



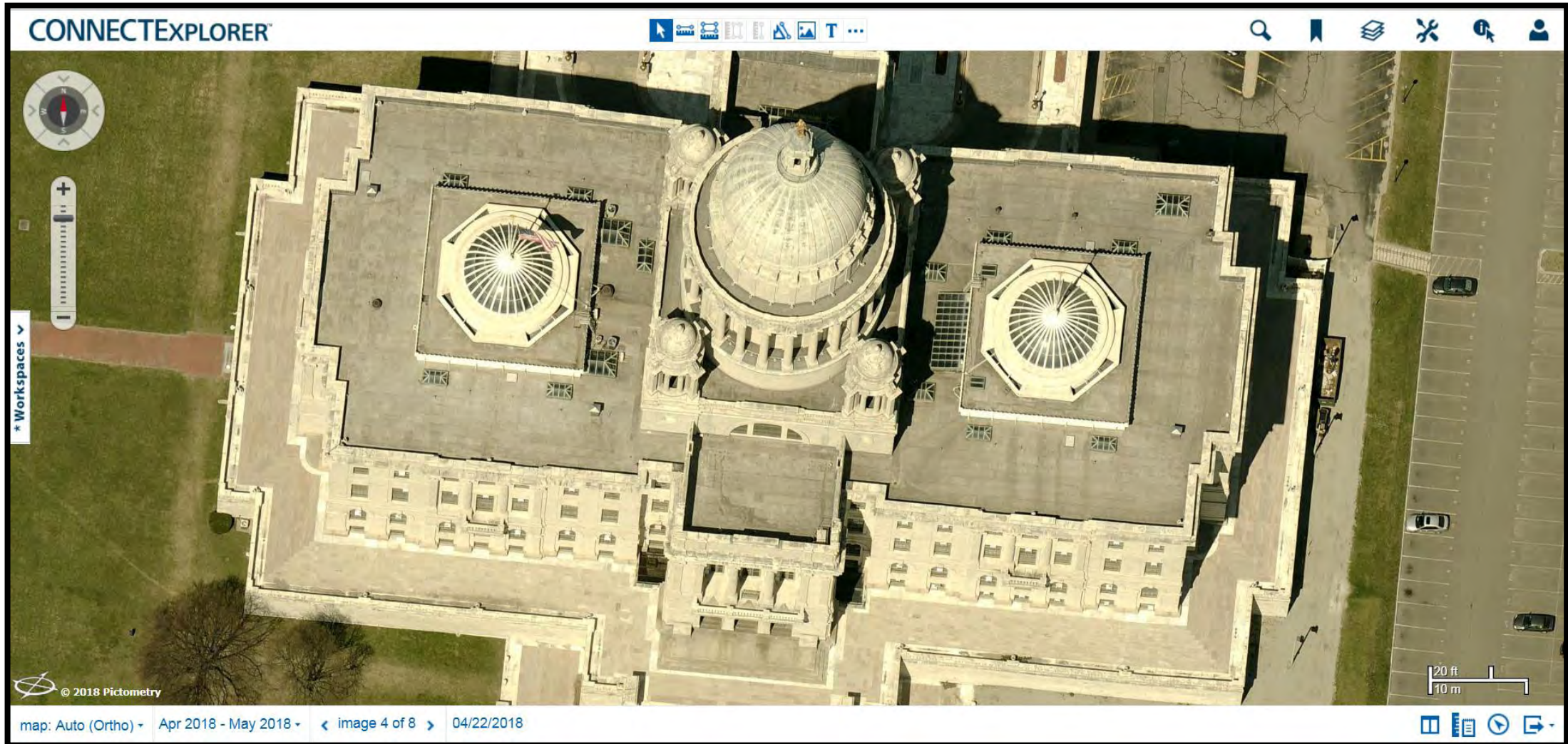
# PICTOMETRY USER GROUP RHODE ISLAND

19 December 2018





# Why are we here?



# AGENDA

- Welcome/Introduction Jon Langstaff EagleView District Manager
- Project Background RI DOT/RI DEM Imagery Capture Steve Kut RIDOT Transportation Information Systems
- RI DOT Project Execution Jonathan Garner EagleView Project Manager
- Accessing Pictometry Imagery Joe Oddi EagleView Regional Technical Manager
- Pictometry Imagery Deployment for PSAPs Gregg Scungio RI E-911 Acting Director

## BREAK

- Open Access to Pictometry Ortho Imagery via RI GIS Greg Bonyngre URI Geospatial Extension Specialist
- How Pictometry Imagery is Being Used by Various Municipal Departments to Assist in Their Everyday Jobs  
Suzanne Kogut Smithfield/Kenneth Mallette Cumberland
- Imagery Derived Solutions Jon Langstaff
- Closing Remarks/Q&A
- 'Mappy Hour' Trinity Brewhouse







Aerial Imagery  
Data Analytics  
GIS solutions

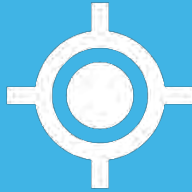




# SPECIALIZED CAPTURE PROCESS

This benefits your organization in three key areas:

## ACCURACY & CLARITY



- We fly lower than our competitors, making our clarity and natural color unmatched in the industry

## DELIVERY TIME



- Our capture process allows us to capture images, upload to our server and generate access in less than 60 days

## IMAGERY PROCESSING



- Pictometry imagery is processed 100% by EagleView employees, ensuring speedy delivery and accuracy.
- We retain more than 105 patented algorithms to process the imagery





# TRADITIONAL ORTHO IMAGERY VS. EAGLEVIEW



## Rock & Roll Hall of Fame, Cleveland, OH

Oblique imagery brings a natural perspective to a location.  allows a user to view the environment as if they were there.





# SO YOU GET ALL TO THIS....



- Traditional Ortho image
- great with GIS Layers,
- Oblique North but can fail to identify:
- Oblique South
  - Key property details
- Oblique East
  - Livable space
- Oblique West
  - Specially areas with specific damage
  - Height





# EAGLEVIEW – BY THE NUMBERS



98%

coverage in the U.S.  
in terms of population



126

planes at  
our disposal



130

domestic & international  
patents granted



526

EagleView  
employees



1,455

jurisdictions flown  
in North America



2,362

terabytes of  
imagery storage



3,750

terabytes of  
data storage



25,000

reports delivered  
per 24-hour period



34,500

hours spent  
flying per year



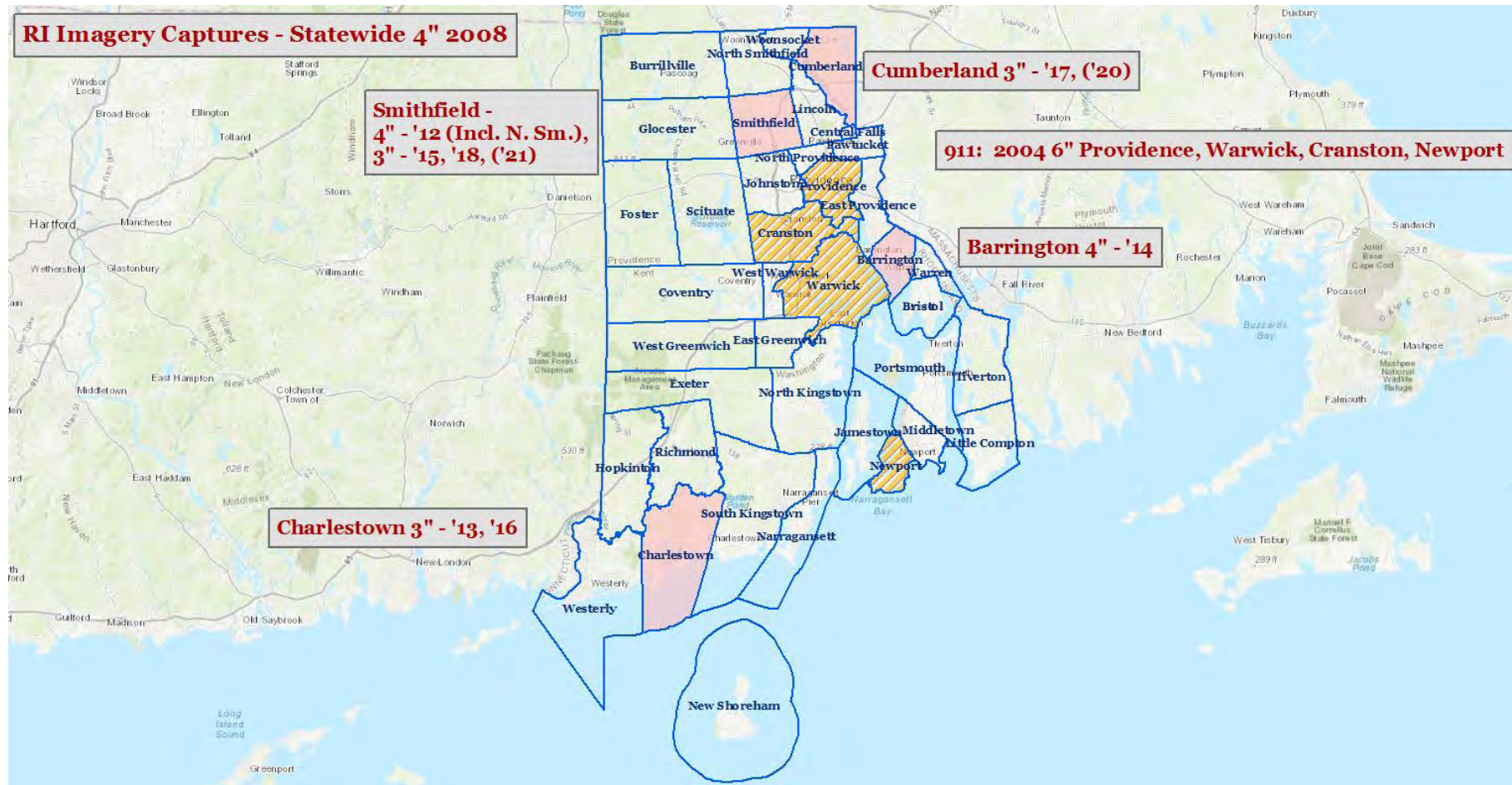
350 Million

images in our  
image library





# RHODE ISLAND IMAGERY ACCESS





# Project Background

## RI DOT/RI DEM Imagery Capture

Steve Kut RIDOT Transportation Information Systems





## Request for Quote

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
ONE CAPITOL HILL  
PROVIDENCE RI 02908

