# RECORD OF DECISION
# FOR
# O'HARE MODERNIZATION

**AT**

**CHICAGO O'HARE INTERNATIONAL AIRPORT**

**CHICAGO, ILLINOIS**

**September 2005**


**DEPARTMENT OF TRANSPORTATION**

**FEDERAL AVIATION ADMINISTRATION**

**GREAT LAKES REGION**

**DES PLAINES, ILLINOIS**

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# 1. INTRODUCTION

This Record of Decision (ROD) provides final agency determinations and approvals for those Federal actions by the Federal Aviation Administration (FAA or Agency) necessary for proposed improvement of O'Hare International Airport (ORD or Airport).

FAA identifies its preferred alternative in a Final EIS and designates the selected alternative in its ROD. The FAA identified Alternative C, the City's proposed O'Hare Modernization Program (OMP), as its Preferred Alternative in the Final EIS. The FAA's specific decision and order selecting Alternative C to be implemented at ORD, required by 40 CFR 1505.2, is described in detail in Section 13 of this ROD. Alternative C provides for reconfiguration of the airfield as shown in **Exhibit 1,** along with associated terminal and support facilities, and related land acquisition.

In addition to the FAA's extensive analysis of potential environmental impacts, the Final EIS, including the response to comments, also addresses financial issues implicated by the Agency's duties under NEPA and related environmental statutes. The FAA has taken into account project cost estimates and proposed funding sources outlined in the City's Airport Master Plan. The FAA has also conducted its review of the OMP financial plan to the extent that such review aided in the performance of the Agency's NEPA duties in general and its review of alternatives in particular. The FAA's selection of Alternative C signifies that the projects meet FAA standards for approval of the Airport Layout Plan and other agency actions identified in this ROD. It does not, however, signify an FAA commitment to provide a specific level of financial support, which is a future decision that will be made in accordance with other FAA policy and procedures. Further discussion regarding the relationship between this ROD and FAA decisions involving financial support for the OMP appears at Section 10.1.1 of this document.

This ROD completes the FAA's thorough and careful environmental decision-making process, including FAA's public disclosure and review by the FAA decisionmaker of the analysis of impacts described in the July 2005 O'Hare Modernization Final Environmental Impact Statement (Final EIS). This ROD has been prepared and issued by the FAA in compliance with the National Environmental Policy Act of 1969 (NEPA) [42 U.S.C. Section 4321, et seq.], the implementing regulations of the Council on Environmental Quality (CEQ) [40 CFR Parts 1500-1508] and FAA directives [Order 1050.1E and Order 5050.4A]. The ROD is also used to demonstrate and document FAA's compliance with the procedural and substantive requirements and environmental, programmatic, and related statutes and regulations that apply to FAA decisions and actions on proposed airport expansion projects.

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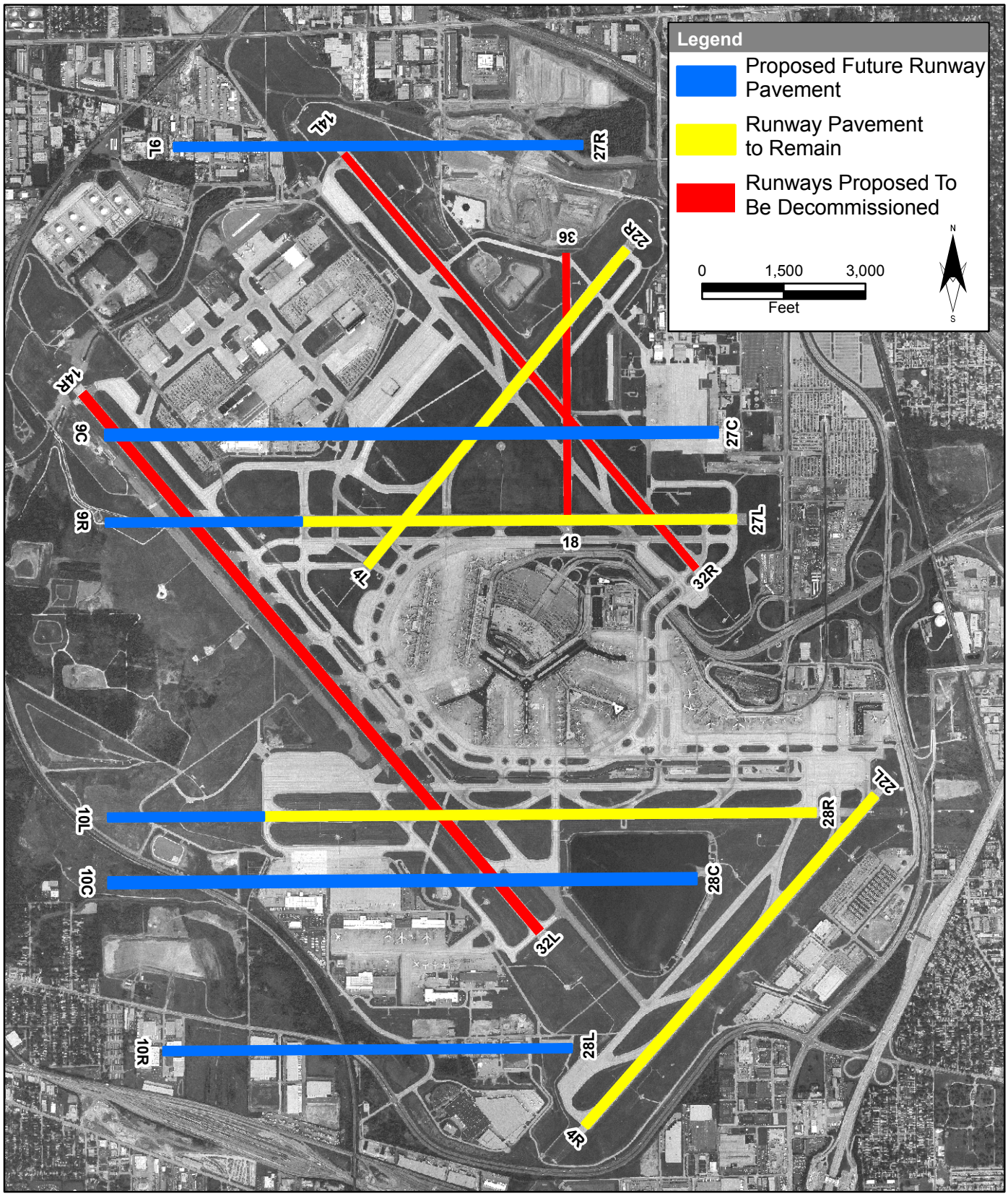


Source: ALP Drawing Set, Ricondo and Associates Inc. (CCT), 2004.

Chicago O'Hare International Airport

**O'Hare Modernization Environmental Impact Statement**

## Existing and Proposed Future Runways (Sponsor's Proposal)

▶ Exhibit 1

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The Cooperating Agencies for this EIS are: the United States Army Corps of Engineers (USACE) (due to the need for a Section 404 permit issuance decision), the United States Environmental Protection Agency (USEPA) (due to air quality, wetlands and environmental justice matters), the United States Fish and Wildlife Service (USFWS)(due to wildlife impact and wildlife habitat matters), the Federal Highway Administration (FHWA)(due to potential impacts on the area's interstates), and the Illinois Environmental Protection Agency (IEPA) (due to air quality matters and the need for a Section 401 Water Quality Certification issuance decision).

During preparation of the Draft and Final EIS, the FAA worked closely with the Cooperating Agencies. In addition, the FAA coordinated with other Federal, state, and local entities throughout the EIS process, including the, Department of Interior (DOI), National Park Service (NPS), Advisory Council on Historic Preservation (ACHP), Illinois Department of Natural Resources (IDNR), Illinois Historic Preservation Agency (IHPA), Illinois Department of Transportation (IDOT), Illinois State Toll Highway Authority (ISTHA), Northeastern Illinois Planning Commission (NIPC), Chicago Area Transportation Study (CATS), local municipalities, other interest groups, and the public to facilitate early consideration of key issues and an understanding of the proposed actions.

The FAA is responsible for the preparation and content of the EIS and the ROD. The FAA is also responsible for reviewing and verifying the accuracy of any environmental information provided by outside entities. CEQ regulation 40 CFR 1506.5 permits the FAA to receive and use information related to the EIS. In keeping with its oversight responsibility, FAA has consistently exercised control over the scope, content and development of the EIS. FAA selected a Third Party Contractor (TPC) to assist in the preparation of this EIS. The Agency also utilized its own resources, as well as the resources of the TPC, to independently evaluate any environmental information and other submissions provided by the City of Chicago Department of Aviation (DOA) or other entities. In addition, FAA has utilized environmental information submitted by the local agency for development of this EIS, only as permitted under 40 CFR 1506.5(a). The local agency in this case was the DOA.

FAA is responsible for the accuracy of all information within the EIS and ROD. The FAA/TPC independently and extensively reviewed the DOA-provided environmental information utilized in the EIS. FAA believes that its degree of supervision exercised over the TPC, and FAA involvement in the preparation/review of the EIS and ROD is consistent with CEQ regulations and its own Orders, and fully demonstrates the integrity and objectivity of the EIS and ROD.

This ROD also contains the FAA's decision concerning religious liberty claims and assertions of entitlement to formal adjudicatory process that have been presented to it by those opposed to the acquisition and relocation of two religious cemeteries, St. Johannes and Rest Haven.

## 2. BACKGROUND

Against the backdrop of aviation delays throughout the country, the Senate Commerce, Energy, and Transportation Committee held hearings in Chicago during the summer of 2001 to discuss the effect of delays at O'Hare on the national airspace and how redevelopment of O'Hare could potentially alleviate these delays. At the time these hearings were held, the Committee strongly

encouraged the City of Chicago and the State of Illinois to reach agreement on airport expansion before September 1, 2001, or according to congressional leaders, run the risk of Congressional intervention.

On June 29, 2001, the Mayor of Chicago announced a concept to enhance the capacity and efficiency of O'Hare and reduce delay, which later evolved into the OMP. The resulting airfield would resemble those at Hartsfield-Jackson Atlanta International and Dallas/Fort Worth International airports, where recent advances in air traffic control technology for parallel runway operations have been incorporated.

The essence of the O'Hare Modernization is to correct the inherent inefficiencies created by the original "runway triangle" built when O'Hare was Orchard Place, and the Douglas Aircraft Company was making propeller aircraft for World War Two. The three original runways (Runways 4L/22R, 14L/32R, and 9L/27R) lie north of the present terminals. Because these runways and the flight paths of aircraft that use them intersect with each other, the ability to use any one runway is dependent upon the aircraft using the other two. For that reason, all of them are considered "dependent runways." As one example, O'Hare controllers need to arrange sufficient spacing between aircraft landing on Runway 9L to accommodate those departing on Runway 4L. Half a century ago, such runway architecture was acceptable, if not necessary, to insure that those venerable but primitive aircraft could always land and take off into the wind. However, dependent runways create a severe penalty in the ability to move a large amount of traffic. That penalty can become even greater in bad weather. Today's modern aircraft are less dependent on wind conditions. Thus, new runway architecture, as demonstrated at Atlanta, Dallas/Fort Worth, and Denver, feature parallel, non-intersecting, "independent runways" which permit constant streams of landings or take offs for each runway, regardless of what activity may be occurring on another parallel runway. The City of Chicago's proposal with its six parallel runways, breaks the O'Hare "runway triangle" and allows for far more operations in all weather conditions without compromising safety.

On December 5, 2001, the Mayor and the Governor announced that they had virtually reached agreement on the major components of a long-range conceptual plan to address delay and airfield congestion at O'Hare. After discussions with the City of Chicago regarding a forthcoming more-detailed plan, the FAA issued a Notice of Intent to Prepare an EIS and to Conduct Environmental Scoping for Improvements to the O'Hare International Airport in July 2002. Throughout 2002, the City of Chicago refined the conceptual plan and submitted an initial draft Airport Layout Plan (ALP) in December 2002 to the FAA for review.[1] The ALP, which consists of a much more detailed representation of the proposal, is shown in **Exhibit 2.**

Due to the importance of O'Hare to the State of Illinois, specific O'Hare Airport-related legislation was passed. The O'Hare Modernization Act (OMA), which related to the proposed expansion of O'Hare, was adopted by the Illinois legislature and signed into law by the Governor on August 6, 2003.

[1] The Draft ALP was resubmitted in October 2003 following FAA review and comment and again in September 2005 following further FAA review and comment. **Exhibit 2** shows the September 2005 ALP. The environmental consequences of the September 2005 ALP are not different from those evaluated in the previous versions of the ALP.

The OMA states:

> Section 5. Findings and purposes.
>
> (a) The Illinois General Assembly finds and determines:
>
> (1) The reliability and efficiency of the State and national air transportation systems significantly depend on the efficiency of the Chicago O'Hare International Airport. O'Hare has an essential role in air transportation for the State of Illinois. The reliability and efficiency of air transportation for residents and businesses in Illinois and other States depend on efficient air traffic operations at O'Hare.
>
> (2) O'Hare cannot efficiently perform its role in the State and national air transportation systems unless it is reconfigured with multiple parallel runways.
>
> (3) The O'Hare Modernization Program will enhance the economic welfare of the State of Illinois and its residents by creating thousands of jobs and business opportunities.
>
> (4) O'Hare provides, and will continue to provide, unique air transportation functions that cannot be replaced by any other airport in Illinois…
>
> (5) Public roadway access through the existing western boundary of O'Hare to passenger terminal and parking facilities located inside the boundary of O'Hare and reasonably accessible to that western access is an essential element of the O'Hare Modernization Program. That western access to O'Hare is needed to realize the full economic opportunities created by the O'Hare Modernization Program and to improve ground transportation in the O'Hare area. It is important to the State that the western access be constructed not later than the time existing runway 14R-32L is removed from service.
>
> (6) For the reasons stated in paragraphs (1), (2), (3), (4), and (5), it is essential that the O'Hare Modernization Program be completed efficiently and without unnecessary delay.
>
> (7) For the reasons stated in paragraphs (1), (2), (3), (4), and (5), it is essential that acquisition of property as required for the O'Hare Modernization Program be completed as expeditiously as practicable.
>
> (8) The General Assembly recognizes that the planning, construction, and use of O'Hare and the planning, construction, and use of the O'Hare Modernization Program will be subject to intensive regulatory scrutiny by the United States and that no purpose would be served by duplicative or redundant regulation of the safety and impacts of the airport or the O'Hare Modernization Program…
>
> (b) It is the intent of the General Assembly that all agencies of this State and its subdivisions shall facilitate the efficient and expeditious completion of the O'Hare Modernization Program to the extent not specifically prohibited by law, and that legal impediments to the completion of the project be eliminated.

In both 2003 and 2004, O'Hare International Airport (ORD) was the busiest airport in the world in terms of operations, and second busiest in terms of enplaned passengers. In 2004, ORD served approximately 35,952,198 enplaned passengers and 992,471 aircraft operations at an annual average delay of approximately 18 minutes per operation; from 2003, there was approximately a 9 percent increase in enplaned passengers, and a 6 percent increase in aircraft operations. The FAA forecasts that the demand for air travel at ORD will continue to grow and that ORD will serve approximately 1.2 million aircraft operations and 50 million enplaned passengers in 2018 – the final year of analysis within the EIS. Further, FAA notes that the

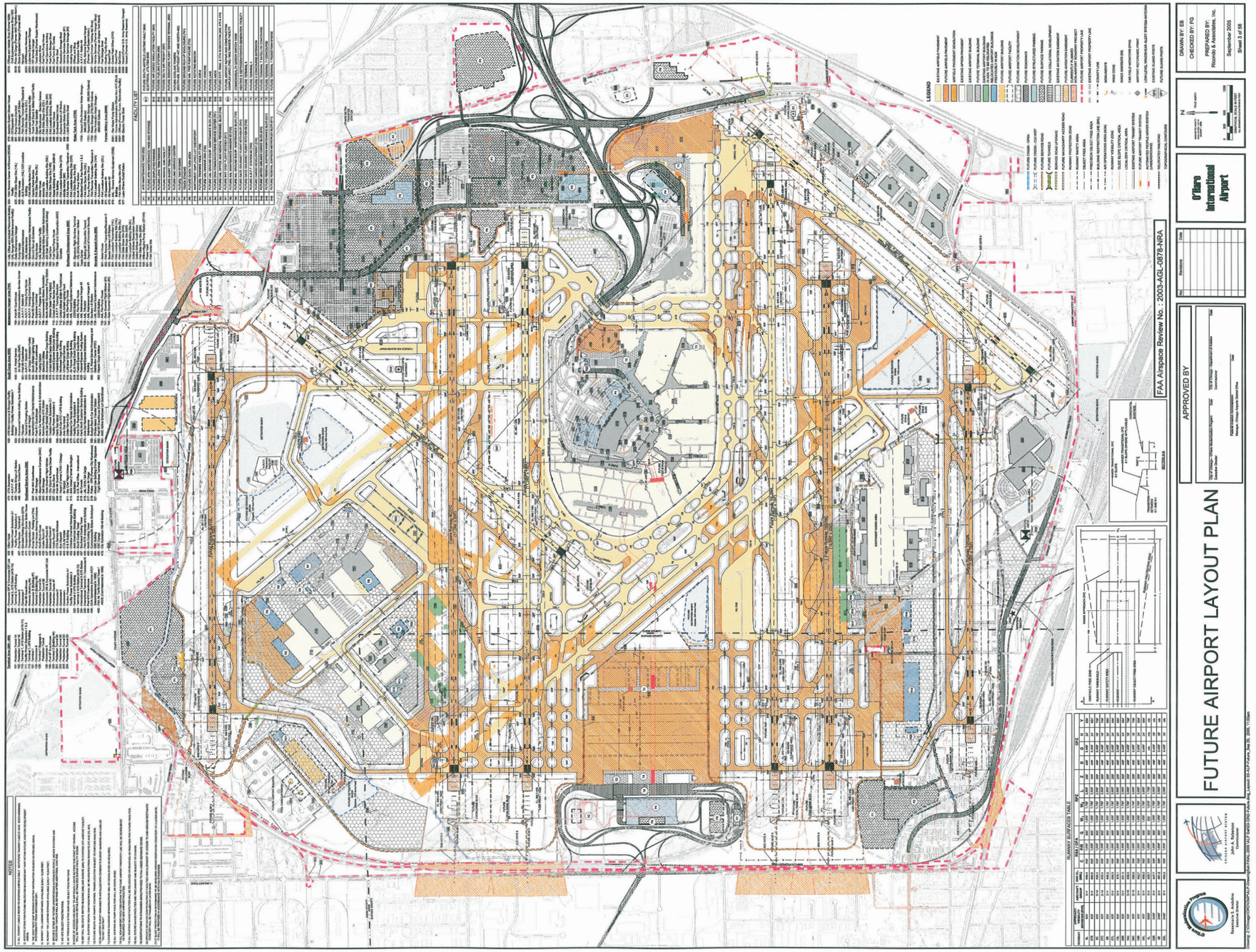
airport has been ranked first worldwide in total operations in 39 of the last 42 years, and first worldwide in total passengers in 36 of the last 42 years.

ORD is owned and operated by the City of Chicago (Sponsor). Designated by the FAA as a large hub airport, ORD, as of October 2004, serves 47 scheduled passenger airlines -- 10 U.S. flag air carriers, 27 foreign-flag air carriers, and 10 regional/commuter carriers. In addition, 23 carriers provided scheduled cargo service at ORD. ORD provides nonstop service to 127 domestic and 48 international destinations. The Airport plays a vital role in the overall air transportation and economic system of the greater Chicago Market Area. O'Hare also plays an important role in the National Airspace System (NAS) as a dual airline hub, a major mid-continent market for nearly every major airline, and a key international gateway. Because of these characteristics, O'Hare is one of the busiest airports in the world in terms of aircraft operations and enplaned passengers.

In the EIS, the FAA has identified ORD as a major contributor to delays throughout the NAS. The FAA has determined that a capacity and delay problem exists at ORD, and that one of the major causes of the delay is inadequate all-weather airfield capacity due to the airfield's current configuration (see Chapter 2 of the Final EIS). In 2002, the airfield at O'Hare consisted of six (6) primary air carrier runways configured as three (3) parallel sets, and one (1) commuter/general aviation runway. The three sets of parallel runways are oriented in southwest-northeast, east-west, and northwest-southeast directions, with the commuter/general aviation runway oriented in a north-south direction. The runways in each of the parallel sets are separated by at least 5,450 feet, allowing dual-independent instrument flight rule (IFR) approaches to each set. Runway 18/36, the north-south commuter/general aviation runway, was decommissioned on December 4, 2003 and converted to a taxiway.

The Sponsor's proposed airfield projects (i.e., Alternative C) include the realignment of three runways, and the construction of one new runway. For FAA purposes, realignment involves decommissioning of existing runways and construction of replacement runways. The four replacement runways include Runway 9L/27R, 9C/27C, 10C/28C, and 10R/28L. The three existing runways to be decommissioned include 18/36, 14L/32R and 14R/32L. In addition, two existing runways (Runway 9L/27R and 9R/27L), whose future designations would be 9R/27L and 10L/28R, respectively, would be extended. Further, existing Runways 4L/22R and 4R/22L would remain for additional operational flexibility. This airfield layout results in a total of eight runways, including six parallel runways in an east - west orientation and two crosswind runways.[2]

[2] The Federal Register description of the proposed airfield differs from the description herein. Although there is no change in the actual projects described, the FAA clarifies the term realignment of runways to include decommissioning and construction of replacement runways.




Chicago

O'Hare

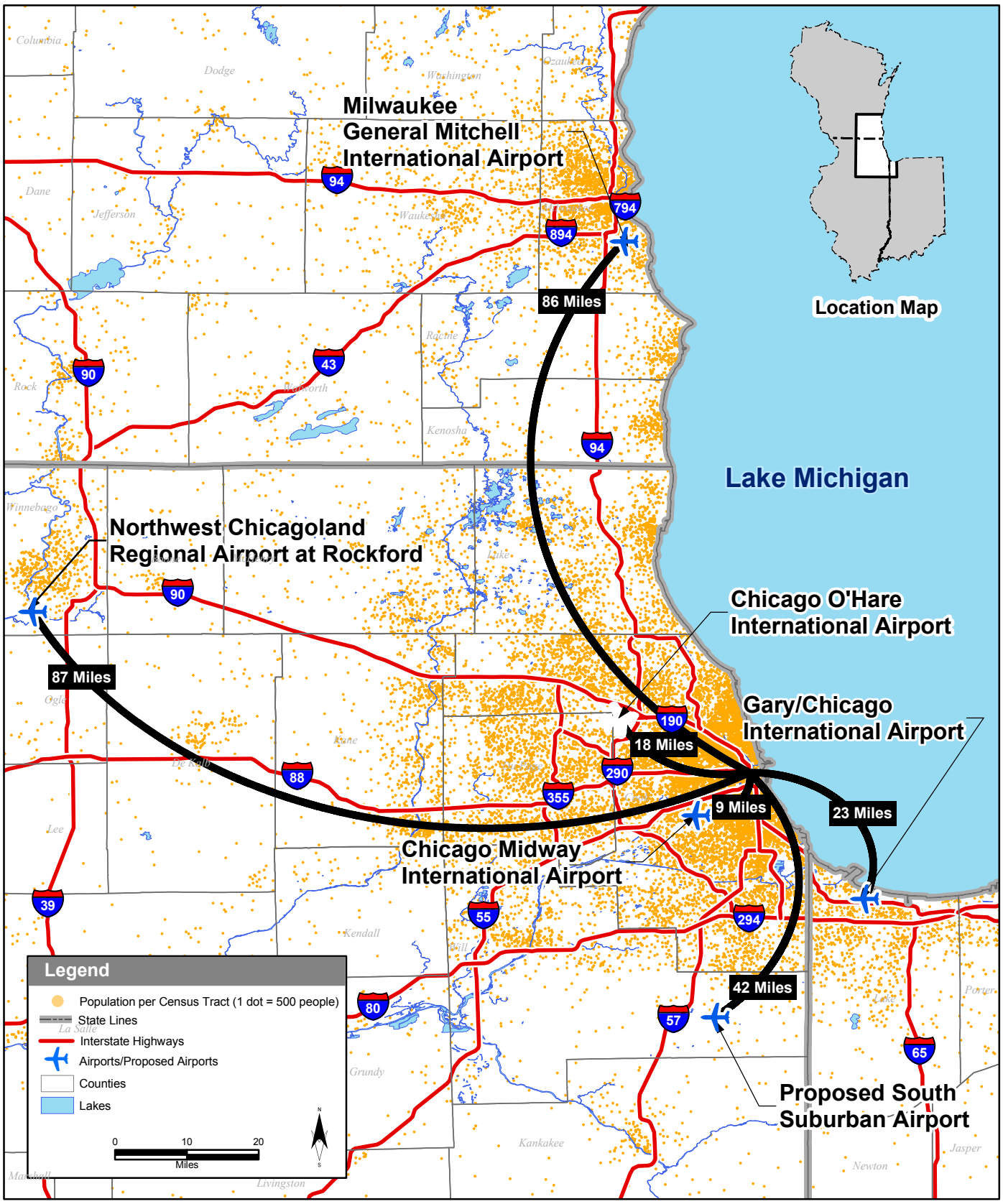
International

Airport

**O'Hare Modernization**
**Environmental Impact Statement**

**Proposed Future**
**Airport Layout Plan**

▶ **Exhibit 2**




Source: StreetMap USA 2000, ESRI Data and Maps "United States" CD #3, Census 2000 Tracts and Summary File 1

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## 3. PROPOSED FEDERAL ACTIONS AND APPROVALS

Section 1.1 of the Final EIS identifies the FAA actions to support the proposed development project. The necessary FAA actions, determinations, and approvals are summarized below.

- Approval of an Airport Layout Plan (ALP) depicting the proposed project (see **Exhibit 2** depicting the ALP and Section 5 of this ROD for a description of the proposed project),
- Determinations under 49 U.S.C. Sections 47106 and 47107 relating to eligibility of the proposed project for Federal funding under the Airport Improvement Program (AIP) and under 49 USC 40117, as implemented by 14 CFR 158.25(c), to impose and expend passenger facility charges (PFCs) for the proposed project,[3]
- Establishment of air traffic control and airspace management procedures designed to affect the safe and efficient movement of air traffic to and from the proposed runways as well as in the airspace surrounding the airport,
- Establishment of flight procedure modifications,
- Certifications as to the safety of instrumentation, procedures, airfield operations, and
- Installation and/or relocation of navigational aids associated with the proposed new and relocated runways.

In addition to these FAA actions, the U.S. Army Corps of Engineers is responsible for reaching a permit issuance decision for the proposed project under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, and associated determinations must be made by the IEPA as follows:

- Water quality certification under Section 401 of the Clean Water Act,
- National Pollutant Discharge Elimination System permit for storm-water and wastewater discharges into navigable waters under Section 402 of the Federal Water Pollution Control Act, 33 U.S.C. §1342.

## 4. FORECASTS

By definition, forecasts are projections of future estimated activity rather than goals or targets to be achieved. The FAA updates its forecasts annually using the most recent information available and the application of reasonable scientific, industry-accepted methodology. Although short-term forecasts (up to five years) may not exactly match actual experience from year to year, in most cases the differences are relatively small. Longer-term forecasts beyond a five-year period, however, are typically less certain due to the dynamic, fluid nature of aviation activities. This is especially true in today's aviation environment that is highly sensitive to even slight market shifts, competitive factors, national economic trends, and strategic decisions by

[3] Certain requirements for AIP funding overlap with environmental review requirements for approval of the ALP and so are addressed as part of the Final EIS and ROD for the ALP. These determinations are a prerequisite to funding but do not complete the determinations that are necessary for funding. The decisions to approve AIP and PFC funding are completed in separate processes.

airline management. For the EIS, the FAA utilized the published 2002 Terminal Area Forecast (TAF).[4] The FAA TAF represents the official FAA outlook for each airport and is the industry standard. An airport environmental impact statement typically uses the TAF or a specifically developed forecast for the individual airport by the airport sponsor. Where the sponsor's forecast is used, the FAA requires that forecast be consistent with the TAF for that airport.

For over 30 years, the FAA has developed an annual TAF consisting of projected traffic forecasts for all airports with air traffic control towers. The TAF is prepared by FAA staff using industry-standard methodology—including statistical analysis of historical trends, review of recent trends in airline service, and assumptions regarding future airline developments. The FAA relies upon these forecasts in defining its long-range spending and staffing needs. In addition, numerous Federal, state, and local government agencies use the TAF for various types of aviation planning tasks. As the TAF only projects total operations and enplanements within larger categories of aviation activity types, additional detailed information is needed concerning aircraft fleet mix, lengths of flights, day/night split of aircraft operations, and peak day and peak hour passengers and operations. For the EIS, more detailed information was developed for use in conducting the detailed environmental analysis. Specifically, the breakdown of the TAF projections into more specific categories was conducted using historical O'Hare data. The detailed forecast results and the assumptions used to develop them are included in Appendix B of the Final EIS.

In addition, the FAA's TAF does not always reflect existing facility constraints since the TAF assumes an unconstrained demand. Plans for major infrastructure development are based on forecasts of future demand, or in the case of O'Hare, immediate need. Nevertheless, such forecasts frequently change during the planning process. It is not possible or feasible to continually redirect the planning process in response to constantly evolving economic conditions. Rather, the planning process must be flexible enough to accommodate changing conditions.

The 2001 TAF was used by the City in formulating its Master Plan. The following year, the FAA decided that its EIS should utilize the FAA's 2002 TAF, the most recent demand forecast available when the technical analysis began. The FAA began the modeling analysis for the Draft EIS in October 2003 and released that document for public comment in January 2005. During that time new TAFs for 2003 and 2004 have been published, and their existence is noted in both the EIS and in response to comments. The FAA's EIS continues to rely upon the 2002 version of the TAF for three reasons: first, the FAA believes it represents an accurate depiction of aviation activity at the time this work began; second, no EIS on a project this massive could ever be completed if the agency had to start anew every year when a new TAF appeared; and third, the FAA has taken those more recent forecasts into account in the EIS. To address variations in forecasts and other unanticipated events, the FAA conducted an analysis contained within Appendix R of the EIS. Appendix R identifies and considers a range of potential alternate outcomes with regard to aviation activity at O'Hare that encompasses both

[4] Terminal Area Forecast Summary - Fiscal Years 2002-2020, FAA, April 2003.

the 2003 and 2004 TAF projections, and identifies the possible alternate environmental impacts that could occur under these conditions.

**Table 1** is a summary of the 2002 FAA TAF for O'Hare, for the period from 2002 to 2018. As shown, total enplaned passengers are forecast to increase from 31,710,512 in 2002 to 50,372,000 in 2018, at an average annual rate of 2.9 percent. Also as shown, total aircraft operations are forecast to increase from 922,787 in 2002 to 1,194,000 in 2018, at an average annual rate of 1.5 percent.

CEQ Regulations implementing NEPA require that an EIS utilize a scope of analysis sufficient to adequately characterize foreseeable impacts (40 CFR 1508.25). In this regard, FAA EISs customarily utilize an impact horizon extending beyond the project completion year. Furthermore, CEQ guidance related to cumulative impact assessment requires use of an impact assessment horizon sufficient to represent the "reasonably foreseeable future." In recognition of the CEQ requirements, FAA Order 1050.1E, Appendix A, paragraph 14.4(g)(2) calls for a horizon of 5 to 10 years, post build out. In the case of this EIS, the "Build Out + 5" horizon appears to be a well justified representation of the reasonably foreseeable future since the project will take a lengthy time to complete, and the ability to predict future events declines over time. Additionally, FAA also notes that in previous discussions with USEPA involving the FAA's preparation of an EIS for a fourth runway at the Miami International Airport, USEPA and FAA agreed that utilization of a Build Out + 5 impact evaluation horizon would be an appropriate planning horizon for NEPA purposes. For this EIS, the FAA considered using a Build Out + 10 impact horizon that was tied to a TAF forecast extending that far into the future. However, the FAA determined to proceed with a planning horizon in this EIS as it had in Miami recognizing that TAF forecasts tend to be less and less accurate in the "out years," and concluding that NEPA's command of "reasonable foreseeability" dictated a more conservative approach. Thus, even though the FAA uses other horizons for other purposes, the Agency finds that the Build Out + 5 approach is the most responsible manner of resolving the question of an appropriate impact horizon (for NEPA and Section 106 purposes) in its O'Hare Modernization EIS. When the FAA informed USEPA, as part of the ongoing consultation between those agencies, that this EIS would adopt Build Out + 5 as the outermost year of analysis thereafter, the USEPA raised no objections. Indeed, in USEPA's comment on the Final EIS, it commended the FAA's EIS for a number of reasons including the adoption of a fifteen year planning horizon for environmental analysis. Finally, the USEPA also concurred that it had no problems or concerns regarding the use of a Build Out + 5 as the outermost year of environmental analysis within the context of the O'Hare Modernization EIS.[5]

[5] Email from Sherry Kampke, USEPA to Michael MacMullen, FAA, September 22, 2005.

**TABLE 1**
**2002 TAF FOR O'HARE – CALENDAR YEARS (CY)**

| | CY 2002 | CY 2003 | CY 2007 | CY 2009 | CY 2013 | CY 2018 | AAGR(a) 2003-2018 |
|---|---|---|---|---|---|---|---|
| Enplaned passengers | 31,710,512 | 32,609,000 | 36,943,000 | 39,149,000 | 43,912,000 | 50,372,000 | 2.9% |
| Average annual change | n/a | 2.8% | 3.2% | 2.9% | 2.9% | 2.8% | n/a |
| Aircraft Operations | 922,787 | 960,500 | 1,026,300 | 1,057,200 | 1,120,600 | 1,194,000 | 1.5% |
| Average annual change | n/a | 4.1% | 1.7% | 1.5% | 1.5% | 1.3% | n/a |

Note: (a) AAGR – Average annual growth rate.
(b) n/a = not applicable.
Source: 2002 FAA Terminal Area Forecast, published in March 2003.

## 5. PURPOSE AND NEED

CEQ Regulations implementing NEPA require that the Federal agency preparing an EIS include in that document a statement identifying underlying purpose and need to which an agency is responding in proposing alternatives, including the proposed action (40 CFR §1502.13). Airport capacity improvements in this country, including those that have the potential to confer significant benefits upon the overall National Airspace System (NAS), are initiated by and remain as the ultimate responsibility of an individual airport sponsor. Nevertheless, in the fulfillment of its NEPA obligations for airport improvement proposals, the FAA makes its own determination of the purpose and need for the proposed action while also being particularly mindful of the sponsor's overall goals.

From a historic perspective, as nationwide air traffic has increased, traffic and attendant delays at O'Hare have increased as well. In response, the FAA has undertaken national and regional initiatives to address the need to increase capacity and reduce delay in the Chicago region and in the NAS. These initiatives[6] include:

- 1991 O'Hare Delay Task Force – co-chaired by the FAA and the City of Chicago;
- 2001 O'Hare Delay Task Force – also co-chaired by the FAA and the City of Chicago;
- National Airspace Redesign efforts in the Chicago terminal airspace;
- FAA's Operational Evolution Plan; and
- FAA's orders Limiting Scheduled Operations at O'Hare.

FAA Orders limiting scheduling at O'Hare were adopted on January 21, 2004, April 21, 2004, and August 18, 2004. In adopting the most recent Order, the Agency said that its action was not intended to evaluate or to prescribe any particular long-term avenue for increasing capacity and reducing delays at O'Hare. The FAA reserves the authority to take further interim action, if necessary, when the present Order expires. Independently of the scheduling reduction Order,

[6] Each of these initiatives is discussed in detail in Section 2.2 of the Final EIS.

the FAA noted that it is preparing the EIS evaluating the City of Chicago's proposal and reasonable alternatives for reducing delays and thereby enhancing capacity.

Subsequent to the issuance of the Draft EIS, on March 25, 2005, the FAA issued a Notice of Proposed Rulemaking (NPRM) to extend the limitation of flight schedules:

> The FAA is proposing this rule to address persistent flight delays related to over-scheduling at O'Hare International Airport (O'Hare). This proposed rule is intended as an interim measure, because the FAA anticipates that the rule would yield to longer term solutions to traffic congestion at the airport. Such solutions include an application by the City of Chicago that, if approved, would modernize the airport and reduce levels of delay, both in the medium term and long term. For this reason, the proposed rule includes provisions allowing for the limits it imposes to be gradually relaxed and in any event would sunset in 2008.

At the time of adoption of this ROD, the NPRM was still under consideration by the FAA.

It is not surprising that the FAA has devoted so much attention to events and issues at O'Hare. Continuing the role held by Midway Airport before Midway was eclipsed by the jet-age, O'Hare plays a vital role in the NAS by providing an extensive network of domestic and international air service to and from one of the nation's largest metropolitan areas, and also by serving as a central connecting point in the nation's air transportation network. O'Hare is uniquely suited to this role by virtue of its large local market, which is expected to increase in the future. This large local market, coupled with O'Hare's central location in the NAS, provides opportunities for connecting service to many destinations. Consequently, O'Hare has consistently ranked as one of the busiest airports in the United States. Under the current airport configuration, playing this role comes at the cost of high levels of aircraft delay. Continued growth in O'Hare traffic in the years ahead would have additional adverse impacts on the air transportation needs of the Chicago region and upon the efficiency of the NAS.

O'Hare is ranked as one of the most delayed–prone airports in the country. **Exhibit 4** shows that O'Hare's share of delays is at least twice those experienced by Atlanta or Newark, the next most delayed airports. Delays at O'Hare have a direct impact on the entire NAS, in part because approximately 51 percent of the total passengers traveling through O'Hare currently connect to and from other airports. Additionally, O'Hare affects the NAS because the airfield lacks adequate runway capacity or gate availability to handle both the current and forecast levels of activity. O'Hare operations also directly affect the networks of 47 domestic and international passenger airlines providing service to 127 domestic and 48 international airports. In light of the significant role that O'Hare plays for connecting traffic, this level of delay clearly impacts many other airports and propagates further delays and inefficiencies throughout the NAS.

