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GCCMA



Johns Creek

Data Holds the Key

**Ways to Use Technology and Information to
Improve Infrastructure Management & Operations**

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Assistant to the City Manager

Spring GCCMA Conference

March 2025 | Athens, GA

Introductions



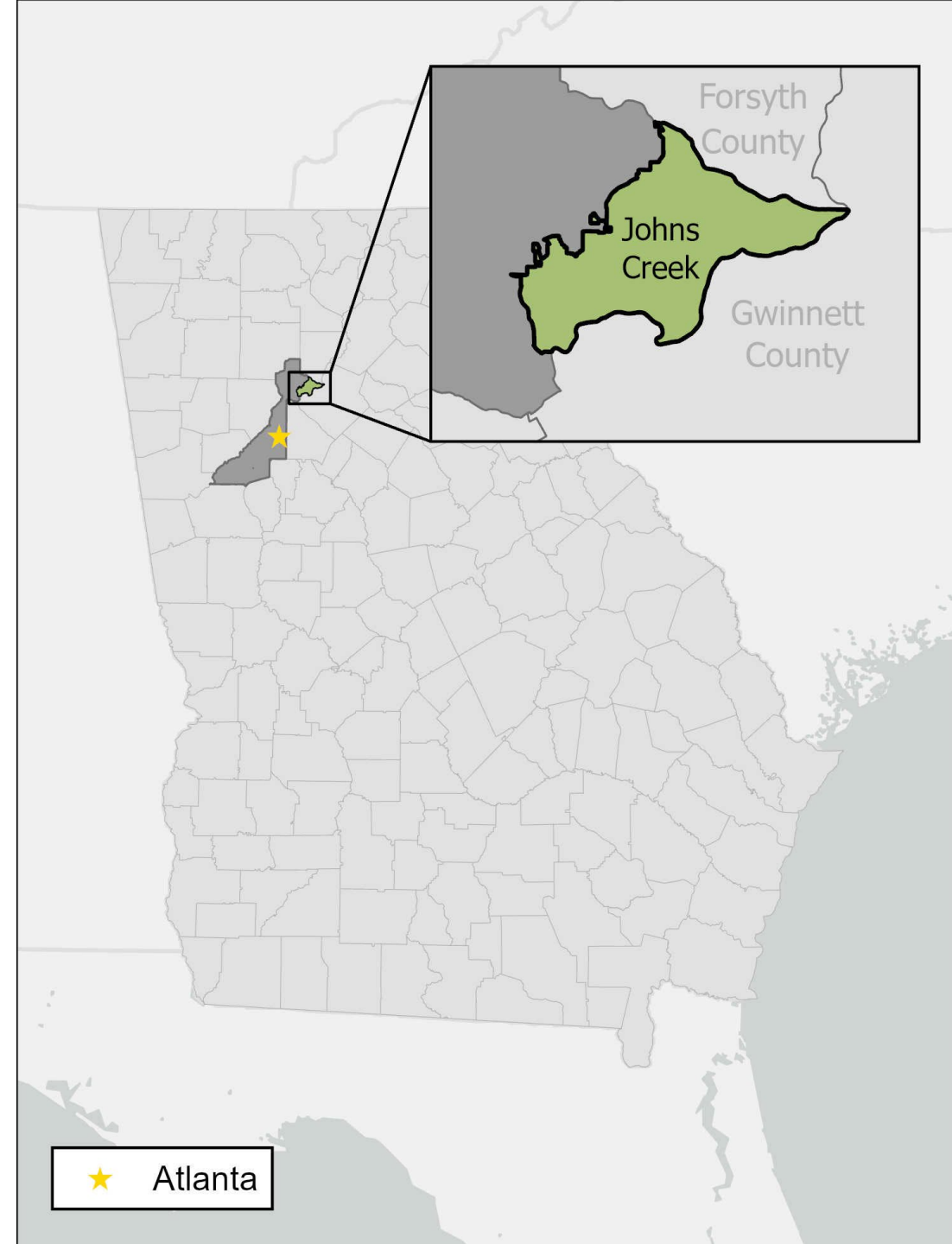
Chris Haggard, PE
Assistant City Manager



Olivia Gazda, MPA
Asst. to the City Manager

About Johns Creek

- Established in **2006**
- Population: **82,453**
- County: **Fulton**
- Size: **32 sq. miles**
- Infrastructure:
 - 252 miles of roadway
 - Busiest roads - 45,000+ cars/day
 - 92+ mi. sidewalks + trails



Where We Started

- 2006:
Incorporated
+ Inherited a
Patchwork of
Data

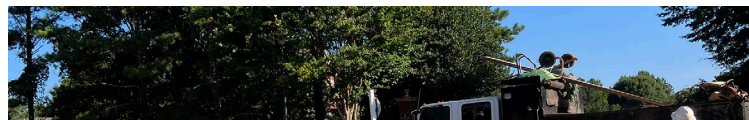


Why?

