

Expansion Plans for O'Hare: Introduction

The Village's Advisory Committee on O'Hare Noise (ACON), at the direction of the Village Board, has reviewed the City of Chicago's proposed plan for expansion of runways and capacity at O'Hare. To date, only general information has been provided by the City of Chicago and the State of Illinois regarding the proposal, therefore the analysis is limited to the information provided. ACON has not provided a formal recommendation to the Board, but rather presented the potential benefits and concerns for the Village and the region. Certain aspects of the plan may be beneficial to the Village but not other communities, particularly with respect to aircraft noise. Therefore ACON has approached this review from both a local and regional perspective. This report is intended to highlight the potential impacts of the plan.



“ACON has approached this review from both a local and regional perspective.”

City of Chicago Proposal

Mayor Daley and Governor Ryan recently agreed to a four phase plan to expand the number of runways from seven to eight, which will increase capacity to 1.6 million annual operations and reduce delays. The City states that based on FAA forecasts, the capacity increase will serve demand beyond the year 2030. Last year there were 908,977 operations at O'Hare. The agreement also includes Peotone and keeping Meigs open at least through 2005.

The four phases are expected to take about 15 years to implement. Phase 1 includes construction of a new 7,500 foot north runway (9-27) at the far north end of the airport. Phase 2 includes demolition of runway 18-36 and construction of a new arrival runway 9R-27L. Phase 3 includes construction of a new arrival runway 9L-27R and demolition of runway 14L-32R. Phase 4 would include construction of a new 7,500 foot south runway (9-27), lengthening of the four 9-27 runways and demolition of runway 14R-32L. However the Chicago Tribune quoted an official from the City of Chicago that this phase might be accelerated and constructed earlier, but the City won't confirm. Also, the expansion plan calls for a new terminal at the west end of the airport and improved access to O'Hare including the western access and Lee Street interchange. The appendix of this report includes Chicago's "Proposal for Future of O'Hare", which outlines the improvement plan in greater detail. The proposed final airport configuration is depicted on the next page.

Also included in the appendix is the projected noise contour resulting from the parallel runway configuration. This contour was developed by a consultant hired by the O'Hare Noise Compatibility Commission. The consultant projects that the 65 DNL noise contour would reduce in size from 37.6 to 26.5 square miles. The shape of the contour would change as well.

ACON Analysis

ACON has analyzed the proposed expansion plans as follows:

- 1) Impact of Parallel Runways;
- 2) Impact of Proposed North Runway;
- 3) Impact of Proposed South Runway;
- 4) Economic Impact of Increased Capacity;
- 5) Legislative / Regulatory Issues, and;
- 6) Alternatives to Expansion.

The analysis and opinions suggested in this report reflect the various perspectives of ACON members.



Impact of Parallel Runways

All civil air carrier airports (i.e. O'Hare) must meet the requirements contained in Federal Aviation Regulations (FAR) Part 139, Certification and Operations: Land Airports Serving Air Carriers. The Federal Aviation Administration (FAA) Advisory Circular "Airport Design" (AC No. 150/5300-13) contains the FAA's standards and recommendations for airport design. The standards and recommendations contained in the Airport Design AC are recommended by the FAA for use in the design of civil airports. The AC contains the requirements for environmental assessment, state role, local role, runway location/orientation, parallel runway separation standards, object clearing criteria, runway protection zone, obstacle free area, runway safety area, etc. For airport projects receiving Federal grant-in-aid assistance, the use of these standards is mandatory. Thus, O'Hare International Airport (ORD) would follow this AC.

The City of Chicago, in a Chicago Tribune article (6/12/02), confirmed that if the FAA requires more spacing for the runways, then additional land may be necessary. The National Air Traffic Controllers Association, in a memo to Senator Durbin dated 5/8/02, indicated their support for new runways subject to the approval of the FAA.