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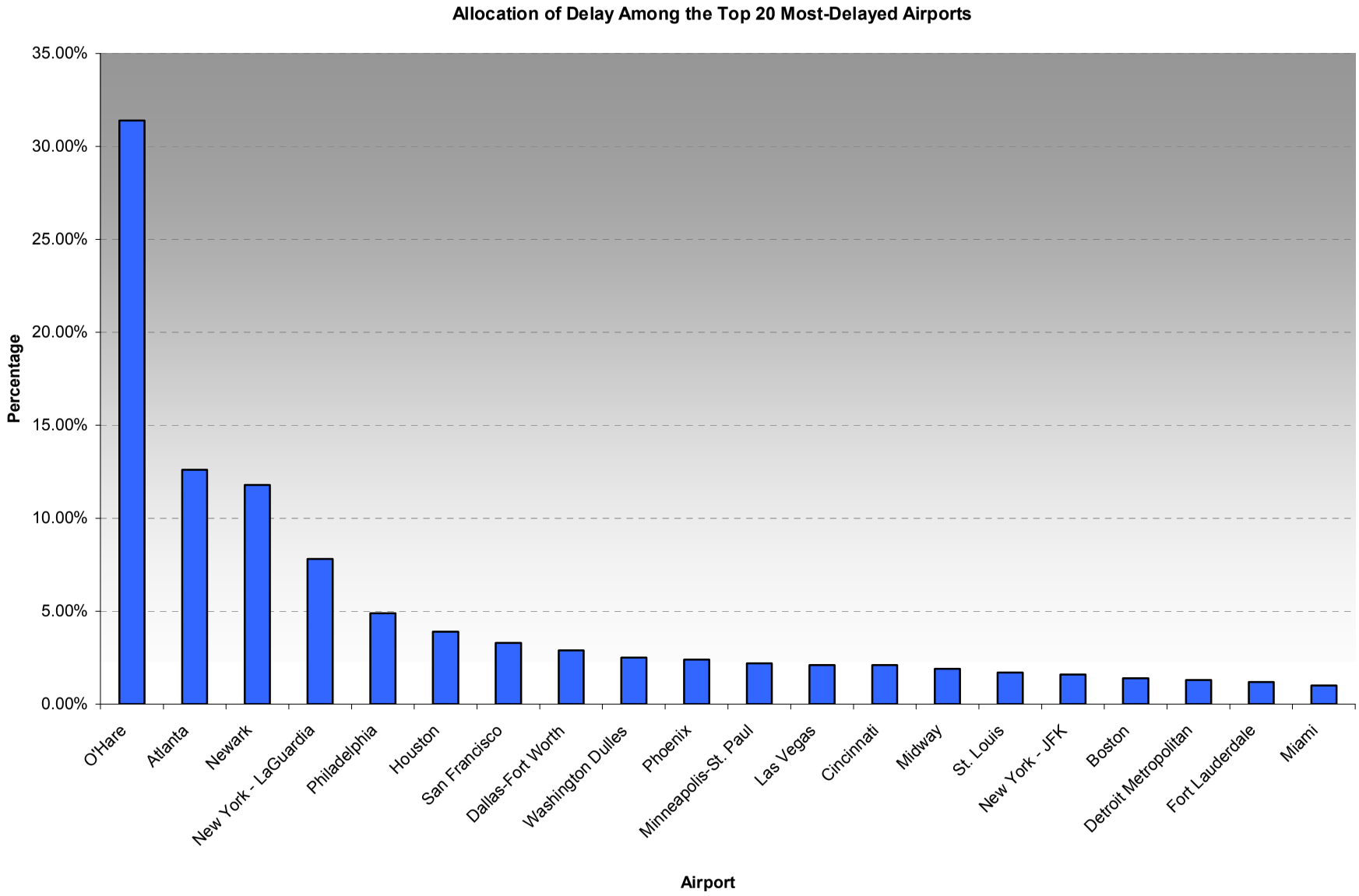


Source: FAA OPSNET; Crawford, Murphy and Tilly, Inc. [TPC], December 2004.

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The average annual all-weather (all conditions) delay per operation is a convenient way to describe airport efficiency because it is a single number. Using that single number can, however, obscure the impact that may occur when adverse weather requires instrument flight rules (IFR) operations. At most airports, good weather conditions that permit use of visual flight rules (VFR), occur a majority of the time. Because airlines typically schedule operations for the prevalent weather conditions, and are not able to modify schedules in response to varying weather conditions, aircraft delay is especially severe when the IFR capacity of an airport is substantially lower than its VFR capacity. As a result, total NAS aircraft delay is clearly influenced by IFR operations at key airports. When an airport is a major airline connecting hub or when the airport contains multiple hubbing operations, the adverse weather (IFR) delays at the airport affect the entire NAS.

At O'Hare, the adverse weather (IFR) arrival acceptance rate[7] does not meet the current arrival demand. This IFR acceptance rate is partially limited by the intersecting or converging nature of the existing runway system. While the overall average annual delays were modeled using the Total Airport and Airspace Modeller (TAAM) to be 9.3 minutes per operation in 2002, adverse weather (IFR) delays averaged about 50.1 minutes per operation.[8] In contrast, good weather (VFR) delays were modeled using TAAM and averaged about 7.1 minutes per operation.[9] This discrepancy between the airfield's good and adverse weather performance has a dramatic effect on the NAS.

To meet the needs of airlines, passengers, air cargo operators, and other Airport users, the capacity of terminal and support facilities should be in balance with the capacity of the airfield. Thus, this component of purpose and need simply reflects the FAA's recognition that any undertaking to enhance the airside capacity at an already congested location also needs additional non-airfield capacity, including terminals, gates, and associated infrastructure. The 21 gates and 5 hard stands in Terminal 5 today are the only nonexclusive gates at O'Hare. Consequently, new entrant carriers must either use these gates or sublease gates from an incumbent carrier. Gates at the other terminals (Terminals 1, 2, and 3) already average 7 to 11 turns per day, which is above the national industry average for gate utilization.

The market forces that have consistently made O'Hare one of the world's busiest and most congested airports are expected to continue. Both the current and forecast aviation demand in the Chicago market signal the need for immediate action to reduce congestion and delay at O'Hare. O'Hare has consistently been a major contributor to the problems related to delays within the NAS. The FAA has concluded, as explained in the EIS, that the projected needs of the Chicago region cannot be met without improvements at O'Hare. As discussed in Section 3.2.2.2 of the Final EIS, the FAA continues to respond to sponsor requests and support the development of other airports in the region, including Gary/Chicago International Airport, Greater Rockford Airport, Milwaukee General Mitchell International Airport, Chicago Midway International Airport, as well as the proposed South Suburban Airport. Although

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7 Acceptance rate is the number of operations a runway or runway system can handle in a one-hour period.

8 See Section 6.4 of this Record of Decision for further information on the TAAM modeling.

9 Ricondo and Associates, Inc. [CCT] Preliminary Draft TAAM Simulation Data for Noise and Air Quality Analysis – [Existing Airfield 2002], January 2004.

improvements at the region's airports would collectively enhance the efficiency of the NAS, O'Hare has consistently been the number one problem related to delays within the NAS in the United States today.

Accordingly, the proposed Federal action, which was the subject of the EIS, encompasses the following purposes:

- Address the projected needs of the Chicago region by reducing delays at O'Hare, and thereby enhancing capacity of the NAS.
- Ensure that existing and future terminal facilities and supporting infrastructure (access, landside, and related ancillary facilities) can efficiently accommodate airport users.

## 6. ALTERNATIVES ANALYSIS

The FAA conducted its analysis of alternatives and has applied the relevant environmental statutes mindful of its statutory objectives. As generally noted in Sections 3.3.1.4 and 3.7 of the Final EIS, the FAA has a statutory charter to encourage the development of civil aeronautics and safety of air commerce in the United States (49 U.S.C. §40104). Congress has also declared as a matter of policy that the FAA should undertake airport construction and improvement projects that increase the capacity of facilities to accommodate passenger and cargo traffic to the maximum feasible extent so that safety and efficiency increase and delays decrease [49 U.S.C. §47101(a)(7)].

While the FAA does not have the authority to control or direct the actions and decisions of the City of Chicago relative to planning for this project, the FAA does have the authority to withhold project approval, including determinations required to establish eligibility for Federal funding and the other Federal actions discussed in this ROD. It was from this perspective that the various alternatives were considered in terms of evaluating and comparing their impacts to that proposed by the City of Chicago, or whether Chicago's proposal would cause impacts warranting disapproval of the Federal actions discussed in this ROD, including eligibility for Federal funding.

As summarized here and discussed in more detail in the Final EIS, the FAA evaluated a broad range of alternatives including non-airfield and O'Hare development alternatives to meet the purpose and needs set forth in Chapter 2 of the Final EIS. Because of the magnitude and complexity of the project and its national implications, the FAA conducted both initial and secondary screening to ensure that a reasonable range of alternatives would be studied in detail.

The initial screening assessed whether 15 potential alternatives met the purpose and need as stated in the EIS. Thereafter, secondary screening examined the feasibility and prudence of alternatives that met the initial screening criteria as well as a "blended" alternative created after initial screening.

The types of alternatives considered in the EIS included the following:

- No Action (i.e. Alternative A),
- Other modes of travel or communication,

- Use of other airports, including regional airports and other mid-continent airports,
- Congestion management,
- Airspace improvements,
- New air traffic control and navigation technologies,
- Eight different O'Hare Development Alternatives, and
- A Blended Alternative combining component parts of other alternatives with limited airfield development (created after initial screening for consideration in secondary screening).

### 6.1 Initial Screening

In its initial screening of alternatives, the FAA evaluated the potential of each alternative to satisfy each component of the purpose and need of the proposed action. A total of 15 alternatives were considered, consisting of: the No Action Alternative, eight O'Hare Development alternatives (shown in **Exhibit 5**), and six Non-Airfield alternatives. For example, the Agency carefully assessed the potential of other airports, including Rockford, Gary/Chicago, Milwaukee, and the proposed South Suburban, as well as other mid-continent airports, to determine whether expanded use of those facilities was likely to alleviate present and future delay at O'Hare. In addition, expanded use of these airports was also considered in conjunction with certain non-airfield alternatives.

At the conclusion of the initial screening process five O'Hare Development Alternatives (Alternatives C, D, E, F and G) plus the No Action Alternative (Alternative A) remained (see **Table 3**). These alternatives were carried forward for secondary screening, see Section 3.2 of the EIS.

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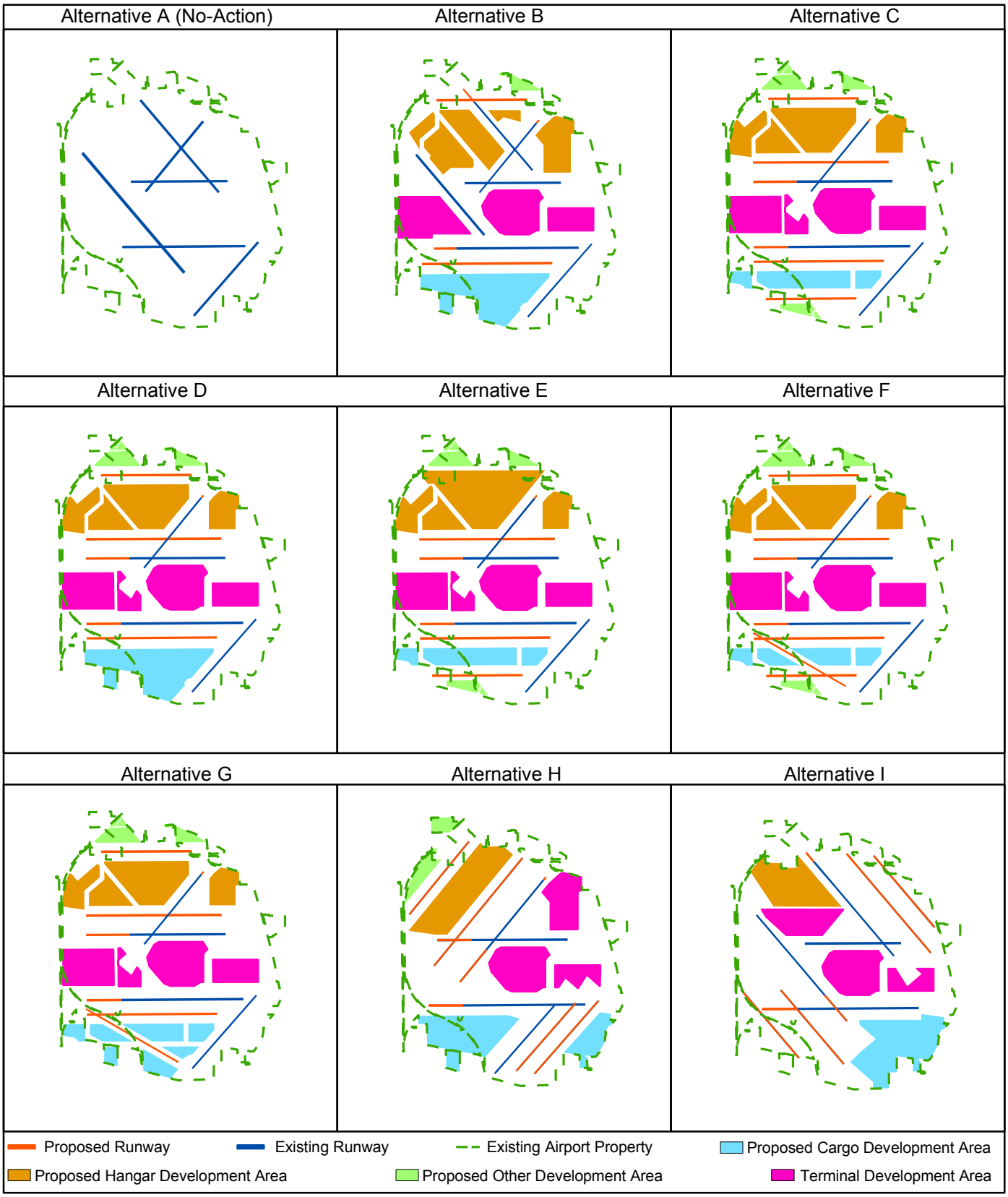


Source: Environmental Science Associates [TPC], 2003. Ricondo and Associates [CCT], Existing and Future ALP Drawing Set, 2004. 07/06/2005

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In the following subsections, the FAA includes detail regarding its careful consideration of the use of other airports, including both regional and other mid-continent hubs, as well as the use of congestion management would not meet the initial screening criteria.

### 6.1.1 Use of Other Regional Airports

There are a number of other regional airports that could accommodate additional commercial passenger service: Chicago Midway International, Gary/Chicago International, Greater Rockford Airport, Milwaukee General Mitchell International, and the proposed South Suburban Airport. O'Hare's location, along with other regional airports, is shown in **Exhibit 3**, with the population density surrounding each of these airports. The use of these regional airports could potentially relieve demand at O'Hare and reduce the urgency or need for certain airport improvements. Appendix C, Section C.1.2, of the Final EIS includes a brief overview of existing regional airports and the status of planning initiatives underway for the proposed South Suburban Airport.

Based upon the analysis presented in the Final EIS, Appendix C, Section C.1.2, forecast aircraft operations at both Midway and Milwaukee are anticipated to exceed their practical airfield capacity by 2018 unless capacity-enhancing improvements are undertaken.[10] While Rockford and Gary/Chicago each have capacity that could be available to support future commercial activity, these facilities presently have surplus capacity and to date have had little to no impact on commercial activities at O'Hare. Additionally, the South Suburban Airport could provide additional capacity if built.

Appendix C, Section C.1.1, of the Final EIS presents information on multiple-airport regions throughout the nation and provides an analysis for development of airline service at other regional airports, which could reduce the need to accommodate forecast aviation demand at O'Hare. In evaluating the use of other airports as an alternative to enhancing capacity at O'Hare, it is helpful to consider how multiple airport systems have evolved in the nation. There are many regional aviation markets throughout the nation that support multiple commercial passenger airports. In 2002, 10 of the 15 largest air travel markets in the United States were served by more than one airport and seven (7) were served by three (3) or more secondary airports. Exhibits 3-2 through Exhibit 3-6 of the Final EIS depict the top five market areas in the United States, showing the population densities and each of the airports serving these market areas. Multiple airport systems can be reasonably expected to share in the service of local originating passenger demand. In terms of local originating passengers, as of 2002, the Chicago area was the third largest air travel market in the nation, following New York and Los Angeles.

Currently in the Chicago market, O'Hare International, Midway International, and General Mitchell International Airport in Milwaukee, each accommodate at least 10 percent of regional demand. There is no current example in the United States for a region to be served by more than three airports each with a significant (10 percent or greater) market share. From this data,

[10] MKE is in the process of updating its Airport Master Plan, which will address the type and extent of facilities required to meet future demand. The implementation of planned improvements could substantially increase the airport's capacity.

it is not reasonable to conclude that the Chicago area could be served by more than three airports, with each having 10 percent or more of the regional demand.

Additional conclusions from this analysis are: (1) it is possible that the capacity at other existing and potential regional airports could be used to satisfy some of the local origin-destination passenger demand forecast for O'Hare, (2) it is not likely that any of the other regional airports would be used as a significant connecting hub or international gateway during the forecast period, (3) the continued role of O'Hare as a major national connecting hub and international gateway is dependent on the airline service of local origin-destination demand at O'Hare, so there is a limit to the amount of local demand that could be diverted while still maintaining the roles of O'Hare as a hub and gateway, (4) the practical limit of potential diversion of demand from O'Hare is estimated to be far less than the likely availability of capacity at other regional airports, and (5) any material diversion of demand from O'Hare would require airline strategic decisions which cannot be predicted or relied upon. As a result, it was determined that the use of other regional airports would not, by itself, be sufficient to satisfy purpose and need. Although the use of other regional airports would not be sufficient to satisfy purpose and need, the FAA continues to respond to sponsor requests and support the development of other airports in the region, including Gary/Chicago International Airport, Greater Rockford Airport, Milwaukee General Mitchell International Airport, Chicago Midway International Airport, as well as the proposed South Suburban Airport.

### 6.1.2 Use of Other Mid-Continent Hubs

Other mid-continent airports could potentially be used to accommodate connecting passengers forecast for O'Hare. Significant reductions in connecting passenger traffic at O'Hare would likely reduce the level of air service for local passengers at O'Hare. The current connecting hub operations at O'Hare enable a range and frequency of service that is convenient for local passengers. With connecting passengers available to "fill" the airplanes, airlines can provide a greater offering of nonstop service to multiple destinations than would otherwise be the case. If connecting passengers were diverted to other hubs, it is likely that there would be a reduction in the frequency and range of nonstop service. This reduction in the frequency and range of service would likely be most pronounced for smaller domestic markets and for international markets, which rely significantly on connecting passenger flows. This would result in diminished service to local Chicago passengers.

Over time, as bilateral agreements for international air service have been liberalized to more closely resemble the domestic deregulated environment, international service is an increasingly important component of air service at O'Hare. International traffic at O'Hare has grown at a faster rate than domestic traffic. As shown on **Table 2,** O'Hare is currently one of the top five international gateway airports in the nation.

## TABLE 2
## TOP 20 US AIRPORTS – INTERNATIONAL ENPLANEMENTS

| | ACI International Enplanements – CY 2002 | | |
|---|---|---|---|
| **Rank** | **Airport** | **International Enplanements – CY 2002** | **(Rounded)** |
| 1 | John F. Kennedy International | 7,605,216 | 7,605,000 |
| 2 | Los Angeles International | 7,435,442 | 7,435,000 |
| 3 | Miami International | 7,170,124 | 7,170,000 |
| 4 | O'Hare International | 4,358,579 | 4,359,000 |
| 5 | San Francisco International | 3,650,692 | 3,651,000 |
| 6 | Newark Liberty International | 3,546,775 | 3,547,000 |
| 7 | Hartsfield-Jackson Atlanta International | 2,863,505 | 2,864,000 |
| 8 | Houston–Intercontinental | 2,855,102 | 2,855,000 |
| 9 | Dallas / Fort Worth International | 2,241,281 | 2,241,000 |
| 10 | Honolulu International | 2,125,931 | 2,126,000 |
| 11 | Washington-Dulles | 2,017,724 | 2,018,000 |
| 12 | Boston-Logan | 1,811,884 | 1,812,000 |
| 13 | Philadelphia International | 1,594,735 | 1,595,000 |
| 14 | Detroit Metropolitan | 1,340,945 | 1,341,000 |
| 15 | Orlando International | 772,182 | 772,000 |
| 16 | Minneapolis-Saint Paul International | 741,123 | 741,000 |
| 17 | Seattle-Tacoma International | 703,516 | 704,000 |
| 18 | Fort Lauderdale – Hollywood International | 602,777 | 603,000 |
| 19 | Phoenix Sky Harbor International | 601,550 | 602,000 |
| 20 | Charlotte Douglas International | 516,843 | 517,000 |

Source: Airports Council International, December 2004.

Because the Chicago region is such a strong origin and destination market, it is likely to remain as a primary hub, essential to the operations of each of the hubbing carriers. Therefore, when combined with the presence of both domestic and international connecting traffic, it is unreasonable to expect a significant shift in traffic to other mid-continent airports.

Furthermore, neither the FAA nor the City of Chicago can direct how airlines conduct their network operations.[11] Consequently, implementation of this alternative would require new authority to provide control over airline service patterns at O'Hare and possibly other airports, which is (1) in direct conflict with the deregulation of the airline industry that occurred in 1978 and (2) beyond the capability of the FAA.

Particularly in light of the recent business decision by American Airlines to downsize their St. Louis hub operations in favor of expanded hub operations at O'Hare, FAA believes it is not reasonable to expect (1) one or both hubbing carriers to voluntarily shift enough connecting traffic to one or more alternative mid-continent airports to avoid the need for improvements at O'Hare or (2) that the Federal government would mandate such a shift. Therefore, the use of other mid-continent hub airports alternative does not meet the purpose and need.

[11] Suburban O'Hare Commission v. Dole, 787 F.2d 186,192 (7th Cir. 1986) and Citizens Against Burlington, 938 F.2d 190 (D.C. Cir. 1991).

### 6.1.3 Congestion Management

The FAA evaluated congestion management, including both administrative- and market-based options, as an alternative to meet the purpose and need. To address the purpose and need, congestion management measures would need to be designed to enable O'Hare and/or other airports to accommodate all forecast originating and connecting passenger activity.

With respect to the administrative options available to implement the congestion management concept, as explained in Section 2.2.4 of the Final EIS, the FAA issued a Notice of Proposed Rulemaking (NPRM) on March 25, 2005, to extend the limitation of flight schedules as a temporary congestion management measure.[12] The NPRM makes clear, however, that the use of arrival caps as a method of reducing flight delays is not preferable to the long-term goal of increasing airport capacity through infrastructure enhancements. This same point has also been made by the two hubbing carriers, American and United Airlines.[13] Even if this were to occur, congestion management is not an effective tool to address the future needs of the Chicago region.

The NPRM specifically stated:

> The FAA is proposing this rule to address persistent flight delays related to over-scheduling at O'Hare International Airport (O'Hare). This proposed rule is intended as an interim measure, because the FAA anticipates that the rule would yield to longer term solutions to traffic congestion at the airport. Such solutions include an application by the City of Chicago that, if approved, would modernize the airport and reduce levels of delay, both in the medium term and long term. For this reason, the proposed rule includes provisions allowing for the limits it imposes to be gradually relaxed and in any event would sunset in 2008.

As noted above, the NPRM makes clear, however, that the use of arrival caps as a method of reducing flight delays is not preferable to the long term goal of increasing airport capacity through infrastructure enhancements. As stated:

> Although arrival caps are being proposed in this rule, imposing caps on the use of airport capacity does not meet aviation demand; rather, such caps artificially limit operations during certain hours to achieve the benefit of delay reduction. The FAA's preferred approach to reducing delay and congestion is to increase airport infrastructure so that capacity meets demand. Because a timely increase to airport capacity is not always feasible, alternative measures may be necessary to address congestion that adversely affects the efficiency of the national airspace system.

Further, the FAA has stated earlier in the Final EIS for the Runway 17-35 Extension Project at Philadelphia,

> As a matter of policy, [the Office of the Secretary of Transportation] and FAA disfavor administrative approaches to demand management as an artificial constraint on the demand for air transportation. For example, such approaches bar air carriers from offering air travelers as much service as they would like. Administrative approaches should only be employed where

[12] Notice of Proposed Rulemaking: Congestion, Delay Reduction and Operating Limitations at Chicago O'Hare International Airport, Federal Register, Vol. 70, No. 57, Friday March 25, 2005.

[13] United Airlines and American Airlines comments on the NPRM can be found in Appendix A, Attachments A-7 and A-8 of the Final EIS.

> absolutely necessary and as an interim, stop-gap measure, until an acceptable solution to delay can be implemented.[14]

Title 49 U.S.C. §47101(a)(9) provides that as a matter of congressional policy, artificial restrictions on airport capacity are not in the public interest and should be imposed by the FAA to alleviate air traffic delays only after other reasonably available and less burdensome alternatives have been tried. Accordingly, it remains the FAA's position that administrative rules that cap operations may be suitable interim actions where improvements are physically impractical, or not yet implemented.

With respect to market-based approaches to congestion management, Appendix E, Section E.1.2.3 of the EIS, presents an analysis of alternatives and their applicability to O'Hare. The conclusions of this analysis are: (1) there is virtually no potential to accommodate unconstrained demand at O'Hare through peak-spreading, (2) there is likely to be potential to provide incentives for the use of larger aircraft and thereby accommodate more passenger demand with fewer aircraft operations, although this is limited by the current and projected fleet composition of airlines, and (3) congestion management alone is not likely to result in accommodation of unconstrained passenger demand without other improvements or actions. Thus, this alternative would not, by itself, meet purpose and need.

## 6.2 Secondary Screening

The secondary screening criteria were drawn from the applicable environmental statutes and regulations that are used in this section to evaluate the alternatives retained as a result of the initial screening process. For example, several criteria are found in FAA Order 5050.4A *(Paragraph 83b)*. In pertinent part that Order provides:

> [These acts] require a finding that "no feasible and prudent alternative" exists. The terms "feasible" and "prudent" are separate criteria and refer to sound engineering principles and sound judgment, respectively. A construction alternative, for example, may be feasible if, as a matter of sound engineering principles, it can be built. It may not be prudent, however, because of safety, policy, environmental, social, or economic consequences. As outlined in FAA Order 5050.4A, the environmental documentation must show that no feasible and prudent alternative exists when all factors (safety, national policy, efficiency, economic, social, and environmental) are considered.

The FAA applied the secondary criteria with the following in mind:

- Pursuant to NEPA, the FAA must take a "hard look" at all "reasonable" alternatives, which involves a study of those alternatives "that are practical or feasible from the technical and economic standpoint and using common sense."
- Because the proposed action involves the application for a permit from the U.S. Army Corps of Engineers to fill waters of the U.S., issuance of the 401 Water Quality Certification from the IEPA, and required FAA findings regarding wetlands and floodplains, the FAA must also comply with the alternative analysis of the Clean Water Act, requiring a finding that no practicable alternative exists that would avoid or further minimize impacts to the resources at issue.

[14] Philadelphia Final Environmental Impact Statement, Chapter 3, page 3-22, February 18, 2005.

- Further, the proposed action implicates Section 4(f) of Department of Transportation Act and Section 6(f) of the Land and Water Conservation Act (See Appendix L of the Final EIS) because there is proposed use of properties protected by those statutes, including historic properties.
- As a result, the FAA must conduct alternatives analyses as required by those statutes.

The Council on Environmental Quality (CEQ) and the FAA's environmental policies and procedures require the EIS to serve as the platform for satisfying not only NEPA, but all these other environmental statutes as well. Because the concepts of reasonableness, practicability, and prudence are so similar, the FAA chose not to conduct separate sets of analyses for these retained alternatives under each of the statutes identified above. Instead, the Agency integrated these three similar concepts into one consolidated, common-sense, secondary screening process.

By definition, each of the retained alternatives appeared feasible as a matter of sound engineering principles, capable of being implemented, and operated safely. The examination of whether the retained alternatives were "reasonable" in the secondary screening analysis involved issues of practicality and prudence. This examination also involved measuring alternatives against the purpose and need for the proposed action. Accordingly, the retained alternatives were evaluated relative to one another with respect to environmental, social, efficiency, economic, and national policy factors. At the conclusion of the secondary screening process three alternatives (Alternatives C, D, and G) plus the No Action Alternative (Alternative A) remained. **Table 3** provides a summary of the findings of the secondary screening process. For more information on FAA's careful consideration of each of these alternatives, including the basis of the conclusions reached in secondary screening, see Section 3.3.2 of the EIS.

In the following subsection, the FAA describes why the Blended Alternative, which included the use of other regional airports, as well as the use of congestion management, would not meet the secondary screening criteria.

**Blended Alternative**

Following initial screening, the FAA created a Blended Alternative combining use of the non-airfield alternatives (including use of other airports, congestion management, other modes of transportation, airspace improvements, and new technology) with less extensive development (Alternative B). The FAA examined the possibility that this Blended Alternative might meet the purpose and need for the proposed action.

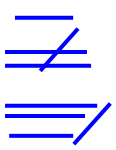
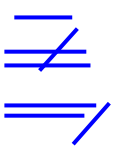
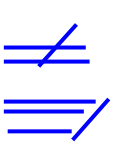
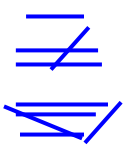
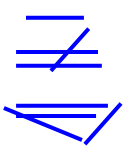
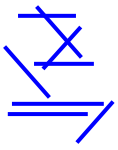
The Blended Alternative would have environmental impacts that are substantially equal to other alternatives and as noted previously appears to be feasible from an engineering standpoint. Based on professional judgment, the Blended Alternative would perform worst, in terms of delay reduction, of all the alternatives considered in secondary screening. Therefore, in terms of delay costs, this alternative would yield the least dollar savings to passengers and airlines.

The Blended Alternative consists of several speculative technological, and infrastructure developments that are combined with a fundamental restructuring of current marketplace management of aviation demand. While it is conceivable that this series of events could occur

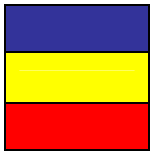
and adequately address the needs for this project, there are many hurdles that must be overcome including the fact that most are not within the control of the FAA to implement. These hurdles were independently discussed in the initial screening of each of the components used in the Blended Alternative in Section 3.1.2 of the EIS.

The Blended Alternative only has the potential to meet the purpose and need requirements if each of the identified components is implemented and achieves optimal performance. The implementation of the many components lies with multiple entities, and each of those entities must address numerous secondary effects in implementing each of the components. These secondary effects include cost, difficulty in coordinating multiple entities, unwillingness of public to accept congestion management, uncertainty of federal policy changes relative to congestion management, uncertainty in development and acceptance of new technology, etc. There is such little margin of error in the Blended Alternative that an adverse secondary effect, and/or a failure to achieve optimal implementation, in just one of the components could completely undermine this alternative. It is unreasonable to expect so many unproven technologies and concepts that are overseen by a disparate range of entities to perfectly come together and represent a prudent alternative. Therefore, as described in Section 3.3.2.6 of the EIS, further consideration of the Blended Alternative was not prudent or reasonable, and it was eliminated from further consideration.

## TABLE 3
## SUMMARY OF SECONDARY SCREENING

| Alternative | C Sponsor's Proposal | D | E | F | G | Blended Alternative |
|---|---|---|---|---|---|---|
| **Runway Layout for Each Alternative** |  |  |  |  |  |  |
| **1. ENVIRONMENTAL- Identify clearly superior and/or inferior alternatives with respect to environmental factors.** | | | | | | |
| No alternative is clearly inferior or superior with respect to environmental factors. Therefore, no alternatives were eliminated on the basis of environmental factors. | | | | | | |
| **2. OPERATIONAL EFFICIENCY - Identify clearly superior and/or inferior alternatives with respect to operational efficiency.** | | | | | | |
| Delay Reduction | | | | | | |
| **3. ECONOMIC - Identify clearly superior and/or inferior alternatives with respect to economic factors.** | | | | | | |
| A. Delay Costs | | | | | | |
| B. Local Tax Base | | | | | | |
| C. Development Costs | | | | | | |
| **4. NATIONAL POLICY - Identify clearly superior and/or inferior alternatives with respect to implementation factors.** | | | | | | |
| Implementation Factors | | | | | | |
| **5. CONCLUSION** | | | | | | |
| **Retain for Detailed Evaluation** | **YES** | **YES** | **NO** | **NO** | **YES** | **NO** |

Legend:



Alternative is better than other alternatives in the specific category.

Alternative is between other alternatives in the specific category.

Alternative is worse than other alternatives in the specific category.

### 6.3 Description of Alternatives Retained for Detailed Consideration

Each of the alternatives which were retained for detailed consideration in Chapter 5 of the EIS following the secondary screening process are described in the subsections below.

**Alternative A (The No Action Alternative) -** In accordance with CEQ Regulations, Section 1502.14, the No Action Alternative was retained for detailed consideration. Under Alternative A, the FAA assumed some limited development at O'Hare would continue without the proposed action. For purposes of defining the No Action Alternative, improvements which would be reasonably foreseeable without the O'Hare Modernization and which would not require additional FAA reviews or approvals pursuant to NEPA are included in the No Action Alternative.

Major improvement projects included as part of Alternative A are described in Appendix E, Section E.6.1 of the EIS. Most Alternative A improvements are intended to replace and/or rehabilitate airport infrastructure to maintain operations throughout the planning period. However, a few of the projects associated with Alternative A would enhance the operational capabilities of the existing airfield.

The airfield layout consists of three pairs of parallel runways (e.g., six total runways) oriented in the 9/27, 14/32, and 4/22 directions. The lengths and widths of these runways are provided in Table 3-6 of the EIS, and are identical to the existing runway lengths and widths. The airport's terminal facilities would remain in their existing locations. The terminal complex would consist of the Airport's existing gates, which are distributed among four terminals. Customs and immigration services facilities to process passengers arriving from abroad would remain located in Terminal 5, requiring all international arrivals to disembark their passengers at Terminal 5.

Ground access to the terminal complex would remain and would be provided via the existing I-190 corridor. Ground access to other major airport development areas—including the cargo complex on the south side of the airfield, the general aviation and air cargo facilities located on the former Air Force site on the northeast corner of the airfield, and airline maintenance complex located on the northwest corner of the airfield—would remain the same as it is today.

Aside from committed airfield and support facility improvements on and around the former Air Force facility, aviation support, air cargo, and general aviation facilities would remain in their current locations without substantial modification or expansion.

Based on the Total Airspace and Airport Modeller (TAAM) simulation results, Alternative A would neither reduce existing delays nor accommodate anticipated growth in aviation activity at the Airport at acceptable levels of delay.

**Alternative C -** This airfield reconfiguration would result in two sets of parallel runways. The first set would consist of six parallel runways in the 9/27 orientation, and the second set would consist of two parallel runways in the 4/22 orientation. Runways 14L/32R and 14R/32L would be decommissioned. The airfield layout of Alternative C can be seen in **Exhibit 1** in Section 2 of this ROD. Alternative C was the FAA's Preferred Alternative in the Final EIS, and the O'Hare Modernization Program proposed by the City of Chicago. Alternative C is the Selected Alternative in this ROD.

Existing Runway 9L/27R would be renamed Runway 9R/27L, and existing Runway 9R/27L would be renamed Runway 10L/28R. Both of these existing runways would be extended. Existing Runway 9L/27R/future Runway 9R/27L would be extended from 7,967 feet to 11,260 feet, and existing Runway 9R/27L/future Runway 10L/28R would be extended from 10,144 feet to 13,000 feet.

The existing airport terminal complex would be expanded with the construction of Terminals 4 and 6, and the expansion of Concourse K. In addition, a new 60-gate terminal complex—including both landside and airside facilities—would be constructed on the west side of the airfield. This new west terminal would be supported by its own access roadway system, parking facilities, and passenger processing facilities. The west terminal would be connected to

the existing terminal complex via an underground people mover system that would permit ticketed, screened passengers to travel between the new west terminal and Terminal 1. The new west terminal would incorporate its own U.S. Customs and Immigration Services facilities to process international travelers.

Land areas would be reserved for the expansion of airline support, airport support, and air cargo facilities. In addition, facilities for new storm water detention, wastewater treatment, and utilities would be provided. To accommodate new runways and supporting development, the City of Chicago would acquire approximately 135.8 acres of land northwest of the existing Airport boundary and approximately 304.2 acres of land to the southwest of the Airport.

Based on TAAM simulation results, average annual delay in 2018 is estimated at 5.8 minutes per operation for Alternative C. The delay reduction achieved by Alternative C is greater than the delay reduction of Alternatives A, D and G. A detailed description of the operational and delay characteristics of Alternative C is provided in Appendix E, Section E.6.2 of the EIS, Alternative C.

**Alternative D –** As presented on Exhibit 3-4 of the EIS, the current six-runway airfield at the Airport would be reconfigured in accordance with the O'Hare Modernization Program proposed by the City of Chicago with the exception that the 7,500-foot long Runway 10R/28L would not be constructed. Ultimately, this airfield reconfiguration effort would result in two sets of parallel runways. The first set would consist of five parallel runways in the 9/27 orientation, whereas the second set would consist of two parallel runways in the 4/22 orientation. The existing 14/32 parallel runway system, consisting of Runways 14L/32R and 14R/32L would be decommissioned. A basic diagram of the Alternative D airfield can be seen in **Table 3** in the previous section. For Alternative D, the terminal and landside improvements would be the same as Alternative C.

Based on TAAM simulation results, average annual delay in 2018 is estimated at 10.5 minutes per operation for Alternative D. The delay reduction achieved by Alternative D is less than the delay reduction of Alternatives C and G but significantly more than that of Alternative A. A detailed description of the operational and delay characteristics of Alternative D is provided in Appendix E, Section E.6.3, of the EIS.

