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# **Fire Tactical Response Guide Solution using ArcGIS Online Web Apps**

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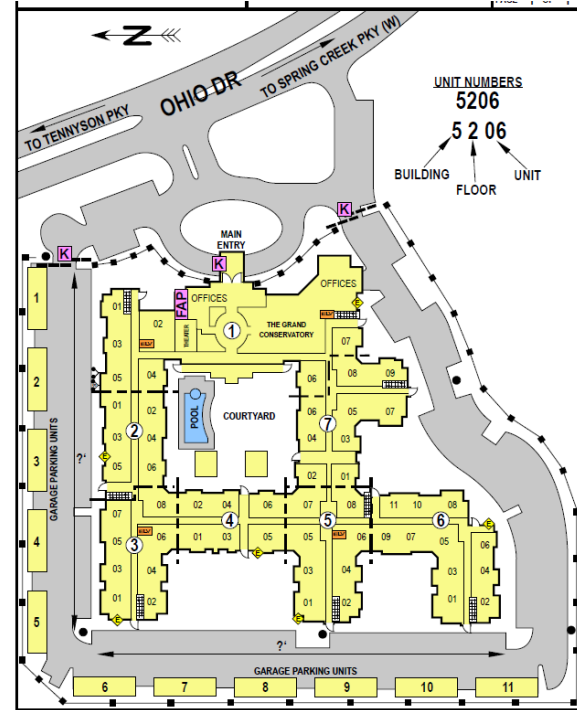
# Tactical Response Guides

- TRGs for short or Pre Fire Plans
- Not built for every building
- Target Hazard Analysis to identify TRGs
- Plans and guidance information for building and equipment access during emergency
- Seconds matter in an emergency



# Original Tactical Response Guide Format

- Paper maps – generated in GIS but fire information created in Adobe
- Updates tracked on paper
- Assignment process manually setup each month
- Fire Marshalls would update dispatch with contact information





# Updating to the Digital Age

- Creating the digital data and how to update them
  - ESRI Web Map Applications adapted from an original ESRI Solution
- Automating monthly assignments per station and shift using Python
- Communicating assignments to the chain of command
- Tracking progress throughout the month
  - ESRI Dashboards
- Creating Central locations to access everything
  - ESRI Hubs



# ESRI Web Mapping Applications for editing

- Web map used in field or office for editing data
- Create new features
- Edit existing features
- Hides features marked for deletion
- Editor Tracking
- Filters for finding monthly assignments
- Layer Control

The image displays two screenshots of an ESRI web mapping application. The top screenshot shows the 'Find My Assignment' interface with a search bar and a map. The bottom screenshot shows the 'Smart Editor' interface for editing 'Building Information'. The 'Smart Editor' includes a 'Query criteria' section with dropdown menus for 'Status is', 'Battalion is', 'Station is', and 'Shift is'. Below this is a 'Result layer name' field containing 'Building Information (Edit)\_Query result'. The 'Smart Editor' also displays a list of attributes for a selected feature, including 'Station', 'Station 1', 'Shift', 'Status', 'Approval Date', 'Assigned Date', 'Ready For Review', and 'Assigned Shift'. A green 'Apply' button is visible at the bottom of the 'Smart Editor' window.



# ESRI Web Mapping Applications for review

- Assigned personnel reviewing data
- Filters for finding features ready for review
- Smart editor for editing the data
- Hides features approved for deletion
- Nightly Python script to update approval state

Tactical Response Guide Program Coordinator environment

Find address or place

Key Boxes: Box

Type	Box
Floor Number	
Location Description	
Comments	
Ready For Review	Yes
Ready To Publish	No
Delete Entry	No
Code	
Assigned Battalion	2
Assigned Station	Station 8
Assigned Shift	B