### Scope of Work for the Capture of High Resolution Aerial Imagery Sub 3" GSD Statewide, Rhode Island

#### PROJECT NEED:

The RIDOT Office of Stormwater Management is charged with finding hundreds, maybe thousands of opportunities for stormwater treatment over the next 20 years through watershed wide Stormwater Control Plans. In order to accomplish this overwhelming task, the Office needs to utilize technologies to the maximum extent practicable.

It is RIDOT's intent to get its' employees, venders, contractor, and consultants access to accurate, timely, precise photography of the State, the costs of these stormwater control plans should be reduced allow a more rapid assessment of the State and potential stormwater treatment options. The vender is providing access to our engineers and consultants, therefore, this product will provide a savings to the entire program over time. Each consultant, will have current, high-resolution imagery when looking for opportunities. We are spending nearly \$1 million per year on Stormwater Control Plans, the costs need to be reduced

The RIDOT will use the vender and its' software to facilitate up-to-date imagery for the drainage maintenance crew. They will be able to identify assets in great disrepair.

Other uses for this imagery, include but not limited to:

- Construction project pre and post design analysis
- Pavement management (cracks and ruts)
- Pothole verification (spring flight could be processed to locate dangerous potholes)
- Construction status (at a certain date/time) are projects holistically on-track
- Construction compliance
- PAPA pre and post construction verification.

In addition, the Vender is to provide RIDEM, its' employees, venders, contractors and Consultants this imagery for one year with 4, one year extensions.

Finally, should there be a disaster, hurricane, flood or other, this contract puts Vender "on the ready" for an emergency flight to assess damages. The benefit is that information this will be shared with RI Emergency Management and RIDEM for all's use.



# RFP DELIVERABLES

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1. **RIDOT Capture sub 3" Ortho image capture (for a 3 year period)** for the entire State of Rhode Island, 3 times per year, spring (leaf off), summer, fall (leaf on).
  - High resolution aerial imagery Sub 3" GSD
  - Provide enterprise-wide access to RIDOT employees (750)
  - Provide derivative user access to RIDOT– Consultant Engineers, construction firms and other vendors to utilize imagery pertaining to RIDOT projects only
  - Provide RIDOT access to the Vender supplied services (engineering and/or other) to ensure seamless use with VUEWORKS (RIDOT previously purchased asset management system)
  - RIEMA E911 - Provide E-911 with one hard copy or “on-the-premises” copy (DVD or other as determined by E911) of one flight each year of the contract, at the resolution and capture date specified by the E-911 data steward.
2. **RIDEM – (for a 1 year period)** Provide enterprise-wide access for all RIDEM employees on all 3 flights flown for the RIDOT for 2018.
  - Provide derivative user access to RIDEM – consultant engineers and construction firms can utilize imagery pertaining to RIDEM projects only
  - Provide RIDEM access to the Vender supplied services (engineering and/or other) to ensure seamless use with any RIDEM products as required.





# RFP DELIVERABLES

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Add-ons to this contract, to be determined as necessary:

3. **RIDOT Extension** – 2, one year extensions (2021 & 2022): If RIDOT may extend any item of the contract for a year a maximum of 2 years.
4. **RIDEM Extension** – 4, one year extensions (2019, 2020, 2021 & 2022): If RIDEM finds the flights useful for enforcement actions and/or day-to-day operations. They may continue payment for access to the data. RIDEM could extend the contract as above or may choose to reduce services as RIDEM determines for a period of one year a maximum of 4 years.
5. **State of Disaster** - Upon a disaster declared by the Governor of the State of Rhode Island, or at the request of the Director of RIDOT, The Vender shall fly the State and capture sub 3" imagery for the entire State, as soon as is safely possible, no longer than 7 days after the declaration or request. The Vender will provide RIEMA and RIDOT with this data within 7 days of the flight. The Vender will also provide within 14-days, a computerized processing of changes from the last flight to the disaster flight. This add-on will also provide RIEMA access **to Vender (engineers and/or other) services to integrate the data (photos) into EMA/E911 systems.**







State of Rhode Island

## E 9-1-1 Uniform Emergency Telephone System

Department of Public Safety

- Continued use of 2008 4" Statewide capture in
- Opted buy up option for oblique imagery
  - Fall 2018
  - Fall 2021





# CURRENT CONTRACTS

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## **RIDOT Contract**

- 3 Flights a year for 3 years (9 total) with option for 2 more years
  - Spring and Summer '18 already captured, Fall '18 in progress.
- **Sub 3" GSD**
- **Ortho only**
- License allows for usage at State and Municipal Level.
- Available via CONNECT and RIGIS
- Access to all historical imagery via CONNECT

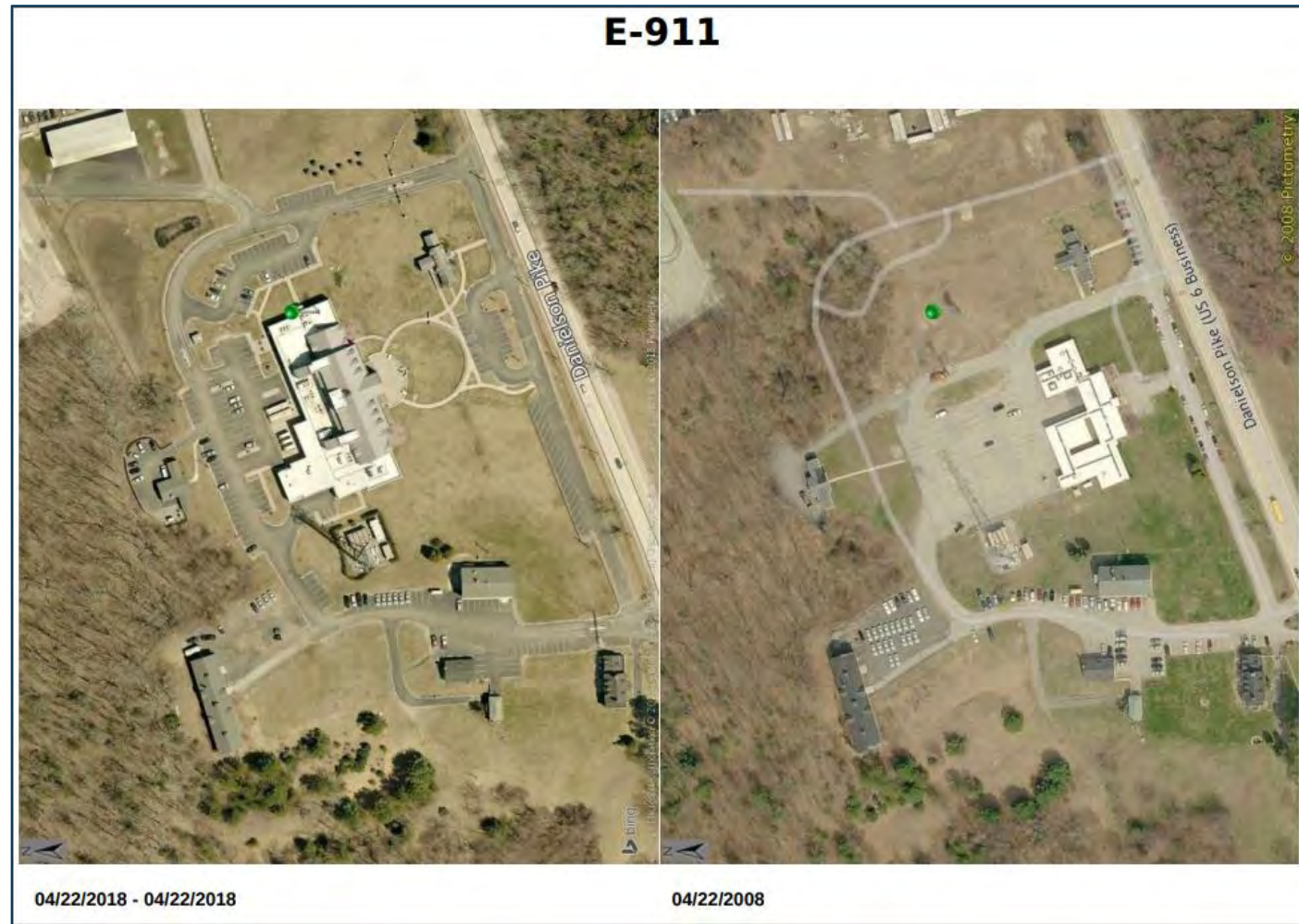
## **RIE911 Contract**

- Full, state-wide oblique capture
- Fall 2018
- 3" GSD
- LTI signed, second full oblique flight in 2021
- License allows for usage at State and Municipal Level.
- CONNECT & local deployment
- Access to all historical imagery



