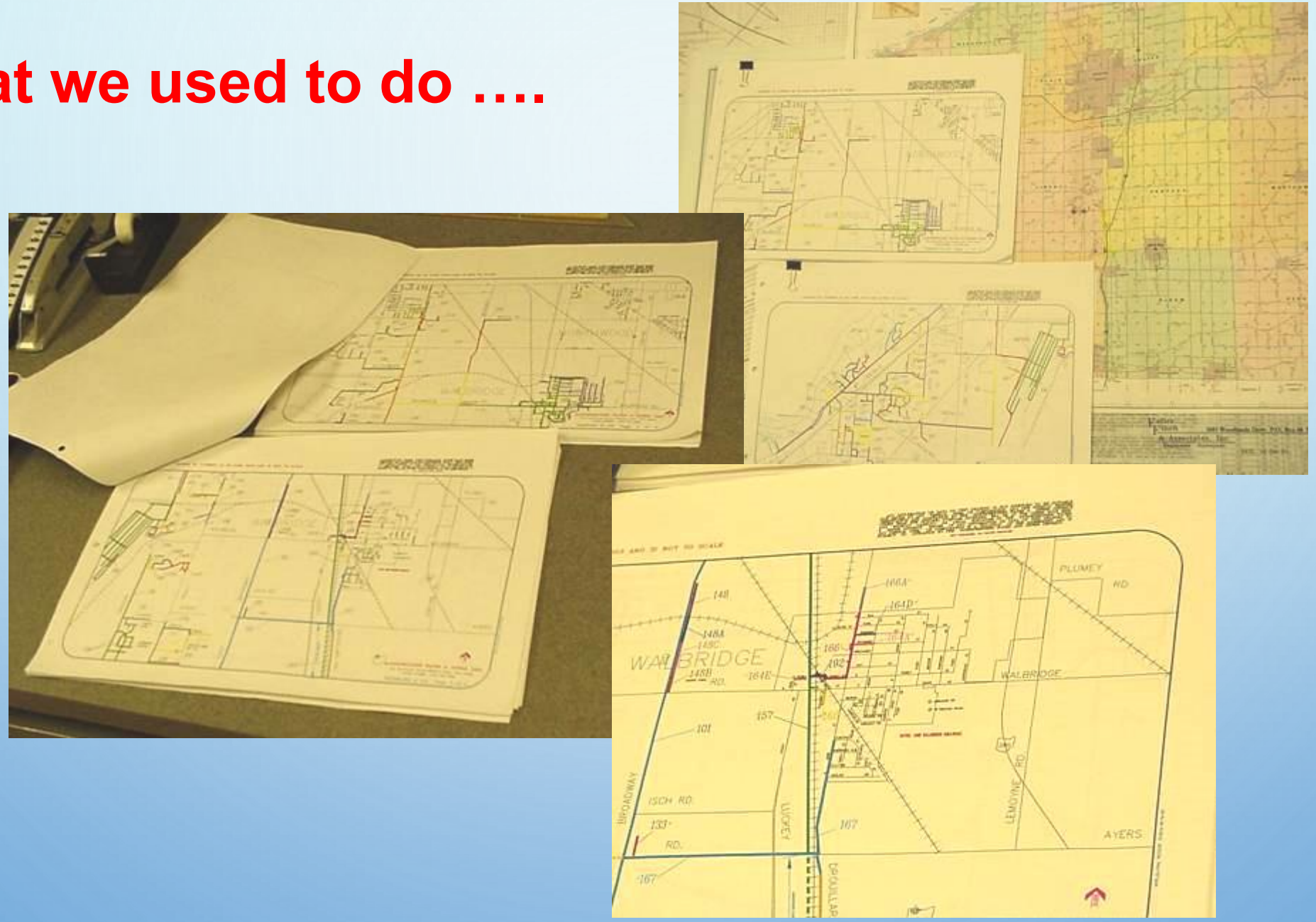
GIS/OPERATIONS/ENGINEERING INTEGRATION

2019

WHAT WE USED TO DO, BEFORE GIS…

What we used to do ….



What we used to do ….

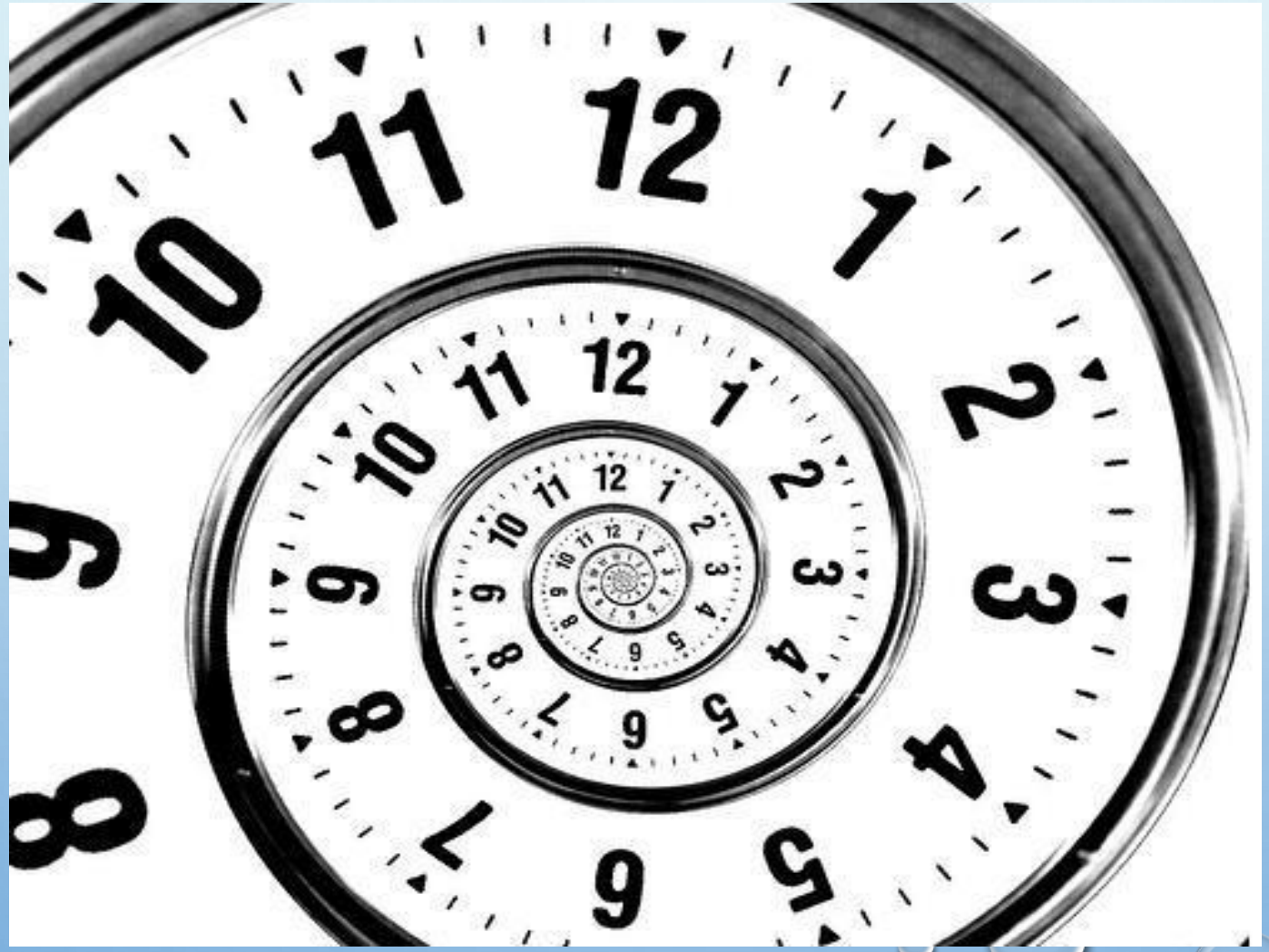
What we used to do ....

What we used to do ….