**Alternative G -** As presented on Exhibit 3-5 of the EIS, the current six-runway airfield at the Airport would be reconfigured in accordance with the O'Hare Modernization Program proposed by the City of Chicago with the exception that the 7,500-foot long Runway 10R/28L would not be constructed. In place of this distant south parallel runway, a 9,946-foot long runway would be constructed on the southwest quadrant of the airfield with a 12/30 orientation. Ultimately, this airfield reconfiguration effort would result in two sets of parallel runways plus new Runway 12/30. The first set would consist of five parallel runways in the 9/27 orientation, whereas the second set would consist of two parallel runways in the 4/22 orientation. The existing 14/32 parallel runway system, consisting of Runways 14L/32R and 14R/32L would be decommissioned. A basic diagram of the Alternative G airfield can be seen in **Table 3** in the previous section. For Alternative G, the terminal and landside improvements would be the same as Alternative C.

Based on TAAM simulation results, under Alternative G, average annual delay in 2018 is estimated at 6.9 minutes per operation. The delay reduction achieved by Alternative G is significantly greater than the delay reduction of Alternatives A and D but less than that of Alternative C. A detailed description of the operational and delay characteristics of Alternative G is provided in Appendix E, Section E.6.4, of the EIS.

### 6.4 Simulation Modeling of Alternatives A, C, D and G

As a foundation for the majority of analysis work to be accomplished under the EIS process, FAA employed state-of-the-art computer simulation modeling tools and methodology. Based on the forecast, computer simulation allows the FAA to evaluate multiple airspace, airfield, and operational scenarios in a variety of contexts and assess how each would perform. Based on forecast flight schedules, this model takes each aircraft traveling to and from O'Hare through its hypothetical trip in conjunction with all other aircraft in the region's airspace arriving at or departing from O'Hare and aircraft movement on the airfield. In other words, this model simulates flights using O'Hare from departure at another airport to when the engines are turned off at the gate at O'Hare. Then the model calculates the appropriate time between flights at that gate and provides a departure time based upon both ground traffic at O'Hare and other aircraft demanding the same airspace. This simulation modeling, utilizing the commercially-available TAAM software, provided insight into the operational capabilities of the airfield alternatives being studied, and provided a basis for assessment of environmental consequences associated with each alternative as well as the operational performance.

An unprecedented series of TAAM simulation analyses were conducted by the City of Chicago's Consultant Team (CCT) with direction, oversight, review, and approval by the FAA and FAA's Third Party Contractor (TPC). TAAM simulation experiments were conducted for the No Action Alternative and Build Alternatives C, D, and G. The purpose of this effort was to provide insight as to how the various airfield alternatives performed when compared to one another. In addition, the model outputs provide input data to the noise and air quality assessment models.

The FAA and TPC participated in an intensive, nine month review process during this simulation effort. The objective of this process was to ensure that TAAM input assumptions, modeling methodologies, and output data conformed to industry best modeling practices and accurately reflected air traffic control rules and procedures. In total, the FAA invested over 2,000 hours reviewing assumptions, draft results, animations, and final results. The FAA review was conducted by an Air Traffic Work Group consisting of: FAA Management and National Air Traffic Controller Association (NATCA) representatives from O'Hare Tower, the Chicago Terminal Radar Approach Control Facility (TRACON), and the Chicago Center (ZAU); FAA Airports Division; and the FAA's TPC.

### 6.5 Evaluation of Commenter and FAA-developed Derivatives

In the course of reviewing comments on the Draft EIS, FAA was presented with suggestions and requests regarding the alternatives presented in the Draft EIS that could be considered for the purpose of avoiding or mitigating impacts. These impacts primarily dealt with the acquisition of property associated with proposed Build Alternatives.

**Commenter Derivatives**

Although in many cases these suggestions or requests have been described by commenters as "new alternatives", FAA reviewed these proposals and believes that they are properly characterized as "variants" or "derivatives" to the alternatives that were presented in the Draft EIS. A document titled "The Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," in the Federal Register on March 23, 1981, Question 29b specifically deals with the issue of how an agency must respond to a comment raised on the Draft EIS concerning a specific alternative or alternative(s) not previously considered. Below are two scenarios discussed in this document which supports the agency's approach to the further evaluation of "variants" or "derivatives."

> A second possibility is that an agency may receive a comment indicating that a particular alternative, while reasonable, should be modified somewhat, for example, to achieve certain mitigation benefits, or for other reasons. If the modification is reasonable, the agency should include a discussion of it in the final EIS….
>
> A third slightly different possibility is that a comment on a draft EIS will raise an alternative which is a minor variation of one of the alternatives discussed in the draft EIS, but this variation was not given any consideration by the agency. In such a case, the agency should develop and evaluate the new alternative, if it is reasonable, in the final EIS. If it is qualitatively within the spectrum of alternatives that were discussed in the draft, a supplemental draft will not be needed….

The commenter's derivative alternatives can be categorized as derivatives of the "No Build" or "Limited Build" alternatives. Derivative alternatives were submitted to the FAA that included variations of the no build or limited build alternatives. The commenter's derivatives are discussed in Section 3.6 of the Final EIS and in this ROD at Section 11.1.2. In large measure, these suggestions and requests shared two common characteristics. First, they retained the existing runway triangle on the north side of the airfield, and second, they adopted key portions of the FAA's proposed runway geometry on the airfield's south side, as presented in Alternatives C and D. Accordingly, the FAA was able to rely upon its extensive experience in air traffic control at O'Hare, as well as the detailed TAAM modeling conducted for the EIS secondary screening to assess the potential effectiveness of these proposals.

FAA representatives evaluated these eight derivatives relative to the purpose and need. Based on its evaluation, FAA determined that none of the commenter derivatives meet purpose and need, therefore, these derivatives did not warrant further consideration.

**FAA Developed-Derivatives**

As a result of comments made on the Draft EIS, the Agency directed its staff to develop derivatives of Alternative C, the preferred alternative, that would avoid or minimize potential impacts to St. Johannes Cemetery. These derivatives included among others, the elimination, relocation, or shortening of proposed Runway 10C/28C, which under Alternative C (and other alternatives retained for secondary screening) would pass directly over St. Johannes Cemetery. FAA representatives from within the Great Lakes Region (Airports, Air Traffic, Chicago Area Modernization Program Office, Third Party Contractor, and Runway Safety Officer) evaluated the FAA-developed five derivatives in comparison to Alternative C. Again, because of the great similarity between Alternative C and the FAA-developed derivatives, the Agency was able to

rely upon the TAAM modeling for Alternative C to assess the potential effectiveness of these proposals. Based on its evaluation, FAA determined that none of the five FAA derivatives was a less restrictive alternative capable of performing as well as Alternative C. Similarly, none of the five derivatives would avoid or minimize impacts to St. Johannes Cemetery while also performing as well as Alternative C. For further information on the FAA's careful evaluation of these five derivatives, including a basis for this conclusion, please see Section 3.6 of the Final EIS.

## 7. AGENCY PREFERRED AND ENVIRONMENTALLY PREFERRED ALTERNATIVES

### Agency's Preferred Alternative

The FAA identified Alternative C, the City's proposed O'Hare Modernization Program, as the agency's preferred alternative in the Final EIS, for reasons summarized briefly below and discussed in more detail in Section 3.7 of the Final EIS.

**Table 4** presents a side-by-side comparison of the alternatives in terms of environmental, economic, and operational impacts. As shown in **Table 4**, all of the Build Alternatives (Alternatives C, D, and G) have substantially similar environmental impacts and would fully satisfy the purpose and need of ensuring that existing and future terminal facilities and supporting infrastructure (access, landside, and related ancillary facilities) can efficiently accommodate airport users. Yet, Alternative C is clearly superior in terms of reducing average annual delays. It is more effective and efficient than any of the other build alternatives in meeting the purpose and need of reducing delays at O'Hare, thereby reducing delays in the National Airspace System. In consideration of the substantial similarity between the environmental impacts for the Build Alternatives, the FAA identified the alternative that best fulfills its statutory mission and responsibilities as its preferred alternative.

In terms of environmental consequences, Alternatives C, D, and G would have the same wetland, DOT Section 4(f)/6(f), historic property, and air quality impacts. Alternative C would have slightly greater noise, land acquisition/relocation, and environmental justice impacts than Alternatives D and G, but fewer floodplain impacts than Alternative G.

In terms of delay reduction benefits, while serving 1,194,000 annual operations in 2018, Alternative C (City's OMP) would have an average annual delay of 5.8 minutes per operation, Alternative D would have 10.5 minutes of delay per operation, and Alternative G would have 6.9 minutes of delay per operation. Notably, when comparing Alternative C to Alternative D, there is an 81 percent increase in the average annual delay with Alternative D. When comparing Alternative C to Alternative G, there is a 19 percent increase in the average annual delay with Alternative G. Alternative C provides the greatest benefits in reducing delays in the Chicago region and consequently in the NAS. As discussed in the EIS, O'Hare affects the NAS because the airfield lacks adequate runway capacity and gate availability to handle both current and forecast levels of activity for O'Hare. In addition, delays at O'Hare have a direct impact on the NAS, in part because approximately 51 percent of the total passengers traveling through O'Hare currently connect to and from other airports.

In contrast with the Build Alternatives, the No Action Alternative is projected to serve 974,000 annual operations (constrained) in 2018 at an average annual delay 17.1 minutes per operation.[15] This is approximately 200,000 less operations at a significantly higher level of delay than any of the Build Alternatives and does not meet the purpose and need.

**Environmentally Preferred Alternative**

In accordance with 40 CFR 1505.2(b), the environmentally preferred alternative should be identified in the ROD. Although this ROD finds that the proposed project will include all reasonable steps to minimize harm from significant adverse environmental impacts, the FAA recognizes that the No Action Alternative would impose the least environmental impacts. Therefore, the No Action Alternative is the environmentally preferred alternative. Notably, the No Action Alternative would avoid the impacts of land acquisition and relocation of St. Johannes Cemetery, houses, and businesses; impacts on properties protected under DOT Section 4(f), and impacts on wetlands. From a NEPA perspective applying this provision, the environmentally preferred alternative is often found to be the No Action Alternative; that is true in this case as well.

**Selected Alternative**

Under the No Action Alternative, additional runways and infrastructure would not be developed at O'Hare now or in the near future. Adoption of the alternative would not meet the purpose and need. It would fail to alleviate the current and forecast delays at O'Hare which are documented in the Final EIS. Accordingly, although it is the environmentally preferred alternative, for the reasons discussed in Section 6 of this ROD, it is concluded that adoption of the No Action Alternative is not in the public interest.

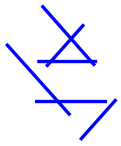
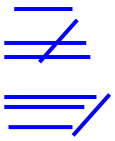
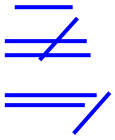
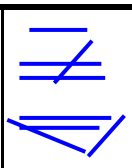
All of the factors that led the FAA to identify Alternative C as the preferred alternative equally support a decision to select it and approve the related Federal actions necessary for its implementation at O'Hare. In addition, the FAA selects Alternative C for the following reasons. First, Alternative C is consistent with the FAA's statutory and policy obligations, specifically (1) the FAA's legal obligation to plan the kind of airport development necessary to provide a safe, efficient, and integrated system of public-use airports adequate to anticipate and meet the needs of civil aeronautics (49 U.S.C. §47103), and (2) the Congressional declaration of policy that artificial restrictions on airport capacity are not in the public interest and should be imposed to alleviate air traffic delays only after other reasonably available and less burdensome alternatives have been tried [49 U.S.C. §47101(a)(9)].

Second, in making this selection, the Agency was fully aware of the environmental consequences and the benefits as described throughout the Final EIS and this ROD. Additionally, the Agency gave full consideration to all comments regarding the Draft and Final EIS, the Draft and Final Section 4(f) and Section 6(f) Evaluation, and the Draft and Final General Conformity Determination. For example, when comparing Alternative C to Alternative G

[15] The constrained forecast was developed for the evaluation of the No Action Alternative because the existing airport (constrained) is not capable of serving the same number of operations as an improved airfield (unconstrained). For a complete description of the constrained forecast, please see Section B.5 of Appendix B in the FEIS.

(which was demonstrated to be the next most effective in reducing delay after Alternative C), the FAA has calculated that Alternative C produces delay savings immediately commencing with the full build out. These savings total approximately $150 million over a five-year time period after full build out, and would not be realized by any other alternative. Such delay savings would be even greater when Alternative C is compared with those of any other alternative. In addition, the FAA notes that Alternative C is the only alternative that has the potential, should the technology/procedures be approved of immediately implementing four independent arrival streams under all weather.

## TABLE 4
## SUMMARY COMPARISON OF RETAINED ALTERNATIVES

| Runway Layout for Each Alternative | |  |  |  |  |
|---|---|---|---|---|---|
| **Alternatives** | | **A** | **C** | **D** | **G** |
| **1. Environmental Impacts** | | | | | |
| Wetland impacts | Jurisdictional & non-jurisdictional, including non-wetland Waters of the United States (acres) | 23.5 | 154.2 | 154.2 | 154.2 |
| Floodplain impacts | Increase in impervious surfaces area (acres) | 0 | 1,000 | 823 | 1,126 |
| DOT Section 4(f) / 6(f) Parkland impacts | Parkland properties to be acquired | 0 | 3 | 3 | 3 |
| Section 106 impacts | NRHP-eligible properties with adverse effects | 0 | 3 | 3 | 3 |
| Acquisition and relocation impacts | Area of proposed land acquisition (acres) | 0 | 440 | 413 | 413 |
| | Population of proposed land acquisition area | 0 | 2,631 | 2,553 | 2,553 |
| | Housing Units | 0 | 539 | 522 | 522 |
| | Businesses | 0 | 197 | 164 | 164 |
| 65+ DNL noise impacts (Build Out) | Area (acres) | 12,427 | 11,263 | 11,187 | 11,216 |
| | Housing Units | 5,199 | 6,754 | 7,392 | 6,572 |
| | Population | 14,512 | 19,577 | 21,154 | 19,135 |
| Environmental justice impacts | Minority residents in proposed acquisition area by race | 0 | 1,575 | 1,479 | 1,479 |
| | Minority residents in proposed acquisition area by ethnicity | 0 | 1,599 | 1,524 | 1,524 |
| Air Quality Impacts | Compliance with NAAQS | Exceedance of CO at 1 location | No exceedances | No exceedances | No exceedances |
| **2. Operational Efficiency Factors** | | | | | |
| 2018 average annual delay | (minutes per operation) | 17.1 | 5.8 | 10.5 | 6.9 |
| 2018 annual operations served | (operations) | 974,000 | 1,194,000 | 1,194,000 | 1,194,000 |
| **3. Economic Impact Factors** | | | | | |
| Delay cost | Delay cost to the airlines in 2018 (millions) based on $25 per minute of delay | $416.4 | $173.1 | $313.4 | $206.0 |
| Local tax base | Tax base loss of parcels acquired (millions) | $0 | $5.7 | $5.3 | $5.3 |
| Relative development costs | Relative construction cost | Less than C, D or G | More than A, D, less than G | More than A, less than C, G | More than A, C and D |
| **4. National Policy Factors** | | | | | |
| Implementation factors | Regulatory – Does authority exist to implement? | Yes | Yes | Yes | Yes |
| | Sponsor – Is there a sponsor able to fund? | Yes | Yes | Yes | Yes |
| | Service Provider – Will adequate service be initiated? | Yes | Yes | Yes | Yes |

Notes: Surface transportation effects are included in Sections 5.3, of the EIS.
n / a = not applicable
Source: TPC Analysis, Chapter 5, Environmental Consequences, of the Final EIS.

## 8. PUBLIC OUTREACH AND AGENCY COORDINATION

The FAA has committed to public involvement and agency input throughout this EIS process. The FAA *Community Involvement Policy Statement*, dated April 17, 1995, clearly affirms:

> The Federal Aviation Administration (FAA) is committed to complete, open, and effective participation in agency actions. The agency regards community involvement as an essential element in the development of programs and decisions that affect the public.

Additionally, Chapter 2, Paragraph 208b. of FAA Order 1050.1E states:

> At the earliest appropriate stage of the action and early in the process of preparing NEPA documentation, the responsible FAA official, or when applicable, the project proponent, must provide pertinent information to the affected community and agencies and consider the affected communities' opinions (40 CFR 1501.2). The extent of early coordination will depend on the - complexity, sensitivity, degree of Federal involvement, and anticipated environmental impacts of the proposed action.

In Chapter 7, paragraph 74 of FAA Order 5050.4A, as a part of public involvement, the lead agency is encouraged to invite Federal or state agencies that have "jurisdiction by law in areas that may be affected by airport development" to serve as cooperating agencies. These agencies may have expertise in a given area, or assure that the proper permits, licenses, or other requirements are met throughout the development of the EIS.

In an effort to meet and exceed this guidance, the FAA developed and implemented a comprehensive and proactive public involvement program. The facets of the program included:

- Public and Agency Scoping.
- Agency Coordination including initiatives with Cooperating Agencies.
- Public Outreach Program including extensive Environmental Justice Outreach.
- Public Hearings at three separate locations, over three days.
- Utilization of the World Wide Web including the development and implementation of two public websites updated throughout the EIS process: the O'Hare Modernization EIS Website at www.ompeis.net, as well as the O'Hare Modernization Program Document Library file sharing site at: www.agl.faa.gov/OMP/. In order to provide early access to key information prior to release of the Draft EIS, the FAA began posting modeling data and other EIS-related documentation in July 2004 (over six months prior to the issuance of the Draft EIS). Through November 2004, FAA posted over 7.5 millions pages related to O'Hare.
- In order to facilitate additional public disclosure and involvement, FAA posted on its website (www.agl.faa.gov/OMP) the Draft and Final EIS, Draft Section 4(f) and Section 6(f) Evaluation, and Draft General Conformity Determination. In addition, these documents were also delivered in hard copy and CD versions to 33 local libraries.
- The FAA has provided computer support for the use of all FAA web-posted documents and in addition has also provided electronic copies of the web-posted documents upon

request. User website access issues predominately resulted from individual user computer settings that did not allow their internet settings to allow automatic detection of settings and allow active File Transfer Protocol (FTP) access. These settings can be modified to allow access of the FAA material by individual computer users, or if in a corporate environment, system administrators, if they choose to do so. Where individuals or entities chose not to change the settings, the FAA advised them of other website access locations (e.g. including libraries and FedEx/Kinko's). In all instances when requested, FAA provided CD versions of the materials. FAA staff has verified website access from libraries, FedEx/Kinko's locations, and their own homes.

### 8.1 Public Involvement

From the outset, the public has been provided opportunity for input, and their concerns have been considered by FAA throughout the process. Both the City of Chicago and the FAA have been forthcoming with the communities about the project through extensive opportunities for public involvement. The interests of communities have been considered throughout the decision-making process regarding the project.

Because of the Airport's impact on the surrounding communities, the FAA has conducted open public meetings to inform the public of the expansion plans. The FAA has received numerous public comments throughout the EIS process. All of these comments have been reviewed to ensure that the needs and concerns of the public were considered and addressed. Based on the extensive opportunities for public participation, the FAA is satisfied that full consideration has been given to the public's views on airport expansion plans.

The public involvement program included the following:

- From Scoping, and throughout the NEPA process, the FAA has received extensive communication from interested parties.
- The FAA held two agency scoping meetings, one on August 19, 2002 at the Illinois Department of Transportation in Springfield, Illinois, and on August 20, 2002 at the Metcalfe Federal Building in Chicago. Federal, state, and local agencies, including representatives of the Suburban O'Hare Commission were in attendance.
- The FAA held two public scoping meetings, one on August 21, 2002 at the Fountain Blue Banquet Hall in Des Plaines and the August 22, 2002 at Avalon Banquets in Elk Grove Village.
- The FAA held a general informational Mayor's meeting on August 29, 2002. Ninety mayors in the Chicago Metropolitan area were invited to attend.
- Representatives from the FAA have briefed the O'Hare Noise Compatibility Commission (ONCC) on five occasions, February 2, 2003, June 4, 2004, January 25, 2005, May 6, 2005 and June 3, 2005. ONCC is an organization that is dedicated to reducing aircraft noise in the communities around O'Hare International Airport. Its membership includes 22 municipalities, Cook County, and 14 school districts that represent nearly 40 surrounding communities.

- Briefings and presentations by FAA were given to other municipal, community, and professional organizations, including: the Airport Consultants Council, the Transportation Research Board, the DuPage County Board, the Union League of Chicago, the Mount Prospect Rotary Club, the Transport Chicago Conference, the Illinois Society of Professional Engineers, and the American Association of Airport Executives.
- A public outreach meeting conducted by FAA to introduce the preliminary Purpose and Need was held March 19, 2003 at the Sheraton Four Points Hotel in Schiller Park.
- A public website dedicated to the EIS was launched April 25, 2003. The website address is http://www.ompeis.net.
- In June of 2003, the FAA published their Public Outreach Program for the Environmental Impact Statement.
- An FAA Alternatives working session was conducted on October 17, 2003, which included members of local governments to discuss alternatives. The session was held at the Fountain Blue Banquet Hall in Des Plaines.
- Three FAA Environmental Justice public workshops were held May 23, 2004, August 29, 2004 and March 6, 2005.
- On September 29, 2004, the FAA published a Federal Register Notice that announced the early release of EIS related documents. The documents that were posted included the Total Airspace and Airport Modeler (TAAM) simulation results and the Surface Transportation modeling results.
- A Federal Register Notice for the Availability of the Draft EIS was published on January 21, 2005. A subsequent notice was issued by the U.S. Environmental Protection Agency and published on January 28, 2005.
- The Draft EIS was distributed to local libraries, city halls, cooperating agencies, and other interested parties. The FAA requested that the Draft EIS be made available for review from January 14, 2005 through at least March 23, 2005.
- The EIS modeling data and documents referenced in the Draft and Final EIS were delivered to five geographically dispersed local libraries (Mount Prospect, Park Ridge, Elk Grove Village, Bensenville, and Des Plaines) to even further facilitate public involvement and disclosure. The documents referenced in the Draft and Final EIS were also posted to the web at www.agl.faa.gov/OMP/DEIS and www.agl.faa.gov/OMP/FEIS, respectively.
- Three FAA public workshops/public hearings were held to receive comments on the Draft EIS on February 22 (Avalon Banquets – Elk Grove Village), February 23 (Waterford Conference Center – Elmhurst) and February 24, 2005 (White Eagle Banquets – Niles) more than 30 days after the Draft EIS was released for review. Approximately 1,500 people attended the three events and approximately 300 people provided testimony over the course of the three hearings.

- The Draft EIS was available for 60 days, which is a period that extends beyond the minimum 45 days required by CEQ regulations. The comment period for the Draft EIS began on January 21, 2005 was extended 14 days, for a total of 74 days, and ended on April 6, 2005.
- Approximately 1,000 comment documents were received from the public and agencies in response to the Draft EIS. The comments were reviewed and considered by the FAA in the preparation of the Final EIS. Comments received were responded to in the Final EIS (Appendix U, Response to Comments of the Final EIS).
- The Final EIS was distributed to local libraries, city halls, and many of the principal commenters on the Draft EIS. The Final EIS was approved by the FAA on July 25, 2005 released to the public on July 28, 2005, and FAA's Notice of Availability (NOA) was listed in the Federal Register on July 29, 2005. The comment period on the Final EIS began with the USEPA's NOA in the Federal Register August 5, 2005.
- Comments were solicited on portions of the Final EIS. The FAA received approximately 500 pages of comments on the Final EIS and related documentation (Final General Conformity Determination and Final Section 4(f)/6(f) Evaluation). Of the 500 pages of comments, approximately one-half were submitted by the entities that represent the two communities (Bensenville and Elk Grove Village) and the Cemetery Associations that oppose the proposed action. All comments received were carefully evaluated and considered by the FAA. Comments received on the Final EIS are addressed in **Appendix A** of this ROD
- The FAA has conducted two formal Section 106 consultations on August 18 and August 30 of 2005. A court reporter was present at both meetings to document the discussions.

The FAA provided extensive opportunities for the public to comment throughout the EIS process. In addition to public hearing testimony, the FAA received comments in the following formats: written, private testimony, email, and voice mail. Overall, the FAA received approximately 3,500 pages of comments on the Draft EIS and Final EIS and related documentation (Draft General Conformity Determination and Draft Section 4(f)/6(f) Evaluation). Every comment has been considered and addressed in the Final EIS and/or this ROD. Most of the comments focused on Alternative C, the City's proposed OMP. The main themes from those supporting OMP (Alternative C) were economic growth and the benefits to the area's commerce, sustaining the region's prominence as a transportation hub, the employment opportunities of OMP (Alternative C), and that an improved O'Hare would generate improved efficiency/reduced delays. Those speaking in support were primarily business leaders, business associations, members of labor organizations, airline employees, others employed in the aviation industry, and local elected officials.

The main themes from those opposed to OMP (Alternative C) were: concerns about how the project would be funded, relocation of the cemeteries, and support for use of other airports, congestion management, and/or building a south suburban airport rather than expanding O'Hare. Those in opposition included elected officials and local residents of affected suburbs.

In addition, there were comments related to environmental impacts including, among others, air quality, noise, Section 4(f)/6(f), and surface transportation.

Throughout the development of the EIS and this ROD, FAA has had frequent and repeated contact with legal representatives for the Village of Bensenville, Elk Grove Village, St. John's Church of Christ, and Rest Haven Cemetery Association. FAA has engaged the representatives on a variety of fronts, including correspondence, telephone calls, conference calls, at public meetings, and in consultations both at the Great Lakes Region and at FAA Headquarters. FAA believes that the legal representatives' positions have been clearly heard and fairly addressed throughout the EIS process. This, in part, is based on FAA's thorough consideration and response to the over 1,300 pages of comments filed on the Draft and Final EIS, Draft General Conformity Determination and Draft Section 4(f) and 6(f) Evaluation.

In addition, the Agency has received broad Freedom of Information Act (FOIA) requests from these same legal representatives. These requests included information related to the City's proposed OMP, World Gateway Program, and other FAA documents. Beginning in December 2003, the FAA began the process of providing and/or making available over 15,000 documents (comprising over 8 million pages) for a fee of $3,000. The Agency continues to respond to the latest FOIA requests including those filed in June 2005. In addition, the Agency responded by letter dated April 29, 2004 to earlier FOIA requests (dated November 19, 2003 and February 26, 2004), which are now the subject to an FAA administrative appeal.

The FAA has made available all documents regarding the EIS process as required by CEQ regulations. The legal representatives have requested, through the FOIA process, categories of documents that are unrelated to this EIS. These documents were prepared by the Agency for planning purposes unrelated to this EIS. The Agency completely disagrees with the legal representative's assertions that FAA has hidden documents required to be provided under CEQ regulations. Indeed, this assertion has even less merit than the challenge twenty years ago by these same opponents to the methodology and conclusions employed by the FAA in assessing the last improvement of Chicago O'Hare.[16]

### 8.2 Environmental Justice Outreach

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low Income Populations,* and FAA Order 1050.1E, require FAA to identify and address potential disproportionately high and adverse impacts on minority and low income populations.

A qualitative assessment of the project area, interaction with community residents, and quantitative analysis of census data guided outreach efforts for the Environmental Justice impact assessment. Using information about the community, outreach team members were chosen to reflect the primary cultural make-up of area residents. The multi-cultural, multi-lingual team included both men and women to accommodate cultural sensitivities in order to maximize communication between the team and community residents.

[16] SOC v. Dole, 787 Fed. 2nd 186, 197 (Seventh Cir. 1986).

Both Federal and state environmental justice policies stress that early and ongoing public outreach is a vital component of the environmental justice process. These activities establish trust and open dialogue with community members. The strategy utilized for effective public participation included the following activities:

- A survey was conducted by the FAA's contractor to assess community awareness of the EIS process. These paper surveys asked questions concerning family size, ethnic background, languages spoken in the home, years of residence, annual household income, employed household members, place of employment, schools attended by children, place of worship, primary businesses frequented, and owner/renter status. These two-page surveys were distributed in the proposed acquisition area to approximately 300 residences and businesses. The surveys were prepared in English and Spanish. Copies of the survey and survey results are included in Appendix P of the EIS.
- Over 30 small-group meetings conducted by FAA's contractor were held at various businesses and residences located in the acquisition area. These meetings ranged in size from 2 to over 30 residents. Residents offered to host these meetings at their homes, and some meetings were held in the Hamilton Townhome Association Office. These meetings were conducted in the evening to enable the greatest number of residents to attend.
- On May 23, 2004, the FAA held its first environmental justice public outreach session. The session was publicized through flyers posted in local businesses within and adjacent to the proposed acquisition area. These flyers, in English and Spanish, were also made available to residents within the acquisition area. In addition, personal letters were mailed to key stakeholders and announcements were made during mass at St. Alexis Church located in Bensenville, Illinois. Over 110 residents living in and around the acquisition area attended the meeting. This session was held at the Cascade Banquet Hall, a location identified by community members as local, convenient, and accessible. After this meeting, attendees demonstrated their commitment to the process by participating in small-group meetings and recruiting other residents to participate.
- On August 29, 2004, a second environmental justice outreach session was held at St. Alexis Church in Bensenville. The session was publicized through flyers posted in local businesses within and adjacent to the proposed acquisition area. These flyers, in English and Spanish, were also made available to residents within the proposed acquisition area. In addition, personal letters were mailed to key stakeholders and flyers were distributed to parishioners at St. Alexis Church. Approximately, ninety residents attended to obtain information and ask questions of FAA officials. Detailed documents regarding the outreach can be found in Appendix P of the EIS.
- The third environmental justice outreach session was also held at the St. Alexis Church in Bensenville, Illinois on March 6, 2005 to discuss the preliminary environmental findings within the Draft EIS. Approximately 60 people were present. Several of the presentation boards that were used at the public hearings were set up at the outreach

session for use in an open house format, where citizens could talk one-on-one with representatives of the FAA and its contractor. As with the first and second environmental justice outreach sessions, Spanish-English translators were in attendance to interpret the presentation material and discuss issues raised at the meeting.

- Collaboration with individuals, institutions, and organizations in the acquisition area was conducted to educate the public about potential environmental impacts and enhance public involvement.
- All meetings were conducted in both English and Spanish and all appropriate documents were translated into Spanish. Upon requests by the community, some documents were also translated into Hindi and Urdu. The translation of these documents into the appropriate languages helped residents obtain current and detailed information on the EIS process, including the various alternatives being assessed.
- All comments received at the environmental outreach sessions, including comments regarding property acquisition, have been responded to by the FAA and included in Appendix U of the Final EIS.
- After the ROD is published another meeting will be hosted by the FAA and the City of Chicago to answer questions regarding EJ, the project, and property acquisition.

### 8.3 Agency Coordination

The FAA gratefully acknowledges and very much appreciates the significant roles played by the following agencies in this EIS process by serving as cooperating agencies: United States Environmental Protection Agency (USEPA), Illinois Environmental Protection Agency (IEPA), United States Army Corps of Engineers (USACE), United States Fish and Wildlife Service (USFWS), and Federal Highway Administration (FHWA). An Interagency Coordination Agreement was signed between the FAA, USACE and IEPA in May 2004. FAA also acknowledges and is thankful to the Illinois Department of Transportation (IDOT) and Illinois Department of Natural Resources (IDNR) for their participation in a cooperative fashion even though they did not accept "formal" cooperating agency status. In addition to formal cooperating agency contacts, FAA worked closely and cooperatively with numerous other Federal, state and local agencies throughout the EIS process, including Northeastern Illinois Planning Commission (NIPC), United States Department of Agriculture (USDA), Department of Interior (DOI), National Park Service (NPS), Advisory Council on Historic Preservation (ACHP), Illinois Historic Preservation Agency (IHPA), Illinois State Toll Highway Authority (ISTHA), Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), Regional Transportation Authority (RTA), and Chicago Area Transportation Study (CATS). These extensive contacts greatly benefited the FAA by giving a substantial amount of information and perspective on the proposed development from the viewpoint of the other agencies. These meetings also were intended to enhance the ability of those entities to comment meaningfully, both during the development of the Draft EIS, in the formal comment period thereafter, and in the preparation of the Final EIS.

Simultaneously with preparation, distribution, and review of this EIS and completion of this ROD, the USACE is reviewing and processing a Section 404 permit application and pre-discharge notification per the requirements of the Clean Water Act, as submitted by the City of Chicago DOA. Similarly, IEPA is reviewing anti-degradation (Water Quality Standards) and Section 401 (Water Quality Certification) information pertaining to potential project-related wetland impacts. In furtherance of this goal, the public hearings that were conducted for the Draft EIS were hosted by FAA, the USACE, and the IEPA for purposes of meeting these agencies' requirements.

In its Draft EIS comment letter dated February 25, 2005 (pages U.2-7 and U.2-8 in Appendix U of the Final EIS), the USACE accepted FAA's purpose and need and evaluation of alternatives when it concurred that "there are no less damaging alternatives to construct this project". In its letter dated March 28, 2005 (pages U.2-9 and U.2-10 in Appendix U of the Final EIS), the Fish and Wildlife Service provided mitigation commentary, but it interposed no objections to FAA's purpose and need and evaluation of alternatives. In its letter dated April 6, 2005 (pages U.2-11 through U.2-27 in Appendix U of the Final EIS), the USEPA accepted FAA's purpose and need, agreed with FAA's retention of three Build Alternatives for detailed evaluation, provided technical comments on various impact categories, and focused on the need for appropriate mitigation. In its Draft EIS comment letter dated April 6, 2005 (page U.2-28 of the Final EIS), the FHWA requested that the Final EIS include additional analysis to indicate whether or not increased traffic volumes would be generated by the project and it raised no objections to FAA's purpose and need and evaluation of alternatives. In its Draft EIS comment letter dated April 6, 2005 (page U.3-5 through U.3-8 of the Final EIS) the IEPA provided technical air quality comments, noted the need for satisfactory wetlands mitigation to be identified, and raised no objections of any kind. As described earlier in Section 4 of this ROD, USEPA commended the FAA's EIS for a number of reasons including the adoption of a fifteen year planning horizon for environmental analysis. In comments filed by Federal, state and local entities, no governmental body, other than the Village of Bensenville and Elk Grove Village, has expressed significant concerns about the quality of the EIS or this proposed action. **Table 5** lists many of the meetings conducted with other agencies/entities throughout the course of the EIS process.

## TABLE 5
## AGENCY COORDINATION MEETINGS

| Date | Participants | Location | Purpose |
|---|---|---|---|
| October 2, 2002 | FAA, USEPA, City of Chicago | Chicago, IL | Air quality impact analysis |
| November 4, 2002 | FAA, USEPA, City of Chicago | Chicago, IL | Air quality impact analysis |
| November 7, 2002 | FAA, FHWA, IDOT, ISTHA, City of Chicago | Springfield, IL | Surface transportation impact analysis, western access |
| November 7, 2002 | FAA, IHPA, City of Chicago | Springfield, IL | Cultural resources impact analysis |
| November 8, 2002 | FAA, IDNR, City of Chicago | Springfield, IL | Natural resources impact analysis |
| November 8, 2002 | FAA, IEPA, City of Chicago | Springfield, IL | Air quality impact analysis |
| December 18, 2002 | FAA, USDA, City of Chicago | Des Plaines, IL | Wildlife attractant issues, water resource impact analysis, on-airport detention facilities |
| February 28, 2003 | FAA, USEPA, City of Chicago | Chicago, IL | Air quality impact analysis |
| April 10, 2003 | FAA, IDOT | Des Plaines, IL | Surface transportation impact analysis, western access |
| April 25, 2003 | FAA, CATS | Des Plaines, IL | Surface transportation impact analysis |
| January 29, 2004 | FAA, USACE | Chicago, IL | Section 404 coordination |
| March 4, 2004 | FAA, IDOT | Des Plaines, IL | Surface transportation impact analysis |
| March 5, 2004 | FAA, USACE, IEPA | Springfield, IL | Section 404 coordination |
| March 11, 2004 | FAA, MWRDGC | Chicago, IL | Stormwater runoff impact analysis |
| March 19, 2004 | FAA, USACE | Chicago, IL | Section 404 mitigation concepts |
| March 23, 2004 | FAA, ISTHA | Downers Grove, IL | Surface transportation impact analysis |
| April 21, 2004 | FAA, DuPage Department of Transportation | Wheaton, IL | Surface transportation impact analysis |
| May 11, 2004 | FAA, USEPA, IEPA, City of Chicago | Chicago, IL | Transportation Analysis coordination |
| May 16, 2004 | FAA, USEPA, IEPA, City of Chicago | Chicago, IL | HAPS Protocol Discussion |
| May 27, 2004 | FAA, USACE, IEPA, USEPA, FWS, FHWA | Chicago, IL | Purpose & Need, Alternatives discussions with Cooperating Agencies |
| June 2, 2004 | FAA, City of Chicago | Des Plaines, IL | Potential City of Chicago wetlands mitigation sites |
| June 23, 2004 | FAA, IEPA | Springfield, IL | Section 404 coordination |
| September 29, 2004 | FAA, IEPA | Springfield, IL | Section 404, 401 and Air Quality coordination |
| October 6, 2004 | FAA, USEPA | Des Plaines, IL | Overall impact analysis |
| October 20, 2004 | FAA, IEPA, USEPA | Springfield, IL | Wetland and air quality impact analyses |
| October 21, 2004 | FAA, IDNR, and City of Chicago | Springfield, IL | Wetland and biotic communities impact analyses |
| October 22, 2004 | FAA, USACE, City of Chicago | Chicago, IL | Wetland and Waters of the US impact analyses |
| November 5, 2004 | FAA, USEPA, USACE, FWS, IEPA | Des Plaines, IL | Overall impact analysis |
| February 23, 2005 | FAA, Bensenville Park District | Bensenville, IL | Section 4(f)/6(f) |
| March 24, 2005 | FAA, Bensenville Park District | Bensenville, IL | Section 4(f)/6(f) |
| August 18, 2005 | FAA, IHPA, Bensenville, Elk Grove, City of Chicago, and Cemetery Representatives | Des Plaines, IL | Section 106 Process |
| August 30, 2005 | FAA, ACHP, IHPA, Bensenville, Elk Grove, City of Chicago, and Cemetery Representatives | Des Plaines, IL | Section 106 Process |

## 9. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

A detailed environmental analysis of the potential environmental impacts resulting from the implementation of the project alternatives was accomplished as part of the EIS. Five separate years of analysis were examined as follows:

- Baseline – Represents conditions in the year the EIS was initiated (2002)
- Construction Phase I – This represents the anticipated year (2007) that the first major phase of the proposed action is anticipated to be completed and operational.
- Construction Phase II – This represents the anticipated year (2009) that the second major phase of development would become operational.
- Build Out – This is the anticipated year (2013) that all components of the alternatives are anticipated to be completed and operational.
- Build Out + 5 – This is a future year (2018) representing five years beyond the completion of all components (Build Out) of the proposed action and other proposed projects.

