



U.S. Department  
of Transportation  
Federal Aviation  
Administration



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May 13, 2010

Michigan Department of Transportation  
Bureau of Aeronautics and Freight Services  
c/o Ms. Molly Lamrouex  
2700 Port Lansing Road  
Lansing, MI 48906

Subject: Draft Environmental Assessment for Ann Arbor Municipal Airport  
Federal Aviation Administration Review Comments

Dear Ms. Lamrouex:

We have completed a review of the draft Environmental Assessment (EA) submitted to the Federal Aviation Administration (FAA) Detroit Airports District Office (ADO). Based on our review the FAA offers the following.

Air Traffic offers the following comments:

No comments.

Tech Ops offers the following comments:

Cover sheet. If the document is to be accepted as a federal document the coversheet will need to reflect this.

Section 2.1. Second bullet states "Shift and extend the parallel taxiway to coincide with the revised Runway 6/24". We recommend *revised* be changed to *extended*.

Section 2.2. This section does not appear to clearly state the need for the proposed action. Are the bulleted "objectives of the proposed project" actually proposed actions? The last bullet states "Relocate and potentially upgrade the Runway 24 Approach Light System". When will it be known if the approach light system will be replaced or upgraded? What is this dependent on? The remainder of the document deals with the impact of the runway extension, but does not address impacts related to the relocation of the existing light system or an upgrade to a new system. Also, action associated with Runway End Identifier Lights (REIL) is mentioned later in Section 4.17 and should be listed here as a proposed action. Are there any other NAVAIDS moving or being established?

Section 2.2.1. This section states that the Medium Intensity Approach Lighting System with Sequenced Flashers (MALSF) would serve the same function as the Omni-Directional Approach Lighting System (ODALS) and is structurally very similar. How would the footprint of the MALSF structures compare to the ODALS? What environmental impacts would installation of a MALSF create?

Section 3.1.2. We suggest adding a qualifier in the second paragraph to state the following: "...would be greater than those expected with the *proposed* expansion of ARB in its current location."

Section 4.4. The Consequences of the Preferred Alternative section states: "Comparisons of existing conditions at various airports with future build out conditions indicate that the net change in air emission is still below standards." Do these *conditions* include runway extension projects similar to the proposed action at ARB?

This section additionally states: "Consequently, the air model results for the Preferred Alternative would be identical to those for the No Build Condition." This statement implies that no air emissions would result from the proposed action. Is this accurate?

Section 4.5.1. Would the existing Storm Water Pollution Prevention Program cover the additional impervious surface area?

Section 4.5.2. We would recommend rewording the first sentence of the Consequences of the Preferred Alternative section to the following (if true and appropriate): *Surface and subsurface geological conditions would not be impacted by the Preferred Alternative.*

Flight Procedures offers the following comments:

No comments were provided by Flight Procedures Office (FPO).

However, it should be noted that the FPO must be notified by formal letter to request the development of future approach procedures for the relocated runway end coordinates. Information needed includes identification of when construction will start, finish, when the equipment will be relocated, etc. This information is critical for developing/amending approach procedures. The FPO must know the project phasing in order to have procedures ready when construction is complete. (Equipment relocation, threshold displacements, etc). Changes in runway pavement length will result in survey data. Please note that survey data must meet the specifications outlined in Advisory Circulars 150/5300-16, 17, and 18. Third party surveys must be coordinated with the FPO. The proponent must submit Proposed Equipment Relocation Data along with information related to any equipment that will be relocated or added to AVN-210 and ATA-110. 7. Publication of new/amended Approach Procedures could take from 18 months to 2 years after runway data is submitted to AVN-210 and ATA-110. NOTE: Development of Approach Procedures will not begin until an official letter of request for development of procedures is received by FPO and the proposed runway data and equipment data provided to AVN-210 and ATA-110. Proponent must update the airport FAA Form 5010-1 to reflect new runway data and updated runway changes.

Airports Division offers the following comments:

The report is not clear if there is a federal action being requested.

Based on the information contained within the draft EA it appears that at least two federal actions are being requested. These actions include the relocation or replacement of the current approach lighting system as well as the development for future approach procedures for the new runway end locations. The FAA recommends that these actions be clearly identified throughout the document. The first page of the document states that this draft EA will become a State of Michigan document when signed by the State Official and does not include similar



language for the Federal Aviation Administration although there is a signature line included for a federal official. Please refer to FAA Order 5050.4B section 707(f).

