U. S. Department
of Transportation

**Federal Aviation
Administration**

Great Lakes Region
Illinois, Indiana, Michigan,
Minnesota, North Dakota
Ohio, South Dakota
Wisconsin

2300 E Devon Avenue
Des Plaines, Illinois 60018

March 7, 2002

Mr. Thomas R. Walker, Commissioner
Department of Aviation
Chicago O'Hare International Airport
P.O. Box 66142, Terminal 2 City Office
Chicago, IL 60666

Dear Mr. Walker:

Chicago O'Hare International Airport
Chicago, Illinois
AIP Project No. 3-17-0022-043
Grant Offer

Enclosed herewith are the original and three copies of the Grant Offer issued by the authority of the Administrator of the Federal Aviation Administration on behalf of the United States to pay the Government's share of the allowable costs up to a maximum of $4,500,000.00 for a project at Chicago O'Hare International Airport, under AIP Project No. 3-17-0022-043.

If the terms of the Grant Offer are satisfactory, it must be accepted by the sponsor on or before April 30, 2002, and such acceptance should be accomplished by execution of the paragraph entitled "Acceptance" by the officers of the sponsor who have been duly authorized to take such action. The respective certificate of the sponsors' attorneys should be executed following the execution of the above mentioned documents. Please return the original and two copies to this office.

The Grant Offer and the executed Acceptance thereof will together constitute the Grant Agreement under which the sponsor is obligated to accomplish the development described therein. The obligations created under the Grant Agreement shall not be modified in any method other than through written approval of the Federal Aviation Administration. At no time should the City of Chicago or the Illinois Department of Transportation, Division of Aeronautics, or their representatives, anticipate any change of any nature under the Grant Agreement, and any deviation from strict compliance therewith for any reason or on any basis without such written approval shall be made at the sponsor's own risk.

Sincerely,

Philip M. Smithmeyer
Manager, Chicago Airports District Office

Enclosures

cc: Illinois Department of Transportation

GRANT AGREEMENT

U. S. Department of Transportation
Federal Aviation Administration

Date of Offer: March 7, 2002
Project Number: 3-17-0022-043

Recipient: The City of Chicago (Herein called the "Sponsor")
Airport: Chicago O'Hare International Airport

OFFER

THE FEDERAL AVIATION ADMINISTRATION, FOR AND ON BEHALF OF THE UNITED STATES, HEREBY OFFERS AND AGREES to pay, as the United States' share, seventy-five percent (75%) of the allowable costs incurred in accomplishing the project consisting of the following:

> **"Airport Master Plan Study, Phase I, for Chicago O'Hare International Airport"** all as more particularly described in the Project Application dated December 17, 2001.

The maximum obligation of the United States payable under this Offer shall be $4,500,000.00 for airport planning.

This offer is made in accordance with and for the purpose of carrying out the provisions of Title 49, United States Code, herein called Title 49 U.S.C. Acceptance and execution of this offer shall comprise a Grant Agreement, as provided by Title 49 U.S.C., constituting the contractual obligations and rights of the United States and the Sponsor.

UNITED STATES OF AMERICA
FEDERAL AVIATION ADMINISTRATION

Manager, Chicago Airports District Office

SPECIAL CONDITIONS

1. The sponsor will not amend, modify, or terminate the agency relationship between the sponsor, as principal, and the State of Illinois, Department of Transportation, Division of Aeronautics as agent, created by the Agency Agreement to be entered into, without prior written approval of the FAA.

ACCEPTANCE

The Sponsor agrees to accomplish the project in compliance with the terms and conditions contained herein, in the Project Application, and in the January 2001 "Terms and Conditions of Accepting Airport Improvement Program Grants" signed on June 5, 2001.

Executed this 8th day of March, 2002

Signature of Sponsor's Designated Official Representative

(Seal)

Commissioner of Aviation
Title

CERTIFICATE OF SPONSOR'S ATTORNEY

I, Monica M. Monroe, Asst. Corporation Counsel, acting as Attorney for the Sponsor do hereby certify: That in my opinion the Sponsor is empowered to enter into the foregoing Grant Agreement under the laws of the State of Illinois. Further, I have examined the foregoing Grant Agreement, and the actions taken by said Sponsor relating thereto, and find that the acceptance thereof by said Sponsor and Sponsor's official representative has been duly authorized and that the execution thereof is in all respects due and proper and in accordance with the laws of the said State and Title 49 U.S.C. In addition, for grants involving projects to be carried out on property not owned by the Sponsor, there are no legal impediments that will prevent full performance by the Sponsor. Further, it is my opinion that the said Grant Agreement constitutes a legal and binding obligation of the Sponsor in accordance with the terms thereof.

Executed this 14 day of March, 2002.

