to benefit and protect the public in obtaining fair market value and assistance with relocation costs.

If an acquisition and relocation program is implemented, fee-simple purchase of the structure, associated improvements, and land is usually undertaken. Acquisition of structure and land is required in subdivided areas where dwellings are located on typical urban/suburban-sized lots, which are normally less than one acre in size. However, in more rural areas where dwellings are located on larger tracts of land (i.e., several acres), it may be possible to purchase the dwelling or the dwelling and land directly associated with the structure in lieu of the entire acreage.

This strategy is not recommended for implementation since there are no incompatible land uses located within the existing 60 Ldn contour or above. Additionally, it is not likely that the FAA would provide funds for implementation of this strategy as a remedial measure in areas outside the 65 Ldn contour.

7.1.2 Easement Acquisition

Part 150 Reference B150.7 (b)(1)
- Acquisition of land and interests, including but not limited to air rights, easements, and development rights.

An easement is the right to make use of a land owner's property for a limited purpose. There are a variety of easement types, such as utility, avigation, and navigation. In the context of airport noise compatibility planning, two general types of easements are available: 1) those which permit noise over land; and 2) those which prevent establishing or maintaining noise-sensitive uses on the subject property. Avigation easements, which have proven to be an effective means of ensuring compatible development around airports, should ensure the right and privilege of using the airspace for the right of flight, right to create noise, and the right to prohibit future height obstructions into the airspace. In addition, aviation easements should restrict the use of the land itself to those uses which are considered compatible in FAR part 150. Typical restrictions that may be addressed by aviation easements include types of buildings or structures, types of agricultural activity that may attract birds, electromagnetic interference, and light emissions.

Easements may be obtained in several manners, including purchase, condemnation, and dedication. Easements can also be purchased via negotiation, with the price based upon the value to the owner of the rights surrendered. This purchase amount can vary considerable, but a guideline of 10 percent

of real market value is frequently used to obtain rights to permit specific noise levels. Easements may also be obtained by condemnation in a manner similar to full-rights condemnation. The typical cost to the airport owner will be less than fee-simple acquisition but, due to direct condemnation costs, the amount will be higher than through negotiation procedures. Dedication of rights may also be obtained through subdivision regulation or site plan review requirements. Provisions of easements upon private land for public purposes can be required prior to local government approval. In addition, easements may be obtained in return for sound insulation assistance or other mitigation programs.

This strategy is not recommended for implementation since there are no incompatible land uses located within the existing 60 Ldn contour or above. Again, it is not likely not the FAA would provide funds for implementation of this strategy as a remedial measure in areas outside the 65 Ldn contour.

7.1.3 Environmental Review

Part 150 Reference B150.7 (b)(1)
- Other actions with beneficial noise impacts.

A comprehensive environmental review program could be established with thresholds or other mechanisms to trigger an environmental review of existing or proposed development. Permit requirements for activities such as remodeling, restoration, redevelopment or the identification of an area undergoing public facility capital improvements could justify a review of existing development. In addition, all new development located with the 60 Ldn noise contour could be required to be subject to the environmental review process. The review process could be established in a manner similar to subdivision or site plan review procedures utilizing local staff in a committee format. Airpark noise impacts could be determined for specific properties and mitigation, including post-construction sound insulation, or real estate disclosure could be required prior to development approval.

The jurisdictions have the means to control development in this manner. This may be a feasible manner to control new development within the contours. However, this strategy is not recommended for implementation since no residential properties are located within the 60 Ldn noise exposure contour and, therefore, would have no remedial benefits.

7.1.4 Sound Insulation Program

Part 150 Reference B150.7 (b)(1)
- Construction of barriers and shielding, including the soundproofing of public buildings.

Sound Insulation (soundproofing) programs could be developed to obtain greater noise reduction levels within the interior of residential buildings and other structures. Sound Insulation is most effective in reducing interior sound levels in structures that are affected by noise up to 10 decibels over the compatibility threshold. Emphasis could be placed on heating, ventilation, and air conditioning systems (including humidification) to reduce noise infiltration through open doors and windows, as well as sound attenuation through greater insulation requirements or specifically designed sound-deterrent materials (windows, doors, ceilings, and walls). Sealing existing leaks or small gaps in structural foundations (walls, ceilings) can reduce the initial 5 decibels or excessive noise. Implementation of the techniques identified above are capable of providing further noise reduction.

Although sound insulation has proven to be a feasible means of reducing the level of interior noise, the location, age, and condition of older structures may dictate the degree of insulation which can be effectively utilized. In general, it is more difficult to justify, from an economic standpoint, the implementation of capital-intensive insulation techniques for a low-value home than for one of higher market value. The major drawback to the program is that sound insulation and climate control mitigates interior sound levels only and does not ameliorate noise considerations outdoors.

Costs associated with the implementation of a sound insulation program could vary considerably. Experience has shown that sound insulation costs could range from $5,000 to $30,000 per dwelling, depending upon several variables such as the degree of sound insulation required (from insulating the attic only to insulating all exterior walls and ceilings and upgrading doors and windows), size and condition of home, and location within the noise exposure area (lower costs in lower noise impact areas, higher costs in higher noise impact areas). In order to implement the program, a structural and acoustical survey (pre-existing and post modification) of all homes designated as qualified compatible would be required. The Montgomery County Revenue Authority would be eligible for Federal funding assistance under the Part 150 program to implement sound insulation improvements for only those areas located in the 65 Ldn contour and above.

Insulation of existing buildings can be a costly alternative. Buildings within the 60 Ldn contour would not be eligible for federal funds thereby leaving the financial burden on the local communities.

This strategy is not feasible since there are no incompatible uses located in the 60 Ldn contour. The

insulation of structures below the 60 Ldn contour would provide little benefit and would likely be very costly. Therefore, this strategy is not recommended for implementation.

7.1.5 Noise Barriers

Part 150 Reference B150.7 (b)(1)
- Construction of barriers and shielding, including the soundproofing of public buildings.

A program that includes the construction of noise barriers would serve to alleviate noise impact to development that is close to the Airpark. In application, a barrier will reflect and/or refract noise energy prior to its being received by receptors located further away from the noise source. This strategy was evaluated as part of the analysis for Operational Alternatives (see Section 6).

Since there are no residences located along the sides of the runway, or close in to the airpark with line-of-sight exposure to noise from takeoff roll and reverse thrust, there is no likely benefit from noise barriers. Therefore, this strategy is not recommended for implementation.

7.1.6 Tax Incentives

Part 150 Reference B150.7 (b)(1)
- Other actions with beneficial noise impacts.

Remedial tax incentive programs are typically related to promoting sound attenuation improvements. The strategy is to provide a break in federal, state, or local taxes to existing incompatible uses in order to encourage structural improvements which serve to reduce interior noise levels.

Additional tax incentive programs may be instituted by federal, state, or local governmental bodies as a means of redeveloping specific areas. For instance, a designated blighted zone or foreign trade zone can provide a redevelopment catalyst.

Various tax breaks, such as reduction or elimination of property taxes may also be provided, usually to private industry, for relocating or expanding industry to increase local ad valorem tax base or to diversify the local economy.

Tax reduction or differential tax assessment can foster incentives for development in specific areas. As an example, development of noise-tolerant uses in areas subject to higher noise levels can be encouraged, which may consequently discourage other noise-sensitive uses. Industrial development is particularly sensitive to taxation systems and can be affected to a greater degree than residential

or commercial development. This type of development typically requires input and support from the local economic development agency in terms of designation of areas and planning and zoning coordination with regard to compatibility issues and appropriate zoning.

Since the sound insulation program would have no remedial benefits a tax incentive program to promote sound attenuation improvements is unnecessary. Therefore, this strategy is not recommended for implementation.

7.1.7 Purchase Assurance Program

Part 150 Reference B150.7 (b)(1)
- Other actions with beneficial noise impacts.

A purchase assurance program would give homeowners who wish to relocate a guarantee that they will get the fair market value for their house. Homeowners willing to move are usually given a set time to sell their house. Typically, if not sold within that time the property is valued by three independent appraisers, with the homeowner generally lowering the price of the house to achieve a sale. The Airport would than pay the difference between the assessed value and the sale value of the property. The property is than resold for residential use with the Airport in return getting an avigation easement for the property. Additional noise insulation may be incorporated into the property before it is resold.

This program is most always proposed in areas where the noise level is between 65 and 75 Ldn. However, because of the difficulty of determining the effect of aircraft noise on property values at low noise exposure levels, to our knowledge, this option has never been implemented at levels less than 70 dB Ldn. Also, the program would be ineligible for Federal funding at levels less than 65 dB Ldn.

This strategy is not feasible since there are no incompatible uses located in the 60 Ldn contour. In addition, buildings within the 60 Ldn contour would not be eligible for federal funds thereby leaving the financial burden on the local communities. Therefore, this strategy is not recommended for implementation.

7.2 Preventative Strategies

Preventive land use measures for airport noise compatibility planning are normally enacted to decrease the possibility of incompatible land uses being developed in the future. Since these strategies are preventive in nature, it is not necessary for existing incompatibilities to be present. Many of the preventive strategies require action by the local government and can be implemented

by the local government in any noise contour they choose. The following is a listing of the preventive measures with a preliminary recommendation regarding inclusion in the implementation plan as a preferred alternative.

7.2.1 Land Acquisition

Part 150 Reference B150.7 (b)(1)
- Acquisition of land and interests, including but not limited to air rights, easements, and development rights.

Similar to that discussed earlier under remedial land use measures (see Section 7.1.1), the acquisition of land could also be pursued as a preventative measure. This measure would acquire property that has the potential to create incompatible land uses.

This strategy is not recommended for implementation because no undeveloped area, that has the potential to become incompatible residential, exists within the 60 Ldn noise exposure contour. Other areas outside the 60 Ldn contour can best be addressed by other preventive measures.

7.2.2 Easement Acquisition

Part 150 Reference B150.7 (b)(1)
- Acquisition of land and interests, including but not limited to air rights, easements, and development rights.

Similar to that discussed earlier under remedial land use measures (see Section 7.1.2), the acquisition of easements could also be pursued as a preventative measure. This measure would acquire the right to create noise and overfly undeveloped property that has the potential to create incompatible land uses.

This strategy is not recommended for implementation because no undeveloped area, that has the potential to become incompatible residential, exists within the 60 Ldn noise exposure contour. This measure would also have no preventive benefits since it would not prevent incompatible uses from being developed. Other areas outside the 60 Ldn contour can best be addressed by other preventive measures.

7.2.3 Real Estate Disclosure

Part 150 Reference B150.7 (b)(1)
- Other actions with beneficial noise impacts.

The preparation of real estate disclosure notices is a common practice when environmental regulations and issues affect the potential of development. Identification of airport noise impacts on real estate may foster an awareness of airport/community relationships and serve notice to potential lessors or buyers in noise-impacted areas of the potential for disturbances due to aircraft noise.

Regulations could be written to require the seller or his agent to be required to provide notification of potential noise impact in the form of a deed covenant. Voluntary notification through the Board of Realtors or local lenders would eliminate the need for making real estate disclosures a legal requirement.

This measure would ensure knowledge of aircraft noise impacts on the area to new residents. It is felt that if local lending institutions, realtors, mortgage companies, developers, and title companies were educated in terms of the Airpark's noise exposure area and its effect on development, that these organizations would support the establishment of a program that would include real estate disclosures. In essence, the real estate disclosure would be included in the title of a property located within the noise exposure area.

The Montgomery County Code, Chapter 40, Section 40-10 and 40-11, presently requires notification to prospective homebuyers. This notification includes the right to review the Gaithersburg Vicinity Master Plan and the notification that an airport is within five miles of their homes. Most real estate contracts in the area presently contain the clause "Purchaser acknowledges that the Agent has advised him of the relative location of any airport or heliport existing within a five (5) mile radius of the property."

A strengthening of the real estate notification process has had support from many parties involved in this study. These include the Montgomery County Airpark Association, the Maryland-National Capital Park and Planning Commission, the Airport Manager, members of the Technical Advisory Committee, and the Montgomery County Airpark Liaison Committee.

Although there are no incompatible land uses within the 60 Ldn noise exposure contour, a strengthened real estate disclosure ordinance is recommended. This ordinance should be expanded to become a more formal and separate disclosure beyond the limit of the noise contours to notify prospective homeowners of the nuisance of aircraft flyovers. Use of the Figure 1.1, Noise Exposure Map Summary, (see Volume 1, NEM) could be used as basis for this new notification process

7.2.4 Compatible Use Zoning/Overlay District

Part 150 Reference B150.7 (b)(1)
- Other actions with beneficial noise impacts.

Typically, the most common and effective method of controlling land use is zoning. Zoning ordinances enable local governments to designate appropriate uses and the densities of such uses on land with respect to the lot or parcel, limitation, and the relative character of adjacent uses. Conventional zoning refers to the application of regulatory control throughout a local jurisdiction. Enactment of zoning to promote compatible development, rezoning of land to a compatible use, decreasing density by increasing minimum lot size, and prohibiting mobile homes in high noise impact areas are all conventional techniques which serve to minimize the number of residents impacted by airport noise in the future.

Other zoning techniques which may also serve to mitigate adverse noise impacts include providing airport noise overlay districts and transfer of development rights. The overlay zoning concept involves restricting uses which are highly sensitive to noise and may also feature general construction references to insulate against exterior noise. The overlay district is particularly effective in that criterion-specific (i.e., noise, pressure, etc.) boundaries can be developed to implement the regulatory requirements. Transfer of development rights promotes development at higher densities in areas with compatible noise levels in return for lower densities or no development on land within incompatible noise levels.

The jurisdiction, Montgomery County, regulates land development through a zoning ordinance. This zoning ordinance was evaluated to determine how future development in the airpark vicinity is being regulated, whether any future incompatible land uses can be developed, and what revisions may be instituted to ensure land use compatibility between the airpark and its environs.

Through rezoning of undeveloped land, an airport zoning/overlay district strategy could ensure that incompatible development is prevented. Montgomery County has a Zoning Ordinance in effect. However, the zoning regulations do not specifically address aircraft noise impacts as they relate to surrounding land uses. The possibility of updating the existing zoning ordinance to address aircraft noise impact is a very viable option.

Figure 7.1 presents existing land use in the GAI environs. The figure includes developed land use and areas committed for development. Presently, no residential development exist within the 60 Ldn noise exposure contour adjacent to GAI. The Gaithersburg Vicinity and Upper Rock Creek Master Plans address land use and zoning issues and recommends residential development in areas outside of the 60 Ldn contour.

MONTGOMERY COUNTY AIRPARK

FAR PART 150 STUDY

MONTGOMERY COUNTY REVENUE AUTHORITY

FIGURE 7.1
MONTGOMERY COUNTY VICINITY LAND USE

- RESIDENTIAL
- RESIDENTIAL APPROVED PRELIMINARY PLAN
- COMMERCIAL
- PUBLIC USE (CHURCHES, SCHOOLS, CEMETERIES, ETC.)
- PUBLIC USE APPROVED PRELIMINARY PLAN
- RECREATIONAL
- INDUSTRIAL
- INDUSTRIAL APPROVED PRELIMINARY PLAN
- AGRICULTURAL
- OPEN SPACE

SOURCE: HMMH, 1990
THE LPA GROUP INCORPORATED, 1990

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* - DENOTATES ZONING DESIGNATION

HARRIS MILLER MILLER & HANSON INC.

THE LPA GROUP INCORPORATED

HANIFIN ASSOCIATES, INC.

Only a small area of residential use exists within the 55 Ldn contour. All other undeveloped area, within 55 Ldn, is either commercial industrial, parkland, or committed for industrial development. A proposed residential development outside the 55 Ldn contour was analyzed for rezoning to a less noise-sensitive use. Although several groups pressed for the rezoning of this parcel to prevent future noise problems, the Maryland-National Capital Park and Planning Commission (MNCPPC), through the Montgomery County Planning Board, reaffirms its position that residential development is appropriate outside the 60 Ldn contour as shown on various area Master Plans.

Therefore this strategy is not recommended for implementation because no undeveloped area, that has the potential to become incompatible residential, exists within the 60 Ldn noise exposure contour.

7.2.5 Building Code Revisions

Part 150 Reference B150.7 (b)(1)
- Other actions with beneficial noise impacts.

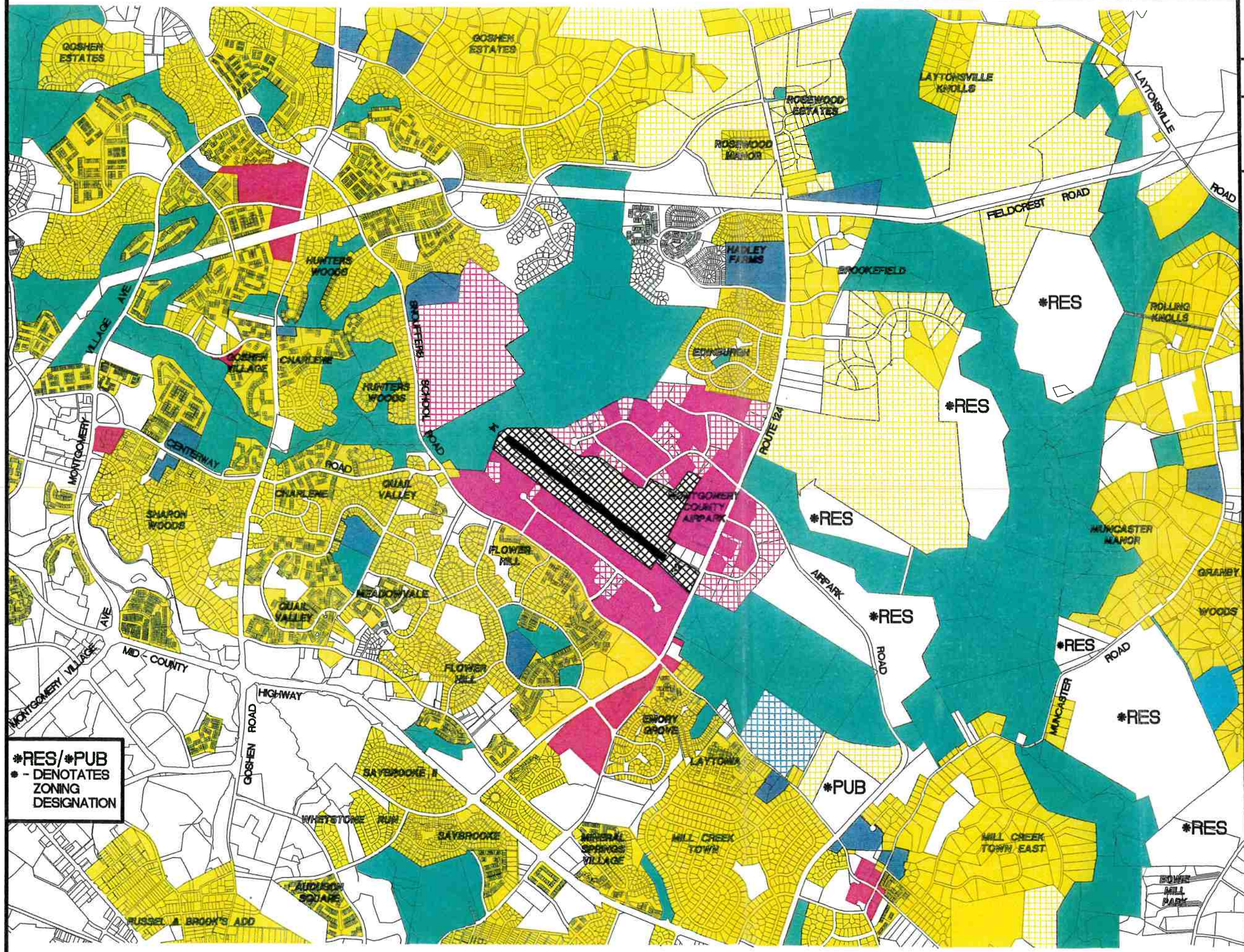
Minimum structural construction techniques and material standards often determine whether changes in current standards or adoption of new standards can increase the interior noise reduction levels of typical residential or commercial structures in impacted areas. Requirements for insulation in the Uniform Building Code are typically based on energy efficiency and not sound attenuation. Each new structure is required to pass inspection procedures provided by the Building Code in each particular area prior to the issuance of a Certificate of Occupancy. Code revisions could occur in a complimentary manner with a sound insulation program.

Through the building code process, new development could be required to provide proper sound insulation in noise impacted areas. However, this strategy is generally used in noise level areas greater than 65 Ldn. This alternative is not recommended for implementation since no undeveloped residential property is located within the 60 Ldn noise exposure contour.

7.2.6 Subdivision Regulations

Part 150 Reference B150.7 (b)(1)
- Other actions with beneficial noise impacts.

Subdivision regulations can guide development in noise-impacted areas by reducing building exposure through orientation and density transfer and by providing better areas and open space requirements. Subdivision review requirements enable the local jurisdiction to determine or evaluate various strategies to minimize noise impacts.



MONTGOMERY COUNTY AIRPARK

FAR PART 150 STUDY

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SOURCE: HMMH, 1990
THE LPA GROUP INCORPORATED, 1990

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SCALE IN FEET

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Through the building code process, new development could be required to provide proper sound insulation in noise impacted areas. However, this strategy is generally used in noise level areas greater than 65 Ldn. This alternative is not recommended for implementation since no undeveloped residential property is located within the 60 Ldn noise exposure contour.

7.2.6 Subdivision Regulations

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- Other actions with beneficial noise impacts.

Subdivision regulations can guide development in noise-impacted areas by reducing building exposure through orientation and density transfer and by providing better areas and open space requirements. Subdivision review requirements enable the local jurisdiction to determine or evaluate various strategies to minimize noise impacts.

In addition, restrictive covenants may by required for all newly platted or replatted subdivisions within areas subjected to relatively low (65-70 Ldn) noise levels where residential development is to occur, or in areas of higher noise levels where commercial or industrial development is proposed. The covenants should be prepared to legally put the owner on notice that the property is subject to noise from aircraft operations and is exposed to aircraft noise. Additionally, a covenant should be developed that requires the building to be designed and constructed to minimize interior sound levels derived from exterior noise sources to the degree required for conformance with FAR Part 150 regulations.

This program could be developed as a preventive strategy. However, revised subdivision regulations would not affect existing development. The benefits that could be gained from this strategy could also be gained from other strategies such as zoning or environmental review.

This strategy assumes that new incompatible development would be allowed but mitigation techniques would be incorporated into structures or developments. However, no undeveloped residential property exists within the 55 Ldn noise exposure contour. Therefore, this strategy is not recommended for implementation.

7.2.7 Comprehensive Planning

Part 150 Reference B150.7 (b)(1)
- Other actions with beneficial noise impacts.

A comprehensive plan is a policy guide to decisions on physical growth and development of a community. Comprehensive planning takes into account existing development and coordinates future development to be compatible. Through an awareness of airport and community relationships, goals and policies can be determined to stimulate proper development of areas subjected to airport noise and discourage sensitive land uses from developing in areas that are impacted by noise. The jurisdictions have some form of a comprehensive plan. These plans could be used to make noise abatement planning a larger part of the growth management and development review process. As policy guides the comprehensive plans could incorporate many of the noise abatement strategies into its policies.

The Gaithersburg Vicinity and Upper Rock Creek Master Plans address land use and zoning issues and already prohibits incompatible residential development in areas within the 60 Ldn contour. However, the Plans should be updated to reflect the extent of the airport noise influence and to make more parties aware of the extent of the noise impact surrounding the airport. Therefore, this strategy is recommended for implementation.

7.2.8 Capital Improvements

Part 150 Reference B150.7 (b)(1)
- Other actions with beneficial noise impacts.

Development can be stimulated or discouraged by the presence or absence of an infrastructure network, which typically includes roads and utilities (power, gas, water and sewer). Other community facilities and services, such as schools, police, fire and EMS service, also tend to promote development. Capital improvements can be programmed for placement of infrastructure to support industrial and commercial uses in areas where growth would be compatible or discourage certain types of growth such as residential development, from areas that are considered incompatible for such use. Similarly, the capital improvements program can be developed to provide appropriate types, sizes, and locations of infrastructure in the noise-impacted areas to encourage noise-tolerant land uses and discourage noise-sensitive land uses in appropriate areas.

Through the development of a capital improvements plan the development of compatible uses could be stimulated. However, capital improvements plans are usually geared towards industrial and commercial land uses and require the development of infrastructure.

A basic infrastructure is already in place in noise impacted areas. Therefore, this strategy is not recommended for implementation.

7.2.9 Development Rights

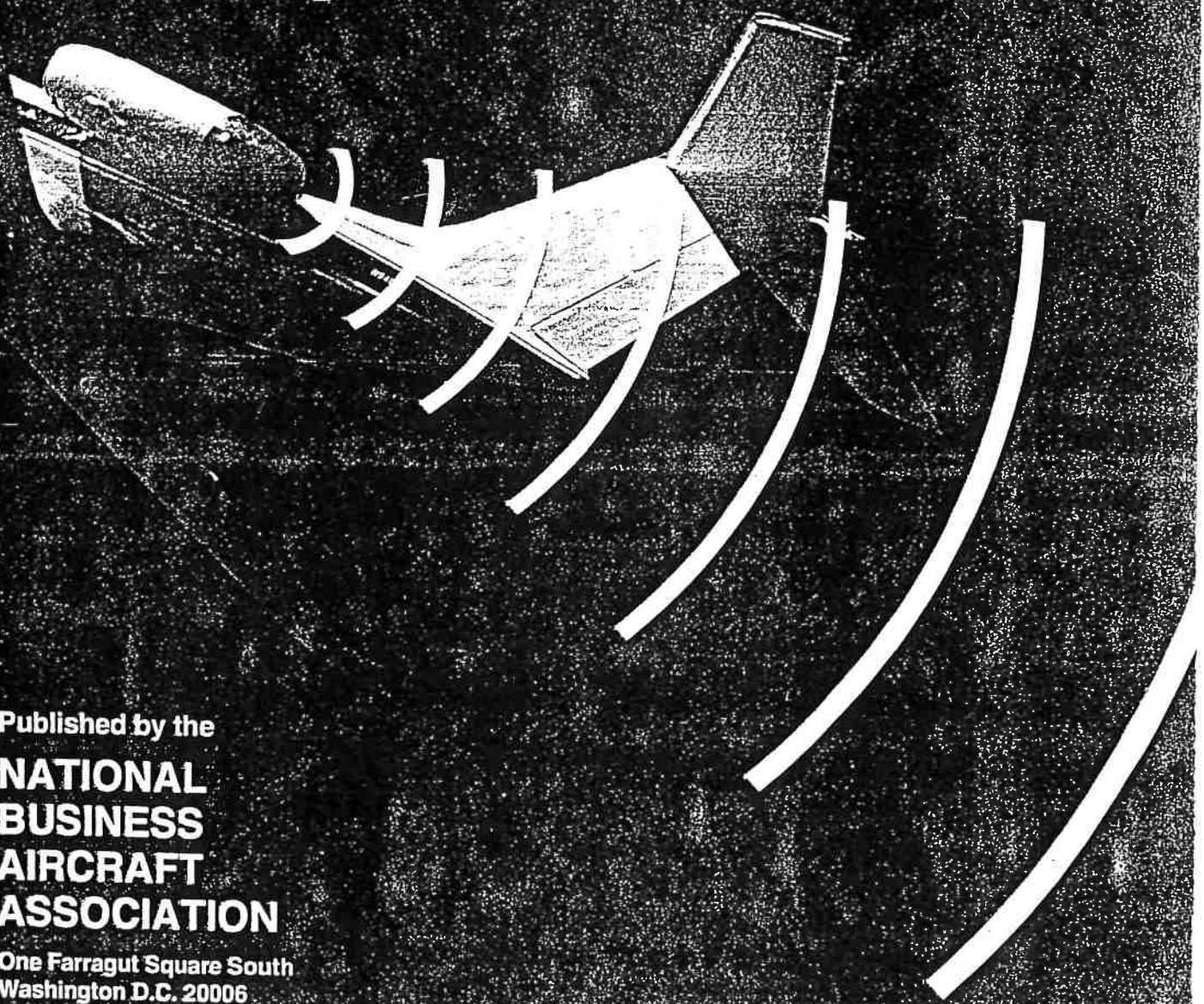
Part 150 Reference B150.7 (b)(1)
- Acquisition of land and interests, including but not limited to air rights, easements, and development rights.

This method for controlling land use would include the purchase from a landowner a limitation on the type or amount of development that could occur on the property. An example would be of residentially-zoned agricultural land that is being considered for a housing development. The property owner would sell to the airport the rights to develop his land. The landowner or farmer would keep the land in agricultural use and would be paid to not develop the property.

However, there is no undeveloped, potentially incompatible, land within the 60 dB Ldn noise contour. Therefore, it was recommended that no further consideration be given to this alternative.

APPENDIX A NBAA Departure Procedures

Noise Abatement Procedures for Turbojet Business Aircraft



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NBAA Noise Abatement Program

Preface

NBAA's Noise Abatement Program has been in existence since 1967. The NBAA objectives and operating procedures have generally withstood the test of time, and have been effective in reducing noise exposure for citizens on the ground.

NBAA procedures are recommended for all operations where they exceed local noise reduction procedures and where no local procedures are established.

When professional opinion indicates that local procedures may be of less effect than NBAA procedures, pilots should contact airport managers with the specific recommendations for change.

Objectives

The objectives of the NBAA Noise Abatement Program, established by the Technical and Operations Committees, state that jet aircraft noise abatement procedures must be:

1. **Safe.** Procedures must not only meet the requirements of known parameters of aircraft performance, they must also provide adequate safety margins so that a prudent, competent pilot will be willing to use them on a repetitive and routine basis under varying conditions.

2. **Standardized.** The same procedures should be applicable to all runways and all airports. For example, the entry point of the second (reduced power) segment of the close-in departure procedure described on page 6 is expressed as an altitude, not a geographic fix. Similarly, the terminal point of this procedure is based on an altitude at which return to climb thrust will not create excessive noise. It should not be based purely on local factors.

Some NBAA procedures impose an operational penalty which cannot be justified solely by the noise level reduction achieved by each aircraft type. We have felt it necessary to make such compromises to achieve standardized procedures which could be used regardless of type and class of aircraft.

3. **Uncomplicated.** Complexity can create misunderstandings, resistance to use and loss of effectiveness.

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The NBAA Noise Abatement Program

The NBAA recommended program for reducing the noise impact of turbojet business aircraft has broad implications for all the various communities affected by aircraft/airport operations.

Turbojet Business Aircraft Operators

1. Business aircraft operators should accept responsibility for operating their aircraft to reduce the noise impact to the lowest practicable level. Noise abatement procedures should be made part of the routine in operating aircraft in and out of *all* airports.

2. Aircraft operators must also take the initiative and responsibility to obtain all pertinent information on the local noise abatement policies followed at any airport they currently use, or expect to use in the future.

3. Operators should be aware that unnecessary use of reverse thrust when landing can be a source of noise. Except for killing residual thrust, use minimum reverse thrust necessary for safety, consistent with runway conditions and available length.

4. Operators flying multi-engine aircraft should refer to the aircraft manufacturer's manual to determine the feasibility of using only one engine to taxi.

Local Communities and Airports

1. The noise abatement procedures recommended by the National Business Aircraft Association are suggested as a national standard for business jet aircraft. They may be applied to any noise sensitive airport. Procedures adopted by any locality should, whenever feasible or beneficial, conform to such a national standard to ensure pilot understanding, acceptance, and use.

2. NBAA member companies should participate in local airport affairs, particularly those concerning noise abatement procedures. Where necessary, technical assistance can be provided to assist airport management in adopting procedures which meet the objectives of the NBAA Noise Abatement Program as they relate to operational safety. Every effort should be made to tailor procedures to the specifics of each airport in order to provide the maximum noise reduction consistent with safe operations practices and without unduly restricting the flow of air traffic.

3. NBAA believes that communities must be given factual data to demonstrate that airport noise level reductions below those achievable through the procedures described cannot be realistically anticipated with current equipment and engines.

4. Approach aids of various types can aid noise abatement procedures at an airport. Improvements in runway facilities aids increase the possibilities for aircraft to use specific runways and approach patterns over the least noise-sensitive areas. Optimal employment of visual and electronic approach aids should be investigated by the airport management.

5. Airport approach and take-off paths should be designated on all official zoning maps. This should be done for all airports, existing or proposed, in order that real estate activity is conducted with full awareness of the confines of such areas. Similarly, the land use permitted in these areas should be specified in zoning regulations and building codes in order to protect inhabitants.

6. Airport management should develop jet aircraft runup areas located so that engine noise will not unduly disturb nearby community or airport tenants. Blast fences, hush houses, etc., should be provided where necessary.

7. Airport management should take a close look at the airport's natural terrain and consider ways in which improvements to landscaping might improve noise conditions around the airport.

8. Airport management should post signs in pilot information centers, as well as at conspicuous places along the taxiways or runway areas, giving the pilots a last reminder that they are in a noise-sensitive area calling for use of noise abatement procedures.

9. A mixing of high and low performance general aviation aircraft on the same runway is often the cause for noticeable additional noise. Some problems that can arise from this type of intermixing are:

a) excessive go-arounds.
b) extended flight over noise-sensitive areas by aircraft in the high-drag high power-setting configuration (flaps and gear extended).
c) derogation of the pilot's ability to follow noise abatement procedures to the fullest.
d) excessive holding before take-off.

The airport management has the responsibility to look at all possible alternatives to control this type of situation. For example, building a short runway of 2500-3500 feet for the use of low performance aircraft would not only help solve many of the problems listed above, but would also allow the airport management to set up more effective noise abatement procedures.

10. The airport management should also contact tower personnel to discuss the development of new ATC procedures for the airport. Adding a phrase such as "use noise abatement procedures" to all tower take-off clearances should also be discussed with the tower.

Airframe and Engine Manufacturing

1. The lowest engine noise levels that can be achieved by engine and airframe manufacturers, without imposing excessive operational penalties, should be determined. New aircraft should be designed to remain within those noise limitations. Regulatory noise limitation on manufacturers should be confined to that which can be achieved within the existing state of the art. Any regulatory action should have sufficient flexibility to permit further noise level reductions as they are developed.

2. Power settings that will achieve a specific flight profile for noise abatement purposes should be developed and published in the manufacturer's flight manuals. Maximum gross weights should be used because business jet aircraft generally have limited gross weight flexibility without incurring an unrealistic operational penalty. Weight reduction as a means of achieving noise reduction is not practical for business jet aircraft. Power setting recommended by manufacturers should meet the following minimum safety criteria:

A. Approach and Landing—
   1) Sufficient engine RPM to permit rapid acceleration of the operative engine(s) in the event of engine failure.
   2) Sufficient engine RPM to permit rapid acceleration of the engine(s) in the event it becomes necessary to abort the approach or landing and made a go-around.
   3) Sufficient engine RPM to operate anti-icing equipment.
   4) Sufficient engine RPM to operate component equipment.

B. Take-off—
   1) Sufficient engine thrust to provide a sustained rate of climb of 1000 FPM.

Flight Information and Pilot Training

Pilot training for turbojet business aircraft should include basic noise abatement procedures in all types of ratings and ATR flight checks.

It is important that airport management also realize that successful application of each airport's noise abatement procedure depends on the effort that is put into educating the pilots. Airport management should consider an education program to inform pilots as to the need for, and procedures associated with, noise abatement and good community relations. A more thorough understanding by the pilots as to what the procedures are, as well as the reasons behind them, is the key to success.

Specific information should be developed by airport management, and made available to the pilot through publication of easily obtainable flight manuals, NOTAMS, AIMS, letter to airmen, charts, and explanatory pamphlets. This information should include:

a) Approach and departure over least noise-sensitive areas;
b) preferential runway usages;
c) recommended noise abatement procedure (see explanation and diagram);
d) general map showing surrounding area and marking places of specific sensitivity such as schools and hospitals.

Air Traffic Control Procedures

1. Preferential runway use systems that are safe and do not unnecessarily restrict the flow of air traffic should be established at all airports having a need for them.

2. Control tower operators should be permitted to give any needed special attention to jet aircraft that may, for purposes of noise abatement, be required to land or take off using a different runway than the one in use by smaller aircraft.

3. The tower should develop procedures that will separate high performance aircraft from low performance aircraft as much as possible.

4. Air traffic control procedures should keep aircraft more than 3000 ft. AGL over noise-sensitive areas to the extent that this can be accomplished without excessive derogation of air traffic flow.

5. The FAA "*Keep-'em-high*" Program is intended to provide noise relief to communities surrounding airports. Pilots should cooperate with controllers in effecting the "*Keep-'em-high*" Program.

6. SID's should include a noise abatement procedure.

7. ATC clearance when issued by tower should include a statement to "use noise abatement procedures."

NBAA Flight Procedures

The prime requirement for an acceptable noise abatement procedure is that it will ensure operational safety.

Secondly, it should provide the lowest sound level over noise-sensitive areas surrounding airports.

The NBAA procedures have been developed to cover:

1) *Take Off**

   a. Standard—for communities more than 10,000 feet from brake release point.
   b. Close-in—for communities less than 10,000 feet from brake release point.

2) *Approach and Landing*

   a. VFR
   b. IFR

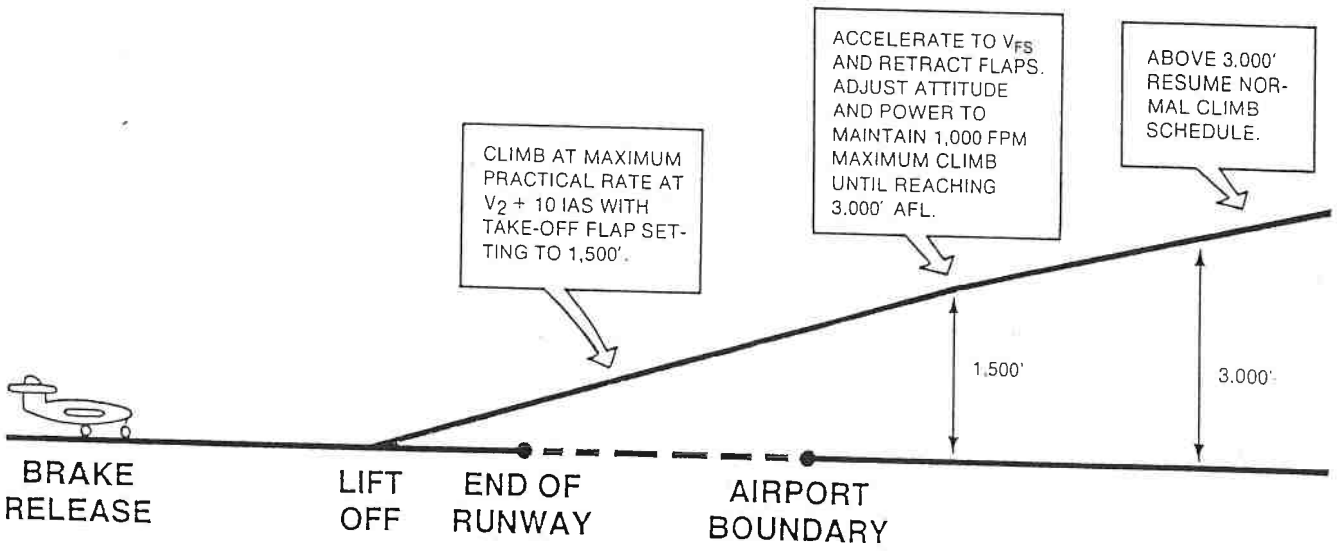
*When in doubt use the close-in procedure.

NBAA STANDARD DEPARTURE PROCEDURE

1) Climb at maximum practical rate at V_2 + 10 Knots indicated airspeed (IAS) with take-off flap setting to 1,500' above field level (AFL).
2) At 1,500' AFL, accelerate to final segment speed (V_{FS}) and retract flaps. Adjust attitude and power to maintain 1,000 FPM maximum climb until reaching 3,000' AFL. If ATC requires level off prior to 3,000' AFL power may be reduced to avoid excess IAS. (See Notes 1 and 2)
3) Above 3,000' AFL, resume normal climb schedule.
4) Observe all speed limits and ATC instructions.

Notes applicable to the procedure are:

1) Consult your flight manual. Final Segement speed (V_{FS}) is usually found in the aircraft's flight manual and is generally equal to, but never less than, 1.25 Vs.
2) It is recognized that aircraft performance will differ with aircraft type and take-off conditions. Therefore, the business aircraft operator must have latitude to determine whether take-off thrust should be reduced prior to, during, or after flap retraction.



NBAA CLOSE-IN DEPARTURE PROCEDURE

1) Accelerate to V_2 + 10 Knots IAS with take-off flaps.
2) At 500' AFL, reduce power to a climb setting that will maintain V_2 + 10 Knots IAS and sustain a 1,000 FPM maximum rate of climb.
3) At 1,500' AFL, accelerate to final segment speed (VFS) and retract flaps. Adjust attitude and power to maintain 1,000 FPM maximum climb until reaching 3,000' AFL. If ATC requires level off prior to 3,000' AFL power may be reduced to avoid excess IAS. (See Notes 1 and 2)
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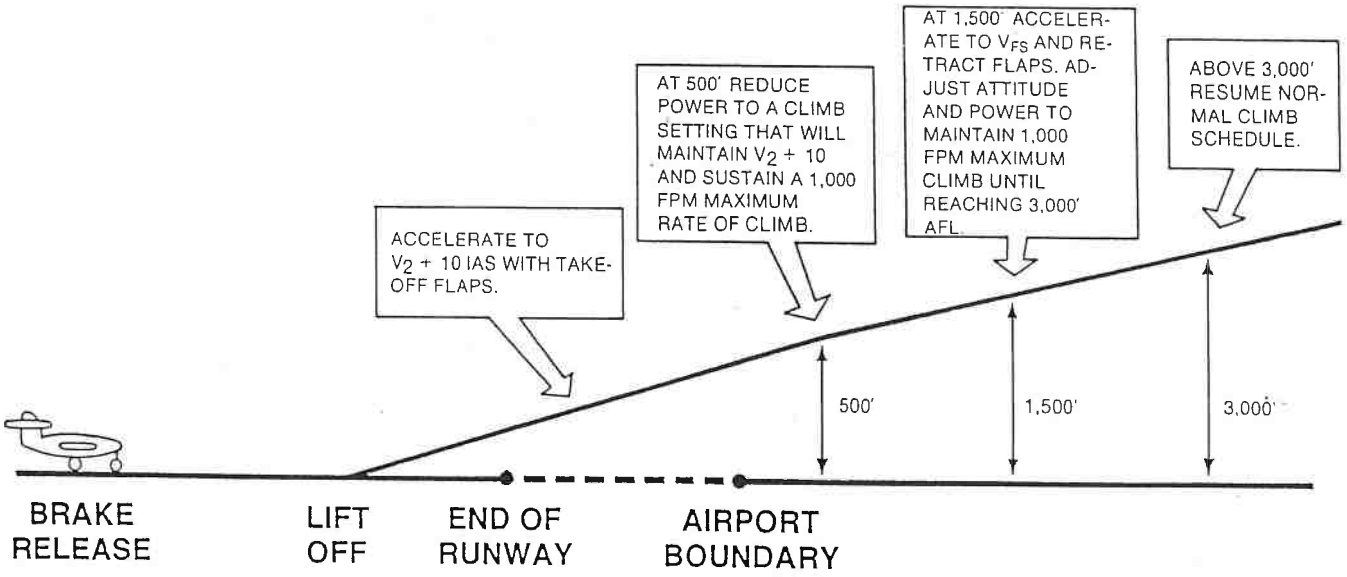
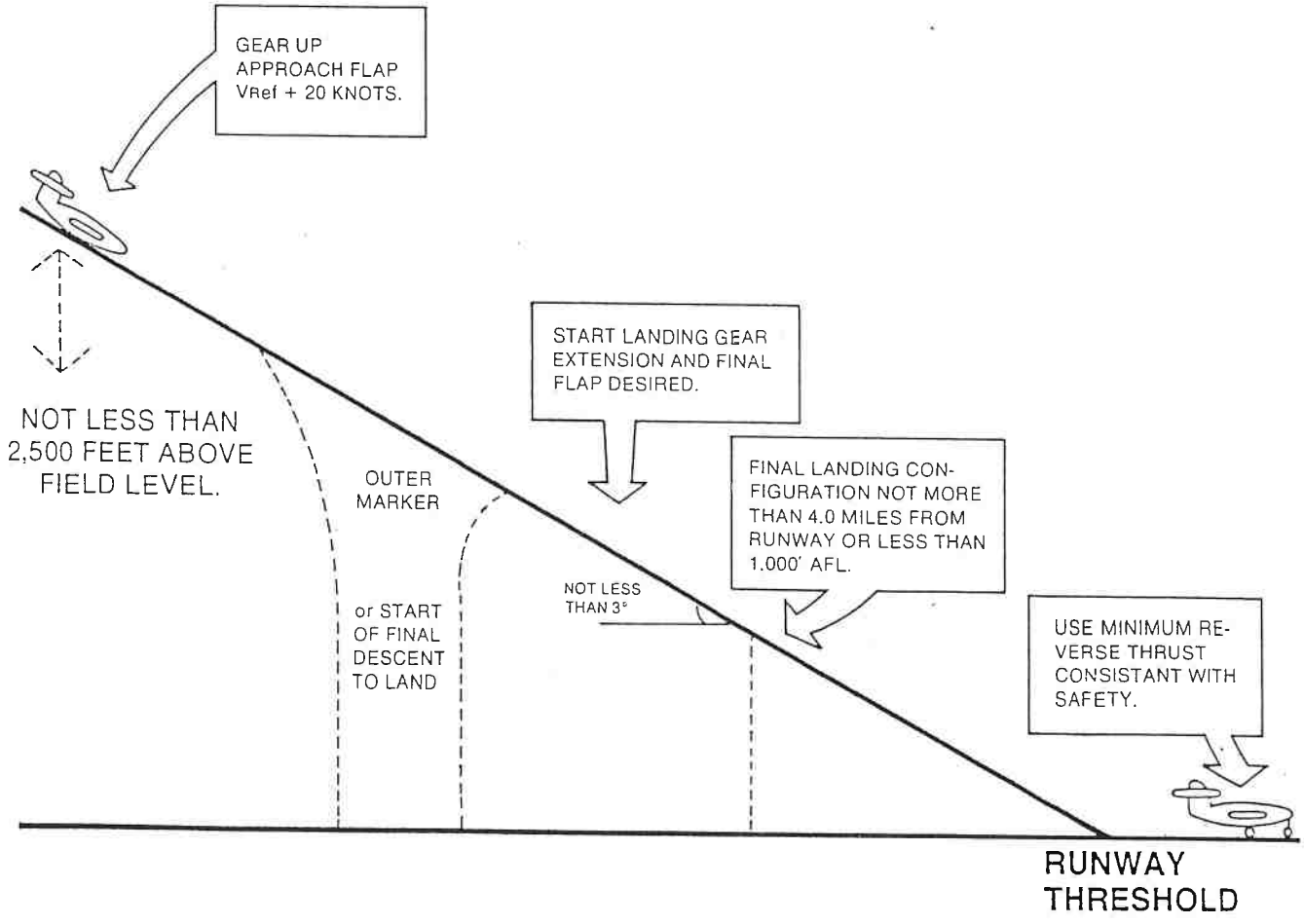


NBAA APPROACH and LANDING PROCEDURE
VFR

1) Inbound flight path should not require more than a 20 degree bank to follow noise abatement track.
2) Observe all speed limits and ATC instructions.
3) Initial inbound altitude for noise abatement areas will be a descending path from 2,500' AFL or higher. Maintain a minimum $V_{Ref}(1.3V_{so})$ + 20 Knots airspeed with gear up and approach flap.
4) Start landing gear extension and final flap desired so as to be in final landing configuration not more than 4.0 miles from runway threshold or less than 1,000' AFL.
5) Except for killing residual thrust use minimum reverse thrust necessary for safety, consistent with runway conditions and available lengths.