# PICTOMETRY IMAGERY DEPLOYMENT FOR PSAPS

Greg Scungio RI E-911 Acting Director





RI DOT

## Project Execution

Jonathan Garner EagleView Project Manager



# How Pictometry Imagery is Being Used by Various Municipal Departments to Assist in Their Everyday Jobs

Suzanne Kogut - Smithfield/Kenneth Mallette - Cumberland





# Imagery Derived Solutions

Jon Langstaff EagleView District Manager



# Imagery Derived solutions

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## Sensors

Imagery

Legacy

REVEAL

LiDAR

IR (NIR)

## • *Ancillary Products*

- AccuPlus
- ChangeFinder
- Sketch Check
- EPIC
- Feature Mapping
- 3D





# Sensors – Legacy Imagery

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# Sensors – REVEAL Imagery

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# Sensors – REVEAL Imagery

## MORE PRODUCTIVE FROM YOUR DESK

Offers ultra-high-resolution imagery as fine as 0.75" ortho & 1.0" oblique



Captured with EagleView's next-generation imaging system





# Sensors – REVEAL Imagery

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# Sensors – REVEAL Imagery

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# Sensors – REVEAL Imagery

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# Sensors – REVEAL Imagery

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# Sensors - LiDAR

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# LiDAR Solutions (QL1 and QL2)

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**Products:** Pictometry QL1 and QL2 LiDAR

**Details:** Collection, Processing, QA/QC, Delivery of USGS-compliant QL1 or QL2 LiDAR

**QL1** = aggregate nominal post spacing (ANPS) of 0.35m or less (equivalent to density of 8 ppm or more), vertical accuracy 10cm RMSEz

**QL2** = aggregate nominal post spacing (ANPS) of 0.70m or less (equivalent to density of 2 ppm or more), vertical accuracy 10cm RMSEz

Deliverables and Specifications in accordance with USGS LiDAR Base Specification  
Version 1.2, November 2014

**Deliverables:**

- Raw Point Cloud (LAS)
- Classified Point Cloud (LAS)
- Bare-Earth Surface (Raster DEM)
- Breaklines (hydro)
- FGDC-Compliant Metadata
- Collection Report
- Survey Report
- Processing Report
- QA/QC Report
- Digital Extents

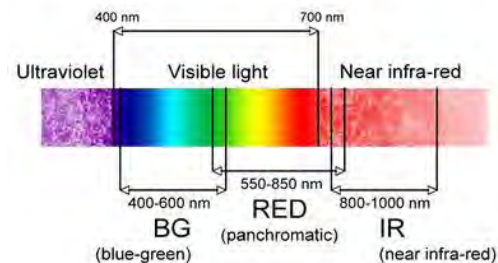
\*\* 1 ft or 2 ft Contours are optionally available \*\*



# Sensors – InfraRed (NIR)



- Vegetative Management
  - Agriculture
  - Encroachment
  - Wildfire prevention
  - Invasive species
- Impervious Surface Mapping
  - Storm water runoff calculations





# ACCUPLUS

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## Manual Corrections

- Seam Editing
- Local color corrections
- Bridge & Road Correction
  - Orthorectification to proper elevation

## Utilizes...

- Ground Control Points
- Aero-Triangulation (AT)
- Double the flight lines
  - Necessary for AT
  - Nearly eliminates building lean



# ACCUPLUS – NEXT TO ZERO BUILDING LEAN

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# CHANGEFINDER

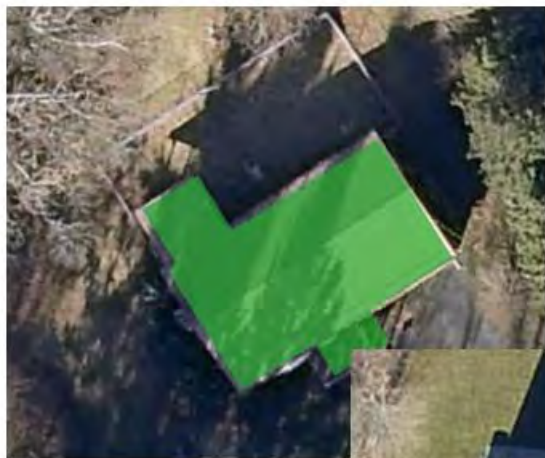
## Full Change Detection Solution



# SKETCH CHECK

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Match



Minor Mismatch



Major Mismatch





# EPIC – EagleView Property Identification Card

EXIT

PARCEL ID:  
**2694954**

GED ID:  
R-10402-00L-0090-1

PROPERTY ADDRESS:  
7601 Juno Springs Way  
McKinney, TX 75071

DEED HOLDER:  
Carol Sullivan

SEC/TWP/RNG:  
0-0-0

BRIEF LEGAL DESCRIPTION:  
L7821HUMB

GROSS ACRES:  
0.22

EXEMPT ACRES:  
N/A

NET ACRES:  
0.22

CSR:  
N/A

CLASS:  
R-Residential

TAX DISTRICT:  
Collin

SCHOOL DISTRICT:  
McKinney ISD

ACCEPT

PRINT

EXPORT

PUSH TO CAMERA

RESIDENTIAL DWELLING

SALES & VALUATIONS

TAXATION

TAX HISTORY

COMMENTS (2)

OCCUPANCY  
Single-Family / Owner Occupied

STYLE  
1 Story Brick

ARCHITECTURAL STYLE  
N/A

YEAR BUILT  
2006

CONDITION  
Normal

GRADE  
4

ROOF  
Hip/Asph

FLOORING  
Carp/Hdwd

FOUNDATION  
C Blk

EXTERIOR MATERIAL  
Brick

INTERIOR MATERIAL  
Shrc/Hdwd

BRICK OR STONE VENEER  
Brick

TOTAL GROSS LIVING AREA  
2,042 SF

NUMBER OF BEDROOMS  
3 above; 0 below

BASEMENT AREA TYPE  
Full

BASEMENT AREA  
1,941

PLUMBING  
1 full bath; 1 water closet; 1 sink

APPLIANCES  
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CENTRAL AIR  
Yes

HEAT  
Yes

POOL \*  
Yes (in ground)

GARAGES  
418 SF (22F W x 19F L)

ME Enclosed (98 SF);  
ME Enclosed (144 SF);

Property Data

CONNECT EXPLORER VIEW

02/17/2007 < 7 of 19 > Select Date

Image Date: 08/28/2017

EXPAND EXPLORER

Property Viewer

Property Sketch

1st Floor

Creation Date: 08/28/2017

MANAGE SKETCHES

Property Change

PRIMARY SKETCH COMPARISON

Date: 08/28/2017 < 03/03/2017 >

EXPAND COMPARISON



# Feature Mapping

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- 2-D Planimetrics
  - Height attribution
- Impervious Surface Mapping
- Feature Point Mapping
  - Ideal for Asset Management and Inventory Projects
  - Pools, Hydrants, etc.
  - Anything you can see!





# 3D

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- **Building geometry** - extraction process produces clean 3D polygonal boundary models
- **Building textures** - created from Pictometry imagery deliver to detail without geometric complexity
- **Ground geometry** - triangular mesh, derived from customer-supplied DEMs, modeled from source aerial photography or both
- **Ground texture map** - true ortho-rectified photography eliminates building lean and leaves streets fully visible



# DISASTER RESPONSE PROGRAM (DRP)

**Disaster Coverage Imagery at No Additional Charge** – Pictometry will, upon request of Customer and at no additional charge, provide standard quality imagery of up to 200 square miles of affected areas (as determined by Pictometry) upon the occurrence of any of the following events during any period Customer is eligible for the DRP:

- **Hurricane:** areas affected by hurricanes of Category II and higher
- **Tornado:** areas affected by tornados rated EF4 and higher
- **Terrorist:** areas affected by damage from terrorist attack
- **Earthquake:** areas affected by damage to critical infrastructure resulting from earthquakes measured at 6.0 or higher on the Richter scale
- **Tsunami:** areas affected by damage to critical infrastructure resulting from tsunamis





# DISASTER RESPONSE

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Moomp, OK, May 2013



# DISASTER RESPONSE

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Moore, OK, May 2013





# DISASTER RESPONSE

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Breezy Point, NY, as it stood on April 7, 2012

