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MEMORANDUM

To: Mr. Richard McQueen, Akron-Canton Airport
From: Ted Baldwin
Copy: Kevin Clarke and Paul Puckli, RW Armstrong
Robert Mentzer, HMMH
Date: September 24, 2012
Subject: Scope and Schedule for Akron-Canton Airport Part 150 Update Study
Reference: HMMH Proposal P11-20026

1. INTRODUCTION

The Akron-Canton Regional Airport Authority has retained HMMH, in association with RW Armstrong (RWA), to prepare a Part 150 Noise Compatibility Planning Update Study for Akron-Canton Airport (CAK).¹ HMMH and RWA, the core of the “Part 150 Team,” prepared a proposed project scope and schedule, based on the following primary sources:



- Part 150 requirements defined in 14 C.F.R. (Code of Federal Regulations) Part 150, “Airport Noise Compatibility Planning.”
- Federal Aviation Administration (FAA) implementation guidelines, as set forth in FAA Advisory Circular (AC) 150/5020-1 “Noise Control and Compatibility Planning for Airports,”² and “Airport Noise Compatibility Planning (Part 150) Checklists.”³
- Part 150 Team experience at CAK, including HMMH’s lead role in preparation of the last (1997) Update, and the Team’s ongoing responsibilities for the preparation of a Master Plan Update under RWA leadership.
- Part 150 Team experience at other airports on related projects with similar characteristics.⁴
- Background information and policy input provided by CAK staff.
- Guidance from the Detroit Airports District Office (ADO) in particular Ms. Katy Delaney, the Community Planner who will have the lead role in ADO input, review, and processing.

HMMH will head up the Part 150 update, including the following primary areas of responsibility:

- Overall project management.
- Lead coordination with CAK staff and the FAA.
- Leadership of the public outreach effort.
- Noise-related data collection and analyses associated with noise contour preparation, including development of modeling inputs, and coding and running the FAA’s integrated Noise Model.
- Noise measurements, and related analyses and documentation.
- FAA radar data collection, analysis, and use in noise modeling and operational analyses.
- Leadership in preparation of the official Noise Exposure Maps and associated documentation.
- Identification, analysis, and recommendation of noise abatement alternatives, and associated implementation considerations.
- Overall Noise Compatibility Program documentation, including integration of RWA input.

RWA’s primary roles will include:

¹

² http://www.faa.gov/airports/resources/advisory_circulars/index.cfm/go/document.current/documentNumber/150_5020-1 (Last accessed January 6, 2012)

³ http://www.faa.gov/airports/environmental/airport_noise/part_150/checklists/ (Last accessed January 6, 2012)

⁴ Including, but not limited to, HMMH responsibility for the ongoing Cleveland-Hopkins International Airport Part 150 Update, under the oversight and review of the FAA’s Detroit Airports District Office (ADO) staff who will have the same roles at CAK.

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- Preparation of Part 150 forecasts and noise modeling fleet mixes, and associated FAA approvals.
- Coordination with the Master Plan, to ensure the Part 150 reflects data, analyses, and recommendations from that study.
- Off-airport land use, zoning, and building code data.
- Identification, analysis, and recommendation of off-airport compatible land use strategies, and associated implementation considerations.
- Economic impacts in terms of flight, construction, maintenance, staffing, or other costs.
- Safety, capacity, delay, operational considerations.
- Compliance with applicable laws and airport lease and operating agreements.
- Assistance with public outreach related to their areas of responsibility.
- Documentation related to their areas of responsibility.

Either RWA, HMMH, or a third project team member firm (to be added) will be responsible for printing, and public outreach coordination, administration, mailings, provision of a court reporter at the final workshop/hearing, production and distribution of minutes and newsletters, and other public outreach, production, and distribution tasks. Decisions regarding addition of that firm or dividing the work between RWA and HMMH will be made during the performance of Work Element 1, in consultation with CAK staff and staff from the Federal Aviation Administration (FAA) Detroit Airports District Office (ADO).



