Using GIS to Manage Work Program

Presented by
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Presenters

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Agenda

Overview of Work Program at District 3

Design and Rollout of Work Program Viewer

Work Program Functionality/Demo

Questions

Link to Work Program Viewer

https://fdot.maps.arcgis.com/apps/webappviewer/index.html?id=1f83e972e84e46a1add6a0e07d06a16d&find
FDOT D3 Overview

- Northwest Florida
- 16 Counties
- 2,300 Centerline Miles
- 372 mapped projects in last WP cycle
FDOT D3 Work Program

- “Tentative work program” means the 5-year listing of all transportation projects planned for each fiscal year which is developed by the central office based on the district work programs.

- “Adopted work program” means the 5-year work program adopted by the department.

- Type of Work Program Projects presented in the public web viewer:
  - Current Major Projects (NWFL Roads)
  - Future Major Projects (NWFL Roads)
  - Active or Under Construction (Central Office/D3 Specific)

- Stakeholders:
  - Internal Users
  - NWFL Roads.com for Public consumption
Previous Version of Mapping
NWFL Roads

Northwest Florida Roads

Current Projects

Under Construction  Future Construction

Counties  Cities  Roads  Search Phrase  Sort By
All Counties  All Cities  All Roads

Bay

- 23rd Street Flyover Project
- 36th Street Bridge
- SR 388 from SR 79 to east of NWFL Beaches International Airport
- SR 390 from east of CR 2312 to Jenkins Avenue
- SR 390 from Jenkins Avenue to SR 77
- US 99 (Tyndall Pkwy) Resurfacing
- US 99 at the intersection of AIrey Ave and Tyndall Dr

District Wide

- I-10 (FDR) Corridor WBLA (Oak Hill to Apalachee) 2014-15

District 3 Public Meetings
NWFL Roads

Northwest Florida Roads

NWFL Roads / Current Projects / 23rd Street Flyover Project

23rd Street Flyover Project

Project Details

This is an intersection improvement project on SR 30 (US 98) at SR 368 (23rd Street) in Panama City. Locally known as the 23rd Street Flyover Project.

Traffic Impacts

FDOT has diverted traffic on US 98 to temporary US 98 from east of the Hathaway Bridge to east of Brown Avenue. All lanes are open on temporary US 98 and 23rd Street. Temporary US 98 will remain in place for at least two years while the 23rd Street Flyover is constructed and allows east and westbound traffic to avoid construction.

Project Overview

- Project Number: 217976-3
- Work Type: Add Lanes & Reconstruct
- Status: UNDER CONSTRUCTION
- Project Length: 1.063 miles
- Estimated Completion: Winter 2019
- Est. Construction Cost: $67.9 M
- Project Manager: Billy Robinson

Project Documents

- Project Fyer
- Meeting Materials
- Project Limits Map
- Frequently Asked Questions
- Project Videos

Affected Areas

Design and Rollout of Work Program Viewer
Previous Challenges

1. Multiple Data Sources
   - SharePoint (Central Office) /NWFL Roads
     • Concurrency of the data hosted publicly combined with internal data version control (i.e. data consistency).
   - Central Office Oracle Data Repository

2. Updates to the Data
   - Central Office Data Repository—Nightly updates
   - SharePoint/NWFL Roads (Public Information Office)
     • Varies based on project selection via PIO to create links to map from project web page

3. Mapping Would be Static (yearly snapshot of data)
   - PDF Maps, KMZ, multiple web maps
Project Considerations

Simplify solution for administrators and users

Define best data management practices and gaps in data inputs where biggest ROI can be gained

Use existing data schema and data formats

Controlled migration to new software and system tools (ESRI, SharePoint, AGOL, etc.)

Define the technology advantages & disadvantages

User centralized solutions

Managing expectations and provide continuous outreach
Solutions

▪ Esri ArcGIS Online Environment
  – Data is pulled nightly from an Oracle database (automated)
  – Published into a Feature Service for consumption in an ArcGIS Online Web Map
  – Hosted via a custom app designed using Web App Builder
  – Linked dynamically to NWFL Roads web site

▪ Automated Python Scripts to pull data (NWFL Roads and Oracle)
  – Projects are compiled into Feature Classes by a series of scripts on local D3 GIS Server
  – Feature Classes are then defined by Current, Future, Active Construction

▪ Verify all features have a valid Roadway ID, Beginning MP and/or Ending Milepost, if not:
  – Create output for projects that do not have defined spatial limits and are therefore, un-mapped.
    These records are then loaded into an attribute table available via the app's attribute table.
    Some examples of un-mapped projects include:
    • Newly planned roadways
    • Trails
    • Rail system
    • Off of the FDOT system linear road network
Demo
<table>
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<tr>
<th>PROJECTID</th>
<th>COUNTY</th>
<th>MANAGER</th>
<th>LENGTH</th>
<th>DESCRIPTION</th>
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<td>4.188</td>
<td>SR 77 FROM NORTH OF SUNNY HILLS ENTRANCE TO 1 MI S WAUSAU CITY LIMITS</td>
<td>ADD LANE &amp; RECONSTRUCT</td>
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</table>
Filter Options

- Current_Projects
- Future_Projects
- Active_Under_Construction
QUESTIONS?