Efficient Asset
Management +
Data Tracking

=

Informed
Decisions +
Cost Savings



● 2017: Increasing Issues

- # of resident stormwater complaints increased



● 2018: Getting a Baseline

- Council allocated funds for a survey – all public and private SW structures



● 2019: “The Year of Stormwater”

- RFP for stormwater assessment released and awarded

● 2020: Assessment Complete

- Conditions data of 30,000 assets → GIS
- Est. \$32M in repair work needed



● 2021: Stormwater Utility

- Service area + timeline set
- Conditions data prioritized work
- Integrated Inspection Forms



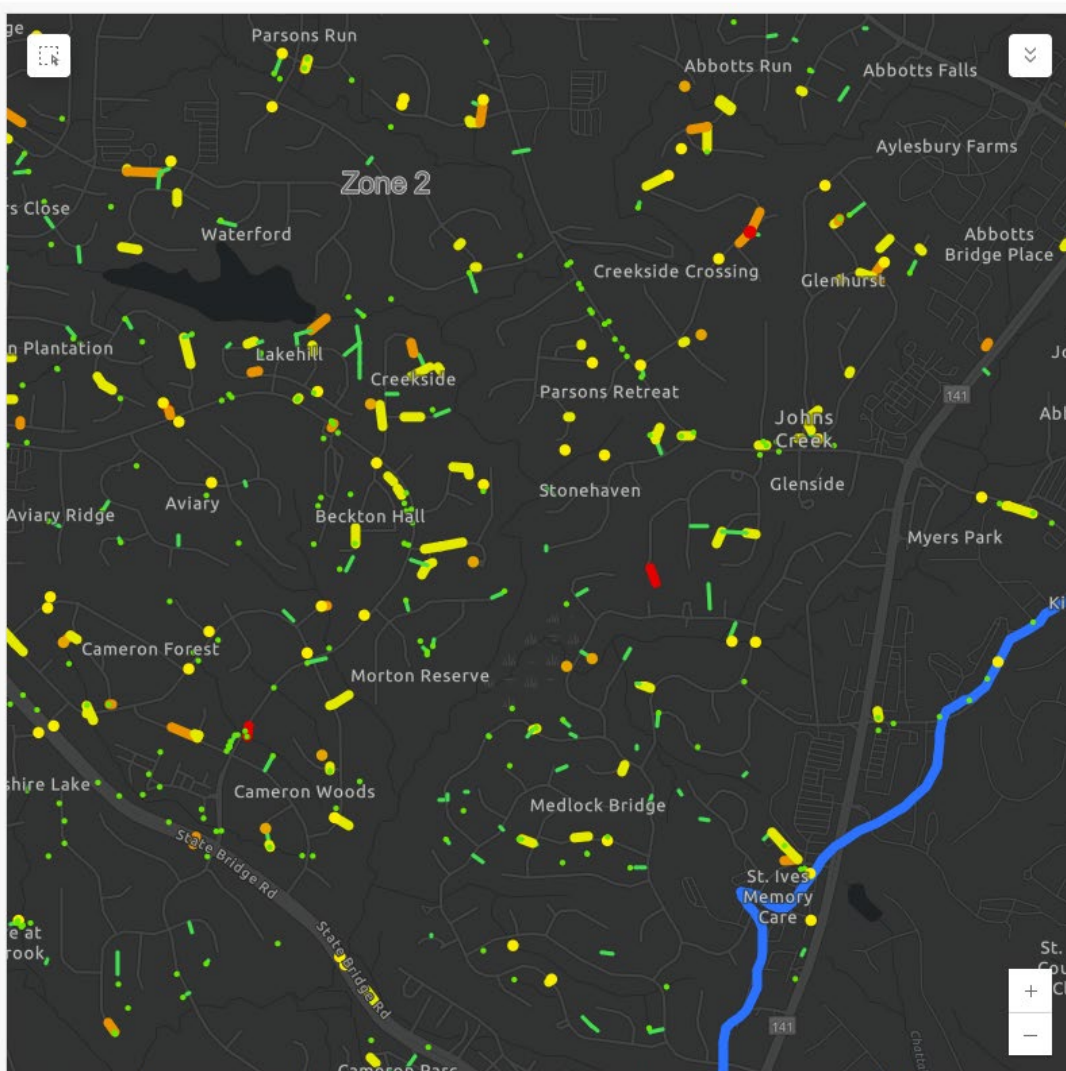
Stormwater Maintenance In GIS

Top 50 Highest Structure Asset Score

Feature ID	Asset's Mai...
BL20798S	65
JC10272S	58
CR14663S	58
CR13713S	58
CA10115S	58
JC22646S	56
CR15366S	55

Highest Conveyance Asset Maintenance Scores

Feature ID	Asset's Mai...
JC13974C	70.18
JC18838C	69.30
BL12903C	66.00
BL15727C	65.60
BL15749C	62.90
JC18294C	62.50