2. STUDY APPROACH

The Part 150 Team's proposed approach includes eight primary elements and related tasks as follow:

ELEMENT 1. STUDY DESIGN

- Task 1.1 Finalize Project Scope, Schedule, and Budget
- Task 1.2 Organizational and Kick-Off Meeting
- Task 1.3 Study Design Summary

ELEMENT 2. DESIGN AND CONDUCT A PUBLIC CONSULTATION PROGRAM

- Task 2.1 Advisory Committee Meetings and Authority Briefings
- Task 2.2 Provide Material for Incorporation into CAK Website
- Task 2.3 Prepare and Distribute Project Newsletters
- Task 2.4 Organize and Attend Informational Meetings
- Task 2.5 Final Public Hearing

ELEMENT 3. DEVELOP OPERATIONAL, NOISE, AND LAND USE DATABASE

- Task 3.1 Review Existing Planning and Environmental Documents
- Task 3.2 Prepare Updated Forecasts
- Task 3.3 Land Use Inventory and Base Map Development
- Task 3.4 Conduct Noise Measurements
- Task 3.5 Operational Data Collection
- Task 3.6 Noise and Land Use Database Analyses
- Task 3.7 Prepare Preliminary Part 150 Data Report

ELEMENT 4. IDENTIFY, ANALYZE, AND EVALUATE ABATEMENT ALTERNATIVES

- Task 4.1 Review Implementation and Effectiveness of Existing Noise Abatement Measures
- Task 4.2 Identify Airport Plan Alternatives
- Task 4.3 Identify Airport and Airspace Use Alternatives
- Task 4.4 Identify Aircraft Operational Alternatives
- Task 4.5 Evaluate Noise Abatement Alternatives
- Task 4.6 Prepare Interim Report on Noise Abatement Alternatives

ELEMENT 5. IDENTIFY, ANALYZE, AND EVALUATE COMPATIBLE LAND USE STRATEGIES

- Task 5.1 Review Implementation and Effectiveness of Land Use Measures
- Task 5.2 Identify and Evaluate New or Revised Compatible Land Use Measures
- Task 5.3 Prepare and Present Interim Report on Land Use Alternatives

ELEMENT 6. SELECT PREFERRED NOISE COMPATIBILITY PROGRAM MEASURES

- Task 6.1 Prepare and Present Draft Recommendations
- Task 6.2 Prepare and Present Final Recommendations

ELEMENT 7. DEVELOP IMPLEMENTATION SYSTEMS

- Task 7.1 Identify Noise Compatibility Program Implementation Requirements
- Task 7.2 Plan for Updating Noise Compatibility Program

ELEMENT 8. PREPARE AND PRESENT PART 150 SUBMITTAL

- Task 8.1 Prepare Formal Part 150 Submittal to FAA
- Task 8.2 Present Part 150 Results to CAK
- Task 8.3 Support CAK in Responding to FAA Questions



ELEMENT 1: STUDY DESIGN

Task 1.1 Finalize Project Scope, Schedule, and Budget

The Part 150 Team will prepare a final scope, budget, and schedule through the following steps:

- Provide a detailed draft scope of services and proposed schedule for review by and discussion with Authority staff.
- Revise scope and schedule as appropriate, and provide final draft for Authority staff to provide to the FAA's Detroit ADO for its review.
- Incorporate ADO feedback to finalize the scope and schedule.
- Identify required levels of effort and associated costs to accomplish each element and submit to Authority staff for review.
- Meet Authority staff to review study scope, schedule, and proposed budget.
- Prepare final scope, schedule, and budget.

Task 1.2 Organizational and Kick-Off Meeting



Subsequent to finalizing the scope, schedule, and budget, the Part 150 Team will meet with Authority staff for a one-day set of “kick-off” meetings. The major purpose of the meetings will include defining the following organizational and procedural matters:

- Part 150 Team and Authority staff meeting to discuss communication, review, and coordination processes.
- Part 150 Team and Authority staff meeting with ADO staff to discuss their interests, anticipated levels of involvement, and desired review and coordination processes.
- Field visits to neighborhoods with particular noise interests.
- High-priority data needs and potential sources.
- Overall study goals and objectives.
- Discussion of public consultation processes, including:
 - Advisory committee membership, roles and responsibilities, and process for initial contact.
 - Use of CAK website.
 - Media interactions.
 - Workshop and public hearing considerations.
 - Agency consultation.
 - Aeronautical user consultation.

