91

November 18, 2005

ANALYSIS AND REVIEW OF CITY OF CHICAGO'S APPLICATION FOR LETTER OF INTENT AGL 06-01

Chicago O'Hare International Airport
Chicago, Illinois

1.1 Introduction and Summary

The City of Chicago (City) submitted an application requesting a Letter of Intent (LOI) for $300 million in Airport Improvement Program (AIP) discretionary funds and $55.8 million in entitlement funds to be paid over a ten-year period for development at Chicago O'Hare International Airport (O'Hare). The Federal Aviation Administration (FAA) has reviewed the initial LOI application dated February 15, 2005, along with the supplemental submissions by the City. The review was conducted by FAA staff and FAA contractors retained for this purpose.

The FAA has concluded, as detailed below, that the City's application meets the criteria of the applicable statutory provisions based on its analysis and review of the LOI application and the supporting exhibits and supplementary documents attached hereto. Accordingly, the FAA will issue a LOI, informing the City that it is eligible to receive $300 million in AIP discretionary funds and $37.2 million in entitlement funds over a 15-year period. The LOI is an FAA document stating the agency's intent to obligate from future budget authority those amounts for allowable project costs at O'Hare in connection with what the City has described as Phase 1 of the O'Hare Modernization Program (OMP).

1.2 Background

O'Hare is one of the most important airports in the National Airspace System (NAS). It provides vital origin and destination service to the nation's third largest metropolitan area, as well as serving as an important connecting hub for two of the world's largest airlines – American Airlines and United Airlines. Moreover, it provides substantial and growing international service. In 2002, O'Hare was the world's busiest airport as measured by total operations, the second busiest in terms of enplaned passengers, and the fourth busiest international gateway in the nation in terms of total international enplaned passengers. O'Hare also operates as a major cargo airport. As of October 2004, 47 scheduled passenger airlines regularly served O'Hare - 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 O'Hare. O'Hare provides nonstop service to 127 domestic and 48 international destinations.

Growing demand at O'Hare has resulted in travel delays, affecting passengers traveling to and from Chicago and those using O'Hare for connections. In 2003, O'Hare was the most delayed airport in the country. These delays reverberated

across the NAS, causing delays far beyond O'Hare. In the Environmental Impact Statement (EIS) prepared to address the OMP and other Total Master Plan components, the FAA has described in detail the purpose and need of the proposed action.

In both the EIS and the LOI request, the City has identified various components of airfield development including OMP Phase 1 Airfield, Total Master Plan Phase 1, Total Master Plan and OMP Total Airfield. The individual components are summarized below for each of these development scenarios:

OMP Phase 1 Airfield
The OMP Phase 1 Airfield includes new Future Runway 9L-27R, Extension of Future Runway 10L-28R (Existing Runway 9R-27L), Future Runway 10C-28C (Relocation of Existing Runway 18-36), and the taxiway system, navigational aids, and other enabling projects necessary to construct and operate these runway projects. The City submitted its LOI Application to cover the activities in the OMP Phase 1 Airfield development scenario.

Total Master Plan Phase 1
The Total Master Plan Phase 1 scenario includes all of the projects included in the OMP Phase 1 Airfield scenario (Future Runway 9L-27R, Extension of Future Runway 10L-28R, and Future Runway 10C-28C) with new terminal facilities (West Satellite Concourse and extension of the K Concourse) and other airfield improvements as identified in the City's Total Master Plan. The components included in this scenario are identical to those analyzed in Phase I of Alternative C in the FAA's EIS. For purposes of calculating the BCA for this Application, the FAA took into account all costs related to Total Master Plan Phase 1 scenario.

OMP Total Airfield
The OMP Total Airfield scenario includes all of the airfield components of the O'Hare Modernization Program. These include Future Runway 9L-27R, Extension of Future Runway 10L-28R, and Future Runway 10C-28C, Future Runway 9L-27C, Extension of Future Runway 9R-27L, Future Runway 10R-28L, taxiway system, navigational aids, and other enabling projects necessary to construct and operate these runway projects. This development scenario is, essentially, the combination of OMP Phase 1 Airfield and the anticipated OMP Phase 2 development scenario. Like Phase 1, the FAA expects the City to file another application for an LOI for Phase 2 before it begins to implement that stage of the OMP.

Total Master Plan

The Total Master Plan scenario includes all of the projects identified on the City's September 2005 Future Airport Layout Plan (ALP). These include the complete O'Hare Modernization Program (Future Runway 9L-27R, Extension of Future Runway 10L-28R, Future Runway 10C-28C, West Satellite Concourse, Future Runway 9L-27C, Extension of Future Runway 9R-27L, Future Runway 10R-28L, West Terminal, and associated surface transportation and enabling projects) and the complete World Gateway Program (Extension of the K Concourse, Terminal 4, Terminal 6, and associated taxiway improvements and enabling projects). The components included in this scenario are identical to those analyzed in the Build Out Phase of Alternative C in the FAA's EIS.

It is important to note that the Airport's Capital Improvement Program (detailed in the City's Total Master Plan) is assumed to occur in all of the scenarios, including the No-Action scenario.

1.3 Relationship between the Record of Decision for O'Hare Modernization Approved on September 29, 2005, and this application for a Letter of Intent

Before the FAA may proceed to issue an LOI, all environmental actions related to the subject of that funding proposal must be completed. Here, the FAA approved the Record of Decision (ROD) for O'Hare Modernization on September 29, 2005. All findings required under NEPA and other statutory provisions to allow the Selected Alternative (Alternative C - OMP and other Total Master Plan components) to be eligible for Federal grant-in-aid funds and/or PFC have been made in the ROD. The ROD, in turn, relies upon a thorough examination of the overall project in the EIS issued in July 2005. The ROD has been posted at http://www.agl.faa.gov/OMP/ROD.htm

1.4 Letters of Intent Generally

The statute governing Letters of Intent (LOI) is expressly clear that an LOI is not an obligation of the United States; issuance of an LOI is not deemed to be an administrative commitment for financing. See, 49 U.S.C. Section 47110(e)(3). In part, this section provides:

> "The letter shall establish a schedule under which the Secretary will reimburse the sponsor for the Government's share of allowable project costs, as amounts become available, if the sponsor, after the Secretary issues the letter, carries out the project without receiving amounts under this subchapter."

Thus, an obligation or administrative commitment may be made only as amounts are provided in authorization and annual appropriation laws. These annual amounts then become available as reimbursement for funds the sponsor has

already spent on allowable project costs. Accordingly, the actual decisions to issue these annual grants as scheduled in this LOI are made when the City submits grant applications to the FAA based on costs it has incurred in implementing Phase 1 of the OMP. At that point, the FAA applies the statutory criteria applicable to the use of discretionary and entitlement grants as identified in this document, and makes decisions on availability for that year's previously proposed scheduled allotment.

1.5 Additional Analysis Contained in this LOI

The FAA analysis conducted here includes a finding that the proposed action is cost beneficial. In reaching this conclusion, the FAA and its contractors subjected the projected benefits and costs of OMP Phase 1 to a range of sensitivity analyses in order to ensure that reasonably foreseeable circumstances were identified and considered in making this benefit-cost determination.

Because the Total Master Plan has been the subject of review by the Department's Office of Inspector General, as well as criticism by local opponents of the OMP, the FAA decided it would be appropriate to address the issue of financial feasibility of the Total Master Plan in this document as well. Therefore, this document goes beyond the FAA's typical practice and is not limited to the terms of this particular LOI Application – OMP Phase 1 Airfield in order to address the issue of whether the entire project is financially feasible, and whether the City is likely to implement the entire proposal. As demonstrated below, the FAA finds the Total Master Plan is financially feasible, and it concludes that the City is likely to implement the entire project.

1.6 The O'Hare Modernization Program: Phase 1 and Phase 2, the Total Master Plan, and the Identification of Activities for which Federal Reimbursements are Requested

Because the City's overall proposal to modernize O'Hare will involve approximately 8 years of construction, the City has elected to divide the overall OMP portion into two phases for construction and funding purposes. As described in the FAA's ROD for O'Hare Modernization:

> 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. These four 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, existing Runways 9L/27R and 9R/27L, whose future designations would be 9R/27L and 10L/28R, respectively, would be extended.

> The OMP and Total Master Plan components also includes proposed expansion of the existing airport terminal complex 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 built on the west side of the airfield.

The City has begun the implementation of its modernization program for O'Hare, following the FAA's approval of the OMP in the ROD on September 29, 2005.

