LAX Development Program: Customizing a SharePoint GIS to provide Construction Information to the LAWA community

2018 ESRI Conference – San Diego, CA
July 12, 2018

Don Chinery, Los Angeles World Airports
Abdel Khineche, Los Angeles World Airports
✓ Introduction
✓ LAX Background
✓ Program Controls/GIS
  ✓ Data Collection/Analysis
  ✓ Application
  ✓ Deliverables
  ✓ Costs
  ✓ Benefits
✓ Conclusion
Gateway to LA: 84 million passengers per year (2017)
$15 Billion of Construction Improvements
- Capital, Airlines/Tenants, Maintenance Projects
- 3 major phases – 2010 through 2028
- Nation’s largest modernization airport project
- Largest public works project in Los Angeles’ history
Terminal Renovations (2016 – 2018)
LAX is the busiest origin and destination airport in the world

Connectinglax.com
Consolidated Rent-A-Car Center (CONRAC)
Automated People Mover System (APM)
Automated People Mover System (APM)
C.A.L.M.

Coordination And Logistics Management

Minimizing construction-related impacts to passengers and tenants while maintaining a positive guest experience.
✓ Program Management Function

✓ Program Controls Deliverables:
  ✓ Master Schedule – all projects – published monthly
  ✓ GIS Database – “Live” CALM Geodatabase
  ✓ Schedule and Locational Information tracked from Planning through Design & Construction
✓ ArcGIS Geodatabase
✓ Identify Locations for All Projects
✓ Interactive Map Application
✓ Live Data
✓ Efficient Packaging
✓ Captures Active and Future Work Areas
✓ Reports Scheduling
✓ Reveals Time and Space Conflict
✓ Stores Project Details
✓ Provides Mapping for Logistical Coordination
- Project Locations for All Available Projects in the Master Schedule
- Data Stored in ArcGIS Geodatabase
- HTML 5 Language and SharePoint 2016
- Information Displayed through Interactive Map Application on LAWA SharePoint Website – Access to Internal Airport Employees Only
- Updated Daily
- Project Information Captured Includes
  - Phasing and Site Logistics Plans
  - Construction Start and End Dates
  - ADG Project Managers
  - Project Status (Planning, In Design, In Construction, Complete)
  - Contractor Information
  - Square Footage
- Planning Tool (Examples Include Element Maps, Roadway Coordination, Laydown Areas)
Systems Integration (P6 to ArcGIS)
Welcome to LAWA ADG CALM SharePoint

The CALM (Coordination and Logistics Management) Team's mission statement is to minimize construction-related impacts to our customers by utilizing CALM as a central point of communication and collaboration.

This SharePoint site will enable LAWA staff to access all CALM deliverables. You will have the ability to customize Construction Projects by plotting selected points of interest using our interactive map. Also, you will have the ability to customize your selections based upon a specific terminal or specific project areas and filter construction projects based upon a specified time frame. You may also download all CALM deliverables in pdf format including Maps (CTA, Aisles/Landside, Elevator/Escalators and Traffic Impacts), Master Schedules, and Construction Bulletins.

CALM Deliverables

- Master Schedule
- Concessions Schedule
- CALM Histogram
- CALM Dashboard
- Roadway Coordination (weekly)
- Aisle
- Landside
- Logistics/Laydown
- Arrivals and Tunnels
- Ticketing and Apron
- Gates
- Elevator/Escalators
- FMG Coordination

Nightly Report

Most recent Nightly Reports:
- new document or drag files here
- Name
- Night report 2016-11-4
- Night Report 2016-11-3
- Night Report 2016-11-2

Nightly Report Archive

Construction Bulletin

Most recent Weekly Construction Bulletins:
- new document or drag files here
- Name
- Weekly Construction Bulletin
CALMShare Website
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Project Name: T1.5
Construction Start Date: 7/31/2017
Construction End Date: 4/1/2020
Project Number: T-LAX-12964
ADG Project Manager: M. Barakat
Status: In Construction
Terminal: 1
Level: Arrivals
Square Footage: 83,976 sq. ft
Contractor: HP
Contractor Phone Number: 213.896.3401
Inspector: Ferdinand Marquez
Inspector Phone Number: 424-646-5455
Phasing Document – pdf (hyperlink)
Filtering Functionality
Overlap of CIP, Tenant and Concessions Construction Projects
Construction Staging Laydown Map
✓ Initial Data Collection – 1 FTE – 6 months
✓ Data Development – Schedule/GIS – 2 FTE – 6 months
✓ GIS System Development – 2 FTE – 6 months
✓ Hardware/Software Costs = < $100K
✓ Maintenance of Schedule/GIS system (ongoing) – 3 FTE
✓ Confirm with Project Managers on a monthly basis – project status
✓ Cross-reference with Program Controls on budget/cost reports
✓ Conduct Quarterly Data Scrubs with:
  ✓ Planning
  ✓ Project Managers
  ✓ CALM Team
✓ Attend weekly project OAC and status meetings for latest information
✓ Tool used for Terminal Coordination Meetings
✓ Full Control of Interface Changes – Can Reflect Organizational Changes Quickly
✓ Resolve Conflicts “On Paper” Rather than in the “Field”
✓ Minimize Passenger Inconvenience
✓ More Efficient Packaging of Work
✓ More Information for Project Managers in Terminals – Know the “Big Picture” Rather than Individual Projects
LAWA GIS Support Services Division: 3D interactive modeling simulator for select Departure / Ticketing levels at LAX using ArcGIS Pro and WebScene

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Abdel Khineche, Los Angeles World Airports – IMTG / GISSSD
Don Chinery, Los Angeles World Airports
GIS tests 3D interactive modeling simulator for select Departure / Ticketing levels at LAX using ArcGIS Pro and WebScene: LAX Bird’s eye view
GIS tests 3D interactive modeling simulator for select Departure / Ticketing levels at LAX using ArcGIS Pro and WebScene

**Departure / Ticketing level - Space Areas recognition:** Public Lobby Passage Area - Ortho View

![3D Interactive Modeling Simulator](image-url)

3D Interactive Modeling Simulator
GIS tests 3D interactive modeling simulator for select Departure / Ticketing levels at LAX using ArcGIS Pro and WebScene

**Departure / Ticketing level - Space Areas recognition:** Public Lobby Passage Area - Perspective View
GIS tests 3D interactive modeling simulator for select Departure / Ticketing levels at LAX using ArcGIS Pro and WebScene

Departure / Ticketing level - Space Areas recognition: Outbound Baggage - Perspective View

3D Interactive Modeling Simulator
GIS tests 3D interactive modeling simulator for select Departure / Ticketing levels at LAX using ArcGIS Pro and WebScene.

**Departure / Ticketing level - Space Areas recognition:** Void Space
GIS tests 3D interactive modeling simulator for select Departure / Ticketing levels at LAX using ArcGIS Pro and WebScene.

**Departure / Ticketing level - Room Area recognition:** Restrooms

3D Interactive Modeling Simulator
GIS tests 3D interactive modeling simulator for select Departure / Ticketing levels at LAX using ArcGIS Pro and WebScene

Department / Ticketing level – Emergency equipment recognition: Automated External Defibrillators
GIS tests 3D interactive modeling simulator for select Departure / Ticketing levels at LAX using ArcGIS Pro and WebScene

Departure / Ticketing level - Emergency equipment recognition: Fire extinguishers
Questions

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