Task 1.3 Study Design Summary

Following the kick-off sessions, the Part 150 Team will prepare a brief working paper that summarizes the results of the meetings with Authority and FAA staff, the consensus reached in each of the major discussion areas, and follow-up actions and responsibilities.

ELEMENT 2. DESIGN AND CONDUCT A PUBLIC CONSULTATION PROGRAM

The public consultation program will include the following major elements:

- Advisory Committee meetings and Authority briefings.
- Material posted on the CAK website.
- Informational newsletters tailored for public distribution at key points in the project.
- Informal workshops open to the general public.
- Public hearing.

The Advisory Committee represents the core of the public consultation program. It is assumed Advisory Committee members will participate in all study elements, and reliably transfer information to and from their constituencies.

Task 2.1 Advisory Committee Meetings and Authority Briefings

Seven Advisory Committee meetings will be held at key points, for the following major purposes:

- Kick-off to introduce the process, identify issues of concern, and solicit ideas related to potential noise abatement and compatible land use measures to consider, and to identify candidate areas for noise monitoring.
- Final noise measurement site-selection and kick-off. This meeting will be held on the day immediately preceding the start of the measurements, to minimize travel expense.
- Presentation of the inventory results; i.e., noise measurement results, the noise modeling inputs and draft contours; and further discussion of potential abatement and compatibility options to consider. (This would be a good time to hold the first open public workshop, perhaps in the evening of the day we meet with the advisory committee.)
- Presentation of the existing and five-year condition Noise Exposure Maps (NEMs) with the existing Noise Compatibility Program (NCP), and first-round noise abatement and land use compatibility alternative analyses.
- Presentation of second-round abatement and compatibility analyses, and selection of preferred options. (Second open public workshop in the evening).
- Presentation of final revised NEM contours reflecting the selected noise abatement and compatible land use options. (Third open public workshop and hearing in the evening.)
- One meeting held in reserve to respond to unanticipated requirements.

The HMMH Project Manager, a lead HMMH technical assistant, and at least one RWA staff member will attend each meeting. Based on decisions made in Work Element 1, either a second RWA staff member or a representative from the third project team firm (if added based on Work Element 1 final study design decisions) will attend each meeting to take notes and prepare minutes. The minutes will be in summary form, focused on recording decisions made at each meeting and any specific items that Advisory Committee members request for inclusion in the records; they will not be detailed minutes.

The Part 150 Team will prepare draft agendas and background material, including the draft meeting notes from the preceding meeting, for CAK review in advance of each meeting, revise materials to address CAK feedback, and reproduce and distribute the materials by mail and/or email (in “pdf” format), based on each Advisory Committee member’s preference, in advance of the meeting. It is assumed that up to 35 printed packages of materials will be prepared and distributed for each meeting, including five copies for CAK staff. We recommend that CAK maintain one set of these copies in chronological order at its administrative offices for interested stakeholders to review during normal business hours.⁵

⁵ This review could be by prior appointment or some other arrangement that the Part 150 Team can work out with the Authority. It is a means of ensuring that all interested parties – including those without website access – have the opportunity to review all study materials. Airports typically permit interested parties to review the materials in an unused conference room or some

The Advisory Committee meetings will be open to all interested parties to attend and observe, with an identified point in the agenda for non-committee members to provide their input. They will be announced on the CAK website.

The Part 150 Team will coordinate with CAK staff to schedule some or all Advisory Committee meetings to coincide with dates of Authority meetings (perhaps on the same day as the meeting or the following morning on dates when there is a workshop in the evening), so that the presentations can be made to the Authority at appropriate points in the study process at no additional cost. The Authority briefings may not be scheduled around every Advisory Committee meeting; the Part 150 Team will work with CAK staff to determine the suitable timing and purpose of the briefings. We assume that the normal Authority meeting minutes will serve as the record of these briefings and that the briefings will be based on presentation materials prepared for Advisory Committee meetings and workshops.