NBAA APPROACH and LANDING PROCEDURE
IFR

1) Inbound flight path should not require more than a 20 degree bank to follow noise abatement track.
2) Observe all speed limits and ATC instructions.
3) Initial inbound altitude for noise abatement areas will be a descending path from 2.500' AFL or higher. Maintain a minimum V_{Ref}(1.3 V_{so}) + 20 Knots airspeed with gear up and approach flap.
4) A nominal 3 degree glideslope should be used on approach to runway threshold.
5) Start landing gear extension and final flap desired so as to be in final landing configuration not more than 4.0 miles from runway threshold or less than 1,000' AFL.
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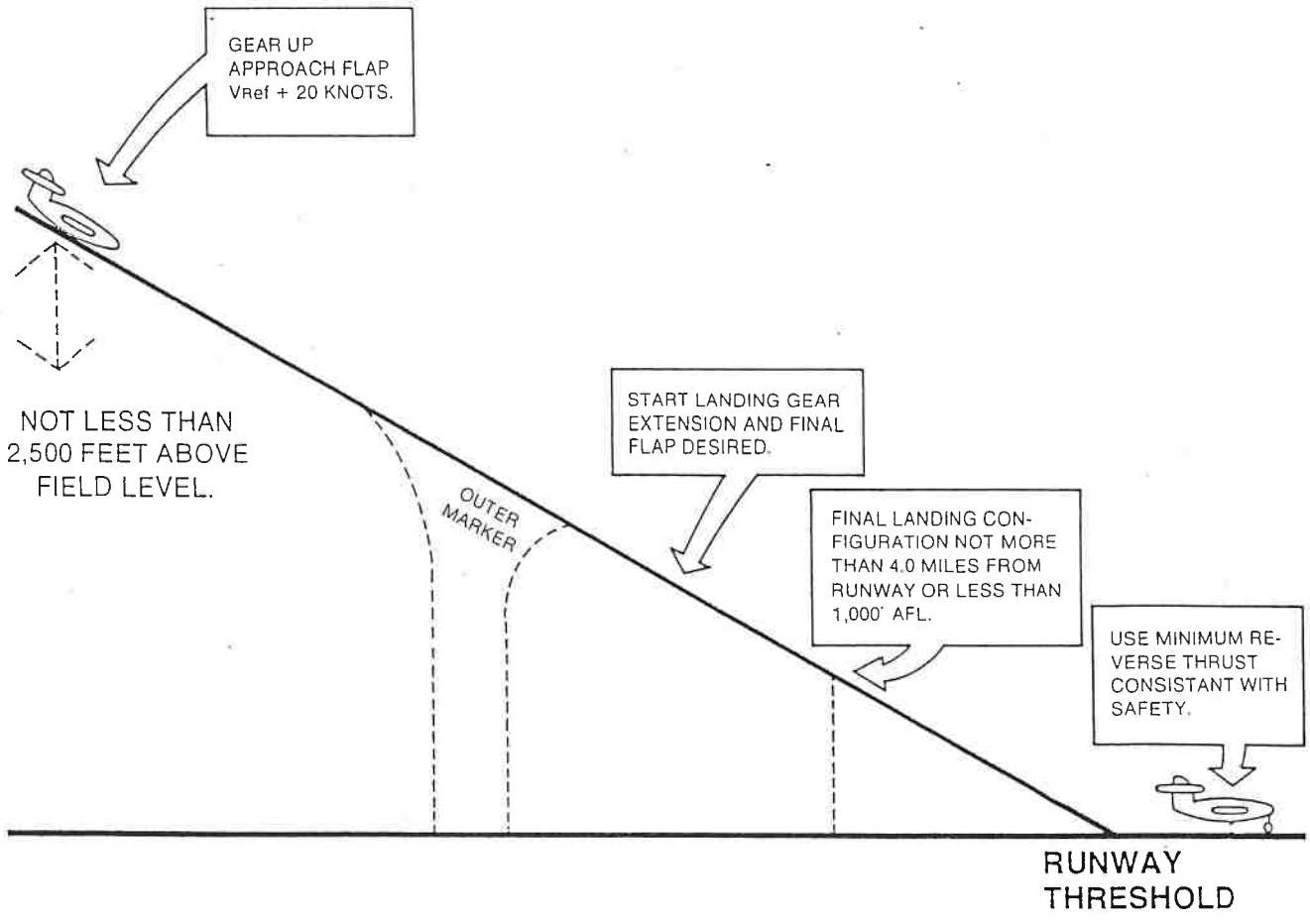

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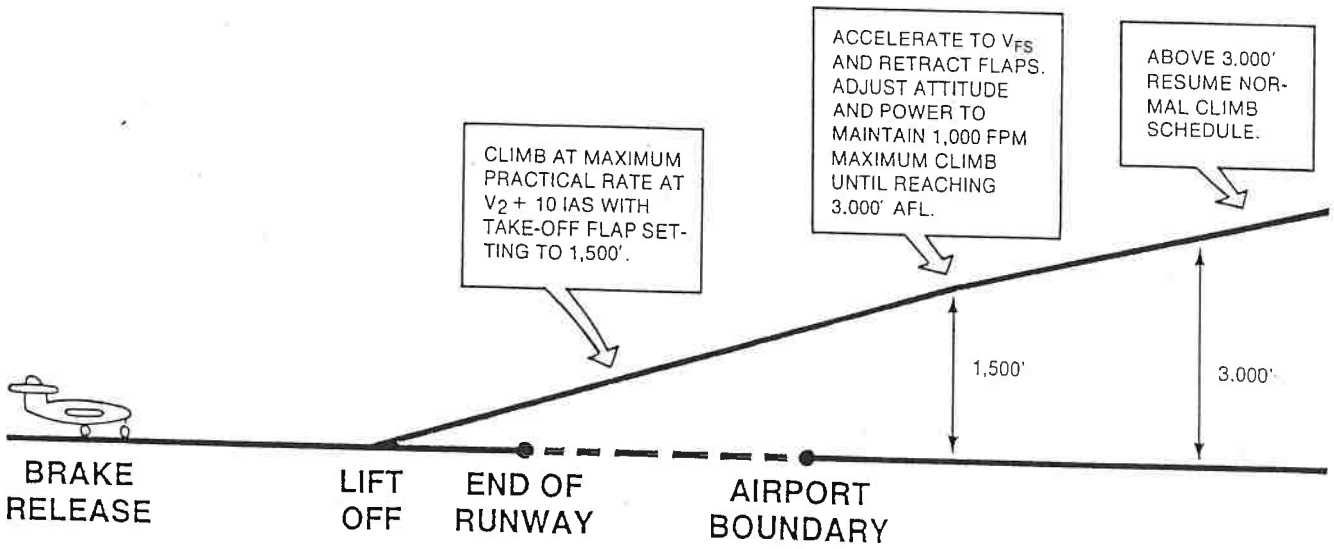

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4) Above 3,000' AFL, resume normal climb schedule.
5) Observe all speed limits and ATC instructions

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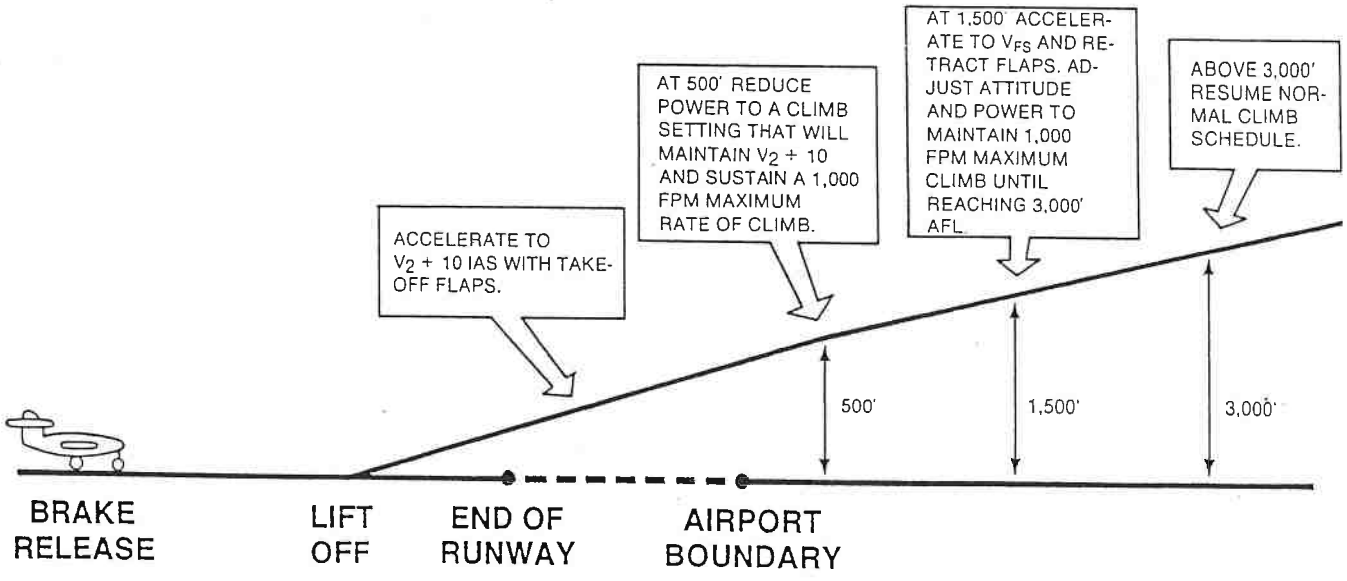

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VFR

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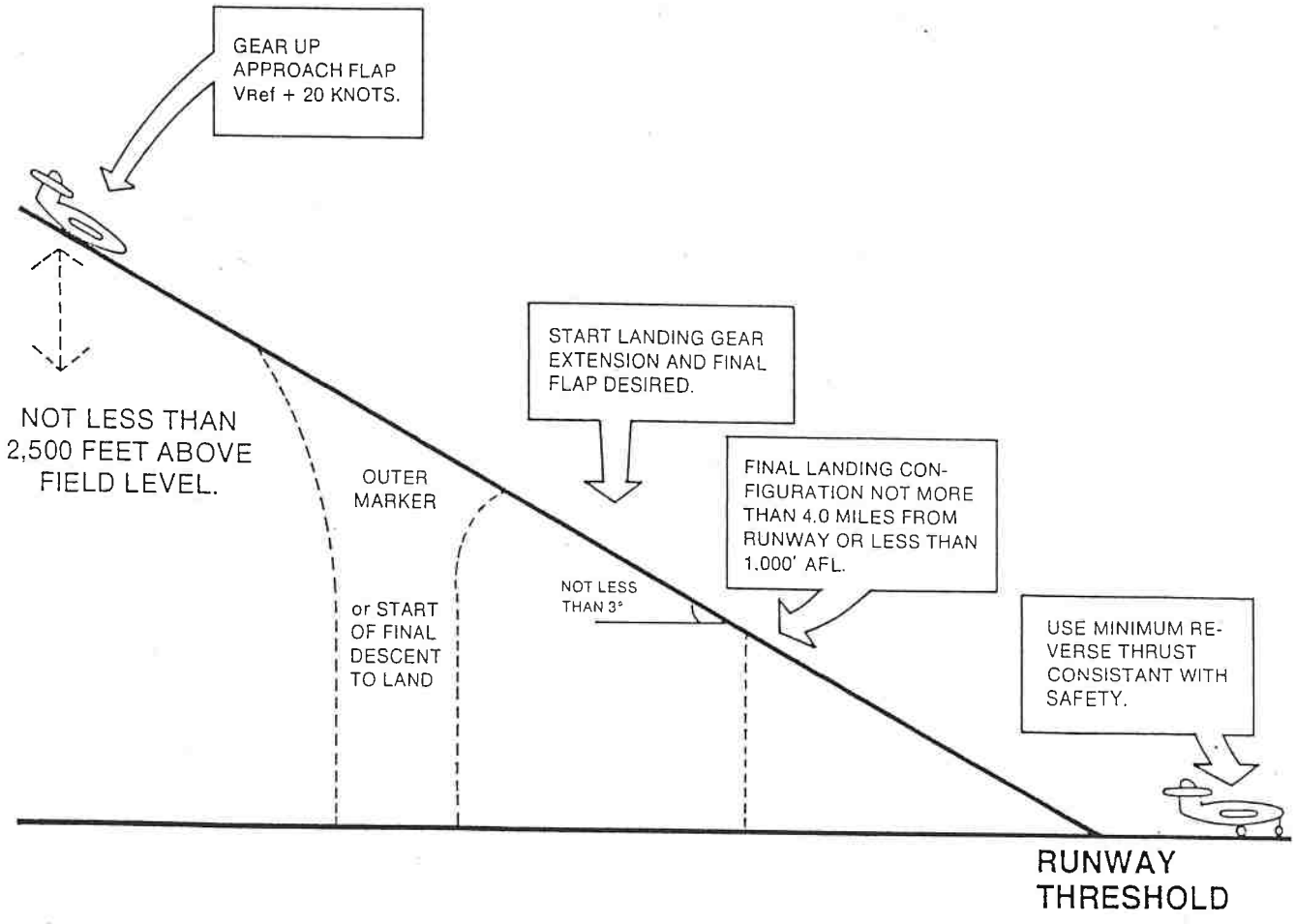

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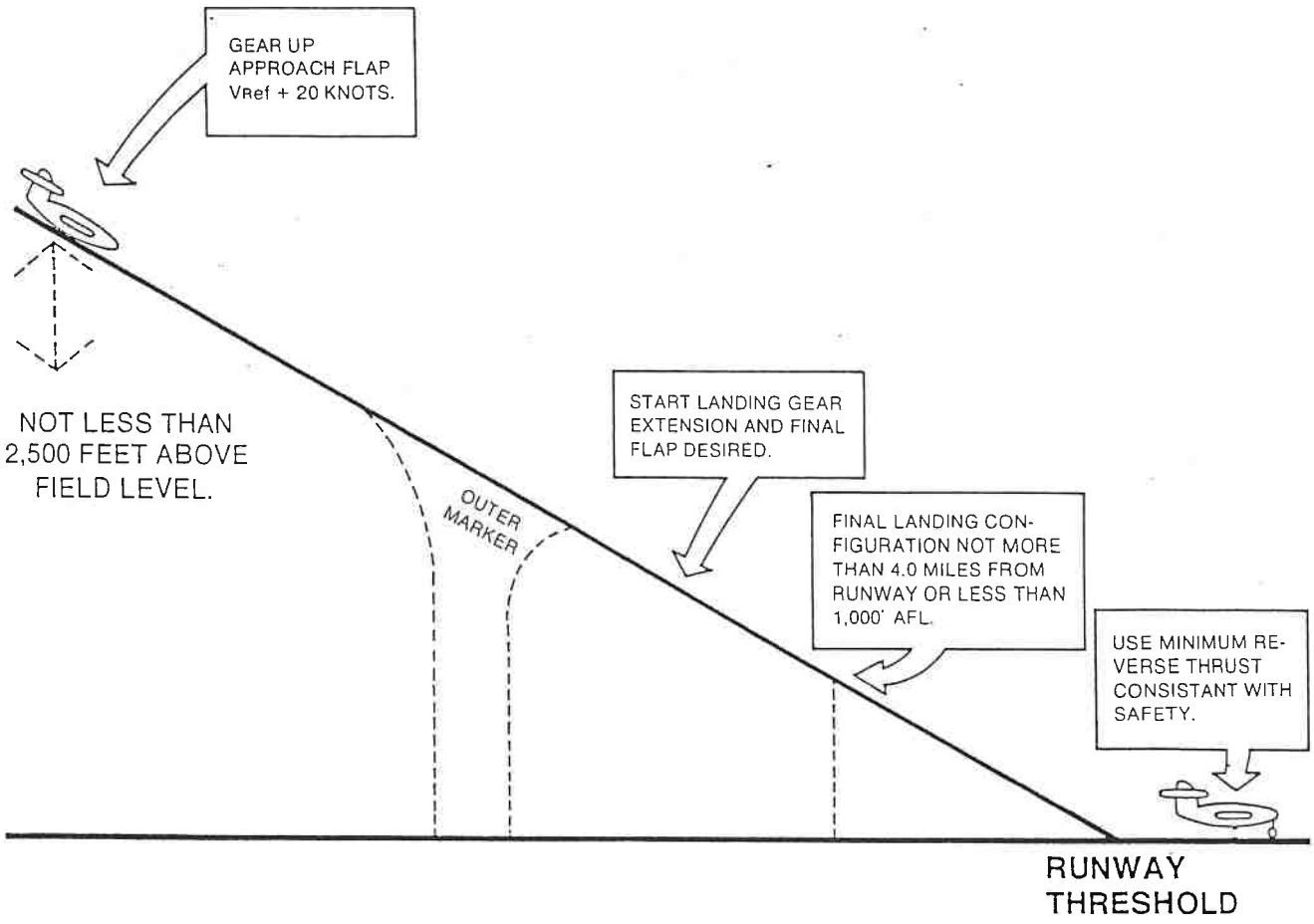


Other Noise Abatement Procedures

Aircraft Manufacturers

Although the manufacturers as a group have not established noise abatement procedures for each aircraft not certified under Part 36, some individual companies have taken steps in this direction. Business aircraft operators flying aircraft not certified under Part 36 should request from the manufacturer the noise abatement procedures that could be put into the aircraft manual and used by its owner. These procedures should be of such a degree as to allow the FAA to approve them and enable the aircraft to meet provisions of Part 36.

FAA's "Profile Descent"

The Federal Aviation Administration's Profile Descent, although used at only a few major airports, portends to be an important ATC procedure in coming years because of its capabilities to save fuel as well as to ease the noise problems around airports. A general procedure is described on page 10.

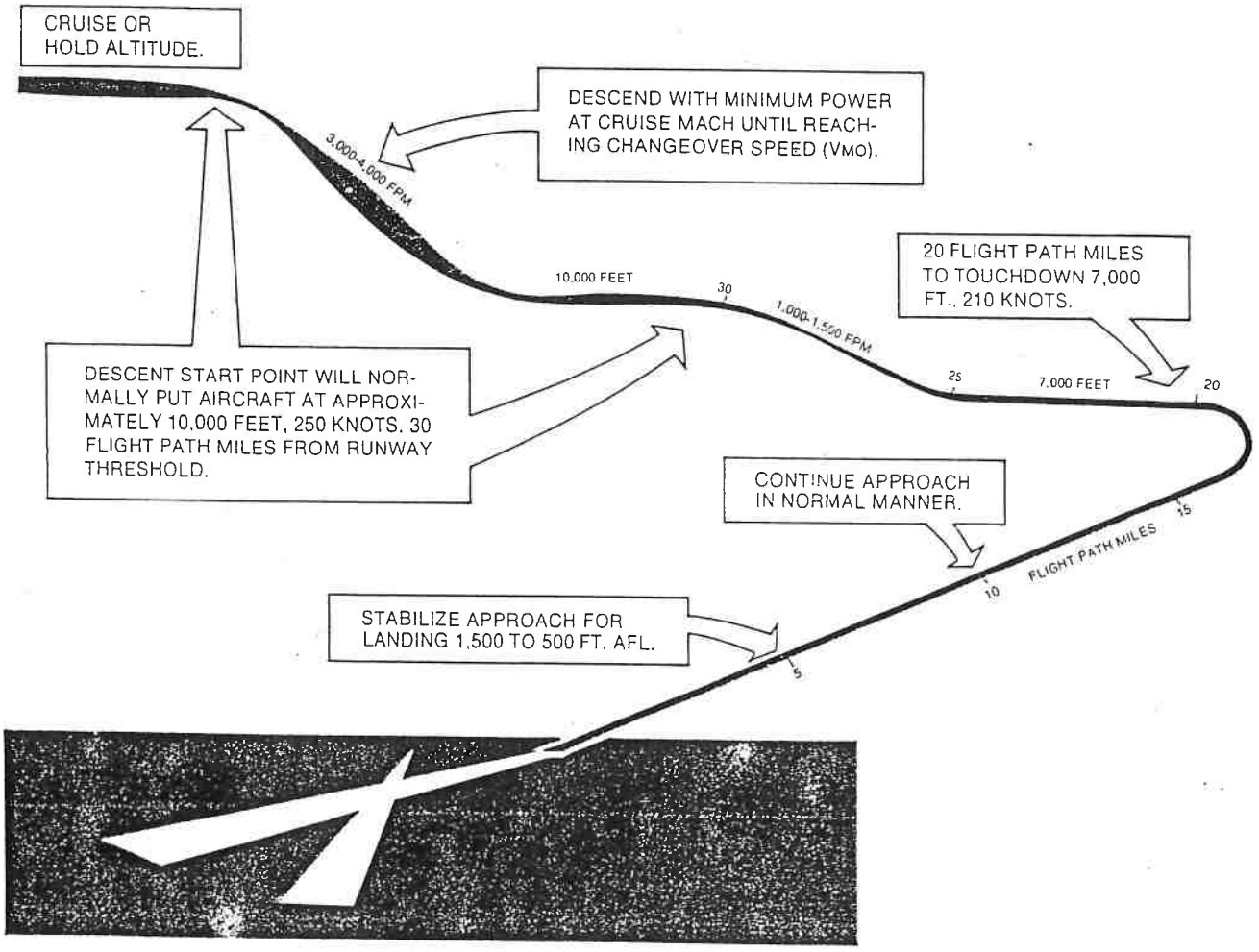
FEDERAL AVIATION ADMINISTRATION'S PROFILE DESCENT

The FAA, in keeping with its "Keep-'em-High" philosophy has established a "Local Flow Traffic Management Program." It is designed to save fuel, reduce the impact of aircraft noise on local communities, enhance safety, and standardize high performance aircraft arrival procedures. The profile descent is part of this program and is based on an altitude loss of 300 feet per mile which is designed to provide an unrestricted descent from cruising altitude to interception of a glide slope or to a minimum altitude specified for the initial or intermediate approach segment of a non-precision instrument approach.

The profile descent keeps the high and low performance aircraft separated while the approach control is positioning each individual aircraft for landing. Through metering, which is a method of time regulating arrival traffic flow into a terminal area so as not to exceed predetermined acceptance rate, low and high performance aircraft flight paths are joined in the vicinity of the final approach when their speeds are more compatible.

Although profile descent is now functional at only a few major air carrier airports, its potential benefits ensures us that it will become an important part of our future ATC procedures.

For your information, below is a general example of a profile descent. NBAA suggests you become familiar with this should you have the opportunity to use this procedure.



Summary

This publication was designed to illustrate the need for, and the availability of, noise abatement procedures for turbojet business aircraft.

It is not intended to describe all the different types of noise abatement policies followed by airport and aircraft operators. Nor does it pretend to describe the "best" way to handle the problem of airport noise.

We have tried, however, to point up some workable, sound alternatives.

In closing, we would like to stress the importance of three points:

1) A noise policy must be developed, published, and followed by the airport operators and pilots in order to convince the community of the determination to make the airport a good neighbor.

2) At the time the decision was made to buy and operate a company aircraft, the business aircraft operator bought the best available type of equipment that would fit the requirements of his individual needs. Many such aircraft, although not certified under Part 36, have the ability to fly within its specifications, and business aircraft operators are strongly urged to utilize the procedures that let them do so.

3) A system of flight procedures is only one part of a complete noise abatement program. As the procedures are the only part that can be implemented immediately, there is a tendency to use them beyond reasonable expectations for effectiveness as a means of resolving the whole problem. We believe this tendency is self-defeating, particularly when used to mislead the general public as to the effectiveness of flight procedures as a permanent solution to the overall noise problem.

Published by The National Business Aircraft Association
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Washington, D.C. 20006
202/783-9000

APPENDIX B Sample Real Estate Disclosure Ordinances

Airport Impact Zone

Portland, Oregon

33.69.070Disclosure. The owner of any residential structure located inside the Ldn 65 or higher noise contour shall provide a disclosure statement to all prospective purchasers or tenants of such residential structure, providing notice that the premises may be impacted by noise from aircraft operations from Portland International Airport.

NOISE DISCLOSURE ORDINANCE

No person shall sell or offer to sell any residential structure or land within the Ldn 65 airport noise zone unless the prospective buyer has been given the following notice in writing:

DISCLOSURE STATEMENT

That tract of land situated at _____

_____

lies within the Airport Zone as depicted on the official zoning map. The purchaser is hereby notified that this land is affected by noise resulting from aircraft on the approach and departure routes to and from Portland International Airport and is subject to noise levels that may be objectionable.

The undersigned purchaser(s) of said land hereby certify(ies) that (he/she/they) (has/have) read and understand(s) the above disclosure statement and acknowledge(s) the pre-existence of the above named airport and the potential for objectionable noise.

_____

(signed) Buyer

The undersigned seller(s) of said land hereby certifies(y) that this disclosure statement has been presented to the prospective purchaser; and that (he/she/they) (has/have) read and understand(s) the above disclosure statement.

_____

(signed) Seller

CHART A

NOISE SENSITIVE LAND USE GUIDANCE CHART

LAND USE	LAND USE NOISE ZONES			NOISE ZONES LOCATED IN OVERFLIGHT AREAS		
	Zone A 75 LDN	Zone B 70-75 LDN	Zone C 65-70 LDN	Zone A 75 LDN	Zone B 70-75 LDN	Zone C 65-70 LDN
RESIDENTIAL						
Residential Single and Multi-family	NA	SLR-30	SLR-25	NA	NA	SSA - SLR-25
Motels/Hotels	NA	SSA - SLR-30	SLR-25	NA	SSA - SLR-30	SSA - SLR-25
MANUFACTURING						
Professional and Scientific	NA	SSA	SSA	NA	NA	SSA
General Manufacturing	NA	Permitted	Permitted	NA	SSA	SSA
TRANSPORTATION COMMUNICATIONS & UTILITIES						
Transportation Related Uses	Permitted	Permitted	Permitted	SSA	SSA	Permitted
Communications Facilities	NA	SSA	Permitted	NA	SSA	SSA
Radio-Television	NA	SSA	SSA	NA	NA	SSA
TRADE						
Building Materials, Hardware, Automotive	SSA	Permitted	Permitted	SSA	SSA	Permitted
Retail Trade-General Merchandise	NA	SSA	Permitted	NA	SSA	SSA
Restaurants	NA	SSA	Permitted	NA	SSA	SSA
Petroleum Stations	SSA	Permitted	Permitted	NA	NA	NA
Wholesale Trade	SSA	Permitted	Permitted	SSA	SSA	SSA
Offices, Business and Professional	NA	SSA	SSA	NA	NA	SSA
PUBLIC USE						
Medical and Health	NA	NA	SSA - SLR-30	NA	NA	NA
Educational and Religious Activities	NA	NA	SLR-25	NA	NA	NA
Correctional Institutions	NA	SSA - SLR-30	SLR-25	NA	SSA - SLR-30	SSA - SLR-25
CULTURAL, ENTERTAINMENT, RECREATION						
Entertainment Assembly (Outdoors - Cultural)	NA	NA	NA	NA	NA	NA
Entertainment Assembly (Indoors - Cultural)	NA	NA	SLR-30	NA	NA	SSA - SLR-30
Sports Activities	SSA	Permitted	Permitted	NA	NA	NA
Playgrounds and Neighborhood Parks	NA	Permitted	Permitted	NA	NA	NA
Community and Regional Park	SSA	Permitted	Permitted	NA	NA	NA

SOURCES: Federal Regulation - 24 CFR 51 (Legend: NA = Not Allowed; SSA = Site Specific Analysis; SLR = Sound Level Reduction)

Guidance Chart are permitted or restricted in the appropriate zones based upon their similarity to noise tolerance as exhibited by the land uses which are listed in the Land Use Guidance Chart.

Section 3-35. Sound level requirements for buildings and structures.

The provisions of this Article shall apply to the construction, alteration, moving, demolition, repair and change of use of any building or structure within the City of Boca Raton, except:

(1) Work located primarily in a public right-of-way, public utility towers and poles, and mechanical equipment not specifically regulated in this ordinance, is exempt.

(2) For completed buildings and structures in existence on the effective date of this ordinance, when additions, alterations, or repairs within any three-year period exceed 50 percent of the value of the building or structure, such building or structure shall be made to conform to the requirements of this Article. However, not more than 50 percent of the roof covering of any such building or structure shall be replaced in any three-year period unless the new roof covering is made to conform to the requirements of this Article.

Section 3-36. Approval of methods of construction.

The chief code administrator may approve any methods of construction provided for in the Recommended Material and Construction List in this ordinance (Appendix 4), provided that the proposed design is satisfactory and complies with the Sound Level Reduction requirements. The chief code administrator shall require that sufficient evidence or proof be submitted to substantiate any claims made as to the performance of submitted construction methods prior to issuance of a building permit.

Section 3-37. Sound level reduction (SLR) design requirements.

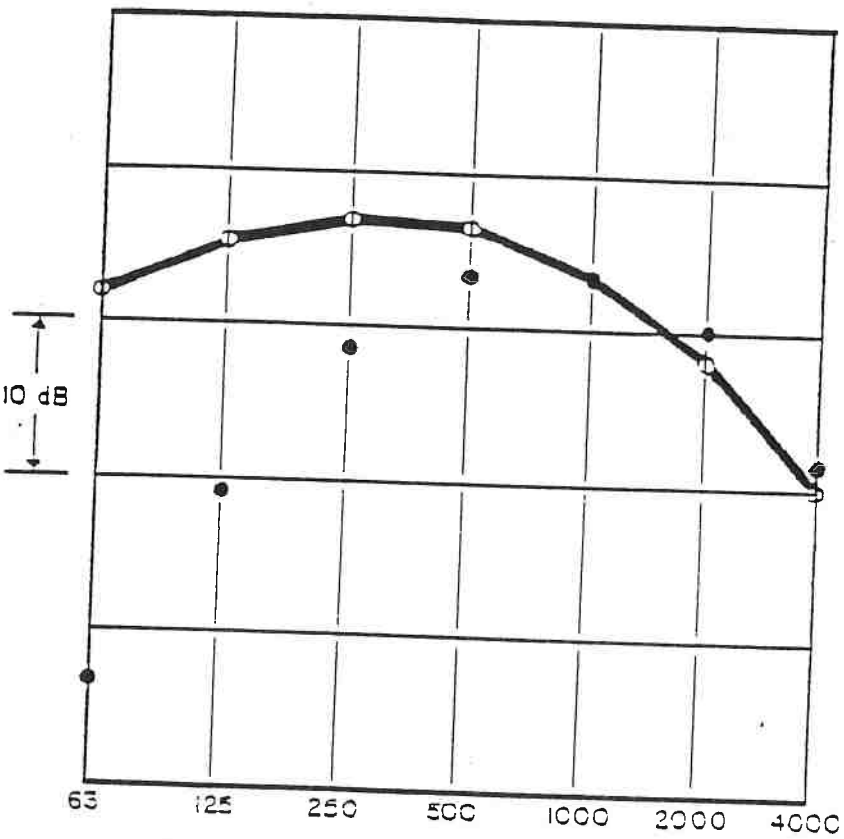
(1) The sound level reduction (SLR) requirements of Chart A may be achieved by any suitable combination of building design, choice of building materials and execution of construction details in accordance with established architectural and acoustical principles. The SLR requirements shall apply to all occupied rooms having one or more exterior walls or ceilings, when furnished in accordance with the intended final usage of the room.

(2) No building or structure for which an SLR25 or SLR30 is required by Chart A of this ordinance may be constructed, altered, moved, or repaired unless and until a building permit therefore has been issued. No such permit shall be issued unless conformance with the sound level reduction requirements of this Article are indicated by plans and specifications for the building or structure, such plans and specifications include the provisions of Appendix 4 of this ordinance, and a sound level reduction for the applicable room(s) at least as great as the SLR value specified in Chart A will result for the particular usage involved.

(3) For calculations undertaken for the purpose of meeting the requirements of this section, the building inspector may use the assumed outside spectrum shown in Chart B attached to and made part of this ordinance. Such calculations shall take into account the area of exposed room surfaces, the sound transmission loss characteristics of exposed room surfaces, and the amount of sound absorption in the room. For rooms in residential structures, it is assumed that the ratio of the sound absorption in each room to the room floor area is as follows:

Octave Frequency Band, Hz	Sound Absorption Floor Area
63	0.30
125	0.50
250	0.75
500 and higher	1.0

CHART B



Note: Closed Circles show the corresponding relative A-Weighted octave band sound pressure levels.

OCTAVE BAND NOISE SPECTRUM TO BE USED FOR CALCULATION OF NOISE LEVEL REDUCTION

In the calculations, allowance shall be made for a decrement of at least two decibels for sound leaks and flanking sound transmission paths.

Section 3-38. Administration and enforcement.

(1) The chief code administrator may, prior to granting final approval of the finished building or structure, require, at the expense of the owner, field tests by a qualified acoustical consultant to verify the sound level reduction (SLR) of the building.

(2) For the purpose of standardization, field tests to verify the noise level reduction requirements may use the aircraft noise prevailing outside the building.

(3) Using the noise signal generated by an individual aircraft operation (flyover event), outside and inside noise levels may be measured simultaneously. The difference between the maximum noise levels outside and inside the room for the flyover event should be taken as the measured SLR for the flyover event, provided that the maximum inside noise level exceeds, by at least seven decibels, the background noise level of the absence of the flyover.

(4) The SLR should be determined for at least four flyover events for each room tested. The resulting SLR value assigned to the room would be the arithmetic average of the individual flyover event SLR values.

(5) For occupied rooms in residential structures, the inside noise level should be measured with a single microphone four feet above the floor near the center of the room. For other residential structures, the inside noise level should be measured with a single microphone five feet above the floor, either near the center of the room, or eight feet into the room from the exterior wall most directly exposed to the aircraft

noise source, whichever distance from the most directly exposed wall is less. The outside noise level should be measured at an unobstructed location approximately five feet above the level of the floor of the room under test and eight feet outside the exterior wall most directly exposed to the aircraft noise source, near the center of the wall.

(6) For structures in which several rooms are to be evaluated, the tests need only be conducted for those rooms whose exterior walls are most directly exposed to the noise source. If noise level reduction requirements are met for these rooms, the tests need not be repeated for rooms of similar construction which are not as directly exposed to the flyover event.

(7) For structures where a number of rooms receive nearly equal exposure to aircraft noise, tests need be constructed in only two of the near-identical rooms.

(8) For residential units, it will usually be sufficient to conduct tests in two rooms. One of the rooms to be tested shall be the bedroom most directly exposed to aircraft noise. The other room to be tested shall be either the living room, dining room or family room, whichever is most directly exposed to the aircraft noise source.

(9) When the sound level reduction is measured in an unfurnished room or a room furnished less than normally, the adjusted sound level reduction shall be computed by adding ten times the logarithm to the base ten of the ratio of the floor area of the room to the sound absorption in the unfurnished room, but in any event, such correction shall not exceed two decibels. The adjusted noise level reduction value shall be used in determining compliance with the SLR requirements. If the noise level reduction is measured in a furnished room, no

adjustment in the noise level reduction shall be made.

(10) The noise levels measured outside and inside the room under test may be observed directly by simultaneously reading the maximum noise levels on two sound level meters. Alternatively, the outside and inside flyover event noise signals should be recorded on magnetic tape with noise level reduction determined by analysis of the recorded signals. In either case, the two measuring systems used for outside and inside noise measurements must each satisfy the requirements for a Type II sound level meter according to ANSI S1.4-197 and be operated in the manner designated by ANSI S1.13-197 (or latest revisions thereof). Further, the two systems are to be calibrated prior to and following the flyover events so that they indicate the same level, within one decibel, for the same noise, using suitable calibration procedures as specified by the sound level meter manufacturer.

Section 3-39. Notification of potential noise impact.

(1) Noise Zone A. No residential development shall be allowed within Noise Zone A.

(2) Noise Zones B and C. Constructive knowledge shall be made available to all owners and purchasers of residential property as provided for in Section 475.25, Florida Statutes, and Public Law 96-163 (49 USC 2101). Public notice through the use of a map (Appendix 2), depicting the noise zones established by this ordinance, shall be available at the Boca Raton Community Development Department and the office of the City Clerk, together with a listing of all residential property within the noise zones.

(3) A listing of all residential property within Noise Zones B and C will be compiled from the records of the Palm Beach County Property Appraiser, and shall be updated at least

once each year. This listing and the map will be available for use by title companies, real estate agencies and property owners to determine the notice required to be given to prospective purchasers of residential property. A disclosure statement (Appendix 5) shall be completed for the sale of all residential property located in Noise Zones B and C. This statement shall be filed with the property deed.

Section 2. Codification of this ordinance in the Code of Ordinances is hereby authorized and directed.

Section 3. This ordinance shall take effect immediately upon adoption.

PASSED AND ADOPTED by the City Council of the City of Boca Raton this 10th day of January, 1984.

CITY OF BOCA RATON, FLORIDA

ATTEST:

William A. Konrad, Mayor

Candace Bridgwater, City Clerk

Approved as to form:

M. A. Galbraith, Jr.
City Attorney

APPENDIX C Noise Complaint Receipt and Response Procedures

Figure C.1 Noise Complaint Receipt and Response Procedures

MONTGOMERY COUNTY AIRPARK
AIRCRAFT NOISE ABATEMENT
TELEPHONE COMPLAINT AND RESPONSE PROCEDURES

1) All telephone calls received will be logged on the approved form for noise complaints.

2) The form will include the following basic information (if given by the caller):

- name of caller;
- address;
- home and/or business telephone number;
- type of complaint; and
- remarks.

3) Every complaint recorded will be properly logged and reviewed by the Airpark Manager. The MCRA will direct the Airpark Manager to investigate complaints requiring further explanation. Complainants will be contacted by the Airpark manager to acknowledge receipt of the complaint and to provide followup information.

4) Should the MCRA require an investigation, the Airpark Manager or his designated representative will attempt to secure as much information as possible from various sources around the airport including the BWI FAA Tower. However, if the caller's information is considered by the Airpark manager to be incomplete, insufficient or of a very minor nature, he may choose not to undertake a full investigation of the complaint but will log and retain the information for future used in determining a possible pattern of complaints.

5) If a valid complaints can be verified by the Airpark Manager, he will notify the company/pilot by letter or telephone and ask for his cooperation in reducing noise over the noise-sensitive areas around the airport. He will note in his report any comments by the pilot which are relevant to the complaint and the reasons why he flew that particular pattern. Repetitive complaints on the same company/pilots will be acted upon by the Revenue Authority within their statutory limits.

7) The complainant will receive a letter from the Airpark Manager relative to the disposition of the complaint.

8) A monthly summary shall be kept on all noise complaints.

Figure C.2 Recommended Noise Complaint Form

MONTGOMERY COUNTY AIRPARK NOISE COMPLAINT FORM

For Noise Complaints Call
Noise Complaint Line at (xxx-xxxx) or Write:

Montgomery County Airpark
7910 Airpark Road
Gaithersburg, MD 20879

Date:____/____/____ Time:_____ A.M.( ) P.M.( )
Received By:_____
Complainant:_____
Address:_____
Telephone:_____
Number and Street City/Town State Zip
Day Phone # Night Phone #

DESCRIPTION OF NOISE EVENT:
Date:____/____/____ Time:_____ A.M.( ) P.M.( )

FOLLOW-UP REQUESTED: (Check if copy of completed form requested:____)

Complaint taker indicated response by (date):_____

FOLLOW-UP ACTION TAKEN: (Taken by:_____)

AIRCRAFT OWNER (If Identified):_____

AIRCRAFT PILOT (If Identified):_____

COMMENTS:_____

APPENDIX D Agenda, Minutes, And Mailing Lists For Advisory Committee Meetings Dealing With The Development Of The Noise Compatibility Program

MONTGOMERY COUNTY AIRPARK
FAR PART 150 STUDY

FAR PART 150 STUDY
ADVISORY COMMITTEE MEETING

JUNE 18, 1991

4:00 P.M.

6TH FLOOR CONFERENCE ROOM

COUNCIL OFFICE BUILDING
100 MARYLAND AVENUE
ROCKVILLE, MARYLAND

For More Information:
Hanifin Associates, Inc.
(301) 317-9025 or (804) 873-8726

MEETING SUMMARY
MONTGOMERY COUNTY AIRPARK
FAR 150 ADVISORY COMMITTEE
JUNE 18, 1991

Attendees

Dominick Alberti	Neighborhood Rep.
Howard Layer	Neighborhood Rep.
Rowland Schulte	Neighborhood Rep.
Anne Swain	Neighborhood Rep.
Nancy Shenk	Upcounty Advisory Committee
James Richardson	Airpark Leaseholders
Peter Greenburg	Airpark Business Interests
Wendy Johnson	Flight Resources
Doug McNeeley	Flight Resources
Tom Ogle	Mont. Cty. Dept. of EPA
Nellie Shields Maskal	MNCPPC, Mont. Cty. Planning
Stuart Kenney	MCRA
Robert L. Talbert	MD Aviation Admin./Noise Program
Ralph Wilson	Mont. City Council
Eugene Casey	Upper Mont. Chamber of Commerce
Norman Arnold	TAMS Consultant
Alan Hass	HMMH
Linda Hanifin	HAI

Absent Members

Rosemary Arkoian	Neighborhood Rep.
John Clark	Mont. Cty. Dept. of Transportation
Terry Page	FAA Wash., ADD, Falls Church
Michael Sarli	FAA Air Traffic Control Tower

Guests

Steve Federline	MNCPPC Enviornmental Planning
George Lieberman	Greater Goshen Civic Association

ORDINANCE NO. 3274

AN ORDINANCE OF THE CITY OF BOCA RATON REGULATING AND RESTRICTING THE HEIGHT AND MODE OF CONSTRUCTION OF STRUCTURES AND OBJECTS OF NATURAL GROWTH; REGULATING THE USE OF LAND AND CONSTRUCTION REQUIREMENTS WITHIN NOISE IMPACTED AREAS IN PROXIMITY OF THE BOCA RATON AIRPORT; PROVIDING AN EFFECTIVE DATE AND REPEALING ALL ORDINANCES OR PROVISIONS THEREOF IN CONFLICT HEREWITH; PROVIDING FOR CODIFICATION

THE CITY OF BOCA RATON HEREBY ORDAINS:

Section 1. A new Chapter 3 is added to the Code of Ordinances to read:

CHAPTER 3

AIRPORTS AND AIRCRAFT

ARTICLE I.

GENERAL PROVISIONS

Section 3-1. This ordinance is adopted pursuant to the authority conferred by Sections 333.03, 163.3177(7)(b) and 166.021, Florida Statutes. It is hereby found that an airport obstruction is hazardous to aircraft operations as well as the persons and property on the ground in the vicinity of the obstruction. An obstruction may affect land use in its vicinity and in effect reduces the size of areas available for the landing, taking off and maneuvering of aircraft, thus tending to

destroy or impair the utility of the Boca Raton Airport and the public investment therein. It is further found that aircraft noise is an annoyance and is objectionable to residents of the community surrounding the Boca Raton Airport. Accordingly, it is declared that:

(1) The creation of an airport obstruction is a public nuisance and an injury to the region served by the Boca Raton Airport.

(2) It is necessary in the interest of the public health, safety and general welfare that the creation of airport obstructions and the incompatible use of land within certain airport noise zones be prevented.