ACON reviewed the proposal for parallel runways at O'Hare in light of the Airport Design AC. A summary analysis of the expansion plan regarding proposed runway configurations is as follows:

- ◆ Parallel runway operations at O'Hare could result in fewer safety concerns than existing intersecting runway operations especially fewer "land and hold short" operations although the Air Traffic Controllers have expressed that there are safety concerns in the proposed plan.
- ◆ Adding a third east/west parallel runway at O'Hare could accommodate more operations than existing intersecting runways and could reduce delays. Each additional east/west parallel runway could also accommodate even more operations and further reduce delays.
- ◆ The proposed runway configuration has the potential of reducing some existing noise impacts on Arlington Heights.

East/west and northeast/southwest parallel runways when used for

arrivals may result in no noise impacts on Arlington Heights. Even though the west end of the proposed North 9/27 runway is closer to Arlington Heights, arriving airplanes and their noise would be farther away.

- ◆ The proposed North 9/27 runway could reduce the number of arrivals and departures from runway 32L/14R even before 32L/14R is eliminated in Phase IV.
- ◆ Phase III removes runway 32R/14L thus eliminating adverse impacts of arriving and departing flights from that runway.
- ◆ Removal of 32L/14R in Phase IV would eliminate the runway that most adversely impacts Arlington Heights. However, this runway will not be eliminated until approximately 15 years from commencement of the project.
- ◆ Only when used for departures do new east/west parallel runways have the potential to adversely impact Arlington Heights. The proposed North 9/27 Runway has the greatest adverse potential only when used for departures.
- ◆ The proposed Phase II addition of 9R/27L Arrival Runway has less potential for adverse impact than North 9/27 for Arlington Heights.
- ◆ It is assumed that the FAA's Air Traffic Controllers (ATC) would use the 9/27 runways as labeled and not violate the Airport Design AC separation standards.
- ◆ When airplanes depart from the proposed runways and if directed over more compatible land uses, minimal airplane noise impacts over Arlington Heights could result but ATC procedures and airspace analysis are conspicuously missing from the proposal.



"...how the airfield is going to operate will be known after we sit down with the FAA, the air traffic controllers and other parties."
Commissioner Walker – City of Chicago

Impact of Proposed North 9/27 Runway

In reviewing the Chicago Plan for expansion of O'Hare Airport, it is important to keep in mind that the master plan has not yet been formulated and no environmental impact studies have been done. As Commissioner Walker states "...how the airfield is going to operate will be known after we sit down with the Federal Aviation Administration, the air traffic controllers and other parties."

The four phase initial proposal would expand the six currently operating runways to eight by building four new east/west runways and lengthening two existing east/west runways. The existing north/south runway and 32 left and 32 right would be closed. Although the cost estimates vary from 6 billion to 15 billion dollars and the timeline is also uncertain, most agree that the plan could boost capacity to 1.6 million operations a year, almost doubling current traffic.

Nevertheless, according to State of Illinois projections, when the first phase North 9/27 Runway is completed (5-10 years), current levels of congestion will return and when the entire plan is completed in 2019, demand will outstrip capacity, thus causing delay and the need for alternatives. In addition, during the reconfiguration process, the delays will only be exacerbated by the construction.



The proposed North 9/27 Runway would be 7,500 feet long and require the acquisition of 141 acres in Des Plaines and the relocation of Mt. Prospect Road. 9 homes and 101 businesses would be taken in Des Plaines and Elk Grove. The east/west runway would lie as far north as the outermost edge of 32 right. In the past, a concern was the altitude of aircraft departing from the middle of 32 left without using the entire runway. In this case, all flights will be departing much farther north and hence may be lower over Arlington Heights. The runway is east/west, thus not pointing at Arlington Heights. However, the Village would be affected by aircraft turning to the Northwest after takeoff, which is particularly loud due to thrust. Although Elk Grove currently has no runways pointing at that Village, 500 homes are eligible for soundproofing which bears out the premise that turns are very damaging from a noise standpoint.