The EIS presents a detailed examination of the impacts for all alternatives for each year of analysis. The impacts of the Preferred Alternative and the No Action Alternative, and the associated mitigation measures and other impact reduction measures, are discussed in this section of the ROD. **Table 4** in Section 7.2 of this ROD presents a side-by-side comparison of the three build alternatives, in addition to the No Action Alternative, in terms of environmental, economic, and operational impacts.

In accordance with 40 CFR 1505.3, the FAA will take appropriate steps, as described in this ROD, through Federal funding grant assurances and conditions, and airport layout plan approvals, to ensure that the following mitigation measures, and other impact reduction measures as described herein, are implemented for the selected alternative. The FAA will monitor the implementation of these mitigation measures. The approvals contained in this ROD are specifically conditioned upon full implementation of these mitigation measures.

The primary responsibility for implementation of the mitigation measures lies with the City of Chicago. The FAA will have oversight responsibility and conditions this approval upon implementation of that mitigation. Mitigation measures for those impact categories where mitigation measures are necessary to avoid or minimize significant environmental impacts, for which the City of Chicago has agreed to implement, as well as identified or adopted monitoring and enforcement programs, are summarized below. The FAA finds that these measures constitute all reasonable steps to minimize harm and take all practical means to avoid or minimize environmental harm from the selected alternative and proposed Federal Action.

### 9.1 Noise and Compatible Land Use

In the Aviation Safety and Noise Abatement Act of 1979 (ASNA), Congress mandated that the FAA develop a uniform methodology for measuring aviation noise and land use compatibility. The FAA incorporated the recommendations of the USEPA and Federal Interagency Committee on Urban Noise (FICUN), in promulgating the regulations of 14 CFR Part 150, where the FAA selected the yearly average day-night noise level (DNL) of 65 decibels (dB) as the level at which

most land uses are compatible with aviation noise. DNL is a cumulative sound level that provides a measure of the total sound energy during a specified time period. DNL essentially averages the sound levels at a location over a 24-hour period, with a 10-decibel (dB) weighting penalty added to all sounds occurring during nighttime hours (between 10:00 PM and 6:59:59 AM). The 10 dB penalty represents the added intrusiveness of noise that occurs during sleeping hours because ambient sound levels during nighttime hours are typically about 10 dB lower than during daytime hours.

Estimates of noise effects resulting from aircraft operations can be interpreted in terms of the probable effect on human activities characteristic of specific land uses. Land uses are generally considered compatible with noise levels less than DNL 65, but only certain uses are compatible with noise levels at or above DNL 65. For purposes of NEPA, FAA has determined that a significant noise impact would occur if analysis shows that the proposed action will cause noise-sensitive areas to experience an increase in noise of DNL 1.5 dB or more at or above DNL 65 dB noise exposure when compared to the no action alternative for the same timeframe. Land uses considered sensitive to noise levels of DNL 65 and greater generally include residential housing, schools, places of worship, hospitals, and nursing homes.

FAA's commercially available Integrated Noise Model (INM), Version 6.1, was used to generate aircraft noise exposure contours and evaluate effects of the proposed project. In addition to the required DNL metric used for aircraft operations during the evaluation of each of the build alternatives for each year of analysis, supplemental noise metrics were used and are presented in Appendix F of the EIS, including:

- Maximum Sound Level (Lmax)
- Sound Exposure Level (SEL)
- Equivalent Sound Level (Leq)

For comparison purposes, the FAA presents information from its O'Hare 1984 Final EIS regarding an earlier airport improvement project. The 1984 Final EIS identified 94,720 noise-affected homes in its 1982 Baseline 65 DNL contour. In contrast, the estimated number of homes exposed to the 2002 Baseline 65 DNL is approximately 8,108 homes. What is more, even with an increase in operations at O'Hare from 591,807 in 1982 to 922,787 in 2002, the housing units within the 65 DNL contour during that same period diminished by over 90 percent. See **Exhibit 6** for a representation of the 2002 Baseline contour compared to the 1982 Baseline contour. Thus, even though the EIS projects, at most, a slight increase in affected residences (within the 65 DNL Build Alternative contours) when compared to the 2002 Baseline contour, this small overall increment should be viewed in the historic context of meaningful noise reduction in the communities surrounding O'Hare.

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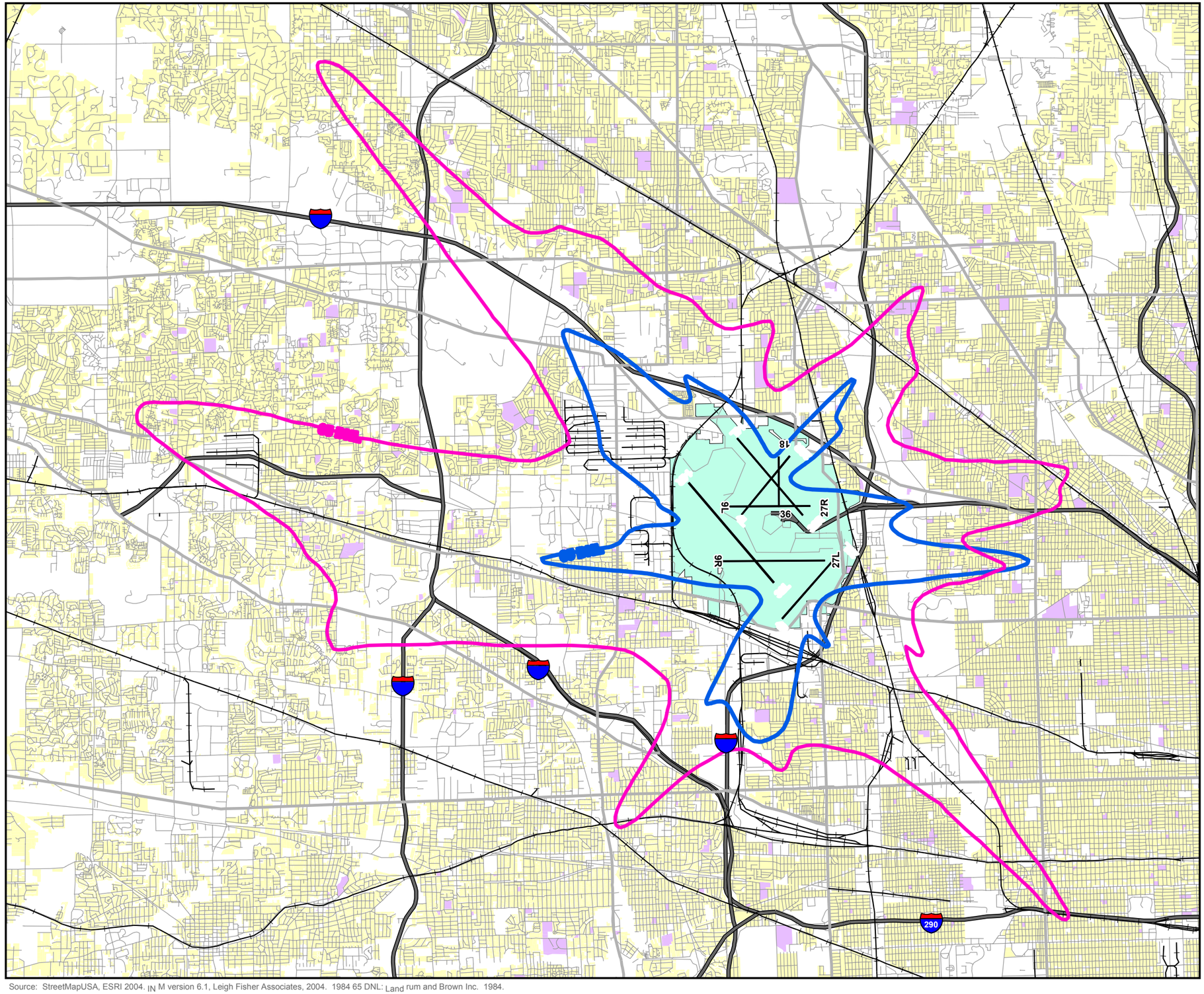


Source: StreetMapUSA, ESRI 2004. IN M version 6.1, Leigh Fisher Associates, 2004. 1984 65 DNL: Land rum and Brown Inc. 1984.

Chicago O'Hare International Airport

**O'Hare Modernization Environmental Impact Statement**

- 1982 65 DNL*
- 2002 65 DNL
- Rail Roads
- Freeways
- Secondary Roads
- Local Streets
- Existing Airport Property
- Compatible Land Use
- Residential
- Public, Hospitals, Institutional

*Note: Contour from 1984 E.I.S.

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S

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**Noise Contours, 2002 Baseline 65 DNL Compared to 1982 65 DNL**

▶ **Exhibit 6**

Exhibit 5.2-3 of the Final EIS depicts the potential change in noise exposure associated with Alternative C compared to Alternative A (No Action Alternative) in the Build Out phase. There would be a total of 5,619 residences (16,218 people) newly exposed to the 65 DNL and greater noise contour area (but outside of the Build Out 65 DNL and greater noise contour for No Action – area noted on Exhibit 5.2-3 in red), of which 1,102 have been sound insulated by the City of Chicago. In addition, there would be approximately 1,368 additional residences with a 1.5 dB or greater increase within the 65 DNL and greater noise contour area, outside of the area defined above, of which 435 housing units have previously been sound insulated. There would be a total of 5,446 currently non-insulated residences (15,212 people) within the Build Out areas defined above.

In addition to the Build Out 65 DNL and greater noise contour area discussed above, there would be a total of 1,647 residences (4,179 people) exposed to the 65 DNL and greater noise contour area at Build Out + 5 (but outside of the Build Out 65 DNL and greater noise contour for No Action and outside of the Build Out 65 DNL and greater noise contour for Alternative C), of which 77 have been sound insulated by the City of Chicago. There would also be approximately 6 additional residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for Build Out + 5, outside of the area defined in the paragraph above, of which no housing units have been sound insulated.

In addition, 11 public parks, 3 historic properties, 6 places of worship, 1 hospital, 2 libraries, 1 university, and 8 schools (7 insulated) would be exposed to DNL 65 and greater in the Build Out phase.

In 1996, the City initiated the formation of the O'Hare Noise Compatibility Commission (ONCC) to oversee noise mitigation efforts around O'Hare. The Commission is comprised of representatives of various communities and public school districts located within the O'Hare area. The ONCC participates in the planning of noise relief projects to be implemented in the O'Hare area, oversees the operation of O'Hare's noise monitoring system, and advises the City on O'Hare-related noise issues.

Over the past 9 years, the ONCC, in coordination with the City of Chicago, has directed the sound-proofing of 5,925 homes and 115 schools within the O'Hare area (many of which are outside the project-related area) at a cost of approximately $189 million. In addition, the ONCC monitors the application of the Fly Quiet Program by producing quarterly reports which can be accessed at www.oharenoise.org.

There is one school, Socrates St. Sava Academy in Chicago, which would be within the 65 DNL Build Out + 5 noise contour for Alternative C that is currently eligible and has also requested sound insulation, but has not been completed. Funding has been approved and this school is scheduled to be sound insulated by the end of the summer 2006. For further information on places of worship, hospitals, and nursing homes, see Section 5.2 of the Final EIS.

In June 1997, the City, in cooperation with the ONCC, user airlines, and the FAA, implemented the Fly Quiet Program at O'Hare. The program consists of a series of voluntary noise abatement flight and operating procedures designed to reduce the impact of aircraft noise during the nighttime hours (10 PM to 6:59:59 AM). The three main elements of the Fly Quiet

Program are (1) preferential runway use, (2) arrival and departure flight procedures, and (3) ground run-up procedures.

Significant noise impacts are anticipated to be reduced with specific noise abatement techniques. Such techniques will include the following:

- All eligible residences and schools within the Build Out 65 DNL and greater noise contour for Alternative C, but outside of the Build Out 65 DNL and greater noise contour for No Action, will be insulated by the City of Chicago by the time Build Out occurs. In addition, all eligible residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for Alternative C will be insulated by the time Build Out occurs.
- After Build Out occurs, the City of Chicago will produce a 65 DNL noise contour based on the operational characteristics of the Build Out configuration, but with forecasted operational levels five years in the future from when Build Out occurs, thus creating a new contour referred to as Build Out +5 Forecast Contour (BO +5 F). The City will then insulate all eligible residences and schools within the BO +5 F 65 DNL and greater noise contour, but outside of the No Action (Alternative A) Build Out +5 65 DNL and greater noise contour presented in the Final EIS, by the time Build Out +5 would occur. In addition, all eligible residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for Alternative C will be insulated by the time Build Out +5 would occur.
- At this point it is not reasonable to either assume that there would be a new Fly Quiet Program or speculate about what a new Fly Quiet Program would be. FAA will, however, give consideration to suggestions for changes in the Fly Quiet Program developed by the ONCC and requested of the FAA by the City of Chicago. It is FAA's understanding that it is the City Chicago's intent to continue the existing Fly Quiet Program, except as affected by runway decommissioning. The Fly Quiet Program will be modified by ONCC in the future only if needed; such modification would be done in consultation with the FAA and the City of Chicago Department of Aviation. Modification requiring FAA action would be subsequent to its prior approval, and any necessary environmental review.
- Continuation of the ONCC to oversee noise mitigation efforts around O'Hare.
- Continued use of the ground run-up enclosure during engine run-up testing.

In addition to the above noise abatement measures, other forms of mitigation will include the voluntary continuation of the following programs:

- **School Sound Insulation Program (SSIP)** – The City will continue the existing voluntary SSIP, providing impacted schools with noise attenuating windows, additional roofing and ceiling insulation, improved doors, and related measures to reduce the transmission of aircraft noise into schools.
- **Residential Sound Insulation Program (RSIP)** - The City will continue the existing voluntary RSIP, which will provide sound insulation for eligible residences which are

subject to a significant noise impact, or which would become incompatible, as a result of Alternative C (DNL 1.5 db increase within the 65 DNL or greater contour, or newly within the 65 DNL or greater noise contour), to reduce the transmission of outside noise into the homes.

**High Altitude Airspace Assessment**

Beyond the immediate noise environment of O'Hare itself, air traffic and airspace analyses conducted for this EIS indicate some traffic arriving and departing other airports in the vicinity would be affected by the Build Alternatives. Specifically, implementation of the Build Alternatives would result in changes to aircraft operations in five geographical areas, as follows:

- General Mitchell International Airport (MKE) Eastbound Departure Corridor from Milwaukee, Wisconsin
- Midway Airport (MDW) arrivals Southeast from the Brickyard VORTAC (VHP) between 6,000 and 24,000 feet MSL
- South Bend Airport (SBN) flight tracks while O'Hare (ORD) is in west flow
- Rockford Airport (RFD) flight tracks while ORD is in east flow
- DuPage Airport (DPA) westbound departures while ORD is in east flow

FAA Order 1050.1E indicates that

> for air traffic airspace actions where the study area is larger than the immediate vicinity of an airport, incorporates more than one airport, or includes actions above 3,000 feet AGL, noise modeling will be conducted using NIRS… Noise contours will not be prepared for the NIRS, however, NIRS will be used to produce change-of-exposure tables and maps at population centroids using the following criteria:
>
> - DNL 60-65 dB ±3 dB
> - DNL 45-60 dB ±5 dB

An evaluation of potential noise impacts caused by changes to aircraft operations in Alternative A (No Action Alternative) and Alternative C in the Build Out + 5 phase was prepared for this EIS. For this EIS, Alternative C was analyzed to represent the Build Alternatives (Alternatives C, D, and G), as the same airspace changes would be required for all Build Alternatives. The changes listed above would not cause noise levels in Alternative C to exceed FAA's criteria for significant noise impacts. The effect of the changes on total noise exposure is expected to be minimal because the number of affected aircraft operations is small, and most of the changes occur where aircraft are at altitudes above 3,000 feet.

In addition to there being no significant noise impact, the airspace analysis indicates that no noise impact is expected with respect to a DNL 5 dB increases at values above DNL 45 dB or DNL 3 dB increases at values above DNL 60 dB.

A complete summary of the airspace noise analysis is included in Appendix F of the Final EIS.

## 9.2 Surface Transportation

Traffic congestion is already present within the surface transportation study area. This situation is expected to become worse with the No Action Alternative (Alternative A) for each of the four future years of analysis. When comparing Alternative C, the preferred alternative, to the No Action Alternative (Alternative A) for each of the construction phases analyzed, there is a pattern of increasing congestion at a number of intersections and directional roadway segments.

Under Alternative C for the Build Out + 5 phase, when compared to the No Action Alternative, there are 10 intersections and 13 directional roadway segments that are expected to deteriorate such that they would exceed the threshold of significance as shown in Table 5.3-14 and Table 5.3-15 in Section 5.3 of the Final EIS. These thresholds are defined using levels of service (LOS) and volume-to-capacity (V/C) ratios. For the EIS, LOS was used to measure the performance of intersections, and V/C was used to measure the performance of roadway links.

The following outlines mitigation measures that will be implemented for Alternative C impacts in the Build Out + 5 phase. The mitigation measures will contribute to the improvement of the LOS and V/C ratio for each significantly impacted intersection and roadway segment, respectively.

**Intersection of Bessie Coleman Drive and Lot E North (Location 23)** – This intersection, which is expected to operate at LOS E in the Build Out + 5 phase without mitigation, will be further evaluated by the City. The ultimate re-design and improvement of the intersection will produce a LOS of D or better, and will be incorporated as part of the proposed projects in Alternative C during Construction Phase I. The improvements could include additional turn lanes, adjustments to total cycle length, additional through lanes, or other modifications, as required to produce LOS D or better.

**Intersection of Irving Park Road and Main Cargo Road (Location 21)** – As compared to the No Action Alternative, this intersection is expected to deteriorate from LOS B to E in the Build Out + 5 phase without mitigation. Improvements that enhance capacity and improve the LOS of this intersection to LOS D or better could potentially require the acquisition of additional right-of-way (ROW) by IDOT, the jurisdictional agency of Irving Park Road. Adjacent land that may need to be acquired for the additional ROW is currently owned by the Airport. The City has committed to participate in cooperative planning with IDOT to address and implement future improvements to this intersection required to improve the intersection to LOS D or better. The improvements could include additional turn lanes or through lanes on Irving Park Road. Additionally, the City has committed to make available adjacent Airport-owned land that would need to be acquired by IDOT for ROW to facilitate these future improvements to the intersection and Irving Park Road. The City will make this land available to IDOT for potential acquisition at the time required by IDOT for construction of the improvements.

**Intersection of Bessie Coleman Drive and Higgins Road (Location 6)** – This intersection is expected to operate at LOS F in the Build Out + 5 phase without mitigation. Improvements that enhance capacity and improve the LOS of this intersection to LOS D or better could potentially require the acquisition of additional ROW by IDOT, the jurisdictional agency of Higgins Road. Adjacent land that may need to be acquired for the additional ROW is currently owned by the

Airport. The City has committed to participate in cooperative planning with IDOT to address future improvements to this intersection required to improve the intersection LOS, which may include additional through lanes or turn lanes on Higgins Road. Additionally, the City has committed to make available adjacent Airport-owned land that would need to be acquired by IDOT for ROW to facilitate these future improvements to the intersection and Higgins Road. The City will make this land available to IDOT for potential acquisition upon issuance of this ROD, or at the time required by IDOT for construction of the improvements.

**Intersection of York Road and Irving Park Road Ramp (Location 37)** – This intersection is expected to deteriorate from LOS D to F in the Build Out + 5 phase without mitigation. There is an existing Intergovernmental Agreement between the City of Chicago, IDOT, ISTHA, and DuPage County for Preliminary Phase I engineering services related to the proposed relocation of this intersection. As part of these preliminary engineering services which are currently underway, an intersection design study (IDS) will be completed which will be reviewed by the City, IDOT, ISTHA, and DuPage County to ensure that, upon implementation of the improvements, the relocated intersection would operate at LOS of D or better.

**All other significantly impacted intersections and roadway segments (Build Out + 5)** - In addition to the four intersections listed above, the City has reviewed the feasibility of providing mitigation for the project-related impacts to the significantly impacted intersections and roadway segments. As part of this effort, the City will (1) participate in cooperative planning with the entities having jurisdictional responsibilities for the individual facilities to develop and evaluate potential mitigation measures and support long-range planning efforts, and (2) contribute to the agencies having jurisdictional responsibility a prorated share of the project-related mitigation costs, if requested, including the total costs of property acquisition, and the total costs of planning, designing, permitting, and constructing the required improvements at each of the significantly impacted roadway segments and intersections. The prorated contribution will be based on the increase in project-related traffic at each location for the Build Out + 5 phase as shown in **Table 6**.

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## TABLE 6
## ESTIMATED MITIGATION COSTS OF SIGNIFICANTLY IMPACTED INTERSECTIONS AND ROADWAY SEGMENTS (BUILD OUT + 5)

| Responsible Agency | Intersection ID | Intersection | Estimated Length (miles) | Estimated Total Mitigation Costs (2005 Dollars) | Airport Share of Total Traffic (%) | | | Airport Projected Share of Mitigation Costs (2005 Dollars) |
|---|---|---|---|---|---|---|---|---|
| | | | | | No Action Alternative | Alternative C | Increase | |
| **Significantly Impacted Intersections** | | | | | | | | |
| City of Chicago | 6 | Bessie Coleman & Higgins Road | N / A | $1,000,000 (a, d) | N / A | 29 | 29 | $290,000 |
| City of Chicago | 23 | Bessie Coleman & Lot E North | N / A | $1,000,000 (a, d) | N / A | 93 | 93 | $930,000 |
| Village of Rosemont | 16 | Balmoral Avenue & Des Plaines River Road | N / A | $1,000,000 (a, d) | 25 | 14 | --- | --- |
| IDOT | 19 | Mannheim Road & Montrose Avenue | N / A | $1,000,000 (a, d) | 33 | 39 | 6 | $60,000 |
| IDOT | 21 | Irving Park Road & Main Cargo Road | N / A | $1,000,000 (a, d) | 33 | 45 | 12 | $120,000 |
| IDOT | 34 | Irving Park Road & Prospect Avenue | N / A | $1,000,000 (a, d) | 1 | 3 | 2 | $20,000 |
| IDOT / DuPage County | 37 | York Road & Irving Park Road Ramp | N / A | $1,000,000 (a, d) | 8 | 39 | 31 | $310,000 |
| IDOT | 39 | Irving Park Road & Wood Dale Road | N / A | $1,000,000 (a, d) | 1 | 3 | 2 | $20,000 |
| Village of Bensenville | 24 | York Road & Green Street | N / A | $1,000,000 (a, d) | 6 | 27 | 21 | $210,000 |
| DuPage County | 26 | Thorndale Road & Busse Road | N / A | $1,000,000 (a, d) | 2 | 32 | 30 | $300,000 |
| **Total (Intersections)** | | | | **$10,000,000** | | | | **2,260,000** |

| Responsible Agency | Reference ID | Roadway Link | Between | Direction (two-way link) | Estimated Length (miles) | Estimated Total Mitigation Costs (2005 Dollars) | Airport Share of Total Traffic (%) | | | Airport Projected Share of Mitigation Costs (2005 Dollars) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | No Action Alternative | Alternative C | Increase | |
| **Significantly Impacted Roadway Segments** | | | | | | | | | | |
| IDOT | G | Mannheim Road | Montrose Avenue and Irving Park Road | NB | 0.8 | $4,000,000 (b, d) | 32 | 41 | 9 | $360,000 |
| IDOT | AC | Irving Park Road | Mannheim Road and Main Cargo Road / Taft Road | WB | 1.5 | $7,500,000 (b, d) | 29 | 40 | 11 | $825,000 |
| IDOT | AD | Elmhurst Road | Touhy Avenue and I-90 | NB | 0.7 | $1,750,000 (b, d) | 24 | 34 | 10 | $175,000 |
| | | | | SB | 0.7 | $1,750,000 (b, d) | 13 | 24 | 11 | $192,500 |
| IDOT | AF | Elmhurst Road | North of Thorndale Avenue | NB | 1.3 | $3,250,000 (b, d) | 2 | 28 | 26 | $845,000 |
| | | | | SB | 1.3 | $3,250,000 (b, d) | 5 | 46 | 41 | $1,332,500 |
| IDOT | AI | Busse Road | I-290 and Irving Park Road | SB | 2.4 | $12,000,000 (b, d) | 1 | 11 | 10 | $1,200,000 |
| IDOT | BG | Ramp from WB I-190 to SB I-294 | --- | N / A | N / A | $10,000,000 (c, d) | 13 | 14 | 1 | $100,000 |
| IDOT | BP | Ramp from SB Mannheim to EB I-190 | --- | N / A | N / A | $10,000,000 (c, d) | 50 | 44 | --- | --- |
| DuPage County | AK | Thorndale Avenue | Wood Dale Road and Prospect Avenue | EB | 0.9 | $4,500,000 (b, d) | 2 | 37 | 35 | $1,575,000 |
| DuPage County | BK | Thorndale Avenue | Arlington Heights Road and I-290 | EB | 1.0 | $5,000,000 (b, d) | 2 | 33 | 31 | $1,550,000 |
| DuPage County | AG | York Road | Irving Park Road and Thorndale Avenue | SB | 1.1 | $5,500,000 (b, d) | 4 | 41 | 37 | $2,035,000 |
| Village of Bensenville | AH | York Road | I-290 and Irving Park Road | NB | 3.1 | $15,500,000 (b, d) | 6 | 27 | 21 | $3,255,000 |
| **Total (Roadway Segments)** | | | | | | **$84,000,000** | | | | **$13,445,000** |
| **Total (Intersections and Roadway Segments)** | | | | | | **$94,000,000** | | | | **$15,705,000** |

Notes: (a) Assumes total project costs (planning, design, permitting, and construction) of $1,000,000 per intersection.
(b) Assumes total project costs (planning, design, permitting, and construction) of $5,000,000 per lane mile of urban street improvements (two-sided widening with in-kind replacement costs).
(c) Assumes total project costs (planning, design, permitting, and construction) of $10,000,000.
(d) All estimated costs are in 2005 dollars, and exclude the costs of potential property acquisition or major utility relocations.

Source: TPC Analysis, May 2005.

The City will contribute its prorated share of the project mitigation costs (including the costs of property acquisition, and the costs of project planning, designing, permitting and construction) to the entities having jurisdictional responsibility within 6 months of each of the following events:

- Execution of property acquisition contract(s) to acquire non-Airport right-of-way (ROW) needed to implement the required improvements to any of the significantly impacted intersections and roadway segments.
- Award of planning study contracts, such as IDOT Phase I studies, or equivalent efforts, to outside parties (e.g., contractors, consultants, or persons other than employees of the entity having jurisdictional responsibility) to conduct planning studies and other pre-design work directly related to any of the significantly impacted intersections and roadway segments, either singularly or as a group.
- Award of contracts for engineering design services to outside parties directly related to the preparation of design and construction documents for any of the required improvements to the significantly impacted intersections and roadway segments.
- Award of contracts to outside parties directly related to the preparation of environmental studies, and obtaining local, State, or Federal permits required to initiate construction of any the required improvements to the significantly impacted intersections and roadway segments.
- Award of construction contracts directly related to the construction of any portion of the required improvements to the significantly impacted intersections and roadway segments.

The City's cost commitment for the events listed above would expire at Build Out + 5. At present, it is the FAA's expectation that the City of Chicago's share of the costs of these intersection and roadway improvements will not exceed $15.7 million, excluding the cost of associated land acquisition. However, regardless of the ultimate cost of the improvements, this is an obligation that the City of Chicago must meet, if requested by the entities having jurisdictional responsibility.

In addition, it is anticipated that a number of the identified adverse impacts could be reduced as a result of other surface transportation initiatives that are under consideration by others. Because these projects are in the early stages of planning and have their own independent utility, they are not included as part of the EIS surface transportation modeling and analysis. If and when those surface transportation initiatives come to fruition, it may be possible that implementation of those projects could reduce projected significant adverse impacts. Under such circumstances, the City may seek FAA approval to revise its mitigation obligations described above. These projects include the following:

- West O'Hare Bypass
- York Road/Irving Park Road/UPRR/CNRR – Grade Separation
- Elgin-O'Hare Expressway – East Extension

- Metra STAR Line
- CTA Blue Line – O'Hare Express
- DuPage County "J" Route Bus Rapid Transit

For further information on these projects, see Section 5.3.5 of the Final EIS.

## 9.3 Air Quality

This section includes the following subsections:

- Regional Air Quality Conditions
- Emission Inventories
- Dispersion Modeling
- Clean Air Act Conformity
- Supplemental Air Quality Analyses
- Emission Reduction Measures

### Regional Air Quality Conditions

O'Hare is located within Cook and DuPage counties. These counties are included in an area that is currently designated as "moderate" non-attainment for the 8-hour ozone National Ambient Air Quality Standard (NAAQS) and non-attainment for particulate matter 2.5 microns or less in size. Both counties are designated attainment for carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. O'Hare International Airport is, however, located within an attainment area for particulate matter 10 microns or less in size.

At the time the air quality analysis was performed for the Draft EIS, the USEPA had not yet designated this or any other area of the U.S. with respect to the status of attainment for the NAAQS for particulate matter 2.5 microns or less in size. Subsequent to the analysis, on December 17, 2004, the USEPA designated Cook and DuPage counties as non-attainment for this pollutant. Based on the USEPA's scheduled timeline to have all areas of the country attain the standards for particulate matter 2.5 microns or less in size, States will submit their plans to the USEPA to attain the standard on or before April of 2008.

Because O'Hare is located within Illinois, the discussion and assessment of precursors to the air pollutant ozone has, for the most part, been limited to the Illinois portion of the 8-hour ozone non-attainment areas (referred to as the Chicago non-attainment area). Notably, representatives of the IEPA and representatives of the Indiana Department of Environmental Management (IDEM) serve together in the Lake Michigan Air Directors Consortium to assess air quality conditions within the 8-hour ozone non-attainment area.

**Emission Inventories**

Before the scoping process, FAA met with USEPA and IEPA representatives to discuss their concerns and to develop a comprehensive scope of work reflected in the EIS methodologies for the air quality assessment. Thereafter, FAA developed, in conjunction with these agencies, specific air quality protocols to be used for air quality assessment purposes. FAA's protocols contained analytical methodologies which were subsequently modified based on further coordination with USEPA and IEPA. In Section 5.6.3 of the Final EIS, FAA provides additional airport operations' emissions inventory information for particulate matter 2.5 microns or less in size.

***Airport Operations***

The emission inventories in the EIS air quality assessment were prepared using the FAA's Emissions and Dispersion Modeling System (EDMS Version 4.12). EDMS generates an emission inventory of carbon monoxide, volatile organic compounds, nitrogen oxides, sulfur oxides, and particulate matter with a diameter of 10 microns or less in size. The EDMS, and supplemental methodologies, were also used to prepare emissions inventories of particulate matter 2.5 microns or less in size.

The following main categories of sources were evaluated: aircraft, ground support equipment, auxiliary power units, motor vehicles on roadways (both on Airport and within a defined study area off Airport property) and at curbsides and parking facilities located on Airport property, fuel storage facilities, Airport-related fire training activities, and on Airport stationary sources (boilers, generators, etc.). The changes in emissions that would affect air quality are shown in **Table 7**. The analysis to determine the affect of the changes on local air quality conditions (in the vicinity of the Airport) are discussed in Dispersion Modeling, in this section of the ROD**.**

***Construction Operations***

Air quality impacts that would result from construction activities would be temporary (occurring over a period of ten years). When considering the total predicted air pollutant concentrations that were compared to the NAAQS, the level of dispersed air pollutants that would result from construction would be minimal when compared to the level of dispersed air pollutants from all other airport-related sources (aircraft, ground support equipment, passenger-related motor vehicles, etc.). Notably, the results of the dispersion analysis indicate that there would be no exceedances of the NAAQS with or without the proposed improvements.

## TABLE 7
## CHANGES IN AIRPORT-RELATED EMISSION INVENTORIES
## ALTERNATIVE C RELATIVE TO ALTERNATIVE A – BUILD OUT + 5

| | | Estimated Tons in Build Out + 5 (b,c) | | | | | |
|---|---|---|---|---|---|---|---|
| Alternative(a) | Source Category | Carbon Monoxide | Volatile Organic Compounds | Nitrogen Oxides | Sulfur Oxides | Particulate Matter 10 microns or less | Particulate Matter 2.5 microns or less |
| A | Total | 21,844 | 1,055 | 6,210 | 438 | 112 | 94 |
| C | Total | 26,119 | 1,324 | 7,290 | 564 | 127 | 107 |
| | **Increase/Decrease(a)** | **+4,274** | **+268** | **+1,081** | **+125** | **+15** | **+13** |

Notes: (a) When compared to Alternative A (No Action).
(b) Numbers reflect numerical rounding.
(c) Estimated emissions and changes in emissions with the Delayed Construction Schedule.
Source: Environmental Science Associates, Inc. [TPC] analysis, 2004/2005.

### Dispersion Modeling

Dispersion modeling provides predicted concentrations of ambient pollutant levels that can be compared directly to the NAAQS. For the purpose of the assessment, two "scales" of dispersion analyses were performed—macroscale (large) and microscale (very small). The macroscale analysis evaluates pollutant concentrations on and in the vicinity of the Airport and the microscale analysis evaluates pollutant concentrations immediately adjacent to intersections/interchanges within the study area. The macroscale and microscale dispersion modeling was performed for ground level emissions only. The dispersion analysis does not include emissions due to sequencing/vectoring delay because these emissions would occur above the atmospheric mixing height. Emissions above this height do not have a discernable effect on ground level concentrations of pollutants. In the Final EIS, FAA provides dispersion analysis for particulate matter 2.5 microns or less in size.

#### *Macroscale Analysis*

The macroscale analysis was used to evaluate the change in ambient pollutant concentrations at various locations on Airport property and in areas adjacent to the Airport. On Airport, the locations included terminal curbsides, the bus center, and parking areas. Off Airport, specific locations were selected either because they are considered sensitive to changes in ambient pollutant concentrations (i.e., residences) or because they were locations where the highest predicted concentrations of any of the air pollutants are expected to occur (intersections, near the end of runways).

The dispersion analysis was performed using the FAA's EDMS. The EDMS uses as its base, emission inventory data and site-specific meteorological data. EDMS provides dispersion analysis for the air pollutants nitrogen dioxide, carbon monoxide, particulate matter with a size diameter of 10 microns or less, and sulfur dioxide. The model is not designed to perform dispersion analysis for ozone or currently capable of performing dispersion analysis of particulate matter 2.5 microns or less in size. In addition to the sources within the defined study area, conservative background concentrations were "added" to computer predicted levels

of each pollutant. These background levels were selected by the IEPA for the purpose of the EIS.

Based on the results of the analysis, ambient concentrations of nitrogen dioxide, carbon monoxide, particulate matter 10 microns or less in size, and sulfur dioxide would not exceed the NAAQS as shown in **Table 8**.

## TABLE 8
## MAXIMUM MACROSCALE DISPERSION MODELING RESULTS (BUILD OUT +5)

| | Maximum Predicted Pollutant Concentrations (µg/m$^3$)(a,c) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Nitrogen Dioxide | Carbon Monoxide | | Particulate Matter 10 microns or less | | Particulate Matter 2.5 microns or less | | Sulfur Dioxide | | |
| Alternative | Annual | 1-Hour | 8-Hour | 24-Hour | Annual | 24-Hour | Annual | 3-Hour | 24-Hour | Annual |
| **NAAQS Values (b)** | **100** | **40,000** | **10,000** | **150** | **50** | **65** | **15** | **1,300** | **365** | **80** |
| A | 84 | 34,687 | 8,237 | 64 | 31 | 39 | 14 | 303 | 96 | 13 |
| C | 84 | 28,767 | 8,338 | 64 | 31 | 39 | 14 | 290 | 99 | 13 |

Notes: (a) Includes background concentrations.
(b) NAAQS = National Ambient Air Quality Standards.
(c) Maximum results with the Delayed Construction Schedule.
Source: Environmental Science Associates, Inc. [TPC] analysis, 2004/2005.

FAA's EDMS, and supplemental methodologies, were used to prepare the emission inventories of particulate matter 2.5 microns or less in size. In May of 2005, in response to comments by the public and by reviewing agencies, the FAA reviewed and amended their procedures to estimate emissions of particulate matter from aircraft and concluded, based on measurement tests that have been conducted to date, that the particle size distribution at the exit plane of today's modern aircraft engines is below 2.5 microns in size. Therefore, the aircraft-related particulate matter were estimated as particulate matter 2.5 microns or less in size, as well as particulate matter 10 microns or less in size. FAA's dispersion analysis for matter 2.5 microns or less in size indicates no exceedances of the applicable NAAQS for any year of analysis or any alternative evaluated.

### *Microscale Analysis*

EDMS does not include algorithms that consider both the free flow and congested motor vehicle operating conditions on levels of carbon monoxide. Therefore, a second type of dispersion analysis, a microscale analysis, was performed to evaluate the change in carbon monoxide emissions in the vicinity of the intersections and/or interchanges affected by the proposed improvements. The microscale analysis was performed using the USEPA's MOBILE6.2 motor vehicle emission rate model and CAL3QHC roadway/intersection dispersion model. The CAL3QHC (Version 2.0) model is currently the most accurate tool for identifying potential carbon monoxide concentrations due to mobile source emissions at congested locations.

The roadway intersection analysis evaluated effects of the alternatives at ten intersections in the vicinity of the Airport. The intersections included both existing intersections and proposed/ improved intersections that would be constructed if the project is approved. The selection of

intersections was based on the analysis methodology described in the USEPA's *Guideline for Modeling Carbon Monoxide from Roadway Intersections*.