(3) The prevention of airport obstructions and incompatible land uses should be accomplished to the extent legally possible by the exercise of the police power, without compensation.

(4) The prevention of the creation of airport obstructions, structures and incompatible land uses and the elimination, removal, alteration, mitigation, or marking and lighting of existing airport hazards are proper public purposes.

Section 3-2. Definitions.

As used in this ordinance:

(1) "Airport" means the Boca Raton Airport.

(2) "Airport elevation" means the highest point of the usable landing area at the airport, measured in feet above mean sea level.

(3) "Airport obstruction" means any structure, object of natural growth, or use of land which exceeds the federal obstruction standards as contained in 14 CFR ss. 77.21, 77.22, 77.25, and 77.28; which obstructs the airspace required for flight of aircraft in landing and take-off at the airport; or

is otherwise hazardous to the landing or take-off of aircraft at the airport.

(4) "Airspace height" means height in feet above mean sea level elevation (AMSL), unless otherwise specified.

(5) "Avigation easement" means the conveyance to an airport proprietor of a right to a portion of the total benefits of the ownership of real property. The selected rights may be granted to the airport proprietor or may be purchased by him.

(6) "Chief Code Administrator" means the person who is responsible for the building inspectors of the City who will inspect the acoustical design of buildings constructed within noise zones to insure that they meet the requirements of this ordinance.

(7) "Height of structure or obstruction" means the highest point above mean sea level (AMSL) minus the airport elevation of fourteen (14) feet.

(8) "Ldn" means a day/night average sound level which is the 24-hour average sound level, in decibels, obtained after the addition of 10 decibels to sound levels from 10:00 p.m. to 7:00 a.m.

(9) "Minimum enroute altitude" means the altitude in effect between radio fixes which assures acceptable navigational signal coverage and meets obstruction clearance requirements between those fixes.

(10) "Minimum obstruction clearance altitude" means the specified altitude in effect between radio fixes on VOR airways, off-airway routes, or route segment and which assures acceptable navigational signal coverage only within 22 miles of a VOR.

(11) "Minimum vectoring altitude" means the lowest MSL

altitude at which IFR aircraft will be vectored by a radar controller, except when otherwise authorized for radar approaches, departures or missed approaches.

(12) "Noise reduction (NR)" means the reduction in decibels of sound pressure levels between two designated locations or rooms for a stated frequency or band.

(13) "Nonconforming use" means any pre-existing structure, object of natural growth, or use of land which is inconsistent with the provisions of this ordinance, or amendments thereto.

(14) "Occupied rooms" means rooms within enclosed structures which are or may reasonably be expected to be used for human activities which involve speech communication; sleeping; eating; listening to live, recorded or broadcast music or speech; or the regular use of telephones.

(15) "Overflight areas" mean those areas that lie directly below and 500 feet on either side of the centerline of Runways 4 and 22 at the airport, and extend 3,000 feet from the runway ends.

(16) "Qualified acoustical consultant" means a person who, because of training and experience in the science and technology of acoustics and knowledge of construction methods and materials, is considered qualified to pass judgment on acoustical designs, materials and methods of construction for the attenuation of noise.

(17) "Runway" means a defined area on an airport prepared for landing and take-off of aircraft along its length.

(18) "Site specific analysis (SSA)" means the process by which a proposed land use in a designated aircraft noise-impacted area is examined for compliance with the Boca Raton Comprehensive Plan, the attached Noise Zone Map, and the Land Use Guidance Chart contained herein. Site specific analysis will consider the specific usage of a structure within a par-

ticular noise zone. The type of construction that will be required will be based upon the necessary measures to reduce inside noise levels to acceptable sound levels. In addition, site specific analysis in overflight areas requires an analysis of specific usage and location to determine compatibility with an airport.

(19) "Sound absorption" means the capacity of materials and furnishings in a room to absorb sound. For the purposes of this ordinance, the sound absorption is equal to 0.05 times the room volume in cubic feet divided by the measured reverberation time in seconds determined with an octave band of noise centered at 500 Hertz.

(20) "Sound level" means a quantity of sound, in decibels, measured by an instrument satisfying the requirements of American Standard Specification for Type II Sound Level Meters. The sound level shall be the frequency-weighted sound pressure level obtained with the frequency weighting "A" and the standardized dynamic characteristic "slow".

(21) "Sound level reduction (SLR)" means the difference in decibels between the sound level outside a building and the sound level inside a designated room of the building which is caused by exterior noise.

(22) "Structure" means any object, constructed or installed by man, including but not limited to: buildings, towers, smoke stacks, utility poles and overhead transmission lines.

(23) "Visual runway" means a runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on a FAA-approved airport layout plan, a military-services-approved military airport layout plan, or any planning document submitted to the FAA by competent authority.

(24) "Zoning administrator" means the director of the Department of Community Development of the City.

Section 3-3. Administration and enforcement.

(1) It shall be the general duty of the city manager and the specific duty of the zoning administrator, or his or her designee, to administer and enforce these regulations within the City of Boca Raton.

(2) Prior to the issuance or denial of a Tall Structure Permit by the zoning administrator, the Federal Aviation Administration must review the proposed structure plans and issue a Determination of Hazard/No Hazard.

(3) In the event that the zoning administrator finds any violation of the regulations contained herein, the zoning administrator shall give written notice to the person responsible for the violation. The notice shall indicate the nature of the violation and the necessary action to correct or abate the violation. The zoning administrator may order discontinuance of any work being done, and shall take any other action necessary to correct violations and obtain compliance with the provisions of this ordinance.

Section 3-4. Nonconforming uses.

(1) The regulations prescribed by this ordinance shall not be construed to require the removal, lowering or other alteration of any existing structure or tree not conforming to the regulations as of the effective date of this ordinance, or to require the sound conditioning or other changes or alteration of any pre-existing structure not conforming to this Article as of the effective date of this ordinance, or otherwise interfere with the continuance of any such pre-existing nonconforming use.

(2) Nothing herein contained shall require any change

in the construction or alteration of any structure for which work has commenced under a current and valid building permit issued by the City prior to the effective date of this ordinance, and which is diligently prosecuted to completion within two (2) years thereof.

(3) No nonconforming structure may be replaced, substantially altered, or rebuilt unless the structure or its replacement is thereby brought into conformity with these regulations, except as provided in Section 3-35(2).

(4) No nonconforming tree shall be permitted to grow higher, but shall be cut back as often as is necessary to a height no greater than its height as of the effective date of this ordinance. The cost of removing or lowering any tree not conforming to the requirements as of the effective date of this ordinance shall be borne by the airport proprietor.

(5) No permit shall be granted that would allow the establishment or creation of an airport hazard, or permit a nonconforming structure or nonconforming use to be made or become higher or become a greater hazard to air navigation than it was as of the effective date of this ordinance.

Section 3-5. Variances.

Any person desiring to use property or erect or increase the height of any structure within a zone established by this ordinance not in accordance with the regulations prescribed in this ordinance may apply to the Board of Adjustment for a variance from these regulations.

(1) The requirements of Federal Aviation Administration Advisory Circular 70/7460-1 and subsequent revisions thereto respecting markers and lights shall not be subject to any variance.

(2) The procedures for such applications and the

grounds for granting variances shall be the same as for variances from the zoning code, as set forth in Article VII of Chapter 25, Code of Ordinances. The zoning administrator may require such additional information as is necessary for the proper consideration of applications for variances from these regulations.

Section 3-6. Board of Adjustment.

The Board of Adjustment shall have the power to hear and decide any question involving the interpretation of any provision of this ordinance upon appeal from a decision of the zoning administrator in the enforcement of this ordinance, and to grant variances from the strict application of the requirements of this ordinance, subject to the requirements and limitations of Section 25-145(b), Code of Ordinances.

Section 3-7. Penalties.

Each violation of this ordinance or of any regulation, order or ruling promulgated hereunder shall be punishable by a fine of not more than $500.00 or imprisonment for not more than 60 days or both. Each day a violation continues to exist shall constitute a separate offense.

Section 3-8. Conflicting regulations.

Where there exists a conflict between any of the regulations or limitations prescribed in this ordinance and any other regulations or zoning applicable to the same area, whether the conflict be with respect to the height of structures or trees, the use of land, or any other matter, the more stringent limitation or requirement shall govern and prevail.

Section 3-9. Severability.

If any of the provisions of this ordinance or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applica-

tions of the ordinance which can be given effect without the invalid provisions or application, and to this end the provisions of this ordinance are declared to be severable.

ARTICLE II

AIRPORT SURFACES AND AIRSPACE HEIGHT LIMITATIONS

Section 3-20. Airport surfaces and airspace height limitations.

(1) In order to carry out the provisions of this ordinance, there are hereby created certain surfaces which include all of the land lying beneath the approach, transitional, horizontal and conical surfaces as they apply to the Boca Raton Airport. Such surfaces are shown on the Boca Raton Airport map which is attached to this ordinance and made a part hereof as Appendix 1.

(2) An area located in more than one of the described surfaces is considered to be only in the surface with the more restrictive height limitation.

(3) The various surfaces are established and defined as follows:

(a) Primary surface. An area longitudinally centered on a runway, extending 200 feet beyond each end of the runway with the width so specified for each runway for the most precise approach existing or planned for either end of the runway. No structure or obstruction will be permitted within the primary surface that is not part of the landing and take-off area, and is of a greater height than the nearest point on the runway centerline. The width of the primary surface for each runway is as follows:

Runway 4: 500 feet.

Runway 22: 500 feet.

(b) Horizontal surface. The area around the airport with an outer boundary constructed by measuring arcs of specified radii from the center of each end of the primary surface of each airport's runway and connecting the adjacent arcs by lines tangent to those arcs. No structure or obstruction will be permitted in the horizontal surface that has a height greater than 150 feet above the airport height. The radius of each arc is:

Runway 4: 10,000 feet.

Runway 22: 10,000 feet.

(c) Conical surface. The area extending outward from the periphery of the horizontal surface for a distance of 4,000 feet. Height limitations for structures in the conical surface are 150 feet above the airport height at the inner boundary, increasing one foot vertically for every 20 feet of horizontal distance measured outward from the inner boundary, to a maximum height of 350 feet above airport height.

(d) Approach surface. An area longitudinally centered on the extended runway centerline and extending outward from each end of the primary surface. An approach surface is designated for each runway based upon the type of approach available or planned for that runway end.

1. The inner edge of the approach surface is the same width as the primary surface and expands uniformly to a width of:

Runway 4: 3,500 feet.

Runway 22: 1,500 feet.

2. The approach surface extends for a horizontal distance of:

Runway 4: 10,000 feet.

Runway 22: 5,000 feet.

3. The maximum permitted height limitation within each approach surface is the same as the runway end height at the inner edge and increases with horizontal distance outward from the inner edge as follows:

Runway 4: Permitted height increases one foot vertically for every 34 feet horizontal distance.

Runway 22: Permitted height increases one foot vertically for every 20 feet horizontal distance.

(e) Transitional surface. The area extending outward from the sides of the primary surface and approach surfaces connecting them to the horizontal surface. Height limits within the transitional surface are the same as the primary surface or approach surface at the boundary line where it adjoins and increases at a rate of one foot vertically for every seven feet horizontally, with the horizontal distance measured at right angles to the runway centerline and extended centerline, until the height matches the height of the horizontal surface or conical surface or for a horizontal distance of 5,000 feet from the side of the part of the precision approach surface that extends beyond the conical surface.

(f) Other areas. In addition to the height limitations imposed above, no structure or obstruction will be permitted within the City of Boca Raton that would cause a minimum obstruction clearance altitude or a minimum vectoring altitude.

Section 3-21. Airport land use restrictions.

(1) Notwithstanding any other provisions of this ordinance or of the Code of Ordinances to the contrary, no use may be made of land or water within any zone established by this ordinance in such a manner as to interfere with the operation of an airborne aircraft.

(2) In addition to all other applicable requirements of

the Code of Ordinances, the following special requirements shall apply to each permitted use:

(a) All lights or illumination used in conjunction with street, parking, signs or use of land and structures shall be arranged and operated in such manner that it is not misleading or dangerous to aircraft operating from a public airport or in the vicinity thereof.

(b) No operations of any type shall produce smoke, glare or other visual hazards within three (3) statute miles of any runway of the airport.

(c) No operations of any type shall produce electronic interference with navigation signals or radio communication between the airport and aircraft.

Section 3-22. Obstruction lighting.

The owner of any structure over 200 feet above ground level within any zone established by this ordinance shall install lighting on the structure, in accordance with Federal Aviation Administration Advisory Circular 70/7460-1 and Amendments thereto. Additionally, high intensity white obstruction lights shall be installed on a structure which exceeds 749 feet above mean sea level, in accordance with Federal Aviation Administration Advisory Circular 70/7460-1 and Amendments.

ARTICLE III.
COMPATIBLE LAND USES, NOISE ZONES, AND REAL ESTATE NOTIFICATION

Section 3-30. Purpose.

The purpose of this Article is to provide for the health, safety and welfare of the general public located in proximity to the Boca Raton Airport by establishing standards

for land use and sound level reduction requirements with respect to exterior noise resulting from the legal and normal operations at the airport. This Article establishes noise zones of differing intensities and allowable land uses, as approved by the City Council, in the vicinity of the airport; establishes those allowable land uses in the noise zones, as approved by the City Council; and establishes notification procedures to prospective purchasers of real estate within the noise zones.

Section 3-31. Establishment of noise zones.

There are hereby created and established three (3) land use noise zones; Zone A, Zone B and Zone C. Noise Zone A is an area within the 75 Ldn noise contour in which land use should be limited to activities that are not noise sensitive. Noise Zone B is an area between the 70-75 Ldn noise contour in which land use would require a site specific analysis, avigation easements and appropriate sound level reduction measures for construction of certain buildings. Noise Zone C is an area between the 65-70 Ldn noise contour in which land use is normally acceptable for construction of buildings which include appropriate noise attenuation measures. Such zones are shown on the airport noise zone map for the City of Boca Raton which is attached and made a part hereto as Appendix 2. The noise zones are based on a projection of future noise environments arising from aircraft flight operations at the airport through the year 1998.

Section 3-32. Legal description of noise zone boundaries.

(a) Zone A (75 Ldn and above) -- Noise Zone A applies to an area of 75 Ldn entirely within the Boca Raton Airport and surrounding Runway 4-22 at various depths more particularly described in Appendix 3.

(b) Zone B (70 Ldn to 75 Ldn) -- Noise Zone B applies

to an area of 70 Ldn surrounding the Boca Raton Airport more particularly described in Appendix 3.

(c) Zone C (65 Ldn to Ldn) -- Noise Zone C applies to an area of 65 Ldn surrounding the Boca Raton Airport more particularly described in Appendix 3.

Section 3-33. Determination of boundaries.

In determining the location of noise zone boundaries, the following rules shall apply:

(1) Where boundaries are shown to follow streets or alleys, the centerline of such streets or alleys shall be the Noise Zone boundary.

(2) Where boundaries are shown to cross platted blocks, the property lines of lots, as they exist at the time of adoption of these regulations, shall be the Noise Zone boundary.

(3) Where boundaries are shown to cross any platted lot, provisions of the more restrictive zone shall apply to the entire lot.

(4) Where boundaries are shown to cross property not subdivided of record and less than 10 acres in area, provisions of the more restrictive zone shall apply to the entire property.

(5) Where boundaries are shown to cross property not subdivided of record and 10 or more acres in area, the location shall be determined by scale shown on the map unless dimensions are given on the map.

Section 3-34. Land use restrictions.

The Boca Raton Airport is exempt from the prohibition of various land uses in zone A.

Land uses shall be permitted in the several noise zones as provided in the Land Use Guidance Chart, Chart A, to the extent permitted by the underlying zoning of the property. Those land uses not specifically listed in the Land Use

LIST OF ATTENDEES
Far Part 150 Study

Jim Rives
Avalon Farm

Jeff Meshinsky
Montgomery Aviation

Jack Collins
Ashford

Charles Settgast
N. Village Homes Corp.

Mary Ritchie
Ashford

Russ Rankin
Hunters Woods

Rosemary Arkoian
Prathertown

Robert Oberlander
MD Air Safety Institute

Judith Ellis
Avalon Farms

Jeff Hartwick
Hunters Woods

Brian Poole
Highfield

Donna Whitridge
Hadley Farms

Joulyn Fraser
Montgomery Aviation

Joli McCathran
MD General Assembly

Ann Toblin
Prathertown

Janet O'Neil
Burton Woods

David Bohn
Ashford

Nancy Shenk
Goshen

Douglas McNeeley
Flight Resources

Dominick Alberti
Granby Woods

Bonnie Buntain
Avalon Farms

Mike Whitcomb
Granby Woods

John Whitridge
Hadley Farms

Vincent Morris
Express Newspaper

SUMMARY
MONTGOMERY COUNTY AIRPARK
FAR 150 ADVISORY COMMITTEE

June 18, 1991
Sixth Floor County Council Conference Room
Rockville, MD

Presenter: Alan G. Hass, P.E.
Harris Miller Miller & Hanson

Attendees: Attachment A

Meeting Agenda

1. Introduction

2. Discussion and Reactions to First Community Workshop

3. Evaluation of Operational Alternatives

    A. Airport Plan
    B. Aircraft Operation
    C. Airport Use
    D. Miscellaneous

4. Closing Comments and Questions

1. Introduction - Howard Layer

The meeting was called to order at 4:05 p.m. by Howard Layer, who introduced the technical consultant, Alan Hass, to present the second of two reports of the FAR Part 150 Study for Montgomery County Airpark.

2. Discussions and Reactions to First Community Workshop

Mr. Alan Hass requested additional comments and reactions to the April community workshop.

Many attendees felt that the workshop was not well publicized. Mr. Hass responded that it had been advertised both in the local paper and in the libraries. The advisory committee agreed that the libraries were not an effective location for advertising. It was suggested that the next workshop be promoted in the Gazette, possibly in two or three different editions (East, Rockville, Germantown, Montgomery County). Furthermore, it was suggested that placing posters in the community might be a viable option for notification.

3. Evaluation of Operational Alternatives - Alan Hass

Using Table 1.1 (*Operational Abatement Summary*), Mr. Hass began by evaluating those operational alternatives. These options were divided into four categories, which are:

- airport plan,
- aircraft operation,
- airport use, and
- miscellaneous.

It was pointed out that if these methods are recommended by the advisory committee, the Airpark must still continue to go through approval processes with the Montgomery County Revenue Authority and the FAA. In other words, any recommendations are not final, but will be considered for further evaluation.

A. AIRPORT PLAN ALTERNATIVES

A number of options dealing with the airport plan were evaluated. They are as follows:

1. Runway Relocation/New Runway

One of the options suggested was to reorient the runway or build a new runway. Reorienting the existing runway or building a new runway will only move the noise concentration from one area to another. This solution is not recommended because neither represents a solution to community concerns.

2. Runway/Taxiway Extension

Another suggested option was to extend the runway, allowing planes to achieve higher altitude before flying over residential areas. This would lower the noise level over affected areas. However, extending the runway an additional 500 feet would bring the runway closer to highway 124. This might create clearance problems with each landing. The noise reduction was considered too minimal to make this a viable option.

3. Displaced Landing/Takeoff Thresholds

It was suggested that the landing threshold could be displaced. This would keep aircraft at a higher altitude before flying over residential areas. However, it was pointed out that by displacing the threshold, the landing runway is shortened. For this reason, this possibility is not recommended.

4. Isolating Maintenance Runup Activity

Another limited solution to reduce noise was to limit or restrict maintenance runups. "Runups" involve the turning-up of the engines when the aircraft is stationary and are a critical part of aircraft maintenance. Though they cannot be eliminated, it was recommended that isolating engine runup activity to limit noise be evaluated further.

5. **Noise Barriers**

No ground-based noise problems have been identified. Therefore, noise barriers were eliminated as a viable option since they would limit ground-based noise only, and have no impact on air-based noise.

B. AIRCRAFT OPERATION

The next group of options addressed were those dealing with aircraft operations.

1. **Noise Abatement Flight Tracks**

One suggestion to address noise associated with aircraft operations is to change the flight tracks so that residential areas would receive less noise. Though this option would lower single-event noise levels, to the overall population, turning flight tracks would result in new population areas being affected. This point was illustrated in Figure 1 - Supplemental Map (*Proposed Noise Abatement Flight Tracks*). It was pointed out that the average turn is 350 degrees with an affected population of 11,570 with the best possible turn of 370 degrees with an affected population of 10,460. It was noted, however, that it may be possible to move the turning point for some aircraft a little earlier than presented.

Doug McNeeley commented that aircraft should climb as high and as soon as possible to allow more space above the residential areas in the event a problem arises. Safety is a priority over noise for all pilots.

Different aircraft have various climbing altitudes and speed characteristics which prevent them from turning at exactly the same point in the air. However, some procedures could be implemented and the public and pilots better educated concerning noise abatement procedures. For more information, see comparisons in Table 6.1 - *Population Exposed to Noise Levels Resulting from a Lear 35 Jet Aircraft Departure.*

It was stated that the following single-event decibel levels occur from aircraft: 60-70 dB for a single-piston aircraft and 80-100 dB for a jet. A level of 80-90 dB is sufficient to interrupt sleep or speech.

One of the final solutions discussed was the relocation of the Airpark. Implementing that suggestion is not possible within the current FAR Study or the existing contract.

2. **Preferential or Rotational Runway Use**

Another recommended solution was the increased use of other runways for departures. It was pointed out that there are some seasonal variations in the direction that airplanes take off and land. Normally, the pilot makes that determination based on wind direction.

A belief noted, that taking off is noisier than landing is not necessarily true particularly if the pilot comes in at too fast a speed he must retrace his path causing twice the amount of noise.

The option of a bi-directional runway use program was also proposed, but it was explained that the FAA would not approve such a program at an uncontrolled airport (one without a tower).

3. **Modification to Departure Procedures**

It was suggested that by following the NBAA Close-In Departure Procedure (cutting back power at 500 feet AGL until 1500 feet AGL) the noise problem at the residential areas off Snouffers School Road could be reduced. This option would ultimately be left up to the pilot, but with additional information provided to pilots, awareness and adherence to these guidelines could be improved. This suggestion is another option warranting additional study.

4. **Control of Engine Maintenance Runups**

The possibility of restricting engine maintenance runups between the hours of 10:00 p.m. and 7:00 a.m. was suggested. According to Montgomery County Noise Ordinance, 9:00 p.m. is the latest that such

runups should be performed; however, emergency circumstances override that stipulation.

C. AIRPORT USE RESTRICTIONS

Many of the suggestions involved the restriction of airport usage.

1. Flight Restrictions Based on Noise

Flight restrictions could be imposed as a way of limiting noise, or made as as voluntary restrictions. It was also pointed out that if a pilot violates such restrictions, a noise complaint could be filed against him.

2. On-Site Air Traffic Control Tower

The possibility of an air traffic control tower received much attention. Old regulations for an on-site FAA tower required 200,000 operations a year which the Montgomery County Airpark does not meet. In order to be FAA contracted but not funded, the old regulations required 125,000 annual operations. Montgomery County Airpark currently has 108,000 operations annually. New regulations outlining tower construction are in effect and should be evaluated. Some expressed concern that a tower only wastes time and money, while others pointed out that a tower presents positive benefits for local control of arriving and departing aircraft.

The other point raised concerning a tower was its cost, estimated at about $300,000 per year for a 24 hour per day tower. However, despite the cost, one person commented that a tower would decrease noise, increase enforcement of existing regulations, and prevent accidents.

D. MISCELLANEOUS

A number of additional comments and suggestions were received that did not fit into any of the previous categories. These options are listed below.

1. Airside Signs

Airside signs could be placed on the runway to inform pilots of take-off and landing procedures. It is an option recommended for further evaluation.

2. Noise Complaint Receipt and Response Procedures

A program using a complaint form or the availability of personnel to respond to complaints on a 24-hour basis could be instituted. This type of formalized complaint procedure will allow personnel to track violators and to educate them about local noise abatement procedures. This increased accountability will, it is thought, increase compliance with voluntary restrictions. A copy of the formal complaint form is shown in Figure 6.2 *Recommended Noise Complaint Form.* An enclosed sample of procedures is shown on page E-2.

3. Noise Monitoring System

A noise monitoring system is one solution that is not recommended at this time.

4. Public Information Program/Review and Implementation

Public information Program/Review and Implementation activities are also ongoing to address current aircraft activities.

5. Noise Abatement Contact

It was suggested that there should be only one person, with a phone number who could be contacted for information or to report loud aircraft.

E. CLOSING COMMENTS AND QUESTIONS

A few questions were posed at the end of the meeting, and some closing comments were made.

Q: - What is the next step in HMMH's study?

A: - The land-use measures will be evaluated and presented at the July 23 meeting. Following another public meeting in September, the final recommendations will be provided in the Noise Compatibility Program Volume 2 in the Fall at the last advisory committee meeting. Volume 2 will be a supplement to Volume 1. The final document will be reviewed by the advisory committee and approved by the MCRA before delivery to the FAA.

Q: - Did you compare this noise study to the one completed in 1988?

A: - Yes, we (the study team) did. The noise has been reduced slightly. However, the previous study contained too many unrealistic forecasts, and HMMH focused only on the actual noise situations. There is no FAA-defined impact on Montgomery County. It is solely a single-event impact.

The next MCRA board meeting is July 10. The next advisory committee meeting with HMMH will be July 23 at 4:00 p.m. in the 6th floor conference room of the County Council building. Nellie Shields Maskal will bring the appropriate Park and Planning people for their input and HMMH will bring their land-use specialist.

Please contact Alan Hass at Harris, Miller, Miller and Hanson or Hanifin Associates, Inc. (301-317-9025) if there are additional comments.

The meeting adjourned at 6:30 p.m.

MONTGOMERY COUNTY AIRPARK
FAR PART 150 STUDY
ADVISORY COMMITTEE MEETING

THE JULY 24TH AIRPARK ADVISORY COMMITTEE MEETING WAS RESCHEDULED TO WEDNESDAY, AUGUST 21, 1991, AT 4:00 PM THE MEETING WILL BE HELD IN THE 3RD FLOOR CONFERENCE ROOM OF THE MONTGOMERY COUNTY COUNCIL OFFICE, STELLA B. WERNER BUILDING.

THE SECOND COMMUNITY WORKSHOP/OPEN HOUSE IS SCHEDULED FOR TUESDAY, SEPTEMBER 24, 1991.

COL. Z. MAGRUDER HIGH SCHOOL AUDITORIUM/LOBBY
MUNCASTER MILL ROAD
HOURS ARE FROM 6:00 PM TO 10:00 PM

COMMITTEE MEMBERS REQUESTING COPIES OF THE CITIZEN INFORMATION REPORT FOR DISTRIBUTION TO THEIR ORGANIZATIONS AND COMMUNITIES, PLEASE ADVISE STUART KENNEY BY AUGUST 14, 1991.

COUNCIL OFFICE BUILDING
100 MARYLAND AVENUE
ROCKVILLE, MARYLAND 20850

For More Information:
Hanifin Associates, Inc.
(301) 317-9025 or (804) 873-8726

MEETING SUMMARY
MONTGOMERY COUNTY AIRPARK
FAR PARK 150 ADVISORY COMMITTEE

August 22, 1991
Third Floor County Council Conference Room
Rockville, Maryland

Attendees	Organization Represented
Robert Baumann	Airpark Users' Association
Nancy Shenk	Upcounty Citizens Advisory Board
Anne B. Swain	Neighborhood Representative
Ralph Wilson	Montg. Cty. Council Staff
Dominick Alberti	Neighborhood Representative
Doug McNeeley	Flight Resources
Rowland Schulte	Neighborhood Representative
Eugene Casey	Upper Montg. Chamber of Commerce
Nellie Maskal	M-NCPPC, Montg. Cty. Planning
Rosemary Arkoian	Neighborhood Representative
Howard Layer (Chairman)	Neighborhood Representative
Stuart Kenney	Montg. Cty. Revenue Authority
Bob Talbert	MD Aviation Admn./Noise Prog.
Robert Clifford	The LPA Group, Inc.
Stephen Federline	M-NCPPC, Montg. Cty. Planning
Bette McKown	M-NCPPC, Montg. Cty. Planning
Alan Hass	HMM&H
Linda Hanifin	Hanifin Associates, Inc.
Laura Rauber	Hanifin Associates, Inc.
Sara Green (Guest)	The Gazette

Absent Committee Members

Tom Ogle	Montg. Cty. Dept. of Env. Prot.
Peter Greenberg	Airpark Business Interests
John J. Clark	Montg. Cty. Dept. of Transp.
Michael Sarli	FAA BWI, Air Traffic Control
Norman Arnold	TAMS Consultants

Meeting Agenda

1. Land Use Alternative Analysis Discussion
2. Proposed Operational Alternatives Comments
3. Second Community Workshop Plans

Prepared by
Hanifin Associates, Inc.
Laurel, MD

Land Use Alternative Analysis Discussion

Bob Clifford, LPA Consultant/Team Member, opened the discussion by asking for committee input on alternative land use measures presented in the working report.

Committee Comments:

- Suggested the implementation of noise abatement procedures as a necessary element for the surrounding community.

- The existing noise abatement procedure on runway 32 (departure) is not a new concept, but is only now being reinforced. The data has changed due to changes in flight patterns.

- It was asked if the takeoffs could be shifted over Route 104 instead of Montgomery Village.

- Suggested the possible extension of the runway, using a displaced threshold, which would ensure that planes will continue to land in the same spot. Mr. Alberti also suggested possible shifting of the main contours as a result of the runway extension.

Comments – A. Hass, R. Clifford

Mr. Hass and Mr. Clifford offered several strategies to the committee:

- A displaced threshold

Ms. Shenk did not agree with this alternative. She suggested that the best way to enforce the displaced threshold, if implemented, is not by painting the runway, but by digging it up. Her concern is that pilots will ignore the threshold. A suggestion was made to post warning signs on the runway.

- Acquisition of undeveloped property surrounding the Airpark by the Revenue Authority

Mr. Layer disagreed with this proposal, stating that zoning measures like this are "nonsense" solutions.

- Extension of the runway by 500 feet
- Enforcement of the Real Estate Disclosure Policy

Preparations – L. Hanifin

Ms. Shenk suggested the following for a new location for the Sept. 24 meeting, commenting that Magruder High is too far away and not in the area affected by the Airpark.

- Goshen Elementary
- Church of the Nazarene
- Flower Hill Community Center
- Lake Marion Community Center

The committee was informed that the information reports had gone to press, but an attempt would be made to stop printing and track down a new location for the meeting.

Ms. Shenk suggested enlarging the display maps for the next meeting. Ms. Maskal also suggested a larger-scale land use map for the upcoming community meeting.

Several committee members requested copies of the information reports for their own distribution. Ms. Hanifin replied that copies will be distributed to those who request them. A total of 5,000 reports are being printed.

Mr. Casey expressed concern about communication with members of the committee. Relative to a late mailing of materials, Ms. Hanifin replied that she discovered the problem was the "oversized" package containing the July report required additional postage. The county was not charged for this; immediate steps have been taken to ensure that the incident does not reoccur.

Ms. Hanifin also informed the committee that in addition to the information reports, press releases and 18 x 24 posterboard meeting announcements would also be distributed. Ms. Shenk suggested the following locations for poster distribution:

Goshen Crossing
Giant Food
Erol's Video
Little Caesar's

Goshen Plaza
Hardee's

Flower Hill
Giant Food

The meeting adjourned at 6:30 p.m. Mr. Hass again requested that committee members convey in writing any additional comments they may have on the land use report.

MEMORANDUM

TO: FAR Part 150 Study Advisory Committee Members

FROM: Linda Hanifin
Hanifin Associates, Inc.

DATE: June 1, 1992

RE: Airpark Advisory Committee Meeting

This is to notify you that a FAR Part 150 Study Advisory Committee meeting is scheduled for Monday, June 29 from 4:00 – 6:00 p.m. The meeting will be held in the Third Floor County Council Conference Room in the County Council Building, located at 100 Maryland Avenue in Rockville.

Enclosed is a copy of the Montgomery County Airpark FAR Part 150 Documentation Report Volume 2: Noise Compatibility Program. Please review the report and bring any comments you may have to the June 29 meeting.

In addition, the third Airpark Open House/Community Workshop is scheduled for Tuesday, June 30 at the Goshen Elementary School from 6:00 – 10:00 p.m. Goshen Elementary is located at 8701 Warfield Road in Gaithersburg. Representatives from the study team will be available to answer any questions area residents may have. All advisory committee members and area residents are urged to attend.

Please call Laura Rauber at (301) 776-7407 if you have any questions.

MEETING SUMMARY
MONTGOMERY COUNTY AIRPARK
FAR PART 150 ADVISORY COMMITTEE
June 29, 1992
Third Floor County Council Conference Room
Rockville, MD

Attendees	Organization Represented
Stu Kenney	Montgomery County Revenue Authority
Doug McNeeley	Freestate Aviation
Rowland Schulte	Neighborhood Representative
Frank Squeglia	FAA Eastern Region
Howard P. Layer	Neighborhood Representative
Dominick Alberti	Neighborhood Representative
Eugene Casey	Upper Montgomery Chamber of Commerce
Bruce F. Mundie	
Norman Arnold	TAMS Consultants
Nancy Shenk	Upcounty Citizens Advisory Board
Anne Swain	Neighborhood Representative
Peter Greenberg	Airpark Business Interests
Rosemary Arkoian	Neighborhood Representative
Carol Edwards	Montgomery County Council Staff
Lori Lehnerd	FAA Washington
Nellie Maskal	M-NCPPC, Montgomery County Planning
Sara Green	The Gaithersburg Gazette
Betsy Steiff	Neighborhood Representative
Bob Clifford	The LPA Group, Inc.
Joseph M. Mott	
Alan Hass	Harris, Miller, Miller & Hanson, Inc.
Linda Hanifin Bonner	Hanifin Associates, Inc.
Laura Rauber	Hanifin Associates, Inc.

Absent Committee Members	
Tom Ogle	Montg. Cty. Dept. of Env. Protection
John J. Clark	Montg. Cty. Dept. of Transportation
Michael Sarli	FAA, BWI, Air Traffic Control
Robert Talbert	MD Aviation Adm./Noise Program
Ralph Wilson	Montg. County Council Staff
Robert Baumann	Airpark Users' Association
James Richardson	Airpark Leaseholders
Paul Puckli	The LPA Group, Inc.
Nicholas Miller	Harris, Miller, Miller & Hanson, Inc.
Thomas Breen	Harris, Miller, Miller & Hanson, Inc.

SUMMARY

Mr. Alan Hass from Harris, Miller, Miller, & Hanson opened the discussion with a review of Table 2.1, found in Volume 2 of the Noise Compatibility Program report. Table 2.1 is an overview of the Elements of the GAI Noise Compatibility Program, and offers 16 recommendations, broken down into Operational Elements, Land Use Elements, and Implementing, Monitoring, and Review Actions.

Suggested Operational Elements:

1. Institute Noise Abatement Flight Tracks
2. Institute Preferential Runway Use
3. Modify Business Jet Departure Procedures
4. Restrict (Voluntarily) Nighttime Operations
5. Restrict Nighttime Maintenance Runups

Suggested Land Use Elements:

6. Update Real Estate Disclosure Policy
7. Update Comprehensive Plans

Suggested Implementation, Monitoring, and Review Actions

8. Program Publicity: Letters to Airmen
9. Program Publicity: Airside Signs
10. Program Publicity: ATIS/ATCT Advisories
11. Program Publicity: Informational Brochure
12. Appoint Part-Time Noise Abatement Contact
13. Institute Noise Complaint Receipt & Response Procedures
14. Institute Public Information Program/Review and Implementation
15. Evaluate (Quantitatively) Changes in Cumulative Noise Exposure
16. Assess NEM & NCP due to Airport Layout/Operation Changes and at Minimum Intervals of Time

A member of the committee asked if there was a program suggested to measure compliance. Mr. Hass answered that there was, and referred to numbers 12 and 13 of the elements listed above. Ms. Swain added that it is often difficult to reach anyone at the Airpark. Ms. Shenk suggested that an objective third party be chosen as a noise abatement contact, if this element is implemented.

The discussion then moved on to the issue of voluntary nighttime restrictions. Mr. Hass explained that planes violating any restrictions should be reported by number, and that the Baltimore-Washington Airport can be contacted if no one is available at GAI. One committee member did not agree, saying that she was told by BWI that they do not have any control over flights that are farther than five miles from BWI airport. Mr. Hass added that it might not be 100% effective, but could work, with BWI's support.

Mr. Hass then referred to Figure 2.4 – the Recommended Letter to Airmen. Ms. Shenk pointed out that the 30% map shows pilots taking their turn after Snouffer School Road – to her this is not "as soon as possible," and indicated that the map and directions are conflicting in Figure 6.1 – Proposed Noise Abatement Flight Tracks. She added that the impact analysis is not valid, based on the recommendations in Figure 6.1.

Mr. Casey also stated that Figure 6.1 is misleading and should be deleted from the study. He also feels there is some confusion regarding the difference between noise awareness and noise abatement in the study, and is concerned that the recommendations given by committee members have been ignored.

Mr. Hass reminded the committee that the study indicates there is no actual noise impact, but that the consultants are still involved and willing to interact with the community.

Some committee members expressed concern about the amount of interaction with the community. Ms. Arkoian added that she was told many area residents didn't receive newsletters at all.

The discussion then moved on to the status of the study, and whether the FAA is in authority. According to Ms. Lehnerd, the airport owner has the responsibility to comply with the FAA. The issue of a control tower was also discussed, and whether it might reduce nighttime and low flying traffic. Ms. Arkoian mentioned that the citizens are aware and are concerned about the possibility of a tower increasing air traffic.

Mr. McNeeley pointed out to the group that the length of the runway is always the determining factor regarding the amount of traffic, not a control tower.

Ms. Shenk mentioned that they are concerned that the report was released to the press prior to the third workshop. She stressed the importance of obtaining input from the committee first.

Mr. Layer suggested that some measure of effectiveness for achieving compliance be included in the final document. Mr. Hass agreed that they would also like to see this.

Mr. Casey suggested HMMH call the AOPA in Frederick at (800) 872–2672, and ask for either Jeff Gilley or John Luce. He believes they have publications with recommendations for operating procedures.

Ms. Shenk then cited a figure on page 81 that contained 1980 Census figures. She asked if there was a way to obtain more recent figures. Mr. Clifford from the LPA group answered that these figures were obtained from M–NCPPC, and are an estimate of persons per household.

It was requested that more shading be included in Figure 5.1. Mr. Hass said they would make the requested change.

Mr. Hass then touched on the subject of airside signs in Figure 2.5. Mr. Mundie suggested that the wording on the first sign should be changed from "as soon as possible" to "as soon as practical," or "as soon as safely possible." Mr. Schulte expressed his concern that a printed document isn't going to discourage pilots, and emphasized that most complaints are based around continuous noise, not single-event noise. He wanted to know how they can get to the pilots that use standard procedures, and create continuous noise.

Mr. Arnold also added that there is concern that some aircraft are continuing up Snouffer School Road at full throttle and are not climbing. Mr. Hass agreed that this issue should be addressed. HMMH will research this issue and put more wording into the signage or letters.

Mr. Clifford then began his presentation with an overview of the two Land-Use Elements:

- Update Real Estate Disclosure Policy
- Update Comprehensive Master Plans

Update Real Estate Disclosure Policy

Mr. Clifford mentioned that the community can decide what criteria should be used for the real estate disclosure policy. It should relate to all land use. There are some concerns that it could reduce the value of existing homes in the area, a factor the committee needs to consider.

Mr. Clifford added that, as a land use planner, he believes it should not be a full disclosure. It should include a revised map of the study area (geographic boundaries).

Update Comprehensive Master Plans

Mr. Clifford emphasized that the results of the study and single event noise contours should be placed as an appendix in the master plan.

CONCLUSION

Mr. Hass added that he would like to receive all comments from committee members by the end of July. Mr. Kenney said that he will need to take comments and recommendations and revise the report. He will then inform the committee (if it is acceptable to the MCRA board) and submit the report to the FAA.

Mr. Squeglia informed the committee that the FAA will then do a preliminary review to see if everything is in line. If there are no additional comments the report will be automatically approved. Mr. Kenney said the report will also be submitted to the County Council and Council Executive for their review.

Mr. Hass concluded the meeting by stating that he hopes these recommendations will reduce the number of single event impacts around the Airpark through education and publicity. He added that this is an ongoing process that should provide some relief.

SIGN IN SHEET
MONTGOMERY AIRPARK FAR PART 150 STUDY
ADVISORY COMMITTEE MEETING
JUNE 29, 1992
4:00 P.M.

NAME AND PHONE NUMBER	DID YOU RECEIVE NOTIFICATION?		ARE YOU GOING TO ATTEND THE WORKSHOP – JUNE 30, 1992	
1. Stu Kenney 3017629080	YES (circled)	NO	Yes	
2. Doug McNeeley 301-963-7100	YES (circled)	NO	Yes	
3. Rowland Schulte 3012535865	YES (circled)	NO		No
4. Frank Squeglia 718-553-0902	YES (circled)	NO		No
5. Howard P. Layer	YES (circled)	NO		NO
6. [illegible]	YES (circled)	NO	YES	
7. Eugene A. Casey 301-230-9220	YES (circled)	NO	Yes	
8. Bruce F. Mundie 4108597064	YES (circled)	NO		No
9. Norman W. Arnold 7038278368	YES (circled)	NO	Yes	
10. Nancy Shenk 869-0656	YES (circled)	NO	Yes	
11. [illegible] B. Swain 977-8320	YES (circled)	NO	Yes	
12. Pete A. [illegible]	YES (circled)	NO	Yes	
13. Rosemary Arkoian 926-5008	YES (circled)	NO	Yes	
14. Carol DE Edwards 217-7929	YES (circled)	NO		No
15. [illegible] 417-1202	YES	NO (circled)	?	
16. [illegible] 428-8191	YES	NO		
17. Lori Lehnerd 703-285-2203	YES (circled)	NO		No
18. Nellie Mas[illegible]al – 495-4567	YES (circled)	NO	Yes	
19.	YES	NO		
20. Sara Green The Gazette 948-3120	YES (circled)	NO	yes	

NAME AND PHONE NUMBER	DID YOU RECEIVE NOTIFICATION?		ARE YOU GOING TO ATTEND THE WORKSHOP – JUNE 30, 1992	
21. Betsy Steph 258-7434	Yes		?	
22. Bob Cl. Ford 813 873 8677	✓		✓	
23. Joseph M Mott 762-1600	✓			
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APPENDIX E Copies of Second and Third Informational Newsletter

Project Newsletter No.2 - page 1

Montgomery County Airpark
FAR Part 150 Study

Montgomery County Government

A Public Information Report
From the Montgomery County Revenue Authority
August 1991

PROGRESS IN THE NOISE CONTROL PROGRAM

In October 1990, the Montgomery County Revenue Authority (MCRA) began an important study at the Montgomery County Airpark (GAI). Funded by the U.S. Federal Aviation Administration (FAA), the State of Maryland, and Montgomery County, the study is examining the impacts of aircraft noise on land uses and residents in the vicinity of the airpark. The principal purpose of the study is to develop a noise control program that addresses concerns of the airpark's neighbors and minimizes potential noise/land use incompatibilities.

The MCRA and the FAA are conducting this study under a federal program called Federal Aviation Regulation Part 150. Part 150 establishes a standard approach for airports to follow in developing and documenting a noise control program. Satisfactory completion of a Part 150 Study makes an airport eligible for federal funding support in implementing noise control measures.

The principal goal of the Part 150 Study is to minimize disturbance resulting from aircraft operations. To accomplish this goal, the study is organized into six technical elements, including:

- ❒ development of a study data base,
- ❒ identification and evaluation of aircraft noise abatement (operational) alternatives,
- ❒ identification and evaluation of compatible land use planning and control alternatives,
- ❒ selection of a "package" of operational and land use actions for implementation,
- ❒ development of a program to implement and monitor the selected alternatives, and
- ❒ preparation of the required documentation.

Project Newsletter No.2 - page 2

At this point in the study we have completed the first three technical elements. Information from the first element including noise measurement data, runway and flight track use, aircraft types and annual operations, computer modelling of annual exposure for existing and future conditions, land use and zoning data, and determination of impacts was presented in the first public information report and at the first community workshop.

The second and third technical elements involved the identification and evaluation of various operational and land use abatement strategies that could be implemented to reduce existing noise impacts or to prevent future noise impacts around Montgomery Airpark. The remainder of the study will recommend final abatement alternatives, determine the procedures required to implement each alternative, the parties responsible for implementation, the sources of funding, and the implementation schedule along with the anticipated benefits of the overall compatibility program. Final noise abatement alternatives will be selected following public, MCRA and FAA review.

At the completion of the project, the MCRA will have developed a Noise Compatibility Program -- a package of operational and land use planning actions designed to minimize noise impacts from the airpark.

PROPOSED OPERATIONAL NOISE ABATEMENT ALTERNATIVES

The chart on the adjacent page presents the initial recommendations resulting from the identification and evaluation of the operational noise abatement alternatives. Several miscellaneous alternatives for noise abatement are also recommended. Operational courses of action affect the airport plan, airport use, or aircraft operation. Miscellaneous measures concern pilot education and public awareness. The proposed alternatives were developed by examining not only the minimum abatement options that must be analyzed under Part 150 regulations, but also by examining other measures that could provide benefit to Montgomery Airpark.