Phase 1 of the OMP, for which the City has submitted the pending application for an LOI, reflects the initial stage of development at the airport. This development includes:

> OMP Phase 1 including new future Runway 9L-27R; extension of future Runway 10L-28R (existing Runway 9R-27L); future Runway 10C-28C; and associated runway enabling projects, including associated taxiway systems, navigation aids installation and upgrade, site utilities construction, and existing facilities relocation.

Notably, there are items such as Concourse K extension, west satellite terminal, portion of underground people mover system to serve the west satellite terminal, land reimbursement, and noise mitigation which are included in Phase 1 of the OMP but are not included in the City's application for this LOI. We expect that the City will fund these activities from its other sources of funding. Nevertheless, for purposes of the Benefit Cost Analysis (BCA), the FAA did include the costs of these excluded items in its consideration of the City's application.

Phase 2 of the OMP is expected to begin around 2009 and will likely encompass the remaining components of the airfield development, western terminal, and remaining Total Master Plan components. As of now, there are no pending applications for funding associated with Phase 2, and the action taken by the FAA with respect to this LOI will not impact the FAA's separate and independent consideration of any subsequent applications for funding of Phase 2.

These phases of development are also reflected in the City's Total Master Plan, which was completed in February 2004, and provided to the FAA as part of the consideration of the OMP.

1.7 Materials and Documents Considered by the FAA in reviewing this LOI

The FAA has examined the information provided by the City in its LOI application in the context of the statutory considerations it is required to undertake for such applications. The FAA also applied the applicable agency policy and guidance in exercising its discretionary authority in this matter. The City submitted a BCA to support the LOI request, with subsequent supplements, as well as an LOI financing plan as part of its LOI application.

In addition to the materials submitted by the City, the FAA has considered several rounds of comments submitted by legal representatives of the Village of Bensenville, Elk Grove Village, St. John's United Church of Christ, Rest Haven Cemetery Association and other identified parties. These included comments from the Campbell-Hill Aviation Group, Inc. These comments challenged several aspects of the City's original BCA[1] submission and its Supplemental BCA provided to the FAA in late September 2005. The FAA also considered comments submitted by Congressman Henry Hyde on behalf of his constituents. The FAA has considered these comments and responses are provided in Attachment F.

During the development of the EIS and the review of the LOI application, the Department of Transportation Office of the Inspector General (OIG), issued a report entitled "Chicago's O'Hare Modernization Program" dated July 21, 2005 (Report Number: AV-2005-067). The FAA has also addressed the Inspector General's issues related to the potential LOI funding for the OMP in Attachment F.

Given the sizable Federal investment requested and the concerns expressed by the commenters, the FAA undertook additional steps to determine if an investment in the Phase 1 Airfield OMP project was sound. The FAA executed a consulting contract with John F. Brown Company (Brown) to review the City's financing plan for the Phase 1 Airfield OMP. Previously, the FAA had engaged this company to perform a similar analysis for the application by the City of St. Louis for an LOI amendment at St. Louis Lambert Field. Although not legally required because it was beyond the scope of the Phase 1 LOI application, the FAA also tasked Brown to review the City's financing plan for the OMP Total Airfield and Total Master Plan. With the FAA's approval, Brown assigned a detailed review of the Phase 1 BCA to GRA, Incorporated (GRA), under a subcontract. Both Brown and GRA provided the FAA with reports on their

[1] FAA could not identify a statutory right to comment on an LOI application nor a statutory obligation for FAA to respond to comments submitted to an LOI application. Although not required by statute, due to the interest shown by various commenters in the LOI decision, FAA did consider the points raised in the comments during its review of the LOI application, and prepared responses.

reviews. These reports are attached as Attachments A and D, respectively, to this analysis document.

1.8 FAA Processing of the City's Application

The FAA conducted internal reviews of both the City's BCA and the LOI financing plan. When the FAA's Office of Policy and Plans (APO) reviewed the City's initial BCA submittal, it found that the City's quantification of benefits attributable to the project could not be fully reconciled with the FAA's policy guidance on conducting BCAs[2]. APO identified omissions that resulted in the BCA overstating the delay-savings to be generated by the proposed development. In addition, APO concluded that the initial submittal failed to quantify potential benefits that would be enjoyed by the additional travelers who would be using O'Hare as a result of the increased operations enabled by the project. Accordingly, APO, in conjunction with FAA's Office of Airport Planning and Programming (APP) and GRA, suggested alternative methodologies for the City to consider for revising its BCA.

The FAA provided guidance to the City from July through September 2005, to ensure the correct application of the alternative methodologies. The City provided a final supplemental BCA on September 27, 2005, that utilized a consumer surplus analysis as outlined in Appendix C *Adjustments of Benefits and Costs for Induced Demand* of the FAA's Airport Benefit-Cost Analysis Guidance, December 15, 1999. Appendix C of this Guidance document discusses the use of an economic approach to the calculation of project benefits. This methodology produced a benefit/cost ratio of 4.6 for the Total Master Plan Phase 1 (which includes the OMP Phase 1 airfield work and all relevant Phase 1 costs).

The BCA methodology and results were reviewed by both APO and GRA. Both determined that the benefits sufficiently exceeded the project costs over a probable range of parameters, thereby enabling the FAA to confirm that the project was cost beneficial. A copy of the memo produced by APO accepting the City's methodology and determination that benefits exceed costs is attached as Attachment E to this analysis document. Also, a letter reviewing the application of the methodology by GRA is attached as Attachment D. The Financial Assistance Division of APP also reviewed the City's financing plan and, in conjunction with the John F. Brown Study, has determined, as explained herein, that the Phase 1 OMP is financially feasible. Although the FAA's LOI investment in Phase 1 of the OMP is substantial, its decision to approve this LOI will not preclude or inhibit the FAA from funding any foreseeable LOI for other critical airport infrastructure nationally, including a potential LOI for the Phase 2 OMP. Approval of this LOI also does not impact any existing LOI payment streams. The FAA's financial analysis is Attachment B to this analysis document.

---

[2] FAA - Airport Benefit-Cost Analysis Guidance, December 15, 1999.

2.0 Identification of Federal Statutes Considered in this LOI Application

2.1 Section 47110(e) of Title 49, United States Code, specifically addresses when the FAA may issue Letters of Intent. First, section 47110(e)(2)(A) requires the airport sponsor to notify the FAA of the Sponsor's intent to carry out the project before the project begins. Second, section 47110(e)(2)(B) provides that the project must be one that will comply with all statutory and administrative requirements that would apply to the project if it were carried out with amounts made available under subchapter 471 on Airport Development. Third, under section 47110(e)(2)(C), the project must meet the criteria of section 47115(d) and (if located at a medium or large hub airport) be a project that the FAA decides will enhance system-wide airport capacity significantly.

2.2 Section 47115(d) establishes the factors that the FAA considers in selecting a project for an individual discretionary grant. For those projects that are intended to preserve and improve capacity, the agency must consider six separate factors. They are:

1) The project's effect on overall national transportation system capacity;
2) Project benefits and costs;
3) Financial commitment from Non-U.S. government sources to preserve or improve airport capacity;
4) Airport improvement priorities of the States to the extent such priorities are not in conflict with 1 and 2 above;
5) Projected passenger or aircraft growth that will be using the airport;
6) Ability of the project to foster US competitiveness in securing global air cargo activity;

For all projects, including those to preserve or enhance capacity, the FAA must consider two additional factors. They are:

1) Whether funding has been provided for all other qualifying projects that were given higher priority during the fiscal year;
2) Whether the sponsor will be able to begin construction within the fiscal year in which the grant is made or within six months thereafter, whichever is later.

2.3 Section 47106 is applicable to FAA decisions regarding Letters of Intent, by virtue of the related requirements of Section 47110(e)(2)(B). Portions of Section 47106 were also applicable to the FAA's approval of the City's revised Airport Layout Plan (ALP); the agency's findings required by Section 47106 for the ALP and some funding-related provisions are contained in the ROD approved on September 29, 2005. And, by its own terms, Section 47106 is also applicable when the FAA makes decisions awarding AIP grants.

Accordingly, the FAA has considered the application of the factors identified in Section 47106 as providing additional guidance in its decision on the LOI. As noted, the final application of these statutory factors will be made at the time the FAA makes a final decision on the award of a specific amount of funding, pursuant to the schedule and identification of reimbursable projects identified in this document.