Signature of Sponsor's Attorney

ACCEPTANCE OF IDOT

The State of Illinois, Department of Transportation, Division of Aeronautics, does hereby accept said Offer and by such acceptance agrees to all of the terms and conditions thereof.

Executed this 21 day of May, 2002

IDOT'S Official Representative/Title

OMB Approval No. 0348-0043

\\ PLICATION FOR FEDERAL ASSISTANCE

2. DATE SUBMITTED	Applicant Identifier	
3. DATE RECEIVED BY STATE 12/31/01	State Application Identifier	
4. DATE RECEIVED BY FEDERAL AGENCY	Federal Identifier	

TYPE OF SUBMISSION:

Application	Preapplication
[ ] Construction	[X] Construction
[ ] Non-Construction	[ ] Non-Construction

. APPLICANT INFORMATION

Legal Name: City of Chicago

Organizational Unit: Department of Aviation

Address (give city, county, state, and zip code): P.O. Box 66142, Chicago, IL 60666

Name and telephone number of the person to be contacted on matters involving this application (give area code): Daryl McNabb (773) 686-3537

5. EMPLOYER IDENTIFICATION NUMBER (EIN): 3 6 — 6 0 0 5 8 2 0

7. TYPE OF APPLICANT: (enter appropriate letter in box) [C]

A. State
B. County
C. Municipal
D. Township
E. Interstate
F. Intermunicipal
G. Special District
H. Independent School Dist.
I. State Controlled Institution of Higher Learning
J. Private University
K. Indian Tribe
L. Individual
M. Profit Organization
N. Other (Specify): _____

8. TYPE OF APPLICATION:

[X] New [ ] Continuation [ ] Revision

If Revision, enter appropriate letter(s) in box(es): [ ] [ ]

A. Increase Award B. Decrease Award C. Increase Duration
D. Decrease Duration Other (specify):

9. NAME OF FEDERAL AGENCY: Department of Transportation Federal Aviation Administration

10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: 2 0 . 1 0 6

TITLE: Airport Improvement Program

11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: Master Plan Project

12. AFFECTED BY PROJECT (cities, counties, states, etc.): Chicago Metropolitan Area

13. PROPOSED PROJECT:

Start Date	Ending Date
01/02	01/03

14. CONGRESSIONAL DISTRICTS OF:

a. Applicant	b. Project
City-wide	City-wide

15. ESTIMATED FUNDING:

a. Federal	$ 4,500,000 .00
b. Applicant	$ 1,500,000 .00
c. State	$ .00
d. Local	$ .00
e. Other	$ .00
f. Program Income	$ .00
g. TOTAL	$ 6,000,000 .00

16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?

a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON:

DATE _____

b. NO. [X] PROGRAM IS NOT COVERED BY E.O. 12372

[ ] OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW

17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?

[ ] Yes * If "Yes," attach an explanation. [X] No

18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED

a. Typed Name of Authorized Representative	b. Title	c. Telephone number
Thomas R. Walker	Commissioner of Aviation	(773) 686-8060

d. Signature of Authorized Representative: Thomas R. Walker

e. Date Signed: 12/17/01

Previous Editions Not Usable

Standard Form 424 (REV 4-88)
Prescribed by OMB Circular A-102

Authorized for Local Reproduction

*Section 18, Items a-e
CERTIFYING REPRESENTATIVE:

The state supports this application from City of Chicago for O'Hare International Airport for federal funding. The project request for Master Plan Project follows the listing in the Department's Proposed FY 2002-2006 AIP.

Hugh Van Voorst, Director
Division of Aeronautics
Illinois Dept. of Transportation

JAN 17 2002
Date Signed

PHASE ONE PLANNING GRANT

The attached scope details the work proposed to occur in 2002. Due to the aggressive nature of this project, the work covered under this scope will begin prior to the availability of planning grant funds. Therefore, it is proposed that the Phase One Planning Grant cover the planning work done under this scope, beginning with the development of the composite concepts. The chart below details the estimated costs for the elements to be covered by the Phase One Planning Grant scope. It is expected that additional planning will occur after 2002. Such things as facility programming will need to be addressed after submittal of the Airport Layout Plan. As well, public and agency coordination will continue after this year. Therefore, the Airport Sponsor may apply for additional phases of planning grants once future needs are better defined.

Phase One Planning Grant Estimated Costs:

Element	Estimated Cost
Roadway Simulations	$500,000
Composite Concepts	$1,500,000
Evaluation	$2,500,000
Preferred Concept	$1,000,000
Airport Layout Plan Development	$500,000
Public & Agency Coordination	$500,000
Estimated Phase One Total	$6,500,000

SCOPE OF WORK

This scope defines the planning process elements to be conducted in support of the refinement of the O'Hare Modernization Plan (OMP). This work will be conducted during Year 2002 with the goal of submitting an ALP to the FAA for review by the end of the year. Following the ALP submittal, facility programming will commence. This programming process will focus on developing the details for each of the necessary facilities as identified by the previous planning process. It should be noted that all of the planning processes associated with the OMP should be viewed as concurrent. Due to the aggressive nature of the Plan, generally accepted streamlining techniques will be utilized to add this level of concurrence. The planning process will include all of the traditional elements considered to be part of a master plan and/or ALP development. However, the goal is to evaluate elements together in order to provide a detailed analysis of the Plan while meeting the aggressive schedule. The attached exhibit depicts the general timeline for each of the components and the relationships between each of the elements.

