

# Constructing O'Hare Airport's future: *Not just runways*

CDA DESIGN AND CONSTRUCTION  
AIRPORT PLANNING AND DEVELOPMENT

## Illinois Transportation and Highway Engineering Conference

Alex Leon - Deputy Commissioner  
Jerzy Jaworski – Assistant Commissioner  
February 27, 2018

O\*HARE21



# O'HARE FUELS CHICAGO'S ECONOMY



## Tourism, trade, and jobs:

- Nearly 50,000 jobs at O'Hare— airline, airport, concessionaires and contractors
- Indirect and induced jobs – employment by suppliers to airlines and airports, hotels, restaurants, and additional employment resulting from their spending
- Tourism jobs – direct, indirect and induced jobs resulting from the effect of air service on tourism  
Passenger Growth (and Related Spending) is a Major Driver for Jobs and Economic Contribution
  - The economic impact of US visitors is substantial - about \$1,500 per visitor
  - The economic impact of international visitors is even higher – about \$3,000 per visitor

## Economic impact of added service:

- Since 2009, new international flights at O'Hare have generated approximately \$3.4 billion in annual economic benefit
  - Each new wide body international flight generates up to \$210 million in annual economic benefit
- CEOs cite O'Hare's connectivity as a primary reason for headquarter relocations
- International visitors through O'Hare in 2017 estimated to contribute \$2.6 billion to Regional GDP
- In addition to commercial, we are the fourth-largest air cargo gateway in the North America—and growing

## Taxes:

- Chicago O'Hare generates \$110 million in taxes annually (Fuel Tax, Parking Tax, Personal Property Lease Transaction Tax, MPEA Airport Departure Tax, etc.)

## Infrastructure spending

- Unlike other transport modes, aviation pays for its own infrastructure and operating costs—no city taxpayer funds

# O'HARE 21



A Modern and Efficient O'Hare is Critical to Chicago and the Region's Economy



# O'Hare 21 Ten-year Plan



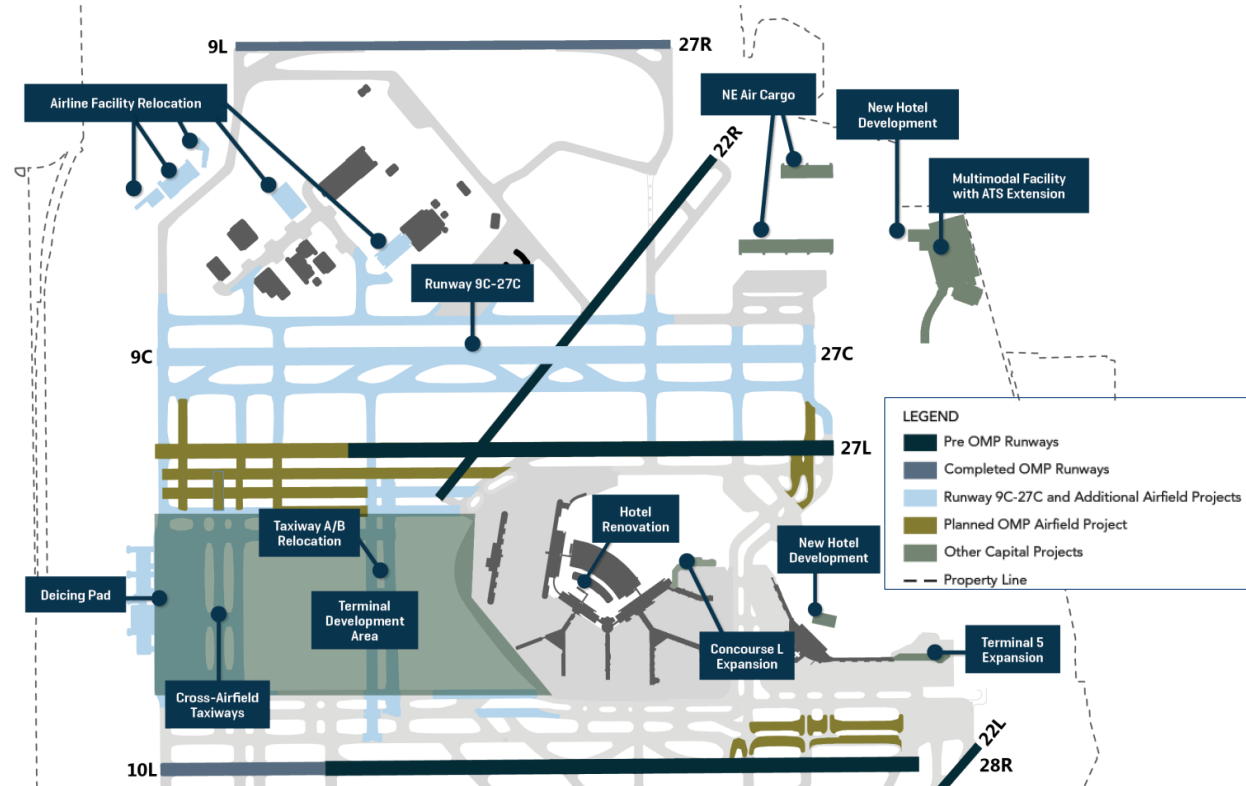
- Series of investments in terminals and airport core designed to increase capacity, connectivity and growth to match our competition
- O'Hare's leases expire May 11, 2018, and make way for the opportunity to replace with new, modern airport business terms
- Entire O'Hare 21 redevelopment is fully financed without city taxpayer dollars
- This investment will create more jobs and economic activity than any single city program in recent history



# O'HARE CAPITAL PROGRAMS OVERVIEW



- O'Hare is taking steps to reconfigure and modernize for long-term growth
- Working in partnership with United, American and other domestic and international airlines on facility needs
- Projects are funded with multiple sources