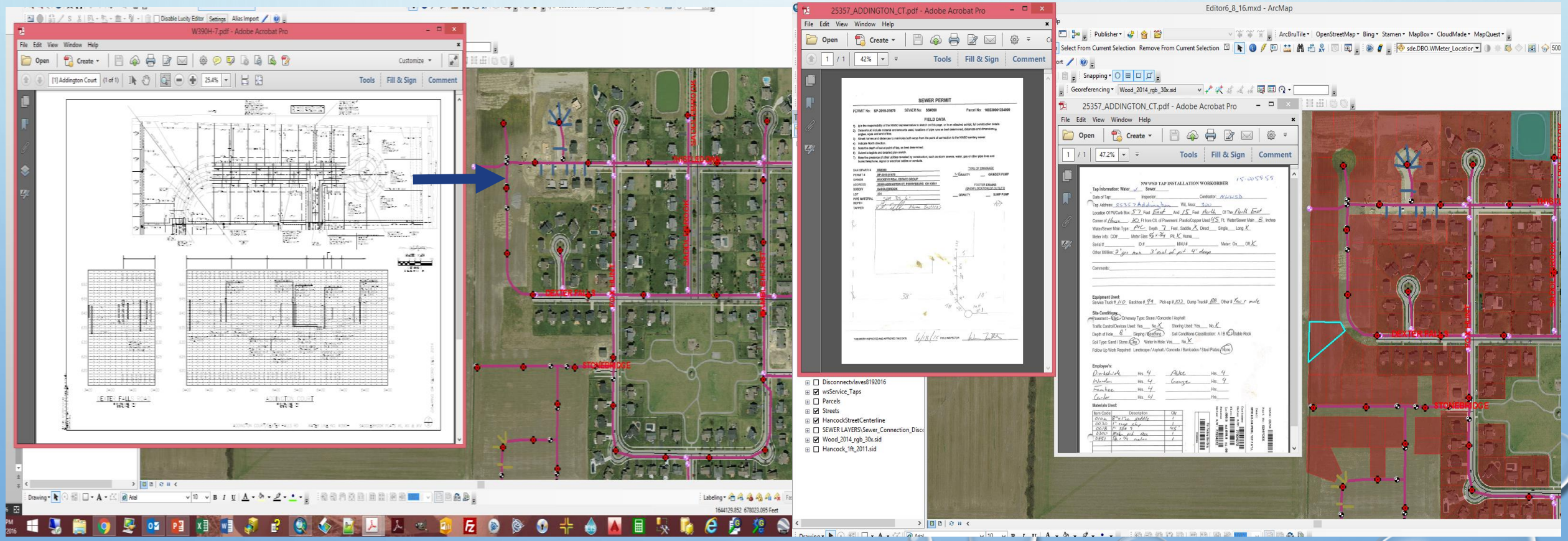
IMPLEMENTATION AND GROWING PAINS OF BUILDING A GIS PROGRAM

- 2002/2003- CONTRACTED WITH SCHNEIDER LLC. TO DO THE INITIAL SCANNING (4500 PLAN AND PROFILE SHEETS), DIGITIZING, AND DATABASE CREATION.
- 2004-BEGAN FIELD VERIFICATION AND GPS COLLECTION OF FEATURES, (MANHOLES, HYDRANTS, VALVES, SERVICE CONNECTIONS, ETC.), IN-HOUSE GEOREFERENCING/DIGITIZING OF NEW RECORD DRAWINGS, TAP RECORDS, AND ANY OTHER INFORMATION PEOPLE WANT TO ACCESS THROUGH THE GIS.
- HAD ARCGIS FOR SERVER. (BUT IT WAS NEVER A BIG PART OF OUR DAY TO DAY OPERATIONS)
- ONLY HAD ABOUT 10 LAPTOPS DEPLOYED WITH ARCREADER FOR FIELD CREWS.
- ONE GPS BACKPACK UNIT
- GETTING "BUY IN" FROM THE FIELD GUYS. "STUPID COMPUTER IS WRONG AGAIN!" WHEN AN ASSET IS MISSING FROM THE MAP, OR AN ATTRIBUTE IS WRONG (I.E. CIP INSTEAD OF DIP, OR 6" INSTEAD OF 8")

FLASH FORWARD TO TODAY…



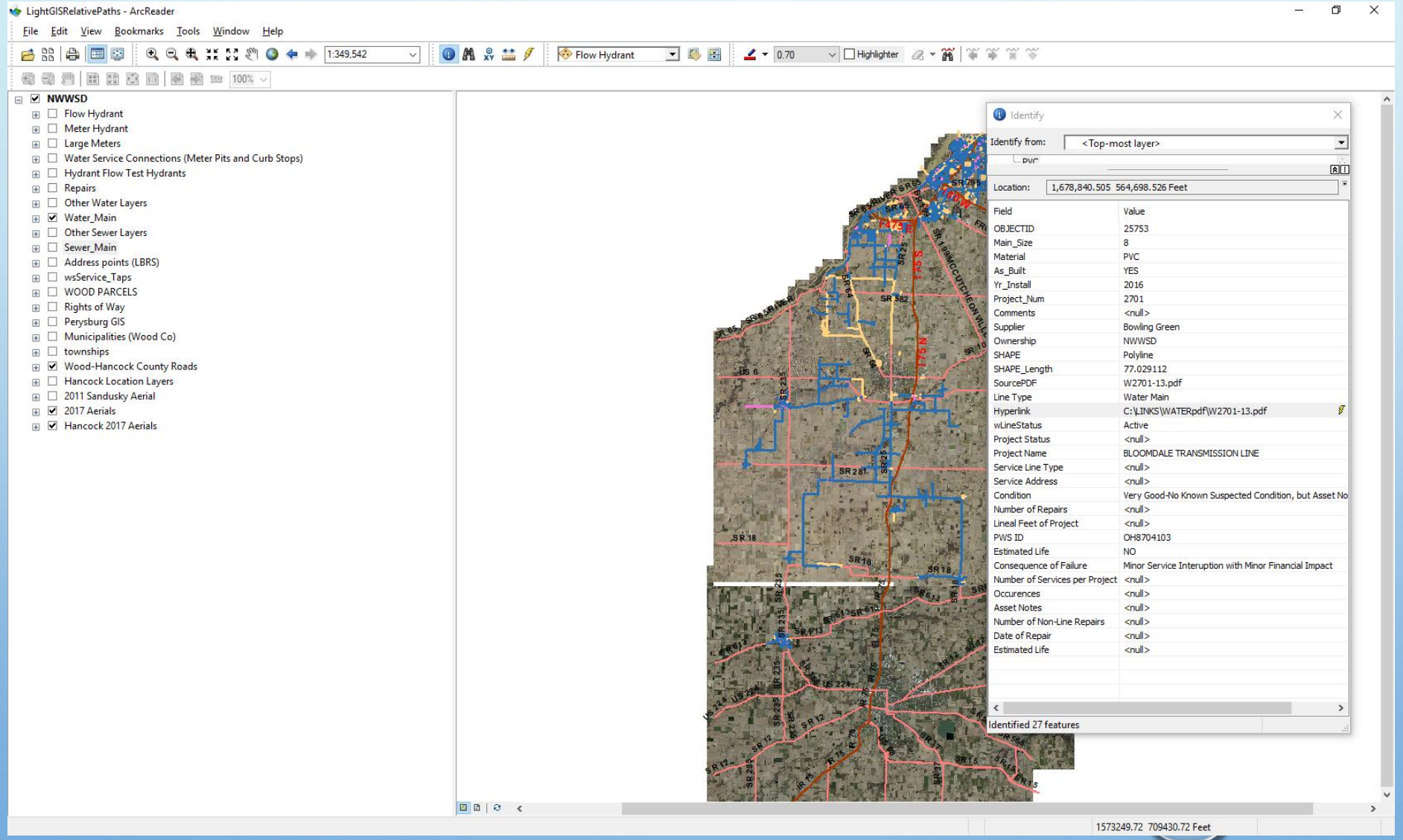
RECORD DRAWING LINKED TO THEIR RESPECTIVE WATER OR SEWER LINE SEGMENT &TAP RECORDS LINKED TO THEIR RESPECTIVE PARCELS