Project Newsletter No.2 - page 3

OPERATIONAL NOISE ABATEMENT ALTERNATIVES

ALTERNATIVES	DESCRIPTION	RESULTS
Isolate Maintenance Runup Activity	Reduce noise levels in residential areas by restricting location and orientation of aircraft undergoing maintenance runups.	Present Airpark regulations do not restrict location and aircraft orientation during maintenance runups.
Noise Abatement Flight Tracks	Reroute aircraft on departures from Runway 32 over areas of Montgomery County that would expose less people noise.	Turning aircraft right between 30 and 50 degrees would reduce the number of residents exposed to noise impacts from aircraft departures on Runway 32.
Preferential Runway Use	Shift aircraft using the Airpark to runway ends that would reduce the impact on populated areas located to the north/northwest.	Maximizing departures on Runway 14 could prove beneficial in reducing noise levels in residential areas adjacent to the Airpark.
Modify Aircraft Departure Procedures	Reduce noise by having aircraft use recommended noise abatement departure procedures for departures from Runway 32.	Noise will be reduced if business jet aircraft follow NBAA departure procedures on departures from Runway 32.
Control Maintenance Runups	Reduce noise levels in populated areas by limiting the time aircraft can perform the runups, most notably at night.	Airpark regulations should restrict the performance of maintenance runups at night. A fine structure could be added to penalize violators of the restriction.
Use Restrictions	Reduce noise levels in populated areas by limiting the types of aircraft that can operate and/or times aircraft can operate at the Airpark.	Due to the limited number of nighttime operations, a noise-based use restriction would have an insignificant reduction on the noise exposure adjacent to the Airpark. However, the elimination of most of the nighttime activity would provide a significant benefit in terms of the community reaction.
Air Traffic Control Tower	Provide positive local direction to pilots operating to/from the Airpark and to educate and remind pilots to follow any adopted noise abatement procedures.	Provides for increased safety and stricter adherence to noise abatment procedures.
Airside Signs	Educate and remind pilots to follow any adopted noise abatement procedures at the Airpark.	Provides for stricter adherence to noise abatement procedures.
Noise Complaint Receipt and Response Procedures	Provide an effective means for the Airpark staff to receive, log, respond to, and summarize all aircraft noise-related complaints.	Provides the Airpark with a means to identify and educate violators and to emphasize the importance of adherence to noise abatement procedures.
Public Information Program/Informational Newsletters	Provide a means to continually inform the public about aircraft noise, impacts, and compatible use.	The Airpark will become more attuned to noise issues with the community and provide a means of disseminating information on noise issues.
Noise Abatement Contact	Provide a liaison between the Airpark and the community for all noise-related matters.	The extent of the noise problem justifies an Airpark employee devoted to this role.
ATIS/ATCT Advisories	Provide a means to educate pilots and remind them to follow all noise abatement procedures.	Provides for stricter adherence to noise abatement procedures.

Project Newsletter No.2 - page 4

PROPOSED LAND USE ALTERNATIVES FOR NOISE ABATEMENT

There are typically two types of noise abatement measures available to land use planners: remedial and preventative. These measures include the minimum abatement options that must be analyzed under Part 150 regulations, as well as other courses of action.

Remedial measures for airport noise compatibility planning are generally implemented to correct or reduce existing land use concerns. These remedial strategies were not recommended since there are no noise-sensitive land uses within the 65 Ldn noise contour and since both federal and state land use guidelines for such actions generally apply only where noise exposure exceeds 65 Ldn. These remedial measures generally include:

- land acquisition and relocation,
- easement acquisition,
- enactment of new zoning,
- changes in current zoning,
- environment review,
- sound insulation,
- noise barriers and
- tax incentives.

Preventative measures for airport noise compatibility planning are generally enacted to decrease the possibility of incompatible land uses being developed in the future.

Remedial Land Use Abatement Summary

ALTERNATIVE	DESCRIPTION
Land Acquisition/Relocation	Fee-simple acquisition and relocation for incompatible land uses in higher noise level areas (generally greater than 70 Ldn).
Easement Acquisition	The purchase of easements acquires the right to create noise and overfly incompatible land use in noise impacted areas (generally greater than 65 Ldn).
Airport Zoning/Overlay District	Enacting for restrictive zoning in areas affected by airport noise.
Environmental Review	An environmental review process that triggers a review of all proposed remodeling, restoration, or redevelopment projects within the noise impact area.
Sound Insulation Program	Insulates affected structures from exterior noise. Provides additional noise reduction within the interior of public and residential buildings, lessening impact from aircraft noise (generally for areas greater than 65 Ldn).
Noise Barriers	Construction of a noise barrier to minimize ground level noise impacts.
Tax Incentives	Provides tax incentives to promote sound attenuation improvements.

The table on the following page presents the results of our initial analysis of the proposed land use abatement alternatives.

Project Newsletter No.2 - page 5

PREVENTATIVE LAND USE ABATEMENT SUMMARY CHART

ALTERNATIVES	DESCRIPTION	RESULTS
Land Acquisition - Relocation	Fee-simple acquisition and relocation of property of incompatible land uses in higher noise level areas (generally greater than 65 Ldn).	Not recommended since there is no land area involved.
Easement Acquisition	The purchase of aviation easements before occupancy acquires the right of aircraft to create noise and overfly incompatible land use in noise impacted areas (generally greater than 65 Ldn).	Would not prevent new incompatible land uses from being developed. Not recommended since there are no noise-sensitive land uses within 65 Ldn noise contour.
Real Estate Disclosure	Requires seller to provide notification of potential noise impacts.	Could notify potential undeveloped land buyers of noise impacts on the area.
Airport Zoning - Overlay District	Enact zoning to require compatible use of undeveloped land.	Could rezone undeveloped land to non-residential compatible uses.
Revised Building Code	Require proper sound insulation in new structures.	Could require new development to be properly sound insulated.
Comprehensive Planning	Through goals, objectives, and policies stimulate compatible development and discourage incompatible development.	Could incorporate proper compatibility policies into plan. It would discourage incompatible development.
Capital Improvements Planning	Stimulate compatible development through Capital improvement spending.	Adequate infrastructure already exists in noise impacted areas.
Environmental Impact Review	Enact review process that requires a noise impact review before new development approval.	Could require noise impacts be addressed before new development approval
Tax Incentives	Enact tax incentive program to promote compatible development.	Would promote development of land uses (industrial, commercial) which may not be desirable in the area.

Project Newsletter No.2 - page 6

WE WOULD LIKE TO HEAR FROM YOU!

The second community workshop will be held at Goshen Elementary School, located at 8701 Warfield Road in Gaithersburg on September 24, 1991, from 6:00 p.m. to 10:00 p.m.

The purpose of this workshop is to share our findings and recommendations regarding proposed operational and land use courses of action for reducing noise levels around the airpark. Representatives from the study team will be available throughout the workshop to answer any questions and to talk to interested parties on a one-on-one basis. Your input on the recommended alternatives, as well as your comments about the Airpark are welcome and appreciated.

Montgomery County Government
Montgomery County
Revenue Authority
211 Monroe Street
Rockville, Maryland 20850

Attention: Notice of Community Workshop
September 24, 1991 "TO BE AN OPEN HOUSE"

Project Newsletter No.3 - page 1

ery County Airpark
rt 150 Noise/Land Use
patibility Study

Montgomery County Government

ublic Information Report
om the Montgomery County Revenue Authority

June 1992

PROGRESS IN THE NOISE CONTROL PROGRAM

In October 1990, the Montgomery County Revenue Authority (MCRA) initiated an important study at the Montgomery County Airpark (GAI). Funded by the U.S. Federal Aviation Administration (FAA), the State of Maryland, and Montgomery County, the study is examining the impacts of aircraft noise on land uses and residents in the vicinity of GAI. The principal purpose of the study is to develop a noise control program that addresses concerns of the airpark's neighbors and minimizes potential noise/land use incompatibilities.

The MCRA and the FAA are conducting this study under a federal program called Federal Aviation Regulation (FAR) Part 150. FAR Part 150 establishes a standard approach for airports to follow in developing and documenting a noise control program. Satisfactory completion of a Part 150 Study makes an airport eligible for Federal funding support in implementing noise control measures.

The principal goal of the Part 150 Study is to minimize disturbance resulting from aircraft operations. To accomplish this goal, the study is organized into six technical elements. The first five elements of the study are complete, while the sixth is nearing completion and will be finalized after the next round of public information meetings.

The six elements include:

- development of a study database,
- identification and evaluation of aircraft noise abatement (operational) alternatives,
- identification and evaluation of compatible land use planning and control alternatives,
- selection of a "package" of operational and land use actions for implementation,
- development of a program to implement and monitor the selected alternatives, and
- preparation of the required documentation.

Two final project steps need to be completed:

- completion of the public participation process; and
- submission of the final documentation of the recommended Noise Compatibility Program (NCP) to the FAA.

The first technical element included collecting noise measurement data, gathering information on runway and flight track use and on aircraft types and annual operations, land use and zoning data, computer modelling of noise exposure for existing and future conditions, and determining noise impact. This information was presented in the first public information report and at the first community workshop. The second and third technical elements involved the identification and evaluation of various operational and land use abatement strategies that could be implemented to reduce noise impacts around GAI. This information was presented in the second public information report and at the second community workshop.

This third public information report, and the upcoming community workshop, will present the results of the fourth and fifth technical elements. They will describe the remainder of the study and recommend final abatement alternatives, determine the procedures required to implement each alternative and the entities responsible for implementation, determine the sources of funding and the implementation schedule, and present the anticipated benefits of the overall compatibility program.

continued: see Progress...,page 5

Project Newsletter No.3 - page 2

Recommended Noise Compatibility Program

The recommended NCP for GAI includes 16 recommended measures: 5 operational measures, 2 land use measures, and 9 measures related to ongoing program implementation, monitoring, and review.

The first section presents the recommended operational measures for GAI. Operational measures are those that affect the airport plan, airport use, or aircraft operation.

PROPOSED OPERATIONAL MEASURES

Institute Noise Abatement Flight Tracks	Institute Preferential Runway Use	Modify Business Jet Departures Procedures	Restrict (Voluntarily) Nighttime Operations	Restrict Nighttime Maintenance Runups
This measure will remind pilots to turn right after departure from Runway 32. This turn will reduce overflights on the close-in Hunters Woods residential area. The FAA will consider the feasibility of this measure during the NCP review, after which the MCRA and the BWI Air Traffic Control Tower will work to advise pilots. The associated costs are discussed on page 3. This action is presently being partially implemented and full implementation is expected in 1993.	This measure will encourage pilots to use Runway 14 for departures to the maximum extent possible. Such use will reduce departures over all residential areas to the north/northwest of GAI. The FAA will examine its feasibility during the NCP review, after which the MCRA will work to advise pilots. The associated costs are discussed on page 3. Full implementation is expected in 1993.	This measure will encourage pilots of business jet aircraft to use the NBAA Close-In Departure Procedure on Runway 32 departures. This procedure will reduce noise levels on all residential areas to the north/northwest of GAI. The FAA will examine its feasibility during the NCP review, after which the MCRA will work to advise pilots. The associated costs are discussed on page 3. Full implementation is expected in 1993.	This measure institutes a voluntary nighttime use restriction by noisier, predominantly business, jet aircraft. Such a restriction will reduce the louder nighttime overflights of all residential areas to the north/northwest of GAI. Since this would be only a voluntary restriction, the MCRA will decide on the legal format of the restriction and will work to advise pilots. Costs associated with this action are covered on page 3. Full implementation is expected in 1993.	Although runups are not currently an issue at GAI, this measure will restrict the time and location for any future runups. This restriction will reduce nighttime noise levels from ground operations for all residential areas adjacent to GAI. Since this would be only a voluntary restriction, the MCRA will decide upon the format of the restriction and will work to advise pilots. The costs associated with this measure are discussed on page 3. Full implementation is expected in 1993.

The next section presents the recommended land use measures for GAI. There are typically two types of land use abatement measures available to land use planners. **Remedial measures** for airport noise compatibility planning are generally implemented to correct or alleviate existing land use compatibility concerns. They include land acquisition and relocation, easement acquisition, enactment of new zoning, changes in current zoning, environmental review, sound insulation, noise barriers, and tax incentives. **Preventative measures** for airport noise compatibility planning are generally enacted to decrease the possibility of incompatible land uses developing in the future. They include land acquisition and relocation, easement acquisition, real estate disclosure, zoning, revised building codes, revised subdivision regulations, comprehensive planning, capital improvements program planning, environmental impact review, and tax incentives.

PROPOSED LAND USE MEASURES

Update Real Estate Disclosure Ordinance	This measure will update the existing ordinance to inform potential home buyers about the presence of aircraft noise. Potential home buyers could receive information about the potential disruptive effect of aircraft noise levels from GAI. Implementation would be the responsibility of Montgomery County after a request by the MCRA. No costs, outside of normal County administrative function, are associated with this action. Full implementation is expected in 1993.
Update Comprehensive Plans	This measure would update local plans to accurately reflect the noise impact from GAI. These plans would help determine future growth and development within the community. Implementation would be the responsibility of Montgomery County after a request by the MCRA. No costs, outside of normal County administrative function, are associated with this action. Full implementation is expected in 1993.

Project Newsletter No.3 - page 3

The last section deals with the ongoing program implementation, monitoring, and review. These measures educate and remind pilots of operational noise abatement procedures, educate the local community about the airport and noise abatement procedures, provide the airport with a method to respond to noise complaints and to solve local noise problems, and provide a means by which GAI can determine when changes occur in the noise exposure surrounding the airport such that an update of the noise study needs to be undertaken.

PROPOSED IMPLEMENTATION, MONITORING, AND REVIEW MEASURES

Program Publicity: Letters to Airmen	This measure will remind pilots to follow all noise abatement procedures at GAI, including all five proposed operational measures previously mentioned. Following FAA review of the five measures, the MCRA will publish and distribute the Letter to Airmen. Better pilot awareness of local noise abatement procedures is expected. It is expected that the Letter would cost $3,000, of which the FAA would pay 90% and the MCRA would fund 10%. Implementation would be carried out in 1993.
Program Publicity: Airside Signs	This measure will remind pilots to follow all noise abatement procedures at GAI, including the first four proposed operational measures previously mentioned. Following FAA review of the four measures, the MCRA will erect the airside signs. Better pilot awareness of local noise abatement procedures is expected. It is expected that the signs would cost $8,000, of which the FAA would pay 90% and the MCRA would fund 10%. Implementation would be carried out in 1993.
Program Publicity: Informational Brochures	This measure will remind pilots to follow all noise abatement procedures at GAI, including all five proposed operational measures previously mentioned. Following FAA review of the five measures, the MCRA will publish and distribute the brochure. Increased pilot awareness of local noise abatement procedures is expected. It is expected that the brochure would cost $5,000, of which the FAA would pay 90% and the MCRA would fund 10%. Implementation would be carried out in 1993.
Program Publicity: ATIS/ATCT Advisories	This measure will remind pilots to follow all noise abatement procedures at GAI, including the first four proposed operational measures previously mentioned. Following FAA review of the four measures, the MCRA will request that the FAA place a noise abatement message on the ATIS and that the FAA ATCT advise pilots requesting procedures not consistent with local noise abatement procedures. Better pilot awareness of local noise abatement procedures is expected. No related costs are expected for this measure. Implementation would be carried out in 1993.
Appoint Noise Abatement Contact	This measure will require the MCRA to appoint a Noise Abatement Contact for GAI. This person would be responsible for handling noise complaints and tracking aircraft not complying with noise abatement procedures. Increased compliance with procedures is expected. No implementation costs are expected, since the employee would be funded from other sources as part of his/her regular job. While this could be implemented immediately, a 1993 implementation date is more likely.
Institute Noise Complaint Receipt and Response Procedures	This measure will require the MCRA to adopt procedures to log and track noise complaints. It is most likely that this logging would be the responsibility of the Noise Abatement Contact. Increased compliance with procedures is expected. The only implementation costs would be for the purchase of a telephone answering machine ($200) to handle after-hours complaints. This would be 90% FAA funded and 10% MCRA funded. This measure could be implemented immediately, although a 1993 implementation is more likely.
Institute Public Information Program	This measure will require that the MCRA form a noise abatement committee to oversee the implementation of the NCP and related noise abatement procedures. Increased compliance with noise abatement procedures is expected. No implementation costs are expected and the procedure could be implemented immediately, although a 1993 date is more likely.
Evaluate Changes in Noise Exposure Due to Changes in Airport Layout/ Operations and at Minimal Intervals of Time	This measure will allow the MCRA to review annual noise exposure on a regular basis. It will also reassess the need to update the NEM/NCP, based on changes in airport operation. Information will be forwarded to the noise abatement committee. No implementation costs are expected and implementation is expected by 1993.

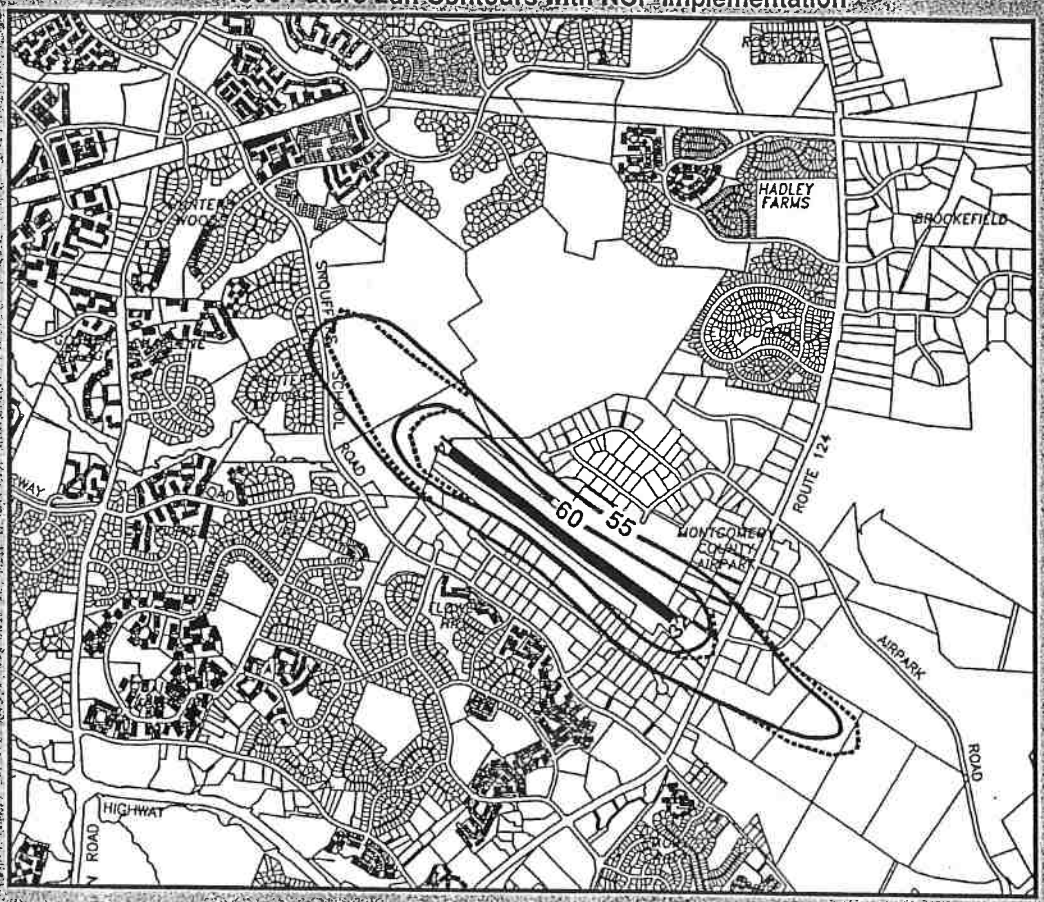
Project Newsletter No.3 - page 4

ANTICIPATED PROGRAM BENEFITS

According to FAA guidelines, there are no homes that are considered impacted by aircraft noise greater than 65 Ldn from GAI. In fact, only eight homes are located within the 55 to 60 Ldn noise contour in the 1996 future case. Therefore, much of the focus of this study was on the reduction of aircraft single-event noise levels. The following figure presents the 1996 noise exposure both with and without full implementation of the five operational NCP elements previously described. With the full NCP implementation, no homes are expected to be located within the 55 Ldn contour or higher.

The effect of the overall program would be felt outside the 60 Ldn contour. The full effect of the NCP would be the reduction of single-event noise levels. Populated areas north/northwest of GAI would experience fewer aircraft overflights and, therefore, reduced noise exposure.

1996 Future Ldn Contours with NCP Implementation



1996 without NCP Implementation
1996 with NCP Implementation

65 Ldn Contours have been removed for clarity

Project Newsletter No.3 - page 5

COMMUNITY QUESTIONNAIRE

The following questions have been developed as a vehicle to gain further community input into the FAR Part 150 Study. Please take a few minutes to respond and mail to MCRA 211 Monroe Street, Rockville, MD 20850.

1. The following sixteen measures have been recommended as part of the noise control program for the Montgomery County Airpark. Please give us your opinion as to the level of effectiveness of each measure, with
   1 meaning very effective,
   2 meaning moderately affective, and
   3 meaning not effective.

   a. Institute noise abatement flight tracks
      1 2 3
   b. Institute preferential runway use
      1 2 3
   c. Modify business jet departures procedures
      1 2 3
   d. Restrict (voluntarily) nighttime operations
      1 2 3
   e. Restrict nighttime maintenance runups
      1 2 3
   f. Update real estate disclosure ordinance
      1 2 3
   g. Update comprehensive plans
      1 2 3
   h. Program publicity: letters to airmen
      1 2 3
   i. Program publicity: airside signs
      1 2 3
   j. Program publicity: informational brochures
      1 2 3
   k. Program publicity: ATIS/ATCT advisories
      1 2 3
   l. Appoint noise abatement contact
      1 2 3
   m. Institute noise complaint receipt and
      1 2 3
   n. Institute public information program response procedures
      1 2 3
   o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
      1 2 3

2. For any measure you do not feel will be effective, please give us your reasons.

   _____
   _____
   _____
   _____
   _____
   _____

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

   _____
   _____
   _____
   _____
   _____

Progress..., continued from page 1

The sixth element includes two documents. The Noise Exposure Map (NEM) describes the information in Element 1, while the Noise Compatibility Program (NCP) describes the information analyzed and presented in Elements 2 through 5. The NEM was completed and submitted to the FAA in July 1991. The FAA acknowledged its acceptance in February 1992. The NCP will be finalized and submitted to the FAA following receipt of comments from the third community workshop. After a 180 day FAA review period, and assuming FAA approval of the noise and land use recommendations, the MCRA will have developed a Noise Compatibility Program -- a package of operational and land use planning actions designed to minimize noise impacts from GAI.

Project Newsletter No.3 - page 6

Your Involvement is Requested!

The next community workshop will be held at Goshen Elementary School, located at 8701 Warfield Road in Gaithersburg, on Tuesday June 30, 1992, from 6:00 p.m. to 10:00 p.m.

The purpose of this workshop is to present the recommended Noise Compatibility Program elements currently under consideration by the Montgomery County Revenue Authority. These include all operational and land use measures proposed to reduce noise levels around the Montgomery County Airpark.

Montgomery County Government
Montgomery County
Revenue Authority
211 Monroe Street
Rockville, Maryland 20850

Questionnaire Analysis Report
MONTGOMERY AIRPARK FAR PART 150 STUDY
Community Workshop #2
24 September 1991

Prepared by
Hanifin Associates, Inc.
December 28th, 1991

Questionnaire Analysis Report
MONTGOMERY AIRPARK FAR PART 150 STUDY
Community Workshop #2
24 September 1991

In conjunction with the Montgomery County FAR Part 150 Study Open House workshop, attendees were asked to respond to a questionnaire so that their specific concerns could be identified and their recommendations and advice recorded. Of the 44 persons attending the workshop, 39 completed the questionnaire. This report discusses the 39 questionnaire responses and provides an overview and analysis of some issues of concern.

1. How did you learn about this workshop?

Nearly half (46%) of the respondents had learned about the FAR Part 150 Study workshop from information reports previously circulated. The remainder of the respondents received their information from a spectrum of sources. Ten (26%) had heard about it from another individual, two had read a newspaper article about it, three saw the informational poster at the Goshen Plaza Giant, and ten indicated the following additional sources: a notice at Goshen Crossing, a notice posted at the airport itself, an airport association mailing, an informational form dropped off by a neighbor, from being in the area and happening to hear of it, through covering the workshop for a newspaper, from the MCAA, from a previous meeting, and through a telephone call to the consultants.

It is clear, from the fact that nearly half of the respondents had come to this workshop based on information received through the information reports, that these reports are an effective communication mechanism for this study. In addition, the fact that more than a quarter of the people who filled out the questionnaire had heard about the workshop from another individual is a clear indicator of the strong community interest in this issue; people are talking to each other about the study and becoming personally involved.

Prepared by Hanifin Associates, Inc.
December 28th, 1991

2. Why did you come to this workshop?

More than two-thirds of the respondents attended the workshop in order to gather basic information on the FAR Part 150 study and to "have a voice" in future Study proceedings. There was a lesser, though still considerable, interest in commenting on specific findings or alternatives (38%) and in having specific questions addressed or issues clarified (46%).

3. What is your interest in the Airpark FAR Part 150 Study?

There are two primary interest groups represented by the respondents. Seventy-four percent are residents of the area in the vicinity of the airport, and 51% are associated with the airport, as either pilots, airpark users, or airpark officials. Five of the pilots, however, are also residents of the area.

4. Have you received other informational materials before attending this workshop?

Most (59%) respondents had received other materials. As the responses to Question 1 also indicate, the public information reports have been effective in informing the community about the Study.

5. Which information sources have you used?

In corroboration of the effectiveness of the information reports, 59% of the respondents, when specifically asked, cited these reports as their primary information source. The other information sources listed - previous community workshops, technical reports, and other sources - were each used by 28-31% of the respondents. The category of "other" included newspapers, civic association meetings, Advisory committee meetings, FAR Part 150 Committee meetings, talks with airport personnel, the spring 1991 meeting at Casey Barn, and homeowner meetings.

Prepared by
Hanifin Associates, Inc.
December 28th, 1991

6. Rate the information sources - Public Information Report #1, Public Information Report #2, Community Workshop #1, and Community Workshop #2 - from 1 being the least effective to 5 being the most effective.

Forty-four percent of the respondents did not answer this question at all. Those who did respond showed a wide scatter in their answers, but in the case of both the information reports and the workshops there was a trend towards considering the second of each of these categories more effective than the first. There was also a trend towards considering the reports as more informationally effective than the workshops. The differences in each case, however, were not great.

7. Is there any other information that might have helped you prepare for this workshop?

The response to this question demonstrated the desire of citizens to be kept informed. In addition to the materials already provided, respondents would have liked the following:

- More publicity: more posters, announcements and handouts
- An announcement on the Gaithersburg cable TV channel
- Publishing of times of meetings in Gaithersburg Gazette
- A formal, detailed agenda

8. Have you been active in other meetings concerning the Airpark?

Sixty-two percent of the respondents had been previously active. Three of the remaining 38% had not known of the previous meetings.

Prepared by
Hanifin Associates, Inc.
December 28th, 1991

9. Did you have specific questions about the FAR Part 150 Study that you wanted addressed?

There were a number of specific issues that respondents were hoping to see addressed during the workshop. These included:

- Safety of nearby school
- Timing of flights, especially early in the morning and on weekends
- Touch and go flights
- Changing current flight patterns
- Fanning flight patterns out
- Sincerity of efforts to have flights avoid neighborhoods
- Zoning of current park area into residential land
- Relocation of airpark to an undeveloped area

Except for the safety of the nearby school, these are all factors that relate to the issue of noise abatement. Subsequent questions address this issue in more detail, and their answers also illustrate the high degree of respondent concern.

10. Has the information provided throughout the Study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

Sixty-two percent expressed satisfaction with the information provided to date. Seventeen of those who were satisfied had been to previous meetings, but six people who had not been to any earlier meeting also expressed satisfaction with the materials they had seen. (Some respondents did not fill out this question.)

Prepared by
Hanifin Associates, Inc.
December 28th, 1991

11. What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning you approve completely. (The alternatives listed and the responses to them are detailed in the appendix.)

An analysis of the responses indicates:

• Those operational abatement alternatives that met with the highest approval were those directly concerned with either limiting noise or distributing it over a broader area.

• Restricting aircraft operations based on noise was the preferred alternative, followed by

a. extending the runway/taxiway,
b. changing flight tracks.
c. installing an air traffic control tower, and
d. implementing noise complaint procedures.

• There was a strong division of opinion on the option of extending the runway/taxiway - 38% disapproved completely and 28% approved completely. All but one of those who strongly disapproved of this alternative are residents; nine out of the eleven who strongly approved are pilots.

• Those who disapproved of implementing noise complaint procedures are either airpark officials or, with one exception, pilots. This is a reinforcement of earlier indications that noise abatement is of greater concern to residents than to airpark users.

• On alternatives that relate to aircraft operations, such as isolating engine run-up activity, it is more likely to be pilots than residents who strongly disapprove. However, the large number of respondents who failed to fill in answers to the alternatives of displacing thresholds and isolating engine run-up activity indicates that these options may not have been understood by everyone.

• About equal numbers of pilots supported as opposed an air traffic control tower.

• Providing a public information program received the highest approval rating of any of the alternatives - 62% of the respondents completely approved.

12. In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

No overwhelming preference was given in the answers to this question (see Appendix). However, extending the runway/taxiway was rated first, second, or third by 21% of the respondents. Other favored alternatives included changing flight tracks (15%), installing an air traffic control tower (13%), and implementing noise complaint procedures (13%).

13. Please identify the area in the vicinity of the Airpark where you either live or work.

The following locations were given in answer to this question: Goshen (6), Montgomery Village (4), Hunters Woods (4), Avalon Farm (4), Ashford, North Village, Granby Woods, Hadley Farms, Airport (3), Montgomery Aviation, Mill Creek Town South (2), and No answer (10).

14. How long have you lived or worked in the area?

Forty-one percent of the respondents have lived or worked in this area for one to five years, 10% for six to ten years, 26% for eleven to twenty, and 1% for more than twenty.

15. What are the ages of the residents in your home?

The ages range from 13 months to over eighty. Most respondents, however, fell into the late twenties to mid-forties age span. Thirty-one percent were families with children. Twenty-three percent did not answer this question.

Prepared by
Hanifin Associates, Inc.
December 28th, 1991

16. Were you aware that the Airpark was actively used when you purchased your home?

The majority (64%) knew the Airpark was actively used; 13%, however, were not aware of this fact. Twenty-three percent did not answer this question.

17. Can you identify the approximate times and levels of aircraft noise that you find are disturbing?

Weekends and early morning use were disturbing to more than 50% of the respondents, with evening and night noise affecting a further 18%.

Have there been any incidents that concern you relative to the Airpark?

Forty-six percent responded affirmatively to this part of question 17, mentioning such incidents as congestion of landing planes, a recent emergency landing, large commuter plane use, low-flying planes, repeat flight patterns over houses, an incident involving a kite, and deviations from set take-off and landing patterns.

Would you support construction of an airport tower as both an operational control and a safety measure?

A third of the respondents would support such construction, but 38% would oppose it. Twenty-eight percent left this question unanswered. The approval in this question is rather greater than that given in question 11, perhaps because safety was explicitly mentioned.

Prepared by
Hanifin Associates, Inc.
December 28th, 1991

18. Is there any additional information you would like provided to you?

The responses to this question included:

- What do local politicians think about this issue?
- Why is the County Council continuing to approve residential building in affected areas?
- Can we receive status reports on the progress of the Study?
- What percentage of homeowners in the vicinity of the airport are opposed it?
- Can we be informed of changes before they happen, especially with regard to expanding commuter flights?
- Can we see Airport regulations and statistics?

19. Have you completed a card to have your name placed on the master mailing list and to verify our information?

Four people (10%) did not fill out such a card.

20. Please use the space below to provide the study team and county officials with any additional comments you may have.

The comments given here are diverse, informative, and often useful. In addition, several people took the opportunity to indicate their satisfaction with the Airport and its noise levels.

- Motorcycles on Shady Grove are louder than aircraft at airport property line.

- Moved to this location in order to be near the airport.

- Planes fly too low over houses.

- A safe airport by any objective measure. Zoning and permitting decisions were made in the past that were known would exacerbate future conflict.

- It would be fairer to have a fanned-out pattern of flight allocation that directed flights over a wider area.
- Phase out this airport and consider a new location.
- It is hard for homeowners to see plane numbers so as to report violators of set landing and take-off patterns. Should require registration on wing bottom.
- Montgomery Aviation has not yet been consulted about the various noise abatement options or alternatives.
- The workshops are constructive, and the information welcome.
- Place meeting notices at grocery stores.
- It would be helpful if local politicians would take a public stand on the air park.
- It seems that it is only a handful of residents who are bothered by loud single event noises.

Prepared by
Hanifin Associates, Inc.
December 28th, 1991

Circ. 9500
P. A2

MONTGOMERY VILLAGE
GAZETTE
Wednesday, September 18, 1991

Briefly Noted

The Montgomery County Airpark area residents are invited to a Noise Study Community Workshop on Tuesday, Sept. 24, 6 to 10 p.m., Goshen Elementary School, 8701 Warfield Rd. They can question the consultants now completing the Airpark Study. For more information call Hanifin Assoc. Inc. in Laurel, Md. at 301-317-9025.

SUMMARY
COMMUNITY WORKSHOP NO. 2
FAR PART 150 STUDY
MONTGOMERY AIRPARK (MONTGOMERY COUNTY, MD)

24 September 1991 - 6:00 PM
Goshen Elementary School
Gaithersburg, Maryland

Presenter:

Alan G. Hass, P.E.
Harris, Miller, Miller & Hanson, Inc.

Thomas Breen
Harris, Miller, Miller & Hanson, Inc.

Robert Clifford
LPA Group

Facilitator:

Linda M. Hanifin
Hanifin Associates, Inc.

Attendees:

Attachment A

Handouts:

Attachment B

Summary of Evaluation Questionnaire:

Attachment C

The purpose of the second community workshop was to provide neighboring residents and other interested persons with information on the FAR Part 150 Study, as well as an opportunity to discuss the study's progress with the technical consultants. The workshop format was conducted in an "open-house" forum, allowing attendees an opportunity to ask questions and discuss issues with the technical consultants on a one-on-one basis. The community workshop also provided area residents with an effective mechanism to provide their input and comments regarding the study on a more personal level.

The workshop room was set up with five "information clusters," each providing details of study results. A member of the study team was available to explain information and answer questions. Approximately 40 people attended, representing concerned citizens, groups, and community organizations. Participants were greeted by the study team and asked to complete a registration form and questionnaire. Attendees were then directed to the "information

clusters" to meet the technical consultants – Mr. Alan Hass of HMM&H, Mr. Thomas Breen of HMM&H, and Mr. Robert Clifford of LPA.

The information clusters were arranged as follows:

INFORMATION CLUSTER #1
Welcome and Basic Study Information
Linda Hanifin – Hanifin Associates, Inc.

INFORMATION CLUSTER #2
Airpark Operations
Tom Breen – HMM&H

- Contour Development
- Flight Track Information
- Annual Operations Information

INFORMATION CLUSTER #3
Operational Abatement Alternatives
Alan Hass – HMM&H

- Operational Abatement Summary
- Single-Event Contours
- Operational Analysis
- Existing Noise Contours

INFORMATION CLUSTER #4
Land-Use Abatement Alternatives
Bob Clifford – LPA Group

- Land-Use Abatement Summary
- Land-Use Map
- Acres of Impact
- Future Noise Contours

INFORMATION CLUSTER #5
Study Information Display and Handouts
Laura Rauber – Hanifin Associates, Inc.

The workshop took place from 6:00 – 9:30 p.m. with attendees arriving in a steady flow throughout most of the evening. Several attendees lingered and were still asking questions as the workshop was wrapped up at 10:00 p.m.

GENERAL COMMENTS
COMMUNITY WORKSHOP #2

MCRA

Mr. Stuart Kenney of the Montgomery County Revenue Authority (MCRA), expressed disappointment at the low turnout at the workshop. Given the concerns conveyed by committee representatives, he expected that more persons would attend. He hopes the citizens groups are doing a thorough job of educating their neighbors – perhaps explaining the low turnout? Mr. Kenney also mentioned that there appeared to be some people who were benefiting greatly from the workshop information.

Harris, Miller, Miller & Hanson

Mr. Alan Hass of Harris, Miller, Miller and Hanson commented after the meeting that the main concern of the attendees seemed to be the lack of available noise reduction options generated from the study. He also mentioned that though the reaction to the workshop was fairly calm, they are still looking for a "magical" noise reduction alternative that just isn't possible. Mr. Hass also stated that the size of the workshop turnout was about average for this kind of study.

Tom Breen also noted that most of the people he spoke with knew little about the study and had not participated in any of the previous meetings. These people wanted to be educated on the study and were very inquisitive. He mentioned that while few specific technical questions were asked, participants basically wanted to know what had been accomplished in the study to date.

The LPA Group, Inc.

Mr. Clifford of the LPA Group stated that the majority of attendees he spoke with appreciated the opportunity to meet with not only the consultants, but with each other to give and take information. Most stated they had learned a great deal more about the Airpark's operations and were reassured after seeing that the County is available and willing to communicate with them. Most felt that the Airpark and its surrounding communities will become better neighbors after this workshop.

Mr. Clifford mentioned that some of the attendees were not aware of the scope of the residential land use surrounding the Airpark. They seemed to be concerned about preventative land-use measures and suggested that any undeveloped land currently surrounding the Airpark (particularly south of the Airpark) should be protected and not zoned residential in the future.

Mr. Clifford also noted that a few area residents stated they were misinformed by their real estate agents when purchasing their homes re: the five-mile airport disclosure. They felt they were not specifically informed about the Montgomery Airpark i.e. size, flight schedules, etc.

Specific Observations and Conclusions

The majority of those who attended the workshop spent quite a bit of time at the meeting asking questions and initiating open discussions. Several attendees continued discussions with the study team until 10:00 p.m. Participants appeared to be quite enthusiastic about filling out the questionnaires, seeing this as an opportunity to provide their own specific input to the study. Many of the new participants also provided additional names to the mailing list for future study information.

ATTACHMENT A

LIST OF ATTENDEES

LIST OF ATTENDEES
Far Part 150 Study

Jim Rives
Avalon Farm

Jeff Meshinsky
Montgomery Aviation

Jack Collins
Ashford

Charles Settgast
N. Village Homes Corp.

Mary Ritchie
Ashford

Russ Rankin
Hunters Woods

Rosemary Arkoian
Prathertown

Robert Oberlander
MD Air Safety Institute

Judith Ellis
Avalon Farms

Jeff Hartwick
Hunters Woods

Brian Poole
Highfield

Donna Whitridge
Hadley Farms

Joulyn Fraser
Montgomery Aviation

Joli McCathran
MD General Assembly

Ann Toblin
Prathertown

Janet O'Neil
Burton Woods

David Bohn
Ashford

Nancy Shenk
Goshen

Douglas McNeeley
Flight Resources

Dominick Alberti
Granby Woods

Bonnie Buntain
Avalon Farms

Mike Whitcomb
Granby Woods

John Whitridge
Hadley Farms

Vincent Morris
Express Newspaper

Leonard J. Stone, Sr.
North Montgomery Village

Clifford Swain
East Village

Albert Ducker
Hunters Woods

Richard Boggs
Goshen Community Assn.

Jimmy Haller
Montgomery Village

Sonya Overeem
Prathertown

Bob Ciri
Brookfield

Margaret Natof
Mill Creek Towne

Sara Green
Gazette Newspapers

Karen McCarthy
Hunters Woods III

Anne Swain
East Village

Janet Martin
Ashford

Barbara Eisenbeiss
Hunters Woods I

Murray Weiss
MCAA

Sampath Arepalli
Hunters Woods

Stuart Natof
Mill Creek Towne

Melanie Rankin
Hunters Woods

ATTACHMENT B

HANDOUTS

MONTGOMERY COUNTY FAR PART 150 STUDY ATTACHMENT B

OPEN HOUSE QUESTIONNAIRE

following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please plete your responses as you tour the information clusters, or after you have finished, and return it to a member of the ect team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this ly.

How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

__ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?
__ Yes __ No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

__ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

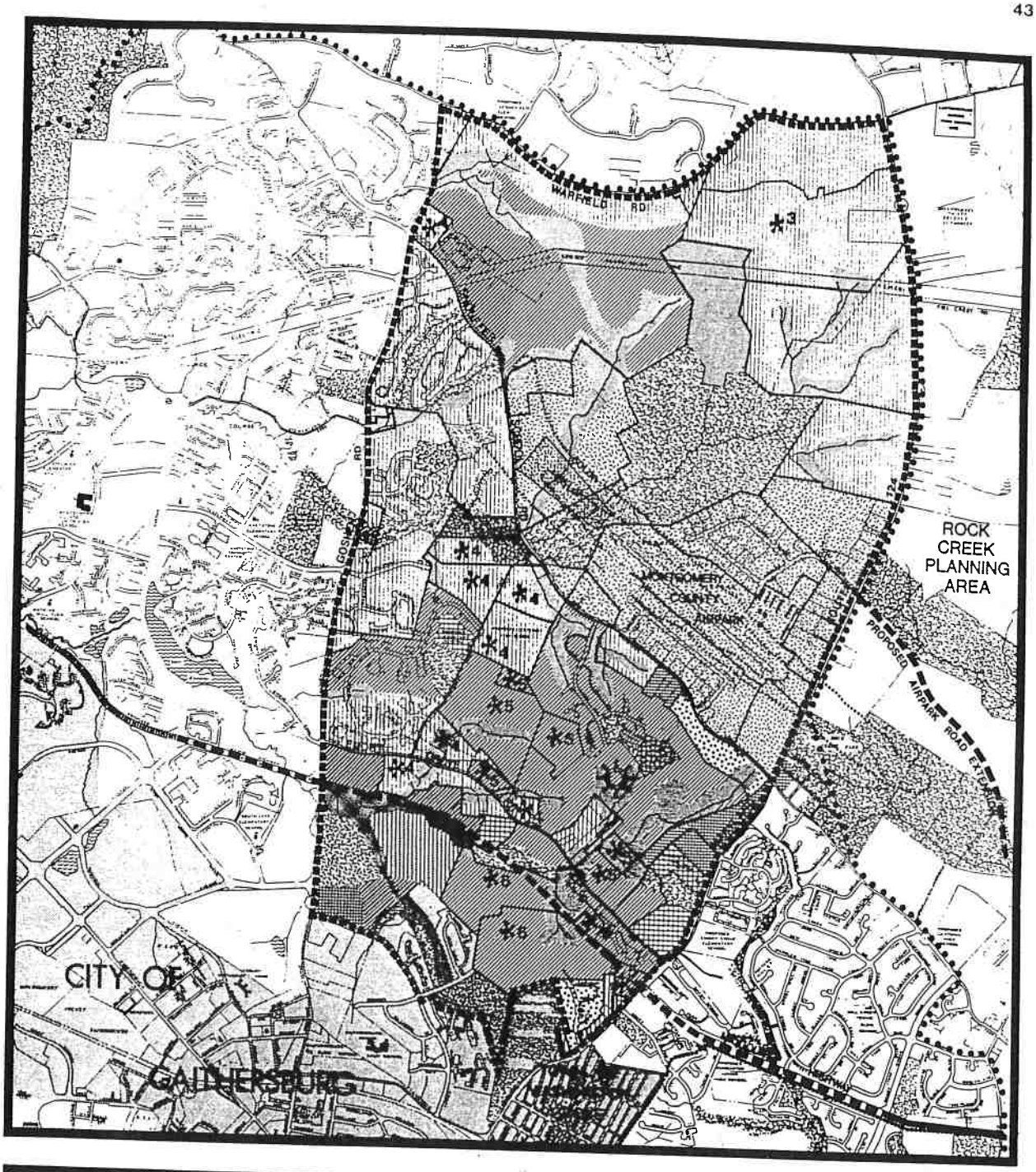
a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes __ No



AIRPARK AREA-RECOMMENDED LAND USE

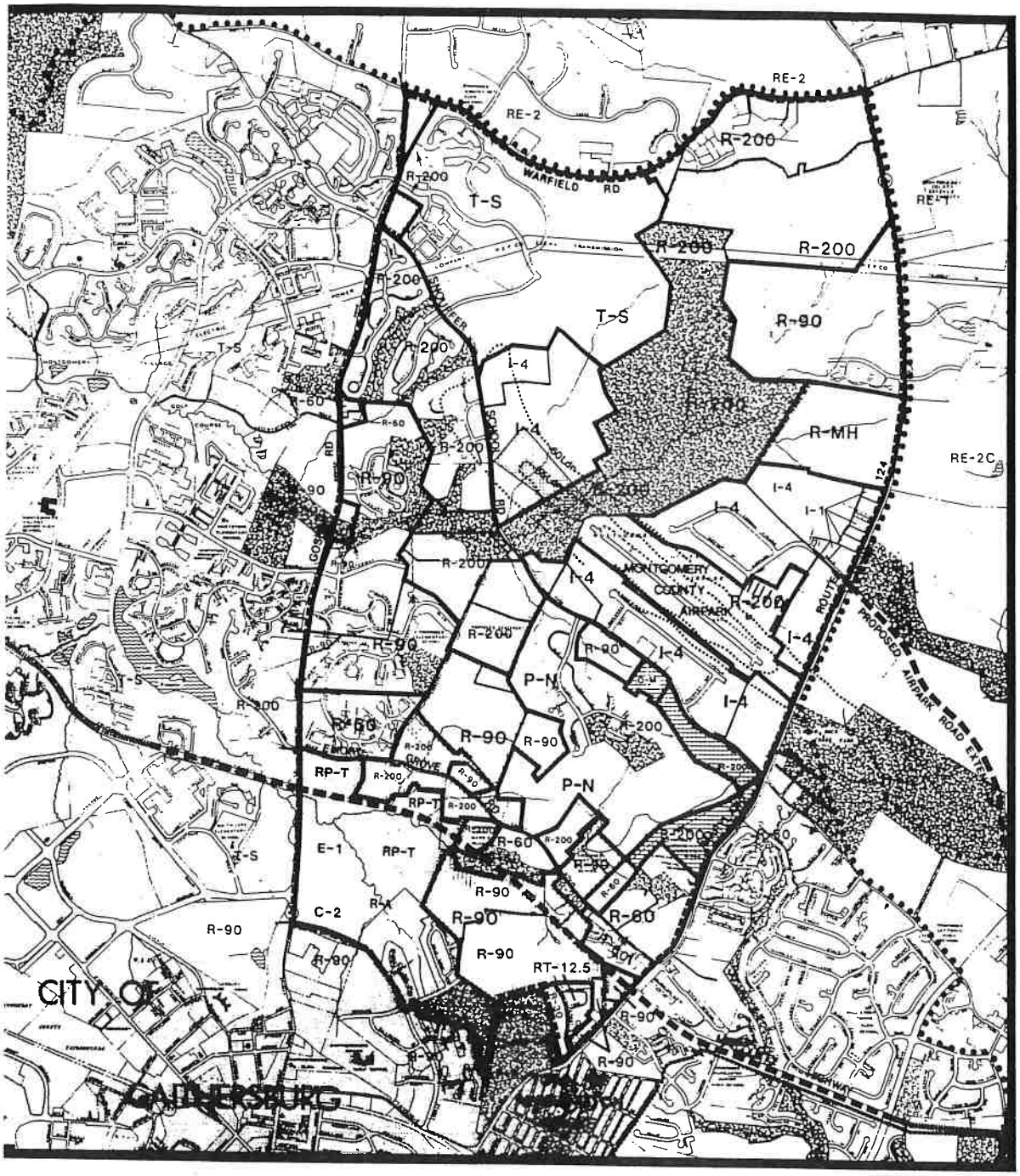
- Planning Area Boundary
- Study Area Boundary
- Planned Neighborhood (Flower Hill)
- *5 TDR Density
- Municipalities

Single-Family Residential
- Suburban 2-4 Units/Acre
- Medium-Density 5-6 Units/Acre
- Multi-Family
- Commercial (Retail & Office)
- Industrial Park
- Private Open Space
- Institutional
- Parks

APPROVED & ADOPTED GAITHERSBURG VICINITY MASTER PLAN
Montgomery County Maryland
January, 1985

NORTH

Fig. 14



AIRPARK AREA-RECOMMENDED GENERALIZED BASE ZONING

- Planning Area Boundary
- Study Area Boundary
- Projected Noise Contours
- Municipalities
- Parks
- Properties Recommended For PN Zone
- Proposed TDR Receiving Areas

NOTE: See Fold Out Map For Details

APPROVED & ADOPTED GAITHERSBURG VICINITY MASTER PLAN
Montgomery County Maryland
January, 1985

NORTH

Fig. 15

INFORMATIONAL MATERIAL

FOR THE

MONTGOMERY COUNTY AIRPARK
FAR PART 150
NOISE AND LAND USE
COMPATIBILITY STUDY

COMMUNITY WORKSHOP NO. 2
GOSHEN ELEMENTARY SCHOOL
GAITHERSBURG, MD

SEPTEMBER 24, 1991

6:00 P.M. - 10:00 P.M.