# O'Hare International Airport Capital Improvement Program (CIP)

O\*HARE21

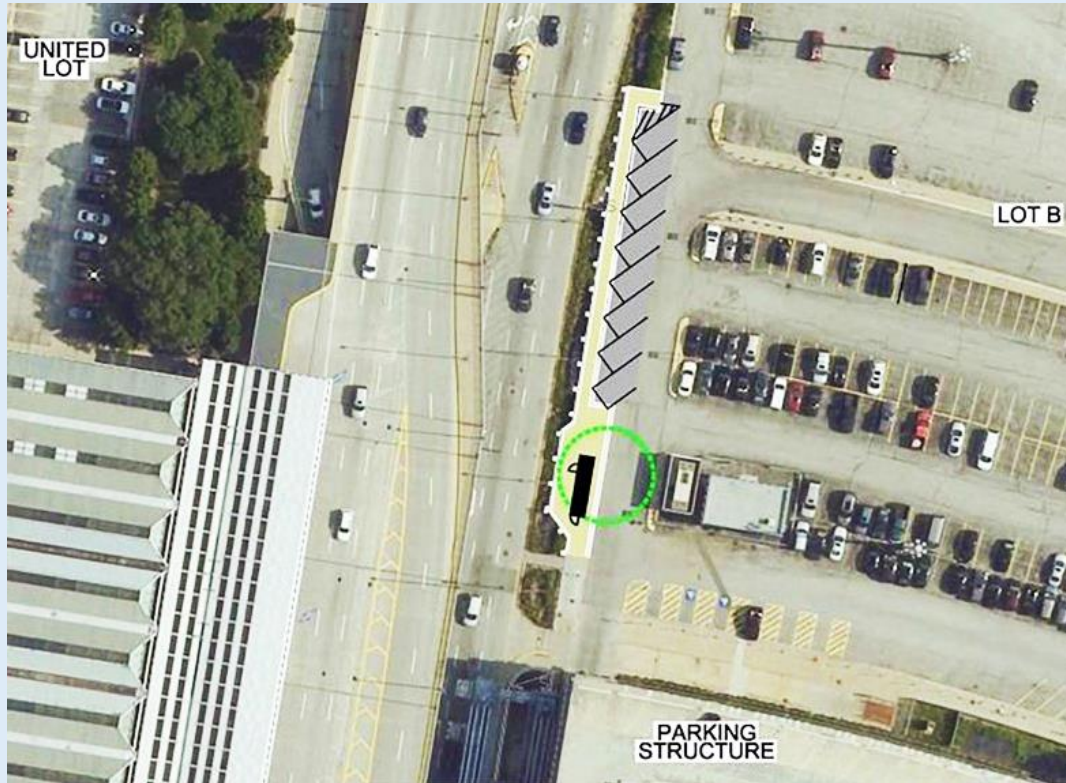


# NORTH AIRFIELD SANITARY SEWER REPLACEMENT



- Construction of a sanitary sewer system that will serve the North Airfield buildings. Existing flow that travels NW to the MWRD Kirie Plant will be intercepted and sent to an existing forcemain sewer on airport property near Building 850.
- A new lift station will be included as well as approximately 6400LF of gravity pipe and forcemain.

# MIAMI BEACH LIFT STATION IMPROVEMENT



- Demolish existing Lift Station and specified equipment, erosion control and paving.
- Site utility installation, including jacked sanitary sewer, excavation and construction of the new Lift Station Facility in the SW corner of LOT B, electrical and communications duct bank installation.
- SMS installation and tie-in, and C1 Electrical Vault Switchboard replacement and lighting upgrades.



# PEDESTRIAN TUNNEL REPAIRS



- Remediation of water infiltration throughout the pedestrian tunnels below the concourses and roadways. Scope also includes interior remodeling and updating of pedestrian tunnels.
- New finishes will allow for a back-up drainage system as a second line of defense to any possible water migration through the tunnel structure.
- New energy efficient lighting and mechanical distribution is included. Project area extends into the area of the tunnels under the Hilton for finishes continuity.

# RECIRCULATION BRIDGE RECONSTRUCTION



- The project includes the replacement of the three-span entrance roadway recirculation bridge and associated ramp and approaches for the structure.
- Structure, Substructure, and superstructure will all be replaced

# O'Hare Modernization Program (OMP)

We are Still Building Runways....