In this regard, section 47106 requires that FAA not approve a grant application unless satisfied that:

1) The project is consistent with local planning agency plans;
2) The project will contribute to carrying out subchapter 471 on Airport Development, 49 U.S.C. 47101 et seq.;
3) Enough money is available for the non-federal share of project costs;
4) The project will be completed without unreasonable delay;
5) The sponsor has authority to carry out the project;
6) The sponsor has good title to takeoff, landing and surface movement areas or that good title will be obtained;
7) Fair consideration has been given to community interests in or near the project location;
8) The project application provides for lighting systems the FAA considers necessary for safe and efficient use of the airport by aircraft.

Additionally, section 47106 requires that:

9) The Sponsor certify that an opportunity for public hearing was given for consideration of economic, social and environmental effects of the location and the location's consistency with community planning;
10) The Sponsor certify that community voting representation on governing board or notification of right to petition Secretary;
11) The Sponsor has made available upon request copy of proposed amendment to ALP and copy of Airport Master Plan; and
12) If no possible and prudent alternatives to the project exist, reasonable steps have been or will be taken to minimize the adverse effect, if applicable. [3]

[3] Determinations for items 1, 7, 9, 10, 11 and 12 have already been made as part of the ROD.

3.0 Considerations, Findings and Conclusions with Supporting Reasons or Bases

3.1 The FAA reviewed the LOI application to determine if all statutory requirements of Title 49 U.S.C. Section 47110(e) *Letters of Intent*, have been met.

3.1.1 Section 47110(e)(2)(A) requires the airport sponsor to notify the FAA of the Sponsor's intent to carry out the project before the project begins.

The City's application for the LOI was filed on February 15, 2005. The filing of the City's LOI application serves as the required notice.

3.1.2 Section 47110(e)(2)(B) requires that the project must be one that will comply with all statutory and administrative requirements that would apply to the project if it were carried out with amounts made available under subchapter 471 on Airport Development.

Based on the LOI application submittals, the FAA has determined that the project as proposed will comply with applicable statutory and administrative requirements. Additionally, in a document entitled "Terms and Conditions of Accepting Airport Improvement Program Grants," executed by the City on July 1, 2005, (Master Certification) the City certified that it will comply with all applicable Federal laws, regulations, executive orders, policies, guidelines and requirements as they relate to the application, acceptance and use of Federal funds for the project. See Attachment G, p. 10 (C)(1). Each grant agreement accepted by the City will incorporate the Master Certification by reference. This will constitute the City's required written certification that the individual project continues to comply with statutory and administrative requirements.

3.1.3 Section 47110(e)(2)(C) requires a determination that the project must be one that will enhance system-wide airport capacity significantly.

In its LOI application, the City provided evidence that the OMP will enhance system-wide airport capacity significantly. Specifically, the City cited two FAA Airport Capacity Benchmark Reports (dated 2001 and 2004) that outline the system impacts of delays at O'Hare. The FAA, in their 2001 Airport Capacity Benchmark Report, lists O'Hare as one of eight airports that, "experience significant passenger delays." In addition, the Report adds that during bad weather, capacity is lower and results in even more delays. O'Hare is listed among four airports having the highest delay rates. The City also referenced the original FAA Order limiting scheduled operations at O'Hare, signed by Marion Blakey, FAA Administrator on January 21, 2004, as well as a follow on Order dated August 18, 2004, providing further evidence of the system wide impacts attributable to delays at O'Hare. Specifically, as stated in the Federal Register

on Congestion and Delay Reduction at Chicago O'Hare International Airport (Vol. 70, No. 57, 15520, March 25, 2005), "While lifting all slot restrictions at O'Hare after July 1, 2002, did not affect air safety, it did eventually lead to a dramatic increase in air delays, which reverberated through the national air transportation system." In October 2005, the FAA extended the scheduling order until April 14, 2008.

In addition, the O'Hare Modernization EIS outlines how delays at O'Hare contribute to delays throughout the NAS. The EIS notes "The physical and operational characteristics of O'Hare contribute to high levels of congestion and delay that are expected to become more severe over the forecast period. Continuing growth in air traffic, congestion and delay at O'Hare in turn affects the efficiency of the entire NAS." [EIS Chapter 2, page 2-1]

The EIS continues, "O'Hare had the greatest share of minutes of delay for the top 20 airports in the NAS with 27.5 percent in 2002 and 31.4 percent in 2003. O'Hare operations were delayed a total of 2,875,328 minutes in 2002 and 3,840,493 minutes in 2003. In 2002, 53,156 operations at O'Hare were significantly delayed (i.e. more than 15 minutes); in 2003, 69,185 operations were significantly delayed." [EIS Chapter 2, page 2-2] These delays (at O'Hare) "can cause significant disruption to the efficiency of the NAS and substantial inconvenience to the traveling public. For example, when congestion due to adverse weather or other conditions at O'Hare reduces its arrival capacity, the FAA imposes flow control to hold aircraft destined for O'Hare at airports across the country. One measure of flow control delay is reflected in the expected departure clearance time (EDCT). When O'Hare experiences congestion and delay, departure clearances for O'Hare-bound aircraft at upstream airports may be delayed. In 2002, O'Hare-bound aircraft incurred over 1,920,000 minutes of (32,000 hours) delay." [EIS Chapter 2, pages 2-4 and 2-5]

This evidence clearly demonstrates that delays experienced while operating to and from O'Hare impact the entire NAS as well as the airport itself. As noted in the EIS, "For an airport such as O'Hare, where the historic percentage of connecting passengers has been 50 percent or more, delays at O'Hare result in delays throughout the NAS because of the high number of operations and passengers served by O'Hare. For example, aircraft traveling through a congested O'Hare environment will produce further delays elsewhere in the system as those aircraft reach other airports. Such delays also impose severe penalties on those traveling to and from Chicago. In addition, these delays cause missed connections, rescheduled flights, and cancelled flights. O'Hare congestion also causes high altitude congestion as aircraft traveling on the same jet routes bound to and departing from O'Hare are slowed in response to delayed operations at O'Hare. In contrast, an equivalent level of delay in Fort Lauderdale, FL or in Phoenix, AZ would not have nearly the same level of effect on the NAS as a delay experienced at O'Hare. Because of O'Hare's significant role in the NAS and because of Chicago's historic role as a transportation hub, reducing or

minimizing delays at O'Hare is vital to enhancing the capacity of the NAS." [EIS Chapter 2, page 2-36]

The OMP and other Total Master Plan components approved in the ROD provide significant capability to handle additional forecast aviation activity (both aircraft operations and total passengers) with a concurrent reduction in average annual delays. Based on the demand/capacity modeling conducted in support of the EIS, the FAA has determined that during the planning horizon the airfield can accommodate an increase of 23 percent in traffic over the existing airfield with a reduction of 66 percent in average annual delays. Specifically, the demand/capacity modeling showed an increase from approximately 974,000 annual operations with no airfield improvements to 1,194,000 annual operations in 2018 with a subsequent reduction in average annual delays from 17.1 minutes per operation down to 5.8 minutes per operation. [EIS Appendix D] In addition, there is a concurrent increase in total annual passengers of approximately 10.8 million between the preferred alternative and the no action scenario. It is important to note that the forecast 1,194,000 annual operations is not the capacity of the preferred alternative. The airfield could accommodate a significant number of additional annual operations (and passengers) albeit with a higher level of average annual delay.

These improvements are not just as a result of the Total OMP and Total Master Plan components but also include enhancements that are solely attributable to the Phase 1 OMP. Phase 1 results in an 18 percent increase in traffic over the existing airfield without increasing average annual delays. By interpolating the demand curves developed for the preferred alternative, the City showed an increase from approximately 974,000 annual operations to 1,150,000 annual operations by 2016 at the current average annual delay level. This additional throughput in passengers resulting from the increased capacity of the new airfield configuration formed the basis of the City's supplemental Benefit Cost Analysis (BCA) that showed substantial local benefits and also identified downstream system benefits that were not specifically analyzed by the City.

In summary, the City has identified substantial reductions in average annual delays for the Total OMP (and Total Master Plan Components) and related this reduction to a 23 percent increase in airfield capacity (based on the forecast for the planning horizon) at a reduced level of delay. The City also demonstrated that the Phase 1 OMP increases airfield capacity forecast for the planning horizon by 18 percent with delays approximately equivalent to current levels (approximately 176,000 additional annual operations by 2009). The City demonstrated that the increased aircraft throughput provided substantial local benefits and noted that there were additional system benefits that it did not attempt to quantify. In consideration of O'Hare's significant role in the NAS and the reduction or lessening of delays at O'Hare through both Phase 1 and the Total Master Plan and the concurrent increase in airfield capacity, the City has demonstrated that the project enhances the capacity of the NAS significantly.