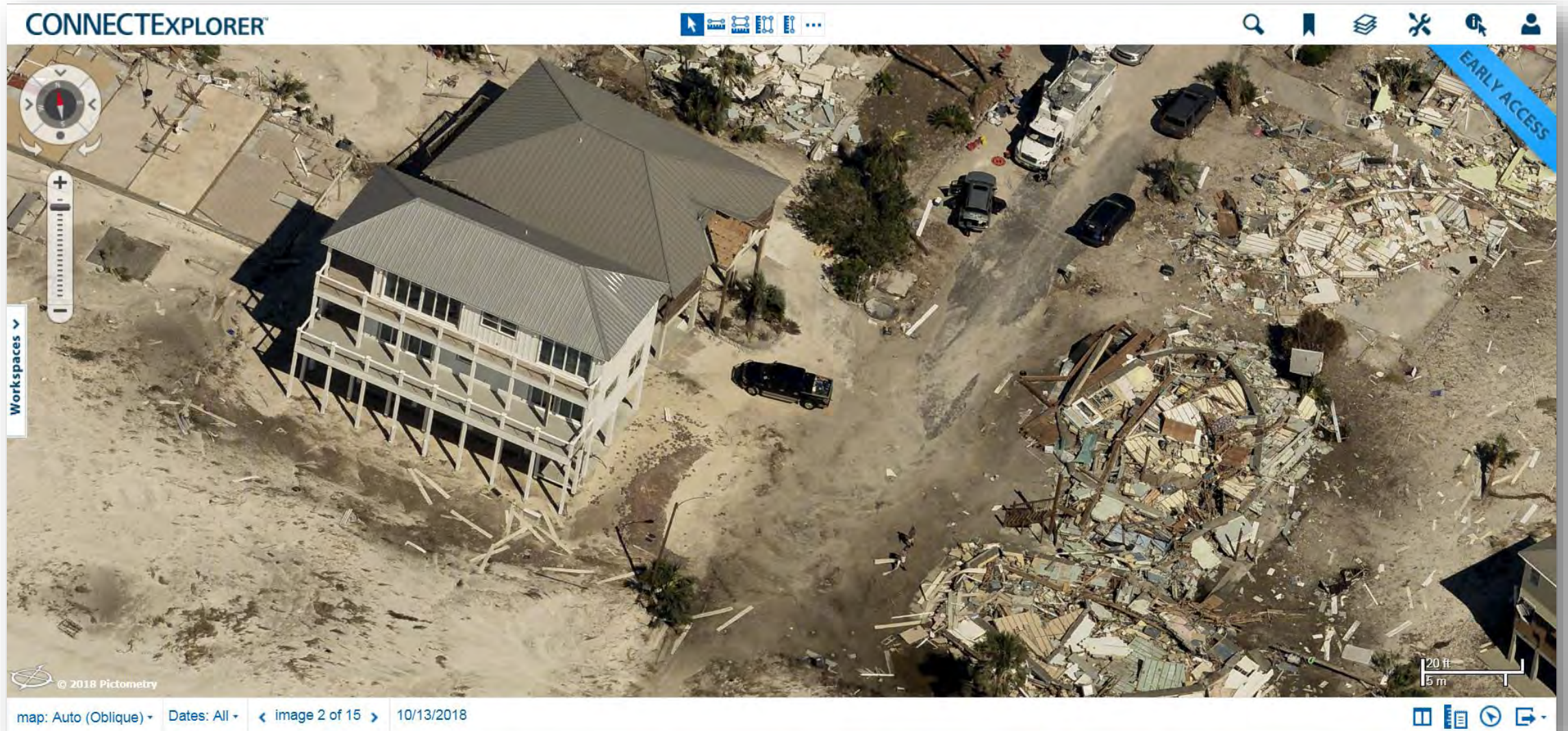


Breezy Point, NY, as captured on November 9, 2012





# DISASTER RESPONSE





## Disaster Re-Flight

### Disaster Response Program

Customer is eligible for DRP described below from the effective date through the second anniversary of the initial project delivery. Following payment to Pictometry of amounts due with respect to each subsequent project, Customer will be eligible for the then-current DRP for a period of two years from delivery of such subsequent project. Customer must be in good-standing with Pictometry to maintain eligibility for DRP.

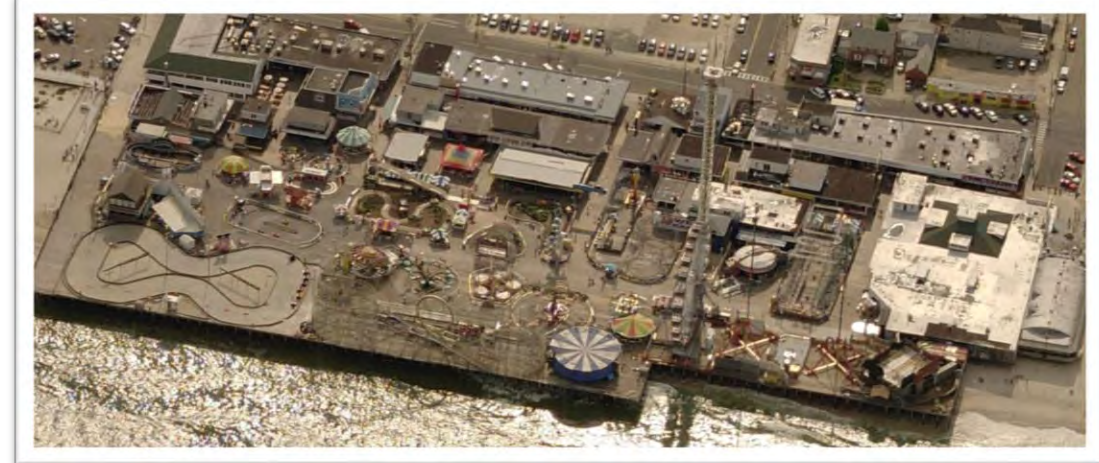
#### A. Disaster Coverage Imagery at No Additional Charge –

Pictometry will, upon request of Customer and at no additional charge, provide standard quality imagery of up to 200 square miles of affected areas (as determined by Pictometry) upon the occurrence of any of the following events during any period Customer is eligible for the DRP:

- **Hurricane:** areas affected by hurricanes of Category II and higher
- **Tornado:** areas affected by tornadoes rated EF4 and higher
- **Terrorist:** areas affected by damage from terrorist attack
- **Earthquake:** areas affected by damage to critical infrastructure resulting from earthquakes measured at 6.0 or higher on the Richter scale
- **Tsunami:** areas affected by damage to critical infrastructure resulting from tsunamis



- B. Discounted Rate –** Coverage for areas affected by the events set forth above exceeding 200 square miles will be, subject to Pictometry resource availability, offered to Customer at the then current DRP rates. Also, coverage for areas affected by hurricanes below Category II, tornadoes below EF4 or earthquakes rated below 6.0 on the Richter scale will be, subject to Pictometry resource availability, offered to Customer at the then current DRP rates.





# Closing Remarks

## Q&A





Mappy Hour

Trinity Brewhouse

186 Fountain St.







# RHODE ISLAND PICTOMETRY USER GROUP: PROJECT EXECUTION

Jonathan Garner, Project Manager

December 19, 2018





# AGENDA

## Introduction

- Who am I?

## Department Overview

- IA&E
- Project Management
- Project Workflow

## Project Review

- RIDOT Ortho Only Capture
- Fall-2018 Capture
- Multi-User Benefits

## Big Eye Advantage

- More imagery, less time
- Consistent obliques

## Conclusion

- What's next?





# WHO AM I?

- **Jonathan Garner, Project Manager – Enhanced Projects**
  - State University of New York at Geneseo – Bachelors in Geography
  - President Elect – New York State GIS Association
  - Director – GIS/SIG Genesee Finger Lakes GIS User Group
- Project Management Coursework
  - Project Management Body of Knowledge
  - Project Management Institute
- Managed 70+ Projects Over Past 3 Years
  - Imagery & LiDAR
  - Sketch Projects
  - Custom Mapping/Planimetric Projects
- Prior Roles at EagleView
  - Senior Geospatial Image Processor
  - GIS/Mapping Specialist





# IMAGERY ACQUISITION & EXECUTION

- Within EagleView Operations
- Consists of Flight Production, Imagery Acquisition, and Project Management Teams
- More than 40 total individuals across IA&E
- Plan, Capture, Manage, & Deliver 100s of projects/season
- Capture imagery & LiDAR for Government, Energy, Insurance, Disaster Response, Feature Mapping, etc.