FACILITY INVENTORY

The inventory process will entail the collection of adequate information to effectively assess the capabilities of the existing facilities, identify relationships between activity and physical space requirements both within the terminal and for other facilities, and identify spatial locations of various physical facilities and leaseholds on Airport property that impact future facility layout. The following areas will be covered:

Terminal Facilities - The terminal facilities inventory will result in the development of current information relative to each carrier's leasehold and occupied space/gates within the terminal buildings, concession areas, public areas, administrative areas, and other necessary terminal functional areas. It is anticipated that significant information is available from the Airport's Terminal Area Assignment Drawings and other existing sources.

Airline Maintenance Facilities – Information relative to these facilities will be collected from existing sources and summarized. Property leasehold information will be collected for each of these facilities.

Cargo Facilities – Information relative to these facilities will be collected from existing sources and summarized. Property leasehold information, including term and boundaries, will be collected for each of these facilities.

Airfield Facilities – Existing NAVAID information, markings, and instrumentation as well as information on physical characteristics of the pavements, will be collected.

Utilities – Utility information relative to the various systems on the Airport will be identified and collected.

Auto Parking Areas – Information on existing parking facilities will be collected. Included are physical and operational characteristics necessary to ascertain relationships between parking demand and capacity as well as to identify limitations and impacts of new development.

Rental Car Information – Information on rental car facilities and their use will be collected in adequate detail to provide information to assess future facility needs and potential impacts to development.

Other Facilities- Information relative to other facilities on Airport property or facilities potentially impacted by the development proposal will be collected. Facilities included in this effort will be Airport maintenance facilities, catering facilities, fuel storage facilities, etc.

PLANNING ACTIVITY LEVEL DEFINITION AND SCHEDULES

The definition of Planning Activity Levels will occur through the use of the FAA Terminal Area Forecast and existing patterns of activity at the Airport. It is anticipated that planning activity levels representative of 2015 and 2030 based on the most recent FAA TAF will be identified as the basis for this effort. Utilizing historical patterns of activity at the Airport, the PALs will be converted to peaking activity levels for analysis of facility requirements. The future peaking characteristics will be based on historical relationships as well as historical schedules of airline activity.

As part of this exercise, future schedules of airline activity will be developed for use in the airfield simulation analyses and in terminal facility planning. These future schedules will be provide information on carrier and equipment as well as information on the peaking patterns at the Airport for both passengers and operations. The development of these schedules will require significant assumptions on future growth by individual carriers and carrier groups (e.g., domestic versus international), fleet mix, and future peaking patterns and schedules. The goal of this effort is not necessarily to provide a perfect prediction of the future (albeit the schedules will be developed with consideration of current market characteristics and realistic assumptions on the future of O'Hare's traffic), but to provide a reasonable estimation of future traffic patterns and make-up for the purposes of assessing and defining the facility concepts.

AIRFIELD REFINEMENTS

The airfield refinements task will utilize the information and concepts developed in concert with FAA and airline parties and refine these concepts to fully consider the operational characteristics of each. Included in this exercise will be the assessment of ground operations to define additional pavements necessary to efficiently route traffic around the Airport to the various facilities, the identification of necessary NAVAID facilities and their impact on ground operations, the investigation of the various safety areas associated with the concepts and the necessary off-Airport modifications necessary for their protection (roadway, railroad re-routings), and runway length analysis. It is anticipated that significant effort will be necessary to confirm routings to/from the runways, and that routings independent of runway operation will be provided to the extent possible. This effort will include review of the various TERPs and critical surfaces associated with the runways. This review will also provide necessary information for the identification of areas available for facility development (terminal, hangar, etc.) necessary to support the Plan and allow its development.

OTHER FACILITY REFINEMENTS

In conjunction with the refinement of the airfield concepts, refinement of the generalized concepts for facilities including cargo, airline maintenance, terminal, parking, etc. will occur. Utilizing the PALs and schedules developed in prior tasks, an assessment of the terminal facility and gate needs to meet the PALs will be assessed. Facility requirements for cargo, maintenance and other facilities will be defined through analytical methods to define the space needs for these facilities in the planning years. Utilizing these requirements, and considering the facility relocations necessitated by the various alternatives, concepts to site these other facilities will be developed. It is anticipated that these concepts will be general in nature, defined only to the extent necessary to provide an indication of the airfield network needed to serve them and to confirm adequate land availability.