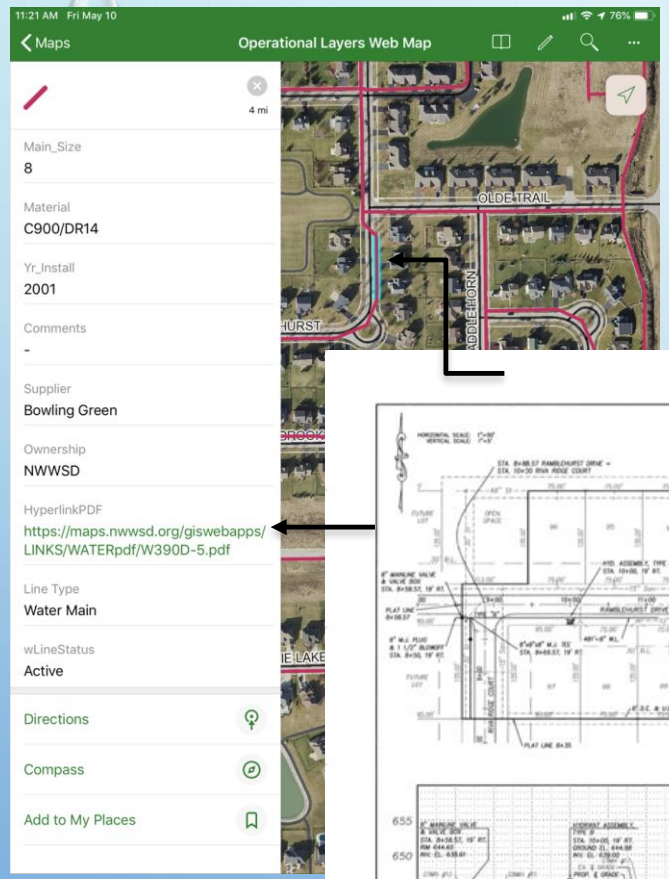
DEVICES/APPLICATIONS USED FOR ACCESSING & COLLECTING THE GIS DATA

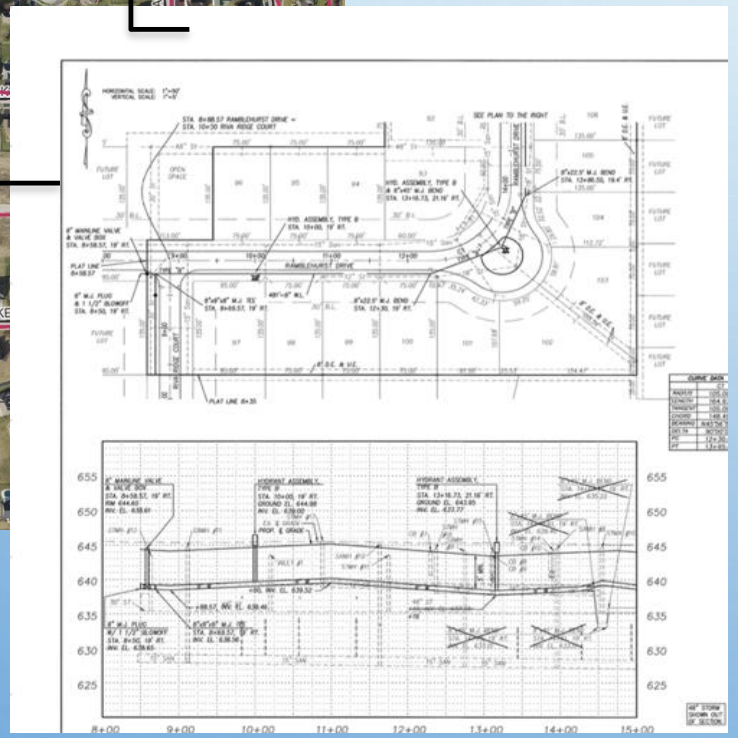
- TABLETS (37)
- LAPTOPS (41)
- SMART PHONES (58)
- TRIMBLE R2 UNITS (3)
- EXPLORER FOR ARCGIS
- COLLECTOR
- ARCGIS ONLINE ORGANIZATION PAGE
- ELEMENTS (OUR NEW ASSET MANAGEMENT SYSTEM)
- ARCREADER

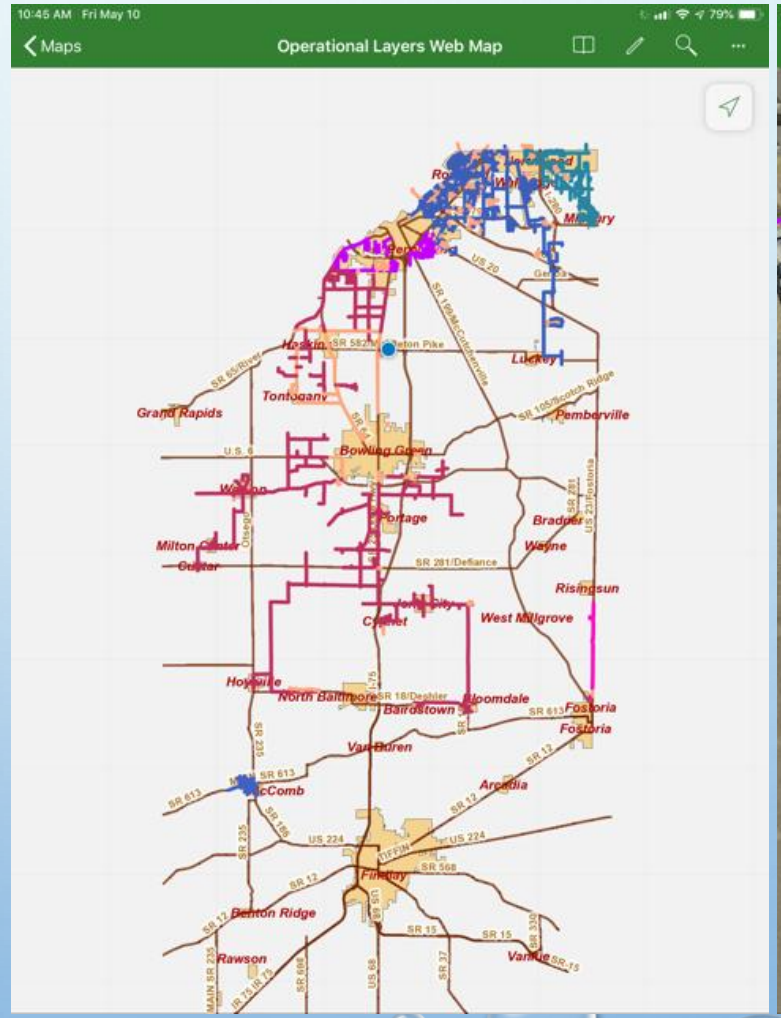
ARCREADER: USED BY OFFICE AND FIELD EMPLOYEES ON THEIR LAPTOP OR PC.



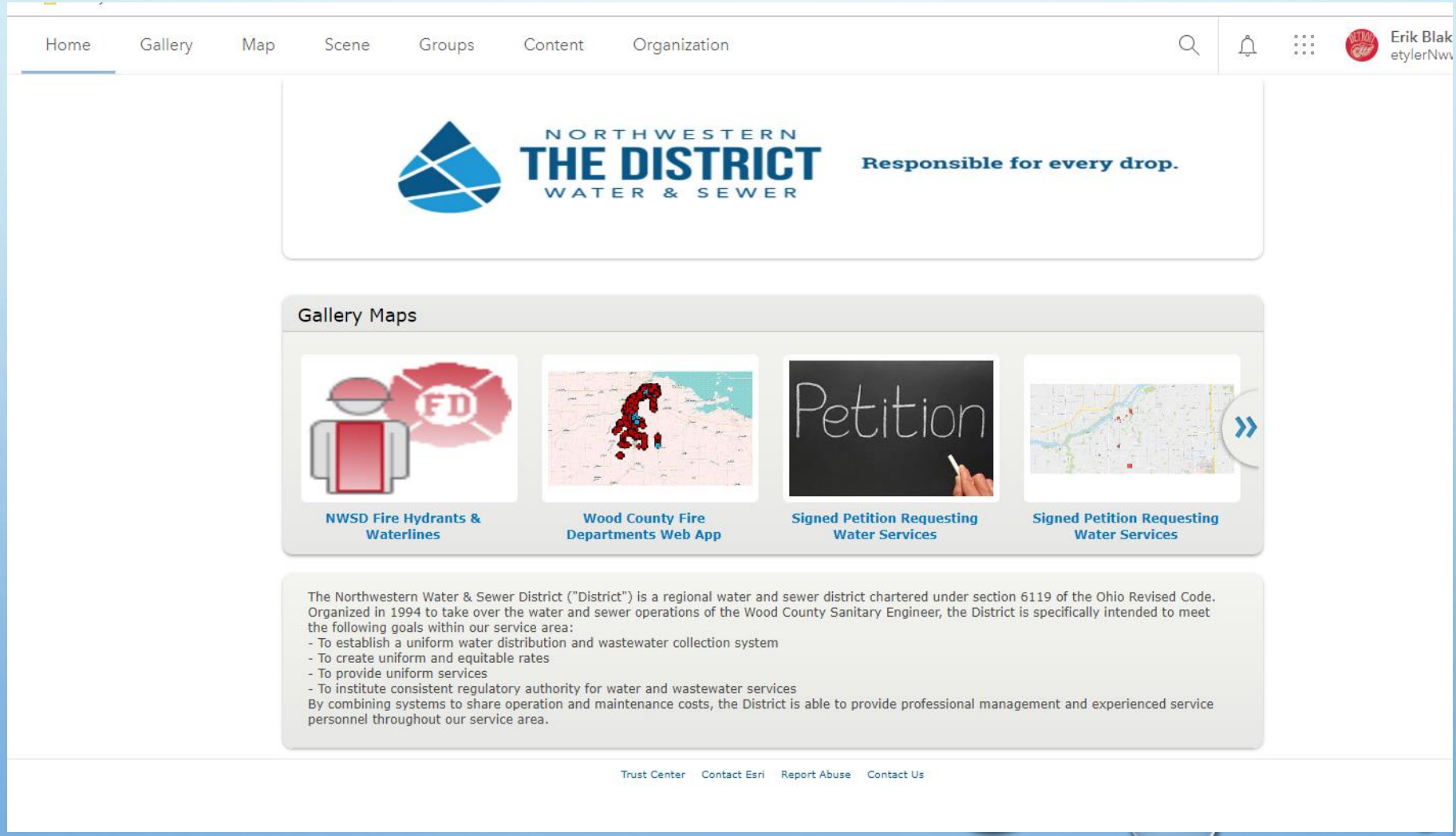
EXPLORER FOR ARCGIS APP USED WITH TABLETS AND SMART PHONES.