# PROJECT MANAGEMENT PHILOSOPHY

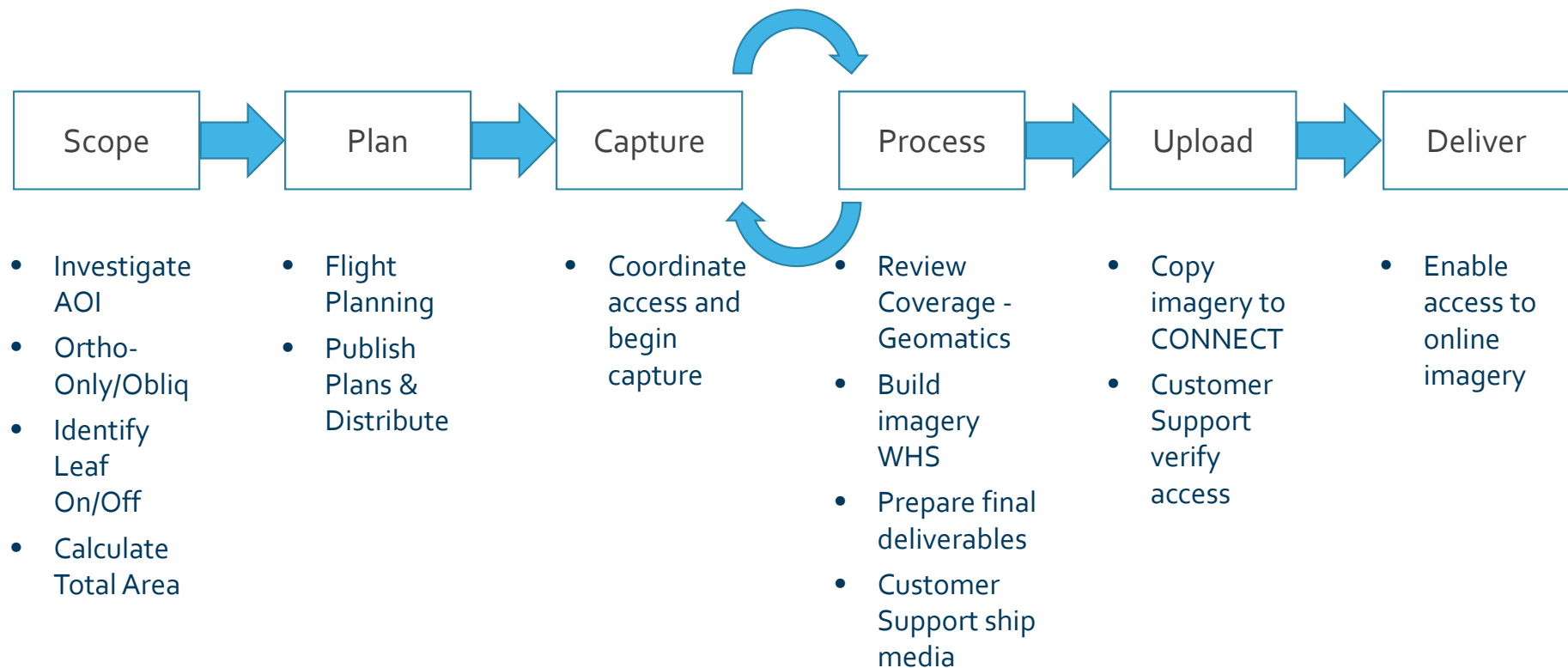
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- Quality First
- Communication Strategy
  - Written Project Reports
  - Weekly Correspondence
    - Progress Review
- Issue Management Process
- Communication First
- Quality Assurance
- Relationship Based Company