The City of Chicago has provided estimated noise contours for 2015 based on computer models of a hypothetical day. The contours suggest that noise would be more concentrated to the east and west and have less effect on Arlington Heights. Other statements by aviation officials have contradicted that statement by referring to noise being diffused and spread out by use of various runways. In any case, these models do not reflect actual runway usage and flight patterns, which will depend on the airlines and the controllers. In addition, they were based on 1.2 million operations instead of the proposed 1.6 million capacity. It may be that with all runways in use flights off the north and south runways would turn off to clear operations on the center runways. Also, a new cargo facility has been approved for the north end of the field, which could lead to increased low and heavy night flights.

The Daley/Ryan airport plans include Peotone and keeping Meigs open. The plan for O'Hare includes the south runway in the fourth phase, which involves closing 32 left. 533 homes and 57 commercial properties would have to be taken in Bensenville. The billion-dollar cost would only afford a 10% reduction in delay. In addition, controllers have stated a preference for closing 4L-22R. The City projects a 51% delay reduction during bad weather with construction of the North Runway which could handle up to 60 flights an hour. Either full or partial expansion has the potential for serious negative impacts on Arlington Heights. Also, the future political climate may impact the proposal.

Impact of Proposed South Runway

Impacts on Arlington Heights. In general, the impact on Arlington Heights would probably improve the situation from the noise perspective. The location would place flight tracks for arrivals and departures East and West and the existence of the additional East/West runways would prevent flights from tracking over Arlington.

Impacts on Surrounding Suburbs. Suburbs east and west of the airport would bear the brunt of the impact and would be a detriment to the quality of life in those suburbs.

General Impact from Noise and Pollution Perspective. Additional flights means more noise and more pollution. This runway would require the taking of a number of private homes and businesses. From a political perspective, although this runway would affect Arlington least, it is also the least palatable portion of the plan.

Economic Impact of Increased Capacity

O’Hare Airport is one of the most significant economic engines of the Northwest suburbs. If O’Hare does not expand, perhaps there may not be any economic detriment to the area, as people have claimed. Likewise, delay reductions may have positive economic benefits.

The proposed O’Hare expansion is projected to destroy 539 homes and 109 commercial properties, the majority in Bensenville, but also in Des Plaines and Elk Grove Village.

Mayor Johnson maintains that up to 20 percent of the industrial park in Elk Grove Village could be lost to a combination of a ring road around O’Hare, an air safety zone, western airport access and Elgin-O’Hare Expressway construction. “The two biggest complaints businesses have are taxes and gridlock,” Johnson said. “This hurts both.”

The cost of the project and whether it takes money from other Public Works projects are additional points of contention.

The cost of displacing over 500 homes and 109 commercial properties is unmeasurable.

Economic stakes are high. The wealth of Chicago and the Northwest Suburbs as a transportation hub is due to the aviation system at O’Hare.

The Chicagoland Chamber of Commerce estimates that O’Hare’s direct and indirect impact is \$44 billion in the overall \$333 billion, nine-county, Chicago-area economy, approximately 13 percent of the overall economy.

The key question is, can O’Hare Airport co-exist with a third airport and maintain the economic stability it currently has?



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Legislative / Regulatory Issues

1. *Airline Regulation/Enforcement of Anti-Competition Provisions of Existing Law.* In order for any capacity relief/enhancement plan to work whether it is Peotone, Gary, Rockford or Mitchell, the airlines should be forced to use those airports. The other option is to enforce the anti-competition provisions of existing law to encourage airlines other than United and American to use those airports. The use of Gary, Rockford and Mitchell have immediate benefit because they are existing. It would not take 7-10 years to become operational. Although the long-term use of the airports may be somewhat limited, the short-term impact would be immediate while a Peotone is being built. With regard to Peotone, the same objections to the environmental impacts of noise and pollution exist there. In addition, there is significant opposition to that airport for the same reasons residents object here in Arlington Heights. It may take years to build based on the potential litigation there as well.



“In the event that the Federal Government does step in to intervene in the O’Hare issue, it would make sense to lobby to remove some of the restrictions on local control...”