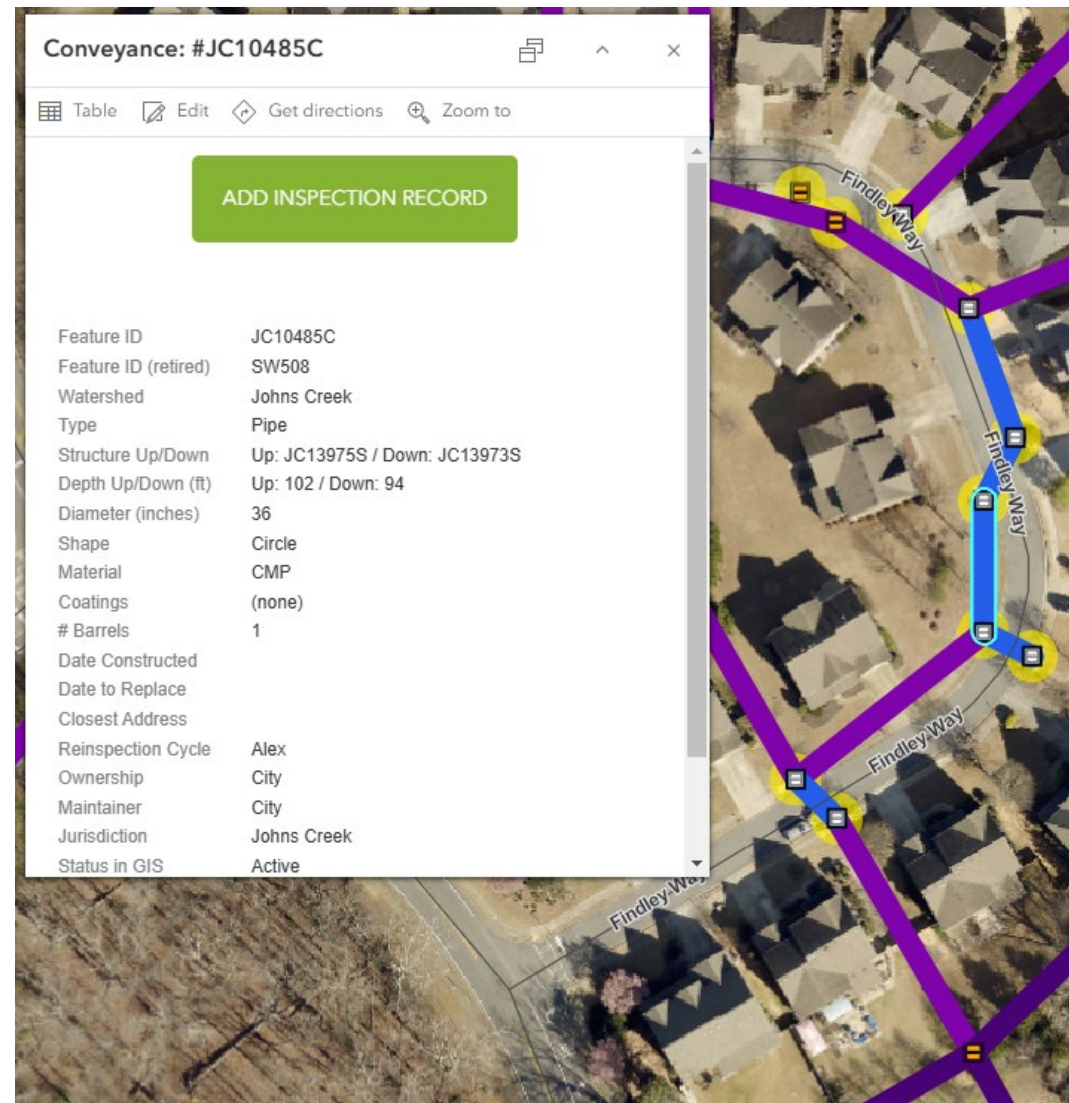
Esri Community Maps Contributors, City of Johns Creek, GA, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI... Powered by Esri

Conveyance: #JC10485C

Table Edit Get directions Zoom to

ADD INSPECTION RECORD

Feature ID	JC10485C
Feature ID (retired)	SW508
Watershed	Johns Creek
Type	Pipe
Structure Up/Down	Up: JC13975S / Down: JC13973S
Depth Up/Down (ft)	Up: 102 / Down: 94
Diameter (inches)	36
Shape	Circle
Material	CMP
Coatings	(none)
# Barrels	1
Date Constructed	
Date to Replace	
Closest Address	
Reinspection Cycle	Alex
Ownership	City
Maintainer	City
Jurisdiction	Johns Creek
Status in GIS	Active



Key Benefits: Management

Reporting

KPIs

MS4

Elected Officials

Residents

Software

App-Based

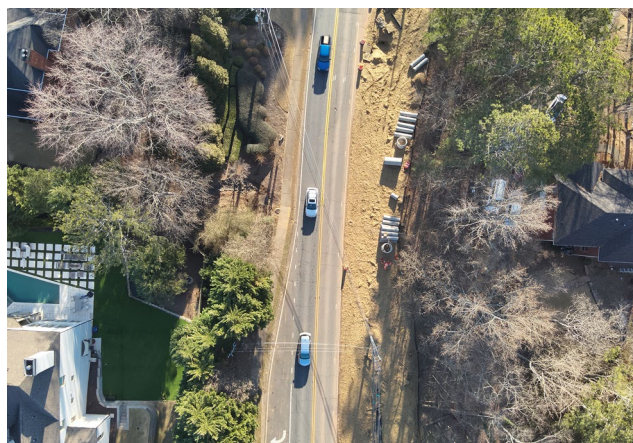
Custom Built

In-House Support

Budgeting

Annual Funding

Informed Decision-Making



**If it worked for
stormwater,
why not other
assets?**

Case Study 1: Traffic Asset Management



Traffic Asset Management: Starting Point

Assets in GIS?

Few, most out of date

Previous Process?

Hard copy work orders + inspection forms

Excel-only tracking

Challenges?