Montgomery County Airpark

FAR Part 150 Study

SELF GUIDED TOUR OF INFORMATION CLUSTERS

MONTGOMERY AIRPARK FAR PART 150 STUDY
OPEN HOUSE

INFORMATION CLUSTER LAYOUT

This Open House has been designed to provide interested persons information on the FAR Part 150 Study, as well as access to experts from the study team. The meeting room has been set up with 5 "information clusters," each providing details describing study results with a member of the study team available to explain information and answer questions. Information clusters are as follows:

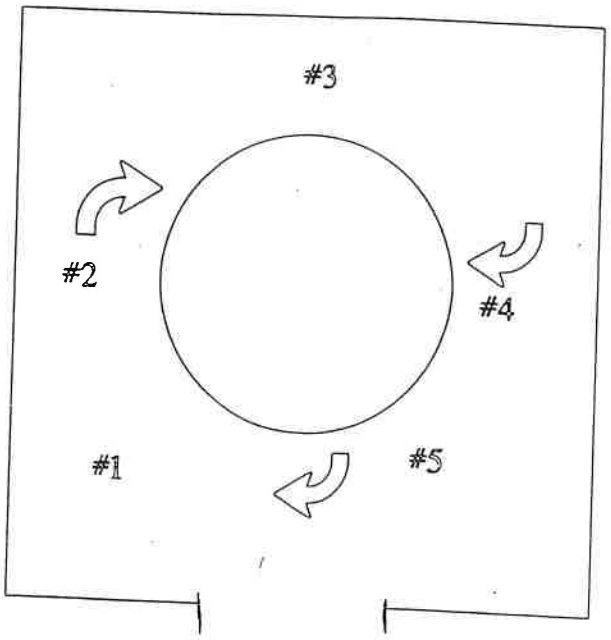
INFORMATION CLUSTER #1
Welcome and Basic Study Information
Linda Hanifin - Hanifin Associates, Inc.

INFORMATION CLUSTER #2
Airpark Operations
Tom Breen - HMMH

- Contour Development
- Flight Track Information
- Annual Operations Information

INFORMATION CLUSTER #3
Operational Abatement Alternatives
Alan Hass - HMMH

- Operational Abatement Summary
- Single-Event Contours
- Operational Analysis
- Existing Noise Contours



INFORMATION CLUSTER #4
Land-Use Abatement Alternatives
Bob Clifford - LPA Group

- Land Use Abatement Summary
- Land Use Map
- Acres of Impact
- Future Noise Contours

INFORMATION CLUSTER #5
Study Information Display and Handouts
Laura Rauber - Hanifin Associates, Inc.

PLEASE COMPLETE AND TURN IN YOUR COMPLETED QUESTIONNAIRE. YOUR INPUT IS IMPORTANT TO US.

COMMENTS

Your comments with regard to the Montgomery County Airpark Part 150 Noise/Land Use Compatibility Study, or this Community Workshop are appreciated. Should you have any questions, comments, or suggestions, please feel free to provide your comments to us tonight or to contact us at any time.

GAI PART 150 STUDY
MR. ALAN G. HASS, P.E.
HARRIS MILLER MILLER & HANSON INC.
429 MARRETT ROAD
LEXINGTON, MA 02173
(617) 863-1401

GAI PART 150 STUDY
MS. LINDA M. HANIFIN
HANIFIN ASSOCIATES, INC.
14105 YARDARM WAY #1101
LAUREL, MD 20707
(301) 317-9025

ATTACHMENT C

SUMMARY OF EVALUATION QUESTIONNAIRE

APPENDIX F Sign-In Sheets and Comments From Second and Third Community Workshop

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

X Other (specify) FAR 150 meeting

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

did not attend 9/24/91 mtg

3) What is your interest in the Airpark FAR Part 150 Study?

X Pilot __ Airpark user

__ Airpark official __ Community official

__ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

X Yes __ No

5) Which information sources have you used?

X Public Information Report (Newsletter)

__ Previous community workshops

X Technical reports

X Other (specify) FAR 150 Committee

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
(1) 2 3 4 5

Public Information Report #2
1 (2) 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note. NO

8) Have you been active in other meetings concerning the Airpark?

X Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

X Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	1	(2)	3	4	5
b. Displacing thresholds	1	(2)	3	4	5
c. Isolating engine run-up activity	1	2	(3)	4	5
d. Changing flight tracks	1	2	(3)	4	5
e. Changing runway use	(1)	2	3	4	5
f. Modifying departure procedures	1	2	(3)	4	5
g. Restricting engine run-ups	1	2	(3)	4	5
h. Restricting aircraft operations based on noise	1	2	3	4	5
i. Installing an air traffic control tower	1	(2)	3	4	5
j. Placing airside signs	1	2	3	4	(5)
k. Implementing noise complaint procedures	1	2	(3)	4	5
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	(3)	4	5
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
o. Producing informational brochures	1	2	3	4	(5)

(3) > (2) > (1)

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.

do not reside in immediate area

14) How long have you lived or worked in the area? 9 YEARS

15) What are the ages of residents in your home?

adults

16) Were you aware that the Airpark was actively used when you purchased your home? X Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing?

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes __ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes X No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

X Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

GAI is a safe airport by any objective measure. Many of the issues about which immediate area residents complain were at one time avoidable by County government, but conscious decisions were made by authorities that were even at that time known to exacerbate future conflict (Example - zoning as residential land in the immediate vicinity - granting building permits for commercial structures that intrude into the final approach/landing zone, etc.). Office indifference interspersed with

Optional

Name

Address

Telephone Number

Organization

R.W. BAUMANN
8005 RIVER FALLS DRIVE
POTOMAC, MD 20854

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters; or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

✓ Other (specify) I had to call Consultants

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

✓ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

✓ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

✓ Resident of affected area (specify neighborhood) Hadley Farms

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

__ Yes ✓ No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5 (NA)

Public Information Report #2
1 2 3 4 5 (NA)

Community Workshop #1
1 2 3 4 5 (?)

Community Workshop #2
1 2 3 4 5 (?)

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

Yes, publish time in Gaithersburg Gazette

8) Have you been active in other meetings concerning the Airpark?

__ Yes ✓ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes ✓ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	(1)	2	3	4	5
b. Displacing thresholds	1	2	3	4	5
c. Isolating engine run-up activity	1	2	3	4	5
d. Changing flight tracks (#1)	1	2	3	4	(5)
e. Changing runway use	1	2	3	4	(5)
f. Modifying departure procedures	1	2	3	4	(5)
g. Restricting engine run-ups	1	2	3	4	(5)
h. Restricting aircraft operations based on noise (#3)	1	2	3	4	(5)
i. Installing an air traffic control tower	(1)	2	3	4	5
j. Placing airside signs	1	2	3	4	5
k. Implementing noise complaint procedures	1	2	3	4	(5)
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact (#2)	1	2	3	4	(5)
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	(5)
o. Producing informational brochures	1	2	3	4	(5)

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.

14) How long have you lived or worked in the area? 1 1/2 years

15) What are the ages of residents in your home? 29 - 30

16) Were you aware that the Airpark was actively used when you purchased your home? __ Yes ✓ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? Weekend morning traing flights + touch+go traffic

a. Have there been any incidents that concern you relative to the Airpark?
✓ Yes __ No
Recent emergency landing

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes ✓ No

18) Is there any additional information you would like provided to you? Yes, results + progress of study

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?
✓ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

The touch+go traing flights in the am must be controlled. It is absolote B-S to have 3-4 plans circling overhead for hours on Saturday + Sunday morning

Optional

Name John Whitridge.
Address 7586 Elick Terrace
Gaithersburg MD 20879
Telephone Number (30.) 869-4173
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

MAIL TO:
Ms. Linda M. Hanifin
Hanifin Associates
14105 Yardarm Way #1101
Laurel, MD 20707

he following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please mplete your responses as you tour the information clusters, or after you have finished, and return it to a member of the oject team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this tudy.

) How did you learn about this workshop?

__ Information report mailed to my home or business

✓ Newspaper article (specify) Journal

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

✓ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

✓ Pilot __ Airpark user

__ Airpark official __ Community official

✓ Resident of affected area (specify neighborhood) Hill Creek Sc.

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?
__ Yes ✓ No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

__ Yes ✓ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

✓ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve.
a. Extending runway/taxiway	1	2	3	(4)	5
b. Displacing thresholds	1	2	3	(4)	5
c. Isolating engine run-up activity	(1)	2	3	4	5
d. Changing flight tracks	1	2	3	(4)	5
e. Changing runway use	(1)	2	3	4	5
f. Modifying departure procedures	1	2	(3)	4	5
g. Restricting engine run-ups	(1)	2	3	4	5
h. Restricting aircraft operations based on noise	(1)	2	3	4	5
i. Installing an air traffic control tower	(1)	2	3	4	5
j. Placing airside signs	1	2	(3)	4	5
k. Implementing noise complaint procedures	1	(2)	3	4	5
l. Providing a public information program	1	(2)	3	4	5
m. Appointing a noise abatement contact	1	2	(3)	4	5
n. Increasing ATIS/ATCT advisory committees	1	2	(3)	4	5
o. Producing informational brochures	1	2	(3)	4	5

12) In question #11, mark with a 1, [illegible] 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
MILL CREEK SOUTH

14) How long have you lived or worked in the area? 1 yr

15) What are the ages of residents in your home? 41 - 57

16) Were you aware that the Airpark was actively used when you purchased your home? ✓ Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? MILITARY HELICOPTERS TO/FROM CAMP DAVID

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes ✓ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes ✓ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

__ Yes ✓ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

MOTORCYCLES ON SHADY GROVE ARE LOUDER THAN A/C AT AP, Property Line

Optional

Name STUART NATOF
Address 17216 HOBBIE BUSTER ROCKVILLE MD
Telephone Number 20855
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

X From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

X To gather basic information on the FAR Part 150 Study

X To comment on specific findings or alternatives

X To "have a voice" in future study proceedings

X To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot

__ Airpark user

__ Airpark official

__ Community official

X Resident of affected area (specify neighborhood) Hunter Woods

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

X Yes

__ No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

X Previous community workshops

__ Technical reports

X Other (specify) Communication with people.

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 (3) 4 5

Public Information Report #2
1 2 (3) 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

X Yes

__ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly Yes - Why is the zoning for residential area while there is parkland now. How come pilots can sometimes avoid neighborhood

b. Were they addressed adequately? __ then after they are not being studied, stop doing it!

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes

__ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly				Strongly Approve
a. Extending runway/taxiway	(1)	2	3	4	5
b. Displacing thresholds	1	2	3	4	5
c. Isolating engine run-up activity	1	2	(3)	4	5
d. Changing flight tracks	1	2	3	4	(5)
e. Changing runway use	1	2	3	4	(5)
f. Modifying departure procedures	1	2	3	4	(5)
g. Restricting engine run-ups	1	2	(3)	4	5
h. Restricting aircraft operations based on noise	1	2	(3)	4	5
i. Installing an air traffic control tower	1	2	(3)	4	5
j. Placing airside signs	1	2	3	4	5
k. Implementing noise complaint procedures	1	2	3	4	(5)
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	3	4	(5)
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
o. Producing informational brochures	1	2	(3)	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work. Hunters Woods - Alliston Hollow Way

14) How long have you lived or worked in the area? 20 years

15) What are the ages of residents in your home? 7 years

16) Were you aware that the Airpark was actively used when you purchased your home? __ Yes X No. If so, how did you learn of this information? By driving planes flying overhead in field - pretty inactive month.

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? 7:00 a.m. JETS!
1:00 a.m.

a. Have there been any incidents that concern you relative to the Airpark?
X Yes __ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes __ No, Don't know.

18) Is there any additional information you would like provided to you? Yes - outcome of changes do they are about to happen or before.

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

X Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

I feel good that we have at least had these workshops to communicate. We need to work harder together & more information.

Optional

Name Karen McCarthy
Address 8838 Alliston Hollow Way Gaitl.
Telephone Number 258-0824
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

X From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

X To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

X To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

I don't want the flights go ~~on~~ over my house

X Resident of affected area (specify neighborhood) Hunters Wood #I

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

__ Yes X No

5) Which information sources have you used?

X Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5 Have not

Public Information Report #2
1 2 3 4 5 Seen them befo

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark? I never heard about it before

__ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

X a. Please list them briefly
They are flighing very early in the morning in weekends.

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

X Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	1	2	3	4	5
b. Displacing thresholds	1	2	3	4	5
c. Isolating engine run-up activity	1	2	3	4	5
d. Changing flight tracks	1	2	3	4	5
e. Changing runway use	1	2	3	4	5
f. Modifying departure procedures	1	2	3	4	5
g. Restricting engine run-ups	1	2	3	4	5
h. Restricting aircraft operations based on noise	1	2	3	4	5
i. Installing an air traffic control tower	1	2	3	4	5
j. Placing airside signs	1	2	3	4	5
k. Implementing noise complaint procedures	1	2	3	4	5
l. Providing a public information program	1	2	3	4	5
m. Appointing a noise abatement contact	1	2	3	4	5
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
o. Producing informational brochures	1	2	3	4	5

I don't understand the question

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
one block east to the Goshen plaza

14) How long have you lived or worked in the area?
1½ yrs

15) What are the ages of residents in your home?
MC 26, Husband 38, 2daughts 3½ & 13mo

16) Were you aware that the Airpark was actively used when you purchased your home? __ Yes __ No. If so, how did you learn of this information?
only Private plains

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing?
approximately 10 times a week. The noise is too much

a. Have there been any incidents that concern you relative to the Airpark?
X Yes X No Large flights, They are flight too low

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes X No No, it will increase the Traffic

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

X Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name Sampath K. AREPALLI

Address 19909 BRAMBLE BUSH DR

GAITHERSBURG, MD 20879

Telephone Number

Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

MAIL TO:
Ms. Linda M. Hanifin
Hanifin Associates
14105 Yardarm Way #1101
Laurel, MD 20707

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

✓ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

✓ Pilot ✓ Airpark user

__ Airpark official __ Community official

__ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

✓ Yes __ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

✓ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

✓ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly				Strongly Approve
a. Extending runway/taxiway	1	2	(3)	4	5
b. Displacing thresholds No opinion	1	2	3	4	5
c. Isolating engine run-up activity	1	(2)	3	4	5
d. Changing flight tracks	1	(2)	3	4	5
e. Changing runway use (#1)	(1)	2	3	4	5
f. Modifying departure procedures	1	2	(3)	4	5
g. Restricting engine run-ups (#2)	(1)	2	3	4	5
h. Restricting aircraft operations based on noise (#3)	(1)	2	3	4	5
i. Installing an air traffic control tower	1	2	(3)	4	5
j. Placing airside signs No opinion	1	2	3	4	5
k. Implementing noise complaint procedures	1	(2)	3	4	5
l. Providing a public information program	1	2	(3)	4	5
m. Appointing a noise abatement contact	1	(2)	3	4	5
n. Increasing ATIS/ATCT advisory committees No opinion	1	2	3	4	5
o. Producing informational brochures	1	2	(3)	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
Mill Creek Town South

14) How long have you lived or worked in the area? 2 years

15) What are the ages of residents in your home? 2 adults

16) Were you aware that the Airpark was actively used when you purchased your home? ✓ Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? None

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes X No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes __ No No opinion

18) Is there any additional information you would like provided to you? No

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

__ Yes X No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

We moved to this location for the purpose of being near the airport.

Optional

Name Margaret Natof
Address 17216 Hobble Bush Ct
Rockville MD 20855

Telephone Number
Organization

Number of years respondent has lived or worked in the area

1 - 5	6-10	11-20	>20
16	4	10	2

Respondent's attitude towards construction of an airport tower

Supports	13
Opposes	15
No Answer	11

Prepared by
Hanifin Associates, Inc.
December 28th, 1991

APPENDIX

How respondent learned about the workshop

1. Information report	18
2. Newspaper article	2
3. Notice at public library	0
4. From another person	9
5. Other	11

Reason for attending workshop (check as many as apply.)

1. To gather basic information on the FAR Part 150 Study	25
2. To comment on specific findings or alternatives	15
3. To "have a voice" in future study proceedings	26
4. To have specific questions addressed or issues clarified	18

Respondent's interest in the Airpark FAR Part 150 Study

1. Pilot	10
2. Airpark user	7
3. Airpark official	3
4. Community official	3
5. Resident of affected area	29
6. Member of environmental or community group	1
7. Other (reporter, State Aviation Administration)	2

Had respondent received other informational materials before attending this workshop?

Yes	23	No	16

Information sources used

1. Public Information Report (Newsletter)	23
2. Previous community workshops	12
3. Technical reports	11
4. Other	11

Ranking, from 1 being the least effective to 5 being the most effective, of (1) Public Information Report #1, (2) Public Information Report #2, (3) Community Workshop #1, and (4) Community Workshop #2.

	Effectiveness				
Source	1	2	3	4	5
1.	5	2	7	1	1
2.	3	1	9	1	2
3.	3	3	3	2	1
4.	2	2	4	3	4

Seventeen respondents did not answer this question.

Prepared by
Hanifin Associates, Inc.
December 28th, 1991

Has the information provided throughout the study assisted the respondent in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

Yes	24	No	16

Respondent's opinion on the following Operational Abatement Alternatives, with 1 meaning complete disapproval and 5 meaning complete approval.

1	2	3	4	5	No Answer
Extending runway/taxiway					
15	1	6	1	11	5
Displacing thresholds					
6	2	3	3	6	19
Isolating engine run-up activity					
7	2	7	4	6	13
Changing flight tracks					
4	3	6	3	15	8
Changing runway use					
8	2	1	2	15	11
Modifying departure procedures					
3	1	9	2	16	8
Restricting engine run-ups					
7	2	8	3	10	9

1	2	3	4	5	No Answer
Restricting aircraft procedures based on noise					
9	4	4	2	14	6
Installing an air traffic control tower					
11	5	7	2	7	7
Placing airside signs					
1	2	3	4	13	16
Implementing noise complaint procedures					
4	2	4	6	19	4
Providing a public information program					
1	1	2	6	24	5
Appointing a noise abatement contact					
1	1	8	6	19	4
Increasing ATIS/ATCT advisory committee					
1	2	7	2	9	18
Producing informational brochures					
1	0	10	2	19	7

Respondents were asked to mark their first, second and third preferences for each of the above Operational Abatement Alternatives.

	First Choice	Second Choice	Third Choice
Extending runway/taxiway	5	1	1
Displacing thresholds	0	2	0
Isolating engine run-up activity	1	0	1
Changing flight tracks	1	2	3
Changing runway use	3	0	1
Modifying departure procedures	1	2	0
Restricting engine run-ups	0	2	1
Restricting aircraft operations based on noise	3	1	4

Prepared by
Hanifin Associates, Inc.
December 28th, 1991

	First Choice	Second Choice	Third Choice
Installing an air traffic control tower	3	2	0
Placing airside signs	0	0	3
Implementing noise complaint procedures	2	1	2
Providing a public information program	2	1	0
Appointing a noise abatement contact	0	2	1
Increasing ATIS/ATCT advisory committees	0	0	0
Producing informational brochures	0	2	1
Changing landing pattern (added by respondent)			1

Prepared by
Hanifin Associates, Inc.
December 28th, 1991

Opinion was strongly divided on F, the measure to update the real estate disclosure ordinance. It was both the measure most people considered as very effective and the one most people considered as not effective. The issue for the latter appears to have been that updating the disclosure ordinance would not change the level of noise; rather, it would make people aware that the Airpark was in the vicinity before they purchased a home.

In addition to ranking the listed measures, respondents were asked to make any other suggestions for noise abatement measures that they deemed appropriate. The following suggestions were offered.

- Stop evening jet operations; discontinue business jet departures.
- Monitor the Airpark management and the increase in the number of aircraft.
- Establish fines for aircraft not following noise abatement procedures.
- Tax, to discourage, noisy aircraft.
- Stop all helicopter flights; alternatively, restrict their operation and space take-offs further apart.
- Have the Hotline for reporting violations set up in the County offices.
- Limit the number of take-offs and landings permitted each hour.
- Prohibit take-offs and landings from 11:00 pm to 7:00 am, with a fine for violators.
- Limit the flight school's activity, and use Runway 14 (rather than 32) for practicing touch-and-go.
- Install a localizer navigation aid at GAI to reduce "missed approach" procedures by aircraft that require full throttle in poor weather.
- Establish higher minimum heights and modify the flight tracks.
- Raise the VFR pattern 100 or more feet, consistent with safety.
- Institute enforcement procedures if the voluntary measures are unsuccessful.
- Keep the Airpark as a hobby airport and not for commercial flights.
- Include a corridor for commercial helicopters with minimum height requirements and an allowable maximum noise level.
- Don't allow new housing any closer to the Airpark.

- Train new pilots on close-in, instead of long and low, approaches.
- Educate the community about the difference between noise and sound.

The workshops conducted as part of the FAR PART 150 study clearly have been effective both in educating residents and Airpark users about possible solutions to noise concerns and in facilitating the receipt of community input. The answers to the final questionnaire demonstrate an increased awareness of airport procedures and, in addition, offer some constructive suggestions. The respondents express a willingness to see if those proposed noise control measures that are voluntary turn out to be effective; if not, they do feel mandatory measures should be implemented. Since increased pilot awareness of the noise control issue has developed as a result of this study it seems likely that, when the proposed pilot education measures are also in place, the voluntary pilot-initiated measures will become accepted standard operating procedures.

APPENDIX B - Report Distribution and Notification List

NAME	ADDRESS	DATE DELIVERED	QUANTITY OF INFORMATION REPORTS	COMMENTS
1. Mr. Tom Ogle	Dir., Noise Programs Mont. Cty. DEP 101 Monroe Street Rockville, MD 20850	6/3/92 - in person	100	Not available
2. Mr. Ralph Wilson/Ms. Carol Edwards	Legislative Analyst Mont. Cty. Council 100 Maryland Avenue Rockville, MD 20850	6/3/92 - in person	100	Not available
3. Mr. John Clark	County Executive Rep. Mont. Cty. DOT 101 Monroe Street Rockville, MD 20850	6/3/92 - in person	100	Not available
4. Mr. Stuart Kenney	MCRA 211 Monroe Street Rockville, MD 20850	6/3/92 - in person	100	Mentioned that Freestate (Jim Richardson) is now managing the Airpark.
5. Mr. Doug McNeeley	General Manager Mont. Cty. Airpark 7940 Airpark Road Galthersburg, MD 20879	6/3/92 - in person	100	Said reporters were waiting in line earlier this week to talk to him re: the accident. Lot of press coverage, both newspapers and television.
6. Mr. Eugene Casey	Gaithersburg/Upper Montgomery Chamber of Commerce 9 Park Avenue Galthersburg, MD 20877	Mailed - 6/8/92	10	

NAME	ADDRESS	DATE RECEIVED	QUANTITY OF INFORMATION REPORTS	COMMENTS
7. Mr. Howard Layer	17600 Wheat Fall Dr. Derwood, MD 20855	Hand Delivered - 6/1/92	500	Not home
8. Ms. Rosemary Arkoian	20816 Bell Bluff Rd Gaithersburg, MD 20879	Hand Delivered - 6/3/92 2nd Delivery - 6/22/92. 150 additional copies - per R. Arkoian's request.	100	Said they were expecting the workshop to be held in May - before the summer. Also mentioned that the Gazette and Post had contacted her after the accident.
9. Ms. Anne Swain	20653 Beaver Ridge Road Montgomery Village, MD 20879	Hand Delivered - 6/1/92	100	Not home
10. Ms. Nancy Shenk	8720 Lochaven Drive Gaithersburg, MD 20879	Hand Delivered - 6/1/92	100	Not home
11. Mr. Dominick Alberti	18708 Rocky Way Derwood, MD 20855	Hand Delivered - 6/8/92	25	Not home
12. Mr. Harry Schulte	24517 Etchison Drive Gaithersburg, MD	Hand Delivered - 6/8/92	25	Not home
13. Mr. Bob Baumann	8005 River Falls Drive Potomac, MD 20845	Mailed - 6/8/92	10	

NAME	ADDRESS	DATE RECEIVED	QUANTITY OF INFORMATION REPORTS	COMMENTS
14. Mr. Robert Talbert	Manager, Aviation Noise Program MAA 1st Floor Terminal Building BWI Airport, MD 21240	Mailed - 6/5/92	5	
15. Mr. Frank Squeglia	FAA Eastern Region Office Fitzgerald Federal Building JFK International Airport Jamaica, NY 11430	Mailed - 6/5/92	5	
16. Mr. Michael Sarli	Manager, FAA Air Traffic Control Tower Terminal Building BWI Airport, MD 21240	Mailed - 6/5/92	5	
17. Terry Page	FAA 101 W. Broad Street Terminal Building Falls Church, VA 22046	Mailed - 6/5/92	5	
18. Mr. Bruce Mundie	MAA Terminal Building 1st Floor Baltimore, MD 21240	Mailed - 6/5/92	5	
19. Lori Lehnard	FAA - Washington 900 S. Washington St. Falls Church, VA 22046	Mailed - 6/5/92	5	

NAME	ADDRESS	DATE DELIVERED	QUANTITY OF INFORMATION REPORTS	COMMENTS
20. Ms. Nellie Maskal/Ms. Melissa Banach	Mont. Cty. Planning Board 8787 Georgia Avenue Silver Spring, MD 20910	Hand delivered - 6/9/92	5	
21. Ms. Bette McKown	MNCPPC 8787 Georgia Avenue Silver Spring, MD 20910	Hand delivered- 6/9/92	5	
22. Mr. Norman Arnold	TAMS Consultants, Inc. 988 Saigon Road McLean, VA 22102	Mailed - 6/5/92 Fed Ex'd 2nd copy - 6/9/92	5	
23. Mr. Bob Clifford	The LPA Group 4511 N. Himes Ave. Suite 140 Tampa, FL 33619	HMMH to mail report study. HAI to mail information reports (mailed - 6/5)	5	
24. Mr. Jim Richardson	Leaseholder Representative 4315 Bill Moxley Road Mt. Airy, MD 21771	Mailed - 6/5/92	5	
25. Mr. Peter Greenberg	4400 Jenifer St., NW Suite 380 Washington, DC 20015	Mailed - 6/5/92	5	

NAME	ADDRESS	DATE DELIVERED	QUANTITY OF INFORMATION REPORTS	COMMENTS
26. Hadley Farms Community Hunters Woods Community	Route 124, Gaithersburg, MD (Hand Delivered) Streets: Alliston Hollow Way, Ridge Heights Drive and Court	June 22	100-150	Hand deivered over 100 information reports in mailboxes along Brenish Drive, Torran Rocks Way, Fareside Lane and Kildonan Way
27. County Council Building	Rockville, MD	Hand Delivered - June 2, 1992	25	Placed press release and information report in press boxes within the County Council Building.
28. Ms. Karen McCarthy	8838 Alliston Hollow Way Gaithersburg, MD 20879	Mailed - August 20, 1992	50	Followed up to confirm reciept of the reports. McCarthy seemed satisfied - she had received them and did not request additional copies.

APPENDIX C - Questionnaire Comments From Residents are as Follows:

Question 2 - For any measure you do not feel will be effective, please give us your reasons:

- Redirect patterns from runway 44 to avoid increased flights over Avalon.

- Too much literature addressed to pilots (that is repetitious) will be tossed away and ignored - do not generate more paper (trash) at unecessary cost.

- Changing flight tracks - to send more planes and take-offs toward the northwest will negatively impact a significant amount of high value real estate homes, whose owners pay taxes.

- The effectiveness of any of these procedures is significantly reduced because all of these actions on the part of the pilots are strictly voluntary. The map on the reverse is inaccurate. Currently, there are many more than four houses being impacted. This map was drawn to the benefit of the airpark.

- The noise abatement measures currently being suggested will only remind and encourge pilots. What about tracking and enforcing these rules, including the use of penalties.

- We in Avalon Farms are concerned that the proposed changes will have more imapct over our area. We want assurance that the flight patterns and increased take-offs from runway 14 will not include more planes over Avalon.

- I live in Avalon Farms and am concerned that changes will increase noise/traffic over my house.

- Disturbing noise caused by airplanes flying over our house, including late hours at night (10:30 p.m.) and early morning (6:30 a.m.). It wakes up babies, the elderly and the sick.

Question 3 - Do you have any other suggestions for noise abatement measures? If so, please discuss them here:

- Use a traffic pattern over non-residential areas (people do live in Avalon Farms).

- - Concentrate on noise awareness by pilots
  - Change chart 6.1
  - Contact AOPA
  - Put in land use recommendations

- Make complaince <u>mandatory</u> - with penalty and fines for those who deviate from acceptable practices.

- 1) Have BWI and other towers instruct pilots about noise abatement procedures - and have some flexibility in patterns to avoid NW/NE populations as well as other areas.

  2) Have flight instructors vary their practice patterns to spread out the noise impact.

- 1) Make the restrictions mandatory.

  2) Failure to follow proper procedures will result in revocation of Airpark privileges.

  3) Better dissemination of information to the PUBLIC!

- a) Eliminate jets from the airport. I have been awakened by jets flying overhead.

  b) Please institute measures to reduce flights over Edinburgh. On weekends, dozens of planes go directly over my home . . . please reduce/stop this!!

- We suggest that flight patterns be more flexible during training flights so that instructors take students over a variable area and not always over Avalon. Also, flight towers should should advise jets that they should avoid houses and not continue to use a set pattern which brings them low over houses. There is a large non-populated area around the airport which should be used for take-offs and landings. Must avoid residential areas.

- Vary training flights - seems like a lot go over our house. Use non-populated areas for take-offs and landings.

- A curfew - from 7:30 a.m. to 8:00 p.m. - with some allowance one day a week.

Communities the above respondents represented included Avalon Farms, Edinburgh, Ashford, and Hunters Woods.

APPENDIX D – List of Attendees (FAR Part 150 Study)

Bob Ciri
Avalon Farm

Dominick Alberti
Granby Woods

Paula Gillette
The Downs

Richard Boggs
Goshen Estates

Carol Weir
Hunters Woods

Thomas Weidner
Avalon Farms

Gary Gillette
The Downs

Judith Ellis
Avalon Farm

Patrick Smith
Goshen Community Assn.

Barbara Rogers
Greater Goshen Civic Assn.

Richard Wilder
Whetstone Run

Martha Cadle
Montgomery Village

Farrel Becker
Gohshen Estates

Robert Goldberg
Greater Goshen Civic Assn.

Mike Whitcomb
Granby Woods

Doug McNeeley
Freestate Aviation

Jeffrey Hartwick
Hunters Woods

Barbara Kay Smerko
County Council Representative

Rosemary Arkoian
Greater Goshen Civic Assn.

Anne Swain
East Village

Barbara Cox
East Village

Wendy Johnson
Freestate Aviation

James Rogers
Greater Goshen Civic Assn.

Andrew Weir
Hunters Woods

Janet O'Neil
Greater Goshen Civic Assn.

Gerald Yager
Self

Jeff Fishman
Pheasant Run

Mary Ritchie
Ashford

Nancy Conant
Hunters Woods

T. Peter Kristian
Montgomery Village

M. Erickson
County Council Representative

Steve Poteat
Upcounty Gov't Center

Lee Petruk
Pilot

Kim Miller
Hunters Woods

Norman Arnold
TAMS Consultants

Robert Harkins
Self

Robert Smith
Flower Hill

Scott Conant
Hunters Woods

Bonnie Buntain
Avalon Farms

Charles Tilford
Brinkwood Estates

A. Fair
Foxlair Estates

John McKendrew
Pilot

F. Stuart Kenney
MCRA

COMMUNITY QUESTIONNAIRE

The following questions have been developed as a vehicle to gain further community input into the FAR Part 150 Study. Please take a few minutes to respond and mail to MCRA 211 Monroe Street, Rockville, MD 20850.

1. The following sixteen measures have been recommended as part of the noise control program for the Montgomery County Airpark. Please give us your opinion as to the level of effectiveness of each measure, with
   1 meaning very effective,
   2 meaning moderately affective, and
   3 meaning not effective.

a. Institute noise abatement flight tracks
   1 2 (3)
b. Institute preferential runway use
   1 2 (3)
c. Modify business jet departures procedures
   1 2 (3)
d. Restrict (voluntarily) nighttime operations
   1 2 (3)
e. Restrict nighttime maintenance runups
   1 2 (3)
f. Update real estate disclosure ordinance
   1 2 (3)
g. Update comprehensive plans
   1 2 (3)
h. Program publicity: letters to airmen
   1 2 (3)
i. Program publicity: airside signs
   1 2 (3)
j. Program publicity: informational brochures
   1 2 (3)
k. Program publicity: ATIS/ATCT advisories
   1 2 (3)
l. Appoint noise abatement contact
   1 2 (3)
m. Institute noise complaint receipt and
   1 2 (3)
n. Institute public information program response procedures
   1 2 (3)
o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
   1 2 (3)

2. For any measure you do not feel will be effective, please give us your reasons.

Too little, too late

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

Close it down

Progress..., continued from page 1

The sixth element includes two documents. The Noise Exposure Map (NEM) describes the information in Element 1, while the Noise Compatibility Program (NCP) describes the information analyzed and presented in Elements 2 through 5. The NEM was completed and submitted to the FAA in July 1991. The FAA acknowledged its acceptance in February 1992. The NCP will be finalized and submitted to the FAA following receipt of comments from the third community workshop. After a 180 day FAA review period, and assuming FAA approval of the noise and land use recommendations, the MCRA will have developed a Noise Compatibility Program -- a package of operational and land use planning actions designed to minimize noise impacts from GAI.

American Board of Veterinary Practitioners
P.O. Box 5285
Laytonsville
Maryland 20882

j. Program publicity: informational brochures

(1) 2 3

k. Program publicity: ATIS/ATCT advisories

(1) 2 3

l. Appoint noise abatement contact

(1) 2 3

m. Institute noise complaint receipt and response procedures

(1) 2 3

n. Institute public education program

(1) 2 3

o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time

(1) 2 3

2. For any measure you do not feel will be effective, please give us your reasons:

Changing flight tracks ~~are~~ to send more planes & take-offs toward the NW side will negatively impact a significant amount of high real estate valued homes who pay taxes.

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here:

(1) Have BWI & other towers instruct pilots as to noise abatement procedures & to whenever possible fly over non-populated areas when approaching - have some flexibility in patterns to avoid NW/NE populations as well as other areas

(2) Have flight instructors vary their practice patterns to spread out the noise

COMMUNITY QUESTIONNAIRE

The following questions have been developed as a vehicle to gain further community input into the FAR Part 150 Study. Please take a few minutes to respond and mail to MCRA 211 Monroe Street, Rockville, MD 20850.

1. The following sixteen measures have been recommended as part of the noise control program for the Montgomery County Airpark. Please give us your opinion as to the level of effectiveness of each measure, with
   1 meaning very effective,
   2 meaning moderately affective, and
   3 meaning not effective.

   a. Institute noise abatement flight tracks
      1 (2) 3
   b. Institute preferential runway use
      1 (2) 3
   c. Modify business jet departures procedures
      1 (2) 3
   d. Restrict (voluntarily) nighttime operations
      1 (2) 3
   e. Restrict nighttime maintenance runups
      1 (2) 3
   f. Update real estate disclosure ordinance
      1 (2) 3
   g. Update comprehensive plans
      1 (2) 3
   h. Program publicity: letters to airmen
      1 (2) 3
   i. Program publicity: airside signs
      1 (2) 3
   j. Program publicity: informational brochures
      1 (2) 3
   k. Program publicity: ATIS/ATCT advisories
      1 (2) 3
   l. Appoint noise abatement contact
      1 (2) 3
   m. Institute noise complaint receipt and
      1 (2) 3
   n. Institute public information program response procedures
      1 (2) 3
   o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
      1 (2) 3

2. For any measure you do not feel will be effective, please give us your reasons.

   The effectiveness of any of these procedures is significantly reduced because all of these actions on the part of the pilots is strictly VOLUNTARY. The map on the reverse is INACCURATE. Currently there are MANY MORE than 4 houses being impacted. This map was drawn to the benefit of the airpark.

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

   1. Make the restrictions mandatory.
   2. Failure to follow proper procedures will result in revocation of Airpark privileges. 3. Better delimination of info to the PUBLIC!

Rodriguez
9400 Tonnen Rocks Terrace
Gaithersburg, MD 20879

NITY QUESTIONNAIRE

...wing questions have been developed as a vehicle to gain further community input into the FAR Part 150 Study. Please take a few minutes to respond and mail to MCRA 211 Monroe Street, Rockville, MD 20850.

1. The following sixteen measures have been recommended as part of the noise control program for the Montgomery County Airpark. Please give us your opinion as to the level of effectiveness of each measure, with
   1 meaning very effective,
   2 meaning moderately affective, and
   3 meaning not effective.

   a. Institute noise abatement flight tracks — 1 2 (3)
   b. Institute preferential runway use — 1 2 (3)
   c. Modify business jet departures procedures — 1 2 (3)
   d. Restrict (voluntarily) nighttime operations — 1 2 (3)
   e. Restrict nighttime maintenance runups — 1 2 (3)
   f. Update real estate disclosure ordinance — 1 2 (3)
   g. Update comprehensive plans — (2) 2 3
   h. Program publicity: letters to airmen — 1 (2) 3
   i. Program publicity: airside signs — 1 2 3
   j. Program publicity: informational brochures — 1 2 (3)
   k. Program publicity: ATIS/ATCT advisories — 1 2 (3)
   l. Appoint noise abatement contact — (1) 2 3
   m. Institute noise complaint receipt and — (1) 2 3
   n. Institute public information program response procedures — (1) 2 3
   o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time — 1 (2) 3

   Who is on the committee?

2. For any measure you do not feel will be effective, please give us your reasons.

   "a → f" and j → e will only remind & encourage pilots. What about tracking & enforcing those rules, including penalties. A "2." does not address the flights over Edinburgh.

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

   (A) Eliminate jets from airport. I have been awakened by jets flying overhead. Please institute measures to reduce flights over Edinburgh. On the weekends, dozens of planes go directly over my home... please reduce this!!

What does this mean?

Progress..., continued from page 1

The sixth element includes two documents. The Noise Exposure Map (NEM) describes the information in Element 1, while the Noise Compatibility Program (NCP) describes the information analyzed and presented in Elements 2 through 5. The NEM was completed and submitted to the FAA in July 1991. The FAA acknowledged its acceptance in February 1992. The NCP will be finalized and submitted to the FAA following receipt of comments from the third community workshop. After a 180 day FAA review period, and assuming FAA approval of the noise and land use recommendations, the MCRA will have developed a Noise Compatibility Program -- a package of operational and land use planning actions designed to minimize noise impacts from GAI.

FAR Part 150 COMMUNITY QUESTIONNAIRE

The following questions have been developed as a vehicle to gain further community input into the FAR Part 150 Study. Please take a few minutes to respond and drop off at the registration desk before you leave, or mail to MCRA, 211 Monroe Street, Rockville, MD 20850.

1. The following fifteen measures have been recommended as part of the noise control program for the Montgomery County Airpark. Please give us your opinion as to the level of effectiveness of each measure, with

1 meaning very effective
2 meaning moderately effective, and
3 meaning not effective.

a. Institute noise abatement flight tracks

1 2 (3)

b. Institute preferential runway use

1 2 (3)

c. Modify business jet departure procedures

(1) 2 3

d. Restrict (voluntarily) nighttime operations

1 2 (3)

e. Restrict nighttime maintenance runups

(1) 2 3

f. Update real estate disclosure ordinance

(1) 2 3

g. Update comprehensive plans

(1) 2 3

h. Program publicity: letters to airmen

(1) 2 3

i. Program publicity: airside signs

(1) 2 3

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

X Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

X To gather basic information on the FAR Part 150 Study

X To comment on specific findings or alternatives

X To "have a voice" in future study proceedings

X To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

X Pilot __ Airpark user

__ Airpark official __ Community official

X Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

__ Yes X No

5) Which information sources have you used?

X Public Information Report (Newsletter)

__ Previous community workshops

X Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 (5)

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

X Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? yes

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

X Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly				Strongly Approve
a. Extending runway/taxiway	1	2	3	4	(5)
b. Displacing thresholds	1	2	3	(4)	5
c. Isolating engine run-up activity	1	2	3	(4)	5
d. Changing flight tracks	1	(2)	3	4	5
e. Changing runway use	1	2	3	(4)	5
f. Modifying departure procedures	1	2	3	(4)	5
g. Restricting engine run-ups	1	(2)	3	4	5
h. Restricting aircraft operations based on noise	1	(2)	3	4	5
i. Installing an air traffic control tower	1	2	(3)	4	5
j. Placing airside signs	1	(2)	3	4	5
1 k. Implementing noise complaint procedures	1	2	3	4	(5)
2 l. Providing a public information program	1	2	3	(4)	5
3 m. Appointing a noise abatement contact	1	2	(3)	4	5
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
o. Producing informational brochures	1	2	3	4	(5)

haven't decided

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
Goshen Estates + Mont. Villag

14) How long have you lived or worked in the area? 17 years.

15) What are the ages of residents in your home? 44, 43, 19, 16

16) Were you aware that the Airpark was actively used when you purchased your home? X Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? Have no problem.

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes X No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
X Yes __ No

18) Is there any additional information you would like provided to you? Reasons why County Council continuous to approve residential building in affected areas!

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

X Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name Sonja Overeem
Address 10 Bell Bluff Ct
Gaithersburg 20879
Telephone Number
Organization myself - citizen Goshen

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the roject team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

) How did you learn about this workshop?

✓ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

✓ Other (specify) PICKED UP COPY AT AIRPARK

2) Why did you come to this workshop? (Check as many as apply.)

✓ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

✓ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

✓ Pilot ✓ Airpark user

__ Airpark official __ Community official

✓ Resident of affected area (specify neighborhood) GRANBY WOODS

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

✓ Yes __ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

✓ Previous community workshops

✓ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
(1) 2 3 4 5

Public Information Report #2
(1) 2 3 4 5

Community Workshop #1
(1) 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note. I AM AN ENGINEER & UNDERSTAND STUDY & METHODS

8) Have you been active in other meetings concerning the Airpark?