Attachments:  
No attachments found

Zoom to

Find Ready to Review

Tasks Results

Key Boxes (Edit)\_Query result

Displayed features: 2/2

Key Boxes

- Assigned Battalion
- Assigned Station
- Assigned Shift

Edited by FirecollectorPL on 1/18/22 at 4:03 PM

Key Boxes

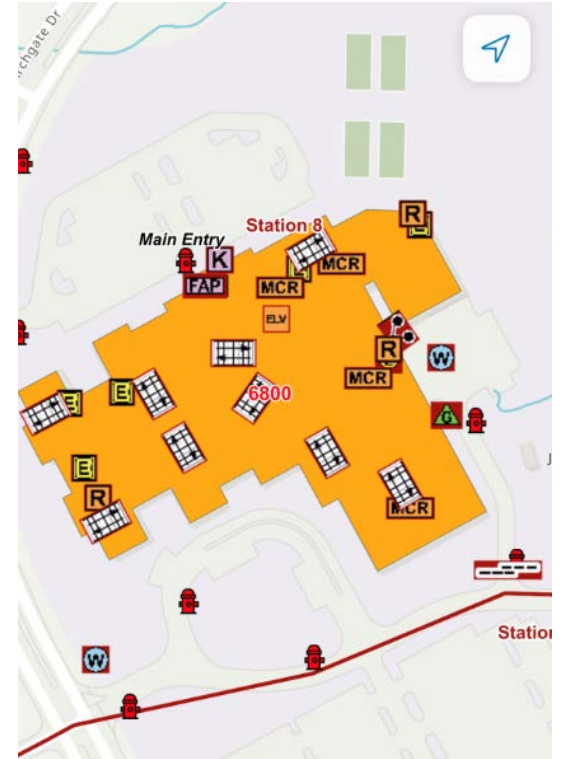
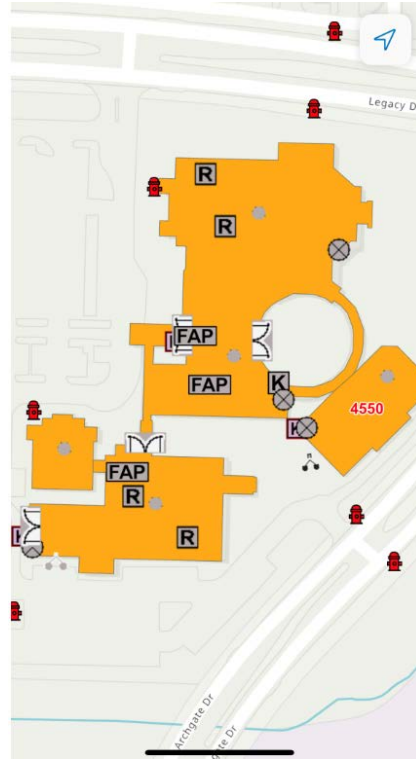
- Assigned Battalion 2
- Assigned Station Station 8
- Assigned Shift B

Edited by FirecollectorPL on 12/21/21 at 3:57 PM



# ESRI Field Maps for utilizing data in the field

- Greyed out unreviewed data
- Hides approved data marked for deletion
- All data shown for field personnel
- Utilized for navigation and in field operations, no editing
- Replaces paper maps
- Maintaining paper versions
- Access to attribute information