2. Changes to 1990 Noise Act

Local Control. One of the problems that we have experienced with regard to our efforts to deal with the noise problem from O’Hare is the limitation imposed removing virtually all local control of airport operations from the airport operator or affected entities around airports by the 1990 Noise Act. The Act almost totally eliminated the ability of local interests to regulate noise. In the event that the Federal Government does step in to intervene in the O’Hare issue, it would make sense to lobby to remove some of the restrictions on local control and allow the affected interests to impose things like noise penalties for single noise events over a certain decibel limit and impose more strict nighttime noise limits.

1. *Penalties.* Penalties could include single event noise penalties including fines, annual noise limitations or nighttime flight restrictions.

3. Eminent Domain

1. *State Law.* State law provides for the taking of private property for a public purpose. I have not found any provisions of the statute which allows a city to take property in another city. The property would most likely need to be annexed if the property owners do not sell voluntarily.

2. *Federal Law.* There may be a provision of Federal law which allows a city of airport to take private property, even if it is another municipality.

4. State’s Rights

Interstate Commerce Clause v. State’s Ability to Restrict Airport Expansion. This is a constitutional argument based on the Interstate Commerce clause of the U.S. Constitution and a State’s Rights argument. Generally speaking, over the last hundred years

or so, the Commerce Clause has been upheld when actions by the State have been interpreted to impair, restrict or impede interstate commerce. This argument goes back to Alexander Hamilton and James Madison in “The Federalist”, railroad expansion and even the Federal Civil Rights Acts in 1864 and 1964. Airport expansion would likely fall into the same category. It is likely that Federal interests would prevail. However, the Supreme Court seems to be going back and forth on this issue lately, as was illustrated in *the Bush v. Gore* case. ACON has not done any in-depth research on the issue however.



Alternatives to Expansion

1. BUILD PEOTONE AIRPORT

Peotone is 45 miles south of Chicago and accessible in less than an hour to more than 2 million people. Peotone will cost the taxpayers six billion dollars to build which is more cost effective than rebuilding O’Hare as there are no demolition and reconfiguration costs. Peotone can provide vastly increased air traffic capacity quickly and well into the future. It will sit on 24,000 acres and not be landlocked as is O’Hare. It would have a total capacity for 1.6 million operations a year in addition to the existing 900,000 operations at O’Hare. A Peotone airport will provide a crucially needed economic base for the population that it geographically affects. Peotone will give consumers a choice of airports and airlines and lower consumer costs through competition. Peotone will provide access to the Chicago marketplace for newer and smaller airlines that are not allowed gates at O’Hare due to the United/American monopoly. The FAA has released a study that gives preliminary consideration to Peotone as a site for the new airport. The findings cite an FAA 1988 study that concluded that O’Hare and Midway airports could not be expanded to meet Chicago’s long term demand and that a new airport would be needed by the turn of the century. However, airspace limitations and air traffic control need to be further analyzed. Representative Lipinski has sponsored H.R. 3479 in the House, which includes language on Peotone as follows: “the agreement between the State and City includes agreement that the construction of an airport in Peotone would be proposed by the State to the FAA. Like the O’Hare expansion proposal, Peotone proposal should receive full consideration by the FAA under standard procedures for approving and funding an airport improvement project...” The Lipinski bill does not request funding for Peotone.

2. BUILD KANKAKEE AIRPORT

A Kankakee airport site has not been widely discussed but is apparently under consideration. As the FAA study concluded, Peotone is the second-best site behind Kankakee in terms of forcing the acquisition of the fewest households and subjecting the fewest people to too much noise.

3. EXPANSION AND IMMEDIATE INCREASED USE OF ROCKFORD AIRPORT

Rockford airport is an immediate partial answer to the Chicago aviation crises. Rockford has longer runways than Midway and can handle any type of plane. Rockford can currently handle 237,000 operations a year

without expending one additional taxpayer dollar, but it is being blocked by the major airlines which refuse to use Rockford for passenger flights. Rockford is used for cargo flights and buses passengers to O'Hare from its 2.2 - 2.5 million passenger base within a 45 mile radius from the airport. This is a situation that Congress or Chicago could remediate immediately, Chicago through its leases with the airlines and Congress through restraint of trade and monopoly powers.