Task 2.2 Provide Material for Incorporation into CAK Website

We recommend all material distributed to the Advisory Committee, including meeting background, agendas, and meeting notes be placed on a “Part 150 Update” tab on the CAK website. The Part 150 Team will work with CAK to develop and maintain the website. The Team will provide files in “pdf” format for integration into the website. As discussed in Task 1.2, arrangements related to website organization, maintenance, and coordination will be a topic for discussion at the kick-off meeting.



Task 2.3 Prepare and Distribute Project Newsletters

The Part 150 Team will prepare and distribute three project newsletters to announce the three Task 2.4 workshops. These newsletters will be two-sided color copies on a heavy stock, triple folded for mailing without an envelope, or for insertion in an envelope. The Part 150 Team will produce and mail up to 500 copies. It is assumed CAK will provide the mailing list from existing sources. Advisory Committee members will be included on the mailing list and invited to suggest any additional addressees.

Task 2.4 Organize and Attend Informational Meetings

The Part 150 Team will conduct three public workshops, to provide an opportunity for interested parties to comment on the Part 150 project in an unstructured setting. We recommend scheduling the meetings to address the following primary purposes, held in the evenings of three Advisory Committee meetings, as discussed in Section 2.1:

- Presentation of the inventory results; i.e., noise measurement results, the noise modeling inputs and draft contours; and further discussion of potential abatement and compatibility options to consider.
- Presentation of noise abatement and land use compatibility analyses, and recommendation of preferred options.
- Presentation of final revised NEM contours reflecting the selected noise abatement and compatible land use options.

As at the Advisory Committee meetings, the HMMH Project Manager, a lead HMMH technical assistant, and at least one RWA staff member will attend each workshop. Either two additional RWA staff members or two representatives from the third project team firm (if added based on Work Element 1 final study design decisions) will attend for logistical purposes, such as greeting and guiding attendees, to staff a sign-in table, etc. We assume CAK staff will attend to represent the airport and that Advisory Committee members will attend to represent and guide their constituents.

We assume the workshops will be held at an on-airport or other central location selected in consultation with CAK staff and the Advisory Committee.⁶ No funds have budgeted for space rental.

other available space. In our experience, relatively few parties take advantage of this type of access, but those that do greatly appreciate the airport's courtesy and the access enhances the inclusiveness and openness of the study process.

⁶ The open lobby space on the second floor of the terminal would be an excellent workshop location, if CAK could arrange for validated parking.

The workshops will include “stations” consisting of boards on easels in a circular arrangement, with Part 150 Team, CAK staff, and Advisory Committee members assisting to discuss the materials being presented. Attendees will be invited to visit the stations in order review and discuss the materials presented. A table with comment forms will be provided at the end of the “circuit.”

For each workshop the Part 150 Team will provide up to 10 enlarged display boards and 200 copies of handouts consisting of 8½” by 11” copies of the boards.

Task 2.5 Final Public Hearing

A public hearing will be held as part of the final workshop, with people submitting comments on forms, rather than a more formal process with a with fixed presentation.⁷ In our experience, stakeholders – including residents – prefer the workshop format. As discussed in Element 8, draft documentation will be available for public review in advance. A court reporter will be provided to transcribe oral comments from meeting attendees who desire to provide their comments in that fashion. The comments will be made on a one-on-one basis with the commenters speaking to the court reporter individually. We assume that a conference room or other private space adjacent to the proposed workshop/hearing space will be used for this purpose.



⁷ The FAA's Detroit ADO has indicated they are comfortable with the public hearing being held in this manner, as long as a court reporter is provided for attendees who wish to provide their comments verbally.

ELEMENT 3. DEVELOP OPERATIONAL, NOISE, AND LAND USE DATABASE

Part 150 requires a broad range of accurate, up-to-date, objective data. It is essential that Advisory Committee members assist in identifying data needs and best available sources, and in obtaining information from their constituents.

