LAX Terminal Improvements: Taking a CALM Approach

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LAX Airport

- Gateway to LA – 56 million passengers per year
- 9 passenger terminals
- Over 80 airlines
- 7th busiest passenger airport in the world
- 2nd busiest origin and destination airport in the world
CALM Team

Coordination and Logistics Management

To minimize construction-related impacts to passenger service and tenants
Building a “New LAX”

• 4 Parts of the LAX Campus under construction
  1. CTA – Central Terminal Area
  2. CUP – Central Utility Plant
  3. Airfield Elements
  4. New Bradley West
Quantify the Problem

- What is the Size?
- When does it Hit?
- What Kind of storm?
- What are the Impacts?
Size of the approaching “Storm” in the CTA

- Compiled: Airline, TSA, Concessions, C&M, CIP, Planning
- $3.5 billion over next 7 years
- 40% – tenant driven
- 45± different general contractors throughout the CTA
- 14 contractors just in Terminal 6 alone
Anticipated Construction Dollars

- Spikes - leveling
- Tenants driving
- Tool for LAWA resource management
Not solely $ driven.....Utility Shutdown Projections

- 4-5x current peak
How are Passengers and Tenants Disrupted?

- Signage
- Barricades
- Power interruptions
- Curb closures
- Closed restrooms
- Elevators/Escalators closed
- Cramped space
- Loud noises
CALM Team Developed

Coordination And Logistics Management
CALM’s Purpose

• Minimize construction-related impacts to passenger service and tenants

• Responsible for project delivery as part of the Airport Development Group

• Act as “Traffic Cop”
CALM Team

GIS
Collect data-daily
"Time and Space"
"Connective Tissue"

Southside Terminal Managers
C.A.L.M. Manager
Scheduler
Northside Manager
### CALM Team Approach

**3-Step Approach**

1. Learn
2. Coordinate
3. Share

**Goals**

- Streamline process
- Inter-department workgroups
- Issue alerts/reports
- Conflict Resolution
CALM GIS Project

• Mission Statement:
To track the spatial and temporal data of all ongoing and planned construction projects in the CTA for LAWA in support of the overall mission of the CALM group to minimize impact of the construction projects on passengers and tenants.
CALM GIS Project Setup

• Current and planned conditions in database, not “as-built” data
• Operates as a “moving target”
• Use GIS for “spatial chokepoints” on construction planning
• Developed mapping standards, symbology, and templates for use with CALM deliverables
Los Angeles World Airports

GIS DATA COLLECTION

- Terminal Construction Phasing
- Utility Shutdowns
- Terminal Tour/Field Verification
- Concessions Redevelopment
- Elevator/Escalator Replacement Program
- Master Schedule
- Ground Transportation Operations
- LAWA Basemap Master Lease Agreements
- Northside Planning Redevelopment
- Photos

Creelman & Associates
CALM Geodatabase

- Layers include:
  - Construction Areas
  - Elevators and Escalators
  - Concessions
  - Asset Management/Points of Interest
  - Traffic Closures
  - Photos
  - Notes and Comments (Planning Phase – Bubbles)
  - Master Lease Agreements (Space Descriptions)
Los Angeles World Airports

GIS DATA/MAPS

- Project Approval Team (P.A.T.)
- CALM Team/ADG
- Ground Transportation Operations
- Capital Improvements
- Airport Security/Police
- Commercial Development Group (Concessions/Real Estate)
- Construction/Maintenance & Inspection
- IT
- Planning
- Tenants
- Airport Ops ARCC Hotline

Creelman & Associates

AECOM
3 Levels of CTA
Terminal 6

- Alaska Airlines building the “Airport of the Future”
- Approximately $260 million construction upgrades
- Terminal-wide Improvements completed March 2012
- State of art Baggage Handling System upgrade completed May 2012
GIS “In Action”

- Elevator/Escalator Replacement Program and the Concessions Redevelopment Program
- Use GIS to show spatial conflicts
- Concessions needs access of closest elevator in order to redevelop their leased spaces
Getting the word out

• Use SharePoint on LAWA’s Existing Server
  – Provides a Central Location for updated maps and reports
  – Provide Online Mapping and analysis
  – Gantt Charts and USR Schedule
  – Keep initial investment low
Next Steps

• Setup Pilot GIS Server and SharePoint Site
• Use Existing project server with 3 VM machines
• Around 1 Month for Setup and Data Loading
• Used ArcGIS Server 10 and SharePoint 2010
Walk Through

Welcome to Los Angeles World Airports (LAWA)

CALM Program

Shared Documents

- Arrivals and Tunnels: 1/6/2011 10:49 AM by SLAVMSP0011Administrator
- Gates: 1/6/2011 10:50 AM by SLAVMSP0011Administrator
- Ticketing and Ground: 1/6/2011 10:50 AM by SLAVMSP0011Administrator

Add document

CALM Interactive Maps

- Arrivals and Tunnels
- Ticketing and Ground
- Gates
Walk Through
Walk Through
## Schedule

### Escalators and Elevators - Arrivals and Tunnels

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CIP Map

Landside CIP Projects

Interactive CIP Project Map

SLR JOINT REPLACEMENT

CIP Projects

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Ugly Alerts
Ugly Alerts
Ugly Alert
Ugly Alert
Ugly Alert
Ugly Alert
Proposed GIS Data Distribution
Benefits

- Maps show simplified real-time work-in-progress
  - Not just as-built
- 24/7 Status and Availability
  - C&M, Planning, FED, Ops, ADG, Etc.
- Utilizing and expanding existing LAWA systems
- Scalable and Expandable Beyond CALM and ADG
- User Friendly
- ITG and GIS-FETS group buy-in
  - Will be used by Asset Management
  - Ties with Future and Current LUSAD Systems
The Road Ahead

• Expand CALM Data Beyond Terminals
• Incorporate More Data Sources
• Share Resources with other GIS Users
LAX Development News and Information:

www.laxdevelopment.org

Earthcam available on construction updates
Questions?

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