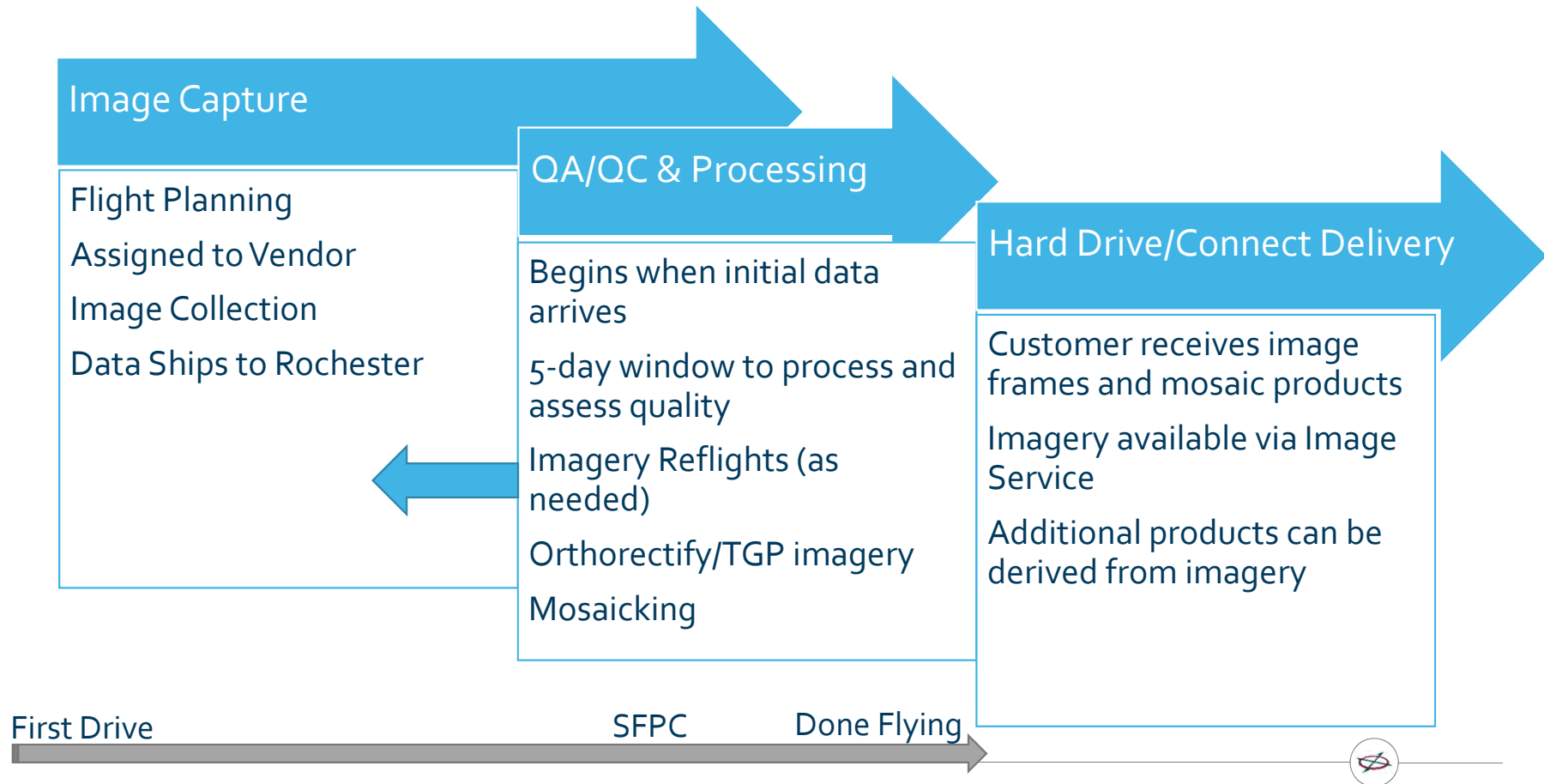




# HIGH-LEVEL PROJECT WORKFLOW



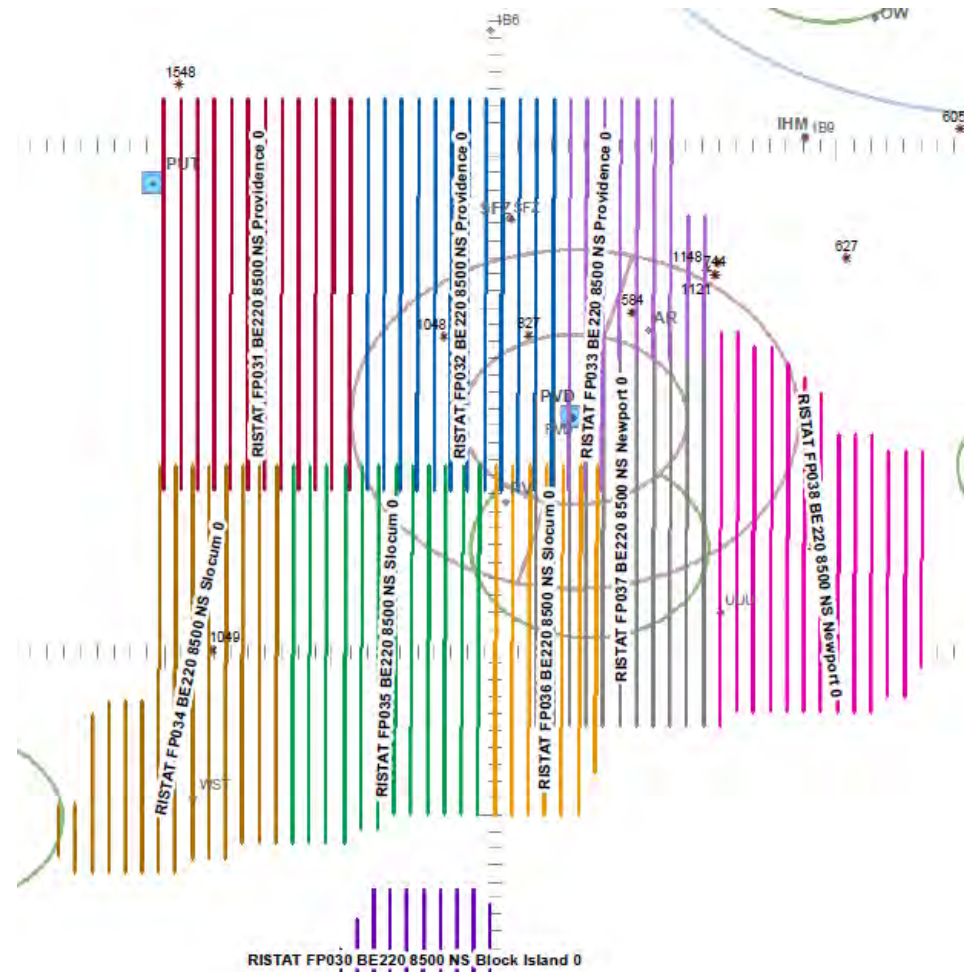
# IMAGE PROCESSING WORKFLOW





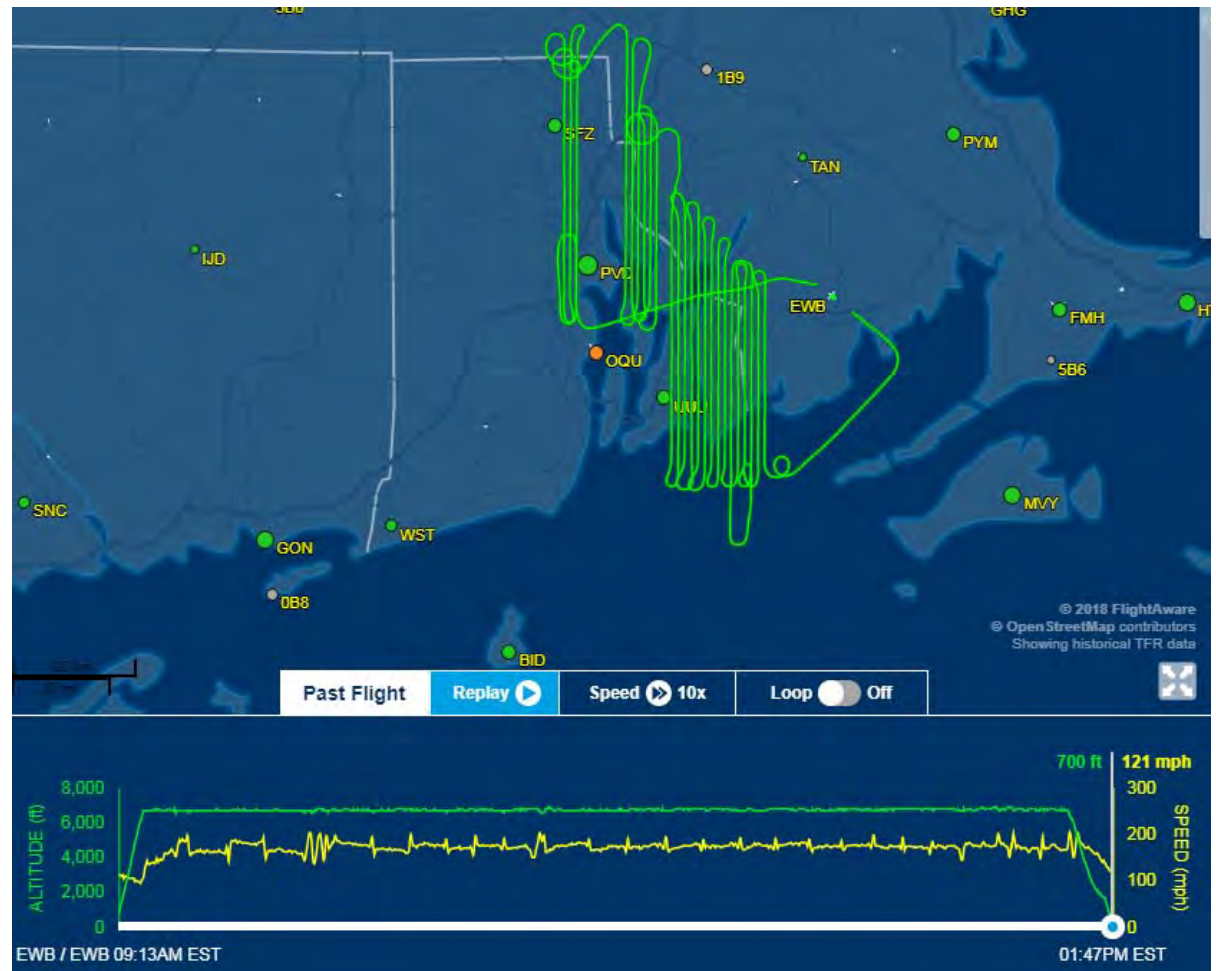
# 2018 RIDOT ORTHO ONLY PROJECT

- Spring & Summer Capture (leaf-off/on)
- 1285 Total Sectors – Entire State of RI
- 3-inch GSD Ortho Tiles Delivery
- Spring/Summer = ~18 hours scheduled capture ea.
- Delivery – HD mosaics, CONNECT ortho mosaic & frames
- Nominal Ortho GSD = ~1.6-1.8"



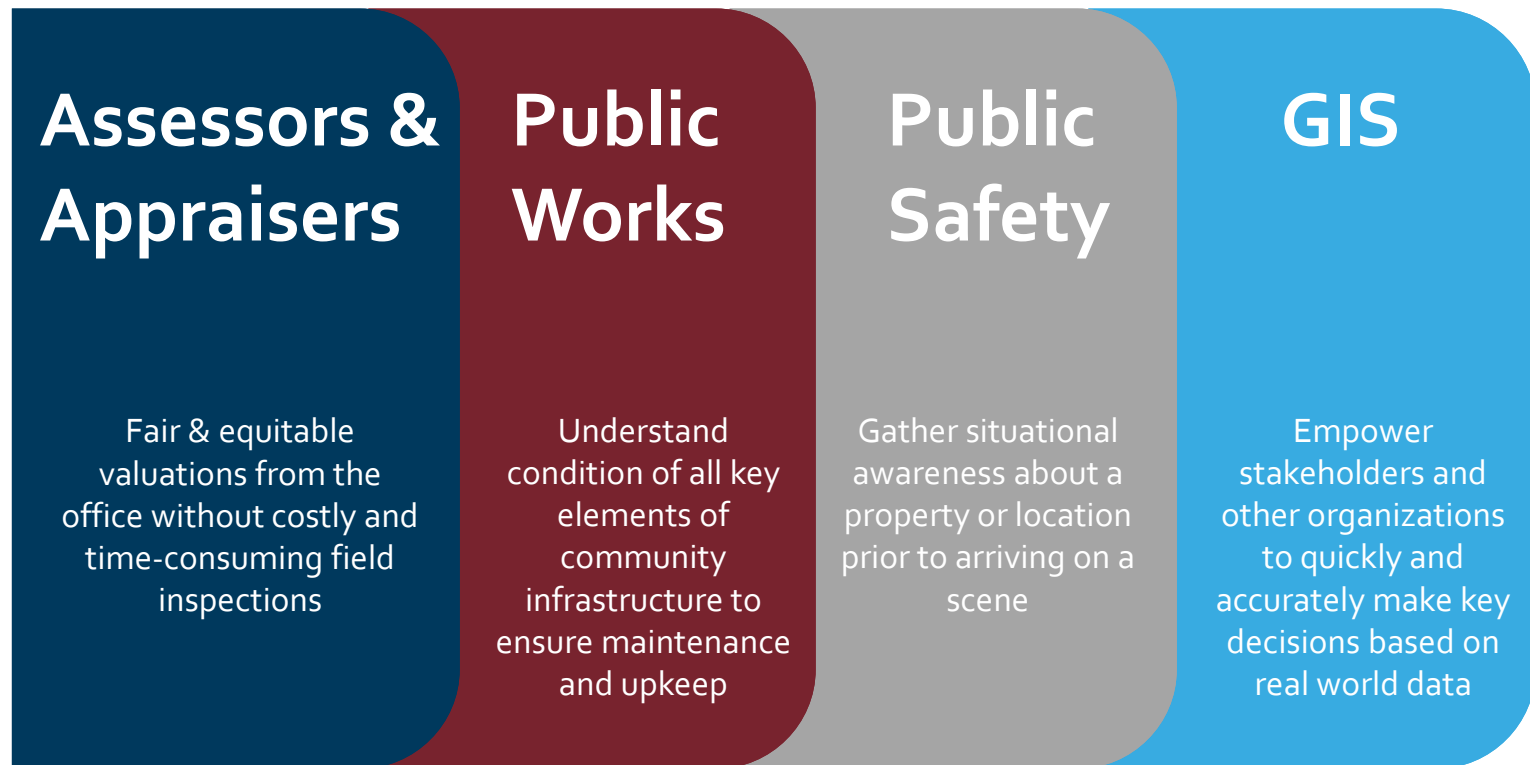
# 2018-19 RIDOT/RI-E911 FLIGHT

- Fall capture (leaf-off)
  - Began early-December
  - 2x scheduled hours than Spring/Summer – two-direction capture
- 55% Complete – Plan to complete in early-2019
- Typical delivery – 30-45 days after Done Flying
  - HD mosaics & imagery first, CONNECT access to follow