Accordingly, the FAA has determined that the project will enhance system-wide airport capacity.

3.1.4 Section 47110(e)(4) limits the total estimated amount of future Government obligations covered by all outstanding letters of intent to not more than the amount authorized to carry out section 48103 of this title, less an amount reasonably estimated to be needed for grants under section 48103 that are not covered by a LOI.

The FAA has structured its LOI offer to the City in a manner that assures compliance with the terms of section 47110(e)(4). As a matter of policy stated in chapter 10, paragraphs 1074 and 1075 of FAA Order 5100.38C (June 28, 2005) (AIP Handbook), the FAA limits the aggregate amount available for all LOIs to 50 percent of the available discretionary funding categories. This limitation ensures that the FAA has sufficient funding to preserve a reasonable amount for grants not covered by LOIs.

In addition, the FAA has reviewed its LOI budget to account for prior LOI awards, current proposed LOI requests, and those LOIs that are reasonably foreseeable in the future, given ongoing planning initiatives. The LOI funding schedule adopted by the FAA for this LOI ensures compliance with the requirements of section 47110(e)(4) within the limitations of Chapter 10, paragraphs 1074 and 1075, of the AIP Handbook. Although the funding schedule adopted does provide the total discretionary funds requested by the City, the FAA is extending the payment schedule from the 10 years requested by the City to 15 years. This longer schedule reduces the annual commitment to the LOI by one-third of the City's request, assuring that discretionary funds will remain available for other projects. The extension of the funding schedule for the OMP Phase 1 is similar to many other funding schedules adopted for other qualifying projects, where the agency has also extended the timeframe for payment. This aspect of the decision reflects the FAA's support of this project while acknowledging its obligation to protect the health of the overall discretionary funding program. Accordingly, the FAA has determined that this requirement is met.

3.2. Considerations involving Section 47115(d).

In contrast with other statutory provisions regarding funding (such as Section 47106(c)(1)(B)) where the Agency is required to make specific findings or determinations, this provision of law imposes a duty upon the Secretary, in selecting a project for an individual grant to preserve and improve capacity, to "consider" the following:

3.2.1 Section 47115(d)(1)(A) requires the Secretary to consider the project's effect on the overall capacity of the national air transportation system.

Earlier, in addressing the requirements of section 47110(e), (see, 3.1.3), the FAA considered whether the project enhanced system-wide airport capacity significantly. As noted above, the FAA determined that the O'Hare OMP Phase 1 will enhance system-wide airport capacity significantly and determined that the Phase 1 project would have significant national airport system benefits. Accordingly, the FAA believes that its determination above satisfies the consideration criteria of 47115(d)(1(A).

The City has identified substantial reductions in average annual delays for the Total OMP and related this reduction into a 23 percent increase in airfield capability with significantly less delay level than can be supported by the existing airfield. The City also demonstrated that the Phase 1 OMP also increases capacity by 18 percent without increasing delays. The City demonstrated that the increased throughput provided substantial local benefits. The City also noted that there were additional system benefits that it did not attempt to quantify. In consideration of O'Hare's significant role in the NAS and the reduction or minimizing of delays at O'Hare through both Phase 1 and the Total OMP and the concurrent increase in airfield capacity, the City has demonstrated that the project enhances the capacity of the NAS.

With respect to the impact of the project on the national air transportation system, the FAA finds that the project will enhance overall airport system capacity. As one of the country's busiest airports, the project's impact on the national air transportation system is most predominantly felt in the segment of the national air transportation system comprising the *airport system* segment. Accordingly, based on the significant airport system benefits, the FAA has considered the effect that the project will have on overall national transportation and system capacity and we find that the project will be beneficial.

3.2.2 Section 47115(d)(1)(B) requires the Secretary to consider the benefits and costs of the project. Here, because funding is sought only for Phase 1 of the OMP, the FAA's statutory obligations are confined to that segment of the overall project, i.e., the FAA must evaluate the benefits and costs of Phase 1 on a stand-alone basis without regard to the benefits and costs of later phases of the OMP or Total Master Plan.

The City, in its LOI application, conducted a BCA indicating that the proposed project was cost beneficial. The FAA reviewed the City's original BCA methodology as part of its review of the LOI request and found the analysis inconsistent with FAA guidance in five general areas:

(1) Methodology used to calculate travel time savings;
(2) Incorporation of relevant costs;

(3) Estimation of downstream benefits;
(4) Quantification of relevant benefits; and
(5) Sensitivity analysis.

In particular, the original submission assumed that aircraft operations would remain capped at current levels, rather than growing to reflect natural demand. In essence, the City assumed that the FAA orders limiting operations at O'Hare would continue in place during the entirety of Phase 1. This assumption resulted in a significant overstatement of the delay savings benefits associated with the proposed project. This and other factors produced a benefit cost ratio that could not be substantiated because, as stated in the FAA scheduling order, it is the agency's intent to lift that order as soon as additional capacity becomes available at O'Hare.

At the same time, the FAA also determined that the BCA did not account for all of the passenger benefits accruing from the airport's ability to handle increased operations. As noted, OMP Phase 1 will permit O'Hare's operations to grow by 18 percent over current levels. The original BCA submission did not account fully for the benefits derived by passengers who would not be accommodated at O'Hare under the current operational constraints or for the benefits derived by passengers currently using the airport from the increase in operations accommodated by Phase 1. Accordingly, with deficiencies in both understatement and overstatement of potential benefits, the FAA was unable to determine if Chicago's original submission established that Phase 1 was cost beneficial.

Based on discussions with the airport sponsor and its contractor conducting the analysis, the FAA's concerns with the original analysis were recognized by the City. As a result, the City provided the FAA with a supplemental analysis, dated September 27, 2005, addressing these concerns.

The supplemental analysis document represents an alternative methodology that uses an FAA accepted economic approach to calculating the benefits from the proposed project. Under this methodology, the BCA would typically need to consider both changes in consumer and producer surplus to derive a measure of the benefits from the proposed project[4]. However, in this particular case where the air carriers have publicly supported the proposed project, measuring project benefits solely on the basis of consumer surplus is conservative and appropriate.

The supplemental analysis relies on changes in consumer surplus as a measure of the benefits of the proposed project. The use of consumer surplus to measure such benefits is widely recognized in the economic transportation literature and is

[4] Consumer surplus is the amount that consumers benefit by being able to purchase a service for a price that is less than they would be willing to pay. Similarly, producer surplus is the amount that producers benefit by selling at a price that is higher than they would be willing to sell for. Social surplus is the sum of consumer and producer surplus.

discussed in general terms in Appendix C of the FAA's BCA guidance. The FAA recognized a need to more fully explain the Appendix C information and requested assistance as part of its contract with Brown. Brown hired GRA, an economic consulting firm specializing in transportation, as a subcontractor to prepare a document describing the application of this approach methodology. The GRA memorandum describes a situation in which changes in consumer surplus measure the benefit to the consumer resulting from a capacity expansion project. The City applied the methodology and submitted a supplemental BCA document as noted above (see Attachment C).

The Appendix C methodology reflects the application of standard microeconomic theory to the proposed project at O'Hare. As discussed in more detail in Attachment C, the Appendix C methodology relies on measurement of the consumer surplus using properly constructed supply and demand curves reflecting current conditions and conditions of the annual traffic growth that will be accommodated by OMP Phase 1. This approach, when the correct inputs are used, provides a reasonable measure of consumer benefits. Demand and supply curves must be constructed to reflect the full value of travel, *i.e.* the money fare paid and passenger travel time. These benefits are calculated to be achieved, beginning in 2007, and continuing until 2028.

Detailed review of the supplemental analysis was limited to *Total Master Plan Phase 1*. While the benefits are identical to those reported for *OMP Airfield Phase 1*, Total Master Plan Phase 1 includes all relevant costs (e.g., costs associated with the Lima-Lima taxiway, the Western Terminal Concourse, and the Concourse K extension) necessary to provide the benefits being measured in the BCA, even though some of these projects are not included within the scope of the LOI.