Task 3.1 Review Existing Planning and Environmental Documents

The Part 150 Team will identify and collect relevant planning and environmental documents related to the airport and surrounding land uses. We will take advantage of previous work undertaken for the CAK or other entities, and draw needed materials from existing CAK, city, county, state, federal, or other publicly available sources. Likely needs (with primary anticipated sources identified parenthetically) include:

- Prior CAK Part 150 studies. (CAK and HMMH records.)
- The ongoing most Airport Master Plan Update. (RWA and HMMH.)
- The most current Airport Layout Plan. (Master Plan Update data collection), FAA form 5010-1, “Airport Master Record,” and FAA “airport diagram.”)
- FAA Tower Orders, Letters of Agreement, and Standard Operating Procedures. (Master Plan Update data collection.)
- Airport operations summaries. (FAA online resources and Master Plan Update data collection.)
- Weather data. (National Climatic Data Center.)
- Aeronautical charts and instrument approach procedures. (FAA publications, “U.S. terminal instrument procedures.”)
- Land use and zoning maps, and building codes. (Master Plan Update data collection.)
- Socioeconomic, land use, community, and historic resources (Master Plan Update data collection.)
- Data identified in other tasks.



Task 3.2 Prepare Updated Forecasts

RWA will prepare detailed operations forecasts required for noise modeling purposes for: (1) a base case year, anticipated to be 2014, and (2) a five-year forecast (as generally expected by the FAA), anticipated to be 2019. The forecasts will build on basic forecast prepared for the Master Plan Update. However, they will include additional data required for input in the FAA’s Integrated Noise Model (INM); i.e., operations for the average annual day, broken down by:

- Aircraft types in the INM database.
- Arrivals and departures broken in the day (7 a.m. – 10 p.m.) and night (10 p.m. – 7 a.m.) time periods required to calculate the Day-Night Average Sound Level (DNL) that Part 150 requires airports to use to describe cumulative noise exposure.
- Departures broken down by INM stage lengths.

RWA will prepare a stand-alone draft of the forecasts and documentation of their development, including comparison to the most recent FAA Terminal Area Forecast (TAF) for submission to the FAA’s Detroit ADO for approval, consistent with FAA’s stated Part 150 protocols.

Task 3.3 Land Use Inventory and Base Map Development

The land use inventory and base map development will take advantage of data collection for the ongoing Master Plan Update, prior CAK and consultant efforts, and information available from municipal, county, and other publicly available sources. After the draft baseline and forecast case contours have been prepared, HMMH will conduct a field visit to perform a “windshield survey” to verify land uses within the 65 decibel (dB) DNL contours for the two analysis years.

HMMH will utilize the data to prepare the base map and GIS database for use in the NEM and NCP analyses, presentation, and documentation.

Task 3.4 Conduct Noise Measurements

While the FAA does not permit adjustments of the noise modeling process using portable noise measurements, the study will include measurements to provide a basis for assessing the reasonableness of modeled estimates, illustrating the effect of existing operations and potential alternatives, comparing aircraft and non-aircraft noise levels, and other issues of interest to the Authority and Advisory Committee.

A one-week round of measurements will be undertaken using three noise monitors as part of the initial inventory, to obtain information on noise levels of individual aircraft overflights, significant non-aircraft sources, and background noise levels. The measurements will focus on single event measurements, in terms of Sound Exposure Level (SEL) and maximum A-weighted sound pressure level (Lmax), the metrics that Part 150 identifies for consideration of single event noise levels. The measurements will provide a basis for comparing single event levels produced by a range of aircraft types. Comparison of measured levels to INM predictions will provide a basis for assessing the model's output in those conditions. DNL samples will be obtained at sites where 24 hours of measurements are conducted. Two Part 150 Team staff will conduct the measurements.

Scheduling, site selection, time spent at each location, and other measurement details for both rounds of data collection will be worked out in consultation with the Advisory Committee. The scope will be generally consistent with measurements conducted for the 1997 Part 150 study.