# BENEFITS FOR MULTIPLE DEPARTMENTS

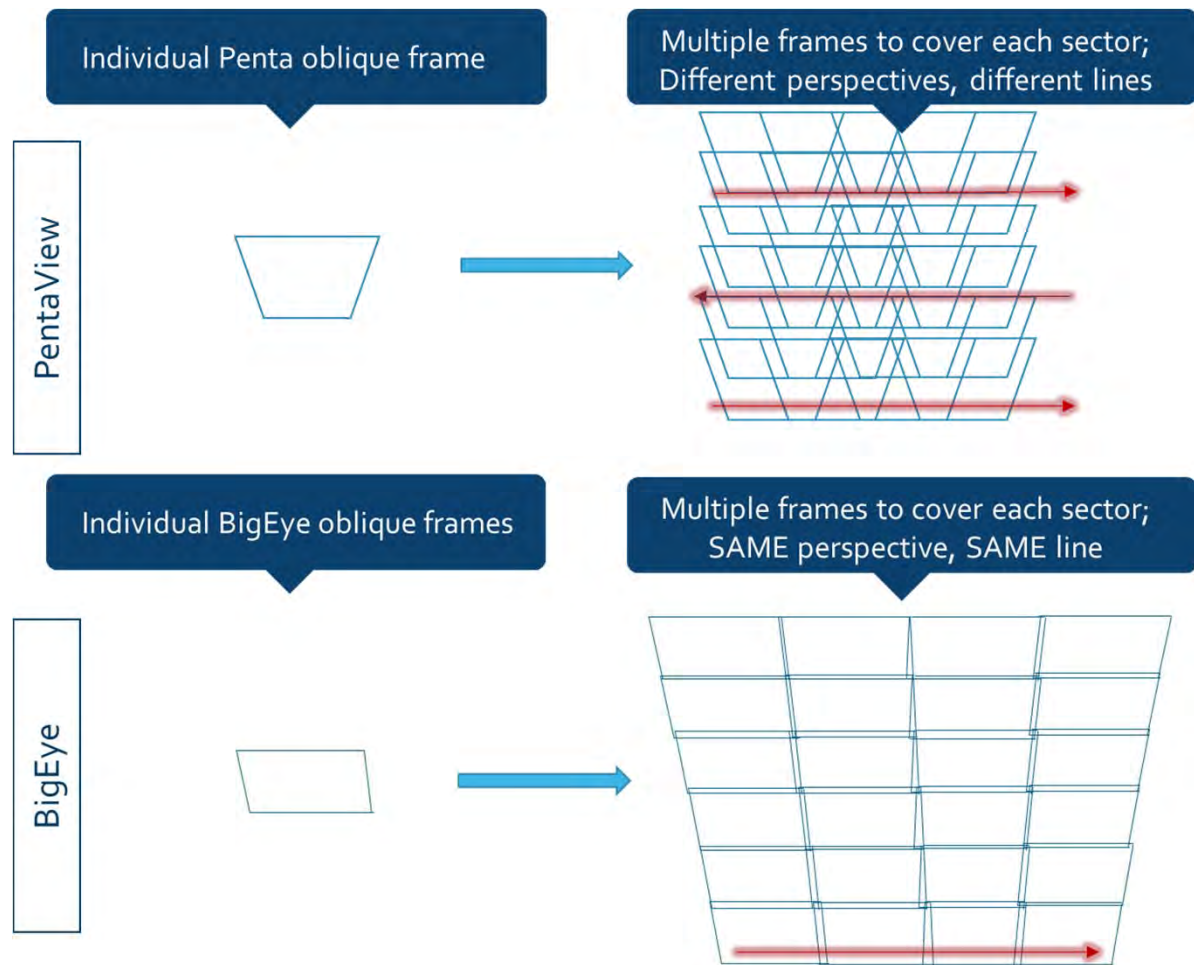


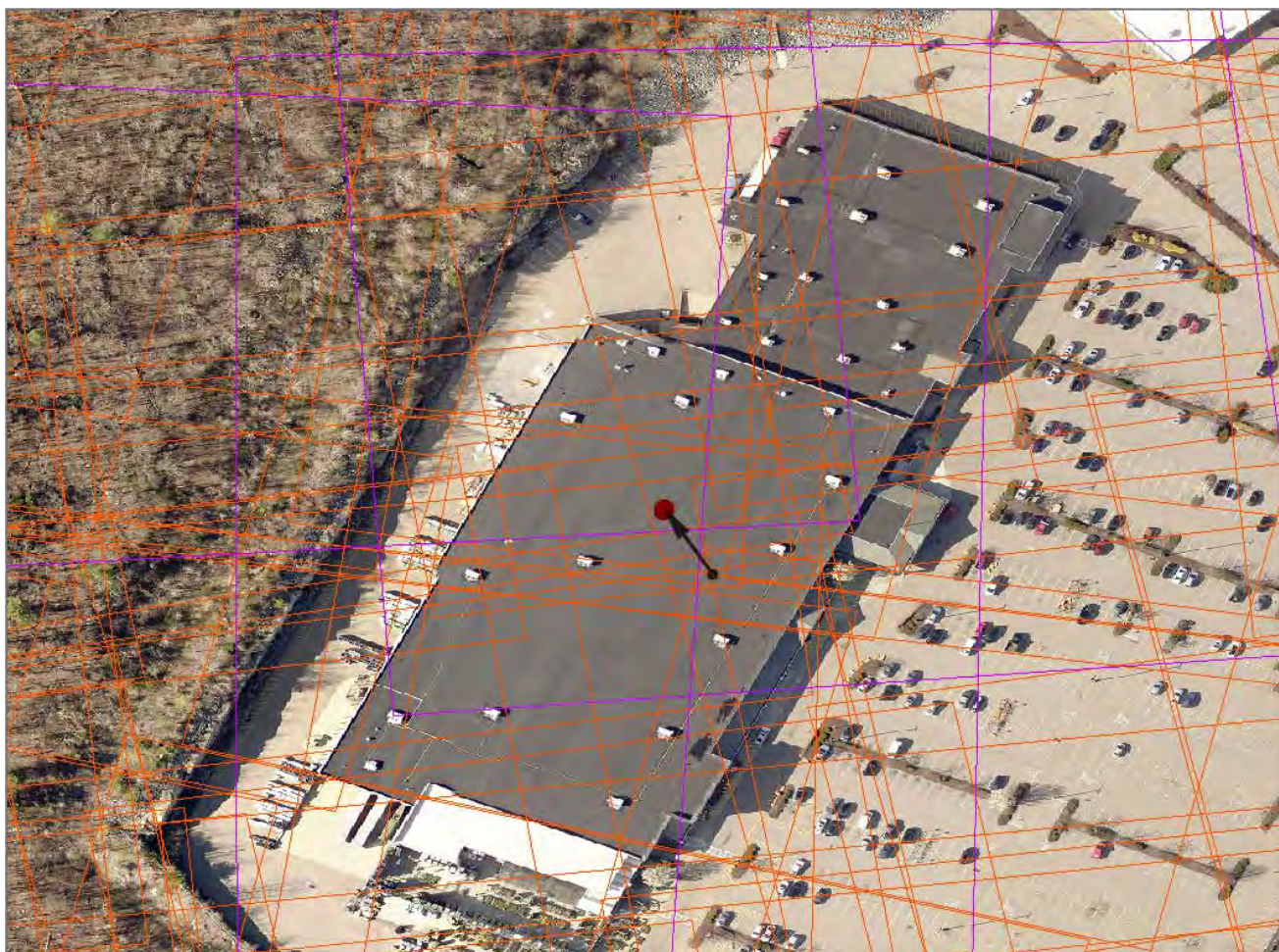
# BIG EYE ADVANTAGE

- Less flight time, more imagery
- Real-time monitoring
- Significantly better GSD
  - More clarity = Better Answers
- Efficient cloud data storage/access









Identify

Identify from: <Visible layers>

- RITSMI18\_NOR
  - RITSMI011012NeighOrtho6567\_180501
  - RITSMI011012NeighOrtho8455\_180501
  - RITSMI011012NeighOrtho8467\_180501
- RISTAT18-REPLACEMENT-ORTHO-WHS\_NOR
  - RISTAT000001003NeighOrtho00001344N\_180422
  - RISTAT00000603NeighOrtho00001367N\_180422
  - RISTAT000001103NeighOrtho00001333W\_180412
  - RISTAT00000706NeighOrtho00000967S\_180422
  - RISTAT00000601NeighOrtho00001400S\_180422
  - RISTAT00000605NeighOrtho00001334N\_180422
  - RISTAT00000705NeighOrtho00000935S\_180422
  - RISTAT000001006NeighOrtho00001375N\_180422
  - RISTAT000001003NeighOrtho00000967E\_180412
  - RISTAT000001001NeighOrtho00001001W\_180412
  - RISTAT000001101NeighOrtho00001366E\_180412
  - RISTAT00000701NeighOrtho00001001N\_180422
  - RISTAT00000701NeighOrtho00001002N\_180422
  - RISTAT00000603NeighOrtho00001366N\_180422
- RITSMI18-SID-3INCH.sld

Location: -71.519848 41.874398 Decimal Degrees

Field	Value
FID	1790
Shape	Polygon
ImageName	RITSMI011012NeighOrtho8467_180501
ImagePath	RITSMI011011 cluster\RITSMI011012\
ImageExt	pml



THANK YOU FOR  
YOUR HOSTING!



Questions/Comments??







# ACCESSING PICTOMETRY IMAGERY

*STATE OF RHODE ISLAND - PUG*

*DECEMBER 19, 2018*

Joe Oddi – Regional Technical Manager





# AGENDA

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- Use Cases
- What is CONNECT?
- Access Options & Integrations
- How do I get this?