O\*HARE21





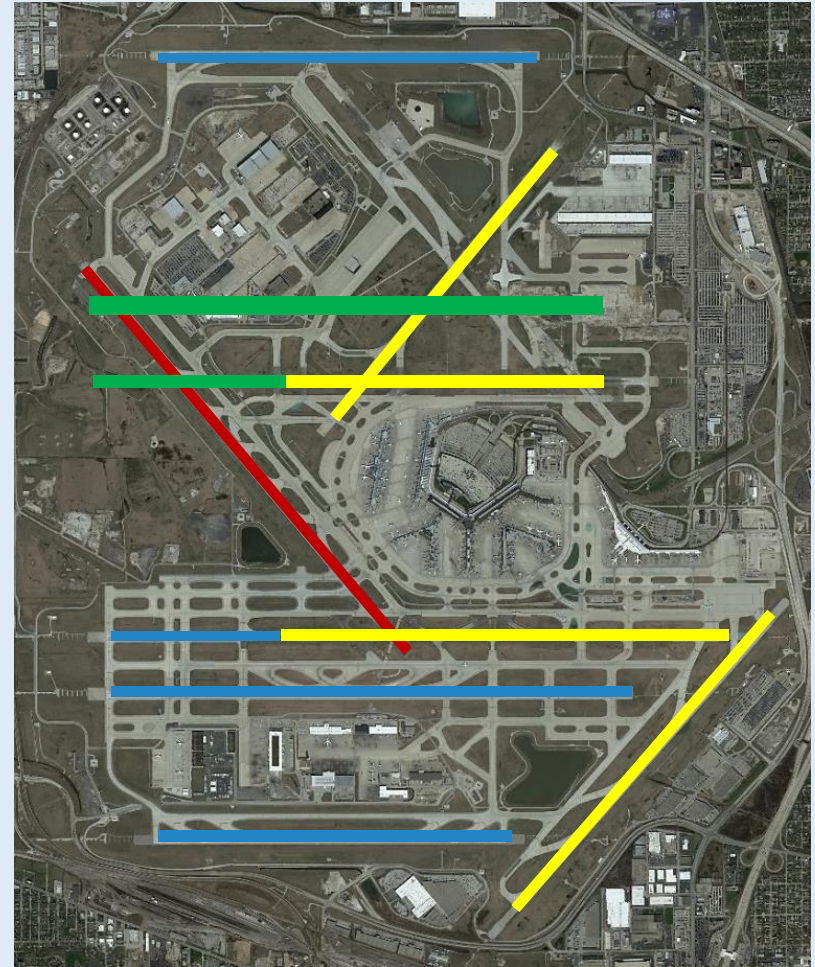
# THEN AND NOW...