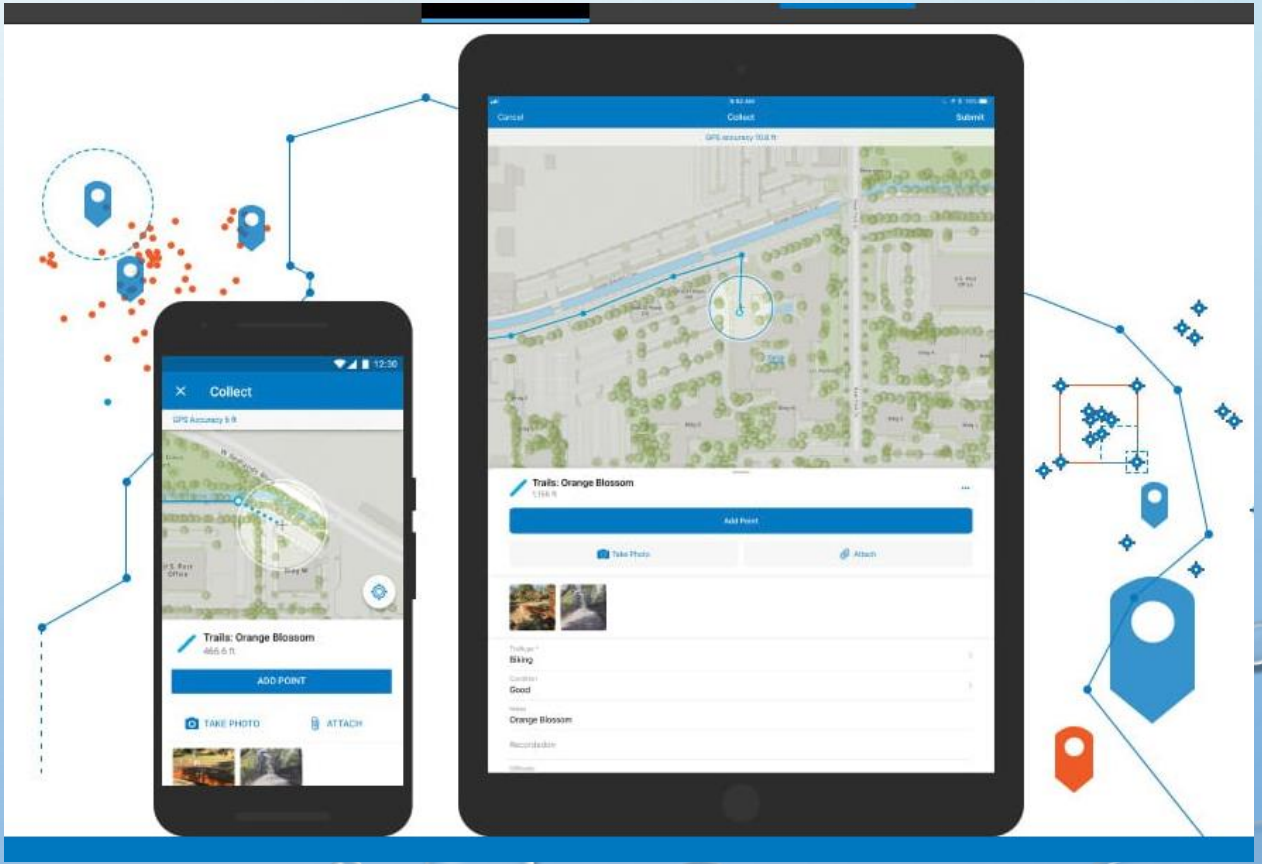




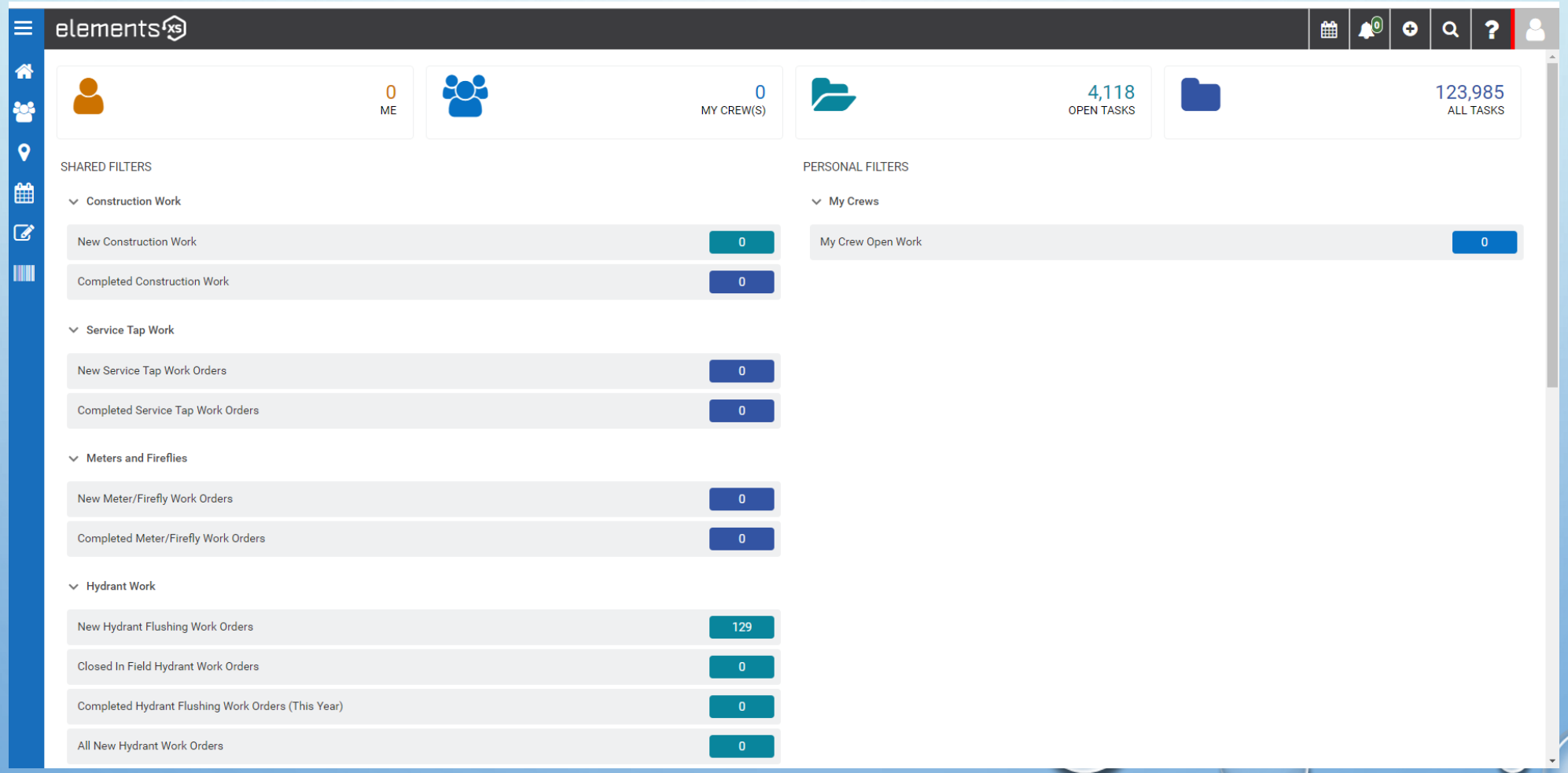
ARCGIS ONLINE ACCOUNT



FIELD COLLECTION OF ASSETS WITH TRIMBLE'S R2 GPS UNITS & ESRI COLLECTOR FOR ARCGIS.