The FAA reviewed the supplemental BCA, including sensitivity analyses submitted with the BCA. We have determined that the project will be cost beneficial over a reasonable range of probable outcomes and that the data and assumptions made were reasonable and correct. Although not discussed in the supplemental BCA, a review of the data also suggests that in the unlikely event that one of the two hub carriers serving O'Hare would exit the market, the benefits of the proposed project would continue to exceed the costs over the same range of parameter values. The FAA's internal review memos are attached to this analysis as Attachment E.

Under its contract with Brown, the FAA requested that GRA review the City's supplemental BCA to ensure consistency with the guidance and direction given by the FAA and GRA. GRA also concluded that the project showed robust benefit cost ratios over a range of parameter values and that the supplemental BCA was consistent with the methods outlined in Appendix C of the BCA guidance and with GRA's prior direction and guidance (see Attachment D).

As indicated in the documents generated by both the FAA and its consultants, the insistence on adherence to the appropriate formulae for calculating Phase 1 benefits and costs requires the adoption of assumptions that are different from those employed in the EIS to address the overall OMP. Specifically, for analytical purposes, the BCA must evaluate the benefits and costs of Phase 1 on a stand-alone basis over the life of the benefit streams being evaluated. For example, because the FAA must look only to the conditions at O'Hare attributable to Phase 1 in this analysis, it is necessary to consider that at about 2016, demand at O'Hare if only Phase 1 were constructed would cause a level of delay that would return the airport to its current conditions and would likely require the re-imposition of limitations on flights, but at a higher level than today.

These factors were included in the agency's calculations, even though the FAA recognized in the EIS and ROD that the entire OMP is financially feasible and that the City with the support of the majority in interest carriers is likely to have completed the entire project by 2016. Thus, although Phase 1 BCA analysis requires a scenario in which congestion management may be appropriate around 2016, the FAA expects the Total OMP to be completed by then producing all of the benefits of the overall project that are described in the September 29, 2005 ROD. Moreover, for purposes of this LOI that must examine Phase 1 only, this projected 18 percent increase in capability over current levels that are attributable to Phase 1 provide genuine benefits for the purposes of considering the LOI application. Among these benefits of added capacity is the additional supply of air services attributable to Phase 1. Application of the FAA guidance and economic modeling provide that with such added supply comes a decline in the real dollar value of average fares, along with greater choices by consumers.

The FAA has considered the benefit and cost of the project and concludes that the project is cost beneficial over a range of parameters.

3.2.3 Section 47115(d)(1)(C) requires the Sponsor to demonstrate financial commitment from Non-U.S. government sources to preserve or improve airport capacity.

The City identified non-federal financing sources in its February 15, 2005, LOI application for the Phase 1 OMP. These sources included Passenger Facility Charges (PFC) and general airport revenue bonds (GARB) supported by air carrier rates and charges in amounts noted as follows:

PFCs:	
Pay-as-you-go	$9,100,000
PFC Bonds	$641,600,000
GARBs	$1,869,400,000

As of the time of this analysis, the City has not filed a PFC application for funding any project associated with the OMP. However, the FAA expects the City to file

applications sequentially as needed for projects in the OMP. FAA's review of the financing plan included a comprehensive analysis of the City's PFC status and funding potential. On that basis, the FAA determined that the City's PFC funding estimates were supportable and realistic as noted further below.

The FAA reviewed the City's financing plan and found the non-federal funding sources to be satisfactory for the funding of the Phase 1 OMP. However, given the magnitude of the OMP, the large federal investment requested, and in consideration of the findings made by the OIG in its July 21, 2005 report on the OMP, the FAA concluded that a more extensive review would be appropriate. The FAA wanted to ensure that the funding sources for both Phase 1 and the Total OMP were, as noted by the OIG, "fully disclosed and can handle expected cash flows needed to pay for Phases 1 and 2, and are not otherwise committed or encumbered for the O'Hare Capital Improvement Program or World Gateway Program." In addition, the FAA also wanted to ensure that "the schedule is realistic and takes into account any known risks that could affect Phase 1 and 2 costs and milestones."

The FAA hired Brown to conduct a comprehensive review of the City's proposed financing plan for the project and subsequent project phases, as well as the overall O'Hare Total Master Plan. This review also contemplated sensitivity analyses, including cost escalation, project delay, and alternative LOI funding, to assess the affordability of the project currently under consideration and the subsequent projects. Brown submitted the results of its analysis in a letter report dated June 27, 2005. (Brown Study – see Attachment A)

Brown utilized the common industry metric of cost per enplaned passenger (CPE) to quantify and measure the affordability of the financing costs associated with the project and the subsequent projects. These costs were compared with other similar airports to establish a measure of relative affordability.

The FAA's contractor used industry-accepted practices to develop a model to compile financial projections of the effect of proposed development plans on CPE and other financial variables.[5] The model uses base scenario assumptions developed by the City and its financial consultants and sensitivity scenario assumptions defined by the FAA. The results cover the period through 2015 and are presented in nominal dollars. To the extent that the assumptions were know at this time, they appear to reasonably reflect expected conditions and the City's expected course of action.

The base scenario for OMP Phase 1 followed the financial plan of the City set out in the LOI in all respects including estimates of costs, schedule, and funding.

---

[5] The FAA contracted with John F. Brown Company, Airport Management Consultants, to develop a financial model and compile the financial projections. Brown also reviewed and commented on the FAA Financial Feasibility review attached to this analysis document as Attachment B.

Funding assumptions for the base scenario included, among others, a $300 million LOI; unconstrained passenger growth consistent with the projection set out in the draft EIS; AIP entitlement grants according to existing passenger formulas, decreasing to zero in 2011 when a $6.00 PFC would be implemented; and that 83.5 percent of enplaned passengers are PFC eligible. It was projected that CPE would increase from about $9.00 in 2004 to $13.19 in 2015.[6]

The sensitivity scenarios evaluated the effect of increases in project costs (+15 percent), schedule delays (12 months), decreases in LOI amounts, extensions in LOI payment schedules, and no increase in PFC levels above $4.50. The most significant effect on CPE was caused by increases in project costs. A 15 percent increase in the costs of OMP Phase 1 caused the CPE in 2015 to increase 6.4 percent from $13.19 to $14.04.

Based on its review of the City's financial plan, the Brown Study, FAA's understanding of airport finance, and with the assistance of its contractor, the FAA completed a review of the City's financing plan for OMP Phase 1. The FAA's review is attached as Attachment B. Furthermore, as the FAA found in the EIS and Record of Decision for the ALP, the overall OMP is financially feasible and the FAA expects the City to complete it.

As discussed earlier, we have concluded that the financial plan for OMP Phase 1 is realistic, reasonable, and credible. Accordingly, in considering the financial commitment from non-U.S. government sources, the FAA is satisfied that enough money will be available to pay the costs of OMP Phase 1 that will not be paid by AIP grants.

As noted in the Brown Study, the OMP Phase 1 CPE would place the airport at the upper end of the middle range for large hub airports as defined by the FAA. In addition, as noted in Attachment B, Chicago possesses important characteristics that make O'Hare an attractive market for carriers. Unlike many other airline hubs, O'Hare has a strong origin and destination (O&D) traffic base. For example, O'Hare's traffic is split roughly 50-50 between O&D and connecting traffic. In contrast, Charlotte's traffic is split 74 percent connecting and 26 percent O&D and Cincinnati has a 77/23 connecting/O&D split.[7] To attract O'Hare's O & D traffic, service at another city is not an attractive alternative. Admittedly, a large segment of O'Hare passengers might use air carrier services at Chicago Midway Airport, but that airport is itself severely constrained. The strength of O'Hare's O&D traffic is itself a reflection of Chicago's role as the largest population and economic center in the middle of the country.

---

[6] The City estimated that the CPE would be $9.24 in 2003 and $8.89 for 2004. (See Attachment A, page 4.)

[7] National Plan of Integrated Airport Systems (NPIAS) (2005-2009), Report of the Secretary of Transportation to the United States Congress Pursuant to Section 47103 of Title 49, United States Code.

Further, O'Hare has substantial international traffic (14 percent of passengers). Given its strong O&D and international traffic O'Hare shares more of the characteristics of large coastal airports such as Miami International, John F. Kennedy International and San Francisco International than it does other mid-continent airline hubs such as Charlotte or Cincinnati. Each of these airports has proven capable of sustaining substantially higher CPEs than what is projected for OMP Phase 1.