Task 3.5 Operational Data Collection

Starting with readily available information from CAK, the ongoing Master Plan Update data collection, and other sources, the Part 150 Team will assemble operational data required for development of base year and forecast contours, including

- On-site observations of flight paths, and aircraft operations during measurement sessions.
- Interviews with representatives of the airport, FAA, airlines, community, flight schools, pilots, etc., as appropriate and feasible.
- Data available from CAK records and other publicly accessible sources.
- Electronic flight track, altitude, and identification data acquisition obtained either directly from the FAA's Automated Radar Terminal Service (ARTS), the FAA's "National Offload Program," or from the "Passur" passive radar installation at Cleveland-Hopkins International Airport (CLE).

With regard to the last item listed above, the specific source of electronic flight tracking data will be determined based on information obtained at the outset of the study on the availability, accuracy, comprehensiveness, and other aspects of available options. The data will supplement the samples already evaluated for the Master Plan Update. Given the relatively dated nature of those samples, the FAA Detroit ADO staff requested that the Part 150 consider data from the year following airfield improvements that were completed at CAK in mid-November 2011. Consistent with the FAA request, we have budgeted to acquire, process, and analyze four additional months of data.

Task 3.6 Noise and Land Use Database Analyses

It is anticipated that the following new material will be developed under this task:

- As required by Part 150, modeled 65, 70, and 75 dB DNL contours for the 2014 base year and 2019 forecast year, as discussed in Task 3.2.
- The estimated residential population encompassed by each DNL contour, by contour interval.
- Mapping of land uses within the 65 dB and higher DNL contours
- Analysis of noise complaints available from CAK.

The current INM version available at the outset of the study will be used, as required by Part 150.



Task 3.7 Prepare Preliminary Part 150 Data Report

To minimize the effort required in preparing the final Part 150 submission under Element 8, the preliminary database report will satisfy the requirements for Noise Exposure Map documentation to the extent feasible.

For budgetary purposes, it is assumed that 35 bound copies of approximately a 200-page report will be provided.



ELEMENT 4. IDENTIFY, ANALYZE, AND EVALUATE ABATEMENT ALTERNATIVES

The Advisory Committee and CAK staff will provide critical input into identification and evaluation of alternatives. The Part 150 Team will provide guidance to ensure all Part 150 mandated categories of options are considered.

Task 4.1 Review Implementation and Effectiveness of Existing Noise Abatement Measures

The 1997 NCP analyses and FAA Record of Approval (ROA) related to noise abatement measures provides a starting point. The status and effectiveness of existing measures will be evaluated.

Task 4.2 Identify Airport Plan Alternatives

The Part 150 Team will work with the Advisory Committee and CAK staff to identify abatement measures involving physical changes, such as changes in runup locations and orientation. Any ground noise analyses will use specialized modeling methodologies to supplement the INM – and for which the results will be combined with those from the INM. FAA approval will be obtained in advance for the use of any such specialized methodologies. These methodologies might include the U. S. Department of Defense “BaseOps” model, or the highly advanced “SoundPlan” model that the FAA has approved for use in similar studies – including a joint HMMH/RWA study for Port Columbus International Airport.



Task 4.3 Identify Airport and Airspace Use Alternatives

The Team will work with the Advisory Committee and CAK staff to identify abatement measures in this category, such as:

- Noise abatement flight track design.
- Formal instrument flight procedures.
- Preferential or rotational runway use.
- Other measures recommended by Advisory Committee members, CAK staff, FAA, or other interested parties.

Task 4.4 Identify Aircraft Operational Alternatives

The Part 150 Team will work with the Advisory Committee and CAK staff to identify aircraft operational measures, such as the noise abatement departure profile (“NADP”) procedures set forth in FAA AC 91-53A, and the equivalent National Business Aviation Association (NBAA) and manufacturer’s quiet flying techniques for general aviation aircraft. Similarly, methods will be considered to reduce approach noise levels, such as “optimized profile descent” (OPD) procedures.

Task 4.5 Evaluate Noise Abatement Alternatives

The Part 150 Team will assess the identified alternatives in terms of relevant factors, such as:

- Noise impacts and associated land use compatibility implications.
- Economic impacts in terms of flight, construction, maintenance, staffing, or other costs.
- Airport safety, capacity, and delay.
- Compliance with applicable laws and airport lease and operating agreements.

