Airports GIS

Project Types and Workflow

Presented to | FAA Regions | Alaskan
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Agenda

- Robust Data Collection – “eALP” (10 min)
- Runway Extension/New Runway with New Instrument Approach Procedures (10)
- No Safety Critical Data - Apron/Taxiway (5)
- Establish Geodetic Control (5)
- Other – Land Acquisition, Boundary Survey, Noise, Planned Development (5)
Robust Data Collection (eg., eALP project)

- Critically evaluate features and attributes to include in project
- Some attributes, for non safety-critical features, may be omitted from original project, then collected during a future initiative
- Evaluate which runways need AS/AAA to support IAP development in the near term (5-7 years)
- Consider 65 DNL contour and limits of noise program
- Two Airports GIS projects:
  - Airport Airspace Analysis: VG (data includes all existing data)
  - Airport Layout Plan: airport design or planning (planning & design data)
- SOW, Plan(s), NGS review and approval
- If “Triggering Event,” the airport must incorporate contract requirements and processes for upcoming projects to ensure Airports GIS deliverables

Robust Data Collection Project | Getting Started

- Consultant Selection
  - Reference APP-1/AAS-1 working guidance: 06/24/2010-Attachment A
- Scoping Meeting with airport/consultant team/FAA
  - Working guidance, Attachment B
  - Scoping meeting guide/agenda (handout)
- Negotiate scope/fee and issue NTP
- Create two Airports GIS “Survey” projects
  - Project 1 | New Survey: Obstruction Survey (or similar)
  - Project 2 | Planned and Design Data (ALP, eALP)
- SOW (Project 1)
  - Develop, Submit, and Approve (FAA | Region/HQ (Contractor))
- Plans
  - Develop and Submit for NGS Review and approval
Creation of an electronic ALP (current) in Airports GIS

**“Survey” Projects**

- Aeronautical Survey (s)
  - Create Project
  - Upload Data
  - Assemble eALP

- Planning/ALP Update (s)
  - Create ALP Project
  - Upload Planning Data
  - Data Acceptance

**eALP Projects**

- Create eALP “Project”
- Assemble eALP
- Electronic ALP
New instrument approach with runway extension

- Timing: usually must collect imagery before extension/new runway is in place
- Recommend collecting low-level (high-resolution) imagery for entire airport property, not just in runway environment
- After Construction: may re-fly runway flight line (new tiles) for orthoimagery and may wish to use to extract new features (e.g. lights, marking) rather than using CADD/survey data
- Airports GIS Project Type: AAA/VG
- SOW, Plan(s), NGS review and approval

Workflow - IAP Development with Design Values

1. Determine Design Values (Runways ends/ CL Profile)
2. Conduct AAA Using Design Values
3. Submit Data Status = Under Construction
4. FAA/NGS Data Acceptance
5. Yes
6. FAA/FFPO IAP Design
7. Yes
8. Survey As-Built Features
9. Submit Data Status = As Built
10. Design As-Built
11. Yes
12. Flight Check and Publish
13. No
How to treat obstacles or NAVAIDS shown in the imagery, but scheduled for removal or relocation

- Use Status Attribute to differentiate
- NAVAID/Obstacle scheduled for removal/relocation
  - Status = “Temporary”
  - Recommend additional information in UserFlag
- After Removal
  - Status = “Demolished”
  - Provide Documentation
No Safety-Critical data project (new taxiway/apron)

- Determine how Airports GIS will be incorporated into both design and construction phases of project.
- Determine who is responsible to QC and upload Airports GIS data
- Planned Major Feature (RW/TW) should be in Airports GIS with status code as near-term, eventually feature will be refined and status changed during airspace and or SMS review
- Identify as-built features to be included in the upload before the project can be closed (e.g. – Taxiway, Shoulder, Lights, Signage, Marking and Utilities)
- Collect all attributes
- Airports GIS Project Type – Construction/Airside (or Landside)
- SOW, Plans with Airport Review and QC of Data
- QC and Upload Data near end of project
- Close project
Establish Geodetic Control

- **Recommendations**
  - Separate Airports GIS project
  - Not in Planning Project (e.g. – Robust Data Collection)

- **Project Type – Construction – Landside**

- **SOW, Geodetic Control Plan (only), NGS Review and Approval**

- **SOW Review (FAA) Focal Point**
  - Proposed Location of PACS/SACS

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Land Acquisition, Noise (Contours or Mitigation), Environmental or Planned Development

- Determine how Airports GIS will be incorporated into the project
- Determine features to be included and review attributes (expect all are included in the project)
- Determine who is responsible to QC and upload Airports GIS data
- Determine Airports GIS Project Type
- Airport has responsibility for data
- Upload data and close project
- Planning Data – **SOW?**, Plans?
## Airports GIS – SOW and Plan Requirements

<table>
<thead>
<tr>
<th>Project Goal</th>
<th>Airports GIS Project Type</th>
<th>Statement-of-Work</th>
<th>Geodetic Control</th>
<th>Imagery</th>
<th>Survey &amp; Quality Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Approach(^1) RW - Extension/New(^2)</td>
<td>AAA-VG or Non VG</td>
<td>✓</td>
<td>✗</td>
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<tr>
<td>Robust Data Collection - &quot;eALP&quot;(^3)</td>
<td>AAA-VG or Non VG</td>
<td>✓</td>
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<td>Runway Reconstruction</td>
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<td>Taxiway/Apron Construction</td>
<td>Construction - Airside</td>
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<tr>
<td>Noise Contours, Planning Data(^4)</td>
<td>ALP – Airport Design / Planning</td>
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<tr>
<td>Install PACS/SACS</td>
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<tr>
<td>Land Acq./Wetlands/Environmental Mapping</td>
<td>Construction - Landside(^6)</td>
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<td>✗</td>
<td>✓</td>
</tr>
</tbody>
</table>

1 – No Installation of PACS/SACS
2 – VG Approach Analysis
3 – Including eALP Planned data (non Surveyed)
4 – Temporarily

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