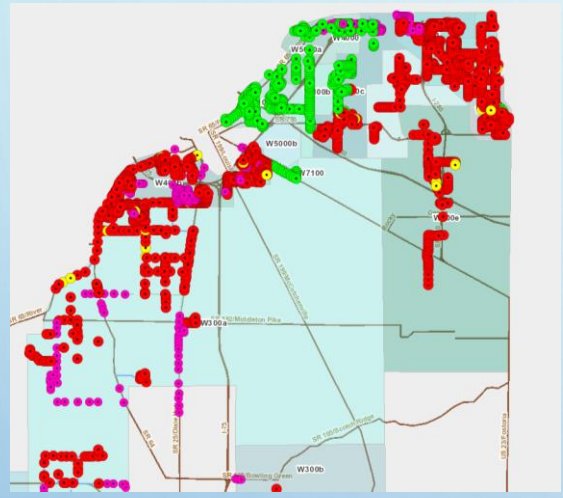


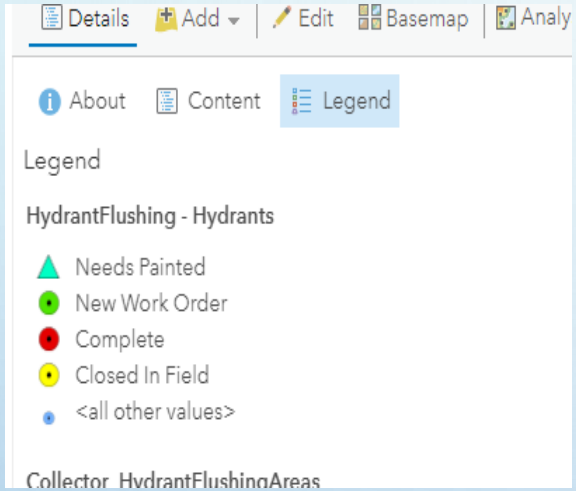
ELEMENTS ASSET MANAGEMENT WORK ORDER SYSTEM



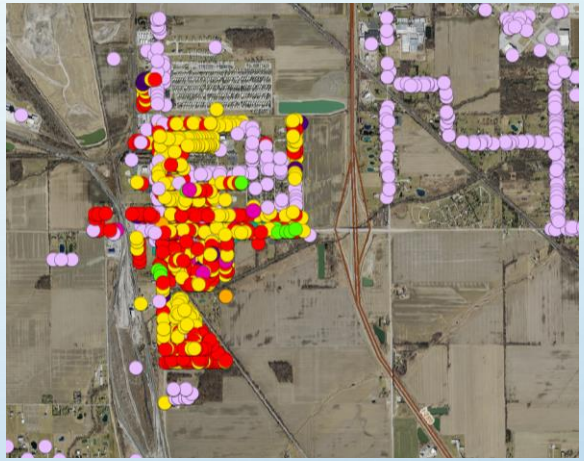
APPS DESIGNED FOR OPERATIONS DEPARTMENT

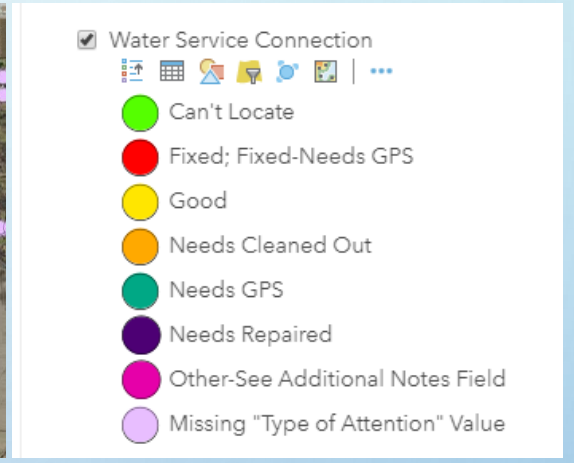
HYDRANT FLUSHING



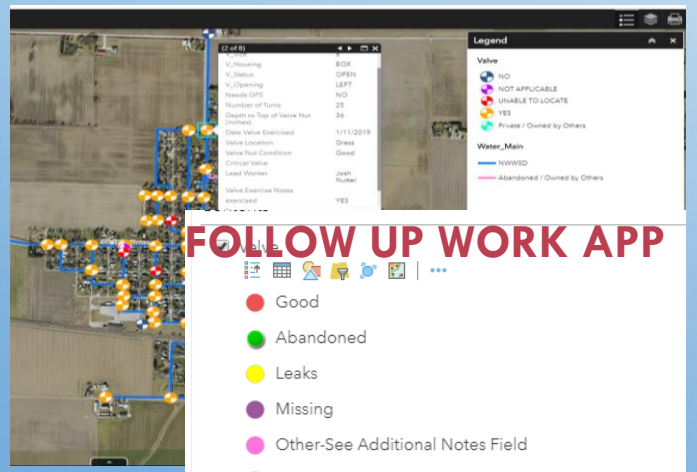


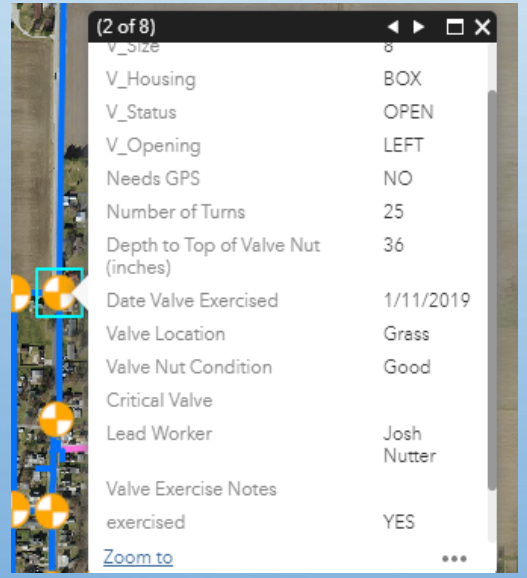
FIELD VERIFICATION FOR LEAK DETECTION