Based on the results of the analysis, ambient concentrations of carbon monoxide would not exceed the NAAQS in the vicinity of any of the evaluated intersections as shown in **Table 9**.

**TABLE 9**
**MAXIMUM MICROSCALE DISPERSION MODELING RESULTS – BUILD OUT + 5**

| Phase | Alternative | Intersection No. | Intersection | Carbon Monoxide Concentrations (ppm) (a,d) 1-Hour(b) | 8-Hour(c) |
|---|---|---|---|---|---|
| **NAAQS Values (e)** | | | | **35** | **9** |
| Build Out+5 | A (No Action) | 10 | Mannheim Road and Zemke Road | 11.9 | 7.6 |
| | C | 20 | Mannheim Road and Irving Park Road | 10.9 | 7.0 |

Notes: (a) ppm= parts per million.
(b) Includes background concentration of 4.5 ppm.
(c) Includes background concentration of 2.9 ppm.
(d) Maximum results occur with the Original/Compressed Construction Schedules.
(e) NAAQS = National Ambient Air Quality Standards.
Source: Environmental Science Associates, Inc. [TPC] analysis, 2004.

**Clean Air Act Conformity**

Under Section 176(c) of the Clean Air Act, 42 U.S.C. § 7506(c) (also known as Conformity), Federal agencies, such as the FAA, are prohibited from engaging in, supporting in any way, providing financial assistance for, licensing or permitting, or approving any activity in a non-attainment or maintenance area that does not conform to an approved State Implementation Plan (SIP).

To implement the provisions of Section 176(c) of the Clean Air Act, the USEPA has adopted guidance for demonstrating conformity. Within non-attainment areas, Federal actions related to transportation (highway) plans, programs, and projects that are developed, funded, or approved under U.S.C. Title 23 or the Federal Transit Act, must meet the procedures and criteria of 40 CFR Part 51, Subpart T. Non-highway related actions must also demonstrate conformity. These conformity demonstrations must meet the procedures and criteria of 40 CFR Part 51, Subpart W. The IEPA has adopted these "general conformity rules" (Title 35, IL Administrative Code, Part 255).

Under the general conformity rules (40 CFR Part 93 Subpart B), a project does not require a conformity determination if the project is exempt, presumed to conform, or if the increase in emissions due to a proposed Federal action is less than the *de minimis* thresholds outlined in Title 35 Illinois (IL) Administrative Code Part 255 and 40 CFR Part 93 Subpart B and if the action-related emissions are not regionally significant (if the action-related emissions are less than 10 percent of the emissions in the SIP).

USEPA's general conformity rule defines a "conforming" project as one that: 1) conforms to the SIP's overall objective of eliminating or reducing the severity and number of air quality violations in a state and achieving expeditious attainment of the NAAQS; 2) does not cause or

contribute to new NAAQS violations in the area; 3) does not increase the frequency or severity of existing NAAQS violations in the area; and 4) does not delay the state's timely attainment of the NAAQS or impede required progress toward attainment.

Based on the results of the general conformity determination, the total direct and indirect project-related emissions of volatile organic compounds and nitrogen oxides (these compounds are the precursors to ozone) were determined to be either:

- Accounted for in the emission projections incorporated into the Chicago 1-hour ozone attainment demonstration SIP (the applicable SIP), or
- Could reasonably be accounted for in established emission totals and or excess regional emission estimates.

For these reasons, the FAA, in consultation with the IEPA and USEPA, has determined that the VOC and $NO_x$ emissions associated with all of the Build Alternatives and construction schedules for the proposed O'Hare Modernization Program improvements conform to the applicable SIP, and thus to the Clean Air Act. IEPA's letter dated July 13, 2005 (Final EIS page J-345) provides that agency's concurrence with FAA's findings that the "airport's emissions are accounted for in the 1-hour ozone attainment demonstration SIP for the Chicago region." FAA's full response to USEPA's comments on the Draft General Conformity Determination is found on page J-356 in Appendix J of the Final EIS.

**Supplemental Air Quality Analysis**

In recent years, public and agency interest has increased regarding the contribution of airports to hazardous air pollutants (HAPs). HAPs are gaseous organic and inorganic chemicals and particulate matter that are either known or suspected to cause cancer (to be carcinogenic) or known or suspected to cause other serious health effects (non-carcinogenic).

The FAA developed the HAPs Protocol for the EIS in coordination with USEPA and IEPA. While the effects on human health from HAPs were raised in Scoping, the FAA, USEPA, and IEPA concur that at this time it is not appropriate to conduct a human health risk assessment for the HAPs discussed in Appendix I of the Final EIS, and that the influence of the proposed airport development on the health of those living in the vicinity of O'Hare cannot currently be quantified in a meaningful way. Collectively, the agencies believe that the use of existing human health risk assessment protocols would not be scientifically sound nor defensible given the limitations of the existing modeling tools and critical input data. Specifically, the computer models typically used in human health risk assessment protocols are unable to accurately represent chemical reactivity during transport of airborne pollutants, and the assumptions prescribed for HAPs exposure from stationary sources are not directly transferable to mobile sources. Furthermore, critical data concerning the absence of HAP emissions data and the limitations of HAP speciation profiles for all types of aircraft engines (i.e., commercial jets, military, general aviation, and air taxi) do not exist.

After stating, among other things, that "there are no federal standards regarding exposure to [toxic air pollutants]", and "the data that would be necessary to make conclusive statements regarding certain health risks associated with [toxic air pollutants] are not available…", the

FAA presented the results of a human health risk assessment (HHRA) prepared by the City of Los Angeles in its recent LAX Final EIS for proposed master plan improvements at Los Angeles International Airport. The FAA explained why the HHRA results were being presented in the LAX Final EIS as follows: "…however to the extent that fulfillment of the purposes of Executive Order 12898 [on Environmental Justice] would be furthered by such an analysis, presented below are the results of the [Los Angeles World Airports] Human Health Risk Assessment, which was prepared in compliance with CEQA and based upon CEQA thresholds of significance and provides a qualitative comparisons [sic] of potential health risks."[17] The FAA's conclusions concerning health risk assessments under NEPA in the LAX Final EIS are consistent with those reached in the EIS and ROD for the proposed modernization projects at O'Hare.

Given the lack of national ambient air quality standards for concentrations of HAPs and, also, given the uncertainties and limitation associated with airport-related data, information in this EIS regarding HAP emissions is provided in this EIS for disclosure purposes only.

In a recently initiated effort to better understand the potential effect of airport operations on HAPs, FAA, USEPA, and other Federal and state agencies are launching several new aircraft emission studies. For example, in August 2005, at Oakland International Airport, FAA, USEPA, the National Aeronautic & Space Administration, the California Air Resources Board (CARB), and Southwest Airlines were scheduled to initiate a study of aircraft jet engine emissions. This comprehensive study is expected to provide important new information on both criteria and air toxicant emissions. Additionally, starting in September 2005 at Los Angeles International Airport, CARB and UCLA will examine ambient pollutant levels in and around the Airport. This study will consider emissions from a variety of sources, including aircraft. If these studies are completed in a scientifically acceptable manner, the FAA may be able to better address these topics in future environmental studies for airport improvement projects.

**Emission Reduction Measures**

Alternative C will not have the potential to cause or contribute to a violation of the NAAQS, therefore no mitigation is required. However, through discussions with the USEPA, IEPA, and other agencies and organizations, several potential emission reduction measures have been identified. The measures would reduce pollutant emissions, including those associated with HAPs, resulting from both the operation and construction of the Airport. The measures (listed below) will be implemented by the City of Chicago for incorporation into the proposed improvements at O'Hare and throughout construction.

- Continue the use of Best Management Practices (BMP) as outlined in the City's BMP Manual, and in Section 5.6.5 of the Final EIS;
- Provide Fuel Hydrant System access at all future gates to eliminate tanker fuel trucks;
- Provide Pre-Conditioned Air (PCA) at all future constructed gates;
- Encourage provision of PCA at all existing gates;
- Continue the use of aircraft idling time reduction at gates;

[17] LAX Final EIS, Volume A, page A.2-88.

- Encourage retrofitting existing Ground Service Equipment (GSE) or replacing/converting GSE to electric power or alternate fuels to the extent practicable and feasible;
- Provide 400 Hz power and electrify connections at all future gates for aircraft use;
- Continue to encourage the use of 400 Hz power and electrified connections at all existing gates for aircraft use;
- Incorporate energy-efficient features into the specifications for new and existing buildings;
- Require that contractors limit the time that construction-related vehicles idle, to the extent practicable and feasible;
- Implement diesel idling restrictions for delivery vehicles;
- Use newer, cleaner, and more fuel efficient engines, or best available retrofit technology, in lieu of older diesel engines during construction to the extent practicable and feasible;
- Use ultra low sulfur diesel fuel for off-road diesel equipment as soon as possible and prior to the year 2010 (use of this fuel is Federally mandated in the year 2010 for off-road equipment);
- Use ultra low sulfur diesel fuel for on-road diesel equipment as soon as possible and prior to the year 2006 (use of this fuel is Federally mandated in the year 2006 for on-road equipment);
- Use best available retrofit technology as approved by USEPA and/or CARB for off-road diesel equipment during construction to the extent practicable and feasible;
- Continue the use of Stage II vapor recovery for refueling (GSE and aircraft);
- Encourage the use of alternate fuel and best available retrofit technology as approved by USEPA and/or CARB for internal bus/shuttle transport and for ground support equipment (GSE);
- Provide a centralized and consolidated rental car facility with connection to the Airport Transit System (ATS);
- Extend the existing ATS to new and existing facilities;
- Lower construction haul trips offsite (and overall emissions) by utilizing onsite material and balancing earthwork and excavation to the maximum extent possible;
- The City, working in cooperation and consultation with IEPA, will pay to IEPA the costs associated with that Agency's purchase and installation of three (3) HAPs-capable air quality monitors in the O'Hare environs. The proposed air quality monitors will be located off airport property in areas acceptable to IEPA, and in areas that would minimize or eliminate the need for property acquisition (such as at locations of existing FAA-owned navigational aids that are proposed to be abandoned as part of the proposed projects);

- Implement components of the City's OMP Sustainable Design Manual during design, planning, and construction, which includes the following:
    - Use of active/passive solar energy where practicable and feasible.
    - Use of green building design and other Sustainable Design goals with energy efficiency features for new and existing buildings and lighting systems.
    - Use of low volatile organic compound emission paints and solvents during construction of OMP-related buildings and terminals.
- Provide preferred parking for public and employees traveling to/from the Airport in alternatively fueled vehicles or hybrids, in vanpools/carpools, and for rental car fleets using alternatively fueled vehicles.

As previously stated, the emission reduction measures would also reduce pollutant emissions associated with HAPs. Additionally, the emission inventories/dispersion analysis presented and discussed in the Final EIS for Construction Phase I, Construction Phase II, and Build Out, conservatively assumes that 9.4 million cubic yards (MCY) of material would be removed from O'Hare property to construct the proposed improvements. Two potential additional scenarios, a 0.0 MCY scenario and a 5.4 MCY scenario, are also being considered by the City. Each of these scenarios would reduce the level of construction-related HAP emissions (the majority of the reduction being diesel particulate matter) associated with the proposed improvements. The reduction in HAP emissions would be primarily due to a lesser need for haul trucks to remove the material from the Airport. Over the entire construction period, the level of HAP emissions could potentially be reduced from 11 percent to 32 percent of those presented in the Final EIS through the implementation of the 5.4 or 0.0 MCY scenarios, respectively.

Additional detail related to these emission reduction measures, and the estimates of resultant reductions in emissions, is provided in Section 5.6.5 of the Final EIS and Section I.9.2 in Appendix I of the Final EIS.

### 9.4 Social/Secondary (Induced) Impacts

Under Alternative C, 539 homes and 197 businesses would be acquired. The residences and businesses in the acquisition area need to be acquired because they are located in the footprint of the project development area, which includes areas required for construction of the proposed project, and for Runway Protection Zones (RPZ), which require specific areas to be kept free of any obstacles that would hinder approach or departure activities at the end of a runway. **Exhibit 7** through **Exhibit 10** depict the proposed land acquisition details associated with Alternative C, and illustrates the acquisition area for each community (Elk Grove, Bensenville, and Des Plaines) in relation to the entire community. The direct impacts of relocation require mitigation in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act). Owners, tenants, and businesses in the proposed acquisition areas would be relocated pursuant to the Uniform Act and FAA's Advisory Circular AC150/5100-17 *Land Acquisition and Relocation Assistance for Airport Improvement Program Assisted Projects*. The Uniform Act will be followed by the City of Chicago with compliance assured by FAA. In

addition, although not specifically required under the Uniform Act, the City of Chicago has committed to providing advisory services to those immediately adjacent to the acquisition area.

In addition, the employment forecast for the Preferred Alternative (in 2018) indicates that there would be approximately 49,000 more permanent jobs related to O'Hare than there are under the No Action Alternative (Alternative A).

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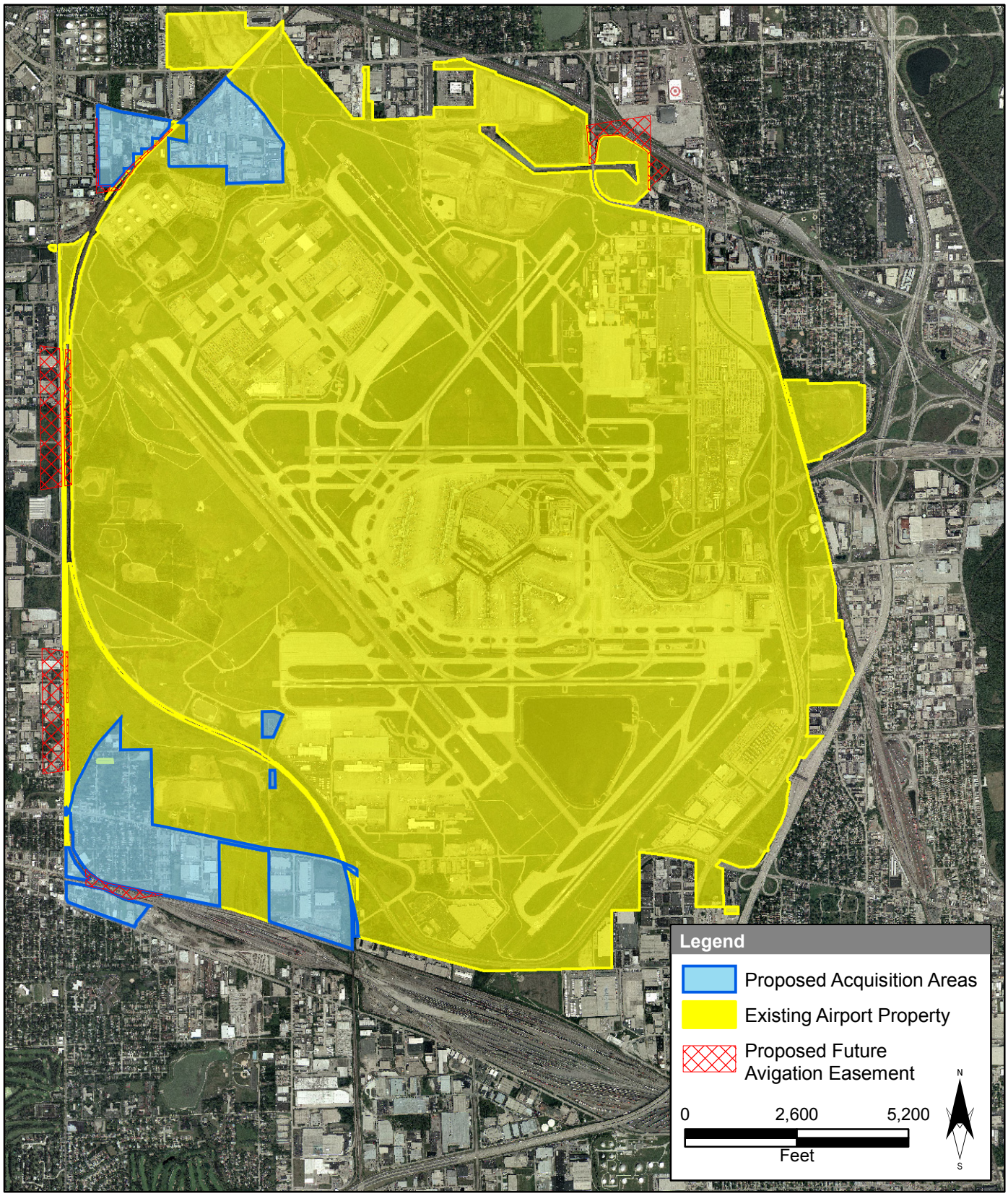


Source: Ricondo and Associates, [CCT] 2004.

Chicago O'Hare International Airport

# Alternative C Land Acquisition

**O'Hare Modernization Environmental Impact Statement**

**▶ Exhibit 7**

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Source: Land Acquisition Database, Ricond & Associates, 2004. Community Boundaries, U.S. Census Bureau, 2000. Proposed Future Airport Property, Ricondo & Associates, 2003.

Chicago O'Hare International Airport

**O'Hare Modernization Environmental Impact Statement**

## Proposed Land Acquisition Elk Grove

▶ Exhibit 8

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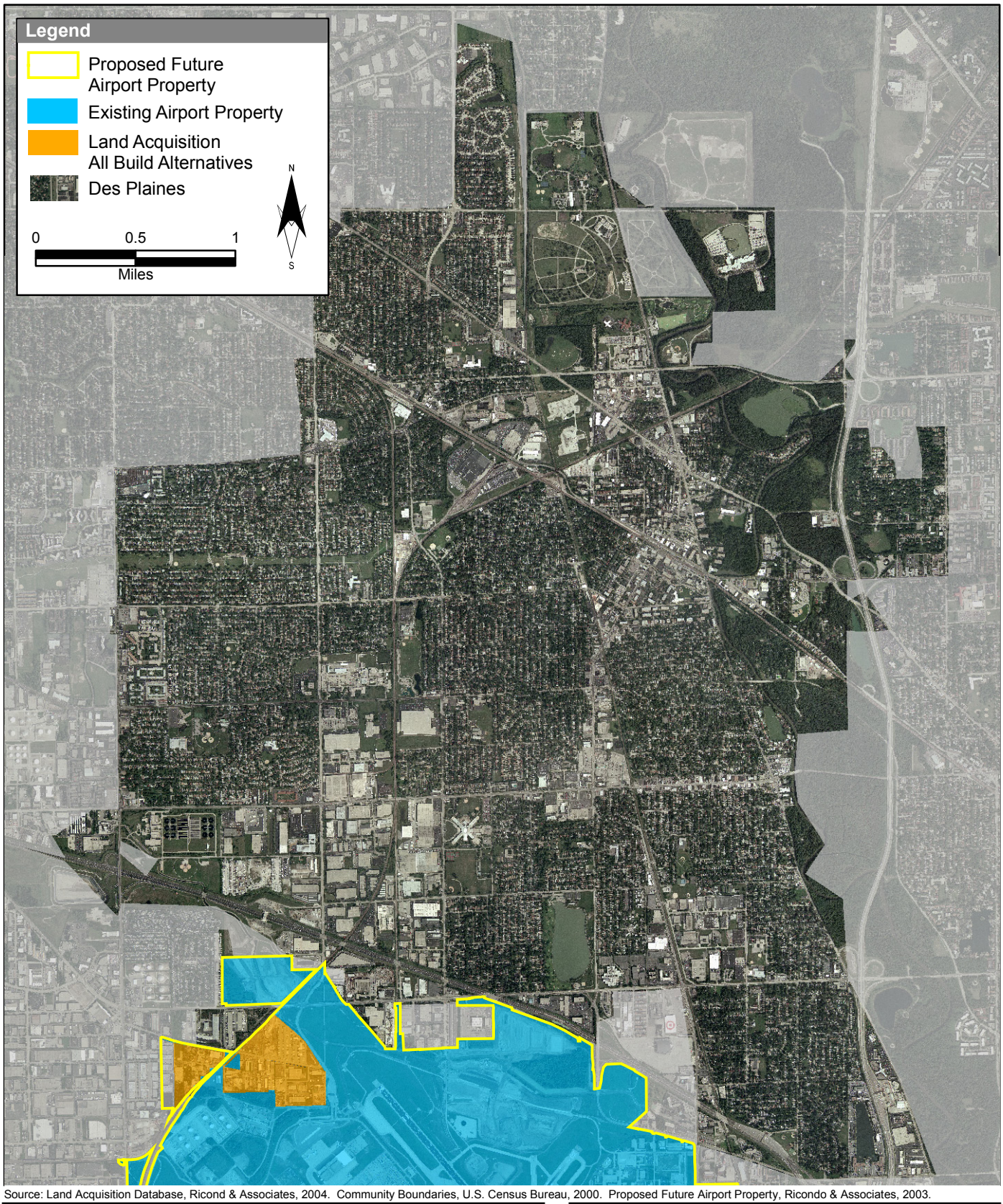


Source: Land Acquisition Database, Ricond & Associates, 2004. Community Boundaries, U.S. Census Bureau, 2000. Proposed Future Airport Property, Ricondo & Associates, 2003.

Chicago O'Hare International Airport

**O'Hare Modernization Environmental Impact Statement**

## Proposed Land Acquisition Des Plaines

▶ Exhibit 9

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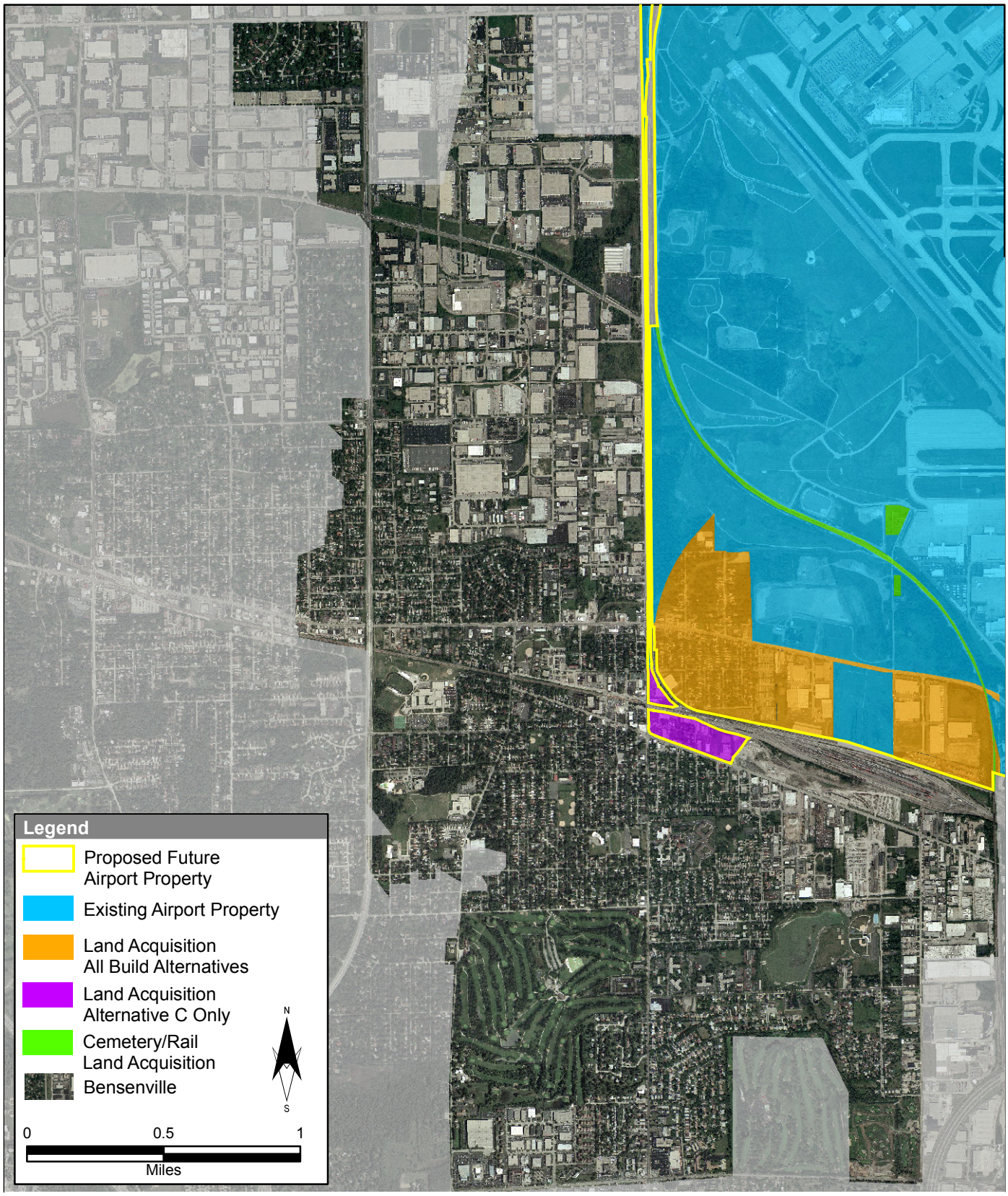


Source: Land Acquisition Database, Ricond & Associates, 2004. Community Boundaries, U.S. Census Bureau, 2000. Proposed Future Airport Property, Ricondo & Associates, 2003.

Chicago O'Hare International Airport

**O'Hare Modernization Environmental Impact Statement**

# Proposed Land Acquisition Bensenville

▶ Exhibit 10

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**Residential Relocations and Business Acquisitions**

A Draft Relocation Plan was prepared by the City of Chicago to assist displaced residents and businesses in relocating to new properties outside the proposed acquisition areas. This Relocation Plan was prepared in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), 49 CFR Part 24, and the FAA Advisory Circular/150/5100-17, dated September 7, 2001, and will be implemented.

As stated in the Relocation Plan, the following are the purposes of this plan:

- To inventory the characteristics and needs of the residences and businesses to be displaced;
- To investigate methods for minimizing the disruptions to households and businesses caused by their relocation;
- To inventory and demonstrate that an adequate number of properties similar to those being acquired by the airport currently exists within reasonable distances from the project area; and,
- To assure that all eligible property owners and tenants located within the project area will enjoy the full benefit of all protections and guarantees provided by Federal and state laws and regulations.

FAA is aware of the residents' concerns that the sale price established for their existing property (fair market value) would be insufficient to provide for purchase of comparable property in a new location. Provisions within the Uniform Act provide a mechanism to address these concerns.

Any impacted owner, tenant, or business in the proposed acquisition area will be afforded all appropriate rights established under the Uniform Act and FAA's Advisory Circular (AC) 150/5100-17. The Uniform Act will be implemented by the City of Chicago's O'Hare Land Acquisition Program with compliance assured by FAA.

In addition, because a large number of Spanish-speaking residents are within the acquisition areas, the City's Land Acquisition Consultant will provide a Spanish translator (translators for other languages will be provided if needed), with knowledge of 49 CFR Part 24 requirements, throughout the land acquisition process.

In addition to the above described mitigation measures, although not specifically required under the Uniform Act, the City of Chicago has committed to providing advisory services to those businesses immediately adjacent to the acquisition area.

**Cemetery Impact**

As a result of impacts to the St. Johannes and Rest Haven Cemeteries, a Memorandum of Agreement (MOA), has been developed for Section 106 purposes which outlines the steps that will be taken to mitigate the adverse impacts to these resources. The St. Johannes Cemetery Relocation Protocol is included as Attachment A to the MOA. The MOA is included in **Appendix B** to this ROD. With regard to other cemetery issues, including the FAA's process to

resolve the adverse impacts and the Religious Freedom Restoration Act (RFRA), see Section 9.7 and Section 11 of this ROD.

**Property Tax Loss**

The total taxes that will be lost to the school districts and community colleges for one year will be approximately $3,150,000 for Alternative C. Based on Section 21, Reimbursement for tax base losses of the O'Hare Modernization Act, tax loss reimbursement is outlined as follows:

> (a) Whenever the City acquires parcels of property within any school district or community college district for the O'Hare Modernization Program, the City shall, for the following taxable year and for each of the 5 taxable years thereafter, pay to that district the amount of the total property tax liability of the acquired parcels to the district for the 2002 taxable year, increased or decreased each year by the percentage change of the district's total tax extension for the current taxable year from the total tax extension for the prior taxable year; provided that no annual increase shall exceed the lesser of 5% or the annual increase in the Consumer Price Index. Funds payable by the City under this Section shall be paid exclusively from non-tax revenues generated at airports owned by the City, and shall not exceed the amount of those funds that can be paid for that purpose under 49 U.S.C. 47107 (1)(2).
>
> (b) Notwithstanding any other provision of this Section: (i) no funds shall be payable by the City under this Section with respect to any taxable year succeeding the 2009 taxable year; (ii) in no event shall such funds be payable on or after January 1, 2010; (iii) in no event shall the total funds paid by the City pursuant to this Section to all districts for all taxable years exceed $20,000,000; and (iv) any amounts payable to a district by the City with respect to any parcel of property for any taxable year shall be reduced by the amount of taxes actually paid to the district for that taxable year with respect to that parcel or any leasehold interest therein.

**Temporary Construction Jobs**

Construction employment, associated with airport development, is usually brief in duration and unlikely to cause long-term changes in regional growth. Therefore, the increase in construction jobs was not evaluated for potential secondary (induced) impacts.

**Children's Environmental Health and Safety Risks**

Pursuant to Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, Federal agencies are directed, as appropriate and consistent with the agency's mission, to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children. Agencies are encouraged to participate in implementation of this Order by ensuring that their policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

In regard to potential children's health impacts, the FAA has undertaken an air quality analysis of project-related particulate matter emissions of 2.5 microns per cubic meter or less (PM2.5) which is presented in Section 5.6 of the Final EIS. This analysis indicates that Alternative C will increase PM2.5 emissions. The increased emissions will not result in violations of or delay attainment of the NAAQS. The NAAQS for PM2.5, as promulgated by the USEPA, are health-based standards designed to address concerns associated with sensitive populations, including children, the elderly, and those with asthma. As the NAAQS are health-based standards, Alternative C is not expected to cause adverse health effects on residents in Cook and DuPage

Counties, including children. Additionally, since the science and methodology for completing a valid project level analysis of health impacts is lacking, it would be speculative to extrapolate environmental health and safety risks for children from the hazardous air pollutant (HAPS) emissions data. For a discussion of project-related hazardous air pollutants and potential health effect, see Section 5.6 and Appendix I of the Final EIS.

There is a growing body of literature that demonstrates the effects of high noise levels on learning. The FAA, the City of Chicago, and the ONCC have been engaged for a long period of time in sound insulating schools within areas exposed to high aircraft noise levels around O'Hare. Through these efforts, 62 schools within the project area have been sound insulated as of June 2005. There is one eligible school, Socrates St. Sava Academy in Chicago, which would be within the 65 DNL Build Out + 5 noise contours for Alternatives C, D, and G that is currently eligible and has also requested sound insulation, but has not been sound insulated. Funding has been approved and this school is scheduled to be sound insulated by the end of the summer 2006.

The Final EIS has not identified any other project-related environmental health risks or safety risks that may disproportionately affect children.

### 9.5 Environmental Justice

As stated by Executive Order 12898 (EO 12898), Federal agencies must address potential environmental justice impacts. NEPA requires Federal agencies to identify measures to mitigate adverse effects of Federally funded, licensed, or approved projects. Additionally, other Federal laws, such as the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act) and Title VI of the Civil Rights Act, require Federal agencies to take steps to alleviate impacts from Federally-approved projects. DOT Order 5610.2, *Environmental Justice in Minority Populations and Low-Income Populations*, establishes how DOT and its operating administrations will integrate EO 12898. The DOT Order requires FAA to determine if activities for which it is responsible will have an adverse effect on minority and low-income populations, and whether that adverse impact will be disproportionately high. Further, DOT Order 5610.2 states:

> In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures that will be taken and all offsetting benefits to the affected minority and low-income populations may be taken into account…

Accordingly, this section identifies impacts on environmental justice populations and required mitigation measures.

In the event there are disproportionately high and adverse effects on minority populations and low-income households, the DOT Order states that the activity will only be carried out if:

> further mitigation measures or alternatives that would avoid or reduce the disproportionately high and adverse effect are not practicable. In determining whether a mitigation measure or an alternative is 'practicable,' the social, economic (including costs) and environmental effects of avoiding or mitigating the adverse effects will be taken into account.

EPA guidance states it is important to "encourage and facilitate more active participation by low-income communities and minority communities in its NEPA process." In response, the FAA committed to a particularized, highly focused outreach program designed to ensure that this affected population received the full measure of all possible information about the proposed project and their rights related to potential acquisition/relocation. This goal was accomplished through careful identification of target audiences and aggressive community outreach beyond the traditional forums. The environmental justice outreach process for the EIS provided information to the affected population and afforded significant opportunity for interaction with Federal officials. On May 23, 2004, the FAA held its first environmental justice public meeting. A second environmental justice outreach meeting was held on August 29, 2004 at St. Alexis Church in Bensenville, and the third environmental justice outreach meeting was held on March 6, 2005, also at St. Alexis Church. In addition, over 30 small-group meetings were held at various businesses and residences located in the acquisition area.

FAA considered direct and indirect impacts for environmental resource categories where there were potentially significant impacts under NEPA: acquisition, noise, surface transportation, air quality (as requested by commenters, including USEPA), wetlands, and Section 4(f) and Section 6(f) impacts.

**Direct Impacts**

Within the population to be acquired under Alternative C, there are a disproportionate number of minority (by race and ethnicity) populations. In addition, businesses could be negatively impacted by the loss of minority residents. Other than the residents and the businesses previously mentioned, there may also be some environmental justice impacts to certain community resources that would remain following acquisition. For instance, schools or other social service agencies may conduct programs which teach English as a second language because of the large minority population present in the acquisition area. If this large minority population moves beyond the limits of the present school district boundary, programs may be affected. Class size and demographics could be affected which could cause a reduction in staff.

Such acquisition and relocation will require full compliance with the Uniform Act. The Uniform Act is a Federal statute that regulates the acquisition and relocation process and protects the interests of residents and business owners affected by the potential acquisitions. The Uniform Act requires that homeowners, business owners, and renters are provided with the following:

- Training in the acquisition process and an explanation of residents' rights, relative to the proceedings. (This training will be conducted in the language most familiar to the residents).
- Help in identifying comparable residential housing and commercial properties. (Housing must be safe, decent, sanitary and comparable to their present homes and lifestyles).
- Payment of applicable relocation assistance and moving expenses, as well as guidance on determining the property's fair market value.

Under Alternative C, the Uniform Act will be implemented by the City of Chicago's O'Hare Land Acquisition Program with compliance assured by the FAA. The City established a Land Acquisition Program office in July 2002, and it currently provides information through a website, written material, and a telephone hotline. In addition, the City of Chicago, under the supervision of the FAA, has developed a Draft Relocation Plan for the OMP.

The FAA also entered into discussions with the City of Chicago regarding the provision of appropriate assistance to businesses adjacent to the acquisition area. Although not specifically required under the Uniform Act, the City has committed to providing advisory services to those who request such services.

In addition, because a large number of Spanish-speaking residents are within the acquisition areas, the City's Land Acquisition Consultant will provide a Spanish translator (and other languages as needed), with knowledge of 49 CFR Part 24 requirements, throughout the land acquisition process.

Taking into account these mitigation measures, the FAA has made the determination that there would not be a disproportionately high and adverse effect to the minority (by race and ethnicity) populations that would be relocated as a result of the proposed action.

**Noise Impacts**

The analyses of potential noise impacts for Alternative C led to the preliminary conclusions in the Final EIS that there are disproportionately high and adverse noise impacts on minority (by race and ethnicity) populations and low-income households. In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures to the affected minority and low-income populations have been taken into account. As noted in Section 9.1 of the ROD, mitigation for noise impacts will occur. The specific noise abatement techniques are discussed further in Section 9.1.

The noise impact area to be mitigated (specified in Section 9.1) includes the area with noise impacts on minority (by race and ethnicity) populations and low-income households noted above. Therefore, after taking into account these mitigation measures, the FAA has made the determination that there would be no disproportionately high and adverse noise effect on minority (by race and ethnicity) populations and low-income households.

**Surface Transportation Impacts**

The analyses for the Build Alternatives led to the preliminary conclusions that there are disproportionately high and adverse surface transportation impacts on minority (by ethnicity) populations and low-income households. Within environmental justice areas, there are a total of two deficient intersections (Bessie Coleman Drive & Higgins Road and York Road & Irving Park Road Ramp) with Alternative C when compared to the No Action Alternative (Alternative A) in Build Out and Build Out + 5.

In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures to the affected minority and low-income populations have been taken into account. As noted in Section 9.2 of the ROD,

mitigation for surface transportation impacts will occur for these two intersections. The specific surface transportation mitigation for these two intersections is discussed further in Section 9.2.

After taking into account these mitigation measures, the FAA has made the determination that there would be no disproportionately high and adverse noise effect on minority (by ethnicity) populations and low-income households.

**Impacts for Other Resource Categories**

There are no disproportionately high and adverse impacts for air quality, wetlands, and Section 4(f) and Section 6(f) impacts.

### 9.6 Water Quality

Under Alternative C, the FAA concludes that no significant impacts related to water quality would occur. Compared to the No Action Alternative (Alternative A), the potential for water quality impacts under the Alternative C would be greater due to the increase in impervious surface area, additional airside areas using deicing chemicals, and substantial construction activity. However, the increase in potential water quality impacts would not be significant because, in addition to the efforts to reduce contamination to surface water from deicing chemicals, adequate stormwater facilities, designed to manage, contain, and convey the calculated increases in stormwater, would be designed and constructed as part of the proposed projects under Alternative C.

### 9.7 Historic, DOT Section 4(f), and Section 6(f) Properties

The selected alternative would trigger the application of 49 U.S.C. Section 303(c), commonly known as Section 4(f) of the Department of Transportation Act with regard to properties protected under that act. The selected alternative would constitute a "use" of three properties eligible for the National Register of Historic Places (NRHP): HP-7 (St. Johannes/John's Cemetery), HP-5 (Gas Service Station), and HP-6 (Rest Haven Cemetery). St. Johannes Cemetery would be acquired and relocated and the Gas Service Station would be acquired and demolished or relocated. The FAA has determined that the change in setting surrounding the Rest Haven Cemetery due to the selected alternative would constitute a use.