Lack of historical tracking;

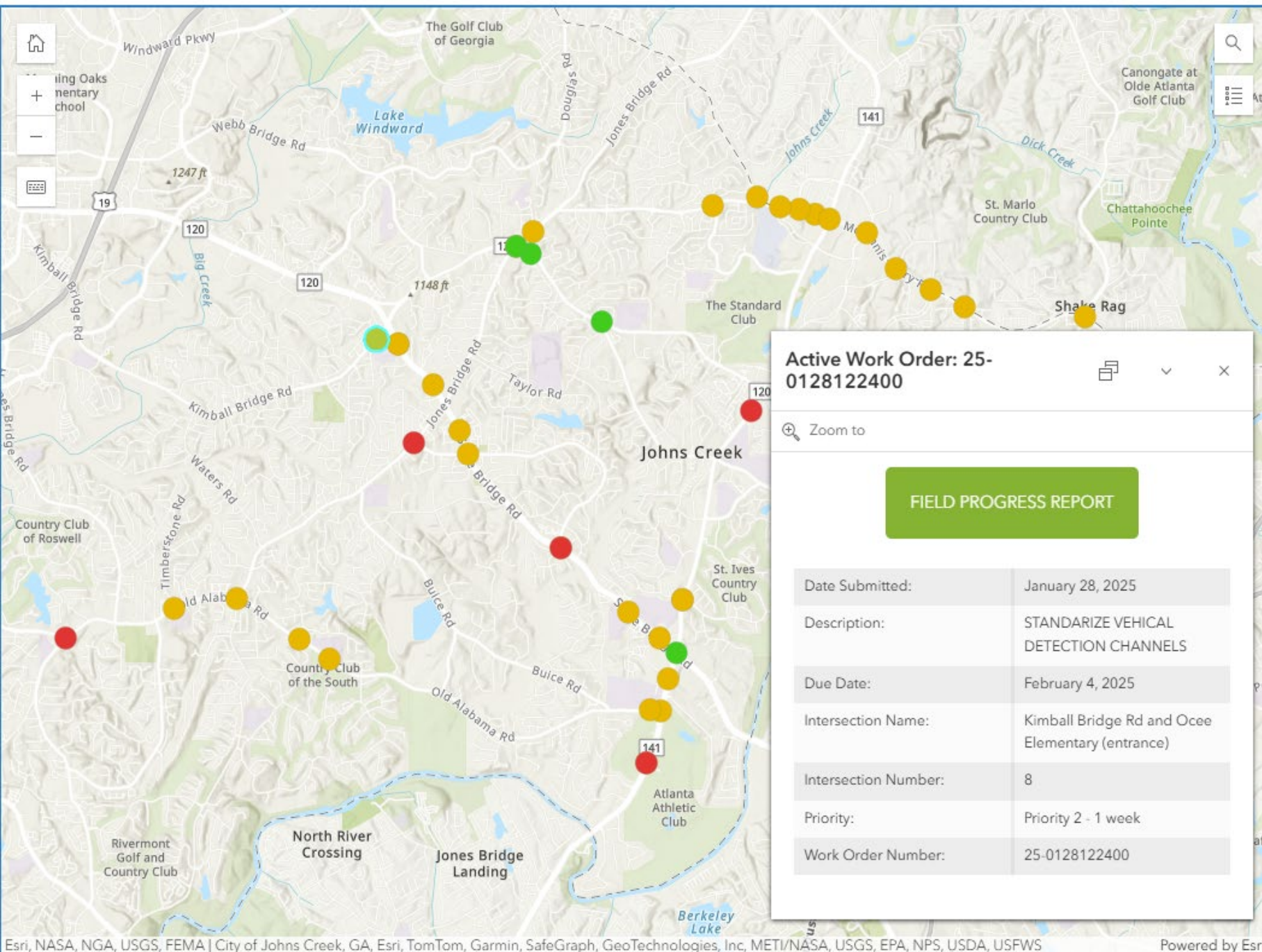
Lack of accountability





GIS Integration Process

- Created **assets** from scratch in GIS
- Created workflow
Existing manual process → semi-automated digital process
- Trained internal staff + contractors to use system
- Biggest cost? **Staff time for setup.**



Work Orders
can be created
and managed
from desktop,
tablet, or mobile
device from
anywhere

WO data
attaches directly
to asset record

Create Work Order

Location

34°4'N 84°10'W



Date Submitted: *

Tuesday, February 18, 2025

2:34 PM

Work Order Number: *

25-0218143400

Priority: *

☐ Priority 1 - 24 hours

☐ Priority 2 - 1 week

☐ Priority 3 - 30 days

Description: *

Status: *

In-Progress

Due Date *

Monday, March 10, 2025

New Work Order Assigned

JCGSCAN

To: jcdispatch.us@yunextraffic.com

Fri 1/31/2025 9:03 AM

Hello,

The City of Johns Creek has issued a new work order. Please read the following information to determine the next steps.

Work Order Number: 25-0131090000

Location: Old Alabama Rd and Timberstone Rd

Date: 01-31-2025

Priority: Priority 2

Due Date: 02-07-2025

Description: MOVE WAVETRONIX SDLC TO BIU 1 AND STANDARDIZE DETECTION AND MOVE SENSYS TO DETECTION RACK 2 (PAVEMENT TEMPS ONLY NO DETECTION)

If you have any questions, please contact the Traffic Division.