Section 1 page 1-1. The draft EA states that the projects under consideration are those shown on the FAA approved Airport Layout Plan (ALP). This statement should be clarified as to the role of Michigan Department of Transportation (MDOT) in conditionally approving the ALP set on behalf of the FAA under the authority of the State Block Grant Program. When referencing the ALP throughout the document, additional emphasis should be made to the June 23, 2008 ALP approval letter that clearly states that the approval is conditional. Several conditions were placed on the approval letter including the requirements that the projects contained within the ALP set must comply with the National Environmental Policy Act (NEPA). The FAA recommends inclusion of the conditional ALP approval letter in the draft EA for disclosure purposes.

We also suggest the executive summary clearly outline who will be responsible for actions associated with the proposed project (i.e. local sponsor, local unit of government, State of Michigan, Federal Government). For the FAA to co-sign the document, the requested Federal Actions must be clearly identified within the executive summary and throughout the document where appropriate.

Section 2 page 2-1. References to the ALP set need to clarify that MDOT has only conditionally approved the ALP.

Section 2.2 page 2-4. The classification of a B-II Small Aircraft has been determined with a reference to MDOT 2009. Is the B-II "Small Aircraft" a designation that is contained within MDOT planning guidance? The FAA is not familiar with the classification of "small" when identifying the critical design aircraft for an airport. Please clarify how this distinction was derived.

Section 2.2 page 2-4. The paragraph discussing Origin-Destination Analysis should be expanded (or references made where information can be reviewed) to provide clarification to the general statements that are made. Specifically, is there a list of destinations that can be provided that will substantiate the need for a runway extension? A listing of destinations may aid the reader in putting the proposed project into perspective and may further substantiate the need for a runway extension. The report states that a significant number of operations occur between ARB and distant locations without quantifying the number and types of operations that are being referenced. The FAA recommends this be clarified in the report or referenced to the appropriate appendices.

Section 2.2 page 2-5. Are the bulleted items for the objectives of the proposed project presented in order of relative importance?

The statement that the project will enhance interstate commerce does not appear to be substantiated by supporting documentation here or elsewhere in the document. How has this been verified? What are the enhancements? Is this a need for the project? The FAA recommends referring to FAA Orders and Advisory Circulars that address runway length, operational capacity of the aircraft utilizing ARB, and any deficiencies that currently exist at ARB that are a function of the current runway length. Without a detailed discussion and explanation of what the interstate commerce enhancement is and how this has been quantified as a current need, the FAA does not recognize this as a need for the project based on the information provided.

If enhancing interstate commerce is a stated need for the project then the report should be expanded to include a full range of alternatives that can address this need including alternative modes of transportation as an example.

The last bulleted objective in this section is for the relocation and potential upgrade of the Runway 24 approach lighting system. The report does not appear to document why this is a need for the project or if the approach lighting system is currently required or needed in the future.

What benefit does the current approach lighting system provide the airport? There does not appear to be a credit for a reduction in minimums at the airport as a result of having the ODALS. Has a Benefit Cost Analysis (BCA) been completed or requested of the FAA substantiating the need for relocating or replacing the ODALS? Depending on the results of the BCA and associated justification for relocating the existing or installing a replacement light lane at ARB, the potential exists that the Federal Action may be limited to abandoning the existing ODALS and no relocation or replacement would occur with federal funds.

Section 2.2.1 page 2-5. The first paragraph implies that runway incursions have been occurring at ARB as a result of issues with the current line of sight between the ATCT and a portion of the taxiway system and taxiway hold area. The report further indicates that the proposed project will possibly prevent incursions from occurring. Are there any documented runway incursions resulting from the current line of sight issue that can be included in the report to substantiate this claim? The FAA supports safety enhancement projects and would consider this a measure to improve the line of sight from the ATCT to parallel taxiway and the hold area if it can be demonstrated that the existing condition contributes to runway incursions. While a goal of the FAA is to reduce the number of runway incursions at airports nationwide, the FAA can not definitively conclude that this proposed safety enhancement at ARB will potentially prevent runway incursions but rather if the line of sight issue is improved this may reduce the possibility of runway incursions.

This section includes discussion of the potential to achieve a clear 34:1 approach and reduce minimums at the airport. The ADO previously requested clarification on this issue in an e-mail dated March 4, 2010 (attached for reference). Based on the e-mail exchange, the FAA understands there is no anticipation of a reducing of minimums at this airport for the foreseeable planning future.