The selected alternative would also result in use of one locally important historic property: HP-10 (Schwerdtfeger Farmstead). Acquisition and removal or relocation is an actual, physical taking within the meaning of Section 4(f). The Schwerdtfeger Farmstead would be demolished.

The impacts of the selected alternative would not constitute a use to one other NRHP eligible property: HP-4 (Green Street School). Green Street School was originally proposed for acquisition and demolition under the selected alternative only. However, during the preparation of the Final EIS, FAA identified that a minor modification to the Green Street School chimney may obviate the need to remove the Green Street School. The chimney would penetrate the Terminal Instrument Procedures (TERPS) Surfaces of proposed Runway 10R/28L and would need to be lowered by 9.1 feet. The FAA has determined that the lowering of this chimney could be done in accordance with Secretary of Interior's *Standards for the Treatment of Historic Buildings* (U.S. Department of Interior, National Park Service, 1995) and would not constitute an adverse impact to the historic nature of the structure.

Historic properties of national, state, or local significance are protected under Section 4(f) of the U.S. Department of Transportation Act of 1966. Section 4(f) lands include publicly owned public parks, recreation areas, or wildlife and waterfowl refuges of national, state, or local significance and land from an historic site of national, state, or local significance. Land and Water Conservation (LAWCON) Section 6(f) refers to lands that are purchased with LAWCON funds for public recreation purposes. The selected alternative would adversely affect Section 4(f) and Section 6(f) properties.

Some of the properties protected by Section 4(f) and/or Section 6(f) include three parks (part of *Silver Creek/DuPage County Forest Preserve, Schuster Park,* and *Bretman Park*) that would be acquired under Alternative C. Impacts on these resources are discussed below

Local municipalities in the area of potential effect were also provided an opportunity to provide information concerning formally identified local landmarks for purposes of Section 4(f) evaluation. Sources identified 134 sites of local historical importance within the project area that could be affected by the proposed Build Alternatives.

Each of the historic, Section 4(f), and Section 6(f) properties described above are located in the southwest acquisition area. The impacts to these properties are necessary to accommodate the development of proposed Runways 10R/28L and 10C/28C, as well as the runway protection zones for these runways. The southwest acquisition area would also be used to relocate the Union Pacific Railroad and Irving Park Road.

A Draft Section 4(f) and 6(f) Evaluation (Evaluation) was submitted for public and agency review on May 20, 2005. A 45-day comment period was provided on the Draft Evaluation, which ended on July 5, 2005. A total of 13 comment letters were submitted on the Draft Section 4(f) and 6(f) Evaluation which are incorporated into the Final Evaluation and responded to by FAA. The Final Section 4(f) and 6(f) Evaluation is included in Appendix L of the Final EIS.

**Direct Effects**

The following section outlines the mitigation measures for impacts to each of the historic resources and 4(f)/6(f) lands that will be acquired.

***Schuster Park (Bensenville Park District)(Section 6(f) Property)***

The selected alternative will directly affect one park and recreation area (Schuster Park). Schuster Park will be acquired and converted to a non-recreational use by the City of Chicago. As Schuster Park is protected by Section 6(f) as well as Section 4(f), the loss of this park will be mitigated by acquisition at the fair market value and by provision of reasonably equivalent replacement property. Pursuant to the requirements of Section 6(f), any conversion of this property should be in accord with the existing comprehensive statewide outdoor recreation plan.

The FAA has coordinated with the Bensenville Park District, the Illinois Department of Natural Resources (IDNR) and the National Park Service (NPS) concerning the impact to Schuster Park to develop specific mitigation measures tailored to address the unique requirements of this property, as well as meet the requirements of Section 4(f) and Section 6(f). To address the direct acquisition of Schuster Park, a 4(f)/6(f) property, the FAA, in consultation with the Bensenville Park District, IDNR, and NPS, have developed the following mitigation measures:

- Replacement in-kind of the recreational resource. The replacement of the recreational resources would occur in consultation with the Bensenville Park District to ensure that the recreational uses meet local needs, or
- Other options for securing replacement property as identified in working with the Bensenville Park District, IDNR, and the NPS.

Based on the location of this park, its assets, and size, this park appears to be a neighborhood park. The residences in close proximity to the park, whose occupants are likely the primary users of this park, would be acquired under Alternative C. Schuster Park is a part of a system of parks within the Bensenville Park District boundaries and appears to provide facilities and a level of service similar to that of other parks within the Village of Bensenville and general vicinity. Therefore, the location of the replacement property would not necessarily need to be located in close proximity to the current park location. The impacts to this park would require mitigation under Section 4(f) as well as under Section 6(f). A specific mitigation plan will be developed in cooperation with the Bensenville Park District, IDNR, NPS, and the FAA.

As described above, mitigation for Section 6(f) impacts will consist of replacement of the converted Section 6(f) land with land of equal or greater value and usefulness by the IDNR. Prior to the time of conversion, appraisals will be conducted by the City and prepared in accordance with uniform Federal appraisal standards and requirements to assure acquisition of Schuster Park at its fair market value. This activity will commence when the property acquisition program is implemented. Thereafter, provision of the reasonably equivalent replacement property will occur within one year of Schuster Park's conversion.

The Villages of Bensenville and Elk Grove Village have notified the FAA that they do not concur with the DOT Section 303(c)/DOI Section 6(f) process, because they believe that the alternative selected does not safeguard parklands. Council for the Villages commented on this issue after release of the Draft EIS, and council's position has not changed since that time. FAA's responses to the Villages' comments on this issue can be found in Appendix U of the Final EIS, pages U.4-481 through U.4-486, and U.4-874 through U.4-888.

FAA environmental documents must provide evidence that replacement of converted Section 6(f) lands to the satisfaction of the Sectary of the Interior will be accomplished. Through its grant agreements, the FAA will require the City to fulfill mitigation requirements under FAA's property acquisition order (FAA Order 5100.37B). Through its grant agreements with the National Park Service, IDNR is required to comply with mitigation requirements of the Final EIS as related to provision of reasonably equivalent replacement property.

*Bretman Park (Village of Bensenville)*

Based on the location of this park, its assets, and size, this park appears to be a neighborhood park. The residences in close proximity to the park, whose occupants are likely the primary users of this park, would be acquired under Alternative C. Bretman Park is a part of a system of parks within the Village of Bensenville and appears to provide facilities and a level of service similar to that of other parks within the Village of Bensenville and general vicinity. Mitigation for this Section 4(f) property will include acquisition of Bretman Park at the fair market value.

*Silver Creek (DuPage County Forest Preserve District)*

The FAA has coordinated with the DuPage County Forest Preserve District concerning the impacted Section 4(f) property to develop specific mitigation measures tailored to address the unique requirements of each property as well as meet the requirements of Section 4(f). At a meeting with the District, they indicated that there is an Intergovernmental Agreement with the Village of Bensenville that limits acquisition of this property to the condemnation process. It is through this condemnation process that the fair market value of the Silver Creek property would be determined. In consultation with the Forest Preserve District, it was discussed that the fair market value established as a result of a condemnation process would be adequate mitigation for the potential loss of the Silver Creek property.

*St. Johannes Cemetery (St. John's Church of Christ)*

Shortly after the release of the Final EIS, the Keeper of the NRHP made a Final Determination of Eligibility for St. Johannes Cemetery, and in so doing, determined that it is eligible for the NRHP.[18] As a result of impacts to this Cemetery from the selected alternative, the FAA began a consultation process to resolve adverse effects to the Cemetery. The FAA held two meetings with consulting parties (legal representatives for the St. John's Church of Christ, Rest Haven Cemetery Association, the Village of Bensenville, and Elk Grove Village), the City of Chicago, and the Illinois Historic Preservation Agency (SHPO). The Advisory Council on Historic Preservation (ACHP) also attended the second meeting.

Through the consultation process a draft Memorandum of Agreement (MOA) was developed which outlines the steps that will be taken to mitigate the adverse impacts. The legal representatives for the consulting parties sent a letter to the FAA on September 9, 2005 submitting objections to the FAA's draft MOA and the preceding consultation process.[19] The MOA was then slightly modified by the FAA, City of Chicago, SHPO, and the ACHP to generate a final document. The MOA was signed by the FAA, ACHP, SHPO, and City of Chicago and describes the steps that will be taken to mitigate the adverse effects. These mitigation requirements are a condition of this ROD. The MOA is included in **Appendix B** of this ROD.

[18] Determination of Eligibility Reconsideration Letter, John W. Roberts, National Register of Historic Places, August 2, 2005.

[19] Letter from Douglas P. Wheeler, of Hogan & Hartson, to Amy B. Hanson, of the FAA, September 9, 2005.

*Rest Haven Cemetery (Rest Haven Cemetery Association)*

During the same process to resolve adverse effects for St. Johannes Cemetery discussed above, the FAA included Rest Haven Cemetery in the consultation process, because the Keeper of the NRHP had not yet determined whether Rest Haven Cemetery was eligible for the NRHP. FAA assumed for the consultation process that the Cemetery was eligible up to the time that the Keeper would make a determination. The Keeper of the NRHP determined that Rest Haven Cemetery is eligible for the NRHP on September 9, 2005.[20] Due to the determination of eligibility from the Keeper, mitigation provisions for Rest Haven Cemetery remained in the MOA and are a condition of this ROD. As noted above, the final signed MOA is included in **Appendix B** of this ROD

*Gas Service Station (Village of Bensenville)*

To address the project-related impacts (acquisition and relocation or demolition) at this NRHP eligible site, this property was included in the consultation and MOA process discussed above. Mitigation requirements for the Gas Service Station are included in the MOA and are a condition of this ROD. As noted above, the final signed MOA is included in **Appendix B** of this ROD.

*Schwerdtfeger Farmstead (City of Chicago)*

Shortly after the release of the Final EIS, the FAA revised its Determination of Eligibility to the SHPO for the Schwerdtfeger Farmstead, and in so doing, determined that it was not eligible for the NRHP.[21] The SHPO provided concurrence with the FAA's determination.[22] Though it was determined to be not eligible, it was assumed for purposes of the analysis in the Final EIS to be a Section 4(f) resource. As a result of impacts to this property from the selected alternative (demolition), the FAA developed a Memorandum of Understanding (MOU) with the City of Chicago to mitigate the adverse effects. The MOU is included in **Appendix B** of this ROD.

**Indirect Effects**

The following sites could experience potential indirect or constructive use impacts under Alternative C:

*Locomotive Museum in Veteran's Park (Bensenville Park District)*

Based on the uses of this facility, no mitigation appears to be warranted at this site since there would not be a substantial impairment (or constructive use) of this resource.

*Additional Locally Important Sites*

Sources identified 134 sites of local historical importance within the project area that could be affected by the proposed Build Alternatives. Based on the analysis conducted for the Section 4(f) and 6(f) Evaluation, none of these sites would be directly affected by Alternative C, but were considered relative to indirect/potential constructive use impacts. A review was conducted of the indirect impacts of the alternatives on these lands, and noise was identified as

[20] Determination of Eligibility, Patrick Andrus, National Register of Historic Places, September 9, 2005.
[21] Letter from FAA to IHPA regarding the Schwerdtfeger Farmstead, August 10, 2005.
[22] Concurrence from IHPA on FAA's Determination of Eligibility, September 9, 2005.

the only potential indirect impact. Section 5.8 and Appendix L of the Final EIS identified locally important historic sites that would experience noise levels above the FAA's noise compatibility guidelines with Alternative C. Of those 134 sites, 39 residences were within the 65 DNL contour for Build Out and Build Out + 5 for the selected alternative. These sites are identified in **Table 10** and **Table 11** below. These sites were assumed for purposes of the analysis in the Final EIS to be historic properties protected under Section 4(f).

The incompatible noise levels for residential use at these sites with the selected alternative are not anticipated to substantially impair the use of these properties by adversely impacting the historic values associated with these sites. These 39 residences would be sound insulated so that they would be compatible with the residential uses of the properties. These 39 residences would not be sound insulated to protect any historic values associated with the site. However, if any of these sites are valued for historic architectural properties, sound insulation has the potential to affect this value. With the selected alternative, the completion of the sound insulation for these 39 properties would follow the Secretary of Interior's *Standards for the Treatment of Historic Buildings* and FAA guidelines. Accordingly, there would be no Section 4(f) "use" of these sites due to noise impacts or any resulting sound insulation.

As a condition of this ROD for these properties:

- The City of Chicago will insulate the locally important historic properties, eligible for insulation, listed in **Table 10** by the time Build Out occurs.
- After Build Out occurs, the City of Chicago will produce a 65 DNL noise contour based on the operational characteristics of the Build Out configuration, but with forecasted operational levels five years in the future from when Build Out occurs, thus creating a new contour referred to as Build Out + 5 Forecast Contour (BO +5 F). The City will then determine if the locally important historic properties listed in **Table 11** will be within the BO +5 F Contour.
    - If the locally important historic properties listed in **Table 11** will be within the BO +5 F Contour, the City of Chicago will then insulate all locally important historic properties, eligible for insulation, within the BO +5 F 65 DNL and greater noise contour by the time Build Out +5 would occur.
    - If the locally important historic properties listed in **Table 11** will not be within the BO +5 F Contour, the City of Chicago will not be required to insulate them.

The sound insulation procedures are identified in the Memorandum of Understanding for Standards and Procedures for Sound Insulation of Locally Important Historic Properties for the Proposed O'Hare Modernization included in **Appendix B** of this ROD.

## TABLE 10
## LOCALLY IMPORTANT HISTORIC PROPERTIES WITHIN THE ALTERNATIVE C BUILD OUT 65 DNL AND GREATER CONTOUR

| Map-ID | Name | Function | Address | City | Source |
|---|---|---|---|---|---|
| LS-480 | 21 Siemer's Home | Domestic; single dwelling | 4262 N. Ruby St. | Schiller Park | Local Municipal Landmark |
| LS-482 | 20 Corner Store | Domestic; single dwelling | 4851 Michigan | Schiller Park | Local Municipal Landmark |
| LS-502 | Private Home (1918) | Domestic | 138 S. Mason | Bensenville | Local Municipal Landmark |
| LS-503 | Private Home (1911) | Domestic | 141 S. Mason | Bensenville | Local Municipal Landmark |
| LS-504 | Private Home (1906) | Domestic | 145 S. Mason | Bensenville | Local Municipal Landmark |
| LS-505 | Private Home (1903) | Domestic | 146 S. Mason | Bensenville | Local Municipal Landmark |
| LS-506 | Private Home (1919) | Domestic | 158 S. Mason | Bensenville | Local Municipal Landmark |
| LS-507 | Private Home (1924) | Domestic | 166 S. Mason | Bensenville | Local Municipal Landmark |
| LS-508 | Private Home (1925) | Domestic | 169 S. Mason | Bensenville | Local Municipal Landmark |
| LS-509 | Private Home (1921) | Domestic | 172 S. Mason | Bensenville | Local Municipal Landmark |
| LS-510 | Private Home (1900) | Domestic | 173 S. Mason | Bensenville | Local Municipal Landmark |
| LS-511 | Private Home (1920) | Domestic | 175 S. Mason | Bensenville | Local Municipal Landmark |
| LS-512 | Private Home (1921) | Domestic | 180 S. Mason | Bensenville | Local Municipal Landmark |
| LS-521 | Private Home (1922) | Domestic | 143 S. Addison | Bensenville | Local Municipal Landmark |
| LS-522 | Private Home (1922) | Domestic | 150 S. Addison | Bensenville | Local Municipal Landmark |
| LS-523 | Private Home (1924) | Domestic | 168 S. Addison | Bensenville | Local Municipal Landmark |
| LS-525 | Private Home (1925) | Domestic | 201 S. Addison | Bensenville | Local Municipal Landmark |
| LS-524 | Private Home (1922) | Domestic | 169 S. Addison | Bensenville | Local Municipal Landmark |
| LS-540 | Private Home (1866) | Domestic | 4N030 Church Road | Bensenville | Local Municipal Landmark |
| LS-541 | Private Home (1904) | Domestic | 14 S. York | Bensenville | Local Municipal Landmark |

## TABLE 11
## LOCALLY IMPORTANT HISTORIC PROPERTIES WITHIN THE ALTERNATIVE C BUILD OUT + 5 65 DNL AND GREATER CONTOUR, BUT OUTSIDE OF THE BUILD OUT 65 DNL AND GREATER CONTOUR

| Map-ID | Name | Function | Address | City | Source |
|---|---|---|---|---|---|
| LS-59 | Residence | Domestic; single dwelling | 164 S. Center | Bensenville | IHPA Sprague Survey |
| LS-75 | Residence | Domestic; single dwelling | 165 S. York Road | Bensenville | IHPA Sprague Survey |
| LS-487 | Residence | Domestic; single dwelling | 262 N. Hemlock | Wood Dale | IHPA Sprague Survey |
| LS-515 | Private Home (1919) | Domestic | 301 W. Green | Bensenville | Local Municipal Landmark |
| LS-516 | Private Home (1923) | Domestic | 309 W. Green | Bensenville | Local Municipal Landmark |
| LS-517 | Private Home (1923) | Domestic | 313 W. Green | Bensenville | Local Municipal Landmark |
| LS-518 | Private Home (1919) | Domestic | 317 W. Green | Bensenville | Local Municipal Landmark |
| LS-519 | Private Home (1907) | Domestic | 507 W. Green | Bensenville | Local Municipal Landmark |
| LS-520 | Private Home (1872) | Domestic | 517 W. Green | Bensenville | Local Municipal Landmark |
| LS-530 | Private Home (1900) | Domestic | 145 S. Center | Bensenville | Local Municipal Landmark |
| LS-531 | Private Home (1925) | Domestic | 155 S. Center | Bensenville | Local Municipal Landmark |
| LS-532 | Private Home (1894) | Domestic | 156 S. Center | Bensenville | Local Municipal Landmark |
| LS-533 | Private Home (1900) | Domestic | 160 S. Center | Bensenville | Local Municipal Landmark |
| LS-534 | Private Home (1903) | Domestic | 168 S. Center | Bensenville | Local Municipal Landmark |
| LS-535 | Private Home (1919) | Domestic | 181 S. Center | Bensenville | Local Municipal Landmark |
| LS-542 | Private Home (1907) | Domestic | 158 S. York | Bensenville | Local Municipal Landmark |
| LS-547 | Private Home (1870) | Domestic | 120 E. Lincoln | Bensenville | Local Municipal Landmark |
| LS-548 | Private Home (1910) | Domestic | 131 E. Lincoln | Bensenville | Local Municipal Landmark |
| LS-549 | Private Home (1924) | Domestic | 176 S. Walnut | Bensenville | Local Municipal Landmark |

### 9.8 Biotic Communities/Threatened and Endangered Species

The Illinois Department of Natural Resources (IDNR) and the U.S. Fish and Wildlife Service (USFWS) were consulted regarding the presence of biotic communities at the Airport and reviewed and concurred with the protocols and findings of the related surveys conducted for this project. The USFWS and the IDNR concur with the determination that no threatened or endangered species currently exist in the construction impact area.

Alternative C includes proposed land acquisition and would result in the potential disturbance of all biotic communities within the construction impact area. However, given that these biotic communities are not exceptional, and are fragmented, the FAA concludes that no significant impacts would occur. In addition, these biotic communities contain common, highly adaptive urban species that will continue to exist in the vicinity of the Airport.

### 9.9 Wetlands

A thorough evaluation of on- and off-Airport alternatives is provided in the EIS. Within both the EIS and the Section 404 permit application contexts, alternatives evaluated in detail must be determined to be practicable, in terms of satisfying project purpose and need criteria. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. Thus, an alternative recommended for implementation must be determined to be practicable or feasible in terms of safety design, engineering considerations, environmental consequences, economics, and other applicable factors, if any. Both the EIS and the Section 404 processes are structured so as to ensure that environmental information is disclosed to the public and agencies before decisions are made regarding project approval.

Simultaneously with preparation, distribution, and review of the Final EIS, the U.S Army Corps of Engineers (USACE) reviewed and processed a Section 404 permit application and pre-discharge notification per the requirements of the Clean Water Act, as submitted by the City of Chicago Department of Aviation (DOA). Similarly, the Illinois Environmental Protection Agency (IEPA) reviewed anti-degradation (Water Quality Standards) and Section 401 (Water Quality Certification) information pertaining to potential project-related wetland impacts. In accordance with a Memorandum of Agreement (MOA) signed by FAA, the USACE, and the IEPA, all three of these decision-making agencies will use the information developed during this EIS process to reach decisions on project alternatives and related matters as nearly simultaneously as possible. In furtherance of this goal, the public hearings conducted for the EIS were hosted by FAA, the USACE, and the IEPA for purposes of meeting these agencies' decision-making requirements.

Approximately 154.2 acres of wetlands (both jurisdictional and non-jurisdictional) and other non-wetland Waters of the United States (WUS) will be impacted by Alternative C. The wetlands at the Airport include many small, individual sites providing relatively few beneficial wetlands functions and values. These wetlands and non-wetland WUS have been adversely affected by past human activities, including clearing, grading, and other developmental actions. The impacts of past disturbances range from modification of plant communities, to creation of

new wetland areas, primarily caused by man-made grading changes that blocked original drainage ways or which created isolated depressions.

The guidelines associated with the Section 404 permit process indicate that satisfactory mitigation must be provided if jurisdictional wetlands impacts could occur as a result of project implementation. The City's proposed Conceptual Wetlands Mitigation Plan, which has been refined in response to comments from the Interagency Mitigation Review Team (MRT) during the Section 404 application review process, is intended to provide compensatory mitigation for jurisdictional and non-jurisdictional wetlands and non-wetland WUS removed from O'Hare. The MRT consists of the USACE, USEPA, IEPA, and the USFWS. The overall intent is to provide compensatory mitigation, which greatly improves the quality of the provided resources with respect to wildlife utilization, while also offering additional value to interested publics by providing access that is not possible at the Airport. A total of 447.4 acres of compensatory mitigation is to be provided as outlined in **Table 12**. FAA approves the City's proposed Conceptual Wetlands Mitigation Plan.

## TABLE 12
## PROPOSED WETLAND AND NON-WETLAND WUS MITIGATION CREDITS

| Water Resource Type | Classification | Impact (acres) | Mitigation Ratio | Mitigation Credits | Mitigation Category(a) |
|---|---|---|---|---|---|
| USACE Jurisdictional Wetlands (DuPage County) | Jurisdictional | 11.3 | 1.5 : 1.0 | 17.0 | I |
| USACE Jurisdictional Wetlands (Cook County) | Jurisdictional | 15.4 | 1.5 : 1.0 | 23.1 | II |
| WUS - Creeks / Ditches (Cook County) (b)(c) | WUS | 23.0 | 5.0 : 1.0 | 115.0 | IV |
| WUS - Creeks / Ditches (Cook County) (c) | WUS | 3.0 | 1.5 : 1.0 | 4.5 | IV |
| Isolated Wetlands (DuPage County) | Isolated | 24.9 | 1.5 : 1.0 | 37.4 | I |
| Isolated Wetlands (Cook County) | Isolated | 14.5 | 1.0 : 1.0 (d) | 14.5 | III |
| Isolated – Critical Classification (DuPage County) | Isolated | 10.7 | 3.0 : 1.0 | 32.1 | I |
| In-Channel Wetlands (SW120 and SW121) (e) | Jurisdictional | 24.8 | 5.0 : 1.0 | 124.0 | IV |
| USEPA – Forested (DuPage County) (f) | Jurisdictional | 22.2 | 3.0 : 1.0 | 66.6 | I |
| USFWS – Forested (Cook County) (g) | Jurisdictional | 4.4 | 3.0 : 1.0 | 13.2 | II |
| **Total** | | **154.2** | **N/A** | **447.4 (h)** | **N/A** |

Notes:
(a) Refer to Section 5.12.4.3 of the Final EIS for a description of the proposed approaches to meet mitigation requirements.
(b) Includes 1.0 acre of WUS in the potential southwest acquisition area.
(c) Mitigation ratios for specific creeks and ditched were reviewed by USACE.
(d) FAA concurrence from Michael MacMullen (FAA) to Carol Wilinski (DOA), dated January 16, 2002, for the 1.0: 1.0 mitigation ratio for the non-jurisdictional (isolated) wetlands associated with the O'Hare Express North Project.
(e) The USACE has indicated that mitigated Wetland SW120 and Wetland SW121 should be treated as WUS, as these wetlands provide conveyance for WUS (i.e., Bensenville Ditch).
(f) In comments provided by USEPA on the Draft EIS, USEPA indicated that wetlands NW28 and SW15 should be mitigated at a higher ratio of 3:1.
(g) In comments provided by USFWS on the Draft EIS, wetlands SE63, NE01, NE05, NE10, NE58, NW37B, NE08, SE64, and SW25 should be mitigated at a higher ratio of 3:1.
(h) 447.4 acres of credit are proposed.

Source: City of Chicago Department of Aviation Individual Permit Application to U.S. Army Corps of Engineers, November 2004 (Revised June 23, 2005).

### 9.10 Floodplains

Under Alternative C, the FAA concludes that no significant encroachment on floodplains would occur. Executive Order 11988, together with the applicable DOT order, establishes a policy to avoid supporting construction within a 100-year floodplain where practicable, and where

avoidance is not practicable, to ensure that the construction design minimizes potential harm to or within the floodplain. Consistent with the policy, implementation of Alternative C would encroach, although the encroachment would not be significant, upon the floodplains of the North and South Airfields by construction within the floodplains and relocation of the floodplains. The FAA has considered whether there are practicable alternatives to this encroachment. Because the floodplains are coincident with WUS, the review of practicable alternatives conducted on behalf of wetlands and non-wetland WUS is also applicable to the review of practicable alternatives to avoid the floodplain encroachment. FAA determined for WUS that there were no practicable alternatives to siting in these areas. See Finding 12.6 in this ROD, and Section 5.12 of the Final EIS for further information.

The City of Chicago's proposed drainage improvements would be sized to accommodate the increase in runoff from the North Airfield that would occur under Alternative C. In addition, Alternative C would include the development of detention basins on the South Airfield that would accommodate the increase in runoff that would occur as a result of increases in impervious surfaces. These improvements, as described in Section 5.13.3.2 of the Final EIS, would reduce the size of the floodplains on the Airport and would ensure that no significant encroachment impacts to the existing floodplains would occur. The increase in runoff from the Airport would be accommodated without having an adverse effect on floodplains, on stream habitat, or on streambank erosion. Further, Alternative C conforms to all applicable state and/or local floodplain protection standards (Executive Order 11988).

### 9.11 Wild and Scenic Rivers

Because Alternative C would include the expansion of detention basins at the Airport, this alternative would not affect the free flowing condition of the Des Plaines River and, given the use of best management practices in operating the airport, would not affect any of the natural, cultural, or recreational values of the river. Therefore, no impacts to wild and scenic rivers or rivers on the Nationwide Rivers Inventory (NRI) would occur under Alternative C.

### 9.12 Energy Supply and Natural Resources

Energy demands are expected to increase in the future whether or not Alternative C is implemented. Energy demands associated with airport facilities would only increase if additional airport facilities are undertaken, but increases in aircraft fuel consumption would increase as activity increases and/or delay levels increase. Contacts with local energy and natural resource suppliers have indicated the ability to meet the projected demands with Alternative C.

### 9.13 Light Emissions

Light emission impacts are localized based on the existing or potential location of individual facilities. However, because the lighting would be directed upward, or would be buffered from surrounding residential areas by existing industrial, commercial, and transportation sources, the FAA concludes that no significant project-related light emission impacts would be expected.

### 9.14 Solid and Hazardous Waste

The FAA concludes that no significant impacts related to solid and hazardous waste would occur under Alternative C since no problems are anticipated with respect to meeting the applicable local, state, Tribal, or Federal laws and regulations. In general, in addition to construction, demolition and land clearing waste, it is anticipated that there would be an increase in the level of solid waste generated by the Airport with Alternative C when compared to the No Action Alternative. Though the handling of hazardous waste is forecast to increase proportionately with the growth of enplaned passengers, best management practices regarding handling and transporting hazardous materials would be utilized to ensure environmental safety.

### 9.15 Construction Impacts

For large airport improvement projects, it is typical for the construction to be phased in over several years. It is not atypical, nor inherently unsafe, for a major airport construction project to coexist with regular aircraft operations. However, construction in an area of active aircraft operations can present many risks. Section 5.20.4.7 of the Final EIS describes how airfield construction will take precautions to maximize safety and attempt to minimize operational disruptions.

Additionally, the Transportation Security Administration (TSA) was involved in the ALP review process commenting specifically on security issues. The City of Chicago, in consultation with the TSA, will develop and implement procedures to ensure that the airfield remains secure during construction operations.

Temporary construction impacts resulting from building runways, taxiways, roads, terminal improvements, and other activities related to Alternative C may include air, water, and noise pollution, and disposal of construction debris. Surface transportation traffic patterns, both on and off the airport, may be altered during construction, in addition to other social and socioeconomic impacts. Additionally, airfield construction will alter normal aircraft taxi patterns and runway usage.

The City of Chicago has developed a program of construction environmental impact mitigation to eliminate or reduce construction impacts with Alternative C, which includes the incorporation of FAA Advisory Circular 150/5370-10A, *Standards for Specifying Construction of Airports,* pertaining to the reduction of construction impacts. Although three potential construction scenarios (Original, Compressed, and Delayed Construction Schedule) were considered in evaluating the potential impacts from construction (see Section 5.20.3, Construction Plan, of the Final EIS), the required mitigation measures were identical. There are three main entities responsible for construction impact mitigation; the City, the City's Project Designer, and the City's Contractor.

**City of Chicago**

The City of Chicago Department of Aviation (DOA) has established operational requirements for the mitigation of construction impacts on past and current projects. The City of Chicago will ensure that these operational requirements will be conveyed to the City's Project Designers for

inclusion in bidding and contract documents. In addition, the DOA has prepared an OMP Best Management Practices Manual, and an OMP Sustainable Design Manual. These two manuals provide procedures that will become requirements for construction impact mitigation as appropriate for each individual project, and are both included in Appendix Q of the Final EIS. The DOA will also review bidding documents for environmental protection requirements and monitor construction to assure compliance.

Additional construction impact mitigation measures committed to by the City of Chicago, such as the City of Chicago's Construction Outreach Program, the requirement of airfield construction phasing plans for construction within the Aircraft Operations Area (AOA), and adherence to the City's General Storm Water Permit for Small Municipal Separate Storm Sewer Systems (MS4 permit), is provided in Section 7.9 of the Final EIS.

**City's Project Designer**

The Project Designer will include applicable Best Practices and Sustainable Design procedures in all bidding and contract documents, as well as all requirements of local, State and Federal ordinances, regulations and permits. The Project Designer will include in project specifications, where applicable, the provisions of FAA Advisory Circular 150/5370-10A *Standards for Specifying Construction of Airports* that pertain to the reduction of construction impacts. FAA AC 150/5370-10A requires the Contractor to submit:

- Schedules for accomplishing erosion control work
- Plan for erosion and dust control on haul roads and at borrow pits
- Plan for disposal of waste materials

In addition, the Project Designer will require the Contractor to submit, prior to construction and implementation, the following plans for the City of Chicago's review and approval:

- Construction and Demolition Waste Management Plan
- Recycling and Salvage Plan
- Pollution Prevention Plan
- Hazardous Waste Disposal Plan
- Spill Prevention and Mitigation Plan
- Air Pollution Control Plan
- Fuel and Lubricants Control Plan

**City's Contractor**

The City Contractors will be responsible for compliance with all permits and all contractual environmental requirements for both the Contractor operations and all work by subcontractors.

## 9.16 Cumulative Impacts

The FAA conducted a thorough and extensive analysis regarding cumulative impacts. As defined by CEQ guidance,[23] the consideration of cumulative effects must consider the past, present, and reasonably foreseeable projects. Such projects include actions undertaken at the Airport by the City of Chicago or other parties (such as FAA or CTA), as well as notable actions that affect the airport area, including development undertaken in the Airport environs. Chapter 6 of the Final EIS identifies hundreds of past, present, and reasonably foreseeable future projects.

The cumulative impacts analysis contained in Chapter 6 of the Final EIS included the review of past, present, and reasonably foreseeable conditions within the land use study area as shown on Exhibit 4.2.1 in the Final EIS, and in the surrounding airport environs. This review indicates that O'Hare exerts both positive and negative impacts on the local environs, which have changed over time. Over time, these impacts have decreased relative to environmental conditions such as aircraft noise, emissions of carbon monoxide, volatile organic compounds, and particulate matter. Impacts from surface transportation levels and congestion, natural resource consumption, air emissions of nitrogen oxides and sulfur oxides, and solid waste/hazardous waste generation have increased as activity levels have increased. For example, in its study of cumulative noise effects, the FAA has studied aircraft noise, construction noise, highway noise and railroad noise in the O'Hare area. No significant cumulative noise increases were found. With respect to air quality, the agency reviewed emissions reasonably foreseeable from the various Build Alternatives, as well as emissions from construction, and vehicular emissions at O'Hare including surrounding surface roads. Again, no significant cumulative increases were identified.

In addition, a number of past, and present non-airport projects have occurred in the area, and others are expected to occur in the future. It is anticipated that changes will continue in the Airport vicinity due to continued increases in population and economic activity in the airport environs and in the Chicago region, the third largest metropolitan area in the U.S. Much of the Airport environs are already surrounded by intensive transportation, residential, and commercial uses. There will be other forms of development, the dimension of which would not be known until plans are approved, which can not be measured at this point in time. Given the existing extent of development in the region generally, the incremental effect of the Preferred Alternative is minor, at best, as reflected in this EIS. Some intensification of development would be expected in the areas, resulting in additional pressures on the social fabric and natural resources of the area. Such effects are dependent on ultimate design, land use plans, and other considerations. However, until specific project plans are known, it is not possible to quantify the specific cumulative effects from Alternative C and these other regional projects.

[23] Considering Cumulative Effects Under the National Environmental Policy Act, Council on Environmental Quality, January 1997. Guidance on the Consideration of Past Actions in Cumulative Effects Analysis, Council on Environmental Quality, June 24, 2005.

## 10. COMMENTS ON THE FINAL EIS

The FAA has carefully assessed and considered comment letters received on the Final EIS in making its decision. **Appendix A** of this ROD provides copies of each letter received on the Final EIS with detailed responses to comments on major issues raised by the commenting agencies and citizen groups.

### 10.1 Planning Issues

#### 10.1.1 Financial Feasibility

In light of the many comments the FAA has received regarding the financial feasibility of the OMP, any discussion of this subject in this ROD must include an identification of what is appropriate for this document to address, what is beyond the scope of this particular FAA decision, and what the FAA should consider in addressing any application for Federal funding. In the preceding sections of this ROD, the FAA has examined the usual array of matters that it must consider whenever it reviews a proposed ALP for a major airport improvement project. These matters include the environmental determinations under a host of Federal statutes. These measures include the environmental aspects of 49 U.S.C. 47106 and 47107 relating to the eligibility of the proposed project for Federal funding under the Airport Improvement Act, and under 49 U.S.C. 40117 relating to eligibility to impose and expend passenger facility charges for the proposed project. Such determinations, however, do not by themselves empower the FAA to approve airport funding grants or authorize the City of Chicago to collect those PFCs. Instead, as the FAA has reiterated in the Final EIS and elsewhere, the findings contained in this ROD provide the clearances for other, separate, FAA administrative processes. It is well established that the FAA is not required to undertake a formal cost-benefit analysis as part of an EIS. Moreover, there are occasions when there are no pending requests for AIP funding during the time that the FAA completes its EIS and issues its ROD. In other circumstances, the environmental analysis necessary for ALP approval and the economic scrutiny required for AIP funding are conducted on two separate but generally concurrent tracks. In either event, the FAA's environmental review process for approval of an ALP normally includes an examination of financial feasibility within the context of its review of alternatives.

Here, late in the EIS process, the City of Chicago did file a request for AIP funding. A decision by the FAA on that application is expected soon. However, the happenstance of overlapping ALP and AIP decisions cannot be seized upon to convert this environmental review into a thorough analysis of projected benefits and costs that is inherent in an application for Federal funds. Instead, the FAA has treated allegations of financial infeasibility of the OMP that were presented to it as part of the ALP review process as it would any other comment relating to its environmental obligations. These claims were reviewed, examined by experts in this subject, and placed in the context of the FAA's duties for this particular decision.

In Section 1.7 of the Final EIS, the FAA described the plan adopted by the City of Chicago to finance the OMP. In its responses to comments, particularly those of the Campbell-Hill consulting firm, the FAA engaged its own team of experts and consultants to determine the merit of these comments. This examination was conducted as part of the EIS process for this ROD and was wholly separate from any scrutiny the FAA might engage in as part of its

separate duty to consider the City's application for funding. In addition, the FAA conducted a sensitivity analysis of the City's finance plan to better inform its ALP decision.

On the basis of this information, FAA has no reason to believe that the City's financial plan can not be implemented. Further, FAA has no reason to believe that the resulting costs to airport users (most significantly, major airlines serving O'Hare) will significantly adversely affect the ability to finance the capital projects and realize the projected aviation demand, particularly in the context of future investments that will be required at other large hub airports in the United States. All projections and forecasts are subject to uncertainty, and future events may result in changes or adjustments to the FAA conclusions.