## 2005 AIRFIELD

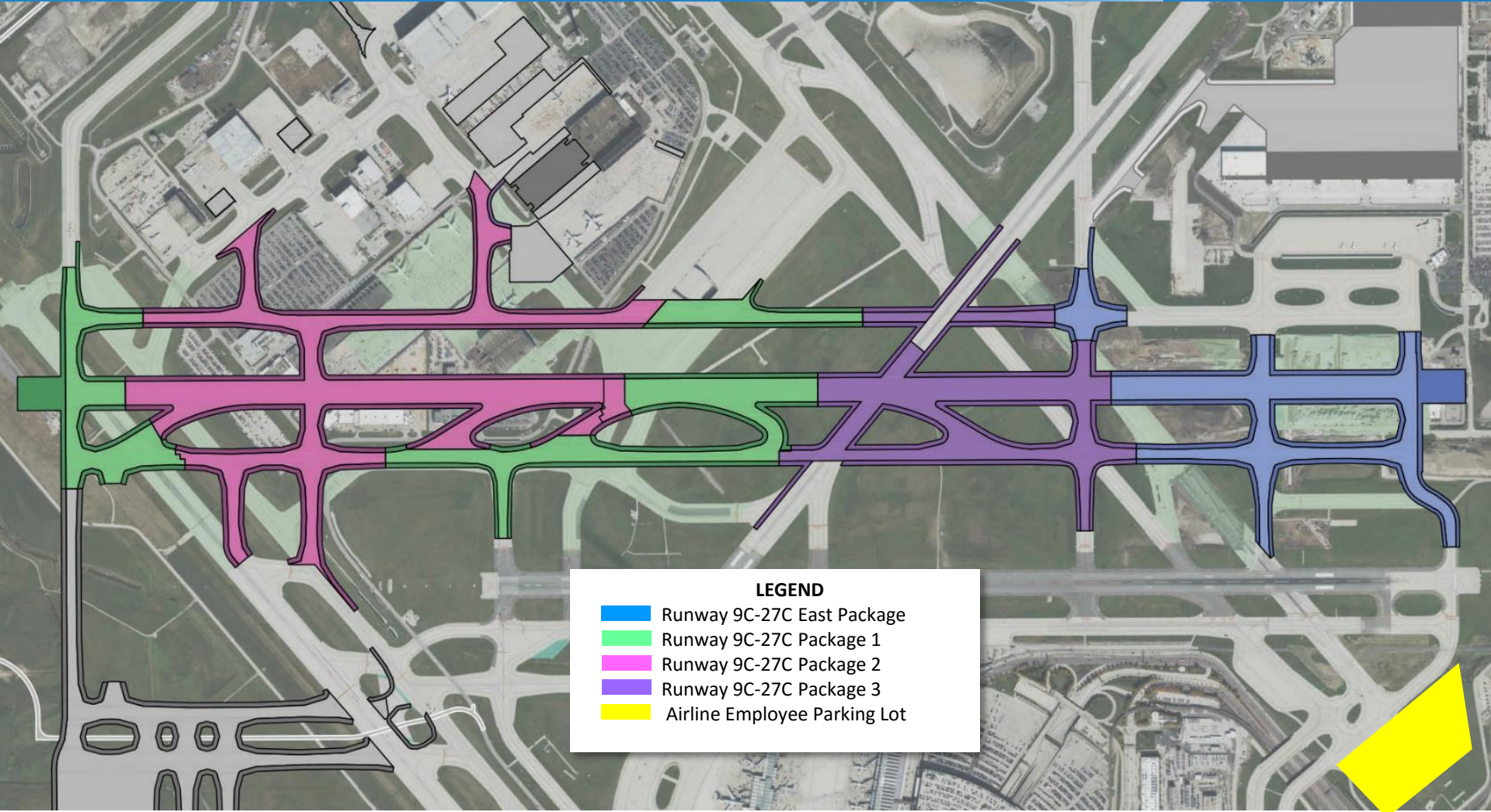


## FUTURE AIRFIELD



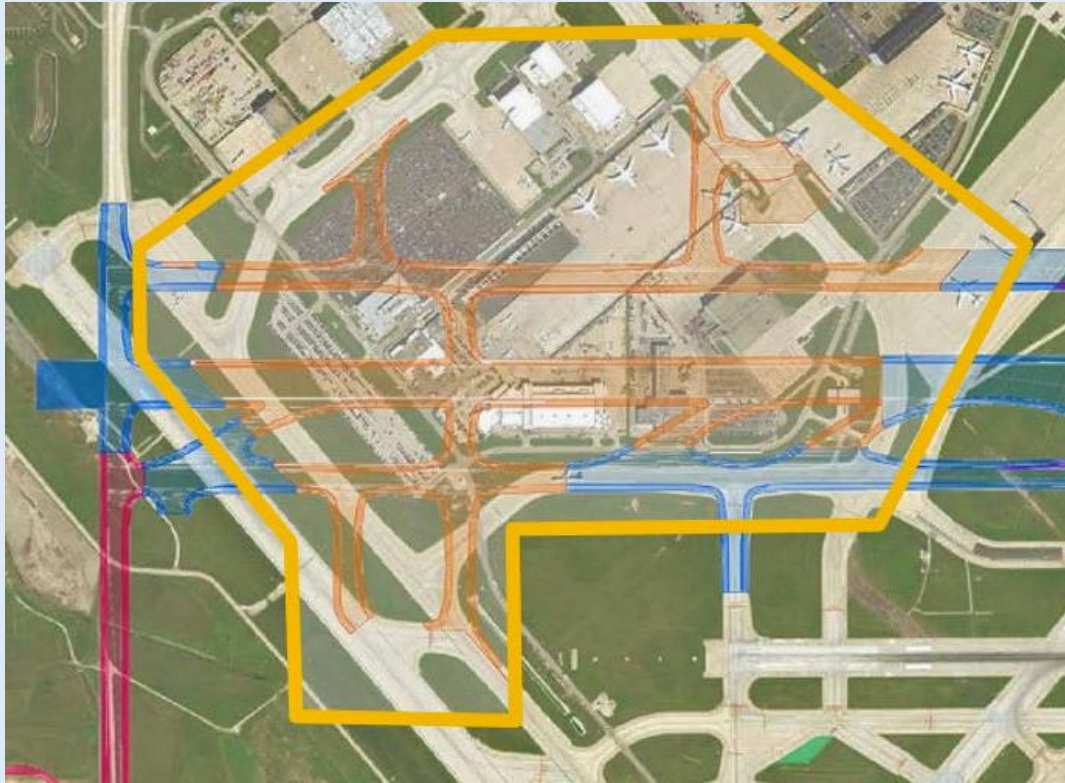


# RUNWAY 9C/27C – CONSTRUCTION PACKAGES



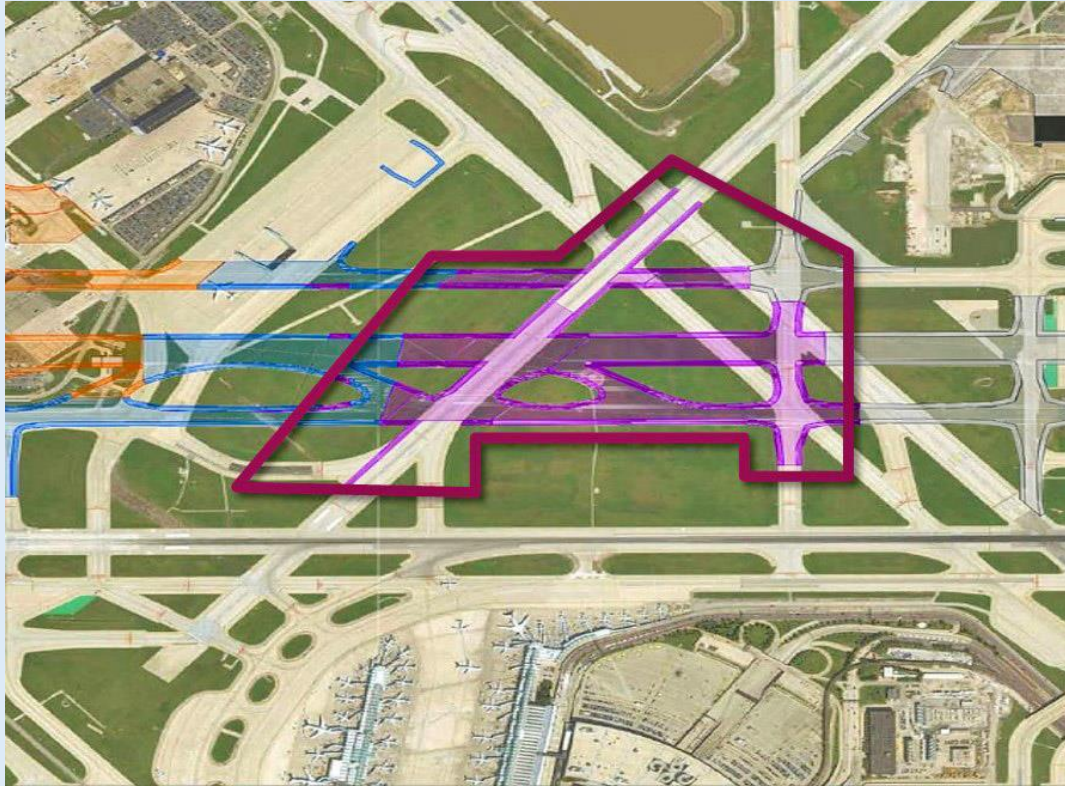
**LEGEND**

- Runway 9C-27C East Package
- Runway 9C-27C Package 1
- Runway 9C-27C Package 2
- Runway 9C-27C Package 3
- Airline Employee Parking Lot



- Construction of airfield pavements, PCC and AC, airfield lighting and signage
- Demolition of existing structures and underground utilities and other improvements
- Site preparation, grading and drainage, site restoration, utilities and other appurtenances and incidental work.
- Project site is located in the Air Operations Area (AOA).