Since minimums will not be reduced as a result of the project, the FAA is unclear on the need for a 34:1 approach or how it enhances safety of the approach procedures currently published for the airport based on the existing 20:1 approaches. The document should better explain how providing a 34:1 approach enhances safety for the existing and future users at the airport or how this also may impact interstate commerce. Has the current 20:1 clear approach resulted in missed approaches that have been documented? If so how often does this condition occur?

Is providing clear 34:1 approaches a project need or a benefit that may result from the relocation of the runway? Earlier in the report it was identified as a stated objective, however, the discussion in the report does not appear to substantiate the need for this when combined with the e-mail exchange of March 4, 2010 and conditionally approved ALP dated June 23, 2008.



While the future 34:1 approaches are identified on the conditionally approved ALP, it should be noted that this would result in an expansion of the approach surface from the existing 500'x2,000'x5,000' to 500'x3,500'x10,000'. The EA needs to fully disclose the increase in the approach surface if a 34:1 approach is achieved and document any environmental impacts that result from the larger approach surface.

Section 2.2.2 page 2-6. It is not clear to the FAA why there is a summary of Wings of Mercy operations since 1992 including 51 flights reported in 2009. This data appears to be in addition to what was collected as part of the user survey report that relied predominately on information from calendar year 2007. What is the relevance of including the 2009 data or specifically identifying the Wings of Mercy flight operations? Are there a range of aircraft types that fly for Wings of Mercy? Does the proposed runway extension impact their operational capacity?

Section 2.2.2 page 2-7. Discussion on the Michigan State System Plan (MASP) identifies the airport reference code (ARC) as B-II. Does the MASP differentiate between B-II small and B-II large? In absence of a clearly defined category of B-II "small aircraft", the FAA would suggest simply referring to the airport with a B-II ARC.

Section 2.2.3 pages 2-7 and 2-8. This section most clearly identifies why a runway extension is being proposed in accordance with FAA advisory circulars and State standards outlined in the 2008 MASP. This section, in combination with section 2.2.4 that documents substantial use (i.e. over 500 annual operations) by the B-II critical design family of aircraft appears to substantiate the justification for the runway extension based on the 2007 operational data.

Section 2.2.4 page 2-9. Detailed operational information is presented for calendar year 2007. Subsequent years are generalized based on trend analysis and overall decrease in operations as reported in the FAA Terminal Area Forecast (TAF). There does not appear to be an evaluation to account for the 21.8% decrease in operations between 2007 and 2009. Would it be prudent to verify if the operational decrease impacted one user group more than other user groups? Are the numbers of local and itinerant operations decreasing at the same rate or is one segment impacted to a greater extent? This evaluation may be accomplished through additional user survey data collection or potentially from the ATCT located at ARB for subsequent years since 2007. Additionally, the FAA recommends that the year of the TAF being utilized for this report be identified.

Section 2.2.4 page 2-11. Specific information for AvFuel Corporation is presented to validate assumptions for the continued classification of the airport as B-II. It should be noted that AvFuel bases a Citation 560 Excel jet at ARB and is designated in the report as a B-II "Large" aircraft. The discussion further indicates that the Chief Pilot submitted written documentation regarding potential future operational levels at ARB. The written documentation does not appear to be included within the report or appendices. However, according to the text in the report, the Chief Pilot anticipates future operational levels increasing to 350-450 annual operations. This level of use, in combination with a limited number of additional similar B-II aircraft would appear to classify the airport as a B-II "Large" designation. The FAA reiterates the hesitation on identification of either a "small" or "large" within an airport reference code and recommends that any qualifier to the size of the B-II critical design aircraft be removed from the report. The number of operations forecasted to occur by AvFuel Corporation would further support the elimination of the qualifier as "small" to the ARC.

Section 2.2.6 page 2-12. The local objective of reducing runway overrun incidents appears to conclude that if the added runway length were present, all the incidents would have been



avoided. Based on information presented, the FAA does not necessarily come to the same conclusion. There are many factors that go into any overrun incident and if additional runway length were present this may have only prolonged the overrun incident. The A-I category of aircraft involved with overrun incidents do not appear to have needed any length beyond the existing runway length to operate at full capacity and in a safe manner.

The paragraph that references Accelerated Stop Distance Available (ASDA) requirements appear to include fleet mixes other than A-I and implies that aircraft can accommodate their operational requirements with a reduced load capacity. The ADO is not aware of any A-I aircraft operating at ARB that would need to operate at a reduced load capacity to adequately satisfy their calculations for safely operating at ARB.