FAA has carefully considered comments related to financial feasibility, including concerns regarding airline financial support for OMP. FAA has concluded, based on review and analysis of data, that the increased airline user charges expected to result from OMP implementation, while important, are likely to be reasonable in the context of the benefits of the investment; such user charges (e.g., landing fees and terminal rents) represent a relatively small share of airline operating costs compared to other costs such as labor and fuel; there is a logical economic basis for the airline support for OMP that has been evidenced. FAA has also reviewed additional cost-related information applicable to the project. For purposes of this review under NEPA, the FAA has concluded that the estimated costs of the project are reasonable. FAA has also concluded that it is reasonable to assume that, based upon the impact O'Hare has on the Chicago region, as well as the NAS, and the benefits to the regional economy, there will be sufficient funds to complete the proposal, if approved. In addition, FAA believes that with a project of this magnitude and importance, the availability of projected funding sources is sufficiently reasonable and capable of being obtained. Moreover, the FAA notes that the $300 million request for Federal funding is a small percentage of the cost of either Phase I or the full build project. Accordingly, the FAA decided, in the Final EIS, that it was both appropriate and necessary under NEPA to subject the Sponsor's full build proposal and alternatives thereto to this environmental analysis because the entirety of the proposed action is reasonably foreseeable. By examining financial feasibility of the proposed action, the FAA assured that its consideration of alternatives was not compromised by any misunderstanding over financial feasibility. This determination was made without prejudice to evaluation of the City's pending Letter of Intent (LOI) request, which is a separate process from this environmental analysis.

The FAA believes that this examination of financial feasibility in a ROD approving an ALP satisfies its obligations under NEPA. The Final EIS, the FAA's responses to comments, and this administrative record, provide the complete grounds for the FAA's findings here on the financial feasibility issue. At the same time, the FAA is mindful of the ongoing consideration of the application for AIP funds, and is able to state, without prejudice to the outcome of that proceeding, that there is no present information in that pending application that would warrant a different outcome in this matter.

### 10.1.2 FAA Planning Horizons

Airport planning and development includes the use of a number of different timeframes. The FAA's consideration of the OMP has included the use of the 2002 Terminal Area Forecast (TAF) with a planning horizon that extends to 2020. In reviewing the Benefit Cost Analysis to

consider funding applications under the Airways Improvement Act, the FAA applied guidance that calls for an applicant to use economic modeling that includes projections to 2028. In the FAA's discussion of environmental impacts contained in the Environmental Impact Statement, the FAA evaluates such impacts out to the year 2018. In addition, the City in its Master Plan, included forecasts and analysis that extended some 20 years beyond the projected completion of the OMP.

The FAA has received several comments suggestion that it should use a uniform planning horizon in general, and that its selection of 2018 as the final year of analysis for this EIS is especially inappropriate because such a shortened span distorts the potential benefits and detriments of the proposed action.

The FAA disagrees with this criticism. Because there are so many different types of functions assigned to the FAA, the agency has the responsibility and discretion to select the tools that will best enable it to fulfill each of those different missions. Just as one uses a different setting on a telescope to view objects at differing distances, the FAA has selected different horizons to satisfy its different statutory objectives.

Terminal Area Forecasts are used for staffing and facility planning purposes. The FAA uses the short-term projections of the TAF to make staffing and personnel planning decisions. The longer range TAF projections inform the agency's decisions on facility planning, requests for budget authority and appropriations, and future strategic initiatives in order to satisfy its statutory obligations under the Federal Aviation Act.

Similarly, the FAA benefit cost guidance provides that a sponsor include an evaluation period that includes projections generally 20 years beyond the completion of construction for major airport infrastructure projects.

This extended cost-benefit horizon reflects the projected useful life of structures and facilities for which funding is sought, in order to properly identify not only the evident costs, but all of the benefits that might flow from approval of such a grant. In some cases, that calculus includes a range of sensitivity tests to insure that these dollars are properly allocated.

With respect to the preparation of master plans, the FAA guidance calls upon a sponsor to include levels of annual activity for 5, 10, and 20 year horizons. On some occasions, as was true here, a sponsor may elect to extend the master plan forecast horizon beyond the 20-year period suggested in FAA guidance.

In contrast, the FAA's obligations under the National Environmental Policy Act (NEPA) require it to identify "reasonably foreseeable" environmental impacts in preparing Environmental Impact Statements. The agency's analysis of such impacts is critical to its ability to accurately evaluate alternatives and to prudently select among them as part of the NEPA process. To accurately identify and properly assess such impacts here, the FAA has used a period of time that extends five years beyond the completion of the proposed action. Its experience in applying NEPA led the FAA to adopt that planning horizon for the OMP because events beyond that period of time are not "reasonably foreseeable." For example, it is highly unlikely that the authors dealing with the proposed O'Hare improvements in the 1984 O'Hare EIS could

have accurately projected the 90 percent reduction in exposure of 65 DNL contours that occurred in the time between that EIS and this proposed action (see **Exhibit 6** of this ROD).

The FAA selection of this planning horizon for NEPA has been ratified as reflected in the concurrence by the USEPA in this airport improvement EIS.

### 10.1.3 1984 O'Hare International Airport Record of Decision

The FAA's 1984 ROD was issued as a basis for FAA's approval of an Airport Layout Plan which was developed by the City of Chicago as part of the Master Plan Study for O'Hare International Airport. The 1984 ROD includes the following under the Alternatives section:

> c. Development of New Airport. Development of a new major air carrier airport was considered several times in the past, as well as in the recently completed Master Plan Study. This alternative was not selected because of difficulties in finding a suitable site, the extremely high costs of acquisition and development of a new site, and the long lead time to make it operational. Development of another air carrier to serve the Chicago Metropolitan Area will be studied again as part of a State System Plan to be prepared by the Illinois Department of Transportation under a series of grants to be funded by the FAA's Airport Improvement Program. The initial grant was issued in September 1984.[24]

It should also be noted that in 1982, Chicago entered into an Intergovernmental Agreement with suburban communities and the Suburban O'Hare Committee (SOC) whereby it agreed that it would not place new O'Hare runways in service during the period ending June 30, 1995.

Subsequent to, and in accordance with, the FAA's 1984 Record of Decision (ROD), several FAA grants were issued for state system planning which studied Chicago regional aviation capacity issues and the needs for a supplemental air carrier airport. This satisfied all FAA's 1984 ROD requirements. While the State System Plan did not conclude that O'Hare's runways should not be expanded, it did recommend a new south suburban airport. In any event, previous state system plan coverage on the topic of O'Hare has been superseded by the State's 2003 passage of the O'Hare Modernization Act, which provided statewide special emphasis for development of the O'Hare Modernization Program.

### 10.1.4 Department of Transportation – Office of Inspector General

On July 21, 2005, the Department of Transportation – Office of Inspector General (OIG) issued a report regarding the FAA's review of the City of Chicago's O'Hare Modernization Program. This report documented an inquiry of the OIG that came about in response to a request from Representative Henry J. Hyde and former Senator Peter G. Fitzgerald. In the report, the OIG raised concerns that the FAA be vigilant with respect to 1) the Agency's progress on the implementation of ORD-related airspace changes, and 2) the Agency's review of the cost estimate and financial feasibility of the OMP. The FAA whole-heartedly agreed with the OIG that these two concerns were indeed legitimate subjects of discussion. FAA has chosen to accept and plans to implement the OIG recommendations with respect to these two concerns.

In addition, the OIG made certain factual determinations, among others, stating that, "[a]dministrative responses are not a desirable long-term solution to capacity constraints at

[24] FAA Record of Decision, Chicago O'Hare International Airport Master Plan, November 14, 1984.

O'Hare because prolonged regulatory intervention can restrict demand and inhibit competition," and "there is no question that capacity constraints exist at O'Hare and that these constraints affect the efficiency of the entire National Airspace System". The FAA agrees with the OIG on these two points.

## 11. OTHER ISSUES

### 11.1 Religious Freedom Restoration Act and First Amendment Issues

St. Johannes Cemetery and Rest Haven Cemetery are two religious cemeteries affected by the proposed Airport Layout Plan for O'Hare Modernization. Sections 5.8.7.4 and 5.8.7.5 of the Final EIS contain detailed descriptions of St. Johannes and Rest Haven Cemeteries. In earlier sections of this ROD, the FAA described its decisions and findings under Section 4(f) of the Department of Transportation Act, 49 U.S.C. §303(c), and Section 106 of the Historic Preservation Act, 16 U.S.C. §470f for these two properties. Here, the FAA addresses and resolves the religious liberty claims related to these cemeteries that have been asserted under the First Amendment of the U.S. Constitution and the Religious Freedom Restoration Act (RFRA) because of the FAA's many actions involving O'Hare modernization.

When the FAA began to examine the City of Chicago's proposal for O'Hare Modernization, it was the FAA's hope that the difficult and sensitive issues involving potential cemetery relocation could be resolved in a collaborative and consensual manner. The agency recognizes that any proposal to relocate a cemetery can provoke intense concerns. The FAA also notes that within the recent past, airport improvement projects at Toronto, Atlanta, Dulles and elsewhere have affected historic cemeteries, and at each of those airports, cemetery relocation/access issues were resolved without recourse to litigation. In fact, an O'Hare improvement project in the 1960's resulted in the relocation of graves from Wilmer's Old Settlers Cemetery to the Rest Haven site. However, through extensive correspondence, a succession of meetings, and pending litigation, the FAA clearly understands that there remains strong opposition by the religious objectors to relocation of graves from St. Johannes Cemetery and preservation of Rest Haven Cemetery as proposed in the Final EIS.[25]

Section 5.22 of the Final EIS presents the FAA's identification of these religious-liberty bases legal issues, and contains the agency's proposed resolution. Also, by letter of July 27, 2005, the FAA advised the parties advancing these religious liberty claims of the agency's contemplated resolution of these matters. The FAA invited written comments on the proposed resolution so that the FAA could make a final decision in this document. As part of this process, the FAA made available to the public the background documents and studies it had utilized in addressing these religious liberty issues. In resolving these matters, the FAA has considered with the greatest care all of the comments submitted to it on this subject.

[25] Those opposing the City of Chicago's contemplated acquisition and relocation of St. Johannes and Rest Haven Cemeteries have indentified themselves in correspondence with the FAA as the "religious objectors." The agency will adopt that term in addressing the issues they have presented to it.

### 11.1.1 Identification of the Claims

The religious objectors assert that RFRA precludes the FAA from approving any revision to an ALP that involves cemetery acquisition. They claim that such approvals by the FAA will substantially burden their free exercise of religion in three distinct, but related ways. First, the religious objectors assert that some of their members wish to be buried at St. Johannes or Rest Haven Cemetery, and that acquisition and relocation of these cemeteries would preclude them from being buried in these sacred, consecrated grounds. Second, they claim that acquisition and relocation would impair the practices of families and friends of those buried at these cemeteries that include visiting the sites, tending to the graves and engaging in meditation and reflection. Third, the religious objectors believe that neither cemetery should be disturbed because the ultimate salvation of those who are buried at St. Johannes or Rest Haven Cemetery will be impaired by the removal and relocation of their remains. The religious objectors declare that each of these claims constitutes a substantial burden on the free exercise of religion as practiced by them. They further assert that there is no compelling governmental interest in approving an ALP that requires cemetery acquisition and relocation, and that the FAA cannot demonstrate that the City's plan is the least restrictive alternative available to the decision makers.

The religious objectors also assert that the Free Exercise Clause of the First Amendment to the U. S. Constitution prohibits the FAA from approving any ALP that would allow the City of Chicago to acquire the two cemeteries and relocate the graves they contain. The religious objectors assert that the FAA is unable to demonstrate a compelling need to authorize such action, and that the agency has failed to establish that no alternatives to acquisition and relocation exist. These objectors assert that they are entitled to have the FAA apply the "compelling governmental interest test" in resolving their Free Exercise claims.

### 11.1.2 Resolution of Religious Freedom Restoration Act Claims

Both in the letter of July 27, 2005, to the religious objectors, and in Section 5.22 of the Final EIS, the FAA described its proposed resolution of these claims after first stating that its analysis of these issues presumed the applicability of RFRA to this situation. The FAA has adopted that presumption in this ROD, even though there is limited judicial guidance on the scope of this act in a permitting or funding context. Accordingly, the FAA first examines if the challenged governmental conduct imposes a "substantial burden" upon the free exercise of religion. The FAA then proceeds to decide if there is a "compelling governmental interest" that has caused this "substantial burden," and finally, it examines whether there is a "less restrictive alternative" to the proposed Federal action.

**Application of the "substantial burden" factor**

The FAA has identified three related but separate assertions of "substantial burden" to the free exercise of religion as practiced by the religious objectors. They are: (1) a desire by relatives or friends of those buried at St. Johannes or Rest Haven cemeteries to have the opportunity also to be buried at that site when they die; (2) a desire to visit St. Johannes or Rest Haven cemeteries to care for graves and for reflection, mediation, and worship; and (3) an insistence that these

cemeteries not be acquired by the City of Chicago and the bodies buried therein relocated to another cemetery.

In applying the substantial burden test to these three claims, the FAA finds limited documentation for two of their three claims. The religious objectors have provided scant evidence that they will be substantially burdened if they cannot be buried at either St. Johannes Cemetery or at Rest Haven Cemetery. Similarly, there is little evidence in support of a substantial burden imposed upon their religious practices involving their desires to continue to visit either of these sites, to tend to graves and to engage in meditation and reflection. In contrast, the FAA does find that the religious objectors have provided sufficient documentation for the religious grounds underlying their opposition to the reinterment of those buried at the two cemeteries. The statements from religious objectors examined by the FAA are replete with references to Scripture, Church creeds, and other recognized religious beliefs with respect to burial and reinterment. The FAA accepts these statements as genuine expressions of religious faith. The agency finds that the religious practices of these individuals are likely to be substantially burdened if these cemeteries are acquired by the City and the bodies buried there are relocated to another site. Because the FAA finds that approval of Alternative C, which calls for acquisition and relocation of St. Johannes Cemetery, is likely to substantially burden the exercise of religion as described above, the FAA concludes that it is not necessary to resolve whether the other two claims also present a substantial burden. Accordingly, the agency addresses the next aspect of RFRA, namely whether its approval of Alternative C advances a compelling governmental interest.

**Application of the "compelling governmental interest" factor**

The FAA finds that there is a compelling governmental interest in taking immediate Federal action that addresses the aviation needs of the Chicago region by reducing delays at O'Hare, thereby enhancing capacity of the National Airspace System (NAS), and ensuring that future terminal facilities and supporting infrastructure can efficiently accommodate airport users. As described in greater detail in earlier sections of this decision, O'Hare is one of the most delayed airports in the country. In 2003, O'Hare operations were delayed a total of 3,840,493 minutes, significantly delaying some 69,185 operations. Air traffic at O'Hare is projected to increase in the future from some 31 million passengers and 922,787 operations in 2002 to some 50 million passengers and 1,194,000 operations by 2018.

O'Hare also plays a vital role in the NAS by providing an extensive network of domestic and international air service to and from one of the nation's largest metropolitan areas, and also by serving as a central connecting point in the nation's air transportation network. For airports such as O'Hare, where there is a high historic percentage of connecting passengers, delays at O'Hare provoke delays throughout the nation, as passengers and aircraft travel to and from the 127 domestic and 48 international destinations directly served by O'Hare. These delays have serious economic consequences. The value to the Chicago region, to the millions of passengers who use O'Hare, and to the NAS of reducing present and projected delays at O'Hare is both substantial and compelling.

The FAA recognizes that some airport improvement projects are more important than others, just as some airports have a greater impact upon local, regional, and national concerns. The

O'Hare International Airport is special because of its role both locally and in the NAS. In the environmental analysis for this project, the FAA identified Alternative C as the "Preferred Alternative" because it provides a clearly superior method of meeting the goals of this project. As demonstrated earlier in this ROD, the difference in delay reduction between Alternative C and Alternative G, especially when measured by the amount of traffic expected by 2018, is truly substantial. Thus, for all the reasons contained in both Chapters 2 and 3 of the EIS, the FAA concludes that the implementation of Alternative C, now the selected alternative, is in the compelling governmental interest when applying RFRA to this project.

This finding of compelling governmental interest is reinforced by Congressional directives to the FAA, mandating it to promote aeronautical development and to support airport operators willing and able to expand their facilities. As improved, O'Hare will be capable of handling an additional amount of traffic with a level of delay approximately equal to today equivalent to the total operations today of Boston Logan International Airport or Miami International Airport. These improvements will benefit the Chicago region, millions of air travelers, and the NAS.

Similarly, the role of a large international airport must include adequate air cargo facilities, as more and more industries move to "just-in-time" production. Air cargo tonnage at O'Hare, carried in freight aircraft and the bellies of passenger aircraft, has increase by over 13 percent between 2001 and 2004, and is projected to increase 58 percent between 2000 and 2018. For these reasons, as well as those contained in the section of this decision describing the Purpose and Need of the proposed project, the FAA finds there is a compelling governmental interest in approving the selected alternative in so far as it also depicts the most efficient and effective means for providing international air cargo services at O'Hare.

In comments to the FAA, the religious objectors have argued that the improvements at O'Hare, at best, will alleviate congestion and delay for ten to fifteen years. At that point, they assert, the airport will be in the same predicament it is currently experiencing. For this reason, they contend that there is no compelling governmental interest in taking religious cemeteries when there are other alternatives that could spare these properties.

The FAA respectfully disagrees. Like many improvement projects, such as a highway for vehicular traffic, a dam for hydropower, or a facility for sewerage treatment, there is the possibility that there will come a time when the continued growth of our economy and society will require further improvements in roads, electric generation, and new treatment plants to supplement those that are needed today. Those more distant future needs do not render unnecessary today's actions. Between now and some point in the future when O'Hare delays may again require a response, the selected alternative will enable an increase in operations to 1,194,000 annually with an average annual delay of 5.8 minutes per operation. That delay level is approximately one-third of the delays experienced today. This reduction in delay is also accompanied by a concurrent increase in approximately 220,000 additional annual operations and nearly 11 million annual total passengers. In addition, the FAA believes that if approximately 1.4 million operations were to occur, the Airport would have between 13 and 16 minutes of average annual delay which is similar to the delays experienced today. Of course, the Airport would be handling nearly 40 percent more operations than today. It has never been the policy of the FAA to forego such benefits of airport improvement over the reasonably

foreseeable future because at some point in the more distant future other solutions may be required for the challenges of tomorrow. Moreover, the religious objectors would have us forego these benefits without also acknowledging that there must a point where, in their estimation, the benefits to the traveling public do outweigh the costs to them.

Therefore, the FAA concludes that there is a compelling governmental need to address the immediate and projected needs at O'Hare and thereby reduce delays in the NAS in as comprehensive a manner as possible. The religious objectors do not take into account the travelers and others that will benefit from reduced delays and increased capacity. The approach urged by the religious objectors would convert RFRA's balancing test into a veto, improperly elevating religious interests above all other interests.

**Application of the "least restrictive alternative" factor**

Having found that there is a compelling governmental interest in taking action that would accomplish the goals of the proposed airport improvement project, as defined by the statement of purpose and need in the EIS, the FAA turns to the final factor of "least restrictive alternative." To address this RFRA factor, the FAA has engaged in a balancing test to measure the competing values of substantially improving one of the nation's most important and congested airports against the religious liberties of those whose practices would be substantially burdened by such improvements. To proceed with these improvements as proposed, the FAA must find that the limitations on free exercise of religion that may result from this action are no greater than that required to protect the governmental interest involved. To conduct this analysis, the FAA has reexamined its earlier study of alternatives, as described in Chapter 3 and Appendix E of the EIS. These alternatives included differing runway configurations, varying numbers of runways, and other alternatives that did not include new runway construction at O'Hare, such as the use of other airports, various air traffic control techniques, other means of transportation, and congestion management. To satisfy the applicable environmental statutes, these alternatives earlier had been given the "hard look" required by NEPA, were studied for "feasibility and prudence" under Section 4(f) of the Department of Transportation Act, and had been measured under the agency's own statutory criteria in 49 U.S.C. § 47106. For RFRA purposes, these alternatives were further studied as part of the process to identify the "least restrictive alternative" of advancing the compelling governmental interest in improving O'Hare.

Beyond its reexamination of these alternatives, the FAA also carefully examined submissions provided by the religious objectors as part of the Section 4(f)/6(f) process. In these submissions, commenters presented the FAA with some eight variations of existing alternatives that offered the prospect of avoiding or mitigating the impacts to the cemeteries. Moreover, recognizing that all of the alternatives it had retained for secondary screening contained Runway 10C/28C which would pass directly over St. Johannes Cemetery, the FAA also directed its staff to produce an additional analysis of possible runway alignments that might avoid St. Johannes Cemetery altogether. The FAA's analysis of these derivatives is contained in Chapter 3 of the Final EIS at pages 3-61 through 3-85. Finally, the FAA also directed its staff to review the comments it had received on the tentative resolution of these issues. That analysis is set forth in **Appendix A** to this ROD.

**Rest Haven Cemetery**

At the outset of the EIS process, the City submitted to the FAA a proposed revision to its ALP that called for the construction of Runway 10C/28C in an area that would require relocation of existing air cargo facilities. To make way for this vital runway and related airport development, the City proposed to relocate these air cargo facilities to the Rest Haven site. In part, this was because the most efficient means of providing air cargo services at any large airport is to cluster those cargo facilities. Indeed, the failure to cluster cargo facilities in the original pre-construction ALP for the New Denver Airport led to such protests by airport users that the City of Denver quickly sought and obtained FAA approval of a revised ALP, centralizing all cargo facilities in order to ensure the viability of that airport. If air cargo facilities at O'Hare are to be co-located, the southwest quadrant of the airport is the only site available in order to avoid additional land acquisition for this aspect of the project. Alternative C, as considered by the FAA in the EIS, represented the optimum arrangement for future air cargo facilities at O'Hare.

However, when the FAA conducted its initial RFRA analysis for Rest Haven Cemetery, it tentatively found that Alternative C, as presented in its original format, is not the least restrictive alternative for purposes of RFRA. In balancing the interests of the Rest Haven religious objectors with the compelling interest in adoption of Alternative C, the FAA found it would be possible to relocate those cargo facilities within the space available for repositioning the cargo buildings and still leave Rest Haven Cemetery undisturbed, without compromising the compelling governmental interest in adopting Alternative C. Here, after further review and examination of the comments it has received, the FAA finds that it is vital to the overall improvement project that air cargo facilities be clustered in a common area, and that this corner of the airport is the only place within its presently proposed bounds that such facilities could be located effectively. Despite the comments of the O'Hare Air Cargo Managers Association, the FAA believes there is a measure of flexibility in the design and location of these buildings sufficient to accommodate the religious liberty interests without impeding the air cargo component of the compelling interest in Alternative C. Thus, the FAA adopts as final, the balancing it struck for Rest Haven Cemetery in its proposed disposition of this matter. Accordingly, the FAA is approving the selected alternative with an ALP that depicts cargo building repositioning, but also shows that Rest Haven Cemetery will remain in private ownership, complete with an access road provided by the City of Chicago, to allow continued access to its grounds. As such, the cemetery will remain available for future burials, and for visitation and care of the graves by members of the public. Under this arrangement, there will be no basis for mandatory reinterment of bodies at Rest Haven Cemetery. As a result, there will be no substantial burden upon religious liberties at Rest Haven Cemetery.

The FAA notes that the visual setting at Rest Haven Cemetery may be somewhat altered because it will be surrounded by the bustling 24-hour a day activity of an international air cargo facility. Also, the adjacent railroad tracks will be relocated to a distance much farther away from the site. Overall, the setting and surrounding environment at Rest Haven will be comparable to and no worse than that at St. Johannes Cemetery today, where the religious objectors assert a continued entitlement to the same types of activities that are sought to be protected at Rest Haven Cemetery. Indeed, noise exposure at Rest Haven is projected to be

lower than that presently experienced at St. Johannes. Rest Haven will be farther away from active runways than St. Johannes is today. Moreover, the Rest Haven surroundings, including potential blast fences that could protect visitors, will be obscured by decorative grasses, thereby mitigating visual intrusions. The FAA also finds that its application of RFRA to this cemetery in this manner, along with the mitigation provided pursuant to Section 106 of the National Historic Preservation Act, provides the full measure of relief sought by the religious objectors under this statute.

**St. Johannes Cemetery**

As the FAA stated in this ROD, the essence of any successful plan to provide significant delay reduction at O'Hare involves correcting the existing "runway triangle" and realigning the airfield in sets of parallel runways that can handle more traffic, safely and efficiently in all weather conditions. At an absolute minimum, there are two air traffic/air safety concepts that must be understood in order to appreciate how the selected alternative substantially improves O'Hare's efficiency and ability to handle more traffic with less delay.

- "Dependent Runways" means that the use of any one runway is dependent upon the use of another runway because they intersect, or the operation of one causes impacts such as wake turbulence on another runway. Dependent runways, by definition, are far less efficient than independent runways which allow constant streams of arrival or departure traffic, unimpeded by operations on another nearby runway.
- "Runway Protection Zones" are trapezoidal areas extending behind and out from the end of a runway where the movement of aircraft and other objects are prohibited for safety reasons. For example, in its current layout, the use of Runway 32R for arrivals precludes the FAA from using one of the two aircraft taxi bridges crossing the road to the airport because that taxiway bridge is located within the RPZ for that runway. Staggering the touchdown areas for parallel runways can create RPZ problems precluding aircraft on one of those runways from traveling behind and entering the RPZ of the other runway.

In its earlier, proposed findings for RFRA, the FAA tentatively concluded that the goals of this project can not be achieved without Runway 10C/28C because that runway is such an integral component of any viable ALP that meets the purpose and need of the project. Every alternative retained for secondary screening in the EIS contains this parallel runway at the same place on the ALP. Every alternative retained for secondary screening would require the acquisition and relocation of St. Johannes Cemetery because that runway is projected to be constructed directly over the cemetery.

In its application of the "least restrictive alternative" component, the FAA exercised its decades of expertise in aviation standards, air safety, and its experience in controlling air traffic at O'Hare. By definition, the FAA will not allow any runway configuration to be operated in an unsafe manner. However, some runway alignments allow greater efficiencies in the movement of aircraft both in the air and on the ground. Other combinations of runways produce the potential for unsafe conditions, which then requires the FAA to reduce the volume of traffic to or from those runways to a level that insures safety will not be compromised. Some

combinations of runways give controllers a measure of operational flexibility in directing constant streams of arrivals and departures in all weather conditions.

The FAA requested its staff to address the comments it received in response to the proposed findings contained in the Final EIS and the letter of July 27, 2005, sent to the religious objectors. That report appears as **Appendix A** to this ROD, and provides additional details of the agency's assessment of these derivatives in an operational context. As demonstrated in greater detail in that Appendix, airport layout plans are "dynamic" in the sense that a change in one runway often has consequences for other runways, nearby taxiways, and the overall ability to handle greater levels of traffic. Having considered all these materials, the FAA makes the following findings under RFRA with respect to St. Johannes.

- The FAA finds that Alternative A, the No Action Alternative, does not warrant consideration under RFRA. This alternative was included in the EIS analysis pursuant to the FAA's obligations under the NEPA. As the no-action alternative, this option would preserve both cemeteries, but would also fail to provide any meaningful relief for present or future delay conditions at the airport. This alternative would not advance the compelling governmental interest as described in the purpose and need for the proposed action. Selection of Alternative A as the "least restrictive alternative" would ignore the balancing scheme for competing values that Congress established in RFRA, in favor of a process that would elevate individual religious liberty concerns above all others in society.
- With regard to the two other alternatives retained for secondary screening in the EIS but not adopted as the Preferred Alternative, the FAA finds that neither warrants selection under RFRA as the least restrictive alternative. In the EIS, Alternative D was not selected as the Preferred Alternative because at 10.5 minutes of delay reduction, it provided considerably less improvement to O'Hare than the 5.8 minutes of delay reduction attributable to Alternative C. Despite its comparatively limited contribution to delay reduction, Alternative D's impact on St. Johannes Cemetery would be the same as the Preferred Alternative because it, too, calls for Runway 10C/28C to be located directly over that cemetery. Applying RFRA, Alternative D imposes the same substantial burden upon the religious objectors while failing to advance the compelling government interest nearly as well as Alternative C. In contrast, Alternative G would produce 6.9 minutes of delay reduction, but its impacts on both cemeteries would be greater.[26] Alternative G calls for Runway 12/30 to pass directly over Rest Haven Cemetery, and for Runway 10C/28C to be located directly over St. Johannes Cemetery. Thus, for RFRA purposes, Alternative G is the most intrusive of the alternatives retained in the Final EIS for secondary screening and does not meet the compelling governmental interest as well as Alternative C.

[26] As shown in the Final EIS, at page 3-86, there are significant differences in delay reduction among the three build alternatives. When comparing Alternative C to Alternative D, there is an 81 percent increase in average annual delay with Alternative D. When comparing Alternative C to Alternative G, there is a 19 percent increase in the average annual delay with Alternative G. These differences are especially compelling when evaluated against the backdrop of some 1,194,000 projected operations in 2018.

- Derivative H, submitted by the religious objectors, called for adoption of the No Action Alternative, combined with the use of other airports and adoption of a level of congestion management techniques at O'Hare to achieve an annual average delay of 9.3 minutes per operation. Derivative I called for the same approach to achieve delay levels that would be consistent with an FAA goal set in a Notice of Proposed Rulemaking. Derivative J presented the same approach, using congestion management to achieve delay levels of 4, 6, or 8 minutes per operation. The FAA finds that no-action, combined with congestion management, and the use of other airports to achieve pre-established levels of delay would not meet the purpose and need of the project. Instead, these derivatives would result in the accommodation of significantly lower level of annual operations than the unconstrained demand forecast by the FAA, and would not advance the compelling governmental interest identified earlier.
- Derivative K is essentially the EIS Alternative B, coupled with the use of other airports and adoption of congestion management techniques. In this regard, it is similar to the Blended Alternative which is discussed in Section 3.3.2.6 of the Final EIS, but Derivative K lacks some of the non-airfield alternatives considered in the Blended Alternative. In its NEPA review, the FAA concluded that the Blended Alternative was too speculative in its ultimate potential to meaningfully reduce delay. The FAA also found that congestion management techniques may be suitable as interim measures where airport improvements to reduce delay are not physically possible, or not yet implemented, but are not appropriate for airports where improvements can be made and airport operators are willing to undertake them. The FAA finds that Derivative K does not offer any long-term relief to present and future O'Hare delay problems. Because this derivative could not advance the compelling governmental interest identified earlier, it does not qualify as the "least restrictive alternative."
- Derivative L-1 proposes shortening Runway 10C/28C to 8,000 feet to avoid St. Johannes Cemetery. Even so, the Runway Protection Zone for Runway 10C would intrude into the cemetery, preventing public assembly. Also, this derivative would place severe operating constraints on the airfield any time weather conditions presented a ceiling below 4,500 feet and less than 7 miles of visibility, thereby limiting arrival capacity to between 76 to 80 arrivals per hour which is today's IFR rate at O'Hare. In response to the FAA's tentative conclusion that this derivative would provide modest delay benefits but would not accommodate anticipated growth in aviation activity at acceptable levels of delay, the religious objectors have responded by asserting that Derivative L-1 would perform better than Alternative B, which is the OMP at Phase One. The accuracy of such a prediction is not important, since Phase I is an interim step in a much larger improvement plan designed to service the forecast aviation demand during the planning horizon. As such, this alternative does not satisfy the compelling governmental interest.
- Derivative L-2, like L-1, preserves the Runway Triangle on the north side of the airfield, with all the associated limitations relating to those dependent runways. It also removes Runway 10C/28C. In addition, this derivative retains two runways scheduled for closure (Runway 14L/32R and Runway 14R/32L), thereby exacerbating the existing

interactions between arrivals and departures to the extent that this derivative actually performs worse than the current runway alignment. In comparison with the selected alternative, Derivative L-2 posits the same number of runways, but the L-2 alignment does not work nearly as well as the selected alternative because so many of the L-2 runways are dependent upon the use of other nearby or intersecting runways. Because of the number of runway dependencies in Derivative L-2, the capacity of the airport, when weather includes a ceiling below 4,500 feet and 7 miles of visibility, is reduced to between 76-80 arrivals per hour, far less than the 120 arrivals possible under the selected alternative. The FAA has been presented with no comments or analysis that would cause it to reexamine its earlier proposed determination that this derivative is likely to yield less delay reduction than Alternative B, a runway alignment found not capable of meeting the purpose and need of the project.

- Derivative M was submitted to the FAA in the form of a transcript of a newscast in which it was asserted that a single new runway on the airport's south end would accomplish the benefits of the OMP at a fraction of the costs. The FAA evaluated this derivative twice, initially at 4,300 feet south of existing Runway 9R/27L, and then, in Derivative N, at 5,000 feet south of that existing runway. For both, the FAA finds that there is no improvement to the existing runway layout on the north side of the airfield, and that the presence of a single new runway would preclude the FAA from conducting triple simultaneous approaches in instrument conditions, both in east and west flow operations. Moreover, in response to FAA safety concerns, the religious objectors suggest Derivative M could work if its proposed runway were shortened by 1,000 feet, limited to arrivals only, or if additional land were acquired in Bensenville. The FAA finds that Derivative M, if operated in a manner that complied with all FAA safety standards, would require operational limitations that restrict the airfield's arrival capacity to a level equivalent to today's conditions. Derivative N, if operated according to FAA standards, performs more poorly than Alternatives B, C, D and G. In good weather, it would be impossible to operate Derivative N to accommodate quadruple arrival streams, as is possible under the selected alternative. Also, overlapping Runway Safety Areas for two runways would make them dependent upon each other, further limiting their efficiency. Accordingly, neither of these Derivatives is capable of accomplishing the compelling governmental interest, and do not warrant further consideration as less restrictive alternatives.
- Derivative C-1 was created by the FAA to study the operation of O'Hare, with the selected alternative, but without Runway 10C/28C which passes directly over St. Johannes Cemetery. This runway is intended to be used as an arrival runway in all operating conditions. Its removal prevents four arrival streams of traffic in good weather. Because such conditions prevail more than 50 percent of the time, the loss of that fourth stream of arrivals means that forecast operations would be handled at a greater level of delay than the selected alternative. Contrary to the comments of the religious objectors, the selected alternative was modeled in the EIS with quadruple approaches in good weather as one of the operating assumptions. In addition, to optimize C-1's productivity in a west flow configuration, Runway 28R must be

converted from a departure to an arrival runway, and all departure traffic on the south half of the airport shifted to Runway 28L. To handle many of these additional west flow departures, Runway 28L would need to be extended by least 1,000 feet, requiring additional land acquisition in Bensenville. A failure to extend this southernmost runway would cause an imbalance in operating the airport, as pilots would demand the use of longer runways for departure that are available on the north side of the airfield. In comments, the religious objectors assert that Runway 10R/28L would not need to be extended because it could serve as a full-time arrival runway. However, shifting the use of Runway 10R/28L from a departure to an arrival function also produces the same imbalance and inefficiencies that the selected alternative was designed to remediate. Not only would this result in greater congestion on those two runways on the north side of the airfield, but such practices would also cause further delay because of the air traffic complications involved in routing those aircraft from a departure runway intended for other destinations as described in greater detail in **Appendix A**, specifically, see the FAA's response to Mr. Fleming's affidavit in Section A.2. In addition, the absence of Runway 10C/28C during the construction of the OMP would pose significant delay issues. In sum, the loss of this critical, full-time runway would preclude O'Hare from achieving a level of delay reduction necessary to achieving the compelling governmental interest in this undertaking.

- Derivatives C-2 and C-3 contemplated shortening Runway 10C/28C to 7,500 and 6,000 feet, respectively, to spare St. Johannes Cemetery. Here, unlike Alternative C-1, there would be the full complement and alignment of runways contemplated by the selected alternative. In its earlier proposed assessment of these alternatives, the FAA tentatively made a number of findings, including a change in the way that aircraft would be able to taxi from Runways 10C and 10R to the terminal. Because the threshold of Runway 10C would be relocated to the east, it will no longer be possible to have arrival traffic on Runway 10C and Runway 10 R cross the departure Runway 10L at the point contemplated in the selected alternative. Under the selected alternative, arrivals from Runway10C cross Runway 10L behind that point where aircraft would utilize an intersection departure from Runway 10L Instead, aircraft using these runways under Derivative C-2 would cross departure Runway 10L midfield, creating the same type of "runway dependency" that the OMP was designed to remediate. The religious objectors ignore this, asserting it does not matter where a runway crossing occurs. The FAA disagrees. Under Derivatives C-2 and C-3, the constant stream of departures from Runway 10L/28R would need to be interrupted by traffic crossing to and from the other southern runways, creating potential safety problems that would need to be addressed by restricting the use of Runway 10L for departures. These restrictions would operate to lower the potential rate of departures from Runway 10L to allow for safe runway crossings of arrival traffic. Similarly, the religious objectors do not comprehend the FAA's safety concerns with wake turbulence associated with the proposed staggered thresholds of Runways 10L and 10C under these derivatives. The selected alternative deals with wake turbulence by aligning the thresholds of these two runways even with each other. In that manner, an aircraft arriving on Runway 10C touches down long

before a departing aircraft on Runway 10L is airborne. Derivatives C-2 and C-3 move these landing and departing events to a position on the respective runways where landing and departures would take place within the same space. The religious objectors tacitly acknowledge this concern by suggesting that wake turbulence could be "mitigated" rather than eliminated, and also by suggesting that the airport be operated by assigning runways to aircraft based on size rather than arrival or departure points. This latter suggestion would create a crazy-quilt dilemma for arrival control. Normally, aircraft are "lined up" for a specific runway some 40 miles from the airport at an initial approach point. Different runways have different approach points, and each runway has its own stream of arrival traffic. The commenter would have aircraft vectored into other approach streams coming from other arrival points, based solely on aircraft size, in order to avoid wake turbulence issues on landing. Such mitigation would seriously compromise the ability of this runway alignment to operate as designed and contemplated in the selected alternative. The FAA finds that because of the operational restrictions required to safely utilize Derivatives C-2 and C-3, they could not achieve a level of delay reduction close to that provided by the Selected Alternative and therefore, neither qualifies as the least restrictive alternative.