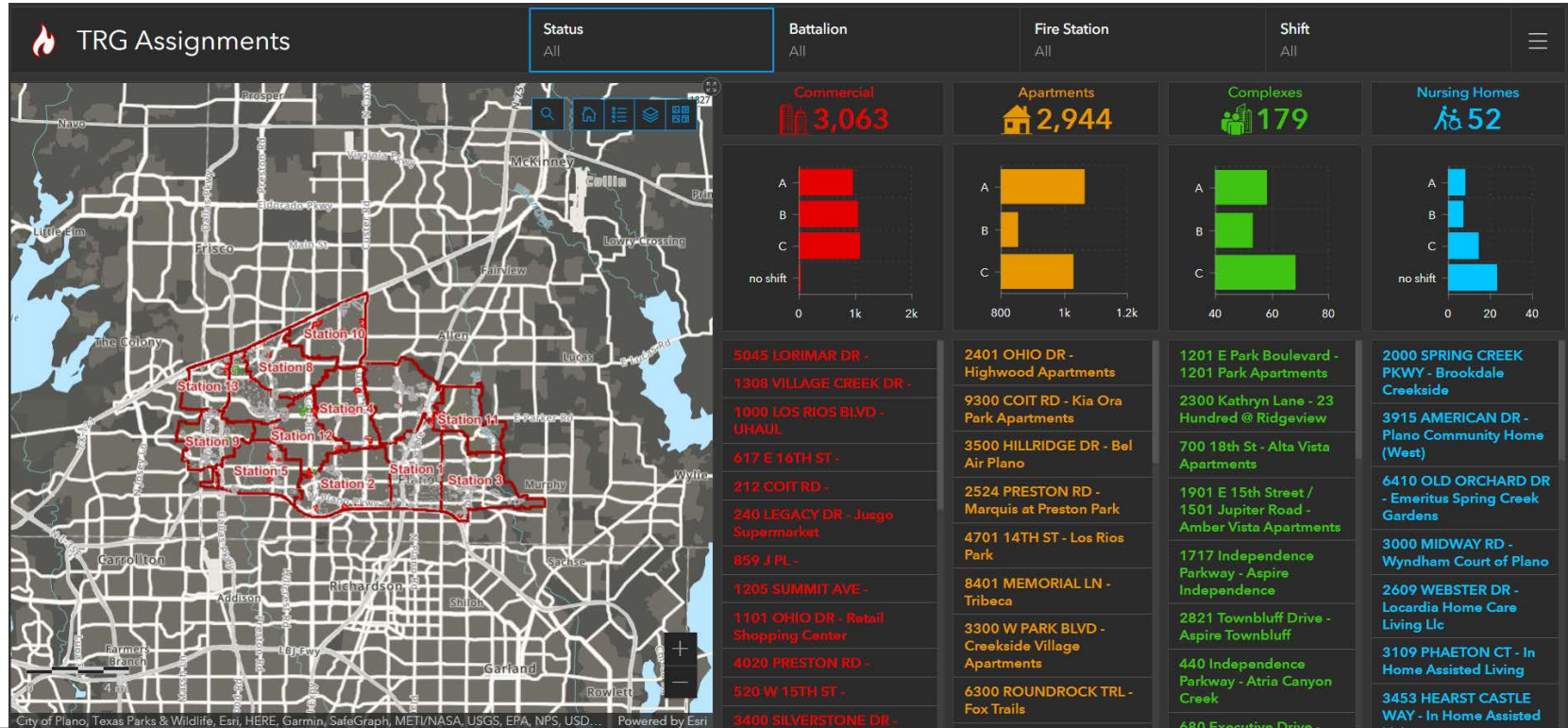
# Monthly Python Script

- Creates monthly building assignments per station and shift
- Prioritizes by Max/High/Standard risk level buildings
- Prioritizes oldest data
- Ability to update number of assignments as needed
- Tracks Assignments and Delinquencies