Finally as noted in Attachment B, a majority-in-interest (MII) of carriers serving O'Hare have already committed to funding OMP Phase 1 under the City's financing plan. This MII approval indicates that the carriers serving O'Hare believe that the value of OMP Phase 1 at least equals, and likely exceeds the added cost they will incur to finance Phase 1. The MII approval was based on the City receiving $300 million in discretionary funds in its LOI, and the FAA will issue an LOI in that amount. Moreover, as shown in the Brown Study, the amount of LOI funding has limited impact on the carriers' cost of serving O'Hare.

Accordingly, the FAA has considered the financial commitment from non-U.S. government sources to preserve or improve capacity and determined that the City has sufficient non-U.S. government financial resources available for this project.

3.2.4 Section 47115(d)(1)(D) requires FAA consideration of airport improvement priorities of the States, (to the extent such priorities are not in conflict with sections 47115(d)(1)(A) and 47115(d)(1)(B)).

The AIP priorities of the City of Chicago as outlined in its Total Master Plan for O'Hare are not in conflict with the priorities of the State of Illinois. Indeed, Public Law 93-0450 (O'Hare Modernization Act), enacted on August 6, 2003, recognizes that O'Hare serves an essential role in air transportation for the State of Illinois as well as the NAS. This law enhances the City's ability to implement the O'Hare Modernization Program. Specifically, the law includes a section that includes the findings and purposes expressly resolving any concerns under this subsection. Relevant portions of that Act are set forth at page 5 of the FAA's ROD for this project.

Thus, issuance of an LOI for OMP Phase 1 is consistent with the airport improvement priorities of the state in which the airport is located.

3.2.5 Section 47115(d)(1)(E) requires the Secretary to consider the project passenger and aircraft growth that will be using the airport.

The project (OMP Phase 1) will enable O'Hare to accommodate an additional 176,000 annual operations and approximately 1 million total annual passengers in 2016. The expected growth in operations and passengers is consistent with

the 2002 FAA's Terminal Area Forecast for O'Hare. Thus, the FAA has considered the projected passenger and aircraft growth at O'Hare.

3.2.6 Section 47115(d)(1)(F) requires the Secretary to consider the ability of the project to foster US competitiveness in securing global air cargo activity.

Currently, there are 17 facilities at O'Hare used to process cargo. Most of the cargo facilities are located in two primary areas, the Southwest Cargo Area and Southeast Services Area. Cargo forecasts indicate cargo enplaned tonnage growth of 58 percent between 2000 and 2018. The City of Chicago interviewed large carriers to determine if and how their facilities would accommodate this growth. The results of these interviews were incorporated into allocation of facility requirements.

Existing cargo facilities total approximately 261 acres. Through the City of Chicago's analysis, approximately 316 acres of cargo development is needed to accommodate 2018 requirements. This amount of cargo acreage has been identified and set aside on the City's revised airport layout plan as a result of the OMP. Further, the OMP Phase 1 and the Total OMP (and Total Master Plan components) will permit an increase in aircraft operations while reducing or maintaining current levels of delay at the airport. Thus the project will provide opportunities for increased all-cargo flights at the airport. Therefore, having considered the matter, we conclude that the project will likely foster competitiveness in securing air cargo activity at O'Hare and because of O'Hare's importance to the national airport system it will likely have a global effect as well.

3.2.7 Section 47115(d)(2)(A) requires the Secretary to consider whether funding has been provided for all other higher scoring projects qualifying for funding during the fiscal year.

Because safety in aviation is and always must be the FAA's foremost priority, this statutory provision and FAA implementing program guidance assures that funding for airport improvement projects will not be approved at the expense of needed safety activities. In this case, the FAA has reviewed its inventory of activities proposed for funding and found that issuance of this LOI will not preclude FAA from funding any otherwise ready-to-go projects that, because of their nature, have a higher priority. Protection is also afforded because the FAA limits the amounts available for LOIs to 50 percent of the available discretionary funding categories to ensure that FAA has sufficient funding to preserve a reasonable amount for grants not covered by LOIs.

During the review process for individual grants under this LOI, the Great Lakes Region Airports Division and Headquarters Office of Airports will also consider whether funding has been provided for all other higher priority projects qualifying for funding during the fiscal year on a regional and national level, respectively.

3.2.8 Section 47115(d)(2)(B) requires the Secretary to consider whether the Sponsor will be able to commence the project in the grant fiscal year or within six months, whichever comes later.

The City has begun to implement Phase 1. As part of its LOI application, the City has submitted a financing plan showing that it will expend significant sums on implementation of the project commencing in FY 2006 and continuing until only 2009. In short, OMP Phase 1 will be not only implemented but also completed before the last 11 grants contemplated in the LOI are issued.

3.3 Section 47106 requires consideration of a number of individual project grant application criteria.

The FAA is applying section 47106 generally to the LOI to ensure compliance with the basic requirements for individual grants, where applicable. Individual grants issued as a result of this LOI will undergo a 47106 review by the FAA in the ordinary course of the grant offer process. As previously stated, the FAA has already made determinations for certain of the following items when they were reviewed as part of the EIS ROD.

The City has also agreed to comply with the section 47106 requirements in agreeing to comply with the terms and conditions of accepting AIP grants in a Master Certification. By the terms of the Master Certification and the individual grant agreements issued to the City, the City will confirm the certifications and commitments contained in the Master Certification each time it executes a grant agreement under the LOI. See Attachment G.

3.3.1 Section 47106 (a)(1) requires the Secretary to be satisfied that the project is consistent with local planning agency plans.

This determination was made in the EIS ROD approved on September 29, 2005, in Agency Findings, Section 12.1, pages 105-106.

3.3.2 Section 47106 (a)(2) requires the Secretary to be satisfied that the project will contribute to carrying out the provisions of the subchapter addressing airport development.

The FAA has determined that the project will contribute to the safe and efficient nationwide system of public-use airports that meets the present and future needs of civil aeronautics in consideration of the following criteria. Under Section 47110(e)(2)(C), the FAA determined that the project will enhance system-wide airport capacity. Additionally, under Section 47115(d)(1)(A), the FAA found the effect the project would have on overall national transportation and system capacity to be beneficial. Finally, under Section 47115(d)(1)(F), the FAA has concluded that the project will have the ability to foster US competitiveness in securing global air cargo activity.

3.3.3 Section 47106(a)(3) requires the Secretary to be satisfied that enough money is available for the non-federal share of project costs.

Section 47115(d)(1)(C) of Title 49 USC requires the FAA to consider the financial commitment from Non-US government sources to preserve or improve airport capacity, as discussed above. As described under the discussion of this statutory criterion above, the FAA has determined that the City will be able to finance the non-Federal share of OMP Phase 1, the subject of the current LOI application.

3.3.4 Section 47106 (a)(4) requires the Secretary to be satisfied that the project will be completed without unreasonable delay.

The City has presented a schedule of major construction and commissioning events in their LOI Application. The FAA has reviewed this schedule and found that it is realistic and takes into account potential contingencies that could affect project milestones and that it is consistent with the duration of similar other major runway and airfield projects.

The City, through its O'Hare Development Program, the Midway Terminal Program, and its annual airfield maintenance work, has displayed a long track record for success in implementing major construction projects. Recent examples of major infrastructure development suggest the City will be able to manage the implementation of the OMP within budget and on time. For example, the City managed the $660 million Midway Airport Terminal Development project, which came in on time and on budget in spite of a 65 percent increase in passenger traffic during construction, and the challenges of addressing heightened airport security requirements in the wake of the 9/11 tragedy. Also, on August 4, 2005, the Chicago Tribune reported that a $200 million initial phase to the Wacker Drive reconstruction project was completed on time and within budget. Lastly, the City completed the $250 million Skyway reconstruction project on time and within budget while the roadway remained open to motorists.

Also, the City has certified in its Master Certification document (dated July 1, 2005), that the City shall carry out and complete all AIP funded projects without undue delays and in accordance with the terms thereof, and such regulations and procedures as the Secretary shall prescribe. (See Attachment G, page 8 IIc) The FAA is therefore, satisfied that the project will be completed without unreasonable delay.

3.3.5 Section 47106 requires the Secretary to be satisfied that the Sponsor has the necessary authority to carry out the project.

The City is the managing body of O'Hare. The FAA has awarded AIP grants to the City and the City has carried out the projects contemplated by those grants

since 1982. In Public Act 93-0450 of the 93rd General Assembly, cited as the O'Hare Modernization Act, the Illinois Aeronautics Act was amended by changing Section 38.01. This amendment states in 38.01 (b) that, "The City of Chicago may submit a project application under the provisions of the Airport and Airway Improvement Act of 1982, as now or hereafter amended, or any other federal law providing for airport planning or development, if the application is submitted in connection with the OMP as defined in Section 10 of the O'Hare Modernization Act, and the City may directly accept, receive, and disburse any such funds."