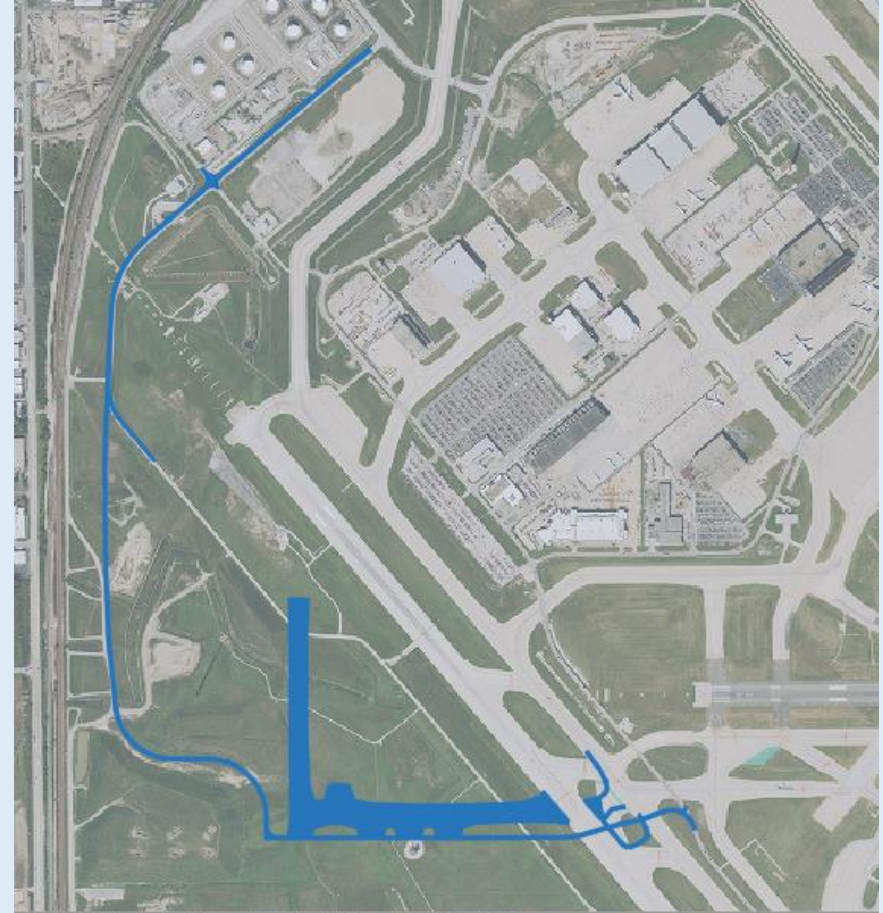


- Project cannot start until VOR is relocated
- Phased construction of airfield pavements, PCC and AC, airfield lighting and signage
- Site preparation, grading and drainage, site restoration, utilities and other appurtenances and incidental work.
- Project site is located in the Air Operations Area (AOA).

# TAXIWAY Z/J & TANK FARM ROAD



- Construct the tie in for the new 9C approach to the (future named) Taxiways Z/J
- The relocation of tank farm road around the new runway
- Majority of work is done outside of Runway Critical Areas

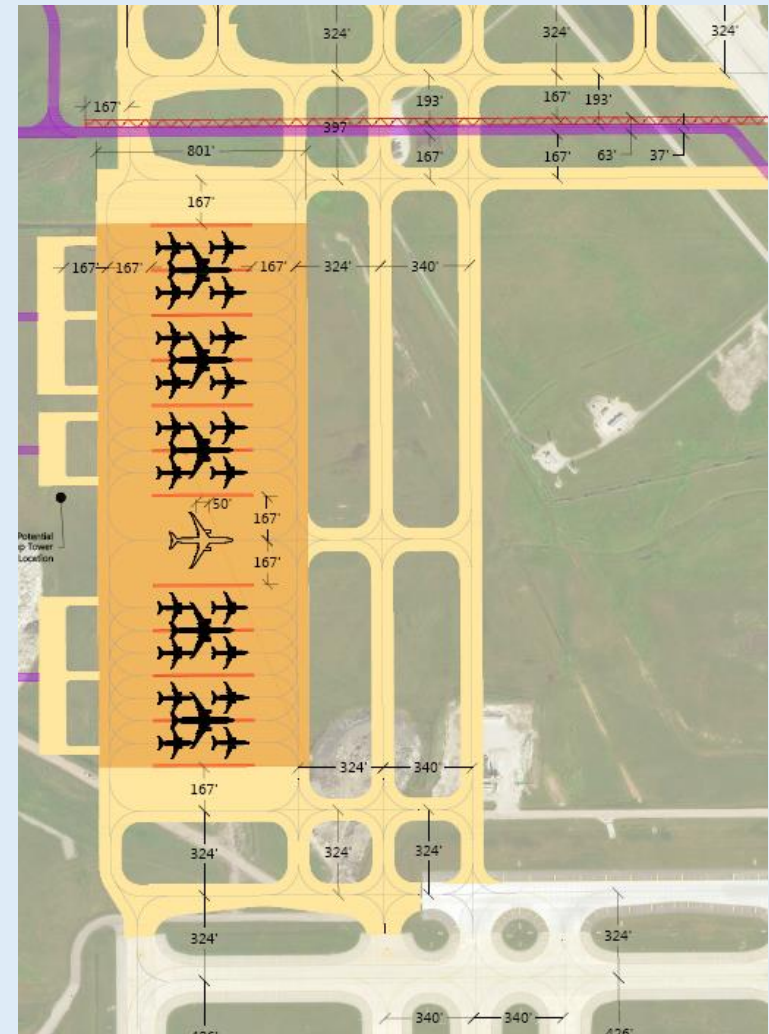




# CENTRAL DEICING FACILITY (PAVING AND UTILITIES)



- Two ground support equipment staging areas
- Snow Dump Area
- Airfield Lighting
- High mast perimeter lighting and variable message boards
- Mainline paving
- Shoulders with tie-in to existing airfield taxiways
- The facility is designed to hold up to 20 ADG III aircraft or 5 ADG VI aircraft





Construction of a building to serve as a operations control tower for airlines management of their winter deicing operations at the Centralized Deicing Facility.