- Derivatives C-4 and C-5 were designed by the FAA to avoid St. Johannes Cemetery by shifting Runway 10C/28C to the south by 350 or 450 feet respectively, and shortening it to no more than 10,300 feet. Under FAA standards for the placement of objects at airports, there is only a small spot available in the south half of the airport where a new air traffic control tower could be located without violating those safety standards. This tower is necessary to allow use of the southernmost runway. Derivatives C-4 and C-5 move Runway 10C/28C into the protected space for this new tower, and would require the FAA to require greater separation between aircraft using the two southernmost runways, thereby compromising the efficiency and capacity of these runways during poor weather. In addition, the FAA's earlier expressed concern that these Derivatives created wake turbulence issues for departures on Runway 22L and arrivals on Runway 28C remains valid. Supporters of these derivatives have responded by arguing that such conditions could only occur 45 percent of the time, and that pilots could vary the power settings used on takeoff to mitigate such concerns. Such responses demonstrate an unfamiliarity with the real-world situation of operating a major airport in both a safe and efficient manner. The cumulative limitations imposed by the restrictions that would be necessary to operate these derivatives safely would result in an ability to handle considerably less traffic than the selected alternative, and therefore, neither of them qualifies for consideration as the least restrictive alternative.
- To gain greater insight in cemetery relocation issues, the FAA requested information from the Tennessee Valley Authority (TVA), a Federal agency that has had substantial experience in cemetery relocation because of the many hydro-power facilities it has constructed in areas where there have been public, private, family and religious cemeteries. Since 1933, TVA has relocated some 555 cemeteries, flooded some 516 others, and has relocated over 30,000 graves. The FAA learned that in some cases, survivors of the deceased requested TVA to simply flood the gravesites rather than

relocate the bodies of the deceased. Accordingly, the FAA examined whether it might be possible, as a matter of engineering, to leave the bodies at St. Johannes Cemetery in place while constructing Runway 10C/28C on the surface of the ground. In this concept, access and future use would not be available, but there would be no need for reinterment. However, the agency has concluded that the depth of excavation needed for runway construction, along with the ancillary activities such as electrical cabling for airfield runway lighting and storm sewer pipes for airfield drainage, presented a substantial likelihood that the graves could be disturbed. Therefore, the FAA finds that this option is not viable as the least restrictive alternative.

In summary, the FAA finds that the derivatives discussed in this ROD are feasible, in the sense that they could be constructed and implemented. To one degree or another, adoption of any of them could avoid the need to acquire and relocate St. Johannes Cemetery. At the same time, none of the derivatives presented to or created by the FAA performs nearly as well as the selected alternative in terms of its ability to reduce delay and meet the long-term forecast demand at the airport. The interests of the religious objectors must be balanced against the interests of the traveling public, the airlines, the larger Chicago region and the National Airspace System, in which O'Hare plays such an important role. During the environmental review process, Alternative C became the Preferred Alternative and then was adopted in this ROD as the selected alternative because it clearly performs so much better than any other alternative. After examining all of the alternatives and derivatives as described above, the FAA finds that it would be contrary to its obligations under both the Federal Aviation Act and RFRA to allow the interests of the religious objectors to outweigh the compelling interests of traveling public, the nation, and others in realizing the unique benefits only provided by the selected alternative. Accordingly, the FAA concludes that, on balance, there are no less restrictive alternatives that could adequately satisfy the compelling governmental interest in proceeding with the most robust and effective approach to meeting the purpose and need of this project at this major airport.

### 11.1.3 Resolution of the First Amendment Claim

In the Final EIS, Table 3-11 shows that all of the "build alternatives" retained for secondary screening are likely to result in the acquisition by the City of between 413-440 acres that are needed for O'Hare improvements. These acquisitions are intended to expand the airport's perimeter, and are driven by proposed runway alignments rather than the present uses for these sites. Only a small percentage of this acreage involves the two cemeteries. All of the "build alternatives" call for the construction of Runway 10C/28C, directly over the location of St. Johannes Cemetery. Similarly, all of these alternatives also call for the relocation of existing air cargo facilities to the far southwestern quadrant of the airport where Rest Haven Cemetery is located. Accordingly, the FAA finds that the City's acquisition plans are not directed at the cemeteries themselves, or at those whose religious beliefs call for the preservation of these two properties. Instead, the FAA's approval of the ALP, through the selected alternative, and the City's potential land acquisition and relocation activities, are governmental actions that are wholly neutral in nature and of general applicability. Because it is clear to the FAA that the present use of the lands slated for acquisition did not enter the calculus of designing the OMP

or deciding what properties required acquisition to accomplish the OMP, this action is unlike some governmental actions in other contexts where actions targeted directly at certain religious practices or establishments may present First Amendment Free Exercise issues. In essence, these cemeteries were initially slated for acquisition and relocation simply because of where they are - not because of what they are. For these reasons, the FAA finds that there is no violation of the Free Exercise Clause, because there are legitimate governmental reasons to proceed with this project.

Moreover, the FAA rejects the proposition that in resolving this Free Exercise Claim, it must apply the "compelling governmental interest" test which would require stricter scrutiny of the proposed action alleged to infringe upon protected religious liberties. Such strict scrutiny is appropriate if the purpose of governmental action is to infringe upon or restrict religious practices. This more demanding test has already been applied in the FAA's application of RFRA to this situation. For First Amendment purposes, the proposed governmental conduct is neutral in nature and of general applicability. Therefore, the FAA finds that this conduct is justified by the legitimate governmental interest in proceeding with this airport improvement project, despite any incidental effect of burdening a particular religious practice or belief. The FAA also declines the invitation of the religious objectors to pass upon the constitutionality of the O'Hare Modernization Act adopted by the State of Illinois. It is not the role of the FAA to make such judicial determinations. This act, as adopted by the State of Illinois, does not impact the FAA's analysis of these First Amendment claims.

### 11.2 Issues Relating to Due Process Claims and Formal Adjudicative Processes

As the FAA discussed in Section 5.23 of the Final EIS, the religious objectors have asserted an entitlement to have their RFRA and First Amendment claims resolved through a formal, adjudicatory process. The asserted legal basis for such an entitlement, however, is somewhat opaque. The objectors recognize such formal processes are appropriate when the FAA is applying a provision of Title 49 of the United States Code that calls for agency determinations to be made "on the record after opportunity for agency hearing." They also recognize that no such statutory provision is implicated in the FAA's consideration of the OMP. Moreover, it is beyond question that here, the FAA has applied the same type of informal, agency decision making that it has always used for the many airport improvement projects it has examined over the past several decades. Nevertheless, the objectors apparently believe that determinations of "compelling governmental interest" and "least restrictive alternative" are themselves adjudicatory matters suitable for resolution only by judicial or administrative tribunals. The FAA rejects this contention.

Integrating RFRA and First Amendment concerns into the statutory scheme of environmental review for airport improvement projects, the FAA examined carefully all of the submissions of the religious objectors, including the pleadings and affidavits of plaintiffs in the pending federal court case involving these matters. To make determinations of "substantial burden," "compelling governmental interest" and "least restrictive alternative," the FAA applied its expertise in aviation safety, air traffic procedures, airport layout, and the public interest in efficient air transportation. The FAA then published its proposed determination in the Final EIS and in a letter to the religious objectors, and invited public comments. Notably, the comments

the FAA received on its proposed resolution simply reasserted that the agency cannot render a decision on contested issues of fact or law relating to these religious liberty claims. The FAA is aware of no requirement that would obligate it, or any other Federal agency when presented with similar claims, to conduct a formal adjudicative process. Surely, administrative law judges do not "ride circuit" on the Federal prison system to decide every RFRA claim inmates present to their wardens. Instead, these claims are appropriately resolved through informal agency determinations, and the administrative records produced through those processes are then available for judicial scrutiny. Here, the findings the FAA has made in this ROD can be challenged by a member of the public with legal standing to file a petition for review in an appropriate federal court where the FAA's determinations will be subject to review under a substantial evidence or arbitrary and capricious test.

## 12. AGENCY FINDINGS

In accordance with applicable law, the FAA makes the following determinations for this project, based upon the appropriate information and data contained in the Final EIS and the EIS record.

### 12.1 The project is consistent with existing plans of public agencies for development of the area surrounding the airport [49 U.S.C. 47106(a)(1)] and Executive Order 12372.

The determination prescribed by this statutory provision is a precondition to agency approval of airport project funding applications. It has been the long-standing policy of the FAA to rely heavily upon actions of metropolitan planning organizations (MPOs) to satisfy the project consistency requirement of 49 U.S.C. 47106 (a) (1) [see, e.g., SOC v. Dole, 787 F.2d 186, 199 (7th Cir., 1986)]. Furthermore, both the legislative history and consistent agency interpretations of this statutory provision make it clear that reasonable, rather than absolute consistency with these plans is all that is required.

Under the provisions of both Federal and state law, the Chicago Area Transportation Study Policy Committee (CATS) has been designated as the MPO for surface transportation for the northeastern Illinois region. CATS provided a transportation conformity letter to the FAA on April 11, 2005[27] stating "[w]e concur that all of the projects requiring a conformity determination and which could be conformed given fiscal constraints at the time of the conformity analysis were conformed." CATS is also responsible for the Regional Transportation Plan (RTP). The Northern Illinois Planning Commission (NIPC) is the comprehensive land use planning agency for the northeastern Illinois region. In this capacity, it provides the official population and employment growth forecasts as key inputs into the RTP. NIPC submitted a letter to the FAA on June 30, 2005[28] that stated that the Draft EIS document was "consistent with NIPC plans and policies."

CATS and NIPC have recently merged into one 15-member board, appointed by elected officials in the seven-county region, with one-third of the seats filled by the City of Chicago, a third filled by suburban Cook County, and the remainder filled by DuPage, Lake, McHenry,

[27] Letter from Donald Kopec, CATS, to Michael MacMullen, FAA, April 11, 2005.
[28] Letter from Ron Thomas, NIPC, to Barry Cooper, FAA, June 30, 2005.

Will, Kane, and Kendall counties. The MPO is primarily responsible, in cooperation with the state, for carrying out the urban transportation planning process in the region.

The FAA finds that the project is consistent with the existing plans of public agencies authorized by the state in the area in which the airport is located to plan for the development of the area surrounding the airport, and will contribute to the purposes of the 49 U.S.C. 47101 et seq. The FAA is satisfied that it has fully complied with 49 U.S.C. 47106(a)(1).

The proposed expansion is also consistent with comprehensive plans that have been adopted by jurisdictions in the vicinity of the airport as described in Section 5.2 of the Final EIS. The FAA has also reviewed and considered the substantial documentation in the EIS record demonstrating that throughout the environmental process the City of Chicago has shown concern for the impact of the proposed development actions on surrounding communities.

In making its determination under 49 U.S.C. 47106(a)(1), the FAA has considered the fact that local governments have been represented by the MPO and have participated, through MPO executive committees and task forces, as members of that organization in its decision to authorize the projects at O'Hare. The FAA has also recognized the fact that none of these jurisdictions has regulatory authority over airport operations, since long-established doctrines of Federal preemption preclude these communities from regulating aircraft operations conducted at O'Hare.

### 12.2 The interest of the communities in or near where the project may be located was given fair consideration [49 U.S.C. 47106(b)(2)].

The determination prescribed by this statutory provision is a precondition to agency approval of airport development project funding applications. The regional planning process over the past decade and the environmental process for this project-specific EIS, which began in 2002 and extended to this point of decision, provided numerous opportunities for the expression of and response to issues put forward by communities in and near the project location. Nearby communities and their residents have had the opportunity to express their views during the Draft EIS public comment period, at public hearings, as well as during the review period following public issuance of the Final EIS. The FAA's consideration of these community views is set forth in Final EIS Appendices S, T and U of the Final EIS, and in **Appendix A** of this ROD. Thus, the FAA has determined that throughout the environmental process, beginning at its earliest planning stages, fair consideration was given to the interest of communities in or near the project location.

### 12.3 Effect on Natural Resources [49 U.S.C. Section 47106(c)(1)(B)].

Under this statutory provision, the FAA may approve funding of an airport development project involving the location of a new runway or major runway extension having a significant adverse effect on natural resources, only after determining that no possible and prudent alternative to the project exists and that every reasonable step has been taken to minimize the adverse effect.

The FAA finds that the selected alternative would have significant adverse impacts in the categories of noise and compatible land use, Section 4(f) properties (parks and historic

properties), Section 6(f) properties, wetlands, social impacts, surface transportation, without mitigation described in Section 9 of this ROD. However, given that all the build alternatives would have substantially similar effects and that Alternative C is clearly superior in terms of reducing average annual delays, the FAA finds that no possible and prudent alternative exists to the project (see Section 7 of this ROD). Finally, the FAA has determined that all reasonable steps have been taken to minimize any significant adverse effects on natural resources through mitigation.

The FAA has decided to condition approval of the proposed alternative upon the mitigation measures described in the Final EIS and in Section 9 of this ROD. This condition will be enforced through a special assurance included in future Federal airport grants to the City of Chicago.

### 12.4 Appropriate action, including the adoption of zoning laws, has been or will be taken to the extent reasonable to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations [49 U.S.C. Section 47107(a)(10)].

On September 27, 2005, the City of Chicago provided written assurance that appropriate action, including the adoption of zoning laws, has been or will be taken to the extent reasonable to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations.

### 12.5 Clean Air Act, Section 176(c)(1) Conformity Determination Regarding Chicago O'Hare International Airport Master Plan Update Development Actions [42 U.S.C. Section 7506(c)].

The determination prescribed by this statutory provision is a precondition for Federal Agency support or approval of airport development projects. The USEPA regulations generally governing the conformity determination process are found at 40 CFR Part 93, Subpart B, Sections 93.154 through 93.159, 40 CFR Part 50, and 40 CFR Part 51, Appendix W.

O'Hare is located within Cook and DuPage Counties. Cook and DuPage counties are designated attainment for carbon monoxide, nitrogen dioxide, and sulfur dioxide. With the exception of an area within Lyons Township (south of O'Hare) that is designated moderate non-attainment, both counties are also designated attainment for particulate matter 10 microns or less in size. Finally, both counties are currently designated moderate non-attainment for the 8-hour ozone NAAQS, and non-attainment for the annual standard for particulate matter 2.5 microns or less in size.

Because the State of Illinois has not yet submitted (nor are they required to) plans that demonstrate the area will attain the annual standard for particulate matter 2.5 microns or less in size, the FAA was required to determine that the project would be consistent with the purpose of the existing Illinois State Implementation Plan (SIP) for ozone (the applicable SIP).

The FAA published a Draft General Conformity Determination in May of 2005. Responses to comments on the Draft document are provided in Appendix J, Section J-5, of the Final EIS. The Final General Conformity Determination is provided in Appendix J, Section J-2, of the Final EIS.

The following summarizes the methodologies used to evaluate the applicability of the General Conformity Rules to FAA's proposed actions, to evaluate total direct and indirect project-related emissions of volatile organic compounds and nitrogen oxides (precursors to the air pollutant ozone) from the sources subject to the General Conformity Rules, and the results of the FAA's final conformity evaluation.

- **Applicability** –Net (project-related) emission levels of volatile organic compounds and nitrogen oxides were compared to de minimis levels published in the General Conformity Rules. At the request of the USEPA, the de minimis level for the 8-hour ozone NAAQS was used (100 tons of either volatile organic compounds or nitrogen oxides). Notably, the de minimis level for the 1-hour ozone NAAQS was also considered (25 tons of either volatile organic compounds or nitrogen oxides). Based on the results of the comparison, it was determined that the General Conformity Rules are applicable to emissions from the proposed improvements.
- **Aircraft, Ground Support Equipment/Auxiliary Power Units** - To evaluate if project-related aircraft, ground support equipment, and auxiliary power unit emissions could be reasonably accounted for in the IEPA's SIP-based projections, emission levels with the proposed improvements at O'Hare were compared to the IEPA projected levels for the attainment year (2007). Because the project-related emission estimates when added to the emissions estimates that would occur without the project were lower than the SIP-based projections, the FAA, in consultation with the IEPA, determined that project-related emissions can reasonably be accounted for in the 1-hour ozone attainment demonstration SIP.
- **Construction Activity** – The 1-hour SIP does not identify specific or individual projects with respect to emissions resulting from any regional construction activity. Based on the results of a comparison of O'Hare –related emissions to IEPA's SIP-based project emissions, the greatest level of construction-related volatile organic compound and nitrogen oxide emissions would represent approximately 2 and 5 percent of the IEPA's regional emissions, respectively. Because the O'Hare-related construction emissions would represent a relatively small percentage of the IEPA's regional projections, the FAA, in consultation with the IEPA, determined that it is reasonable to assume that the O'Hare-related construction emissions can be accounted for in the inventories for the 1-hour ozone attainment demonstration SIP regardless of year, construction schedule, construction scenario, or alternative.
- **Motor Vehicles** – The improvements to O'Hare would increase motor vehicle activity and motor vehicle-related emissions as a result of the forecast increase in aircraft operations with the improvements. When the greatest project-related motor vehicle emissions of volatile organic compounds and nitrogen oxides were compared to Chicago Area Transportation Study (CATS) projected emissions, project-related emissions would account for approximately 0.06 percent of the volatile organic compound or nitrogen oxide emissions. Because the emissions represent such a small portion of the regional emissions, the FAA, in consultation with the IEPA, determined

that the motor vehicle emissions can reasonably be accounted for in established emission totals.

Notably, the IEPA concurred with the FAA's determination that the improvements to O'Hare conform to the applicable State Implementation Plan. This correspondence is included on pages J-345 and J-346 in Appendix J, Attachment J-3, of the Final EIS.

**12.6 For this project, involving new construction that will directly affect wetlands, there is no practicable alternative to such construction. The proposed action includes all practicable measures to minimize harm to wetlands that may result from such use (Executive Order 11990, as amended).**

This executive order requires all Federal agencies to avoid providing assistance for new construction located in wetlands, unless there is no practicable alternative to such construction, and all practicable measures to minimize harm to wetlands are included in the action.

Section 5.12 of the Final EIS documents that the preferred alternative will directly affect 154.2 of jurisdictional and non-jurisdictional wetlands and non-wetland WUS at O'Hare. The FAA has concluded that no practicable alternative exists to development of the preferred alternative because the other alternatives either fail to meet the purpose and need or they result in the same adverse impacts on wetlands as shown in Chapter 3 and Section 5.12 of the EIS.

The wetlands at the airport include many small, individual sites providing relatively few beneficial wetlands functions and values. These wetlands and WUS have been adversely affected by past human activities, including clearing, grading, and other developmental actions. The impacts of past disturbances range from modification of plant communities to creation of new wetland areas, primarily caused by man-made grading changes that blocked original drainage ways or which created isolated depressions.

The guidelines associated with the Section 404 permit process indicate that satisfactory mitigation must be provided if jurisdictional wetlands impacts could occur as a result of project implementation. The proposed conceptual wetland mitigation plan is intended to provide compensatory mitigation for wetlands and WUS removed from O'Hare. The overall intent is to greatly improve the quality of wetlands resources with regard to a variety of functions and values including wildlife support, while offering additional value to the interested public by providing access that was not possible at the Airport.

The FAA finds that there is no practicable alternative to the proposed development's attenuation of the 154.2 acres of wetlands and WUS located on the airport. Compared to the No Action Alternative (Alternative A), the likely impacts to wetlands (both jurisdictional and non-jurisdictional) under Alternatives C, D, or G would be significantly greater due to placement of permanent structures, placement of construction-related equipment, site grading activities, and the placement of construction spoil materials. As compared to Alternatives C and G, Alternative D might theoretically result in the loss of about 7.65 fewer acres of wetlands. However, these 7.65 acres of wetlands would reasonably be expected to dry up over time because these wetlands would be disconnected from their underlying hydrology. Therefore, it is likely that all Build Alternatives would result in the loss of 154.2 acres of wetlands and non-wetland WUS.

As noted in Section 5.12, of the Final EIS, the USACE has worked with the FAA to ensure that all practicable measures will be taken to minimize harm to wetlands, impacted through development of the selected alternative. Using Best Management Practices (BMPs) during construction and developing a wetland compensatory mitigation site will accomplish this. Following issuance of this ROD, the USACE, in consultation with the IEPA, will complete its processing of a Section 404 permit and Section 401 certification, required for the City of Chicago to proceed with development impacting wetlands. The project approvals in this ROD and this wetlands determination are expressly conditioned upon permit approval and conditions to be outlined by the USACE, and upon the City of Chicago accomplishing the wetlands mitigation measures identified in the Final EIS and any USACE permit approval.

Although it is generally preferable to attempt to mitigate wetland loss through replacement wetlands in the same watershed, this is not the case where such replacement would create man-made wetlands in the vicinity of airport aircraft movement areas. FAA Advisory Circular 150/5300-33A, *Hazardous Wildlife Attractants On or Near Airports* , dated July 27, 2004, states the FAA's policy that wetland mitigation projects located within 10,000 feet of airports serving turbine-powered aircraft (such as Chicago O'Hare), present a safety hazard as attractants of wildlife that significantly increase the risk of bird/aircraft strikes.

The safety standards set forth in this FAA policy statement are recommended for the operators of all public-use airports. Furthermore, for airport sponsors who are the recipients of Federal grant funding, adherence to safety standards set forth in FAA advisory circulars is a requirement of standard grant assurances, as acknowledged in section 4-3(a) of FAA Advisory Circular 150/5200-33A.

This recent agency policy guidance supports the Final EIS determination that the replacement wetlands for the Chicago O'Hare development actions should not be located in the vicinity of the airport. Given the potential hazard associated with the creation of wildlife attractions within 10,000 feet of jet runways, the FAA, USACE, and IEPA agreed that it is prudent to permit the City of Chicago to replace these impacted wetlands outside of the airport's immediate watershed. The replacement wetlands are located in the same USGS hydrologic unit.

As detailed in Section 7.8 of the Final EIS, a wetland mitigation program has been developed to offset the impacts of the project and to recognize other long-term biological problems. The mitigation plan calls for replacing the filled wetlands. A total of 447.4 acres of compensatory mitigation is proposed. Several candidate wetland mitigation sites have been examined. Final mitigation requirements will be determined during the Section 404 permit application and review process in consultation with the USACE.

**12.7 This project does not involve a significant encroachment of a floodplain. Consistent with the policy in Executive Order 11988 and DOT Order 5650.2, for this project, involving an encroachment on a floodplain, there is no practicable alternative to the selected development of the preferred alternative.**

The FAA has concluded that the selected alternative would not involve a significant encroachment on a floodplain as defined in DOT Order 5650.2, which implements Executive Order 11988. These Orders establish a policy to avoid supporting construction within a 100-

year floodplain where practicable, and where avoidance is not practicable, to ensure that the construction design minimizes potential harm to or within the floodplain.

Consistent with this policy, implementation of the selected alternative would encroach, although the encroachment would not be significant, upon the floodplains of the North and South Airfields by construction within the floodplains and relocation of the floodplains. The FAA has considered whether there are practicable alternatives to this encroachment. See Section 5.12 of the Final EIS and Section 12.6 of this ROD for further information. Further, the selected alternative conforms to all applicable state and/or local floodplain protection standards (Executive Order 11988).

Assuming completion of the drainage improvements and acceptance of the Conditional Letter of Map Revision (CLOMR) by the Federal Emergency Management Agency (FEMA), and the construction of the detention basins on the South Airfield, none of the projects included in the preferred alternative would significantly encroach on any of the floodplains that exist in the Airport vicinity. Therefore, no significant encroachment on floodplains as defined in DOT Order 5650.2 would occur under the selected alternative. Thus, FAA concludes that there would be no significant impacts on floodplains.

### 12.8 Relocation assistance will be provided in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. Section 4601 et seq.)

These statutory provisions, imposed by Title II of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, require that state or local agencies, undertaking Federally-assisted projects which cause the involuntarily displacement of persons or businesses, must make relocation benefits available to those persons impacted.

As detailed in the Section 5.4 of the Final EIS, the preferred alternative will displace approximately 539 housing units (2,631 residents) and 197 businesses. The FAA will require the City of Chicago to provide fair and reasonable relocation payments and assistance payments pursuant to the provision of the Uniform Relocation Assistance and Real Property Acquisition Policies Act. Comparable decent, safe, and sanitary replacement properties are available on the open market.

### 12.9 For actions that include the use of lands subject to Section 4(f) of the DOT Act including significant historic sites, there is no prudent and feasible alternative to using that land, and the project includes all possible planning to minimize harm resulting from the use [49 U.S.C. Section 303(c)].

The selected alternative would trigger the application of 49 U.S.C. Section 303(c), commonly known as Section 4(f) of the Department of Transportation Act, with regard to properties protected under that act. The selected alternative would constitute a "use" of three properties eligible for the National Register of Historic Places (NRHP): HP-7 (St. Johannes/John's Cemetery), HP-5 (Gas Service Station), and HP-6 (Rest Haven Cemetery). St. Johannes Cemetery would be acquired and relocated, and the Gas Service Station would be acquired and demolished or relocated. The FAA has determined that the change in setting surrounding the Rest Haven Cemetery due to the selected alternative would constitute a use.

The selected alternative would also result in use of one locally important historic property: HP-10 (Schwerdtfeger Farmstead). Acquisition and removal or relocation is an actual, physical taking within the meaning of Section 4(f). The Schwerdtfeger Farmstead would be demolished.

The impacts of the selected alternative would not constitute a use to one other NRHP eligible property: HP-4 (Green Street School). The FAA has determined that the lowering of the chimney on the Green Street School by 9.1 feet could be done in accordance with Secretary of Interior's *Standards for the Treatment of Historic Buildings* (U.S. Department of Interior, National Park Service, 1995) and would not constitute an adverse impact to the historic nature of the structure.

FAA identified and evaluated locally important sites and determined that there would neither be direct nor indirect use of such properties. As stated in Section 9.7 of this ROD, the completion of sound insulation of these locally important historic properties listed in Table 5.8-1 of the Final EIS, following the Secretary of Interior's *Standards for the Treatment of Historic Buildings* and FAA guidelines, would not constitute a use of these sites.

As also stated in Section 9.7 of this ROD, a total of three parks (part of *Silver Creek/DuPage County Forest Preserve, Schuster Park,* and *Bretman Park*) would be acquired under Alternative C. *Schuster Park* is a Section 6(f) property and mitigation will be provided pursuant to the requirements of Section 6(f).

In terms of avoidance, review of the alternatives evaluation prepared in Chapter 3 of the Final EIS indicated that there are no prudent and feasible alternatives to the acquisition and relocation or removal of these Section 4(f) and Section 6(f) resources, including historic properties. Therefore, in the adoption of Alternative C as the selected alternative, the FAA finds that there is no prudent and feasible alternative to using that land, and the project includes all possible planning to minimize harm resulting from the use. Based upon the mitigation in Section 9 of this ROD, the FAA concludes that there has been all possible planning to minimize any harm resulting from the actual and constructive use of the Section 4(f) resources.

Through the EIS and the Section 4(f)/6(f) process, in consultation with National Park Service and interested parties, the FAA has evaluated alternatives to minimize the use of these properties. The FAA has coordinated with the public and agencies having jurisdiction concerning the impacted properties to determine site significance and to evaluate feasible mitigation measures to meet Section 4(f) requirements. The agencies involved in the coordination were the DOI/NPS, the City of Chicago, and the municipalities of Addison, Arlington Heights, Bensenville, Chicago (portions), Des Plaines, Elk Grove Village, Elmhurst, Franklin Park, Harwood Heights, Itasca, Mount Prospect, Norridge, Northlake, Park Ridge, River Grove, Rolling Meadows, Rosemont, Schaumburg, Schiller Park, Wood Dale, as well as portions of unincorporated DuPage and Cook Counties. In addition, the Agency consulted with the Advisory Council on Historic Preservation, the State Historic Preservation Officer, the City of Chicago, and Consulting Parties regarding impacts to properties eligible for listing on the National Register of Historic Places. A Memorandum of Agreement (MOA) resulting from those consultations appears in **Appendix B** of this ROD.

## 12.10 There are no disproportionately high or adverse human health or environmental effects from the project on minority or low-income populations (Executive Order 12898).

### 12.10.1 Direct Impacts

Environmental justice concerns were addressed in Section 5.21 of the Final EIS, and it was preliminarily determined in the Final EIS that there may be minorities that would be disproportionately affected by displacements occurring as a result of the selected alternative.

Taking into account mitigation measures described in Section 9.5 of this ROD, the FAA has determined that the selected alternative will not have a disproportionately high and adverse effect to the minority (by race and ethnicity) populations that would be relocated as a result of the proposed action. Even though the FAA has determined that the selected alternative will not cause a disproportionate high and adverse effect on minority (by race and ethnicity) populations, the FAA has considered whether or not there are practicable alternatives to the relocation of the minority populations and finds that there are no practicable alternatives (See Section 6 of this ROD). FAA has also evaluated the mitigation measures to the project as described in Section 9 of this ROD, and finds that appropriate measures have been incorporated into the mitigation for the proposed project.

### 12.10.2 Noise and Surface Transportation Impacts

**Noise**

It was preliminarily determined by the FAA in the Final EIS that there may be minority populations and low-income households that would be disproportionately affected noise impacts occurring as a result of the selected alternative.

Taking into account mitigation measures described in Section 9.5 of this ROD, the FAA has determined that the selected alternative will not have a disproportionately high and adverse effect to the minority (by race and ethnicity) populations and low-income households affected by noise impacts occurring as a result of the selected alternative. Even though the FAA has determined that the selected alternative will not cause a disproportionate high and adverse effect on minority populations or low-income households, the FAA has considered whether or not there are practicable alternatives to the noise impacts to the minority populations and low-income households and finds that there are no practicable alternatives (See Section 6 of this ROD). FAA has also evaluated the mitigation measures to the project as described in Section 9 of this ROD and finds that appropriate measures have been incorporated into the mitigation for the proposed project.

**Surface Transportation**

It was preliminarily determined by the FAA in the Final EIS that there may be minority populations and low-income households that would be disproportionately affected surface transportation impacts occurring as a result of the selected alternative.

Taking into account mitigation measures described in Section 9.5 of this ROD, the FAA has determined that the selected alternative will not have a disproportionately high and adverse effect to the minority (by ethnicity) populations and low income households affected by surface

transportation impacts occurring as a result of the selected alternative. Even though the FAA has determined that the selected alternative will not cause a disproportionate high and adverse effect on minority (by ethnicity) populations or low-income households, the FAA has considered whether or not there are practicable alternatives to the surface transportation impacts on minority (by ethnicity) populations and low-income households and finds that there are no practicable alternatives (see Section 6 of this ROD). FAA has also evaluated the mitigation measures to the project as described in Section 9 of this ROD and finds that appropriate measures have been incorporated into the mitigation for the proposed project.

**12.11 The City of Chicago has certified that it has made available to and has provided upon request to the metropolitan planning organization (MPO) in the area in which the airport is located a copy of the proposed ALP amendment depicting the proposed action and any airport master plan describing or depicting the project [49 U.S.C. Section 47106(c)(1)(A)(iii)].**

The City of Chicago has certified by letter dated September 27, 2005, that it provided to the Chicago Area Transportation Study Transportation Policy Committee (CATS), a copy of the proposed Airport Layout Plan depicting the project (including, specifically, runway and major runway extensions) and a copy of the Airport Master Plan, in which the OMP (including, specifically, runway and major runway extensions) are described or depicted.

**12.12 The City of Chicago has certified that it provided an opportunity for a public hearing to consider economic, social, and environmental effects of the location and the location's consistency with the objectives of any planning that the community has carried out [49 U.S.C. Section 47106(c)(1)(A)(i)].**

The City of Chicago has certified by letter dated, September 27, 2005, that it provided for an opportunity of public hearing on September 6, 2005 to consider the economic, social, and environmental effects of the OMP (including, specifically, runways and major runway extensions), and the consistency of the OMP (including, specifically, runways and major runway extensions) with the objectives of any planning that the community has carried out.

**12.13 The City of Chicago has certified that the airport management board has voting representation from the communities in which the project is located or has advised communities that they have the right to petition the Secretary about the proposed project [49 U.S.C. Section 47106(c)(1)(A)(ii)].**

The City of Chicago has certified by letter dated, September 27, 2005, that the OMP will be located in Chicago, Des Plaines, Elk Grove Village, Bensenville and Schiller Park, Illinois, and in unincorporated portions of Cook and DuPage Counties, Illinois. The airport management board is the City Council of the City of Chicago which has voting representation from the communities in Chicago in which the project is located. The City of Chicago certifies that each of the other communities in which the project will be located was advised by letter that they have the right to petition the Secretary about the OMP (including, specifically, runways and major runway extensions).

### 12.14 The FAA has given this proposal the independent and objective evaluation required by the Council on Environmental Quality (40 C.F.R. Section 1506.5).

As the Final EIS outlined, a lengthy process led to the ultimate identification of the selected alternative, disclosure of potential impacts, and selection of appropriate mitigation measures. This process began with the FAA's competitive selection of an independent EIS contractor, continuing throughout the preparation of the Draft EIS and Final EIS, and culminating in this ROD. The FAA provided input, advice, and expertise throughout the planning and technical analysis, along with administrative direction and legal review of the project. From its inception, the FAA has taken a strong leadership role in the environmental evaluation of this project and has maintained its objectivity.

### 12.15 Religious Freedom Restoration Act and First Amendment Findings

In applying the provisions of RFRA to this proposed action, the FAA finds that its approval of the selected alternative is likely to substantially burden the free exercise of religion because St. Johannes Cemetery is slated for acquisition and relocation in order to construct Runway 10C/28C. The FAA also finds that there is a compelling government interest in proceeding with the selected alternative and that there is no less restrictive alternative that would avoid St. Johannes Cemetery.

Approval of the selected alternative had the potential to substantially burden the free exercise of religion with respect to Rest Haven Cemetery as well. However, the FAA has identified and adopted a less restrictive alternative that can satisfy the compelling governmental interest with respect to this property by not requiring acquisition or relocation. Accordingly, Rest Haven Cemetery will remain in private ownership with public access and with mitigation for the change in its setting provided pursuant to the National Historic Preservation Act.

The FAA further finds that the First Amendment claims advanced by the religious objectors do not preclude it from adopting Alternative C as the selected alternative.

### 12.16 Findings Relating to Due Process Claims and Formal Adjudicative Processes

The FAA concludes that its application of NEPA, other environmental and aeronautical statutes, RFRA, and First Amendment claims constitute informal agency decision-making. The FAA has provided for public hearings, opportunities to comment on both Draft and Final EISs, as well as on proposed Section 4(f) and 6(f) determinations, Draft General Conformity Determination, and consultation as provided under the National Historic Preservation Act. The FAA has also arranged for meetings, teleconferences, and other opportunities to obtain the views of project opponents. In addition, the FAA has invited comments on its proposed resolution of religious liberty claims. As demonstrated in the Final EIS, the many responses to comments, and this ROD, the FAA clearly took all comments into account. Under these circumstances, and given the nature of this proposed action, the FAA believes it has provided the public with the full measure of due process that is required by law.

## 13. DECISION AND ORDER

In Section 3.7 of the Final EIS, the FAA has identified Alternative C (the City of Chicago's proposed O'Hare Modernization Program) as the FAA's Preferred Alternative. FAA must now select one of the following choices:

- Approve agency actions necessary to implement the proposed project, or
- Disapprove agency actions to implement the proposed project.

Approval would signify that applicable federal requirements relating to airport development and planning have been met and would permit the City of Chicago to proceed with the proposed development and possibly receive federal funding and/or approval to impose and use Passenger Facility Charge (PFC) funds for eligible items. Not approving these agency actions would prevent the City of Chicago from proceeding with implementation of Alternative C.

Decision: I have carefully considered the FAA's goals and objectives in relation to various aeronautical aspects of the proposed development actions discussed in the Final EIS. The review included: the purpose and need that this project would serve, the alternative means of achieving the purpose and need, the environmental impacts of these alternatives, and the mitigation necessary to preserve and enhance the human, cultural, and natural environment.

Under the authority delegated to me by the Administrator of the FAA, I find that the project in the ROD is reasonably supported. I, therefore, direct that action be taken to carry out the following agency actions discussed in Section 3 of this ROD, including:

A. Unconditional approval of the revised Airport Layout Plan (ALP) for the projects summarized in Chapter 3 of the Final EIS, which constitute the proposed development.

B. Eligibility for Federal grant-in-aid funds and/or PFC, including the following elements:

    - Land Acquisition
    - Site Preparation
    - Runway, Taxiway, and Runway Safety Area Construction
    - Terminal and Other Landside Development
    - Installation of Navigational Aids
    - Environmental Mitigation
    - Noise Mitigation Projects

C. Determination and actions, through the aeronautical study process of any off-airport obstacles that might be obstructions to the navigable airspace under the standards and criteria of 14 CFR Part 77 and evaluate the appropriateness of proposals for on-airport development from an airspace utilization and safety perspective based on aeronautical studies conducted pursuant to the processes under the standards and criteria of 14 CFR Part 157.

D. Development of air traffic control and airspace management procedures to establish and maintain safe and efficient handling and movement of air traffic into and out of the

airport under 49 U.S.C. §§ 40103, 40113, and 40120; development and approval of revision to Standard Instrument Approach Procedures (SIAP), Standard Instrument Departures (SID) and Standard Approach Routes (STAR) procedures for the reconfigured runways (14 CFR Part 97).

E. Determinations that the proposed new airfield alignment, including runways and taxiways, conform to FAA design criteria. Approval of protocols for maintaining coordination among sponsor offices, construction personnel, and appropriate FAA program offices, ensuring safety during construction.

F. Determinations that air quality impacts associated with the proposed project conform to the State Implementation Plan under Section 176(c)(1) of the Clean Air Act, as amended [42 U.S.C.§ 7506(c)(1)], and 40 CFR Part 93.

G. Review and subsequent approval of an amended Airport Certification Manual for ORD (per 14 CFR Part 139).

H. Review and subsequent approval of amended air carrier operations specifications for service at ORD.

Recommend:

Jeri Alles — 9-29-05

Jeri Alles — Date

Manager, Airports Division, Great Lakes Region

Approved:

9/29/05

Christopher R. Blum — Date

Regional Administrator, Great Lakes Region

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## RIGHT OF APPEAL

This ROD presents the Federal Aviation Administration's final decision and approvals for the actions identified, including those taken under the provisions of 49 U.S.C. Subtitle VII, Parts A and B. This decision constitutes a final order of the Administrator subject to review by the Courts of Appeals of the United States in accordance with the provisions of 49 U.S.C. Section 46110. Any party seeking to stay the implementation of this ROD must file an application with the FAA prior to seeking judicial relief, as provided in Rule 18(a), Federal Rules of Appellate Procedure.

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