✓ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

✓ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	1	2	3	4	(5) 1
b. Displacing thresholds	1	2	3	4	(5) 2
c. Isolating engine run-up activity	1	2	3	4	(5)
d. Changing flight tracks	1	2	3	(4)	5
e. Changing runway use	1	2	(3)	4	5
f. Modifying departure procedures	1	2	(3)	4	5
g. Restricting engine run-ups	1	2	(3)	4	5
h. Restricting aircraft operations based on noise	(1)	2	3	4	5
i. Installing an air traffic control tower	1	2	3	4	(5)
j. Placing airside signs	1	2	3	4	(5) 3
k. Implementing noise complaint procedures	1	2	(3)	4	5
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	(3)	4	5
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	(5)
o. Producing informational brochures	1	2	3	4	(5)

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
GRANBY WOODS

14) How long have you lived or worked in the area? 10 YEARS

15) What are the ages of residents in your home? 40

16) Were you aware that the Airpark was actively used when you purchased your home? ✓ Yes __ No. If so, how did you learn of this information? LOOKING AROUND & SEEING AIRPLANES

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? DO NOT FIND THEM PARTICULARLY DISTURBING. LIKE TO WATCH THEM FLY

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes ✓ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
✓ Yes __ No

18) Is there any additional information you would like provided to you? I WANT TO KNOW WHAT MY POLITICIANS HAVE TO SAY

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?
✓ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

I WANT THE POLITICOS TO TAKE A STAND PUBLICALLY PRO OR CON SO I KNOW WHERE THEY STAND!!
I PERSONALLY FEEL THAT THEIR INPUT IS CRITICAL & THAT THEY MAY NOT KNOW THE WHOLE STORY!!

Optional
Name MIKE WHITCOMB
Address 18709 ROCKY WAY
DERWOOD MD 20855
Telephone Number 301 963 1478
Organization CITIZEN, NEIGHBOR AIRPARK USER

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

X Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

X To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

X To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

X Resident of affected area (specify neighborhood) GRANBY Woods

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

X Yes __ No

5) Which information sources have you used?

X Public Information Report (Newsletter)

X Previous community workshops

X Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 (4) 5

Public Information Report #2
1 2 3 (4) 5

Community Workshop #1
1 (2) 3 4 5

Community Workshop #2
1 (2) 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

X Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly
LAND USE

b. Were they addressed adequately? __

Yes X No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

X Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly			Strongly Approve
a. Extending runway/taxiway	1	2	3	4	(5)
b. Displacing thresholds	(1)	2	3	4	(5)
c. Isolating engine run-up activity	1	2	3	4	(5)
d. Changing flight tracks	(1)	2	3	4	(5)
e. Changing runway use	1	2	3	4	(5)
f. Modifying departure procedures	1	2	3	4	(5)
g. Restricting engine run-ups	1	2	3	(4)	5
h. Restricting aircraft operations based on noise	1	2	3	(4)	5
i. Installing an air traffic control tower	1	2	3	(4)	5
j. Placing airside signs	1	2	3	(4)	5
k. Implementing noise complaint procedures	1	2	3	4	(5)
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	3	4	(5)
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	(5)
o. Producing informational brochures	1	2	3	4	(5)

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
WORK: 18930 WOODFIELD RD. GAITHERS
HOME. 18708 ROCKY WAY DERWOOD.

14) How long have you lived or worked in the area? WORKED 14 YEARS
LIVED 21 YEARS

15) What are the ages of residents in your home? 60-58

16) Were you aware that the Airpark was actively used when you purchased your home? X Yes __ No. If so, how did you learn of this information? I FOUND THE HOUSE WHEN TAKING FLYING LESSONS

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? NONE

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes X No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
X Yes __ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

X Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name Dominick L. ALBERTI
Address 18708 ROCKY WAY
DERWOOD, MD 20855
Telephone Number 258-0230
Organization AIRPARK LIAISON COMMITTEE

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

__ Information report mailed to my home or business

✓ Newspaper article (specify) Gazette

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

✓ Resident of affected area (specify neighborhood)

✓ Member of environmental or community group (specify) Homes Corp.

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

__ Yes ✓ No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify) None

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note. More publicity Statement of Purpose

8) Have you been active in other meetings concerning the Airpark?

__ Yes ✓ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

✓ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	1	2	(3)	4	5
b. Displacing thresholds	1	2	(3)	4	5
c. Isolating engine run-up activity	1	2	(3)	4	5
d. Changing flight tracks	1	2	3	4	(5)
e. Changing runway use	1	2	3	4	(5)
f. Modifying departure procedures	1	2	3	4	(5)
g. Restricting engine run-ups	1	2	3	(4)	5
h. Restricting aircraft operations based on noise	1	2	3	4	(5)
i. Installing an air traffic control tower	1	(2)	3	4	5
j. Placing airside signs	1	2	3	(4)	5
k. Implementing noise complaint procedures	1	2	3	4	(5)
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	3	4	(5)
n. Increasing ATIS/ATCT advisory committees	1	2	3	(4)	5
o. Producing informational brochures	1	2	(3)	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.

14) How long have you lived or worked in the area?

15) What are the ages of residents in your home?

16) Were you aware that the Airpark was actively used when you purchased your home? __ Yes ✓ No. If so, how did you learn of this information? Observation

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? 5–7am – all noise in flight path 32D3 & 14A4

a. Have there been any incidents that concern you relative to the Airpark?
✓ Yes __ No multiple A/c sharing airspace over my residence

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes __ No ?

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?
✓ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Need to require A/c registration nos. on bottom of wing.

Optional

Name C. Sergent
Address 20629 Highland Hall Dr
Gaithersburg 20879
Telephone Number
Organization No. Ulge Homes. Corp.

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

X Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.) N/A

__ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official X ~~Community~~ STATE official

__ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

X ~~Other~~ STATE AVIATION ADMINISTRATION (specify)

4) Have you received other informational materials before attending this workshop?

X Yes __ No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

X Other (specify) MEMBER ADVISORY COMMITTEE

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

X Yes ADVISORY COMMITTEE __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

X Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

Disapprove Strongly — Approve — Strongly Approve

a. Extending runway/taxiway
1 2 3 4 (5)

b. Displacing thresholds
1 2 3 4 (5)

c. Isolating engine run-up activity
1 2 3 4 (5)

d. Changing flight tracks
1 2 3 4 (5)

e. Changing runway use
1 2 3 4 (5)

f. Modifying departure procedures
1 2 3 4 (5)

g. Restricting engine run-ups
1 2 3 4 5

h. Restricting aircraft operations based on noise
1 (2) 3 4 5

i. Installing an air traffic control tower
1 (2) 3 4 5

j. Placing airside signs
1 2 3 4 (5)

k. Implementing noise complaint procedures
1 2 3 4 (5)

l. Providing a public information program
1 2 3 4 (5)

m. Appointing a noise abatement contact
1 2 3 4 (5)

n. Increasing ATIS/ATCT advisory committees
1 2 (3) 4 5

o. Producing informational brochures
1 2 3 4 (5)

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.

N/A

14) How long have you lived or worked in the area?

N/A

15) What are the ages of residents in your home?

N/A

16) Were you aware that the Airpark was actively used when you purchased your home? __ Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing?

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes __ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes __ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

__ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name ROBERT L. TALBERT
Address BWI AIRPORT

Telephone Number 301 859-7070
Organization MAA

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

✓ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

✓ To gather basic information on the FAR Part 150 Study

✓ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

✓ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

✓ Resident of affected area (specify neighborhood) AVALON FARMS (RT-124 & CLIFF PINE)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

✓ Yes __ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

✓ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 (3) 4 5

Public Information Report #2
1 2 (3) 4 5

Community Workshop #1
1 2 3 (4) 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

✓ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

✓ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly				Strongly Approve
a. Extending runway/taxiway	1	2	3	4	5
b. Displacing thresholds	1	2	3	4	5
c. Isolating engine run-up activity	1	2	3	4	5
d. Changing flight tracks	1	2	3	4	5
e. Changing runway use	1	2	3	4	5
f. Modifying departure procedures	1	2	3	4	5
g. Restricting engine run-ups	1	2	3	4	5
h. Restricting aircraft operations based on noise	1	2	3	4	5
i. Installing an air traffic control tower	1	2	3	4	5
j. Placing airside signs	1	2	3	4	5
k. Implementing noise complaint procedures	1	2	3	4	5
l. Providing a public information program	1	2	3	4	5
m. Appointing a noise abatement contact	1	2	3	4	5
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
o. Producing informational brochures	1	2	3	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
AVALON FARM (RT-124 & CLIFF PINE)

14) How long have you lived or worked in the area? 1 1/2 YR

15) What are the ages of residents in your home? 43 & 46

16) Were you aware that the Airpark was actively used when you purchased your home? ✓ Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? JET PROPS & SOME SMALL PROPS - EVENING HOURS ARE HORRIBLE / WKEND MORNINGS THE SAME

a. Have there been any incidents that concern you relative to the Airpark?
✓ Yes __ No AIRCRAFT HAVE FLOWN DANGEROUSLY LOW IMMEDIATELY ABOVE MY HOME - FELT LIKE I WAS BEING "BUZZED"

b. Would you support construction of an airport tower as both an operational control and a safety measure?
✓ Yes __ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

✓ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name JUDITH ELLIS
Address 19501 PINE CONE CT.
G'BURG, MD-20879

Telephone Number (301) 977-9409
Organization AVALON FARM

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

X Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

X Other (specify) Airport Assoc. mailing

2) Why did you come to this workshop? (Check as many as apply.)

X To gather basic information on the FAR Part 150 Study

X To comment on specific findings or alternatives

X To "have a voice" in future study proceedings

X To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

X Pilot X Airpark user

__ Airpark official __ Community official

__ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

X Yes __ No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

__ Previous community workshops

X Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

all equal

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

✓ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

✓ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly				Strongly Approve
a. Extending runway/taxiway	1	2	3	4	(5) Combined with to maintain 4,200'
b. Displacing thresholds ←	1	2	3	4	5
c. Isolating engine run-up activity	(1)	2	3	4	5 run-ups don't bother residents
d. Changing flight tracks	1	2	3	4	5 don't care if safe
e. Changing runway use	1	2	3	4	5 unsafe
f. Modifying departure procedures	1	2	3	4	5 don't care if safe
g. Restricting engine run-ups	(1)	2	3	4	(5) → you must be crazy
h. Restricting aircraft operations based on noise	(1)	2	3	4	5
i. Installing an air traffic control tower	1	2	3	4	(5)
j. Placing airside signs	1	2	3	4	(5)
k. Implementing noise complaint procedures	(1)	2	3	4	5
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	3	4	(5)
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	(5)
o. Producing informational brochures	1	2	3	4	(5)

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

(1) (2) (3)

13) Please identify the area in the vicinity of the Airpark where you either live or work. live in Chevy Chase work in DC

14) How long have you lived or worked in the area?

15) What are the ages of residents in your home?

16) Were you aware that the Airpark was actively used when you purchased your home? __ Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing?

a. Have there been any incidents that concern you relative to the Airpark?
X Yes __ No The lies repeatedly spread by the airpark bashers

b. Would you support construction of an airport tower as both an operational control and a safety measure?
X Yes __ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

✓ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

A handful of residents have created the illusion that GAI is an issue of major citizen concern. Actually, even the loudest single event bothers so few people that the time + money spent on this issue is inappropriate.

Optional

Name Robert H. Oberlander
Address 3505 East-West Hwy
Chevy Chase, MD 20815
Telephone Number (H) 301/656-8496
Organization (W) 202/364-3892
Maryland Air Safety Institute

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the roject team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this tudy.

1) How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

√ Other (specify) poster at Giant Food Gosnen Store.

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

√ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

√ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

√ Resident of affected area (specify neighborhood) Hunters Woods

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?
√ Yes, only one time __ No

5) Which information sources have you used?

√ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

√ Other (specify) meeting held at Casey Barns Spring of 1991.

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 (3) 4 5

Public Information Report #2
1 2 (3) 4 5

Community Workshop #1
1 2 (3) 4 5

Community Workshop #2
1 2 (3) 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note. More posters, announcements or handouts re. this meeting.

8) Have you been active in other meetings concerning the Airpark?

√ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly
Why not consider the option of relocating the airpark to an undeveloped area?

b. Were they addressed adequately? NO, representative would not comment on this suggestion.
Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes √ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

Disapprove Strongly		Approve		Strongly Approve

a. Extending runway/taxiway
1 2 3 4 (5)

b. Displacing thresholds
1 2 3 4 5

c. Isolating engine run-up activity
1 2 3 4 (5)

d. Changing flight tracks - *enforce!*
1 2 3 4 (5)

e. Changing runway use
1 2 3 4 5

f. Modifying departure procedures
1 2 3 4 (5)

g. Restricting engine run-ups
1 2 3 4 (5)

h. Restricting aircraft operations based on noise
1 2 3 4 (5)

i. Installing an air traffic control tower
1 (2) 3 4 5

j. Placing airside signs
1 2 3 4 (5)

k. Implementing noise complaint procedures
1 2 3 4 (5)

l. Providing a public information program
1 2 3 4 (5)

m. Appointing a noise abatement contact
1 2 3 4 (5)

n. Increasing ATIS/ATCT advisory committees
1 2 (3) 4 (5)

o. Producing informational brochures
1 2 (3) 4 5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.
a - k - d

13) Please identify the area in the vicinity of the Airpark where you either live or work.
Hunters Woods

14) How long have you lived or worked in the area? *6 years*

15) What are the ages of residents in your home? *mid 30's , 7 yrs.*

16) Were you aware that the Airpark was actively used when you purchased your home? _✓_ Yes __ No. If so, how did you learn of this information? *Also were told it was going to be moved.*

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? *Early AM (before 7am) Nights (after 11 pm) Weekend afternoons.*

a. Have there been any incidents that concern you relative to the Airpark? *Aircraft crashes*
_✓_ Yes __ No *Aircraft deviate from set flight take-off/landing paths & little to no enforcement is available.*

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes _✓_ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?
_✓_ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

*Aircraft frequently deviate from set takeoff & landing paths & there is little to no enforcement. Homeowners are told to watch for such aircraft, record the plane number and call the airpark manager. This is not reasonable: 1) not all aircraft have numbers visable from the ground and 2) homeowners cannot spend days standing outside in the yard policing the airpark. **

Optional

Name *Melanie Rankin*
Address *19911 Blue Smoke Way Gaithersburg, MD 20879*
Telephone Number
Organization

** For County officials - Why is a county park under construction at the highest elevation * [illegible] landing path of Hunter's Woods? Current Airpark Manager has told me*

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

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1) How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

✓ Other (specify) SIGN IN STORE WINDOW

2) Why did you come to this workshop? (Check as many as apply.)

✓ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

✓ Pilot ✓ Airpark user

__ Airpark official __ Community official

✓ Resident of affected area (specify neighborhood) NORTH VILLAGE

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?
__ Yes ✓ No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

__ Yes ✓ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly				Strongly Approve
a. Extending runway/taxiway	1	2	(3)	4	5
b. Displacing thresholds	(1)	2	3	4	5
c. Isolating engine run-up activity	(1)	2	3	4	5
d. Changing flight tracks	1	2	(3)	4	5
e. Changing runway use	1	(2)	3	4	5
f. Modifying departure procedures	1	2	(3)	4	5
g. Restricting engine run-ups	(1)	2	3	4	5
h. Restricting aircraft operations based on noise	(1)	2	3	4	5
i. Installing an air traffic control tower	(1)	2	3	4	5
j. Placing airside signs	(3)	2	3	4	(5)
k. Implementing noise complaint procedures	1	2	3	(4)	5
l. Providing a public information program	(1)	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	(3)	4	5
n. Increasing ATIS/ATCT advisory committees	(1)	2	3	4	5
o. Producing informational brochures	(2)	2	3	4	(5)

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work. MONT VILL NORTH VILLAGE

14) How long have you lived or worked in the area? 3 YRS.

15) What are the ages of residents in your home? 63

16) Were you aware that the Airpark was actively used when you purchased your home? ✓ Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? NONE

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes ✓ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes ✓ No

18) Is there any additional information you would like provided to you? NO

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

✓ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name LEONARD J STONE

Address 20732 HIGHLAND HALL DR
GAITHERSBURG, MD 20879

Telephone Number DAY 301-279-5360

Organization NONE

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

✓ Other (specify) Noticing Posted @ Airport

2) Why did you come to this workshop? (Check as many as apply.)

✓ To gather basic information on the FAR Part 150 Study

✓ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

✓ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

✓ Pilot ✓ Airpark user

✓ Airpark official __ Community official

__ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

__ Yes ✓ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 (3) 4 5

Public Information Report #2
1 2 (3) 4 5

Community Workshop #1
1 2 3 (4) 5

Community Workshop #2
1 2 3 (4) 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

✓ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly				Strongly Approve
a. Extending runway/taxiway	1	2	3	4	(5)
b. Displacing thresholds	1	2	3	4	5
c. Isolating engine run-up activity	(1)	2	3	4	5
d. Changing flight tracks	(1)	2	3	4	5
e. Changing runway use	(1)	2	3	4	5
f. Modifying departure procedures	(1)	2	3	4	5
g. Restricting engine run-ups	(1)	2	3	4	5
h. Restricting aircraft operations based on noise	(1)	2	3	4	5
i. Installing an air traffic control tower	(1)	2	3	4	5
j. Placing airside signs	1	2	3	4	5
k. Implementing noise complaint procedures	(1)	2	3	4	5
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	(3)	4	5
n. Increasing ATIS/ATCT advisory committees	1	2	(3)	4	5
o. Producing informational brochures	1	2	(3)	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
Montgomery Aviation

14) How long have you lived or worked in the area? 12 years

15) What are the ages of residents in your home? 30, 25, 27

16) Were you aware that the Airpark was actively used when you purchased your home? ✓ Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing?

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes ✓ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes ✓ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

✓ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

My only comment would be that w/ 18 aircraft and 2 helicopters, we are the largest & most active operation at the field. To date we have not yet been consulted on various noise abatement options or alternatives that may affect us.

Optional
Name Jeff Meshinsky
Address Montgomery Aviation
7920 Airpark Rd.
Gaithersburg, MD 20879
Telephone Number (301) 258-0990
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

X Other (specify) Poem Dropped off By Neighbor

2) Why did you come to this workshop? (Check as many as apply.)

✓ To gather basic information on the FAR Part 150 Study

✓ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

✓ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

✓ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

__ Yes ✓ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 (2) 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note. Yes General report & info on how to proceed w/ our issues.

8) Have you been active in other meetings concerning the Airpark? Recently purchased home

__ Yes X No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options? Just received & reviewed it

X Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	(1)	2	3	4	5
b. Displacing thresholds	(1)	2	3	4	5
c. Isolating engine run-up activity	1	2	(3)	4	5
d. Changing flight tracks	1	2	3	(4)	5
e. Changing runway use pattern	1	2	3	(4)	5
f. Modifying departure procedures	1	2	(3)	4	5
g. Restricting engine run-ups	1	2	(3)	4	5
h. Restricting aircraft operations based on noise	1	2	3	(4)	5
i. Installing an air traffic control tower waste of tax money for its benefit	(1)	2	3	4	5
j. Placing airside signs	1	(2)	3	4	5
k. Implementing noise complaint procedures You are getting aware of it or not	1	2	(3)	4	5
l. Providing a public information program	1	2	3	(4)	5
m. Appointing a noise abatement contact	1	2	3	(4)	5
n. Increasing ATIS/ATCT advisory committees	1	(2)	3	4	5
o. Producing informational brochures	1	2	3	4	(5)

(3) (1) (2)

p. Change Landing Pattern

q.

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work. Avalon Farms - Brookefield

14) How long have you lived or worked in the area? 1½ yrs.

15) What are the ages of residents in your home? Middle Age

16) Were you aware that the Airpark was actively used when you purchased your home? __ Yes X No. If so, how did you learn of this information? Observation

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? very early 4am and heavy weekends.

a. Have there been any incidents that concern you relative to the Airpark?
X Yes __ No Congestion of Planes landing

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes __ No

18) Is there any additional information you would like provided to you? Airport Regulations & Statistics

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

X Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

It would only be equitable with the surrounding area (Brookefield) developed a balanced pattern which spread the # of planes taking off and landing to both left & right sides. Another raise traffic pattern altitude to 1,000'!

Optional

Name Bob Cini

Address 7200 CLIFF PINE DR.
GAITHERSBURG, MD 20879

Telephone Number 926.9478

Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

How did you learn about this workshop?

✓ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

✓ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

✓ Pilot ✓ Airpark user

__ Airpark official __ Community official

✓ Resident of affected area (specify neighborhood) Montgomery Village

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

__ Yes ✓ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

Don't know which I need

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

__ Yes ✓ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes ✓ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

Disapprove Strongly		Approve		Strongly Approve

a. Extending runway/taxiway
1 2 3 4 **(5)**

b. Displacing thresholds
1 2 3 **(4)** 5

c. Isolating engine run-up activity
1 2 **(3)** 4 5

d. Changing flight tracks
1 2 **(3)** 4 5

e. Changing runway use
1 **(2)** 3 4 5

f. Modifying departure procedures
1 **(2)** 3 4 5

g. Restricting engine run-ups
1 **(2)** 3 4 5

h. Restricting aircraft operations based on noise
1 **(2)** 3 4 5

i. Installing an air traffic control tower
1 2 3 **(4)** 5

j. Placing airside signs
1 2 3 4 **(5)**

k. Implementing noise complaint procedures
1 2 3 **(4)** 5

l. Providing a public information program
1 2 3 4 **(5)**

m. Appointing a noise abatement contact
1 2 3 **(4)** 5

n. Increasing ATIS/ATCT advisory committees
1 2 3 4 5

o. Producing informational brochures
1 2 3 4 **(5)**

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference. (A) (H) (I)

13) Please identify the area in the vicinity of the Airpark where you either live or work. Montgomery Village – Lakeside of Whetstone & Darcy's Regress

14) How long have you lived or worked in the area? 20 yrs

15) What are the ages of residents in your home? 73, 37, 37, 2

16) Were you aware that the Airpark was actively used when you purchased your home? ✓ Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? NONE

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes ✓ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
✓ Yes __ No

18) Is there any additional information you would like provided to you? Status Reports

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

__ Yes ✓ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name Jimmy Haller
Address 9812 Freestate Place
Gaithersburg, MD 20879
Telephone Number 301-926-2961
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

X Notice at ~~public library~~ Goshen Crossing

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

X To gather basic information on the FAR Part 150 Study

X To comment on specific findings or alternatives

X To "have a voice" in future study proceedings

X To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

X Resident of affected area (specify neighborhood) Hunters Woods I

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

__ Yes X No

5) Which information sources have you used? I will use them when I can Find them.

X Public Information Report (Newsletter) we need more.

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective. Have not seen them yet

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark? I was not aware of the meeting

__ Yes X No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so: I would like to attend all the meetin

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes X No

Not enough publicity about thes. meetings. I watched the cable

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly				Approve Strongly
a. Extending runway/taxiway	(1)	2	3	4	5
it will increase air traffic					
b. Displacing thresholds	1	2	3	4	5
Don't understand					
c. Isolating engine run-up activity	1	2	3	4	5
Don't understand					
d. Changing flight tracks	1	2	3	4	(5)
Change it away from my house.					
e. Changing runway use	1	2	3	4	(5)
as long as it does not increase activity					
f. Modifying departure procedures	1	2	3	4	(5)
Change Flight pattern away from my house.					
g. Restricting engine run-ups	1	2	3	4	5
Don't understand					
h. Restricting aircraft operations based on noise	1	2	3	4	(5)
We would like Commuter planes to Leave after 800 a.m. !!!					
i. Installing an air traffic control tower	(1)	2	3	4	5
NO! it will increase air traffic!!					
j. Placing airside signs	1	2	3	4	5
Don't understand					
k. Implementing noise complaint procedures	1	2	3	4	(5)
We don't know the complaint process					
l. Providing a public information program	1	2	3	4	(5)
Until I saw a sign at Grocery store, I knew nothing of this meeting					
m. Appointing a noise abatement contact	1	2	3	4	(5)
Yes, please!					
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
Don't understand					
o. Producing informational brochures	1	2	3	4	(5)

(1)

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
one block east of Goshen Plaza.

14) How long have you lived or worked in the area? 3 years

15) What are the ages of residents in your home? 35 and 38

16) Were you aware that the Airpark was actively used when you purchased your home? X Yes __ No. If so, how did you learn of this information?
But only for small planes/ single engines!!!

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? 5:30 am and early morning Large plane commuter Flights!!!!! Wakes every one up in the mornin

a. Have there been any incidents that concern you relative to the Airpark?
X Yes __ No There are more Large Plane Commuter Flights - Loud Noise.

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes __ No only as long as they do not ~~expand~~ increase Flight activity of multi-engine planes!!!

18) Is there any additional information you would like provided to you?
Advance Notice of expanding Commuter Flights

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?
X Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Planes Fly too low to houses - directly over my house - commuter planes and smaller planes.

Public Notices of meetings - Place at Grocery Stores!!!

Optional

Name Barbara Eisenbeiss
Address 19917 Bramble Bush Drive

Telephone Number (301) 977-6414
Organization Resident of affected area.

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

✓ Information report ~~mailed to my home or business~~ PUT IN MY MAIL BOX

__ Newspaper article (specify)

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

✓ To gather basic information on the FAR Part 150 Study

✓ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

✓ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot

__ Airpark user

__ Airpark official

✓ Community official

✓ Resident of affected area (specify neighborhood) GOSHEN ESTATES

__ Member of environmental or community group (specify) GO SHEN COMMUNITY ASSN

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

✓ Yes

__ No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

✓ Other (specify) NEWSPAPERS CIVIC ASSN MEETINGS TALK TO AIRPORT OFFICIALS

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note. NO

8) Have you been active in other meetings concerning the Airpark?

✓ Yes

__ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly
SCHOOL SAFETY
NIGHT FLYING

b. Were they addressed adequately? NO - APPARENTLY THE FAA DOESN'T GET CONCERNED ABOUT 2 SCHOOLS IN THE IMMEDIATE FLIGHT PATTERN

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

✓ Yes

__ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	(1)	2	3	4	5
b. Displacing thresholds	1	2	3	4	5
c. Isolating engine run-up activity	1	2	3	4	5
d. Changing flight tracks	1	2	3	4	(5)
e. Changing runway use	1	2	3	4	(5) MORE OF RUNWAY 14 USE
f. Modifying departure procedures	1	2	3	4	(5) DISCOURAGE LATE NIGHT & EARLY A.M. USE
g. Restricting engine run-ups	1	2	3	4	5
h. Restricting aircraft operations based on noise	1	2	3	4	5
i. Installing an air traffic control tower	1	2	3	4	5
j. Placing airside signs	1	2	3	4	5
k. Implementing noise complaint procedures	1	2	3	4	(5) BUT GOOD CAN IT DO!
l. Providing a public information program	1	2	3	4	5
m. Appointing a noise abatement contact	1	2	3	(4)	5 SEE K
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
o. Producing informational brochures	1	2	3	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
BY GOSHEN ELEMENTARY SCHOOL

14) How long have you lived or worked in the area? 20 YEARS

15) What are the ages of residents in your home? 54, 54

16) Were you aware that the Airpark was actively used when you purchased your home? __ Yes ✓ No. If so, how did you learn of this information? BY EXPERIENCE! + INCREASED USE

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? EARLY MORNING (BEFORE 7:00 am + 6 – 9 P.M.

a. Have there been any incidents that concern you relative to the Airpark?
✓ Yes __ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes __ No NO OPINION

18) Is there any additional information you would like provided to you? NO

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?
✓ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name RICHARD F. DOGGS
Address 8536 PLUM CREEK DR. GAITHERSBURG MD 20882
Telephone Number 301-869-0099
Organization GOSHEN COMMUNITY ASSN

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

✓ Other (specify) HAPPEN TO BE IN THE AREA

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

✓ Resident of affected area (specify neighborhood) HUNTERS WOODS

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

__ Yes ✓ No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

__ Yes ✓ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
2 a. Extending runway/taxiway	1	2	(3)	4	5
b. Displacing thresholds	1	(2)	3	4	5
c. Isolating engine run-up activity	1	(2)	3	4	5
d. Changing flight tracks	1	(2)	3	4	5
e. Changing runway use	1	(2)	3	4	5
f. Modifying departure procedures	1	2	(3)	4	5
g. Restricting engine run-ups	1	2	3	4	5
h. Restricting aircraft operations based on noise	1	2	(3)	4	5
1 i. Installing an air traffic control tower	1	2	3	4	(5)
j. Placing airside signs	1	2	3	4	5
3 k. Implementing noise complaint procedures	1	2	3	(4)	5
l. Providing a public information program	1	2	3	(4)	5
m. Appointing a noise abatement contact	1	2	3	(4)	5
n. Increasing ATIS/ATCT advisory committees	1	2	(3)	4	5
o. Producing informational brochures	1	2	(3)	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
HUNTERS WOODS

14) How long have you lived or worked in the area? ≈ 5 YRS

15) What are the ages of residents in your home? 39, 37, 9, 7, 3

16) Were you aware that the Airpark was actively used when you purchased your home? ✓ Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing?

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes ✓ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
✓ Yes __ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

__ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name ALBERT DUCKER
Address 19821 COCHRANE WAY
GAITH. MD 20879

Telephone Number
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

✓ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

✓ To gather basic information on the FAR Part 150 Study

✓ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

✓ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

✓ Resident of affected area (specify neighborhood) AVALON FARM

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

✓ Yes __ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

✓ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 (5)

7) Is there any other information that might have helped you prepare for this workshop? If so, please note. Format &/o Agenda details

8) Have you been active in other meetings concerning the Airpark?

✓ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

(a.) Please list them briefly (1) Touch & goes (2) Fanning flight (3) Limiting noisey aircraft

b. Were they addressed adequately? Opinions given only - and often why things can't change

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

✓ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	(1)	2	3	4	5
b. Displacing thresholds	1	2	3	4	5 ?
c. Isolating engine run-up activity	1	2	3	4	5 ?
d. Changing flight tracks	1	2	3	4	(5) More! Fan Out (2)
Changing runway use		2	3	4	(5)
f. Modifying departure procedures	1	2	3	4	(5) (1)
g. Restricting engine run-ups	1	2	3	4	(5) (Reduce the times) (3)
h. Restricting aircraft operations based on noise	1	2	3	4	(5) Set a certain decibel level
i. Installing an air traffic control tower	1	2	(3)	4	5
j. Placing airside signs	1	2	3	4	(5)
k. Implementing noise complaint procedures	1	2	3	4	(5)
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	3	4	(5)
n. Increasing ATIS/ATCT advisory committees		2	3	4	(5) education needed
o. Producing informational brochures	1	2	3	4	(5)

? don't Know what that means

? Don't Know that that means

? Meaning?

Don't Know what that mean

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.
#1 - f #2 - d/e #3 - g/h

13) Please identify the area in the vicinity of the Airpark where you either live or work.
Avalon Farm

14) How long have you lived or worked in the area? 1½ yr

15) What are the ages of residents in your home? 40's

16) Were you aware that the Airpark was actively used when you purchased your home? X Yes __ No. If so, how did you learn of this information? Realator downplayed the noise

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? Weekends + early A.M.

a. Have there been any incidents that concern you relative to the Airpark?
✓ Yes __ No, Low flying planes + student pilots repeating patterns over the house.

b. Would you support construction of an airport tower as both an operational control and a safety measure?
✓ Yes __ No (Need more info.)

18) Is there any additional information you would like provided to you? Yes -

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

✓ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

(1) Please consider fan-out patterns to distribute noise

(2) Restrict touch + goes so that it's not all weekends + evenings.

(3) Utilize green-belt areas more for touch + goes + flight patterns

Optional

Name Bonnie Buntain
Address 19501 Pine Cone Ct
Gaithersburg, MD 20879
Telephone Number 301-869-2071
Organization Avalon Farm

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

X Other (specify) POSTER AT GIANT FOOD GOSHEN PLAZA

2) Why did you come to this workshop? (Check as many as apply.)

✓ To gather basic information on the FAR Part 150 Study

✓ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

✓ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

✓ Resident of affected area (specify neighborhood) HUNTERS WOODS

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

✓ Yes __ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

✓ Other (specify) MEETING HELD AT CASEY BARN IN SPRING 1991

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

__ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly HOW ABOUT MOVING THE AIRPARK

b. Were they addressed adequately? X

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	(1)	2	3	4	5
b. Displacing thresholds	(1)	2	3	4	5
c. Isolating engine run-up activity	(1)	2	3	4	5
d. Changing flight tracks	1	2	3	4	(5)
e. Changing runway use	1	2	3	4	(5)
f. Modifying departure procedures	1	2	3	4	(5)
g. Restricting engine run-ups	1	2	3	4	(5)
h. Restricting aircraft operations based on noise	1	2	3	4	(5)
i. Installing an air traffic control tower	(1)	2	3	4	5
j. Placing airside signs	1	2	3	4	(5)
k. Implementing noise complaint procedures	1	2	3	4	(5)
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	3	4	(5)
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	(5)
o. Producing informational brochures	1	2	3	4	(5)

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
HUNTERS WOODS

14) How long have you lived or worked in the area? 6 YEARS

15) What are the ages of residents in your home? 36 & 37

16) Were you aware that the Airpark was actively used when you purchased your home? ✓ Yes __ No. If so, how did you learn of this information? BY JUST LOOKING IN THE SKY AND SEEING PLANES.

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? FRIDAY AFTERNOON TILL SUNDAY EVENING

a. Have there been any incidents that concern you relative to the Airpark?
X Yes __ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes __ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

X Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

HOW ABOUT A PHASE OUT OF THE AIR PARK ENTIRELY, SPAN IT OUT OVER A 5 TO 10 YEAR PERIOD. THE AREA HAS OUTGROWN THE AIR PARK. TIME TO CONSIDER A NEW LOCATION FOR AN AIR PARK.

Optional

Name Russ Rankin
Address 19611 Blue Smoke Way
Gaithersburg, MD. 20879
Telephone Number 869-9024
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

X From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

X To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

X Airpark official __ Community official

__ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

X Yes __ No

5) Which information sources have you used?

X Public Information Report (Newsletter)

X Previous community workshops

X Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 (3) 4 5

Public Information Report #2
1 2 (3) 4 5

Community Workshop #1
1 (2) 3 4 5

Community Workshop #2
1 (2) 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note. N/A

8) Have you been active in other meetings concerning the Airpark?

X Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes X No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

X Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	1	2	3	4	(5)
b. Displacing thresholds	1	2	3	4	(5)
c. Isolating engine run-up activity	1	2	(3)	4	5
d. Changing flight tracks	1	2	(3)	4	5
e. Changing runway use	1	2	3	(4)	5
f. Modifying departure procedures	1	2	3	(4)	5
g. Restricting engine run-ups	1	2	(3)	4	5
h. Restricting aircraft operations based on noise	1	2	(3)	4	5
i. Installing an air traffic control tower	1	2	(3)	4	5
j. Placing airside signs	1	2	3	4	(5)
k. Implementing noise complaint procedures	1	2	3	(4)	5
l. Providing a public information program	1	2	3	(4)	5
m. Appointing a noise abatement contact	1	2	3	(4)	5
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	(5)
o. Producing informational brochures	1	2	3	4	(5)

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
ON AIRPORT - WORK
4.0 MI WEST - HOME

14) How long have you lived or worked in the area? 4 YEARS

15) What are the ages of residents in your home? 41 YRS. 19 YRS.

16) Were you aware that the Airpark was actively used when you purchased your home? __ Yes __ No. If so, how did you learn of this information? N/A

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? N/A

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes X No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
X Yes __ No

18) Is there any additional information you would like provided to you? NO

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?
X Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.
GREAT JOB!

Optional

Name DOUG MCNEELEY
Address AIRPORT MANAGER

Telephone Number 301-330-6750
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

How did you learn about this workshop?

✓ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

✓ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

✓ To gather basic information on the FAR Part 150 Study

✓ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official ✓ Community official

✓ Resident of affected area (specify neighborhood) HUNTERS WOODS

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

✓ Yes __ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

__ Previous community workshops

✓ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 (2) 3 4 5

Public Information Report #2
1 2 (3) 4 5

Community Workshop #1
1 2 (3) 4 5

Community Workshop #2
1 2 (3) 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

✓ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes ✓ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	(1)	2	3	4	5
b. Displacing thresholds	1	2	(3)	4	5
c. Isolating engine run-up activity	1	2	3	(4)	5
d. Changing flight tracks	1	2	3	4	(5)
e. Changing runway use	1	2	3	4	(5)
f. Modifying departure procedures	1	2	3	4	(5)
g. Restricting engine run-ups	1	2	3	4	(5)
h. Restricting aircraft operations based on noise	1	2	3	4	(5)
i. Installing an air traffic control tower	(1)	2	3	4	(5)
j. Placing airside signs	1	2	3	4	(5)
k. Implementing noise complaint procedures	1	2	3	4	(5)
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	3	4	(5)
n. Increasing ATIS/ATCT advisory committees	1	2	3	(4)	5
o. Producing informational brochures	1	2	3	4	(5)

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.

14) How long have you lived or worked in the area?

15) What are the ages of residents in your home? 72, 42, 39, 10, 6

16) Were you aware that the Airpark was actively used when you purchased your home? ✓ Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? WEEKENDS MOSTLY DAYLIGHT WEEK DAYS 6AM - 10PM

a. Have there been any incidents that concern you relative to the Airpark?
✓ Yes __ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
✓ Yes __ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?
✓ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name JEFFREY D. HARTWICK

Address 19613 RIDGE HEIGHTS DR.
GAITHERSBURG, MD. 20879

Telephone Number (301) 258-2365

Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please omplete your responses as you tour the information clusters, or after you have finished, and return it to a member of the roject team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

) How did you learn about this workshop?

X Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

X From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

X To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

X Pilot X Airpark user

__ Airpark official __ Community official

__ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?
X Yes __ No

5) Which information sources have you used?

X Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 (5)

Public Information Report #2
1 2 3 4 (5)

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 (4) 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note. N/a

8) Have you been active in other meetings concerning the Airpark?

X Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

X Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	1	2	(3)	4	5
b. Displacing thresholds	1	2	(3)	4	5
c. Isolating engine run-up activity	1	2	(3)	4	5
d. Changing flight tracks	1	2	(3)	4	5
e. Changing runway use	1	(2)	3	4	5
f. Modifying departure procedures	1	2	(3)	4	5
g. Restricting engine run-ups	1	2	(3)	4	5
h. Restricting aircraft operations based on noise	1	(2)	3	4	5
i. Installing an air traffic control tower	1	2	(3)	4	5
3 j. Placing airside signs	1	2	3	(4)	5
k. Implementing noise complaint procedures	1	2	(3)	4	5
1 l. Providing a public information program	1	2	3	(4)	5
m. Appointing a noise abatement contact	1	2	(3)	4	5
n. Increasing ATIS/ATCT advisory committees	1	2	(3)	4	5
o. Producing informational brochures	1	2	3	(4)	5
2					

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
MONTGOMERY VILLAGE

14) How long have you lived or worked in the area? 15 YEARS

15) What are the ages of residents in your home? 48

16) Were you aware that the Airpark was actively used when you purchased your home? X Yes __ No. If so, how did you learn of this information? REALTOR

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing?

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes X No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes X No

18) Is there any additional information you would like provided to you? N/O

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

X Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name
Address

Telephone Number
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

✓ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

✓ Airpark official __ Community official

__ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

✓ Yes __ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

✓ Previous community workshops

✓ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 (3) 4 5

Public Information Report #2
1 2 (3) 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

✓ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes ✓ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly				Strongly Approve
a. Extending runway/taxiway	1	2	3	4	(5)
b. Displacing thresholds	(1)	2	3	4	5
c. Isolating engine run-up activity	1	2	(3)	4	5
d. Changing flight tracks	(1)	2	3	4	5
e. Changing runway use	(1)	2	3	4	5
f. Modifying departure procedures	(1)	2	3	4	5
g. Restricting engine run-ups	(1)	2	3	4	5
h. Restricting aircraft operations based on noise	(1)	2	3	4	5
i. Installing an air traffic control tower	1	2	3	4	(5)
j. Placing airside signs	1	2	3	4	(5)
k. Implementing noise complaint procedures	(1)	2	3	4	5
l. Providing a public information program	(1)	2	3	4	5
m. Appointing a noise abatement contact	(1)	2	3	4	5
n. Increasing ATIS/ATCT advisory committees	1	2	(3)	4	5
o. Producing informational brochures	(1)	2	3	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference. H, F & D

13) Please identify the area in the vicinity of the Airpark where you either live or work. Operational area

14) How long have you lived or worked in the area? 30 yrs

15) What are the ages of residents in your home? NA

16) Were you aware that the Airpark was actively used when you purchased your home? __ Yes __ No. If so, how did you learn of this information? NA

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? None

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes ✓ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
✓ Yes __ No

18) Is there any additional information you would like provided to you? No

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

✓ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name
Address

Telephone Number
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

How did you learn about this workshop?

✓ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

✓ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

✓ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot

__ Airpark user

__ Airpark official

__ Community official

✓ Resident of affected area (specify neighborhood) Ashford, East Village

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

X Yes

__ No

5) Which information sources have you used?

X Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note. more definitive info on Runways - which way headed

8) Have you been active in other meetings concerning the Airpark?

X Yes

__ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

X Yes

__ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	(1)	2	3	4	5
b. Displacing thresholds	1	2	3	4	(5)
c. Isolating engine run-up activity	1	2	3	4	(5)
d. Changing flight tracks	1	2	3	4	(5)
e. Changing runway use	1	2	3	4	(5)
f. Modifying departure procedures	1	2	3	4	(5)
g. Restricting engine run-ups	1	2	3	4	(5)
h. Restricting aircraft operations based on noise	1	2	3	4	(5)
i. Installing an air traffic control tower	1	2	3	4	(5)
j. Placing airside signs	1	2	3	4	(5)
k. Implementing noise complaint procedures	1	2	3	4	(5)
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	3	4	(5)
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
o. Producing informational brochures	1	2	3	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.

EAST Village

14) How long have you lived or worked in the area? 3 years

15) What are the ages of residents in your home? 53

16) Were you aware that the Airpark was actively used when you purchased your home? X Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? Incessant take offs over my home on weekends

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes X No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
X Yes __ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

X Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name
Address

Telephone Number
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

How did you learn about this workshop?

✓ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

✓ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

✓ Resident of affected area (specify neighborhood) Goshen Estates Bell Bluff Rd

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

✓ Yes __ No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

✓ Other (specify) Homeowner meetings

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

__ Yes ✓ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly				Strongly Approve
a. Extending runway/taxiway	1	2	3	4	5
b. Displacing thresholds	1	2	3	4	5
c. Isolating engine run-up activity	1	2	3	4	5
d. Changing flight tracks	1	2	3	4	5
e. Changing runway use	1	2	3	4	5
f. Modifying departure procedures	1	2	3	4	5
g. Restricting engine run-ups	1	2	3	4	5
h. Restricting aircraft operations based on noise	1	2	3	4	5
i. Installing an air traffic control tower	1	2	3	4	5
j. Placing airside signs	1	2	3	4	5
k. Implementing noise complaint procedures	1	2	3	4	5
l. Providing a public information program	1	2	3	4	5
m. Appointing a noise abatement contact	1	2	3	4	5
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
o. Producing informational brochures	1	2	3	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
Goshen Estates

14) How long have you lived or worked in the area? 14yrs

15) What are the ages of residents in your home? 12-81 4yrs

16) Were you aware that the Airpark was actively used when you purchased your home? ✓ Yes __ No. If so, how did you learn of this information? Not so active as now

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? weekend activities

a. Have there been any incidents that concern you relative to the Airpark?
✓ Yes __ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes ✓ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?
✓ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name
Address

Telephone Number
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

✓ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

✓ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

✓ Yes __ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

✓ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	1	2	3	4	5
b. Displacing thresholds	1	2	3	4	5
c. Isolating engine run-up activity	1	2	3	4	5
d. Changing flight tracks	1	2	3	4	5
e. Changing runway use	1	2	3	4	5
f. Modifying departure procedures	1	2	3	4	5
g. Restricting engine run-ups	1	2	3	4	5
h. Restricting aircraft operations based on noise	1	2	3	4	5
i. Installing an air traffic control tower	1	2	3	4	5
j. Placing airside signs	1	2	3	4	5
k. Implementing noise complaint procedures	1	2	3	4	5
l. Providing a public information program	1	2	3	4	5
m. Appointing a noise abatement contact	1	2	3	4	5
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
o. Producing informational brochures	1	2	3	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
EAST MONT. VILLAGE

14) How long have you lived or worked in the area?

15) What are the ages of residents in your home?

16) Were you aware that the Airpark was actively used when you purchased your home? ✓ Yes __ No. If so, how did you learn of this information? BUILDER

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? NIGHTS. ALL DAY SAT + SUN.

a. Have there been any incidents that concern you relative to the Airpark?
✓ Yes __ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes __ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

__ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name
Address

Telephone Number
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

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✓ Information report mailed to my home or business

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__ Notice at public library

__ From another person

__ Other (specify)

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✓ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot

__ Airpark user

__ Airpark official

✓ Community official

__ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

✓ Yes __ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

✓ Previous community workshops

✓ Technical reports

✓ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

✓ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

✓ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	1	2	3	4	5
b. Displacing thresholds	1	2	3	4	5
c. Isolating engine run-up activity	1	2	3	4	5
d. Changing flight tracks	1	2	3	4	5
e. Changing runway use	1	2	3	4	5
f. Modifying departure procedures	1	2	3	4	5
g. Restricting engine run-ups	1	2	3	4	5
h. Restricting aircraft operations based on noise	1	2	3	4	5
i. Installing an air traffic control tower	1	2	3	4	5
j. Placing airside signs	1	2	3	4	5
k. Implementing noise complaint procedures	1	2	3	4	5
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m. Appointing a noise abatement contact	1	2	3	4	5
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o. Producing informational brochures	1	2	3	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.