# CENTRAL BASIN RELOCATION/RECONFIGURATION

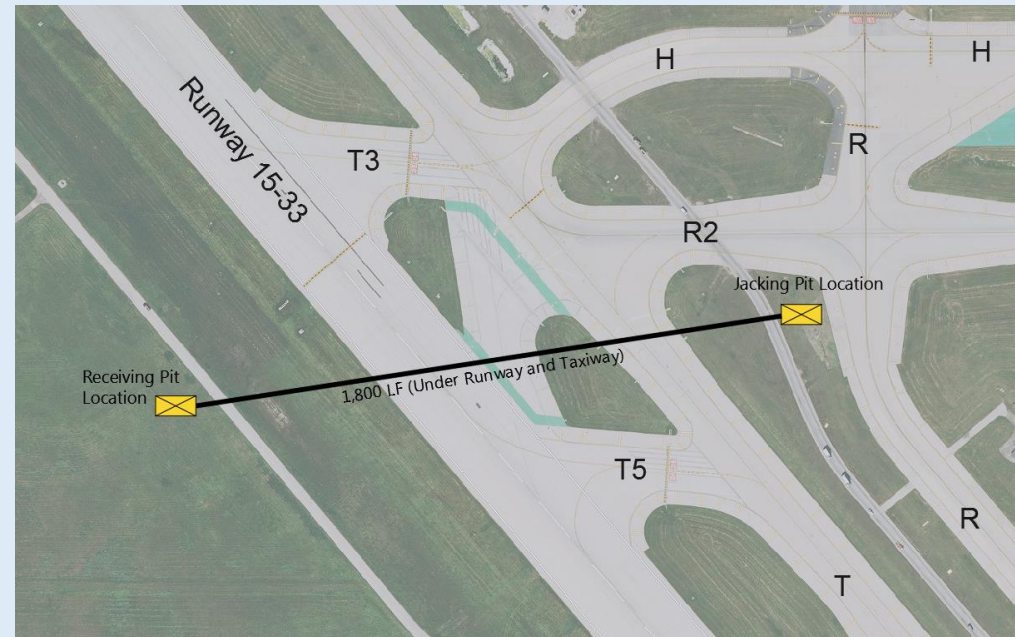


- Modifications to the Central and South Basins to accommodate the future terminal developments.
- Earthwork, large diameter deep tunnel construction, modifications to mechanical equipment, including an existing pump station.
- Project may be delivered as design-build.

# FUEL LINES TRANSMISSION MAIN RELOCATION



- Reroute (2) 24" main fuel lines coming from the North Fuel Farm, around the footprint of the new runway (9C-27C), into the main system at Taxiway J2
- Removal of rerouted fuel lines

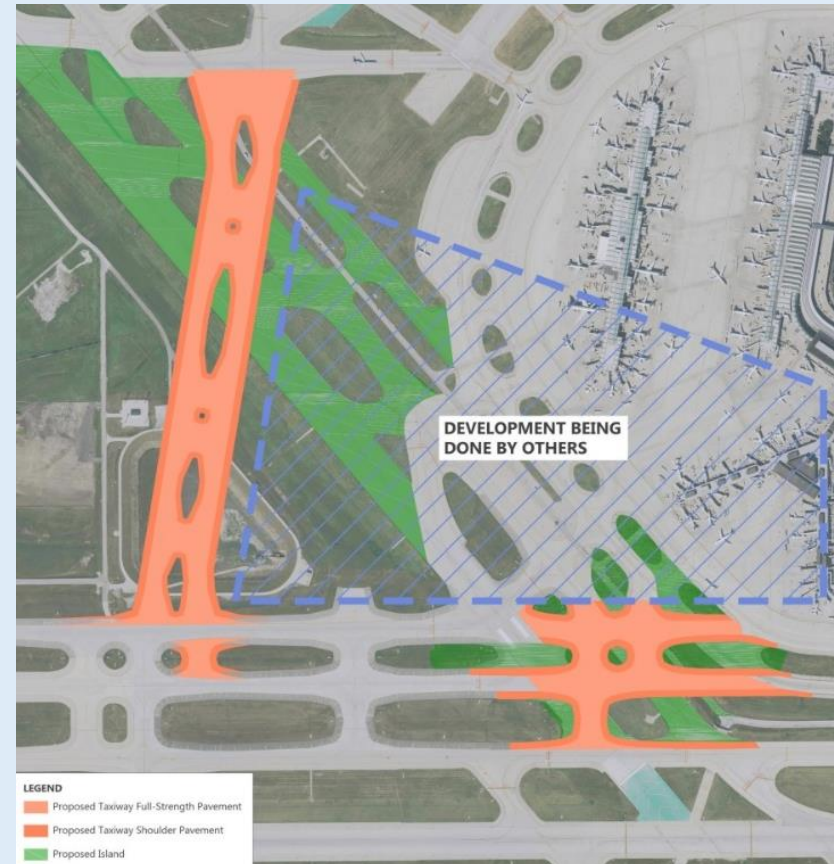




# RELOCATION OF TAXIWAYS A&B



- The relocation will realign the existing segments of Taxiways A and B to the West of the primary terminal complex to connect to East-West Taxiways
- Relocation of A & B Taxiways are needed to allow future construction of Satellite Terminals 1 & 2
- Geometry is aligned with current drawings of Satellite Terminals 1 & 2
- The North-South Segment of the Taxiway A-B Relocation will allow the circular taxiway flow to be maintained around the expanded terminal complex



