

MEMORANDUM

TO: Mayor Gerald Jernigan
City Council

September 25, 1990

FROM: James J. Valenta
Transportation Director

SUBJECT: Update on Airport Part 150 Land Use Study

Several weeks ago the City's consultant performing the above subject project, Coffman Associates of Kansas City, conducted a community workshop at Bryant School. Prior to this activity I briefed Council during the Administrator's Wednesday Briefing Session of the overall issues associated with the technical and emotional subject of the Ann Arbor Municipal Airport. At that time I suggested that individual Council members refrain from taking an early position on this complex issue so that all data can be collected, analyzed, and discussed openly as alternatives are being formulated and presented. This remains an appropriate course of action as zealots of both sides of the airport development issue lobby you for a commitment. The purpose of this memorandum is to reinforce the three themes that I have pursued in directing this study to date. I believe that all sides can agree that three basic elements exist relating to your Airport. The three are:

1. The need for safe airport operations.
2. The need to direct aircraft noise away from existing residential land uses.
3. The need to absolutely preclude larger and thus noisier aircraft from using our airport.

As I review the history of previous airport's development attempts there has been an almost total disregard of these basic issues. Emotional issues generally clouded the technical issues, and anti-airport factions engaged in written and verbal battle with pro-airport factions. The end result of these encounters over the previous years is an airport that was artificially constrained in 1985 and an airport that currently does not provide relief for any of the three basic issues involved in this study. I anticipate that we will revisit many of these same discussions that accompanied previous airport debates. I have seen however a surprisingly simple consensus established with the three basic issues. This leads me to believe that the basic issues regarding the airport should be used to build an airport development and land use compatibility plan that will both satisfy airport activist and protect the interests of anti-airport expansionist.

As you evaluate the positions of your constituents who contact you please try to evaluate whether their arguments can support all three basic issues; Safety, Noise, and Aircraft Size. I will attempt to illustrate my analysis of comments that I have heard regarding the topic of closing the airport.

The abandonment of the airport will solve the concern for safe operations. Since no aircraft will use the facility, no concern for safety would remain.

The abandonment of the airport will not reduce noise impacts on residential portions of the community, it will in fact increase the noise level over the entire city. Obviously local aircraft will not be overhead in high volumes, however the real threat to aircraft noise comes not from our local traffic but rather from the traffic generated at Detroit Metro Airport. Currently the Ann Arbor Airport by its location precludes the intrusion of passenger jet liners over the city at an altitude of less than 3,000 feet. Typically the Detroit Metro traffic flying over the City is at an altitude of between 3,000 and 14,500 feet. The reason that these jets are this high rests with FAA Regulations pertaining to airspace uses. The Ann Arbor Municipal Airport provides a cushion in that no jet liner can penetrate a threshold elevation of 3,000 feet above the ground level. If the Ann Arbor Airport were to close, then there would be no such protection and these jet liners could fly as close as 1,000 feet above the surface of Ann Arbor. Noise is dissipated according to an exponential mathematical function. Aircraft which currently fly over the City at 14,000 feet would generate a noise level of approximately 196 times as loud; were that same traffic to pass over the City at an altitude of 1,000 feet. More realistic is the aircraft that passes over the community at 5,000 feet as it descends into the final approach pattern for Detroit Metro. These aircraft would generate noise 16 times louder than we experience currently should the Ann Arbor Airport be abandoned. During the data collection phase of the Part 150 Study the loudest single event noise that was recorded was a 727 flying directly over the City from Detroit Metro. Staff contacted the Air Traffic Control Center at Detroit Metro and inquired as to whether the abandonment of the Ann Arbor facility would result in a lowering of the ceiling over the community. The response was that Ann Arbor would be used for the staging of aircraft approaching the Detroit area. This is a particularly acute issue since the Gramm Rudman process could see a reduction in the capacity of Detroit Metro leading to an increase in aircraft being staged prior to landing at the Detroit facility. The continued presence of the Ann Arbor Airport is critical to mitigating community wide noise from overflying commercial jets.

The abandonment of the airport will also absolutely preclude larger aircraft from using our facility. Obviously once the facility is closed no aircraft would be able to land in Ann Arbor and this issue would be resolved.

I have heard several concerned citizens raise the issue of Airport closure as being the panacea that would solve all problems. This analysis indicates that it would be detrimental to the community to lose the airspace protection afforded by the Ann Arbor Municipal Airport.