It is not clear when the 11 overrun incidents occurred, their cause, or conclusions that support that runway length was a factor in the overrun incidents. Can additional information be provided to support this position? If additional information is not available the FAA recommends removing this section from the document.

The FAA recognizes that this section of the report was included as a local objective and it is clearly and appropriately stated that the FAA does not recognize this as a need for extending the runway at ARB.

Section 2.2.7 page 2-12. The first bullet point indicates that additional runway length will allow for the majority of B-II "small" aircraft to operate without load restrictions. Has it been documented that the current B-II "small" users operate with load restrictions? If so, how often does this occur and what are the quantifiable impacts to their operations?

The third bullet implies that operational safety will be improved with a clear 34:1 approach. Currently the airport has LPV approaches with minimums of 300' and 1 mile. The ADO questions if a flatter approach is warranted in absence of reducing minimums as indicated in the March 4, 2010 e-mail correspondence. The discussion on the 34:1 approach should be re-evaluated and its need clearly identified. Currently the report does not seem to substantiate a need for a 34:1 approach if minimums are not anticipated to be lowered.

Section 3 page 3-1. The report indicates that alternatives were developed to meet the goals of ARB. These goals are to improve safety and efficiency and serve current users. These goals do not appear to be consistent with those previously outlined in the bullet points of section 2.2 (purpose and need). This section should refer to the stated needs and evaluate the alternatives ability to meet those needs.

Section 3.1.3 pages 3-3 and 3-4. There is discussion on extending the runway to the east and a listing of items impacted by pursuing this alternative. There is, however, no conclusion or statement that this option either should be, or was, eliminated. It can be inferred later in the report by the absence of this alternative that it was eliminated but the conclusion as to why it has been eliminated has not been stated.

When addressing the FAA's comments (included within this letter) associated with the stated needs for the project earlier in the report, the responses to these comments may influence the conclusions on why some of the alternatives carried forward have been eliminated. Specifically, if needs stated in section 2.2 are not further substantiated, or it is concluded that one or more of the needs do not exist, additional alternatives may need to be carried forward if they adequately

address the needs for the project. The FAA will re-evaluate the conclusions of the alternatives section once the FAA's comments on the purpose and need section are addressed.

Section 3.3 page 3-8. Based on the information presented in the draft EA, the FAA has not reached the same conclusion that alternatives 1 and 2 do not meet the stated needs for the project. An apparent evaluation parameter for alternative 2 included in section 3.3.3 discusses the tower line of sight. This evaluation matrix does not appear to be consistent with those goals stated in Section 3 on page 3-1. The previous comment on the apparent disconnect between the different sections of the report also applies to the specific alternative evaluation. The FAA recommends that the decision matrix for which alternatives were eliminated be clarified in the EA.

Table 3-1 page 3-8. The table appears to incorrectly dismiss alternative 1 because it does not meet purpose and need. The discussion in 3.3.2 does not support that conclusion. Additionally, there is reference to a future expansion of State Road. This appears to be the first reference to this issue. Is this a need for the State Road expansion project? In what time frame is the State Road expansion project expected to occur? Should there be expanded discussion on other regional planning projects in this EA so the public can better understand the different parameters that ARB is confined to or bound by?

Additional alternatives that may be considered for evaluation to address the need statements could include a combination of items such as: alternative modes of transportation to address enhancing interstate commerce, removal or relocation of obstructions that limit the ATCT line of sight issues, and raising or constructing a new ATCT to address the line of sight issues. Have any previous discussion on additional alternatives been eliminated prior to, or as part of the planning and environmental assessment process for ARB?

Section 3.4 page 3-9. This section contains a brief summary of environmental resources that will not be impacted by build alternative 3. Would it be advantageous to also summarize environmental impacts associated with the other build alternatives? There is a general statement regarding noise impact analysis in this section that identifies that the 65 DNL contour is not within 1,000 feet of any residential structure. What is the purpose for this statement? The FAA is not aware of an environmental impact decision matrix associated with the distance between residential structures and the 65 DNL contour.

Section 4.3.5 page 4-17. The conclusion for the implementation of the preferred alternative states that a positive result of improvements is the ability of business owners to achieve improved fleet efficiency for critical aircraft by maximizing their passenger and/or cargo loads. How has this statement been substantiated? What records exist that current users at ARB are not operating at maximum passenger and/or cargo loads? What has been the economic impact of the reduction of loads if they are occurring?