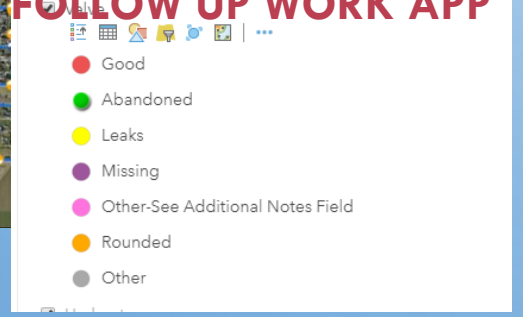


VALVE EXERCISING

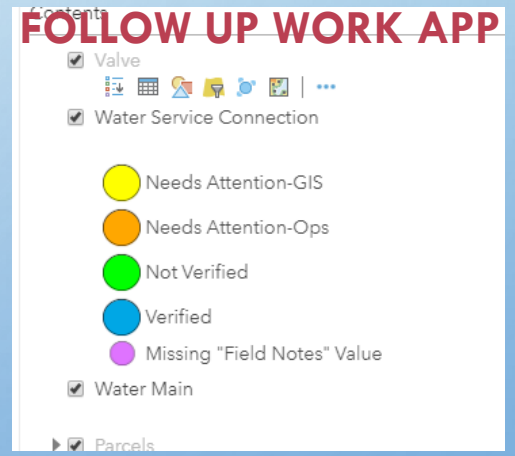




FOLLOW UP WORK APP

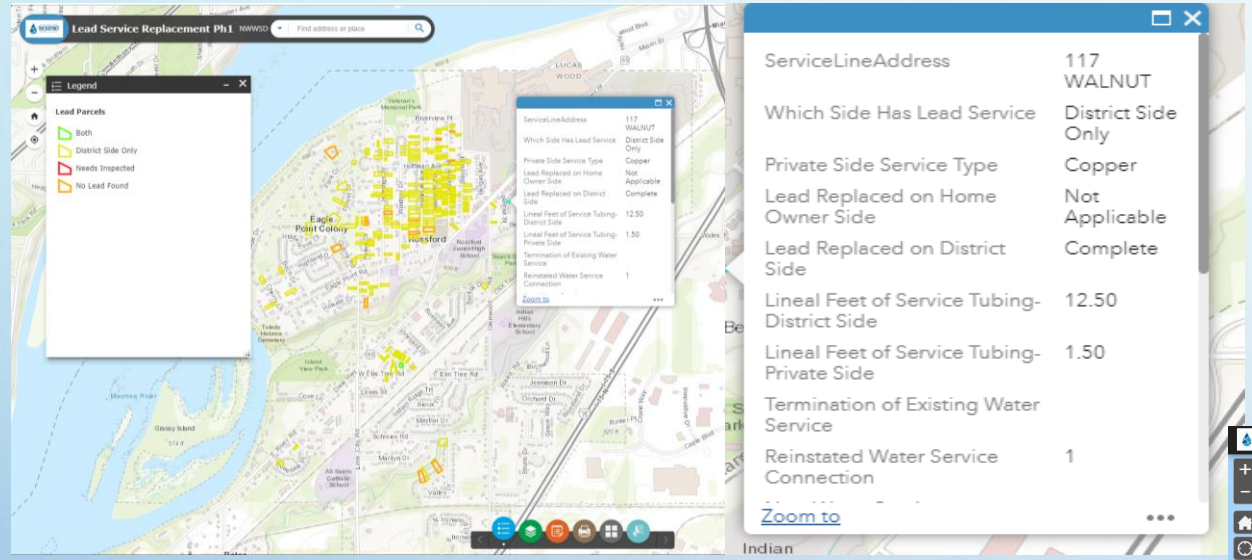


FOLLOW UP WORK APP

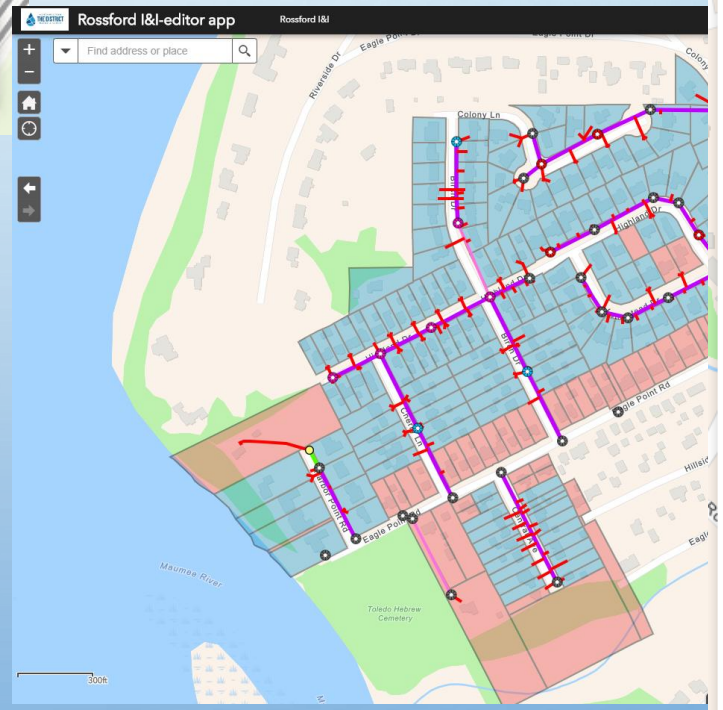


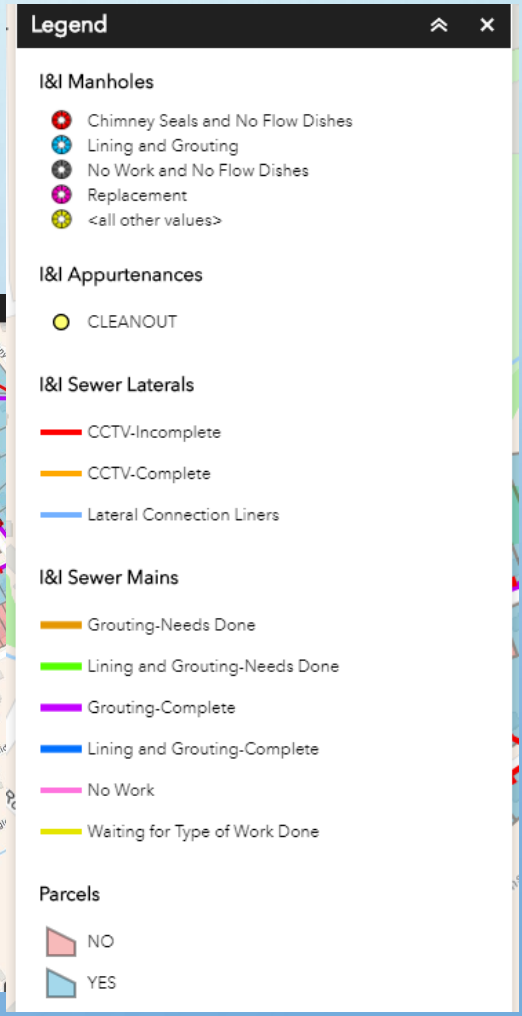
APPS DESIGNED FOR ENGINEERING DEPARTMENT

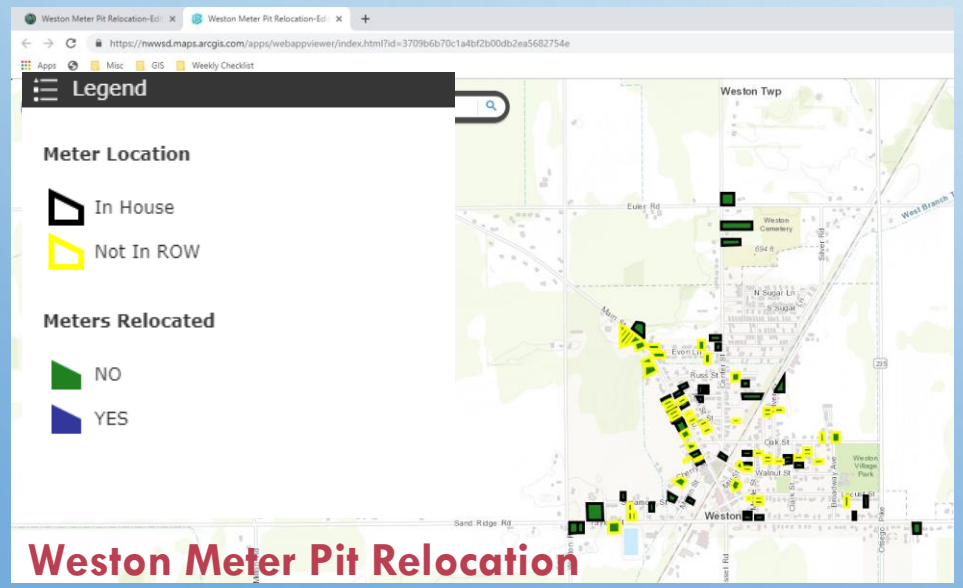
Lead Service Line Replacement.