Thank you,
City of Johns Creek

****this is an automated e-mail****

Reply

Forward

Case Study 2: Police Vehicle Replacements





Vehicle Replacements: Starting Point

Assets in GIS?

None, and still none.

Challenges

Existing RMS lacking desired
visualization capabilities

Solution

GIS consumes RMS data and
displays in custom Dashboard

Police Vehicle Maintenance Dashboard



Vehicle Type

No category selected

Make

No category selected

Model

No category selected

Vehicle Category

No category selected

Assignment Type

No category selected

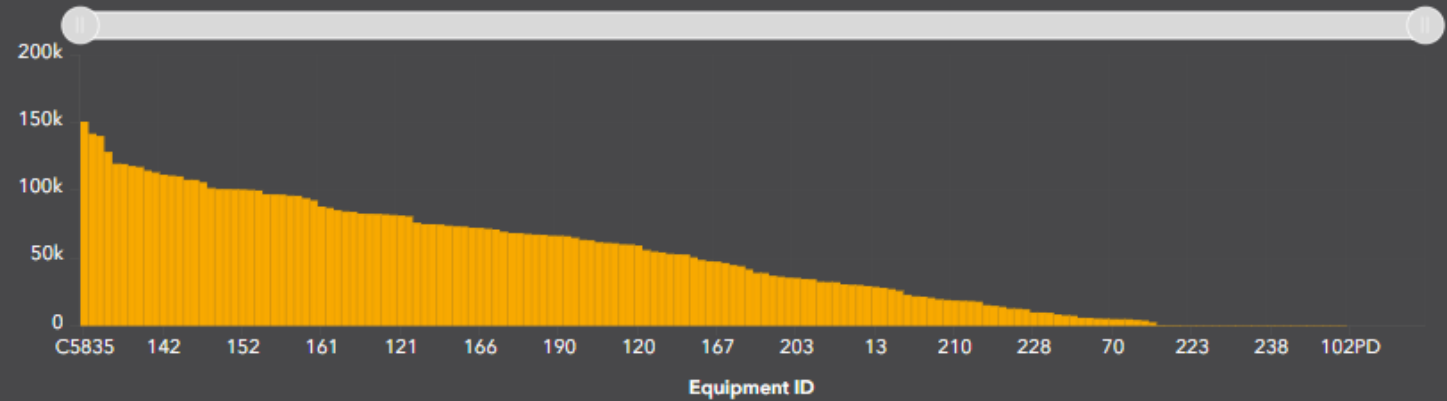
Marked Or Unmarked

No category selected

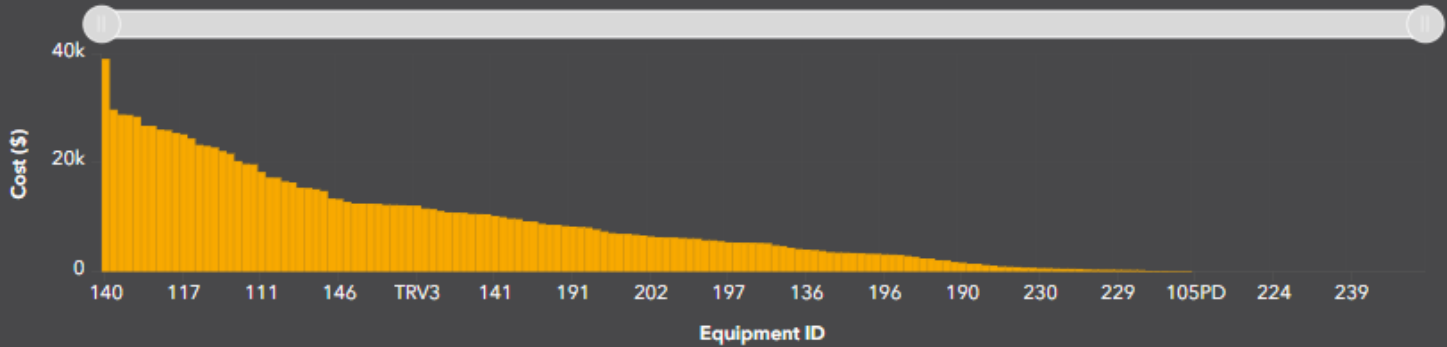
Equipment ID

No category selected

Total Mileage of Active Vehicles: Highest to Lowest



Total Cost of Maintenance per Vehicle: Highest to Lowest



FVMainID	FVMaintID	Equipment ID	Officer ID	Vehicle Type	Make Mod	Active Vehicles 143
226	6,917	172	164	SUV	Chevrolet Tah	
176	6,395	136	54	SUV	Ford Explorer	
218	6,396	167	3	Truck	Chevrolet Col	