I will periodically be sending you memorandums of this nature addressing major airport development issues and a staff analysis of the impacts of those issues. If you have questions or concerns regarding the three issues as I have outlined them, please feel free to contact me for clarification.


cc: Del D. Borgsdorf

JJV/fm:(AIRPORT)

MEMORANDUM

TO: Mayor Gerald Jernigan
City Council

October 3, 1990

FROM: James J. Valenta 
Transportation Director

SUBJECT: Update of Airport Land Use Study - The Do Nothing Alternative

Last week I submitted for your comment a brief memorandum addressing the Airport Part 150 Land Use and Noise Compatibility study. In that document I identified three core issues with which all airport development alternatives should be measured. The three central issues are:

1. The need to operate a safe airport.
2. The need to direct aircraft noise away from existing residential land uses.
3. The need to absolutely preclude larger, in thus noisier, aircraft from using the facility.

The previous memorandum included an analysis of the airport development alternative considering the abandonment of the airport. The analysis of that option indicated that noise levels impacting the community would increase primarily due to the absence of an airspace control zone afforded by the location of the Ann Arbor Municipal Airport. This memorandum will consider the alternative of simply leaving the airport as it is with no major capitol improvement projects contemplated that would materially alter the configuration of existing airside facilities.

The Do Nothing alternative is the alternative that was the result of previous airport development efforts. This alternative however has not been effective in mitigating the adverse impacts of airport operations as evidence by continued concerns for airport safety, noise levels over residential areas, and increasing airport operations. The effect of the 1983 airport development debate was that the Ann Arbor Municipal Airport has current safety deficiencies involving runway approach clear zones, runway safety areas, building restriction lines, runway and a taxiway visibility problems, numerous runway incursions, and balanced field length problems for the current traffic mix. These deficiencies have existed since at least 1983. A City policy that considers basic airport safety issues is an appropriate topic for Council discussion. The risk exposure that Council would be establishing with such a policy should be identified as a major consideration in those policy discussions. The Do Nothing alternative will not mitigate our existing airport safety deficiencies.

The Do Nothing alternative will also be ineffective in directing aircraft noise away from established residential land uses. The residential growth pattern evidenced in Ann Arbor is not unique. Airports all over the world have typically experienced residential development off of the end of runways. This is because land values are typically depressed near airports due to aircraft noise impacts. In times of high housing demand developers proceed with residential construction and offer units at what are perceived to be reasonable prices. Buyers are willing to initially accept airport noise, however as air traffic increases, noise complaints are directed toward the airport. Ultimately the airport is forced to alter operations, or in some cases, acquire the property adversely impacted by airport noise. The Ann Arbor Municipal Airport has already taken the step of altering aircraft operations by instituting preferential runway use patterns, non-standard approach patterns, and maximum rate of climb procedures.

The current level of noise impacting existing residential areas will get louder. This increase is not dependent upon factors such as runway length or airport configuration. It will occur regardless of any changes made to the airport and will be closely related to continued increases in commercial aircraft travel, and increasing commercial airport delays; particularly at Detroit Metro Airport. The key to developing a successful land use and noise compatibility plan is to redirect aircraft noise away from existing residential uses and then take legislative measures to realize the development of compatible land use in noise corridors. The Do Nothing alternative will not accomplish a reduction in residential noise levels beyond the levels experienced today.

The final basic issue is the need to preclude larger, and noisier aircraft from using the airport. The Do Nothing alternative accompanying the 1983 airport discussion was not effective in constraining aircraft activity at the 1983 level. The airport has seen a 24% increase in aircraft use since 1983, another 50% increase should be planned for over the next 20 years. The types of aircraft utilizing the airport have not materially changed with approximately 1.3% of current operations involving turbo fan or turbo jet aircraft. The practical limit to the size of the aircraft capable of using our facility rests not with runway length; but rather with runway strength. The current maximum weight limit is 20,000 pounds single wheel load. This threshold maximum accommodates aircraft as large as a Lear Jet 55, which is the heaviest aircraft currently based at the airport. Maintaining the current runway strength would be an effective means of limiting heavier and noisier aircraft from using the airport. The Do Nothing alternative would thus realize some benefit toward satisfying the concern regarding larger aircraft.

The Do Nothing alternative will not satisfy concerns for safe airport operations or for directing aircraft noise away from existing residential areas. This alternative would be effective in limiting use of the airport by heavier and noisier aircraft.

The next alternative that I will evaluate and discuss in memorandum form will be an extension of the existing paved runway. I anticipate transmitting that memorandum to you some time early in October. If you have any questions or comments regarding the impact of the Do Nothing alternative, then please free to contact me at your convenience.

cc: Del D. Borgsdorf