In short, the O'Hare Modernization Act granted the City the authority to directly apply for, accept and disburse AIP funds to carry out the OMP.

In addition, the City has certified in the Master Certification document (dated July 1, 2005) that it has legal authority to apply for the grant, and to finance and carry out the proposed project; that a resolution, motion, or similar action has been duly adopted or passed as an official act of the applicants governing body authorizing the filing of the grant application including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required. (See Attachment G, page 12 2a) Based on the above, the FAA is satisfied that the City has the authority to carry out the project.

3.3.6 Section 47106 (b)(1) requires the Secretary to be satisfied that the Sponsor holds good title to takeoff, landing, and surface movement areas or good title will be acquired.

On July 1, 2005, the City signed the Master Certification, where the City agreed that for each AIP grant they accept, the project will be in compliance with these requirements. This includes certification that the City holds good title to the landing area of the airport or site thereof, or will give assurance satisfactory to the Secretary that good title will be acquired. In 23 years of issuing AIP grants to the City for O'Hare, the FAA has never had any reason to question the adequacy of the City's title to the landing area of the airport, nor has anyone ever challenged its good title. (See Attachment G, page 13 4a)

3.3.7 Section 47106(b)(2) calls on the Secretary to be satisfied that fair consideration of community interests has been provided.

This determination was made in the EIS ROD approved on September 29, 2005, in Agency Findings, Section 12.2, page 106.

3.3.8 Section 47106 (b)(3) calls on the Secretary to be satisfied that the project application provide for the necessary lighting systems to ensure safe and efficient operation of the airport.

The City has indicated, through development of their ALP that all proposed runways and runway extensions will be CAT II/III approach capable. All proposed runways and runway extensions are depicted with ALSF-2 approach lighting. The FAA will review the project application work scope during the individual grant process for each grant issued under this LOI and determine that the work scope provides for the lighting systems necessary to accommodate CAT II/III operations for the safe and efficient use of the airport by aircraft. In addition, although not a required component of the ALP, the City will install Touch Down Zone and Centerline Lights to ensure a safe and efficient operation of the airport.

Additionally on July 1, 2005, the City signed the Master Certification where the City stated it would carry out the project in accordance with policies, standards and specifications approved by the Secretary, including applicable Advisory Circulars on lighting systems. (See Attachment G, p. 22 34)

3.3.9 Section 47106(c)(1)(A)(i) requires Sponsor certification of an opportunity for public hearing for consideration of economic, social and environmental effects and consistency with community planning, section.

This determination was made in the EIS ROD approved on September 29, 2005, in Agency Findings, Section 12.12, page 114.

3.3.10 Section 47106(c)(1)(A)(ii) requires the Sponsor to certify community participation in the governing board or notification of right to petition the Secretary.

This determination was made in the EIS ROD approved on September 29, 2005, in Agency Findings, Section 12.13, page 114.

3.3.11 Section 47106 (c)(1)(A)(iii) requires the Sponsor to certify that it has made available upon request, a copy of the proposed amendments to the Airport Layout Plan, and a copy of the Airport Master Plan as well.

This determination was made in the EIS ROD approved on September 29, 2005, in Agency Findings, Section 12.11, page 114.

3.3.12 Section 47106 (c)(1)(B) calls upon the Secretary to find, prior to 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, that no possible and prudent alternative to the project exists and that every reasonable steps has been taken to minimize the adverse effect, if applicable, section 47106(c)(1)(B).

The determinations for this item are made in EIS ROD approved on September 29, 2005, in Agency Findings, Section 123, pages 106-107.

4.0 FAA analysis of issues beyond the Phase 1 LOI application

4.1 OMP Phase 2

The OIG recommended that benefits for Phase 1 and Phase 2 be identified, reviewed for reasonableness and accuracy and clearly stated. The City's supplemental analysis includes some data on the benefits and costs. That data shows that the Total Master Plan is cost beneficial. The FAA has reviewed the City's submission. However, this information was not sufficient for the FAA to make a final decision on whether the Total Master Plan is cost beneficial. Moreover, in the absence of an application for Phase 2 funding, it would be inappropriate for the FAA to make such a finding.

As discussed above, a determination of OMP Phase 2's benefits and costs is not required to issue an LOI for OMP Phase 1. Moreover, the OIG's recommendation came in the context of his finding that a significant portion of the benefits from the OMP would only be realized after Phase 2 was completed. However as discussed above, our review of the City's supplemental analysis indicates that OMP Phase 1 will be cost beneficial on a stand-alone basis. Therefore, a detailed analysis of OMP Phase 2's benefits and costs is not required to support our decision to issue an LOI for OMP Phase 1.

While we have not tried to determine OMP Phase 2's benefits in terms of traditional LOI or AIP funding calculations, FAA carefully reviewed OMP costs and other Total Master Plan components costs as part of its environmental review under the National Environmental Policy Act. To assist FAA in determining cost reasonableness, FAA's Third Party Contractor, responsible for the preparation of the EIS, Crawford, Murphy & Tilly, Inc. (CMT), analyzed the completeness and comprehensiveness of the OMP and Total Master Plan components. CMT is a nationally recognized airport engineering and planning firm that devotes key resources to detailed cost estimating. CMT provided the FAA with the results of their analysis in a report titled, "Analysis of the 2004 O'Hare Total Master Plan Cost Estimates for the O'Hare Modernization Environmental Impact Statement". This is included in the Supplemental BCA in Appendix B as well.

In CMT's analysis, it reviewed the cost components of the OMP, World Gateway Program, and other Total Master Plan costs, including Capital Improvement Project (CIP) costs. CMT conducted side-by-side comparisons of key construction cost components and comparisons of estimated costs for similar runway and terminal projects at other large airports. Overall, CMT indicated that the City's estimated costs appear to be reasonable and representative.

In addition, with the help of our consultant, we considered the financial feasibility of OMP Phase 2 and the Total Master Plan. As discussed below, we concluded that the City is expected to go forward with the Total OMP or Total Master Plan, and that it would be able to finance the non-Federal share of the project.

Equally important, should the City elect not to go forward, OMP Phase 1 meets all statutory criteria for LOI funding on a stand-alone basis.

4.2 Total OMP and Total Master Plan

Since the LOI application before the FAA involves only OMP Phase 1, the FAA is not statutorily required to consider the financial commitment from Non-U.S. sources for the Total OMP and Total Master Plan. Nevertheless, in light of the OIG's recommendations, the FAA considered the financial viability for the Total OMP and Total Master Plan, as distinguished from the more precise BCA done for AIP funding.

The base scenarios for Total OMP and Total Master Plan also followed the financial plan of the City set out in the LOI in all respects including estimates of costs, schedule, and funding and the passenger projection set out in the EIS. For the Total OMP and the Total Master Plan, it was projected that CPE would increase to $20.52 and $30.43, respectively, in 2015.

Similar sensitivity scenarios were employed for the Total OMP. The most significant effect on CPE was the 15 percent increase in project costs, which produced an 11.8 percent increase in CPE from $20.52 to $22.94 in 2015. The projected Total Master Plan CPE ($30.43 in 2015) was tested for its sensitivity to a $4.50 PFC, which caused the projected CPE for 2015 to increase to $31.05.[8]

The Brown Study assumed a Total OMP cost of $7.9 billion, based on financial data provided by the City at the time FAA engaged Brown's services. This cost estimate is higher than the Final EIS cost estimate of $7.519 billion. Brown used midpoint cost projections to be more accurate about when costs were incurred over the project's duration. The $7.519 billion estimate represents a 4.8 percent decrease from the estimate used in the Brown Study and is more affordable.

As reflected in the Brown Study the subsequent phase and Total Master Plan projects were expensive. However, as noted in Attachment B, the Chicago region and O'Hare have many characteristics that would enable it to finance the

[8] As part of the development of the O'Hare Modernization Final EIS, Leigh Fisher Associates (a CMT subcontractor) conducted a financial analysis of the City's 2004 Total Master Plan, including the OMP, to determine the financial feasibility of the project. Leigh Fisher's CPE value for the full Total Master Plan was lower than Brown's. However, the Leigh Fisher analysis was not conducted to the level of detail of Brown's analysis, as the requirements were different. Brown's CPE, though higher, was still determined to be feasible.