Section 4.9 pages 4-22 and 4-23. State endangered and special concern species were identified at ARB. The sponsor appears to be proposing a mitigation effort to limit grading for the project to avoid breeding seasons for the specific species. Has this proposed mitigation plan been found to be acceptable by the resource agencies? There is reference to an Audubon Society agreement regarding mowing boundaries. Who is the agreement between? Has this agreement been reviewed by the environmental assessment preparation team? Are there limitations or restrictions for use of airport land as a result of this agreement? Has the Audubon Society been included or have they provided input to this draft EA?



Section 4-15 pages 4-24 and 4-25. The FAA recommends that the score from the USDA form AD 1006 be disclosed in this section and explain what the score means. The consequences identify that some prime and unique farmland of local importance are impacted by this project. The amount of prime and unique farmland should be quantified. Are there any mitigation requirements for this change in use?

Section 4-16 page 4-25. The report identified a decrease in facility energy usage with the installation of LED taxiway lights. Is this net decrease in energy usage compared to baseline or existing conditions?

Section 4-17 page 4-25. There is no discussion on potential relocation of the ODALS or replacement with upgraded equipment. Would there be impacts with either scenario (relocation or replacement)? It should also be noted that the potential exists for the current ODALS to be abandoned if a relocation or upgrade is not justified with a BCA.

Section 4-20 page 4-26. The evaluation regarding construction impacts in the draft EA do not appear to address staging areas during project implementation. The FAA recommends the report verify that staging areas will not impact environmental resources; and as necessary, outline any required mitigation measures for staging area impacts.

Section 4-21 page 4-26. Should the reference to ASTM Standard E1527-94 be updated to E1527-05? The EA should also state if the review was done in accordance with FAA Order 1050.19B, "Environmental Due Diligence Audits".

Section 5 page 5-1. The FAA suggests that this section be titled *Mitigation* rather than *Environmental Consequences – Other Considerations*. We also question if it is prudent to discuss noise, social impacts and community disruption, wetland impacts, and threatened and endangered species in this section since there appear to be no mitigation requirements associated with any of these categories. The FAA suggests either listing all environmental categories reviewed that do not require mitigation or not list any of the categories that do not have required mitigation. Is it a true statement that there are no mitigation measures for threatened and endangered species? Section 4.9 appears to indicate there are seasonal limitations on when grading will occur.

Would it be better to outline required permits for the project in this section, best management practices, construction requirements, etc. rather than having a discussion on what mitigation measures are not required?

Section 6.2.1 pages 6-1 and 6-2. This section includes a summary of when Citizen's Advisory Committee (CAC) meetings were held and the overall agenda for each meeting. The EA does not document either in the text or in an appendix what issues may have been raised and how they were addressed in the CAC meetings. The FAA suggests additional information from the CAC meetings be included in the EA.

Section 6.2.2, page 6-2. The last sentence of this section should indicate that comments received will be reviewed, summarized, and addressed.

Section 7 page 7-3. This section identifies a request that the state and federal agencies approve a Finding of No Significant Impact. This is the first location in the document that specifically requests a federal action. As discussed previously, the FAA requests that earlier in the document the specific actions being requested of each agency be outlined. Based on the



review of this document the FAA anticipates that the FAA will be requested to evaluate, and as appropriate, abandon/relocate/replace the existing approach lighting system and develop new flight procedures for the new runway end locations.

**Next steps.**

The draft EA appears to be intended to be a jointly executed document by both MDOT and the FAA. Since there are several updates/clarifications requested by the FAA contained in this letter and the sponsor's responses may be substantial, it would be prudent to afford the public an additional opportunity to review and comment on the changes that are anticipated to be made for the final draft publication. Most specifically, the document will need to clearly outline the requested local, state and federal actions. Since this was not clearly presented in the initial draft EA, the FAA may consider these changes and clarifications as a material change to the document that should result in solicitation of additional public comment. This may be accomplished by an additional public information meeting or public hearing.

Once the FAA receives confirmation that the above comments have been addressed in the form of an updated draft EA, the FAA requests that we be allotted sufficient time to review, comment, and potentially concur with the updates prior to making the document available to the public for further comment.

If you desire further clarification of these comments, please contact me at (734) 229-2916.

Sincerely,



Brad N. Davidson, P.E.  
Community Planner/Environmental Protection Specialist  
Detroit Airports District Office

Encl: E-mail correspondence dated March 4, 2010 between the ADO and MDOT