Vehicle Maintenance

Total Mileage Vs. Total Maintenance Cost

Police Vehicle Maintenance Dashboard



Vehicle Type

No category selected

Make

No category selected

Model

No category selected

Vehicle Category

No category selected

Assignment Type

No category selected

Marked Or Unmarked

No category selected

Equipment ID

No category selected



MileageVsMaintenanceCost



☐ 01

☐ 10

☐ 100

☐ 101

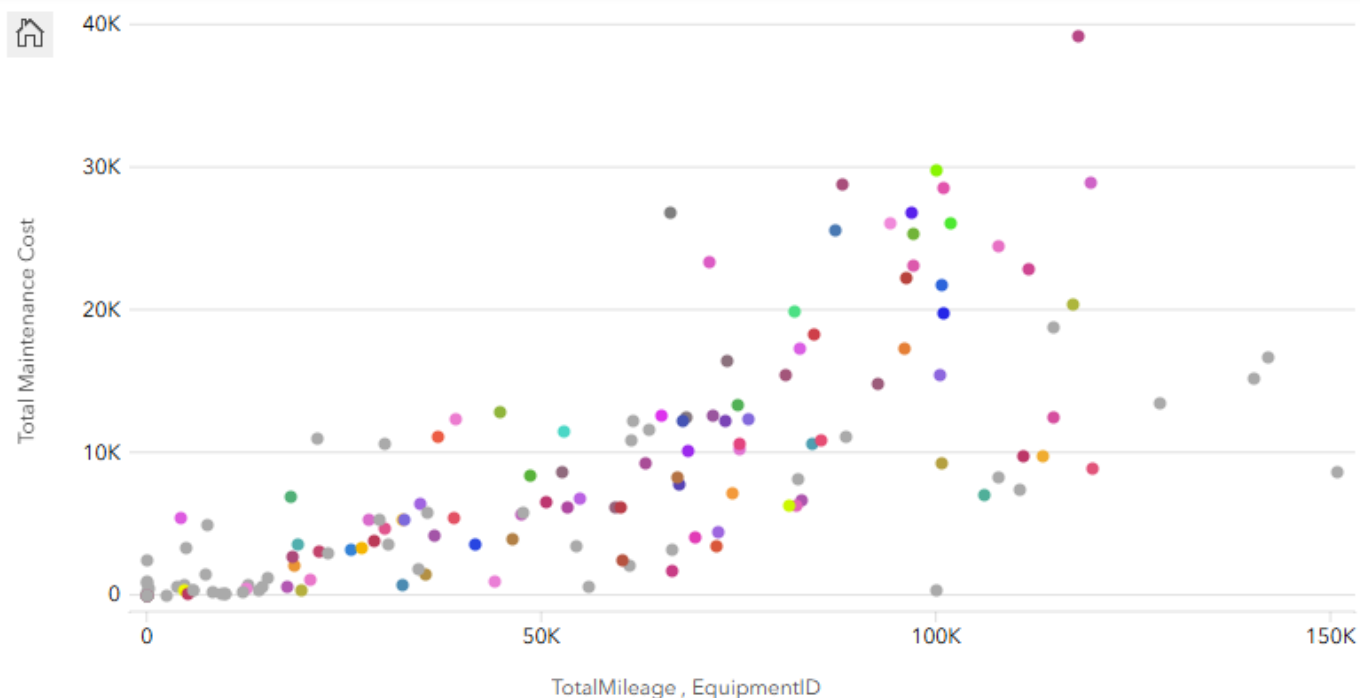
☐ City Hall Vehicle

☐ Critical Service Vehicle

☐ Non-Critical Service Vehicle

☐ Severe Service Vehicle

Total Mileage vs Total Maintenance Cost by Equipment ID



Vehicle Maintenance

Total Mileage Vs. Total Maintenance Cost

Case Study 3: Fire Annual Building Inspections





Fire Annual Building Inspections: Starting Point

Assets in GIS?