Total OMP and Total Master Plan. These characteristics, as discussed above, include O'Hare's strong O&D traffic and international traffic bases and Chicago's role as a regional population and economic center. The CPEs projected for O'Hare under the Total OMP and Total Master Plan are on a par with its most comparable peer airports, such as Miami and San Francisco International.

In order to thoroughly compare the Total Master Plan's CPE levels, the reasonableness of the proposed funding sources used in the Total Master Plan financial plan must be tested. The City identified its financing plan for the Total Master Plan as part of the EIS. The City's financing plan included both federal and non-federal funding sources as shown below:

Total Master Plan Funding Sources

Sources	Amount ($M)*
AIP ENTITLEMENT (LOI)	$43
AIP Discretionary (Non LOI)	$186
AIP Discretionary (LOI)	$616
PFC PayGo	$428
PFC Bonds	$1,979
GARBs	$8,692
Third Party Financing	$1,552
Total	$13,950

*2004 year dollars

The AIP amounts represented above include not only new capacity initiatives (listed as LOI) but also other safety, security, and standards projects (listed as non-LOI) typically funded with AIP assistance. The totality of the AIP funding sources appear large but not out of line with AIP funding commitments made toward other large airport development projects. The LOI amount of $616M includes 6 runway projects, and when considered on a per runway basis, is on a par with the FAA's normal planning target of $100 million discretionary dollars per runway for LOIs at large hub airports. On a percentage basis, the $616M amount (approximately 10 percent of the project cost of the Total OMP cost estimate) is among the lowest of any LOI request for runways at large hub airports.

The non-LOI amount of $186M for other capital projects not included in the Total OMP is also on par with the amount of non-LOI funding granted to other large hub airports currently receiving LOI payments for significant runway development programs. Other airports currently receiving LOI payments include Houston, Miami, Orlando, Cleveland, Seattle, St. Louis, Minneapolis, Atlanta, and Detroit. Since higher levels of AIP were made available under AIR-21 in 2001, the FAA has granted these airports, on average, approximately $16 M annually of discretionary funds for other capital projects not included in LOIs. Therefore, the

City's financial estimate of $186M is on par with capital programs at other large hub airports.

For the Total Master Plan financing plan, FAA has reviewed the sources of funds assumed by the City. These include FAA grants, PFC funds, revenue bonds and 3rd party financing as shown above. FAA believes these funding sources are appropriate for this type of airport development. For PFC funding, the City assumes an increase in the PFC level to $6.00 per eligible enplanement beginning in 2011, which would translate to an additional $50 million in PFC revenues in that year (gradually increasing with enplanements thereafter). If the PFC level were not increased to $6.00 or increased after 2011 then the impact on the City's plan of finance would be material and would likely lead to higher net debt service to be recovered through airline charges as noted above.

In addition, the costs projected for the Total OMP and Total Master Plan must be considered less precise at this point. The FAA expects that, between the City and the airlines, the CPE levels from OMP Phase 2 will be managed to mitigate potentially adverse effects on airline service decisions at O'Hare. Certain mechanisms exist at O'Hare that will enable this to occur.

First, through their MII rights under the Lease, the signatory airlines have substantial control over future CPE levels at the Airport. MII approval of OMP Phase 1 represents the views of most of the affected users that the value of the proposed improvements from savings in aircraft operating costs, improved passenger convenience, and other tangible and intangible benefits is commensurate with the added costs and that the future CPE is not excessive in relationship to the expected value of the aviation market at O'Hare. Similarly, OMP Phase 2 cannot move forward without an MII review of the projects for their benefits and costs including CPE levels. Thus, projects in OMP Phase 2 must undergo a vetting process in which the City and the signatory airlines come to terms on scope, cost, schedule, and other factors affecting CPE levels. If the current projected costs for the Total OMP or Total Master Plan are more than carriers believe they can afford, the MII process will lead to adjustments in project design or scope to bring the project cost and schedule into line with what carriers believe they can afford. Because the FAA has determined that OMP Phase 1 is cost-beneficial and capable of being financed on a stand-alone basis, we need not predict what these adjustments might look like to issue this LOI for OMP Phase 1.

Further, FAA responded to the MII issue in the EIS response to comments. FAA stated, "...as is typical in projects of this scope, magnitude and duration, airport operators seek incremental approval from their majority-in-interest carriers as funding becomes necessary.... " In addition, the initial majority-in-interest approval by the airlines acknowledged the need to provide subsequent approvals to accomplish the funding of the Total OMP. The largest airlines serving O'Hare have evidenced their support for OMP in public statements. For example, in a

speech delivered in March 2002, the CEO of United Airlines stated "modernization of O'Hare also is an important part of United's financial recovery plan and critical to our long-term success". More recently, both United and American have formally expressed their support both in letters and at public hearings".

For more detail on the MII issue, see pg. U.4-568 of response to comments #103 (EIS).

Second, the City has disclosed in bond offering documents its plans to undertake the Total OMP as well as other capital improvements at the Airport, which would be financed through various future issues of airport revenue bonds. Each future issue will be evaluated in terms of the circumstances, management plans, and future expectations that exist at the time of such bond issue. Through bond ratings, insurance premiums, and interest rates, the City will receive independent feedback on the creditworthiness of the Airport and the ability of the City to service its existing and proposed debt. The City can use this feedback to modify its development plans, if appropriate. As noted previously, the FAA has determined that OMP Phase 1 is cost-beneficial and capable of being financed on a stand-alone basis. We need not predict what any adjustments to the City's development plans might look like to issue this LOI for OMP Phase 1.

Third, airline costs that are represented by airport rents, fees, and charges account for 4 to 7 percent of the total operating expenses of major U.S.-flag airlines. Fuel and labor, by contrast, account for about 17 percent and 30 percent, respectively, of airline operating expenses.[9] Because airport charges are a relatively small share of airline operating expenses, they do not exert significant influence on airline service decisions, except when there is a substantially less expensive alternative airport that can work as an effective substitute for serving an airline's target aviation market. While O'Hare competes with Midway and Milwaukee for local passengers, with other mid-continent hubs for domestic connecting traffic, and with other gateways for international traffic, it holds a relatively strong competitive position. Under these considerations, it is expected that the disparity in CPE would have to be significant in order for the risk of diversion from O'Hare to be material.

Finally, both CPE and CPE as a percentage of average airfares at the Airport are within the range currently experienced at other large hub airports (FAA Financial Feasibility Report, page 8).[10] Future CPE levels projected for OMP Phase 1 are also within this range. Future CPE levels projected for the Total Master Plan are

---

[9] U.S. DOT Form 41 data for the 12 month period ended June 30, 2004.

[10] Rating analysts and others recognize the inherent limitations of using CPE ratios as a basis for comparing airports. For example, some airports provide "turn key" facilities while others rely on airlines to finance some or all of their terminal improvements. Other things being equal, CPE would be significantly higher at the "turn key" airport. Despite these limitations, CPE is the most readily available measure of airline unit costs represented by airport charges.

high, but not unprecedented. Moreover, a comparison with current CPE levels at other large hub airports does not account for the increase in CPEs those airports will experience when development in current capital plans comes on-line. As noted, O'Hare shares many of the characteristics of other US airports that experience some of the highest CPE levels in the country. The ability of those airports to sustain their CPE levels indicates that O'Hare would be able to as well. In this regard, it is also important to note that CPE levels typically peak at the time that a large capital program first comes into service (upon expiration of the capitalized interest period and the step-up in operating expenses); thereafter, CPE levels moderate and even decline as costs stabilize, passenger levels increase, and non-airline revenue sources increase faster than costs.

In sum, should the City elect to go forward with the Total OMP or Total Master Plan, we believe that it will be able to finance the non-Federal share of the project. Equally important, should the City elect not to go forward, OMP Phase 1 Airfield meets all statutory criteria for LOI funding on a stand-alone basis, as discussed in this document. However, as demonstrated above, the FAA finds the Total Master Plan is financially feasible, and it concludes that the City is likely to implement the entire project.

5.0 Summary

Based on the foregoing, the FAA finds that the City of Chicago's Application for LOI for development at Chicago O'Hare International Airport includes all relevant support material necessary for LOI selection approval, and meets the applicable statutory requirements for issuance of an LOI. In consideration of the foregoing, the FAA has concluded that a Letter of Intent in the amount of $300 million in AIP discretionary funds and $37.2 million in available entitlement funds paid over a 15 year period as noted in the LOI offer may be issued to the City as partial funding for the OMP Phase 1 Airfield project.