Rossford I&I Rehab



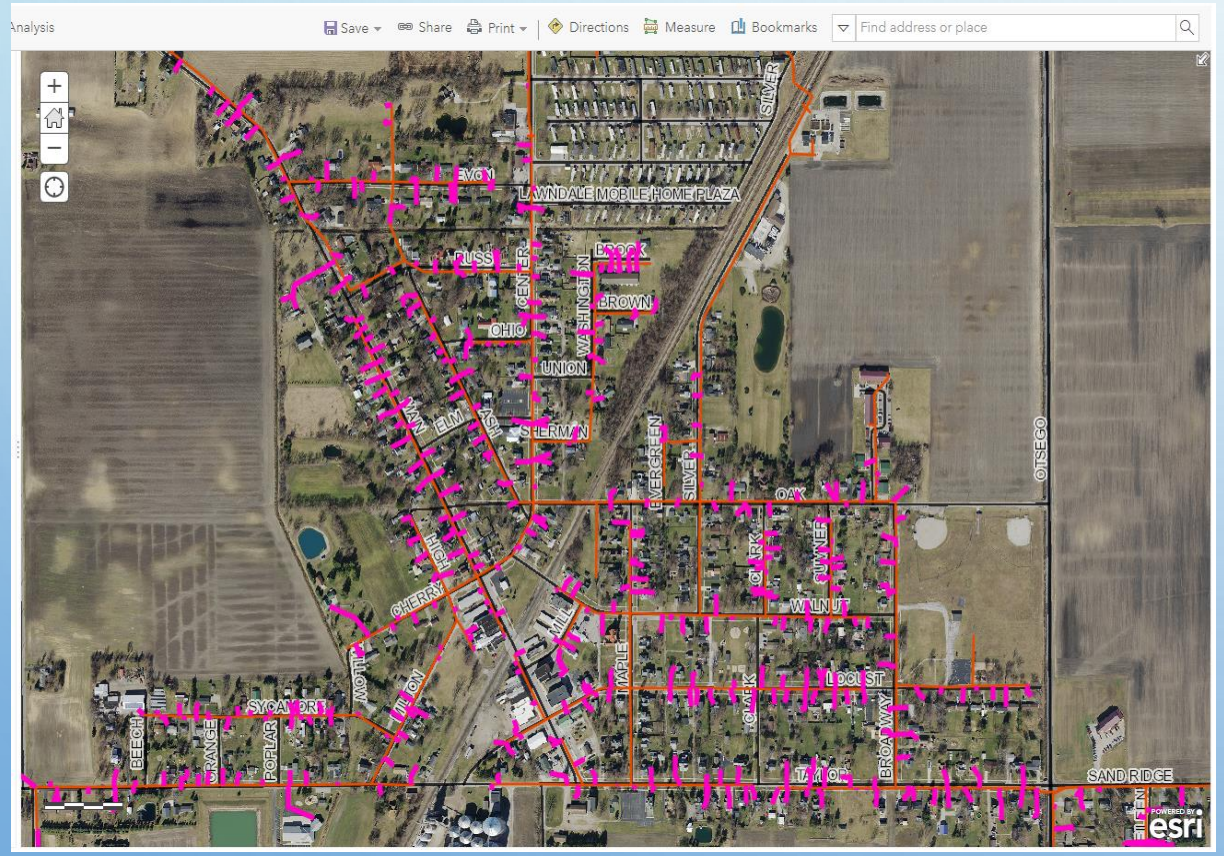


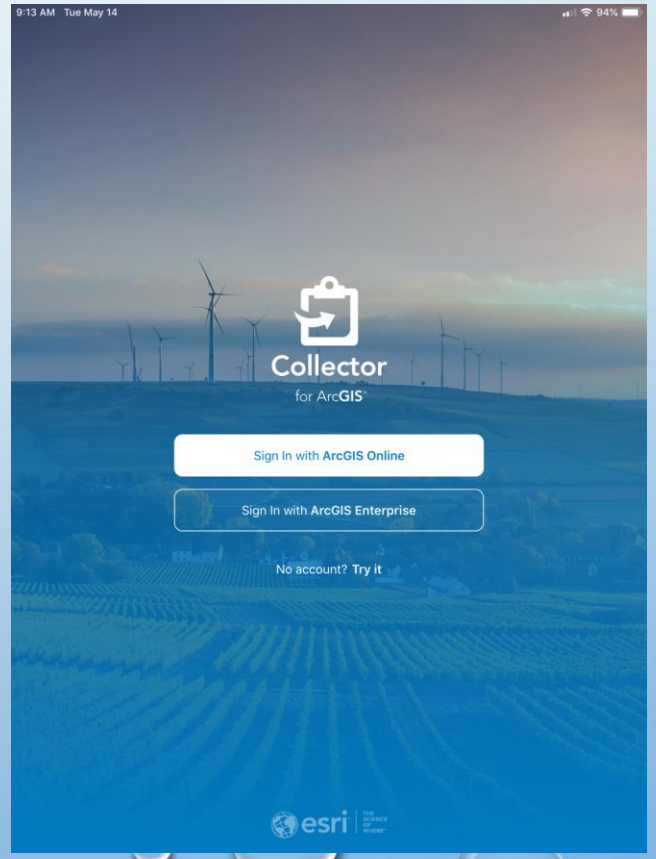


Weston Meter Pit Relocation

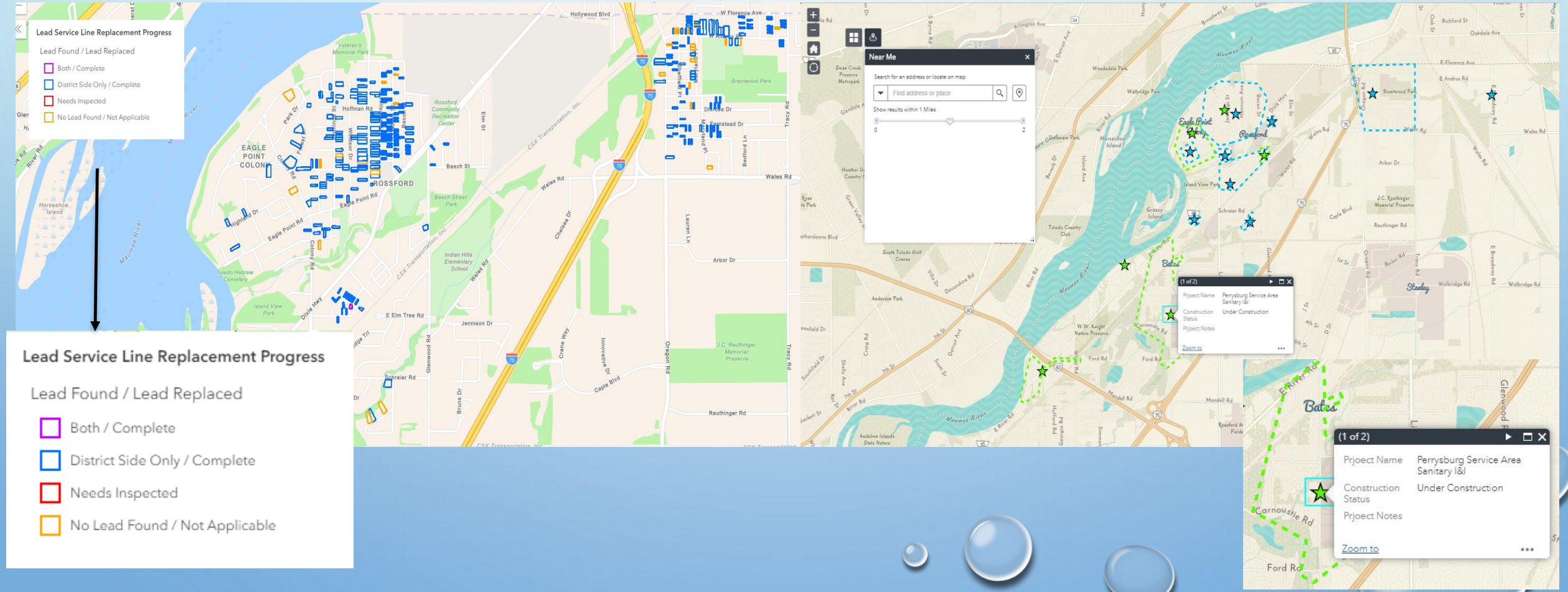
APPS DESIGNED FOR ENGINEERING DEPARTMENT

- **SEWER LATERAL CONNECTION POINTS CAPTURED BY CAMERA TRUCK CREW WITH GPS AND COLLECTOR.**



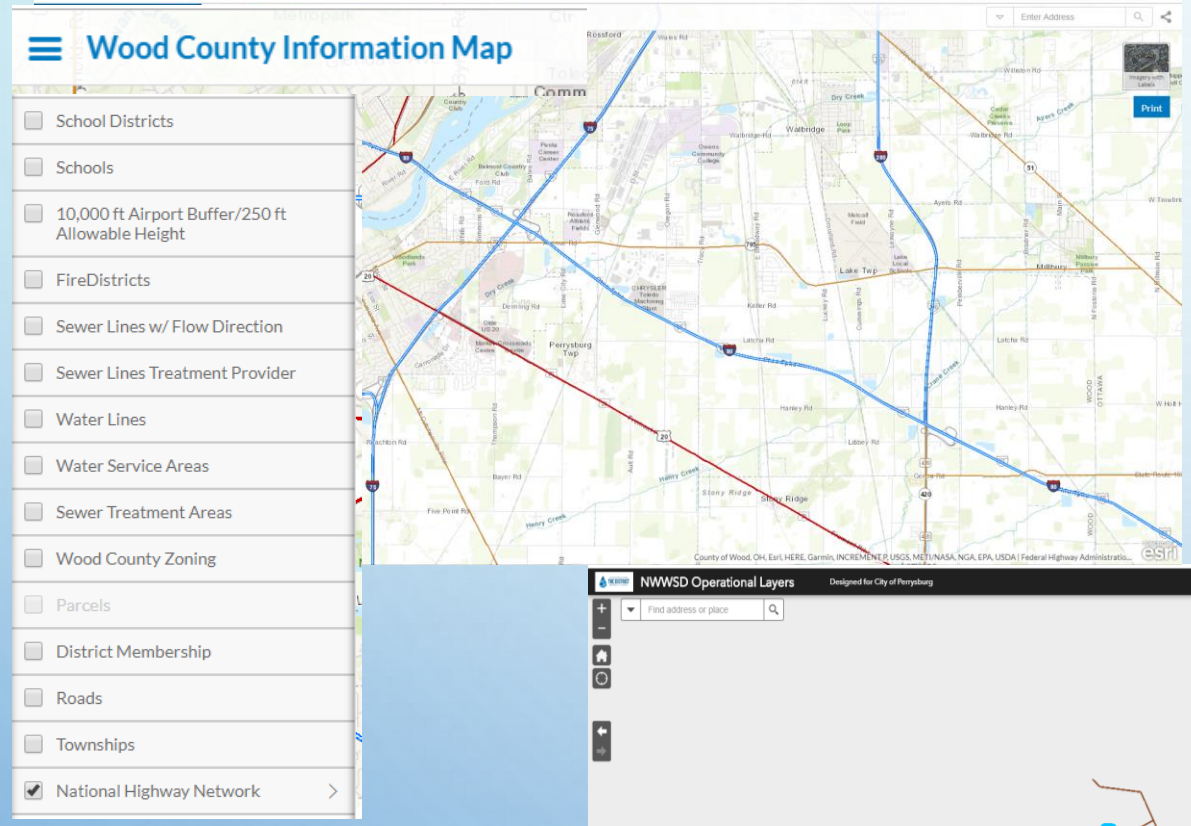


APPS USED FOR INFORMING OUR CUSTOMERS AND PUBLIC ON CURRENT AND UPCOMING PROJECTS.