This review will not be to the level of detail associated with an Environmental Assessment, which FAA might require prior to implementation of some measures. Its purpose is to provide information on potential conflicts between noise abatement and other social, legal, or environmental objectives.

Up to six sets of DNL contours, and associated population and land use assessments will be prepared to evaluate the effect of noise abatement measures on cumulative exposure. To consider single event benefits, 85, 90, and 95 dB Sound Exposure Level (SEL) or Maximum A-weighted Sound Level (Lmax) contours and associated population counts will be prepared for up to 15 combinations of aircraft type, flight track, type of operation, and special operating condition (e.g., departure or

approach procedure, etc.). These contours will be selected in consultation with the Advisory Committee and CAK staff.

Task 4.6 Prepare Interim Report on Noise Abatement Alternatives

At the completion of the alternatives analysis, an interim report will summarize the findings.

For budgetary purposes, it is assumed that 35 bound copies of approximately a 750-page report will be provided.



ELEMENT 5. IDENTIFY, ANALYZE, AND EVALUATE COMPATIBLE LAND USE STRATEGIES

Land use measures will be considered to address existing noncompatible land uses and to prevent introduction of new non-compatible uses. The level of effort required for this work element is expected to be relatively low, because the 65 dB DNL contours for the base and forecast years are not expected to extend over a significant off-airport area.

RWA will take the lead in this study element, which will include the following tasks.

Task 5.1 Review Implementation and Effectiveness of Existing Land Use Measures

As in the case of noise abatement, the starting point will be evaluation of preventive compatible land recommendations from the 1997 NCP analyses and the associated FAA Record of Approval (ROA).

Task 5.2 Identify and Evaluate New or Revised Compatible Land Use Measures

The Part 150 Team will work with the Advisory Committee and CAK staff to identify potential new or revised compatible land use measures to address incompatible land uses within the base case and forecast case noise contours and to prevent introduction of new noncompatible uses in the future.

Task 5.3 Prepare and Present Interim Report on Land Use Alternatives

RWA will prepare and present an interim report summarizing findings and conclusions.

For budgetary purposes, it is assumed that 35 bound copies of approximately a 50-page report will be provided.



ELEMENT 6. SELECT PREFERRED NOISE COMPATIBILITY PROGRAM MEASURES

Selection of preferred measures for inclusion in the updated NCP will be accomplished through an open participatory process involving all interested parties, centered on the Advisory Committee. Recommendations will be presented to the Authority for ultimate approval or disapproval, as required by federal law.

Task 6.1 Prepare and Present Draft Recommendations

On the basis of findings under Elements 4 and 5 above, initial recommendations will be developed in the Advisory Committee process and made available for review and comment. DNL contours for 2014 and 2019, for the preferred combinations of measures, selected in consultation with the Advisory Committee and CAK staff, will be prepared to demonstrate the composite effect on cumulative exposure, with associated land use and population analyses.

Task 6.2 Prepare and Present Final Recommendations

On the basis of Advisory Committee and CAK staff comments and input in response to the draft recommendations, final recommendations will be prepared for submission to the CAK Board. Two final sets of DNL contours for 2014 and 2019 will be prepared to demonstrate the composite effect of the combined measures on cumulative exposure, with associated land use and population analyses.

For budgetary purposes, it is assumed that 35 bound copies of approximately a 50-page report will be provided.



ELEMENT 7. DEVELOP IMPLEMENTATION SYSTEMS

This study element will focus on implementation of recommended measures. Existing implementation procedures will provide a key starting point.

Task 7.1 Identify Noise Compatibility Program Implementation Requirements

The Part 150 Team will identify implementation requirements for recommended NCP elements, including responsible parties, funding sources, schedules, and materials that will need to be developed following FAA approval. The Team also will recommend appropriate monitoring and review systems.

Task 7.2 Plan for Updating Noise Compatibility Program

In consultation with the CAK and Advisory Committee, the Part 150 Team will recommend procedures for identifying the need to update either the NEM or NCP, as required by Part 150.

For budgetary purposes, it is assumed that 35 bound copies of approximately a 25-page report will be provided.