Address information

Challenges

Not user-friendly

Lack of software support

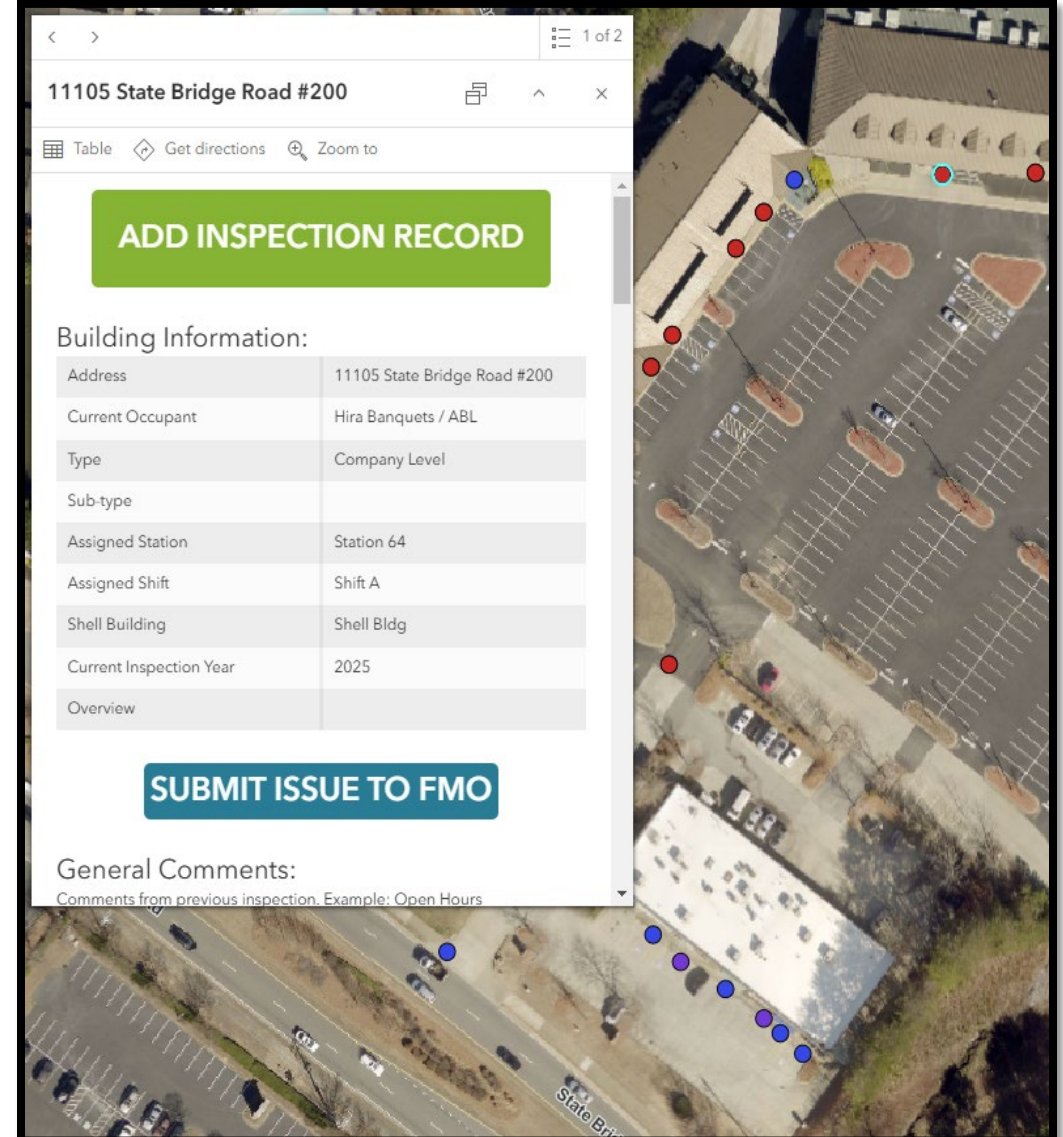
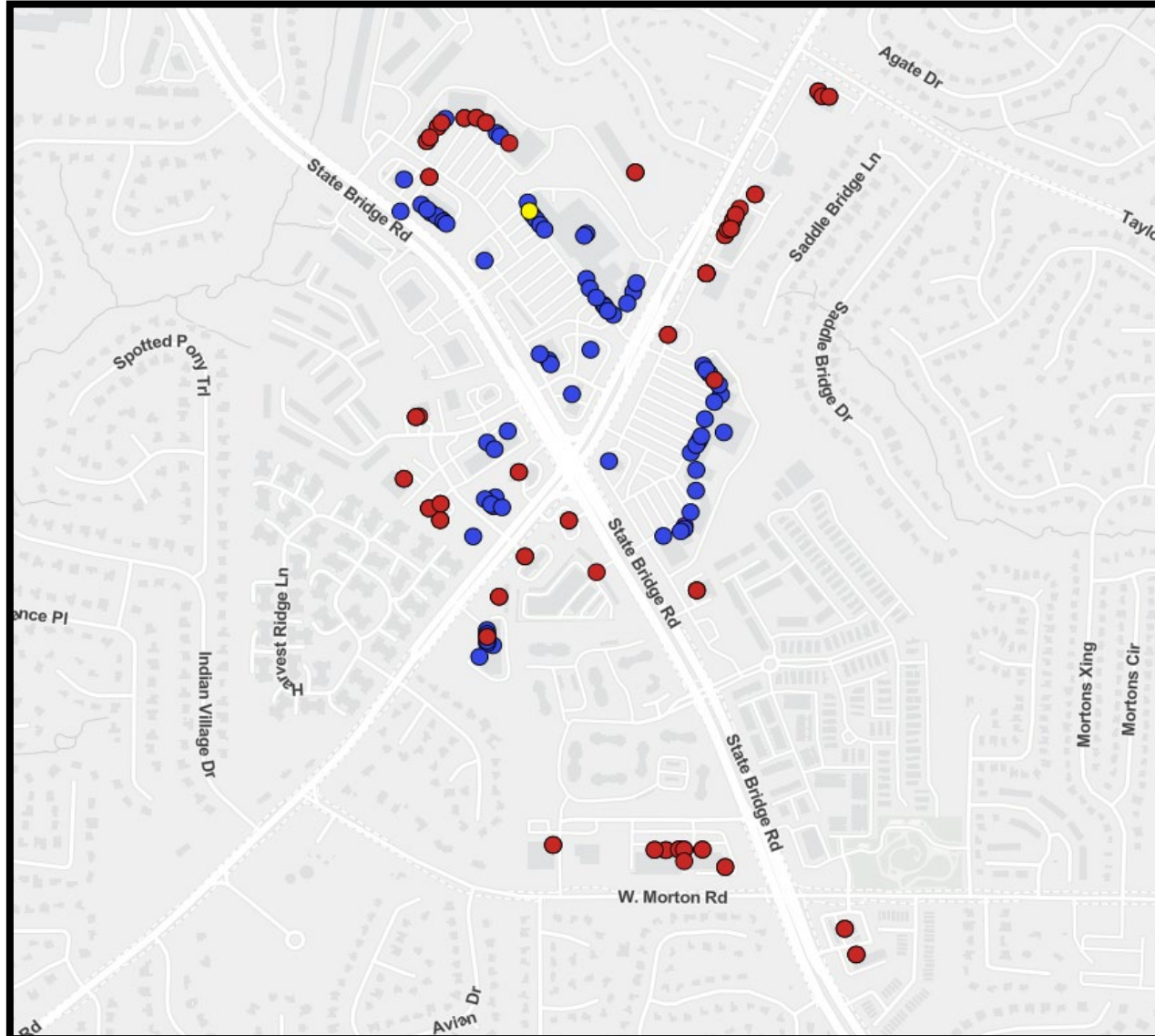
Permissions difficulties