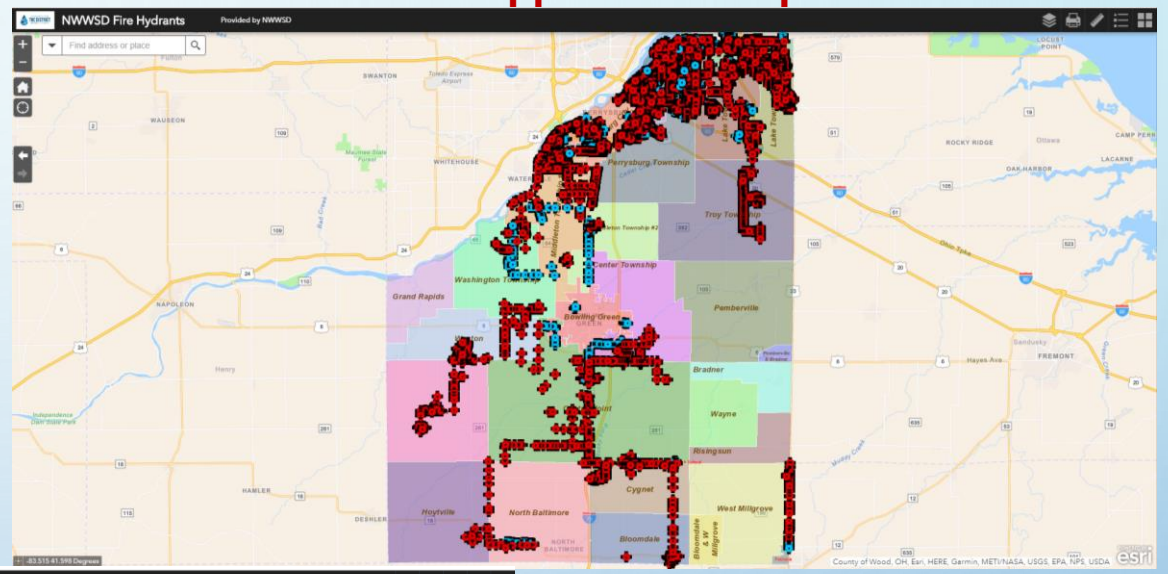


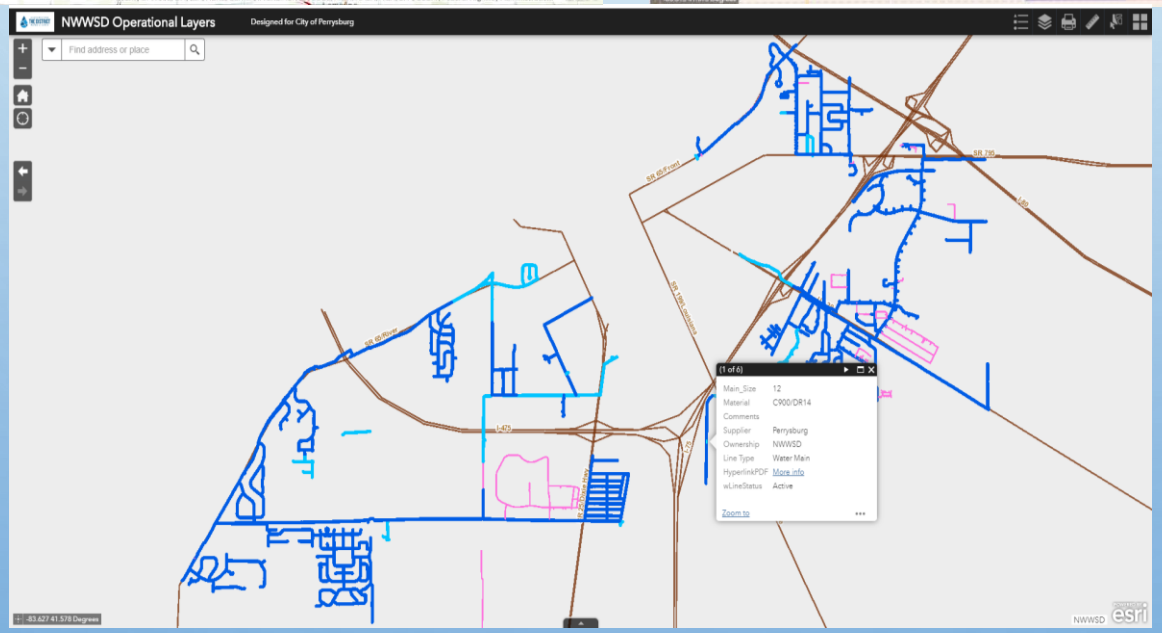
DATA SHARING IS AT THE HEART OF GIS.

Web App for built for Economic Dev. Planning



Web App for Fire Depts.





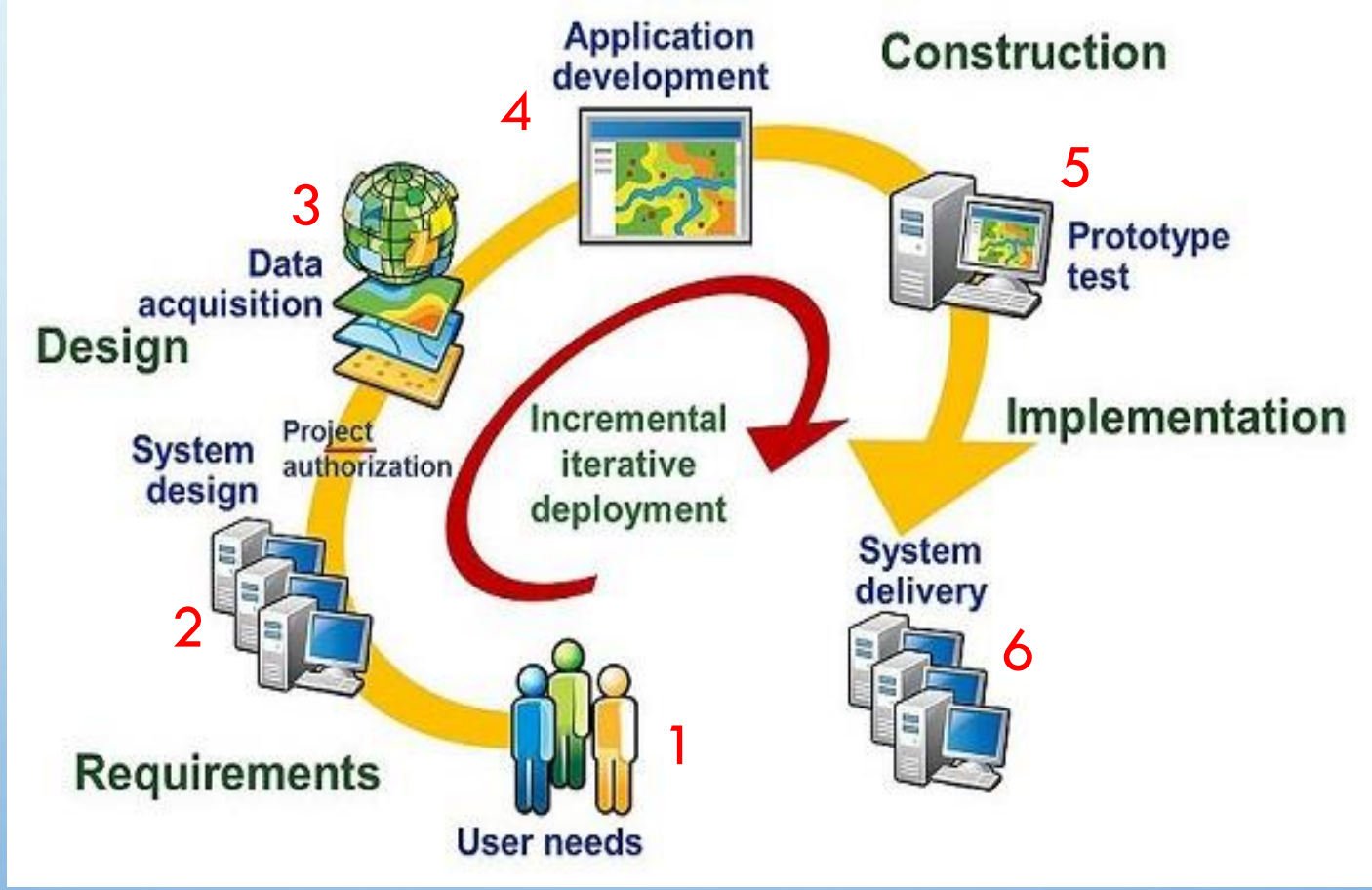
Web App Built for City of Perrysburg

A FEW THINGS TO CONSIDER BEFORE STARTING A GIS PROGRAM.

1. Assess your agency's need.

2. What is your existing system architecture and what do you need to set up.

3. Where is the existing data that will become your GIS data. (Record drawings, tabular data either in databases or spreadsheets, hire interns or contract a company to GPS field assets, digitize As-builts, etc.



4. Hiring the GIS team to build applications and maintain the data.

5. Do a small rollout of applications and software to a few employees first.

6. What devices will be used to access the GIS data. (tablets, smart phones, laptops, PC's, etc)

THANKS!

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NORTHWESTERN
THE DISTRICT
WATER & SEWER