ELEMENT 8. PREPARE AND PRESENT PART 150 PART 150 SUBMITTAL

Task 8.1 Prepare Formal Part 150 Submittal to FAA

Part 150 sets forth in detail requirements which must be fulfilled in a formal Part 150 submittal to the FAA. The submittal includes two principal elements:

- The Noise Exposure Map (NEM), with noise, airport layout, aircraft operational, and land use data.
- The Noise Compatibility Program (NCP), which details the noise abatement and land use measures to be undertaken to ensure future noise compatibility.

At the Detroit ADO's request, these two elements will be presented in a single document for submission to the FAA. The entire study will be conducted with careful consideration of the requirements of this submittal, so that interim task documentation can be combined into a final document with minimal additional effort. The FAA checklists for NEM and NCP documentation will serve as a principal basis for organizing the submission.

A total of 35 copies of draft documents will be prepared for Advisory Committee, CAK, FAA, and general public review prior to the public hearing. Ten final documents will be prepared that address input received during the comment period, including input from the FAA's Detroit ADO, to ensure that the final submission addresses their critical feedback, and to minimize or eliminate need for multiple official submissions. The ten copies will include five for submission to the FAA, as required by Part 150, and five for CAK use. Electronic copies will be provided on disk. Consistent with scoping input from the FAA's Detroit ADO staff, these ten copies will be the only versions that include the large-scale flight track graphics required by Part 150.

Following final FAA approval of the documents, 25 printed copies and 50 disk copies will be provided to the Authority. Electronic files also will be provided to the Authority to permit them to print additional copies in the future, as needed.

Task 8.2 Present Part 150 Results to CAK

The HMMH Project Manager and an RWA representative will attend an Authority meeting to assist CAK staff in presenting the study results and recommendations, prior to submission of the updated NEM and NCP to the FAA.

Task 8.3 Support CAK in Responding to FAA Questions

We have budgeted for one person-week of assistance in responding to FAA requests for clarification during its review of the submission.



3. PROJECTED SCHEDULE

The Part 150 Team anticipates that the following schedule represents a realistic time line for conducting the preceding elements, taking into account reasonable time periods for technical, documentation, public consultation, and other major processes. We assume that background material will be distributed to Advisory Committee members one week to ten days in advance of each meeting and that public workshops and the final public hearing will require one month of advance notice.

The schedule is largely organized around public outreach meetings, since project deliverables are primarily linked to those meetings.



Meeting / Activity	Anticipated Purpose	Anticipated Time Frame
Kick-Off Study Design Meeting with CAK and Part 150 Team	Define organizational and procedural matters and public outreach, review and refine scope and schedule details.	4 th quarter 2012
1 st Advisory Committee Meeting	Kick-off to introduce the process, identify issues of concern, and solicit ideas related to potential noise abatement and compatible land use measures to consider, and to identify candidate areas for noise monitoring.	1 st quarter 2013
2 nd Advisory Committee Meeting	Final noise measurement site-selection. Immediately kick-off noise measurements.	2 nd quarter 2013
3 rd Advisory Committee Meeting	Presentation of the inventory results. (First open public workshop in the evening)	3 rd quarter 2013
4 th Advisory Committee Meeting	Presentation of the existing and five-year condition NEMs with the existing NCP, and first-round noise abatement and land use compatibility alternative analyses.	4 th quarter 2013 or 1 st quarter 2014
5 th Advisory Committee Meeting	Presentation of second-round abatement and compatibility analyses, and selection of preferred options. (Second open public workshop in the evening).	1 st or 2 nd quarter 2014
6 th Advisory Committee Meeting	Presentation of final revised NEM contours reflecting the selected noise abatement and compatible land use options. (Third open public workshop and hearing in the evening.)	2 nd or 3 rd quarter 2014
7 th Advisory Committee Meeting	One meeting held in reserve to respond to unanticipated requirements.	t.b.d. (2014)
Authority Presentation	Present study conclusions and recommendations	3 rd quarter 2014
Submit NEM and NCP to FAA	Respond to FAA questions as needed.	3 rd or 4 th quarter 2014