Solution Features

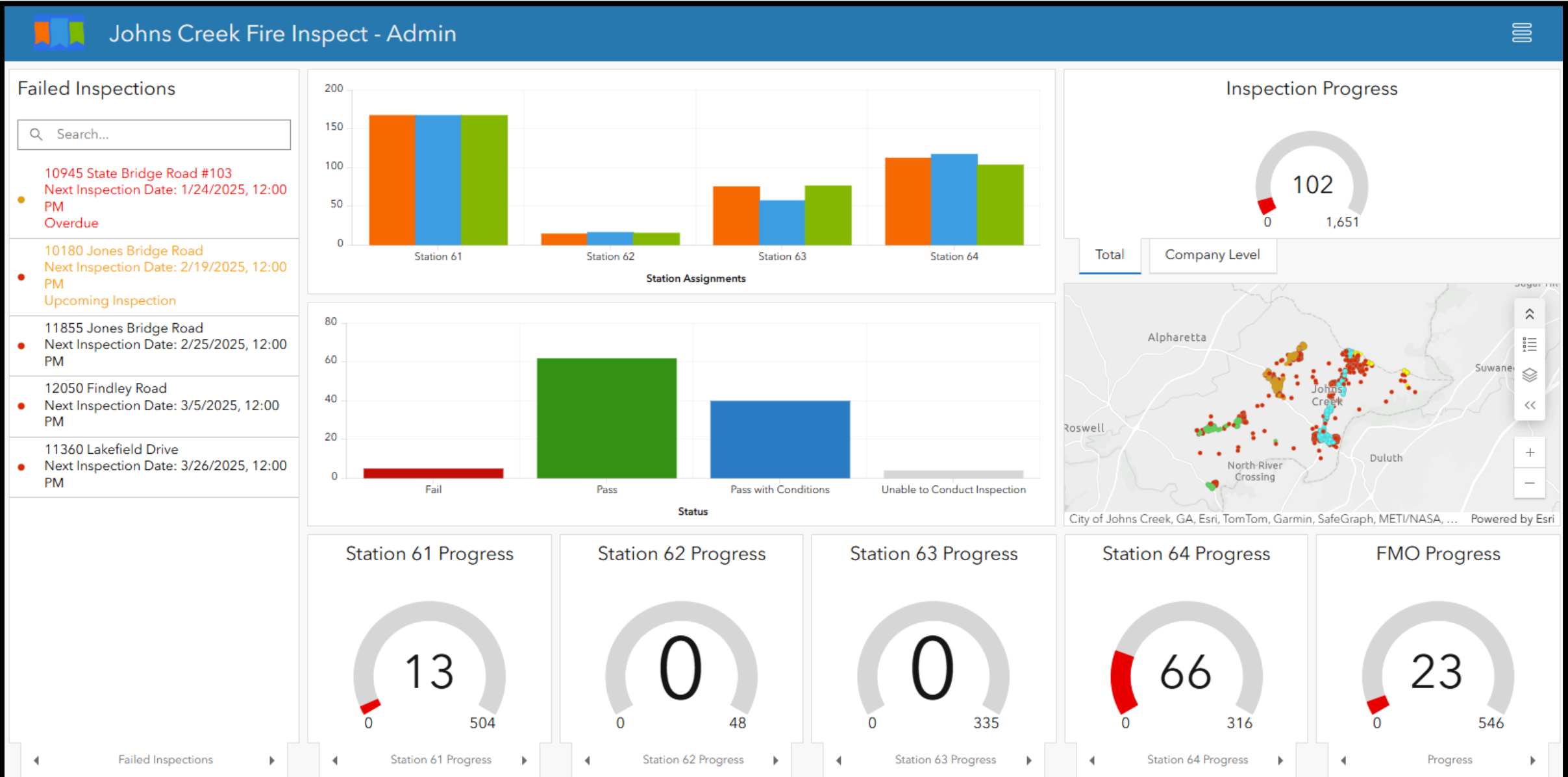
Simplified custom workflow w/
leveled permissions

GIS-based inspection form

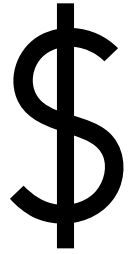
Case Study 3: Fire Annual Building Inspections



Fire Annual Building Inspections Dashboard



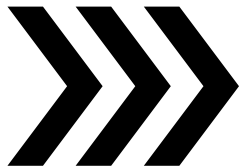
Benefits Summary



Budgeting & Financial Sustainability



Accountability & Reporting



Continuity & Consistency

Questions?

Additional Questions? Contact Us!



Chris Haggard, PE
Assistant City Manager



Olivia Gazda, MPA
Asst. to the City Manager



Catherine Cronlund
GIS Analyst II