14) How long have you lived or worked in the area?

15) What are the ages of residents in your home?

16) Were you aware that the Airpark was actively used when you purchased your home? __ Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing?

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes __ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes __ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

__ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

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Organization

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How did you learn about this workshop?

X Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

X To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

X To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

X Resident of affected area (specify neighborhood) ASHFORD

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

__ Yes X No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

__ Yes X No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

X Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	1	2	3	4	5
b. Displacing thresholds	1	2	3	4	5
c. Isolating engine run-up activity	1	2	3	4	5
d. Changing flight tracks	1	2	3	4	5
e. Changing runway use	1	2	3	4	5
f. Modifying departure procedures	1	2	3	4	5
g. Restricting engine run-ups	1	2	3	4	5
h. Restricting aircraft operations based on noise	1	2	3	4	5
i. Installing an air traffic control tower	1	2	3	4	5
j. Placing airside signs	1	2	3	4	5
k. Implementing noise complaint procedures	1	2	3	4	5
l. Providing a public information program	1	2	3	4	5
m. Appointing a noise abatement contact	1	2	3	4	5
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
o. Producing informational brochures	1	2	3	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.

14) How long have you lived or worked in the area?

15) What are the ages of residents in your home?

16) Were you aware that the Airpark was actively used when you purchased your home? __ Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing?

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes __ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes __ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

__ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name
Address

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Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

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1) How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

✓ Other (specify) reporter

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

✓ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

__ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

✓ Other (specify) reporter

4) Have you received other informational materials before attending this workshop?

✓ Yes __ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

__ Previous community workshops

✓ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

✓ Yes observer __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	1	2	3	4	5
b. Displacing thresholds	1	2	3	4	5
c. Isolating engine run-up activity	1	2	3	4	5
d. Changing flight tracks	1	2	3	4	5
e. Changing runway use	1	2	3	4	5
f. Modifying departure procedures	1	2	3	4	5
g. Restricting engine run-ups	1	2	3	4	5
h. Restricting aircraft operations based on noise	1	2	3	4	5
i. Installing an air traffic control tower	1	2	3	4	5
j. Placing airside signs	1	2	3	4	5
k. Implementing noise complaint procedures	1	2	3	4	5
l. Providing a public information program	1	2	3	4	5
m. Appointing a noise abatement contact	1	2	3	4	5
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
o. Producing informational brochures	1	2	3	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.

N/A

14) How long have you lived or worked in the area? 3 yrs

15) What are the ages of residents in your home?

N/A

16) Were you aware that the Airpark was actively used when you purchased your home? __ Yes __ No. If so, how did you learn of this information?

N/A

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing?

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes __ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes __ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

__ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name
Address

Telephone Number
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

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1) How did you learn about this workshop?

✓ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

✓ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

✓ Pilot ✓ Airpark user

__ Airpark official __ Community official

__ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

__ Yes ✓ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
(1) 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
(1) 2 3 4 5

Community Workshop #2
(1) 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

✓ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	1	2	3	4	(5)
b. Displacing thresholds	1	2	3	4	(5)
c. Isolating engine run-up activity	(1)	2	3	4	5
d. Changing flight tracks	(1)	2	3	4	5
e. Changing runway use	(1)	2	3	4	5
f. Modifying departure procedures	1	2	(3)	4	5
g. Restricting engine run-ups	(1)	2	3	4	5
h. Restricting aircraft operations based on noise	(1)	2	3	4	5
i. Installing an air traffic control tower	1	2	(3)	4	5
j. Placing airside signs	1	2	(3)	4	5
k. Implementing noise complaint procedures	(1)	2	3	4	5
l. Providing a public information program	1	2	(3)	4	5
m. Appointing a noise abatement contact	1	2	(3)	4	5
n. Increasing ATIS/ATCT advisory committees	1	(2)	3	4	5
o. Producing informational brochures	1	2	3	4	(5)

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

a) 1, i) 1

13) Please identify the area in the vicinity of the Airpark where you either live or work.

On the Airport

14) How long have you lived or worked in the area? 2 yrs.

15) What are the ages of residents in your home? 24yr, 1yr

16) Were you aware that the Airpark was actively used when you purchased your home? ✓Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? NONE.

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes ✓No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes ✓No

18) Is there any additional information you would like provided to you?
~~No~~ YES

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

✓Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

What % of home owners in the vicinity of the airport are opposed to the Airport ??

Optional

Name
Address

Telephone Number
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MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

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1) How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

✓ Other (specify) MC AA

2) Why did you come to this workshop? (Check as many as apply.)

✓ To gather basic information on the FAR Part 150 Study

✓ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

✓ Pilot ✓ Airpark user

__ Airpark official __ Community official

__ Resident of affected area (specify neighborhood)

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

✓ Yes __ No

5) Which information sources have you used?

✓ Public Information Report (Newsletter)

✓ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 (5)

Community Workshop #2
1 2 3 4 (5)

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

✓ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

✓ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	1	2	(3)	4	5
b. Displacing thresholds	(1)	2	3	4	5
c. Isolating engine run-up activity	1	2	3	4	(5)
d. Changing flight tracks	1	2	3	4	(5)
e. Changing runway use	1	(2)	3	4	5
f. Modifying departure procedures	1	2	3	4	(5)
g. Restricting engine run-ups	(1)	2	3	4	5
h. Restricting aircraft operations based on noise	(1)	2	3	4	5
i. Installing an air traffic control tower	(1)	2	3	4	5
j. Placing airside signs	1	2	(3)	4	5
k. Implementing noise complaint procedures	1	2	3	(4)	5
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	3	4	(5)
n. Increasing ATIS/ATCT advisory committees	1	(2)	3	4	5
o. Producing informational brochures	1	2	(3)	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.

14) How long have you lived or worked in the area?

15) What are the ages of residents in your home?

16) Were you aware that the Airpark was actively used when you purchased your home? __ Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing?

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes __ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes __ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

__ Yes X No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name
Address

Telephone Number
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

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How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

X From another person

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

X To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

X Resident of affected area (specify neighborhood) HADLEY FARM

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?
__ Yes X No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

__ Yes X No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

__ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	(1)	2	3	4	5
b. Displacing thresholds	1	2	3	4	5
c. Isolating engine run-up activity	1	2	3	4	5
d. Changing flight tracks	1	2	3	4	(5)
e. Changing runway use	1	2	3	4	(5)
f. Modifying departure procedures	1	2	3	4	(5)
g. Restricting engine run-ups	1	2	3	4	(5)
h. Restricting aircraft operations based on noise	1	2	3	4	(5)
i. Installing an air traffic control tower	1	2	3	4	5
j. Placing airside signs	1	2	3	4	5
k. Implementing noise complaint procedures	1	2	3	4	(5)
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	3	4	(5)
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	(5)
o. Producing informational brochures	1	2	3	4	(5)

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
HADLEY FARMS - ELIOAK TERRACE

14) How long have you lived or worked in the area? 1½ years

15) What are the ages of residents in your home? 29, 29

16) Were you aware that the Airpark was actively used when you purchased your home? X Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? TRAINING FLIGHTS, CIRCLING ABOVE EARLY AM FLIGHTS HOUSE

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes __ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes X No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

X Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name
Address

Telephone Number
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

1) How did you learn about this workshop?

__ Information report mailed to my home or business

✓ Newspaper article (specify)

__ Notice at public library

__ From another person

✓ Other (specify) also reminded of meeting at Ashford Meeting

2) Why did you come to this workshop? (Check as many as apply.)

✓ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

✓ To "have a voice" in future study proceedings

✓ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

✓ Resident of affected area (specify neighborhood) Ashford

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

__ Yes ✓ No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 3 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

__ Yes ✓ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly Why planes use pattern they presently use; Why departure path couldn't be changed

b. Were they addressed adequately? Yes

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

✓ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	(1)	2	3	4	5
b. Displacing thresholds	1 ?	2	3	4	5
c. Isolating engine run-up activity	1 ?	2	3	4	5
d. Changing flight tracks	1	2	(3)	4	5
e. Changing runway use	1	2	3	4	5
f. Modifying departure procedures	1	2	3	(4)	5
g. Restricting engine run-ups	1	2	(3)	4	5
h. Restricting aircraft operations based on noise	1	2	(3)	4	5
i. Installing an air traffic control tower	1	(2)	3	4	5
j. Placing airside signs	1 ?	2	3	4	5
k. Implementing noise complaint procedures	1	2	3	(4)	5
l. Providing a public information program	1	2	3	(4)	5
m. Appointing a noise abatement contact	1 3	2	3	(4)	5
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
o. Producing informational brochures	1	2	(3)	4	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.

Ashford

14) How long have you lived or worked in the area? 12 yrs

15) What are the ages of residents in your home? 45 → 6

16) Were you aware that the Airpark was actively used when you purchased your home? ✓ Yes __ No. If so, how did you learn of this information? Building salesman

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? morning around 6–8 very loud engine

a. Have there been any incidents that concern you relative to the Airpark?

✓ Yes __ No Kite incidence

b. Would you support construction of an airport tower as both an operational control and a safety measure?

__ Yes ✓ No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?

✓ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name
Address

Telephone Number
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

__ From another person

✓ __ Other (specify) Member of Committee

2) Why did you come to this workshop? (Check as many as apply.)

__ To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot

__ Airpark user

__ Airpark official

✓ __ Community official

✓ __ Resident of affected area (specify neighborhood) Goshen

✓ __ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

__ Yes __ No

5) Which information sources have you used?

✓ __ Public Information Report (Newsletter)

✓ __ Previous community workshops

✓ __ Technical reports

✓ __ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
(1) 2 3 4 5

Public Information Report #2
(1) 2 3 4 5

Community Workshop #1
1 (2) 3 4 5

Community Workshop #2
1 2 (3) 4 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

✓ __ Yes __ No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

✓ __ Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	(1)	2	3	4	5
b. Displacing thresholds	(1)	2	3	4	5
c. Isolating engine run-up activity	1	2	3	(4)	5
d. Changing flight tracks	1	2	3	4	(5)
e. Changing runway use	1	2	3	4	(5)
f. Modifying departure procedures	1	2	3	4	(5)
g. Restricting engine run-ups	1	2	3	(4)	5
h. Restricting aircraft operations based on noise - whose definition of noise?	1	2	3	4	(5)
i. Installing an air traffic control tower	(1)	2	3	4	5
j. Placing airside signs	1	2	3	(4)	5
k. Implementing noise complaint procedures	1	2	3	4	(5)
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	3	4	(5)
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
o. Producing informational brochures	1	2	3	4	(5)

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
Goshen

14) How long have you lived or worked in the area? 15 yrs.

15) What are the ages of residents in your home? over 40, 2 teens

16) Were you aware that the Airpark was actively used when you purchased your home? ✓ Yes __ No. If so, how did you learn of this information?

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? all day

a. Have there been any incidents that concern you relative to the Airpark?
✓ Yes __ No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes ✓ No

18) Is there any additional information you would like provided to you? NO

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?
✓ Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

Optional

Name
Address

Telephone Number
Organization

MONTGOMERY COUNTY FAR PART 150 STUDY

OPEN HOUSE QUESTIONNAIRE

The following questions have been developed as a vehicle to obtain community input into the FAR Part 150 Study. Please complete your responses as you tour the information clusters, or after you have finished, and return it to a member of the project team. Thank you in advance for your time and cooperation in providing us with your thoughts and viewpoints on this study.

How did you learn about this workshop?

__ Information report mailed to my home or business

__ Newspaper article (specify)

__ Notice at public library

X From another person Rosemary Arkaian

__ Other (specify)

2) Why did you come to this workshop? (Check as many as apply.)

X To gather basic information on the FAR Part 150 Study

__ To comment on specific findings or alternatives

__ To "have a voice" in future study proceedings

__ To have specific questions addressed or issues clarified

3) What is your interest in the Airpark FAR Part 150 Study?

__ Pilot __ Airpark user

__ Airpark official __ Community official

X Resident of affected area (specify neighborhood) Avalon Farm

__ Member of environmental or community group (specify)

__ Other (specify)

4) Have you received other informational materials before attending this workshop?

__ Yes X No

5) Which information sources have you used?

__ Public Information Report (Newsletter)

__ Previous community workshops

__ Technical reports

__ Other (specify)

6) Rate the information sources below from 1 being the least effective, to 5 being the most effective.

Public Information Report #1
1 2 3 4 5

Public Information Report #2
1 2 (3) 4 5

Community Workshop #1
1 2 3 4 5

Community Workshop #2
1 2 3 (4) 5

7) Is there any other information that might have helped you prepare for this workshop? If so, please note.

8) Have you been active in other meetings concerning the Airpark?

__ Yes X No

9) Did you have specific questions about the FAR Part 150 Study that you wanted addressed this evening; if so:

a. Please list them briefly

b. Were they addressed adequately? __

Yes __ No; If no, please state the information you require.

10) Has the information provided throughout the study assisted you in understanding the data presented and in formulating an opinion on Airpark Noise Abatement Options?

X Yes __ No

11) What is your opinion on the following Operational Abatement Alternatives, with 1 meaning you disapprove completely, and 5 meaning that you approve completely.

	Disapprove Strongly		Approve		Strongly Approve
a. Extending runway/taxiway	(1)	2	3	4	5
b. Displacing thresholds	1	2	3	4	5
c. Isolating engine run-up activity	1	2	3	4	5
d. Changing flight tracks	1	2	3	4	5
e. Changing runway use	1	2	3	4	5
f. Modifying departure procedures	1	2	3	4	5
g. Restricting engine run-ups	1	2	3	4	5
h. Restricting aircraft operations based on noise	1	2	3	4	(5)
i. Installing an air traffic control tower	(1)	2	3	4	5
j. Placing airside signs	1	2	3	4	5
k. Implementing noise complaint procedures	1	2	3	(4)	5
l. Providing a public information program	1	2	3	4	(5)
m. Appointing a noise abatement contact	1	2	3	4	(5)
n. Increasing ATIS/ATCT advisory committees	1	2	3	4	5
o. Producing informational brochures	1	2	3	(4)	5

12) In question #11, mark with a 1, 2, and 3 those options that are your first, second, and third preference.

13) Please identify the area in the vicinity of the Airpark where you either live or work.
AVALON FARM

14) How long have you lived or worked in the area? 1 YEAR

15) What are the ages of residents in your home? 29, 30

16) Were you aware that the Airpark was actively used when you purchased your home? X Yes __ No. If so, how did you learn of this information?
LONG TIME RESIDENT

17) Can you identify the approximate times and levels of aircraft noise that you find are disturbing? DUSK

a. Have there been any incidents that concern you relative to the Airpark?
__ Yes X No

b. Would you support construction of an airport tower as both an operational control and a safety measure?
__ Yes X No

18) Is there any additional information you would like provided to you?

19) Have you completed a card to have your name placed on the master mailing list and to verify our information?
X Yes __ No

20) Please use the space below to provide the study team and county officials with any additional comments you may have.

CONCERNS:
1) LOW FLYING AIRCRAFT
2) IDENTIFYING PARTICULARLY LOUD AIRCRAFT.

I WOULD LIKE TO SEE TRAFFIC ON BOTH SIDES OF THE AIRPARK.

Optional

Name Jim Rives
Address 7221 CLIFF PINE DR
GAITHERSBURG MD

Telephone Number 963-3447
Organization

REPORT AND SUMMARY ANALYSIS
COMMUNITY WORKSHOP NO. 3
FAR PART 150 STUDY
MONTGOMERY AIRPARK (MONTGOMERY COUNTY, MD)

30 June 1992 - 6:00 p.m.
Goshen Elementary School
Gaithersburg, Maryland

Presenters:

Alan G. Hass, P.E.
Harris Miller Miller & Hanson, Inc.

Thomas Breen
Harris Miller Miller & Hanson, Inc.

Robert Clifford
The LPA Group, Inc.

F. Stuart Kenney
Montgomery County Revenue Authority

Norman Arnold
TAMS Consultants

Facilitator: Linda Hanifin Bonner
Hanifin Associates, Inc.

Attendees: Appendix A

Analysis of Questionnaire and Comments: Appendix B

Report Distribution and Notification List: Appendix C

INTRODUCTION

The purpose of the third community workshop was to present to neighboring residents and other interested persons the study's findings and suggested recommendations about land use controls and aircraft operations in and around the Airpark. The workshop was conducted in an "open-house" format, allowing attendees an opportunity to ask questions and discuss issues with the technical consultants on a one-on-one basis. It also provided area residents with an effective mechanism to provide their input and comments regarding the study.

The workshop took place from 6:00 - 10:00 p.m. Approximately 45 people attended, representing concerned citizens, business interests, and community organizations (see Appendix A). Attendees were asked to complete a registration form and questionnaire. The technical consultants - Alan Hass and Thomas Breen of HMM&H, Robert Clifford of the LPA Group, and Norman Arnold of TAMS Consultants interacted with members of the community via open discussions. Mr. Stuart Kenney of the Montgomery County Revenue Authority also attended. Portions of the workshop were recorded on videotape.

Organized around "information clusters," specific details pertaining to the study results were presented.

Cluster information boards providing study highlights included

- Elements of GAI NPC,
- Recommended Letter to Airmen,
- Recommended Wording for Airside Signs,
- Summary of NCP Implementation,
- 1996 Future Ldn Contours,
- Future Compatibility Statistics,
- Elements of 150 Process,
- Development of Noise Contours,
- Potential Operational Abatement Alternatives,
- Potential Land Use Abatement Alternatives,
- Land Use with 1991 Contours, and
- Land Use with 1996 Contours.

PUBLIC NOTIFICATION

The workshop notification process was extensive and included:

- Mailing and hand delivery of 2,000 information reports to area residents and public officials,

- Posting meeting notices at libraries, county public buildings and businesses in the vicinity of the Airpark, including the following:

    - Goshen Crossing Shopping Center
        - Giant Food
        - Little Caesar's Pizza
        - Ben & Jerry's Ice Cream

    - Goshen Plaza Shopping Center
        - Hardee's Restaurant

    - Flower Hill Shopping Center
        - Giant Food

- Gaithersburg Library
- TCBY Yogurt - Route 124 (near Airpark)
- Kay's Diner - Route 124 (near Airpark)

- Press notices placed in all County Council press room mailboxes and followed up with a mailing to:

  - Chronicle Express
  - Gaithersburg Gazette
  - Montgomery Journal
  - The Montgomery Sentinel
  - Newton Publication Service
  - Osbourne Publications

See Appendix C for a more detailed tabulation of newsletter and meeting notice distribution.

The number of people attending the workshop was approximately the same as for the two previous ones; most had been present at previous workshops. The majority of attendees stated they heard about the workshop through informational newsletters and word of mouth. Participants appeared interested and were enthusiastic about responding to the questionnaires, using them as an opportunity to provide their own specific input into the study. Most attendeees spent time asking questions and initiating open discussions.

A press conference conducted one day prior to the workshop announced the date, time and location of the workshop and invited all interested to attend. Representatives from the Montgomery Journal, Montgomery Sentinel, Gaithersburg Gazette, and Gaithersburg Express newspapers attended and published articles in their July 1 editions. Representatives from WRC-TV and Montgomery Community Television (Channel 21) also attended and ran pieces in their June 29 evening broadcasts.

APPENDIX A – Analysis of Questionnaire Responses and Comments

In conjunction with the ongoing Montgomery County FAR Part 150 Study, area residents and other concerned citizens were asked to fill out a questionnaire (copy attached) that focused on the recommendations for noise abatement measures that had been developed during the study. For each of sixteen suggested measures, the respondents were asked to rank the level of effectiveness: 1 meaning very effective, 2 meaning moderately effective, and 3 meaning not effective. Forty-eight people completed the questionnaire; the results are summarized below.

Measure	1	2	3	No Answer
A. Institute noise abatement flight tracks	17	16	12	3
B. Institute preferential runway use	17	15	11	5
C. Modify business jet departure procedures	19	17	9	3
D. Restrict (voluntarily) nighttime operations	20	9	19	0
E. Restrict nighttime maintenance run-ups	15	16	15	2
F. Update real estate disclosure ordinance	22	8	16	2
G. Update comprehensive plans	19	11	13	5
H. Program publicity: letters to airmen	16	20	7	5
I. Program publicity: airside signs	22	16	5	5

Measure	1	2	3	No Answer
J. Program publicity: informational brochures	10	18	. . . 14	6
K. Program publicity: ATIS/ATCT advisories	14	18	10	6
L. Appoint noise abatement contact	18	15	9	6
M. Institute noise complaint receipt and response procedures	24	15	10	1
N. Institute public information program response procedures	19	13	12	4
O. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time	19	14	10	5

While all the suggested measures were seen as either very effective or moderately effective by at least two-thirds of the respondents, the most favored measures were the following:

- institute noise abatement flight tracks,
- institute preferential runway use,
- modify business jet departure procedures,
- publicize the chosen measures through letters to airmen, and
- post informational airside signs.

Measure D, which would voluntarily restrict nighttime operations was, according to written comments, considered unlikely to be effective because it would be only on a volunteer basis. Respondents felt that enforcement would be necessary to ensure any any such restriction.

j. Program publicity: informational brochures

(1) 2 3

k. Program publicity: ATIS/ATCT advisories

(1) 2 3

l. Appoint noise abatement contact

(1) 2 3

m. Institute noise complaint receipt and response procedures

(1) 2 3

n. Institute public education program

(1) 2 3

o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time

(1) 2 3

2. For any measure you do not feel will be effective, please give us your reasons:

We in AVALON FARM are concerned that the Proposed Changes will have more impact over our area. We want assurance that the flight Patterns and increased take-offs from Runway 14 will not include more Planes over Avalon.

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here: we suggest that flight Patterns be more flexible during training flights so that instructors take students over a Variety area & not always over the same route over Avalon. Also, flight towers should advise jets that they should avoid houses & not continue to use a set pattern which brings them low over houses. There is a large non-populated area around the airport which should be used for take off & landing. Must avoid ~~with~~ resident areas.

COMMUNITY QUESTIONNAIRE

The following questions have been developed as a vehicle to gain further community input into the FAR Part 150 Study. Please take a few minutes to respond and mail to MCRA 211 Monroe Street, Rockville, MD 20850.

1. The following sixteen measures have been recommended as part of the noise control program for the Montgomery County Airpark. Please give us your opinion as to the level of effectiveness of each measure, with
   1 meaning very effective,
   2 meaning moderately affective, and
   3 meaning not effective.

   a. Institute noise abatement flight tracks
      1 2 3 I don't know
   b. Institute preferential runway use
      1 2 3 I don't know
   c. Modify business jet departures procedures
      (1) 2 3
   d. Restrict (voluntarily) nighttime operations
      1 2 (3)
   e. Restrict nighttime maintenance runups
      (1) 2 3
   f. Update real estate disclosure ordinance
      1 2 (3)
   g. Update comprehensive plans
      1 2 (3)
   h. Program publicity: letters to airmen
      1 2 3 I don't know
   i. Program publicity: airside signs
      1 2 3
   j. Program publicity: informational brochures
      1 2 3 IDK
   k. Program publicity: ATIS/ATCT advisories
      1 2 3
   l. Appoint noise abatement contact
      1 2 (3)
   m. Institute noise complaint receipt and
      1 2 (3)
   n. Institute public information program response procedures
      1 2 (3)
   o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
      1 2 (3)

2. For any measure you do not feel will be effective, please give us your reasons.

   Disturbing noise caused by airplanes flying over our house including late hours at night (10:30 P.M.) and early morning (6:30 A.M.) Awakes up babies, elderly and the sick.

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

   a curfew from 9:30 a.m. to 8:00 P.m. With some allowance on 1 day a week

Maria T Cashwell
19924 Silverfield Dr.
Gaithersburg 20879

Progress..., continued from page 1

The sixth element includes two documents. The Noise Exposure Map (NEM) describes the information in Element 1, while the Noise Compatibility Program (NCP) describes the information analyzed and presented in Elements 2 through 5. The NEM was completed and submitted to the FAA in July 1991. The FAA acknowledged its acceptance in February 1992. The NCP will be finalized and submitted to the FAA following receipt of comments from the third community workshop. After a 180 day FAA review period, and assuming FAA approval of the noise and land use recommendations, the MCRA will have developed a Noise Compatibility Program -- a package of operational and land use planning actions designed to minimize noise impacts from GAI.

Alvin Abrams, M.D.
Celeste Abrams
19577 Ridge Heights Drive
Gaithersburg, MD 20879-1657

COMMUNITY QUESTIONNAIRE

The following questions have been developed as a vehicle to gain further community input into the FAR Part 150 Study. Please take a few minutes to respond and mail to MCRA 211 Monroe Street, Rockville, MD 20850.

1. The following sixteen measures have been recommended as part of the noise control program for the Montgomery County Airpark. Please give us your opinion as to the level of effectiveness of each measure, with
   1 meaning very effective,
   2 meaning moderately affective, and
   3 meaning not effective.

   a. Institute noise abatement flight tracks
      1 2 (3)
   b. Institute preferential runway use
      1 2 (3)
   c. Modify business jet departures procedures
      1 2 (3)
   d. Restrict (voluntarily) nighttime operations
      1 2 (3)
   e. Restrict nighttime maintenance runups
      1 2 (3)
   f. Update real estate disclosure ordinance
      1 2 (3)
   g. Update comprehensive plans
      1 2 (3)
   h. Program publicity: letters to airmen
      1 2 (3)
   i. Program publicity: airside signs
      1 2 (3)
   j. Program publicity: informational brochures
      1 2 (3)
   k. Program publicity: ATIS/ATCT advisories
      1 2 (3)
   l. Appoint noise abatement contact
      1 2 (3)
   m. Institute noise complaint receipt and
      1 2 (3)
   n. Institute public information program response procedures
      1 2 (3)
   o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
      1 2 (3)

2. For any measure you do not feel will be effective, please give us your reasons.

   Ineffective due to lack of enforcement policies! There needs to be fines levied when rules are broken. Too much housing and children in the area!

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

   Please consider closing Airpark as to decrease traffic.

COMMUNITY QUESTIONNAIRE

The following questions have been developed as a vehicle to gain further community input into the FAR Part 150 Study. Please take a few minutes to respond and mail to MCRA 211 Monroe Street, Rockville, MD 20850.

1. The following sixteen measures have been recommended as part of the noise control program for the Montgomery County Airpark. Please give us your opinion as to the level of effectiveness of each measure, with
   1 meaning very effective,
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a. Institute noise abatement flight tracks
   1 (2) 3
b. Institute preferential runway use
   (1) 2 3
c. Modify business jet departures procedures
   1 (2) 3
d. Restrict (voluntarily) nighttime operations
   1 (2) 3
e. Restrict nighttime maintenance runups
   1 (2) 3
f. Update real estate disclosure ordinance
   1 (2) 3
g. Update comprehensive plans
   1 (2) 3
h. Program publicity: letters to airmen
   1 (2) 3
i. Program publicity: airside signs
   1 (2) 3
j. Program publicity: informational brochures
   1 (2) 3
k. Program publicity: ATIS/ATCT advisories
   1 (2) 3
l. Appoint noise abatement contact
   (1) 2 3
m. Institute noise complaint receipt and
   1 (2) 3
n. Institute public information program response procedures
   1 (2) 3
o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
   1 (2) 3

2. For any measure you do not feel will be effective, please give us your reasons.

Since most of these Activities and plans propose only a 'voluntary' compliance, I do not feel that the current problems will go away without the enactment of item #1 below.

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

1. Implement a procedure that would Fine pilots that continually overfly Residential areas a low Altitude.
2. Close the Airpark.

Progress..., continued from page 1

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COMMUNITY QUESTIONNAIRE

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   a. Institute noise abatement flight tracks
      (1) 2 3
   b. Institute preferential runway use
      1 (2) 3
   c. Modify business jet departures procedures
      1 (2) 3
   d. Restrict (voluntarily) nighttime operations
      1 2 (3)
   e. Restrict nighttime maintenance runups
      1 2 (3)
   f. Update real estate disclosure ordinance
      1 2 (3)
   g. Update comprehensive plans
      1 2 (3)
   h. Program publicity: letters to airmen
      1 (2) 3
   i. Program publicity: airside signs
      1 (2) 3
   j. Program publicity: informational brochures
      1 (2) 3
   k. Program publicity: ATIS/ATCT advisories
      1 (2) 3
   l. Appoint noise abatement contact
      1 (2) 3
   m. Institute noise complaint receipt and
      1 (2) 3
   n. Institute public information program response procedures
      1 (2) 3
   o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
      1 2 (3)

2. For any measure you do not feel will be effective, please give us your reasons.

   These proposed measures are not mandatory rendering this effort ineffective. There should be laws to govern these actions and penalties applied when not.

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

   This area is no longer compatible with aircraft take-offs and landings. Children are initially upset at the noise levels. Only suggestion: Remove the park or divert main flow to another airpark!

***Progress...**, continued from page 1*

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   (1) 2 3
b. Institute preferential runway use
   (1) 2 3
c. Modify business jet departures procedures
   1 (2) 3
d. Restrict (voluntarily) nighttime operations
   1 2 (3)
e. Restrict nighttime maintenance runups
   1 2 (3)
f. Update real estate disclosure ordinance
   1 2 (3)
g. Update comprehensive plans
   1 2 (3)
h. Program publicity: letters to airmen
   1 (2) 3
i. Program publicity: airside signs
   1 (2) 3
j. Program publicity: informational brochures
   1 (2) 3
k. Program publicity: ATIS/ATCT advisories
   1 (2) 3
l. Appoint noise abatement contact
   (1) 2 3
m. Institute noise complaint receipt and
   (1) 2 3
n. Institute public information program response procedures
   (1) 2 3
o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
   1 (2) 3

2. For any measure you do not feel will be effective, please give us your reasons.

Voluntary nature
not currently an issue
does nothing about noise
" " " "

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

Progress..., continued from page 1

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FAR Part 150 COMMUNITY QUESTIONNAIRE

The following questions have been developed as a vehicle to gain further community input into the FAR Part 150 Study. Please take a few minutes to respond and drop off at the registration desk before you leave, or mail to MCRA, 211 Monroe Street, Rockville, MD 20850.

1. The following fifteen measures have been recommended as part of the noise control program for the Montgomery County Airpark. Please give us your opinion as to the level of effectiveness of each measure, with

1 meaning very effective
2 meaning moderately effective, and
3 meaning not effective.

a. Institute noise abatement flight tracks

1 2 (3)

b. Institute preferential runway use

1 2 (3)

c. Modify business jet departure procedures

1 2 (3)

d. Restrict (voluntarily) nighttime operations

(1) 2 3

e. Restrict nighttime maintenance runups

(1) 2 3

f. Update real estate disclosure ordinance

1 (2) 3

g. Update comprehensive plans

1 (2) 3

h. Program publicity: letters to airmen

1 (2) 3

i. Program publicity: airside signs

1 (2) 3

Jane J. Corrigan
7309 Cliff Pine Dr.
Gaithersburg, MD 20879

j. Program publicity: informational brochures

1 (2) 3

k. Program publicity: ATIS/ATCT advisories

1 (2) 3

l. Appoint noise abatement contact

(1) 2 3

m. Institute noise complaint receipt and response procedures

(1) 2 3

n. Institute public education program

1 (2) 3

o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time

(1) 2 3

2. For any measure you do not feel will be effective, please give us your reasons:

Redirect patterns from numerous a/c to avoid increased flights over Avalon.

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here:

Use pattern over non residential areas (People do live in Avalon too)

Stan Lowe, Jr.
19569 Ridge Heights Drive
Gaithersburg, MD 20879

COMMUNITY QUESTIONNAIRE

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   1 (2) 3
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   c. Modify business jet departures procedures
   1 2 3
   d. Restrict (voluntarily) nighttime operations
   (1) 2 (3)
   e. Restrict nighttime maintenance runups
   1 (2) 3
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   (1) 2 3
   n. Institute public information program response procedures
   1 (2) 3
   o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
   (1) 2 3

2. For any measure you do not feel will be effective, please give us your reasons.
   "remind", "encourage" and "voluntary" are not effective terms; they leave a great deal of room for not complying

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

Progress..., continued from page 1

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   1 (2) 3
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   1 (2) 3
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   1 (2) 3
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   1 (2) 3
   j. Program publicity: informational brochures
   1 (2) 3
   k. Program publicity: ATIS/ATCT advisories
   (1) 2 3
   l. Appoint noise abatement contact
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   (1) 2 3
   n. Institute public information program response procedures
   (1) 2 3
   o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
   (1) 2 3

2. For any measure you do not feel will be effective, please give us your reasons.

   _____
   _____
   _____
   _____
   _____
   _____

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

   _____
   _____
   _____
   _____
   _____

***Progress...**, continued from page 1*

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   d. Restrict (voluntarily) nighttime operations
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   e. Restrict nighttime maintenance runups
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   1 2 (3)
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   (1) 2 3
   h. Program publicity: letters to airmen
   1 2 (3)
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   1 (2) 3
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   1 2 (3)
   k. Program publicity: ATIS/ATCT advisories
   1 2 (3)
   l. Appoint noise abatement contact
   1 2 (3)
   m. Institute noise complaint receipt and
   (1) 2 3
   n. Institute public information program response procedures
   (1) 2 3
   o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
   (1) 2 3

2. For any measure you do not feel will be effective, please give us your reasons.
   f. Lowers values w/o improving noise levels
   d) no night problem
   h., i, J. K, L: The pilots and Airpark management has demonstrated a disregard for Hunters Woods. These steps won't change it.

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.
   Limit takeoffs to one every three to five minutes.
   Limit student touch down/takeoffs. Get rid of the damn helicopter.

***Progress...**, continued from page 1*

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S. Finger
19553 Ridge Heights Dr
Gaithersburg MD 20879

NITY QUESTIONNAIRE

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g. Update comprehensive plans
1 (2) 3

h. Program publicity: letters to airmen
1 (2) 3

i. Program publicity: airside signs
(1) 2 3

j. Program publicity: informational brochures
(1) 2 3

k. Program publicity: ATIS/ATCT advisories
(1) 2 3

l. Appoint noise abatement contact
(1) 2 3

m. Institute noise complaint receipt and
(1) 2 3

n. Institute public information program response procedures
1 (2) (3)

o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
1 (2) 3

2. For any measure you do not feel will be effective, please give us your reasons.

n. MCRA is not committed to reducing the noise around the airport, but probably wants to expand operations

Have approaching planes on 14 Stay in Landing Area Approach

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

- Include preferential approaches not just landing.
- Restrict air school 'touch tgo' operations
- When landing on 14, make planes stay at higher altitude until close to runway

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(1) 2 3

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(1) 2 3

c. Modify business jet departures procedures
(1) 2 3

d. Restrict (voluntarily) nighttime operations
(1) 2 3

e. Restrict nighttime maintenance runups
1 (2) 3

f. Update real estate disclosure ordinance
1 2 (3)

g. Update comprehensive plans
1 (2) 3

h. Program publicity: letters to airmen
(1) 2 3

i. Program publicity: airside signs
(1) 2 3

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(1) 2 3

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l. Appoint noise abatement contact
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(1) 2 3

n. Institute public information program response procedures
(1) 2 3

o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
(1) 2 3

2. For any measure you do not feel will be effective, please give us your reasons.

f. Will not prevent noise, but devalue area houses instead.

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

Restrict takeoff times in morning and late at night.

***Progress...**, continued from page 1*

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   a. Institute noise abatement flight tracks — 1 2 3
   b. Institute preferential runway use — 1 2 3
   c. Modify business jet departures procedures — 1 2 3
   d. Restrict (voluntarily) nighttime operations — 1 2 3
   e. Restrict nighttime maintenance runups — 1 2 3
   f. Update real estate disclosure ordinance — 1 2 3
   g. Update comprehensive plans — 1 2 3
   h. Program publicity: letters to airmen — 1 2 3
   i. Program publicity: airside signs — 1 2 3
   j. Program publicity: informational brochures — 1 2 3
   k. Program publicity: ATIS/ATCT advisories — 1 2 3
   l. Appoint noise abatement contact — 1 2 3
   m. Institute noise complaint receipt and — 1 2 3
   n. Institute public information program response procedures — 1 2 3
   o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time — 1 2 3

2. For any measure you do not feel will be effective, please give us your reasons.

   _____
   _____
   _____
   _____
   _____
   _____

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

   _____
   _____
   _____
   _____
   _____

***Progress...**, continued from page 1*

The sixth element includes two documents. The Noise Exposure Map (NEM) describes the information in Element 1, while the Noise Compatibility Program (NCP) describes the information analyzed and presented in Elements 2 through 5. The NEM was completed and submitted to the FAA in July 1991. The FAA acknowledged its acceptance in February 1992. The NCP will be finalized and submitted to the FAA following receipt of comments from the third community workshop. After a 180 day FAA review period, and assuming FAA approval of the noise and land use recommendations, the MCRA will have developed a Noise Compatibility Program -- a package of operational and land use planning actions designed to minimize noise impacts from GAI.

COMMUNITY QUESTIONNAIRE

Lisa B. Rubin
19704 Drop Forge Lane
Gaithersburg, Maryland 20879

been developed as a vehicle to gain further community input into the FAR
a few minutes to respond and mail to MCRA 211 Monroe Street, Rockville,

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   1 (2) 3

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   1 (2) 3

c. Modify business jet departures procedures
   1 (2) 3

d. Restrict (voluntarily) nighttime operations
   1 (2) 3

e. Restrict nighttime maintenance runups
   1 (2) 3

f. Update real estate disclosure ordinance
   (1) 2 3

g. Update comprehensive plans
   (1) 2 3

h. Program publicity: letters to airmen ? not sure
   1 2 3

i. Program publicity: airside signs ? not sure
   1 2 3

j. Program publicity: informational brochures ? not sure
   1 2 3

k. Program publicity: ATIS/ATCT advisories ? not sure
   1 2 3

l. Appoint noise abatement contact
   1 (2) 3
   Hopefully very, but afraid individual will be on side of airport

m. Institute noise complaint receipt and
   1 2 (3) fear No repercussion for complaint

n. Institute public information program response procedures
   (1) 2 3

o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
   1 (2) 3

2. For any measure you do not feel will be effective, please give us your reasons.

- All these may be effective if follow-up is really given
- We need an objective person to be noise abatement contact

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

- Make sure objective party is noise abatement contact
- Limit # of flights going 1 direction i.e. 1 every 15 minutes at very most
- complete surveys of noise at different locations, not just a few

COMMUNITY QUESTIONNAIRE

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(1) 2 3

2. For any measure you do not feel will be effective, please give us your reasons.

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

Progress..., continued from page 1

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COMMUNITY QUESTIONNAIRE

Michael & Cheryl Heffner
8926 Blue Smoke Dr.
Gaithersburg, MD 20879

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o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
   1 (2) 3

2. For any measure you do not feel will be effective, please give us your reasons.

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.
   Mandatory Nighttime ~~operations~~ Restrictions
   Mandatory Noise Abatement Tracks
   Restrict Bus. Jets Entirely

Alain Ratsimbazafy
8909 Blue Smoke Dr.
Gaithersburg, MD 20879

COMMUNITY QUESTIONNAIRE

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a. Institute noise abatement flight tracks
(1) 2 3

b. Institute preferential runway use
(1) 2 3

c. Modify business jet departures procedures
(1) 2 3

d. Restrict (voluntarily) nighttime operations
(1) 2 3

e. Restrict nighttime maintenance runups
1 (2) 3

f. Update real estate disclosure ordinance
(1) 2 3

g. Update comprehensive plans
(1) 2 3

h. Program publicity: letters to airmen
(1) 2 3

i. Program publicity: airside signs
(1) 2 3

j. Program publicity: informational brochures
(1) 2 3

k. Program publicity: ATIS/ATCT advisories
(1) 2 3

l. Appoint noise abatement contact
(1) 2 3

m. Institute noise complaint receipt and
(1) 2 3

n. Institute public information program response procedures
(1) 2 3

o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
(1) 2 3

2. For any measure you do not feel will be effective, please give us your reasons.

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.
WE NEED THESE MEASURES ASAP !!!

Progress..., continued from page 1

The sixth element includes two documents. The Noise Exposure Map (NEM) describes the information in Element 1, while the Noise Compatibility Program (NCP) describes the information analyzed and presented in Elements 2 through 5. The NEM was completed and submitted to the FAA in July 1991. The FAA acknowledged its acceptance in February 1992. The NCP will be finalized and submitted to the FAA following receipt of comments from the third community workshop. After a 180 day FAA review period, and assuming FAA approval of the noise and land use recommendations, the MCRA will have developed a Noise Compatibility Program -- a package of operational and land use planning actions designed to minimize noise impacts from GAI.

COMMUNITY QUESTIONNAIRE

The following questions have been developed as a vehicle to gain further community input into the FAR Part 150 Study. Please take a few minutes to respond and mail to MCRA 211 Monroe Street, Rockville, MD 20850.

1. The following sixteen measures have been recommended as part of the noise control program for the Montgomery County Airpark. Please give us your opinion as to the level of effectiveness of each measure, with
   1 meaning very effective,
   2 meaning moderately affective, and
   3 meaning not effective.

a. Institute noise abatement flight tracks
   (1) 2 3

b. Institute preferential runway use
   (1) 2 3

c. Modify business jet departures procedures
   (1) 2 3

d. Restrict (voluntarily) nighttime operations
   (1) 2 3

e. Restrict nighttime maintenance runups
   (1) 2 3

f. Update real estate disclosure ordinance
   (1) 2 3

g. Update comprehensive plans
   (1) 2 3

h. Program publicity: letters to airmen
   (1) 2 3

i. Program publicity: airside signs
   (1) 2 3

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n. Institute public information program response procedures
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o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
   (1) 2 3

2. For any measure you do not feel will be effective, please give us your reasons.

_____
_____
_____
_____
_____
_____

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_____
_____
_____
_____
_____

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   b. Institute preferential runway use
   (1) 2 3
   c. Modify business jet departures procedures
   (1) 2 3
   d. Restrict (voluntarily) nighttime operations
   (1) 2 3
   e. Restrict nighttime maintenance runups
   1 (2) 3
   f. Update real estate disclosure ordinance
   1 (2) (3) *
   g. Update comprehensive plans
   (1) 2 3
   h. Program publicity: letters to airmen
   (1) 2 3
   i. Program publicity: airside signs
   (1) 2 3
   j. Program publicity: informational brochures
   1 (2) 3
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   (1) 2 3
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   (1) 2 3
   m. Institute noise complaint receipt and
   (1) 2 3
   n. Institute public information program response procedures
   (1) 2 3
   o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
   1 (2) 3

   * Afraid of value of homes going down.

2. For any measure you do not feel will be effective, please give us your reasons.
   I think any measure more than the residents have now will be more effective - however I'm concerned that every measure will be on a "voluntary" basis + they that it will make a difference.

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.
   I think this is a good start; I am concerned however because recently I see more planes flying more LEFT instead of more Right over Hunters Woods than ever before. Good luck + keep us informed!

Progress..., continued from page 1

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   (1) 2 3
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   (1) 2 3
   c. Modify business jet departures procedures
   (1) 2 3
   d. Restrict (voluntarily) nighttime operations
   (1) 2 3
   e. Restrict nighttime maintenance runups
   (1) 2 3
   f. Update real estate disclosure ordinance
   1 2 (3)
   g. Update comprehensive plans
   (1) 2 3
   h. Program publicity: letters to airmen
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   i. Program publicity: airside signs
   (1) 2 3
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   (1) 2 3
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   n. Institute public information program response procedures
   (1) 2 3
   o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
   (1) 2 3

2. For any measure you do not feel will be effective, please give us your reasons.

   _____
   _____
   _____
   _____
   _____
   _____

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

   No measures will be effective unless these pilots ARE held STRICTLY ACCOUNTABLE for their ACTIONS. We need the AIRPARKS help. If your pilots don't fly the Proposed flight pattern FINE THEM!

Progress..., continued from page 1

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   3 meaning not effective.

a. Institute noise abatement flight tracks
   1 2 (3)

b. Institute preferential runway use
   1 2 3

c. Modify business jet departures procedures
   1 2 3

d. Restrict (voluntarily) nighttime operations
   (1) 2 3

e. Restrict nighttime maintenance runups
   (1) 2 3

f. Update real estate disclosure ordinance
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   (1) 2 3

n. Institute public information program response procedures
   (1) 2 3

o. Evaluate changes in noise exposure due to changes in airport layout/operations and at minimal intervals of time
   (1) 2 3

2. For any measure you do not feel will be effective, please give us your reasons.

I live in Avalon Farms and am concerned that changes will increase noise/traffic over my house

3. Do you have any other suggestions for noise abatement measures? If so, please discuss them here.

Vary training flights - Seems like don't go over our house. Use non-populated areas for take-off and landing.

