



**SKY**

**WARDOR**

**INTERNATIONAL**

**AIRPORT**

**F.A.R.**

**PART 150**

**NOISE COMPATIBILITY**

**STUDY**



**NOISE COMPATIBILITY PLAN**

**F.A.R. PART 150 STUDY**

**NOISE COMPATIBILITY PROGRAM**

**FOR**

**SKY HARBOR INTERNATIONAL AIRPORT**

**PHOENIX, ARIZONA**

**Prepared For The**

**CITY OF PHOENIX**

**AVIATION DEPARTMENT**

**PHOENIX, ARIZONA**

**By**

**COFFMAN ASSOCIATES, INC.**  
**1300 E. 104th Street, Suite 100**  
**Kansas City, Missouri 64131**

**1989**

## **TABLE OF CONTENTS**

---

**SKY HARBOR  
INTERNATIONAL AIRPORT  
F.A.R. PART 150  
NOISE COMPATIBILITY PROGRAM**

**MAY 1989**

**TABLE OF CONTENTS**

---

**NOISE COMPATIBILITY PROGRAM**

F.A.R. PART 150 NOISE COMPATIBILITY PROGRAM CHECKLIST . . . . . I-1

**Chapter Five  
NOISE ABATEMENT ALTERNATIVES**

EVALUATION CRITERIA . . . . .	5-3
NOISE ABATEMENT MEASURES . . . . .	5-4
Runway Use And Flight Rotating Procedures . . . . .	5-4
Airport Regulation Changes . . . . .	5-6
Aircraft Operational Procedures . . . . .	5-11
Airport Facility Changes . . . . .	5-13
NOISE ABATEMENT SCENARIOS . . . . .	5-16
Scenario A - Maximum Impact Reduction Scenario . . . . .	5-16
Scenario B - Moderate Impact Reduction Scenario 1 . . . . .	5-22
Scenario C - Moderate Impact Reduction Scenario 2 . . . . .	5-26
Additional Retained Measures . . . . .	5-28
SUMMARY . . . . .	5-29

## Chapter Six LAND USE ALTERNATIVES

LAND USE COMPATIBILITY . . . . .	6-1
OBJECTIVES OF THE LAND USE PLAN . . . . .	6-9
LAND USE PLANNING ISSUES . . . . .	6-10
POTENTIAL NOISE ABATEMENT SCENARIOS . . . . .	6-10
LAND USE MANAGEMENT ALTERNATIVES . . . . .	6-12
Regulatory Techniques . . . . .	6-12
Policy Techniques . . . . .	6-21
Expenditure Techniques . . . . .	6-23
EVALUATION OF LAND USE COMPATIBILITY TECHNIQUES . . . . .	6-27

## Chapter Seven NOISE COMPATIBILITY PLAN

ADJUSTMENTS TO BASELINE DATA . . . . .	7-2
Forecasts Revisions . . . . .	7-2
Runway Use Revisions . . . . .	7-3
AVIATION NOISE ABATEMENT PLAN . . . . .	7-4
Recommended Program Elements . . . . .	7-5
Recommended Short-Term Measures . . . . .	7-9
Long-Term Abatement Recommendations . . . . .	7-12
Unresolved Noise Impacts . . . . .	7-13
LAND USE MANAGEMENT PLAN . . . . .	7-18
Rejected Land Use Management Measures . . . . .	7-18
Land Use Management Strategies Retained In Part . . . . .	7-22
Selected Land Use Management Strategies . . . . .	7-24
Population Impacts After Land Use Mitigation . . . . .	7-33
IMPLEMENTATION PLAN . . . . .	7-34
Initiating Actions Short-Term Noise Abatement Plan . . . . .	7-34
Initiating Actions Long-Term Abatement Plan . . . . .	7-36
Initiating Actions Short-Term Land Use Management Plan . . . . .	7-36
Implementation Schedule . . . . .	7-40
Implementation Responsibilities . . . . .	7-40
Continuing Program . . . . .	7-42
Program Costs . . . . .	7-44
Potential Sources of Funds . . . . .	7-46
SUMMARY . . . . .	7-47

## APPENDICES

- A PLANNING ADVISORY COMMITTEE
- B COORDINATION, CONSULTATION, AND PUBLIC INVOLVEMENT
- C NOISE COMPATIBILITY PROGRAM PUBLIC HEARING
- D NOISE ALTERNATIVE EVALUATIONS
- E IMPLEMENTATION DOCUMENTS
- F INM AIRCRAFT TO TRACK ASSIGNMENTS
- G CITY OF PHOENIX AND CITY OF TEMPE OFFICIAL ACTIONS

GLOSSARY

## EXHIBITS

- 5A FAA 92-53 DEPARTURE PROCEDURES
- 5B NBAA NOISE ABATEMENT DEPARTURE PROCEDURES
- 5C SCENARIO A - NOISE EXPOSURE CONTOURS
- 5D SCENARIO B - NOISE EXPOSURE CONTOURS
- 5E SCENARIO C - NOISE EXPOSURE CONTOURS
  
- 6A LAND USE COMPATIBILITY PLANNING ISSUES
- 6B COMPARISON OF RANGE OF NOISE ABATEMENT SCENARIOS
- 6C POTENTIAL FUTURE RESIDENTIAL LAND
  
- 7A RUNWAY USE PERCENTAGES WITH THREE PARALLEL RUNWAYS
- 7B 1987 OPERATIONS NOISE ABATEMENT PLAN CONTOURS (EAST)
- 7B 1987 OPERATIONS NOISE ABATEMENT PLAN CONTOURS (WEST)
- 7C 1992 OPERATIONS NOISE ABATEMENT PLAN CONTOURS (EAST)
- 7C 1992 OPERATIONS NOISE ABATEMENT PLAN CONTOURS (WEST)
- 7D 1997 OPERATIONS NOISE ABATEMENT PLAN CONTOURS (EAST)
- 7D 1997 OPERATIONS NOISE ABATEMENT PLAN CONTOURS (WEST)
- 7E 2007 OPERATIONS NOISE ABATEMENT PLAN CONTOURS (EAST)
- 7E 2007 OPERATIONS NOISE ABATEMENT PLAN CONTOURS (WEST)
- 7F PROPOSED NOISE OVERLAY ZONE BOUNDARIES (EAST)
- 7F PROPOSED NOISE OVERLAY ZONE BOUNDARIES (WEST)
- 7G PROPOSED LOCATIONS OF SOUNDPROOFING PROGRAMS (EAST)
- 7G PROPOSED LOCATIONS OF SOUNDPROOFING PROGRAMS (WEST)