ROADWAY CONCEPTS

Roadway concepts will be developed to support the various airfield and facility alternatives. Based on information gathered in the roadway model database development and prior information on the existing roadway network and traffic characteristics, concepts for the development of a roadway system that will effectively connect the Airport development to the surrounding transportation network will be defined. These concepts will ultimately provide the basis for the roadway simulation analyses in subsequent tasks.

STORM WATER/UTILITIES PLANNING

Preliminary planning and analysis necessary to define potential alternatives to address storm water control and utility issues resulting from the OMP will be investigated. This analysis will initially utilize available information on existing storm water and utility infrastructure and will provide an indication of the potential options available to address these areas in response to the OMP.

AIRFIELD/AIRSPACE SIMULATION MODEL DEVELOPMENT AND EXPERIMENTS

Utilizing TAAM, airfield/airspace simulation models of the existing and future alternative airfield systems will be developed to assess the operational characteristics of the alternatives. Alternatives for future airfield development will primarily be variations of the OMP. Alternatives will be developed based on input collected from the airlines and FAA considering operational issues associated with the base concept. The simulation analysis will assess the operational capabilities of the various options under two PALs (1.1 million annual operations and 1.3 million annual operations) for the anticipated primary operating configurations for each alternative. Statistics generated will include average delay and throughput, number runway crossings, and other relevant measures of operating characteristics.

ROADWAY SIMULATION MODEL DEVELOPMENT AND EXPERIMENTS

A simulation model of the roadway system will be developed to assess the regional implications of the proposed development and alternative concepts to serve future ground transportation needs in the area. Existing operational characteristics for the current roadway system will be collected from existing sources and field work to provide the

basis of development of a model for the existing system's operation. Coordination with appropriate transportation facility operators/planners (including ISTHA, IDOT, and CATS) will occur to ensure that current facility plans by these entities are considered in the analysis. The roadway concepts developed in prior tasks will be modeled to assess their abilities to accommodate the demand levels anticipated in the future planning years.

COMPOSITE CONCEPTS

Following the refinement of the airfield layout concepts, composite concepts alternatives will be developed based on the facility requirements of each of the associated elements. In general, the composite concept alternatives will facilitate the evaluation of the relationship between each of the elements. It will allow for the assessment of the feasibility of composites associated with each of the airfield alternatives. Such things as roadways, drainage plans, terminal areas, and areas for support facilities will be added to each of the airfield alternatives to produce the composite alternatives. Preliminary engineering will provide details on runway end elevations and other components associated with each of the composites. This will not include details of the specific terminal or support facilities; only general areas and necessary magnitudes for such will be determined.

EVALUATION OF COMPOSITE ALTERNATIVES

An assessment of each composite concept alternative will be performed to determine the benefits associated with each. This evaluation will focus on four core areas. A preliminary phasing plan will be developed for each. This preliminary phasing plan will include the feasibility of the airspace to support the phasing and construction phasing requirements to assess the feasibility of constructing each of the components. Preliminary operational characteristics of each of the composite alternatives will be determined. These operational characteristics will be used as the basis for simulation analysis to support the operational evaluation. Preliminary cost estimates will be developed for each of the composite alternatives. Environmental screening of each of the composite alternatives will be performed to identify the associated environmental issues.

PREFERRED COMPOSITE CONCEPT SELECTION AND REFINEMENT

Once the evaluation of each of the composite concept alternatives has been completed, a preferred alternative will be selected. This selection will be based on each of the core areas as identified by the evaluation. Consultation with appropriate agencies, user groups, and the airport sponsor will result in a preferred selection that best meets the desired criteria. Following the selection of a preferred composite alternative, refinement of the composite will proceed. This refinement process will involve all concerned parties in order to develop a concept that best meets all considerations. Part of this process will include the development of a plan of finance to facilitate the implementation of the preferred concept.

AIRPORT LAYOUT PLAN (ALP) DEVELOPMENT

Based on the preferred concept, an ALP will be developed according to FAA standards. This ALP will include all of the drawings detailed by Advisory Circular 5300-13. This ALP will provide necessary detail on airfield components, while providing general

locations and magnitude details of terminal and support facilities. A narrative document will be developed to explain the components of the ALP drawing set.

PUBLIC INVOLVEMENT AND AGENCY COORDINATION

This planning process will include a public involvement element in order to incorporate public input into the planning process and well as provide information on the process details to the public. Numerous communication tools will be utilized to solicit and distribute information. In addition to the general public, agency coordination will be conducted throughout the planning process. This will include the involvement of all appropriate federal, state, and local agencies. Input from each of the agencies will be solicited to provide guidance throughout the process. As well, information on the process will be distributed regularly to each of the appropriate agencies.