# TERMINAL AREA PLAN (TAP)

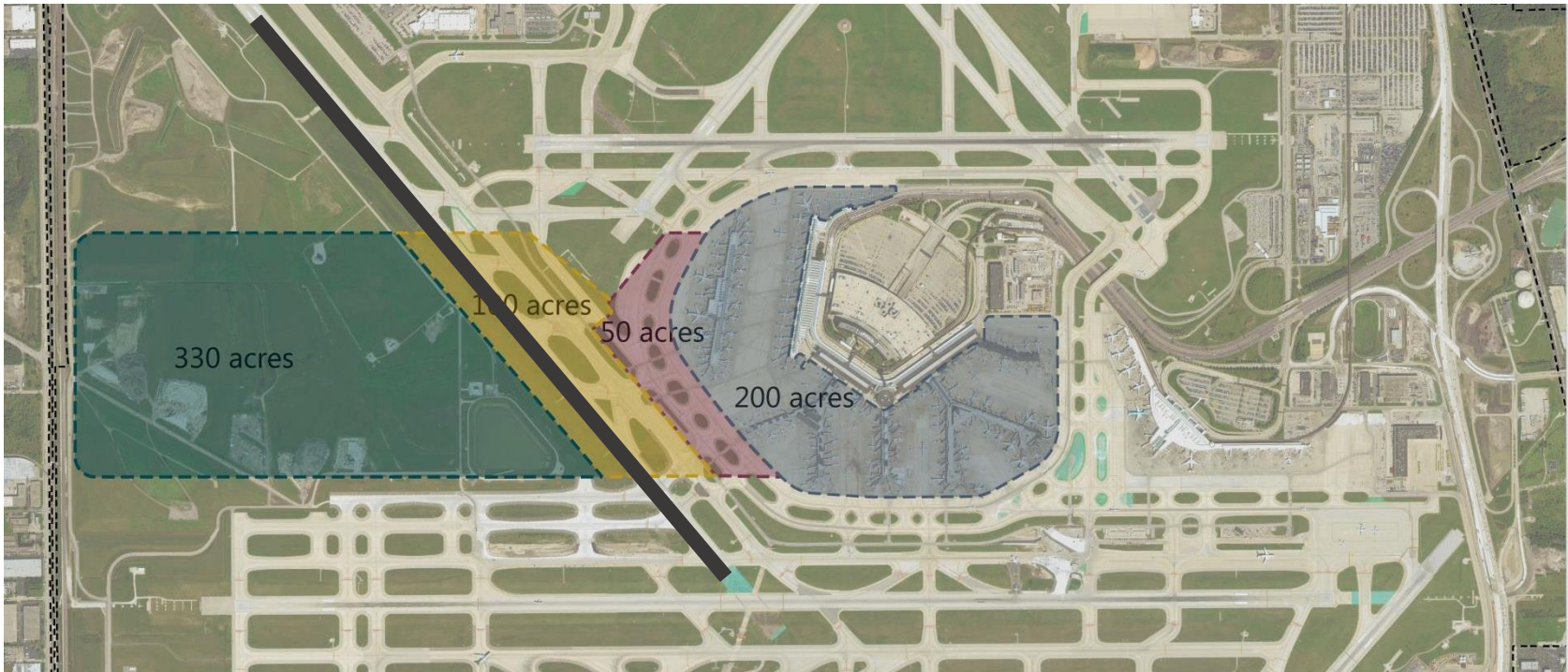
O\*HARE21



# POTENTIAL CONFIGURATION FOR NEW CONCOURSES



## Terminal Area Development - TAP



- Over 400 acres available for gate expansion
- Taxiways comply with FAA guidance to eliminate irregular geometry





O'HARE INTERNATIONAL AIRPORT





## O'Hare Global Terminal (OGT)

- Redevelopment of existing Terminal 2 with a new multi-level expansion comprised of approximately 1,800,000 sq. ft.
- New areas for ticketing, bag check, security check points, domestic and international baggage handling and screening systems, concessions, bag claim
- Includes the demolition of Concourses E and F
- 2 new Group VI Gates
- Will be delivered via Construction Manager at Risk (CMAR)



## Satellite Terminal 1

- New multilevel concourse to be built south of, and in the same north south orientation of existing Concourse C
- Provides approximately 2,365 linear feet of usable gate frontage
- Approximately 600,000 sq. ft. of new building space
- Will be delivered via Construction Manager at Risk (CMAR)