Progress..., continued from page 1

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APPENDIX G Aircraft Single-Event Contours

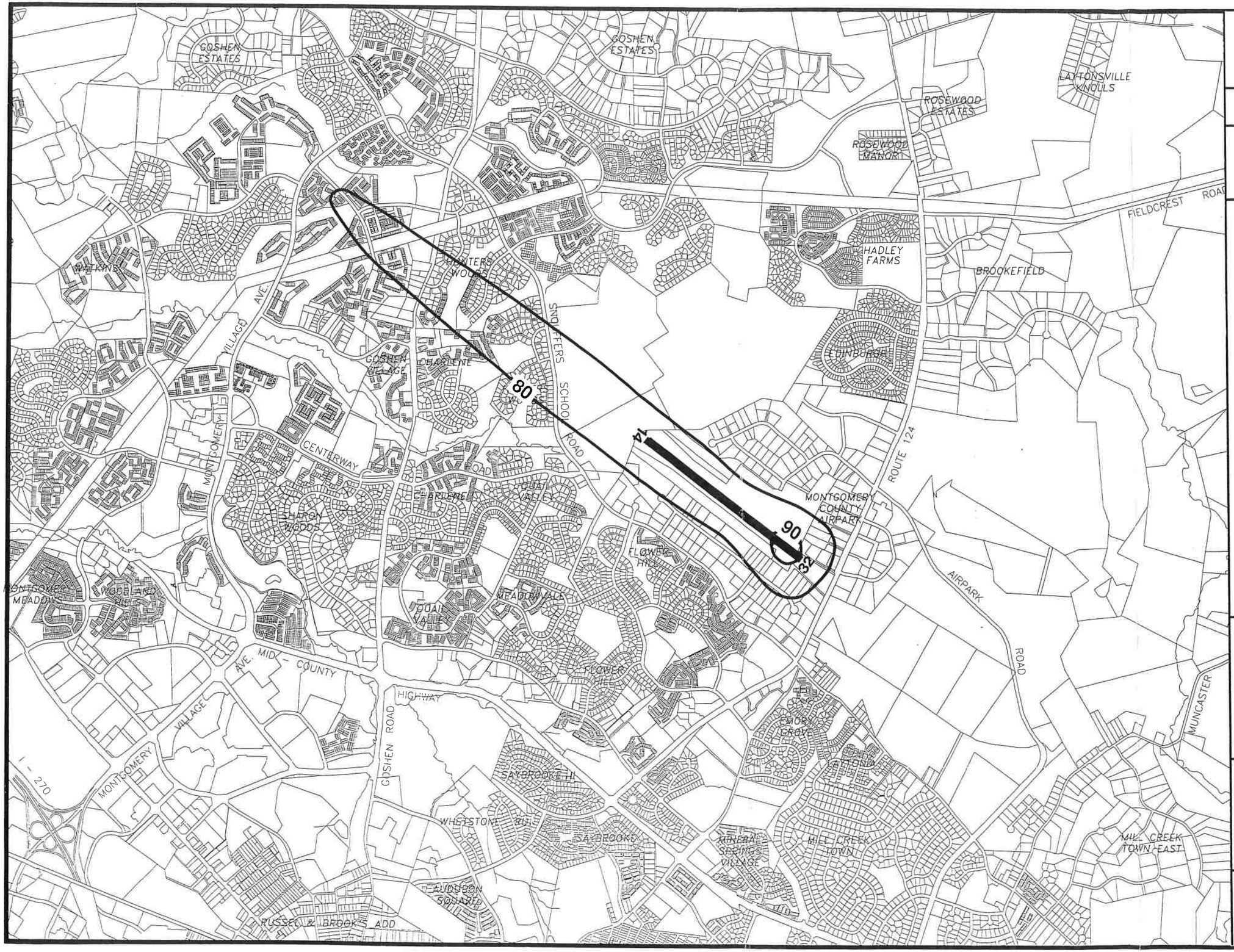
MONTGOMERY COUNTY AIRPARK

FAR PART 150 STUDY

MONTGOMERY COUNTY REVENUE AUTHORITY

FIGURE G.1

SEL CONTOURS FROM SINGLE-ENGINE PISTON DEPARTURE



N

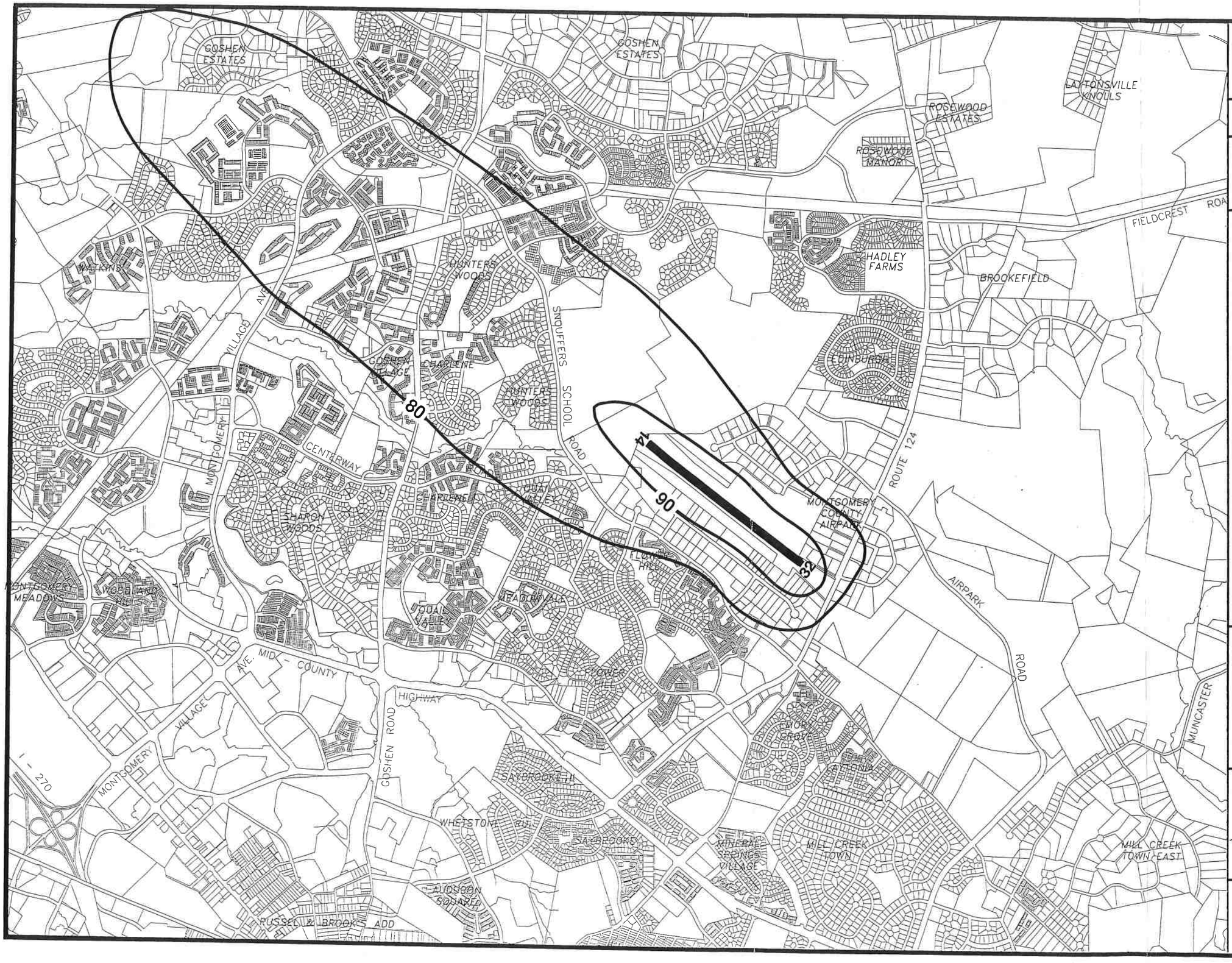
2000 1000 0 2000

SCALE IN FEET

HARRIS MILLER MILLER & HANSON INC.

THE LPA GROUP INCORPORATED

HANIFIN ASSOCIATES, INC.



MONTGOMERY COUNTY AIRPARK

FAR PART 150 STUDY

MONTGOMERY COUNTY REVENUE AUTHORITY

FIGURE G.2

SEL CONTOURS FROM TWIN-ENGINE TURBO DEPARTURE

N

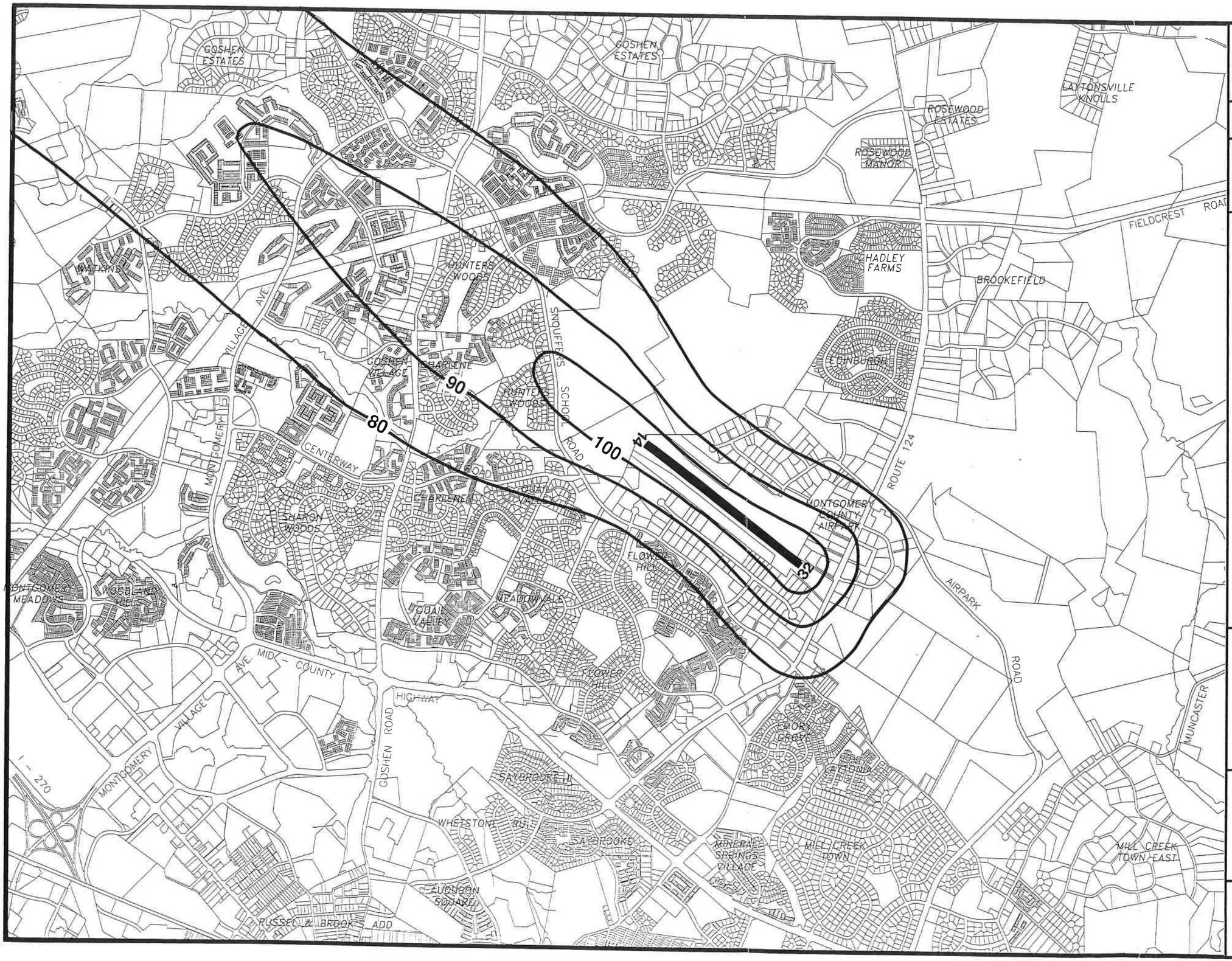
2000 1000 0 2000

SCALE IN FEET

HARRIS MILLER MILLER & HANSON INC.

THE LPA GROUP INCORPORATED

HANIFIN ASSOCIATES, INC.



MONTGOMERY COUNTY AIRPARK

FAR PART 150 STUDY

MONTGOMERY COUNTY REVENUE AUTHORITY

FIGURE G.3

SEL CONTOURS FROM BUSINESS JET DEPARTURE

N

2000 1000 0 2000

SCALE IN FEET

HARRIS MILLER MILLER & HANSON INC.

THE LPA GROUP INCORPORATED

HANIFIN ASSOCIATES, INC.

APPENDIX H GAI All-Weather Wind Rose

APPENDIX I Correspondence With MNCPPC

Montgomery County Revenue Authority

211 Monroe Street, Rockville, Maryland 20850, 301/762-9080

October 1, 1991

Mr. Gus Bauman, Chairman
Montgomery County Planning Board
Maryland-National Capital Park
and Planning Commission
8787 Georgia Avenue
Silver Spring, Maryland 20910-3760

Dear Mr. Bauman,

The Montgomery County Revenue Authority (MCRA) at the request of the County Council and Executive's office, is conducting a Federal Aviation Administration (FAA), Part 150 Noise Study at the Gaithersburg Airport using the services of a FAA approved contractor. The study process also utilizes a technical advisory committee to discuss findings and make recommendations. Your office is represented by Melissa Banach and Steve Federline.

All materials containing relevant findings and potential actions for further study, have been distributed to your representative(s). The noise analysis portion of the study is completed and we are now conducting the land use analysis and will finish the process with the report of final recommendation to the FAA.

The purpose of this letter is to solicit suggestions and guidance from the highest levels of the Montgomery County Government before the MCRA makes its final recommendations, and to advise you that the Board of the MCRA, the Part 150 technical advisory committee and the County Council Airpark Liaison Committee, have expressed concern over the continuing development of residential areas within the noise affected areas of the Airpark.

While it will be several more months before the study is complete and the MCRA makes its formal recommendations to the FAA, the following facts are clear:

1. Using FAA standards, the airport noise contours are acceptable and legal.

2. Approaching and departing aircraft frequently create noise

levels that are distracting to human activity and are the cause of continuing, valid complaints. These single event incidents are not in violation of FAA rules, regulations or standards.

3. The preliminary results of the study show that there is no apparent way to gain FAA approval of mandatory restrictions on the number of flights, aircraft based at the Airpark, or hours of operation. Further analysis will be conducted on this topic including, but not limited to, such issues as pilots education and voluntary compliance with restrictive operating rules.

4. It is apparent that to continue the policy of residential growth within the flight paths will undoubtedly create additional citizen complaints.

The MCRA recognizes that planning, zoning and permitting are outside of its purview but considers it of paramount importance to bring to your attention, again, the seriousness of the continuing and growing problem of residential development near the Airpark. Unless mitigation measures are undertaken, such as condemnation of affected real property or the employment of strict soundproofing in the construction of homes in the affected area, the MCRA is concerned that an entire new segment of the county's population will be subjected to undesirable noise levels by virtue of purchasing new homes in the developments near the Airpark.

The Board of the MCRA expects that it will receive final comments from the public and advisory committee by early November 1991. We welcome your participation as we face the culmination of the Part 150 process.

I will be available to provide you with further information and to arrange any meetings with the Board or its consultants at your convenience.

Sincerely,

F. Stuart Kenney
Executive Director

cc: Federline
Banach

Agenda Item No. 23

Agenda Date: 12/5/91

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
8787 Georgia Avenue • Silver Spring, Maryland 20910-3760

November 26, 1991

TO: MONTGOMERY COUNTY PLANNING BOARD

FROM: Community Planning Division
Environmental Planning Division

SUBJECT: Montgomery County Airpark Part 150 Noise Control and Compatibility Planning Study

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Staff Recommendation

Staff recommends that the Planning Board forward the following findings and recommendations to the Revenue Authority for consideration in developing the final draft of the Montgomery County Airpark Part 150 Noise Control and Compatibility Planning Study (hereafter referred to as the Part 150 Study):

1. The Revenue Authority should continue to use the Master Plans, the Zoning Ordinance and land use maps as the basis for preparing a Noise Abatement Study;

2. The Planning Board affirms its position that residential development is appropriate outside the 60 Ldn contour, as shown in the Master Plans for the area;

3. The Revenue Authority should be aware that most of the land around the Airpark is already developed or committed to development as anticipated in the Master Plans for the area; and

4. The Revenue Authority should consider implementing the following operational or procedural measures to mitigate noise impacts, including single event noise, and/or increase safety margins affecting surrounding properties:

a. a preferential runway program to reduce noise in residential areas;

b. modification of flight tracks and flight procedures to:

1) increase the angle of the Visual Approach Slope Indicator (VASI) for Runway 14 from three to 4.5 degrees.

2) shift the runway to the southeast provided there is no physical extension of the runway; and

on the final draft before it is submitted to the FAA for approval. FAA must approve the study before it can be implemented by the Revenue Authority.

The Revenue Authority seeks the Planning Board's insight on two specific land use problems to be addressed in the final draft:

1. the continuing and growing problem of residential development near the Airpark, and

2. the impacts of high noise levels from individual aircraft overflights, known as single event noise, in areas outside of the projected 1991 and 1996 noise contours.

Stuart Kenney, Executive Director of the Revenue Authority, and Stephen Federline, environmental planner, will make a brief presentation to the Board on Thursday. Members of the Airpark Liaison Committee are also expected to comment.

The Revenue Authority briefed the County Council in October. The Council made only one recommendation, i.e., that the runway should not be lengthened as a noise abatement measure. The Planning Board's recommendations to the Revenue Authority will also be forwarded to the Council.

The master plans, the Part 150 Study, and this memorandum measure noise impacts in Ldn's. The Ldn or Day Night Sound Level represents the average sound level for a 24 hour period with a 10 dBA penalty for night-time noise between 10 p.m. and 7.a.m. to account for increased sensitivity during those hours.

The summary recommendations at the beginning of this report address the two land use issues identified by the Revenue Authority. Following is a brief historical perspective on development near the airpark and a discussion of the issues.

Historical Perspective on Development near the Airpark

The 1971 Gaithersburg Master Plan contained a generalized discussion of potential impacts of the Airpark on surrounding areas. The Gaithersburg Vicinity Master Plan and the Amendment to the Upper Rock Creek Master Plan, both approved in 1985, presented a more detailed study of potential impacts.

In 1980 during the preparation of the master plans the Planning Board was asked for their recommendation on rezoning a large tract located northeast of Snouffers School Road and east of Goshen Road, two-thirds mile from the end of the runway (Zoning Case G-240, R-200 to Town Sector). The official State Aviation Administration (SAA) standard for maximum acceptable noise in residential areas was 65 Ldn. To provide an extra measure of comfort, the SAA and the Environmental Planning Division advised the Board to adhere to a more stringent 60 Ldn standard. Even then, environmental planners cautioned, residents would sometimes object to the noise.

The last remaining uncommitted residential properties are located east of Route 124 adjacent to Rock Creek Park and Airpark Road Extended. These properties are zoned RE-1 and identified as *RES on Figure 14-1, Montgomery County Airport Vicinity Land Use map. Each of these properties is located outside the 55 Ldn contour.

The parcel bisected by Airpark Road extended and the vacant property immediately north of this parcel and east of Route 124 (230 acres in all) are of particular interest since they are closest to the Airpark. These properties should be developed as zoned and protected by operational changes in like manner as other properties located outside the 60 Ldn contour which may be subject to single event noise. One such operational change is staff's recommendation to diminish overflights in this area by using adjacent parkland as a flyway.

The Upper Rock Creek Master Plan discourages more intensive use of vacant residential properties to protect the sensitive waters of the Upper Rock Creek and its tributaries. The Upper Rock Creek Planning Area remains a low-density residential resource area. According to the Plan, transitional land uses and densities should not be located in the residential wedge area.

In summary, staff recommends that the Board affirm the land use and zoning recommendations contained in the Gaithersburg Vicinity Master Plan and the Upper Rock Creek Master Plan as applied to the vicinity of the Airpark, and that the Board encourage the Revenue Authority to continue to use these documents and the land use maps as the basis for developing a Noise Abatement Plan for the Part 150 Study.

Single Event Noise Outside 60 Ldn Noise Contour Areas

Residents in the vicinity of the Airpark object to single event aircraft flyovers which interfere with sleep, telephone conversations, or listening to the radio or television. (A comparison of single-event noises and common neighborhood noises is found in Figure 4.2). As discussed in the preceding section, the Planning Board and County Council expected some inconvenience to residents when these properties were rezoned in the early 1980's. Unfortunately, no standards exist for determining the compatibility of land uses with single event noise.

Residents object that the Ldn descriptor used to measure noise impacts averages the noise over a twenty-four hour period which underestimates the impact of single event noise. This problem is often overstated in part because decibel and Ldn scales are logarithmic rather than arithmetic. It can be demonstrated that one noisy single event has an exaggerated effect on the overall Ldn calculation. For instance, one aircraft creating 90 dBA of noise is equivalent in the Ldn calculation to 100 aircraft at 70 dBA. Being more specific to planes using the Airpark, one Westwind 1124 or Learjet 35A taking off at

According to residential representatives on the advisory committee, a major weakness of the Part 150 Study is that there is no requirement to specifically consider safety. Because of the fear of crashes, the residents' reactions to air traffic noises are greater than they might be to other noises of the same magnitude. Objective noise standards do not deal with this reality.

Staff suggests that modifications be made to flight tracks and flight procedures to increase safety margins despite minimal noise benefits. Recommendations 1 and 2 below are based principally on increasing safety margins.

1) **Increase the angle of the Visual Approach Slope Indicator (VASI) for Runway 14 from 3 to 4.5 degrees.** At any given distance off the runway, airplanes on final approach to Runway 14 under visual flight conditions would be approximately 50 percent higher over residential areas. The 4.5 degree figure is the maximum allowable by FAA.

2) **Shift the runway towards the southeast as a long term noise and safety improvement, provided the runway's existing length (4235 feet) remains physically the same.** Extending the runway towards the southeast and shortening the other end of the runway by the same amount would increase the height of airplanes over residential areas northwest of the Airpark. This option could be used in combination with 1) above. There may be physical limitations to extension of the runway due to Route 124 and necessary obstruction clearances.

The consultant recommends against this alternative due to cost and minimal noise benefits. Staff believes the increased safety margin may justify the additional cost.

3) **Maximize the use of the contiguous Rock Creek parklands as an aircraft flyway or corridor.** The key to success of the overall noise mitigation strategy of shifting flights toward Rock Creek is to secure a permanent noise-compatible flight corridor through that area. The configuration of parklands in Rock Creek provides this opportunity. The parkland could become a designated flyway, thus avoiding overflight of most residential areas. A preliminary discussion with the Department of Parks indicates that an increase in aircraft overflights from what currently occurs should not be a detriment to the intended use of these parklands.

C) **Encouraging voluntary curfews on nighttime use of noisy aircraft.** FAA will not allow imposition of a mandatory curfew for airports such as the Montgomery County Airpark, where no incompatible land uses exist inside the 65 Ldn contour. However, it is essential that some form of voluntary curfew be established to address citizens' concerns for single event noise impacts. Airpark management, in cooperation with pilots' associations and owners of noisy aircraft, should mount an aggressive campaign to

FLIGHT RESOURCES INC.
7940 Airpark Drive
Gaithersburg, Maryland 20879-4160
(301) 977-0124

December 10, 1991

Mr. Gus Bauman, Chairman
The Maryland-National Capital Park and Planning Commission
8787 Georgia Ave.
Silver Spring, MD 20910

Dear Mr. Bauman:

Please note my opposition to the planned development of 230 acres of residential property located east of Route 124 adjacent to Rock Creek Park and Airpark Road Extended in Gaithersburg, presently zoned RE-1. Given the close proximity of the Montgomery County Airpark, and the historic conflict over aircraft noise with Hunter's Woods and other nearby communities, I believe the proposed development is unwise and should be curtailed.

I have reviewed the M-NCPPC memo of November 27, 1991 regarding airpark noise and related land use compatability issues. It states that, in essense, the planned residential development is appropriate and recommends various aircraft operational changes to mitigate noise impact. In addition to placing an inequitable burden for noise reduction on airpark users, many of the proposed changes are simply unworkable.

For example, raising the Visual Approach Slope Indicator (VASI) for runway 14 from 3 to 4.5 degrees would result in higher runway threshold crossing heights as well as increased rates of descent and closure. This effectively increases landing distances and requires more critical pilot skills, two safety concerns. Further, under Federal Aviation Regulation (FAR) 91.87 (d)(3), there is no requirement that aircraft maintain the VASI glideslope at airports like Montgomery County Airpark, making enforcement impossible. Finally, raising a glideslope strictly to reduce noise impact is against FAA policy.

Similarly, the difficulty of enforcement, exsisting regulations, and political reality effectively preclude the "flight track procedures", "runway shift", "preferential runway program", and "voluntary curfews" as outlined in the M-NCPPC memo. Only the provision strengthening the real estate notification process for property near the airpark has real merit.

I propose several potential solutions not addressed in the memo.

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
8787 Georgia Avenue • Silver Spring, Maryland 20910-3760

Agenda Item No. 7
Agenda Date: Jan. 9, 1992

January 6, 1992

TO: MONTGOMERY COUNTY PLANNING BOARD

FROM: Community Planning Division
Environmental Planning Division

SUBJECT: Addendum: Montgomery County Airpark Part 150
Noise Control and Compatibility Planning Study

This staff report supplements the one prepared on November 26, 1991 for a December 5 Board discussion of the Part 150 Noise Control and Compatibility Planning Study. That discussion was postponed until January 9. The original staff report, with recommendations, constitutes Attachment 1. The colored land use map included with the original staff report has not been reproduced; a black-and-white, reproducible version is included with this report.

Members of the Airpark Liaison Committee received the original staff report, and subsequently directed Chairman Howard Layer to express the Committee's consensus objection to future residential development southeast of the Airpark, in the Upper Rock Creek Planning Area. The General Manager of the Airpark, Douglas McNeeley of Flight Resources Incorporated, objected to the several operational recommendations contained in the staff report. Letters from Mr. Layer and Mr. McNeeley comprise Attachment 2.

This supplementary staff report provides a planning history for parts of the Upper Rock Creek Planning Area adjacent to the Montgomery County Airpark. It also summarizes and provides a rationale for the land use recommendations made in the 1985 Upper Rock Creek Master Plan for areas near the Airpark.

Background

The area at issue is east of the Olney-Laytonsville Road (MD 124), in the Upper Rock Creek Planning Area. Nearly all takeoffs and landings to and from the southeast end of the runway fly over this portion of the planning area. Given the concerns of the Airpark manager on the effectiveness of operational controls, the Liaison Committee felt the land use issue should be reexamined.

to the wedge area,"[1] even though the Plan acknowledged the desirability of increasing the county's stock of industrially zoned land. By the time the Final Draft plan was released, the property owners had withdrawn the industrial use proposal for the Brown and Kapiloff properties. The Plan recommends residential uses for the land at a density of one unit per acre. The land is zoned RE-1 in conformance with that recommendation.

The Plan does, however, recognize the effect of "single noise events"--noise generated whenever an aircraft flies past a specified point--and it acknowledges implicitly that a significant number of single noise events can create noise of substantial loudness and/or duration. The potential noise generated by these events did not alter the Plan's land use recommendations.

Land use issues in the Airpark vicinity, and particularly the appropriateness of non-residential land uses in that area, were thoroughly discussed in public hearing testimony and at worksessions as part of the Upper Rock Creek Master Plan process.

Maintenance of the wedge character of the Upper Rock Creek Planning Area is a primary goal of the 1985 Upper Rock Creek Master Plan. The land use recommendations for the area near the Airpark balance the need to permit noise-compatible uses near the facility with the need to maintain the overall character of the planning area. The Planning Board has maintained that zoning in the vicinity of the Airpark should be consistent with the noise standards recommended for planning purposes by the Maryland State Aviation Administration. This policy recommends noise-compatible non-residential uses as appropriate for areas within the 60 dBA Ldn contour.

Since the adoption of the Master Plan, the Planning Board has expressed its opinion regarding Airpark development at yearly CIP deliberations. To summarize:

* The Planning Board has fully supported safety improvements at the Airpark.

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[1] It should be noted that the Upper Rock Creek Master Plan recommended that the 72-acre Fulks property, located immediately across MD 124 from the Airpark, was appropriate for light industrial uses. This recommendation confirmed existing land uses on the property, which already was in the I-1 Zone. The Upper Rock Creek Master Plan, as adopted, recommends that the majority of the property, 63 acres, be recommended for low intensity, light industrial uses in the I-4 Zone. The remaining nine acres was recommended to remain in the I-1 Zone.

Montgomery County Government

ROCKVILLE, MARYLAND 20850

January 21, 1992

Gus Bauman, Chairman
Maryland National Capital Park and Planning Commission
8787 Georgia Avenue
Silver Spring, MD 20910-3760

Dear Mr. Bauman:

The Montgomery County Airpark Liaison Committee has reviewed the Community and Environmental Planning Divisions Discussion of Airpark Issues, dated November 26, 1991. We would like make several comments on the three issues about which there is consensus among our members.

1. UNCOMMITTED RESIDENTIAL LAND SOUTHEAST OF THE AIRPARK:

A considerable number of complaints by residents about the noise and hazards caused by aircraft over flights has occurred because of the closeness of residential communities to the Montgomery County Airpark even though these areas are outside the 60 Ldn noise contours. These residents and the members of this Committee believe that the standard established by the Part 150 Noise Study does not adequately measure the effect of aircraft noise on residential communities and that these communities are impacted by noise well outside the area established by the FAA. The noise generated during single takeoffs and landings, the number and frequency of overflights, particularly between 10:00 p.m. and 7:00 a.m., are equally important in determining the level of disturbance to residential inhabitants. The Committee predicts that residential development in the area enclosed by parkland southeast of the airpark (230 acres, zoned RE-1) will result in additional complaints from the families that may come to live there since it will be located directly under heavily trafficked flight tracks (see Figure 1.1).

The Committee recommends that this land be put into industrial use or a publicly owned recreational use, even though this seems impractical at this time. Parkland surrounds the undeveloped parcel except for the industrial strip along MD Rt. 124. Although we discussed industrial development we recognize that many additional

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
8787 Georgia Avenue • Silver Spring, Maryland 20910-3760
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Montgomery County Planning Board
Office of the Chairman

January 22, 1992

Mr. Jack A. Reid, Acting Chairman
Montgomery County Revenue Authority
211 Monroe Street
Rockville, Maryland 20850

Dear Mr. Reid:

At its meeting of January 9, 1992, the Planning Board endorsed the attached staff recommendations on the FAA Part 150 noise study and associated land use issues in areas surrounding the Montgomery County Airpark. In considering staff recommendations, the Planning Board discussed three issues in depth: the compatibility of remaining undeveloped properties with Airpark noise; the lack of implementation and enforcement techniques for any operational measures to reduce noise and/or increase safety; and the need for enhanced notification for persons considering home purchases in the Airpark vicinity.

Regarding the concern cited in Mr. Kenney's letter for "continuing residential development within the noise affected areas of the Airpark," it should be noted that the majority of this area, particularly northwest of the runway, is either developed or committed to development. The Airpark vicinity land use policy in the Gaithersburg and Vicinity Master Plan recommended residential uses outside the 60 dBA Ldn contour in accord with Maryland Aviation Administration guidance. This noise/land use guideline is more protective than the 65 dBA Ldn regulatory standard used at all other airports in the state. Nonetheless, the Board recognizes that impacts from individual overflights still occur outside the noise contours, and recommends operational controls for mitigation of these impacts.

The Board discussion of land use issues focused on undeveloped portions of the Upper Rock Creek Planning Area. Maintenance of the wedge character and protection of sensitive environmental areas as well as Lakes Needwood and Frank are the primary goals of the 1985 Upper Rock Creek Master Plan. The land use recommendations for the area envision low intensity light industrial uses on MD 124 opposite the Airpark and relatively low-density residential development without provision of community water or sewer service in the adjacent valleys of Rock Creek tributaries.

TABL

PREVENTIVE LAND USE STRATEGY SUMMARY
MONTGOMERY COUNTY AIRPARK

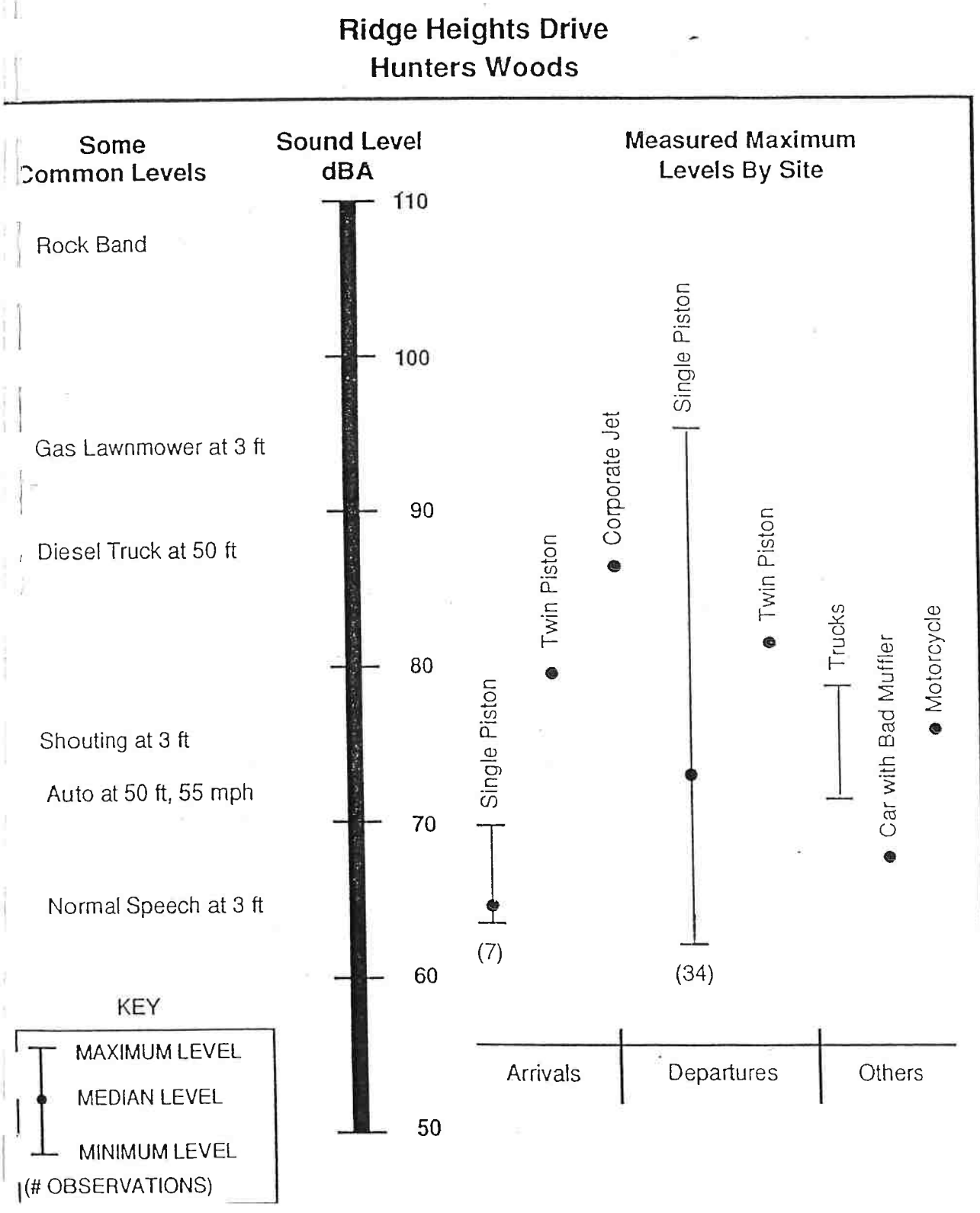
STRATEGY	DESCRIPTION	AREA TO BE AFFECTED	EXPLANATION FOR POSSIBLE IMPLEMENTATION	CONSULTANT'S RECOMMENDATION FOR IMPLEMENTATION	PLANNING DEPARTMENT STAFF RECOMMENDATION
Land Acquisition	Fee simple land acquisition.	(Undeveloped Land) 65 Ldn and above.	Minimal area involved. Probably handled in other measures.	Yes*	No. There are no planned incompatible uses with noise levels 65 Ldn or greater.
Easement Acquisition	Purchase of Avigation Easement before occupancy for the right of aircraft to create noise.	65 Ldn and above.	Would not prevent new incompatible uses from developing.	No	No. There are no planned incompatible uses with noise levels 65 Ldn or greater.
Real Estate Disclosure	Require seller to provide notification of potential noise impacts.	55 Ldn and above.	Could notify potential undeveloped land buyers of noise impacts on the area.	Yes	Yes, but there are no undeveloped planned incompatible land uses within the 55 Ldn contour. The area subjected to disclosure should be expanded beyond the noise contours under the flight paths to notify prospective homeowners of the nuisance of aircraft flyovers. Disclosure should not only apply to the original house sale, but to all subsequent sales.
Airport Zoning/ Overlay District	Enaction of zoning to require compatible use of undeveloped land.	55 Ldn and above.	Could rezone undeveloped land to non-residential compatible uses.	Yes	No. There are no planned undeveloped incompatible land uses within the 55 Ldn contour.
Revised Building Code	Require proper sound insulation in new structures.	55 Ldn and above.	Could require new development to be property sound insulated.	Yes	Yes, in concept but not necessary for housing in Airpark vicinity since noise does not exceed 65 Ldn. (See soundproofing comments in Table 2.)

REMEDIAL LAND USE STRATEGY SUMMARY
MONTGOMERY COUNTY AIRPARK

STRATEGY	DESCRIPTION	AREA TO BE AFFECTED	EXPLANATION FOR POSSIBLE IMPLEMENTATION	CONSULTANT'S RECOMMENDATION FOR IMPLEMENTATION	PLANNING DEPARTMENT STAFF RECOMMENDATION
Land Acquisition and Relocation	Fee simple land acquisition and relocation of land use.	None	Not recommended since there are no incompatible uses in the 60 Ldn contour and above.	No	No. FAA usually will not fund until incompatible uses are within the 65 Ldn contour.
Easement Acquisition	Purchase of avigation easement as compensation for noise impact.	None	Would provide compensation to affected land uses, but would provide no remedial benefits.	No	No. Benefits current homeowner only - does not solve the problem.
Airport Zoning/ Overlay District	Enaction of restrictive zoning in area impacted by airport noise.	None	Not recommended since it would provide no remedial benefits.	No	No. Already has been done in pertinent master plans. New contours indicate compatible uses down to 55 Ldn contour.
Environmental Review	Enaction of environmental review process that accounts for noise.	None	Not recommended since the strategy would provide no remedial benefits.	No	No. This strategy is feasible and is already being done for all sources of transportation noise.
Soundproofing/ Climate Control Program	Soundproofing of affected structures from exterior noise.	None	Not recommended since sound-proofing of structures within the 55 Ldn contour would be too costly and difficult.	No	No, but for different reason. Kettler consultant study in early 80's demonstrated that a "typical" house attenuates air-craft noise 23 - 27 dBA. Therefore, exterior sound levels must be above 65 Ldn before interior levels exceed 45 Ldn an EPA recommended criterion for acceptable interior noise level.
Acoustic Barriers	Construction of a noise barrier to minimize ground level noise impacts.	None	Not recommended since there are no land uses affected adversely by ground noise.	No	No.
Tax Incentives	Tax incentive program to promote sound attenuation improvements.	None	Not recommended since the strategy would provide no remedial benefit.	No	No. See soundproofing dis-cussion above.

Source: The LPA Group Incorporated, 1991.

Figure 4.2
Maximum A-Weighted Levels at Site 1



MONTGOMERY COUNTY REVENUE AUTHORITY

FAR PART 150 STUDY

MONTGOMERY COUNTY AIR PARK

FIGURE 14-1
MONTGOMERY COUNTY AIRPORT VICINITY LAND USE

*RES UNCOMMITTED RESIDENTIAL

- RESIDENTIAL APPROVED PRELIMINARY PLAN
- COMMERCIAL
- PUBLIC USE (CHURCHES, SCHOOLS, CEMETERIES, ETC.)
- PUBLIC USE APPROVED PRELIMINARY PLAN
- RECREATIONAL
- INDUSTRIAL
- INDUSTRIAL APPROVED PRELIMINARY PLAN
- AGRICULTURAL
- OPEN SPACE

SOURCE: HMMH, 1990
THE LPA GROUP INCORPORATED, 1990

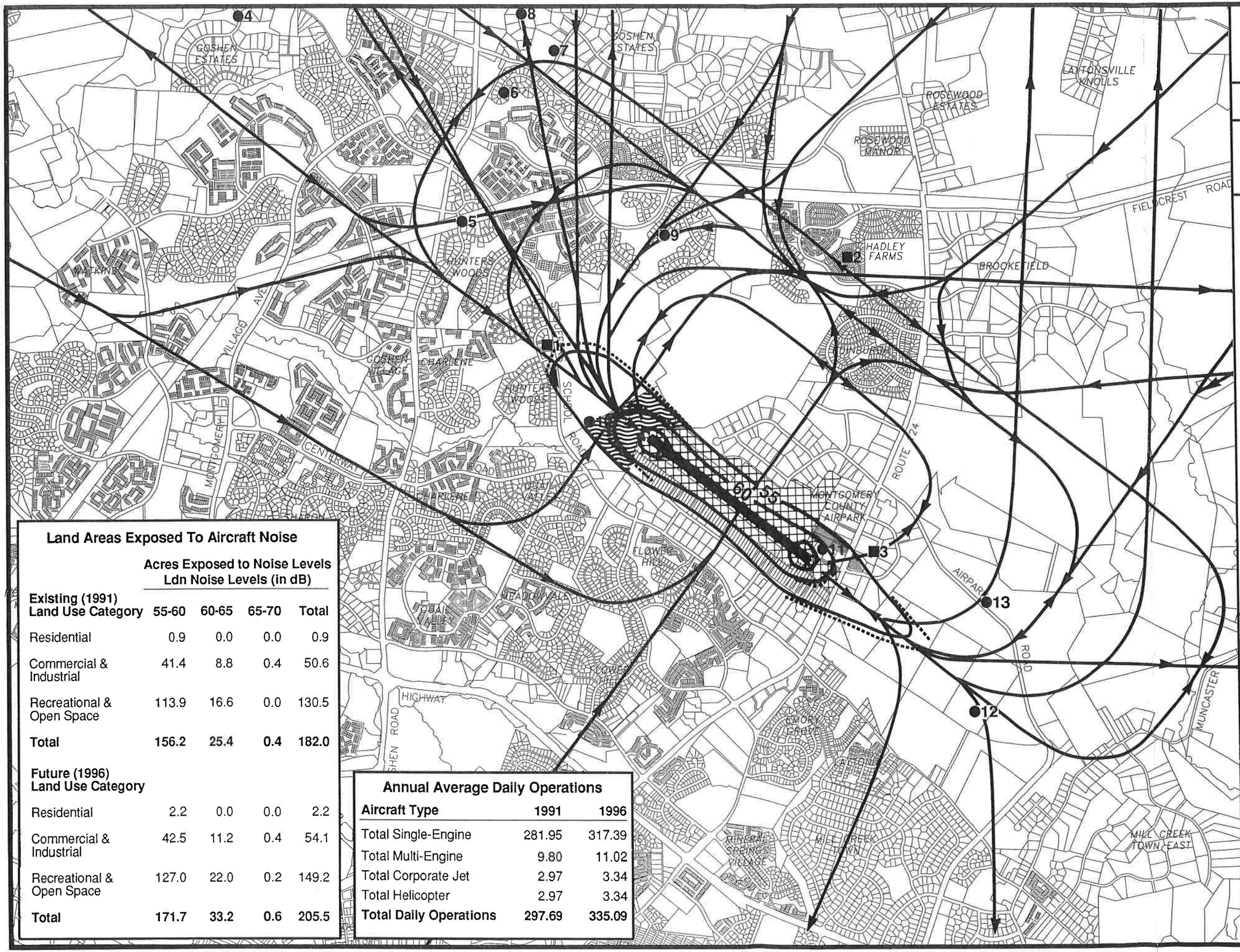
N

2000 1000 0 2000

SCALE IN FEET

The LPA Group Incorporated
TRANSPORTATION CONSULTANTS
Tampa, FL • Philadelphia, PA

HARRIS MILLER MILLER & HANSON, INC.



MONTGOMERY COUNTY AIRPARK

FAR PART 150 STUDY

MONTGOMERY COUNTY REVENUE AUTHORITY

FIGURE 1.1
NOISE EXPOSURE MAP SUMMARY

1991 CONTOURS
1996 CONTOURS
FLIGHT TRACKS

OFF AIRPORT LAND USE

RESIDENTIAL
COMMERCIAL
RECREATIONAL
INDUSTRIAL
AIRPORT PROPERTY LINE

NOISE MEASUREMENT LOCATIONS
LONG-TERM LOCATION
SHORT-TERM LOCATION

N

2000 1000 0 2000

SCALE IN FEET

HARRIS MILLER MILLER & HANSON INC.

THE LPA GROUP INCORPORATED

HANIFIN ASSOCIATES, INC.

Land Areas Exposed To Aircraft Noise

	Acres Exposed to Noise Levels Ldn Noise Levels (in dB)			
Existing (1991) Land Use Category	**55-60**	**60-65**	**65-70**	**Total**
Residential	0.9	0.0	0.0	0.9
Commercial & Industrial	41.4	8.8	0.4	50.6
Recreational & Open Space	113.9	16.6	0.0	130.5
Total	**156.2**	**25.4**	**0.4**	**182.0**
Future (1996) Land Use Category				
Residential	2.2	0.0	0.0	2.2
Commercial & Industrial	42.5	11.2	0.4	54.1
Recreational & Open Space	127.0	22.0	0.2	149.2
Total	**171.7**	**33.2**	**0.6**	**205.5**

Annual Average Daily Operations

Aircraft Type	1991	1996
Total Single-Engine	281.95	317.39
Total Multi-Engine	9.80	11.02
Total Corporate Jet	2.97	3.34
Total Helicopter	2.97	3.34
Total Daily Operations	**297.69**	**335.09**