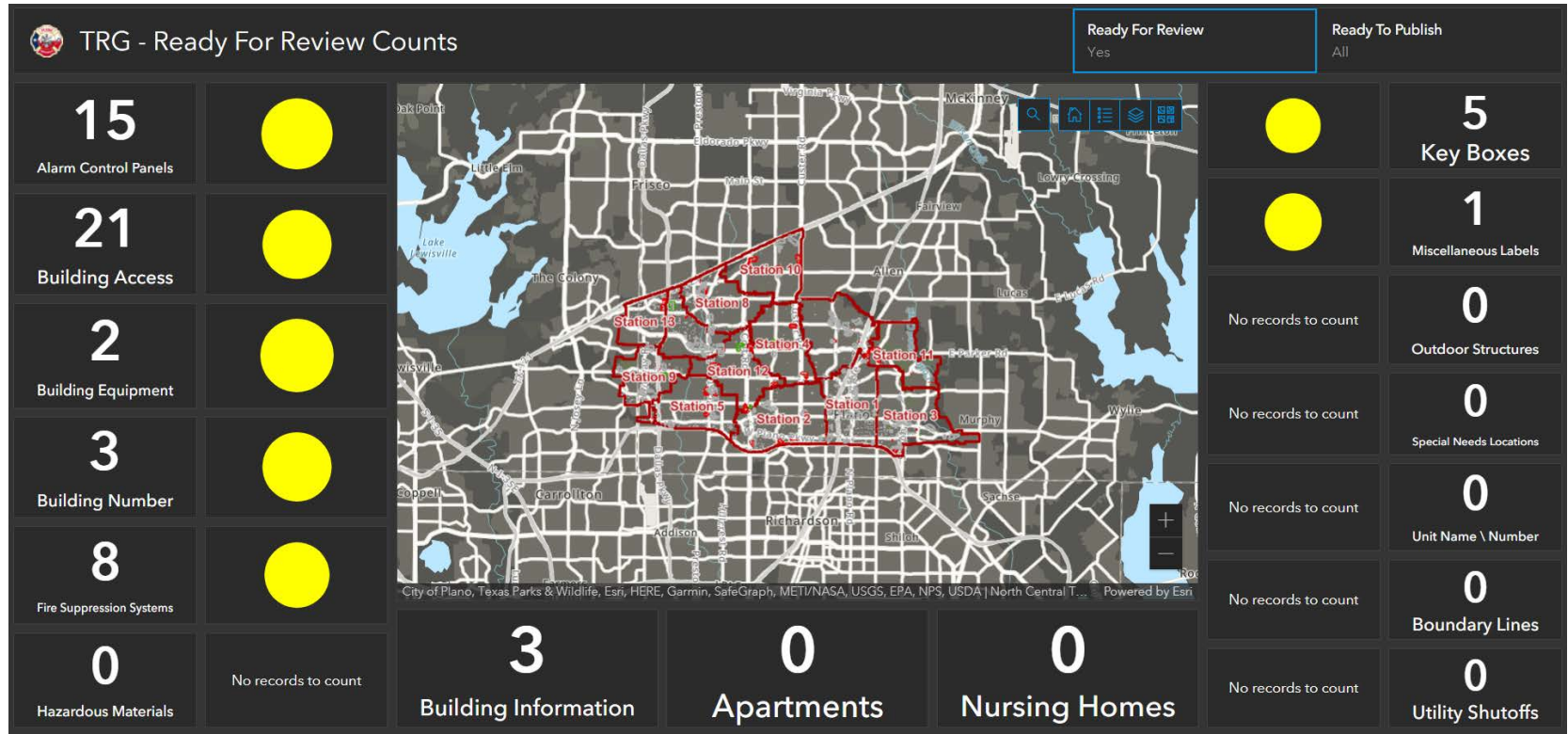




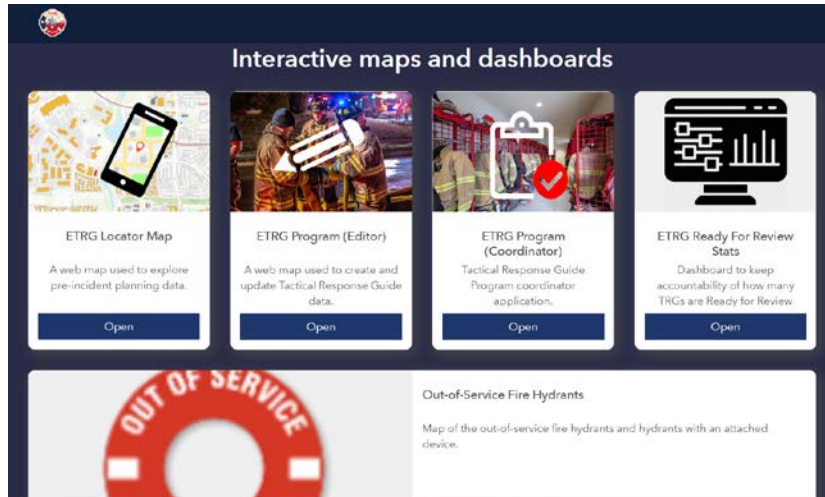
# ESRI Dashboards for tracking progress



# ESRI Dashboards for high level status updates



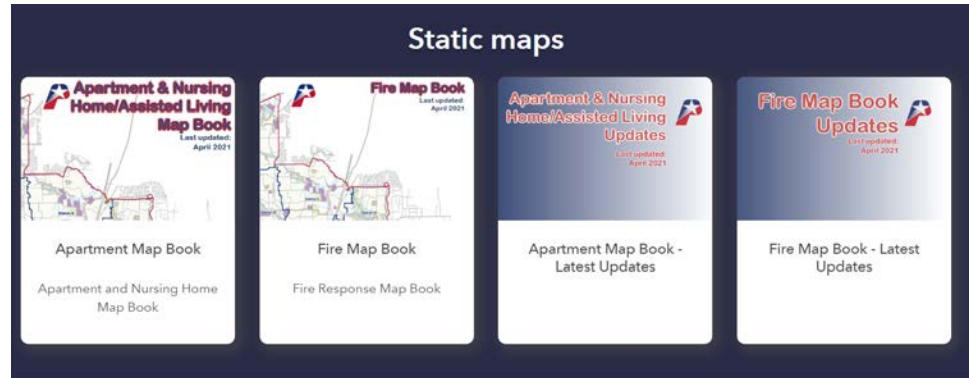
# ESRI Hubs for accessing information



**Interactive maps and dashboards**

- ETRG Locator Map**  
A web map used to explore pre-incident planning data.  
[Open](#)
- ETRG Program (Editor)**  
A web map used to create and update Tactical Response Guide data.  
[Open](#)
- ETRG Program (Coordinator)**  
Tactical Response Guide Program coordinator application.  
[Open](#)
- ETRG Ready For Review Stats**  
Dashboard to keep accountability of how many TRGs are Ready for Review.  
[Open](#)

**Out-of-Service Fire Hydrants**  
Map of the out-of-service fire hydrants and hydrants with an attached device.



**Static maps**

- Apartment & Nursing Home/Assisted Living Map Book**  
Last updated: April 2021  
[Apartment Map Book](#)  
Apartment and Nursing Home Map Book
- Fire Map Book**  
Last updated: April 2021  
[Fire Map Book](#)  
Fire Response Map Book
- Apartment & Nursing Home/Assisted Living Updates**  
Last updated: April 2021  
[Apartment Map Book - Latest Updates](#)
- Fire Map Book Updates**  
Last updated: April 2021  
[Fire Map Book - Latest Updates](#)

Contact Information  
FD Technology



# Challenges

- Getting original data into a GIS format
- Project changing GIS Analyst hands
- Many hands in the honey pot
- Reconciling everyone's vision for the overall goal



# Future Work

- Fire Department is preparing training materials
- GIS Staff to assist in training session on using the products
- Testing it in the field for a few months
- Continuous evaluation and upgrades





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**Thank you**

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