4. CONTINUED AND PERMANENT USE OF MEIGS AIRPORT

Meigs airport has been in use on Chicago's lakefront for over fifty years. The Governor and Mayor Daley have agreed to keep Meigs open, although the State legislature could vote to close Meigs after 2005. An up-to-date GPS system has been in place for three years. Meigs has been serving thousands of corporate and private planes a year, thus adding to aviation capacity. Operations have decreased in recent years as landing fees have been raised by Chicago to the highest in the U.S. During the recent Air & Water Show in Chicago participating aircraft were diverted to Gary. If Meigs closes after 2005, it is safe to assume that flights will be diverted to Gary causing a loss in revenues to the Chicago area business community and the State of Illinois. Palwaukee airport expects to increase operations by taking at least 5% of Meigs operations. The northern area of Arlington Heights does not need increased noise and pollution from Palwaukee.

5. EXPANSION OF GARY AIRPORT

Gary officials claim that by extending one runway and adding another Gary could handle a significant amount of air traffic and be the third airport. This is impossible. The recently released FAA study ruled out Gary as an alternative as a large airport for the future because of its site limitations and impacts on neighboring homes. Chicago has been sending flights to Gary. Mayor Daley refers to it as the Gary-Chicago airport. As long as the Chicago referred flights do not result in the demise of Meigs or the lack of referrals to Rockford (an airport better equipped to handle all types of planes), Gary should continue to be used to alleviate traffic from O'Hare.

6. BUILD AND FUND NATIONAL HIGH SPEED RAIL SYSTEM

A high-speed rail system has the potential to revolutionize travel in the U.S., but first, many obstacles have to be overcome such as infrastructure barriers, track and wiring upgrades, location of bridges and rates competitive with airlines. The Acela Express between Washington and Boston has not yet lived up to expectations. It has, however, transported 250,000 passengers since November. Congress will be considering legislation that would enable Amtrak to issue bonds over the next ten years to support high-speed rail projects.

7. AIRLINE SCHEDULING

Overscheduling by airlines operating out of O'Hare has caused many of the delays that have brought focus on the airport. If Chicago, through its lease agreements with American and United, demanded that a reasonable number of passenger flights be scheduled through Rockford, there would be an immediate decrease in delays at O'Hare.

Summary

The observations made in this report are based on limited data on the proposed expansion at O'Hare. With reconfiguration of the runways to six parallel east/west runways and two southwest/northeast runways, coupled with the elimination of the 32 runways, the Village may realize reduced noise levels, however possible reduced noise levels may be counter balanced by an increase in flights. Construction of a new north runway at the far north end of the airport may be cause for concern.

Certainly, no final approach courses would cross over Arlington Heights as none of the runways will be aligned in our direction. It is uncertain what the impact will be with respect to departures. Although none of the runways are aligned with Arlington Heights, flight paths for departures may take flights over the Village as they turn after takeoff.. In addition some flight paths for departures off the lengthened 9L / 27 R departure runway may bring flights over the Village as well. As the City of Chicago has stated before, pavement usage is not necessarily indicative of flight paths. If the total number of departures at O'Hare increases, then it is possible the Village could experience more departing flights over the Village compared to today's levels. Impacts on Arlington Heights all depends on runway usage, flight paths, and the number of flights at the airport. Reiterating what Department of Aviation Commissioner Thomas Walker stated, "...how the airfield is going to operate will be known after we sit down with the Federal Aviation Administration, the air-traffic controllers and other parties."



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Appendix



Village of Arlington Heights
Advisory Committee on O'Hare Noise



O'Hare International Airport Proposed Expansion Plan

*A report by the Village of Arlington Heights Advisory Committee on O'Hare Noise
Concerning the Proposed Plan for Expansion of the Airport Runways
November 2002*

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