## Satellite Terminal 2

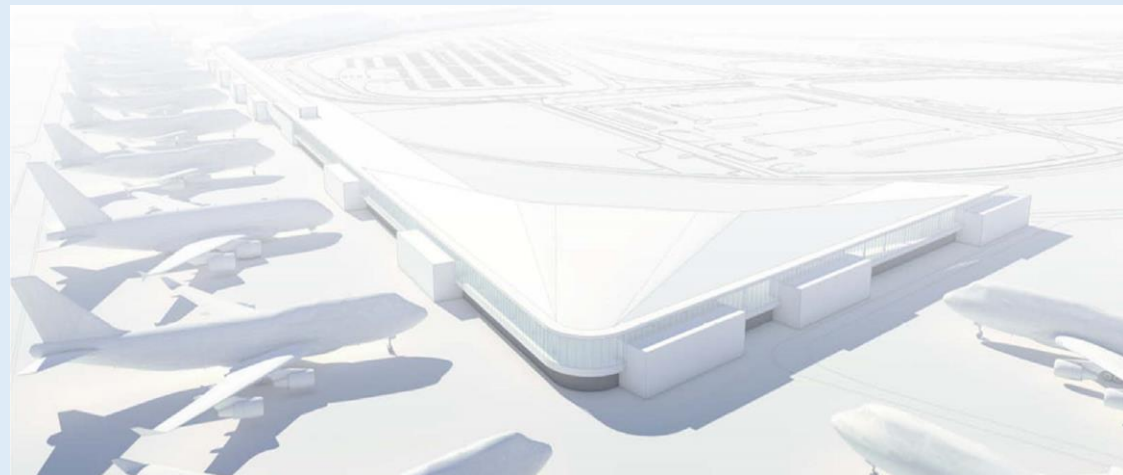
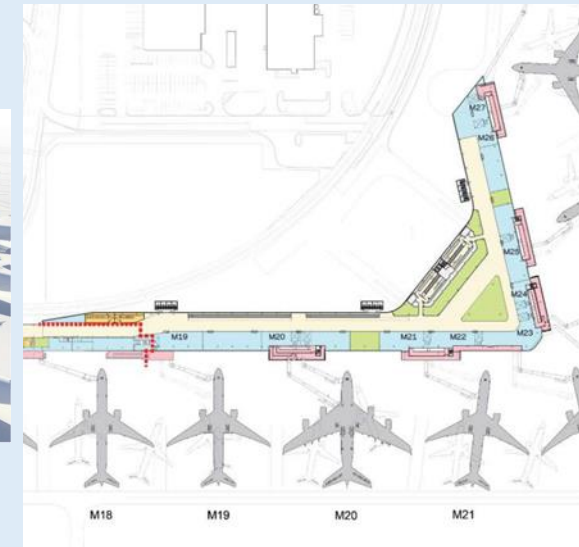
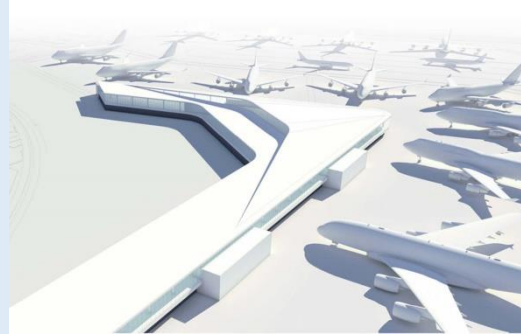
- New multilevel concourse to be built West of the new Satellite Terminal 1
- Provides approximately 3,355 linear feet of usable gate frontage
- Approximately 500,000 sq. ft. of new building space
- Will be delivered via Construction Manager at Risk (CMAR)

# TERMINAL 5 EXTENSION



## Project Description

- 9 new wide-body gates
- Provides a second A380 capable gate at O'Hare
- 4 new hardstand locations
- Addresses near-term demand and capacity of International Terminal gates and facilities
- Modifications throughout the building including Checkpoint, Ticketing, FIS Areas, Baggage areas, airside bus connection
- Renovation of Gates M1 to M6 to add two additional contact gates for future operations
- Will be delivered via Construction Manager at Risk (CMAR)





# TERMINAL 5 EXTENSION



## TERMINAL 5 M EXTENSION - PROJECT SCOPE

TO T1, T2, T3  
HILTON HOTEL  
CTA CAR PARKS

TO FUTURE CONRAC + HOTEL

TO CITY

WEST CONCOURSE  
DOMESTIC OPERATION

DOMESTIC BAGGAGE CLAIM

AIRSIDE BUS

FIS MODIFICATIONS  
SECURITY EXPANSION

M - EXTENSION

HOTEL  
CAR PARK

AREA OF REDEVELOPMENT



# O'Hare 21: Core projects moving forward to increase capacity



- Three hotel development projects will more than double the current hotel capacity

New Hotel Development

Multi-Modal Facility

- Multi-Modal Facility for improved bus, rental car, and parking

Site of New O'Hare Global Terminal

Renovate Existing Hotel

New Hotel Development

T5 Extension

- New Global Terminal will serve both domestic and international flights, replacing the 55 year old Terminal 2

- Terminal 5 additional gates - 25 percent expansion



# Growth at O'Hare is Critical to Chicago and the Region's Economy



Chicago's investment in the OMP has substantially reduced airfield/airspace delay

- 50% increase in capacity
- 57% decrease in delays

It is now time to invest in our terminals

- Terminals are 30-55 years old
- Three million passengers are burdened each year with terminal 5 transfers

Investment will enable many local opportunities throughout the chicagoland region

- Forecasted economic impact reveals additional \$10 billion annual impact over next decade throughout the chicagoland region



# VISIT [WWW.FLYCHICAGO.COM](http://WWW.FLYCHICAGO.COM)

Welcome to the Chicago Department of Aviation  
**Connecting You Everywhere**

**O'HARE**  
INTERNATIONAL  
AIRPORT



**MIDWAY**  
INTERNATIONAL  
AIRPORT



**cdca**

Rahm Emanuel, Mayor  
© 2016 Chicago Department of Aviation



AWARENESS &  
ASSISTANCE



AIRPORTS  
GOING GREEN



SIGN UP FOR  
WEB ALERTS

**O\*HARE21**



**CHICAGO  
DEPARTMENT  
OF AVIATION**



# O'HARE MIDWAY

INTERNATIONAL AIRPORTS

[WWW.FLYCHICAGO.COM](http://WWW.FLYCHICAGO.COM)