# KEY GOVERNMENT APPLICATIONS

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- Remote inspection saves times and money
- View property details to assess accurate value and determine tax rates
- Rely on imagery when processing appeals





# KEY GOVERNMENT APPLICATIONS

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- Imagery integrates into 911 CAD software to verify cell phone locations
- Situational awareness, planning, location intelligence & training exercises
- Imagery can be used in court



# KEY GOVERNMENT APPLICATIONS

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- Various agencies and departments within a county can access high-resolution imagery and integrate it into existing workflows.



- Pre-planning before onsite work (manholes, drainage, valves)
- Determine runoff patterns with oblique imagery
- Sign inventory
- Road and paint conditions



- Imagery layered on GIS data aids in planning
- Georeferenced ortho and oblique imagery provides accuracy





# KEY GOVERNMENT APPLICATIONS

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• Various agencies and departments within a county can access high-resolution imagery and integrate it into existing workflows.



- Code enforcement
- Imagery can determine how a parcel will be used and if permits are granted



- Wildfire control using wide-area imagery
- Planning and emergency drills



- Disaster preparedness, mitigation, response, and recovery planning



- Determines property boundaries





ACCESS



# BACK IN THE DAY...

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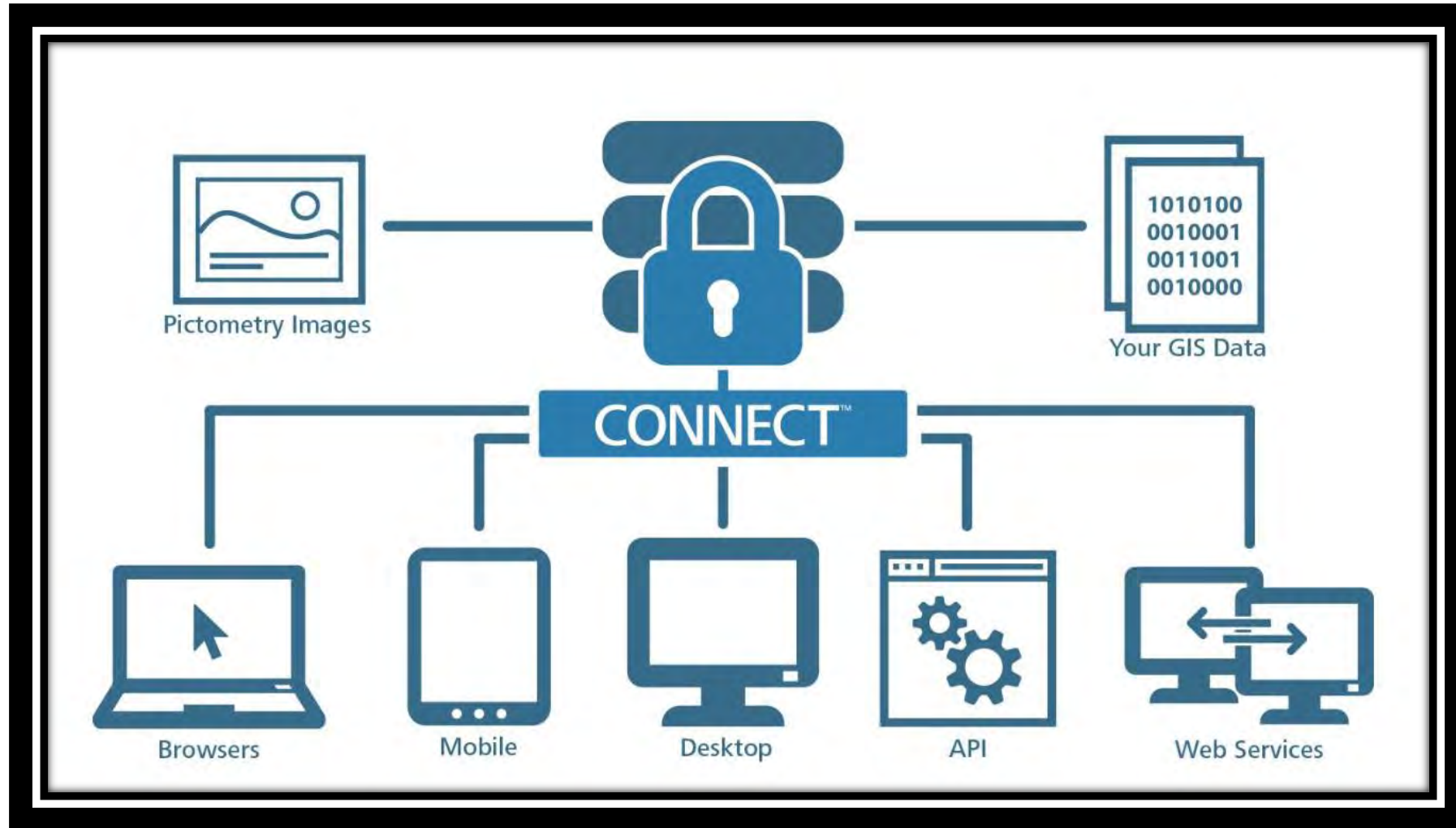
- Everything delivered on hard drive to be stored locally at each muni
- Local software install on every computer with EFS software
- IT/MIS Permissions
- Configuration files <gasp!>
- Network reliance
- Ugh...



**But now we have.....**

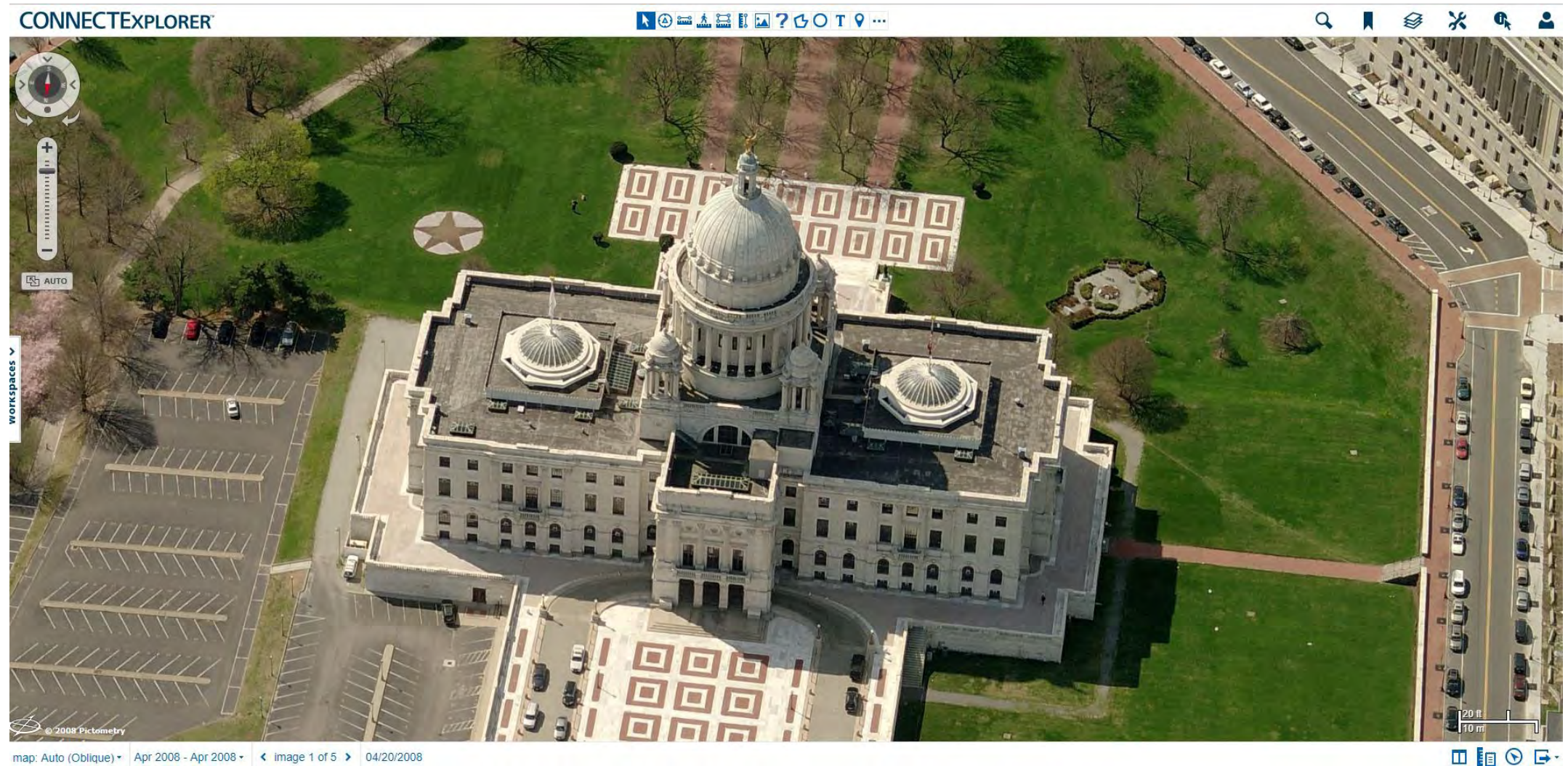


# CONNECT





# CONNECTEXPLORER



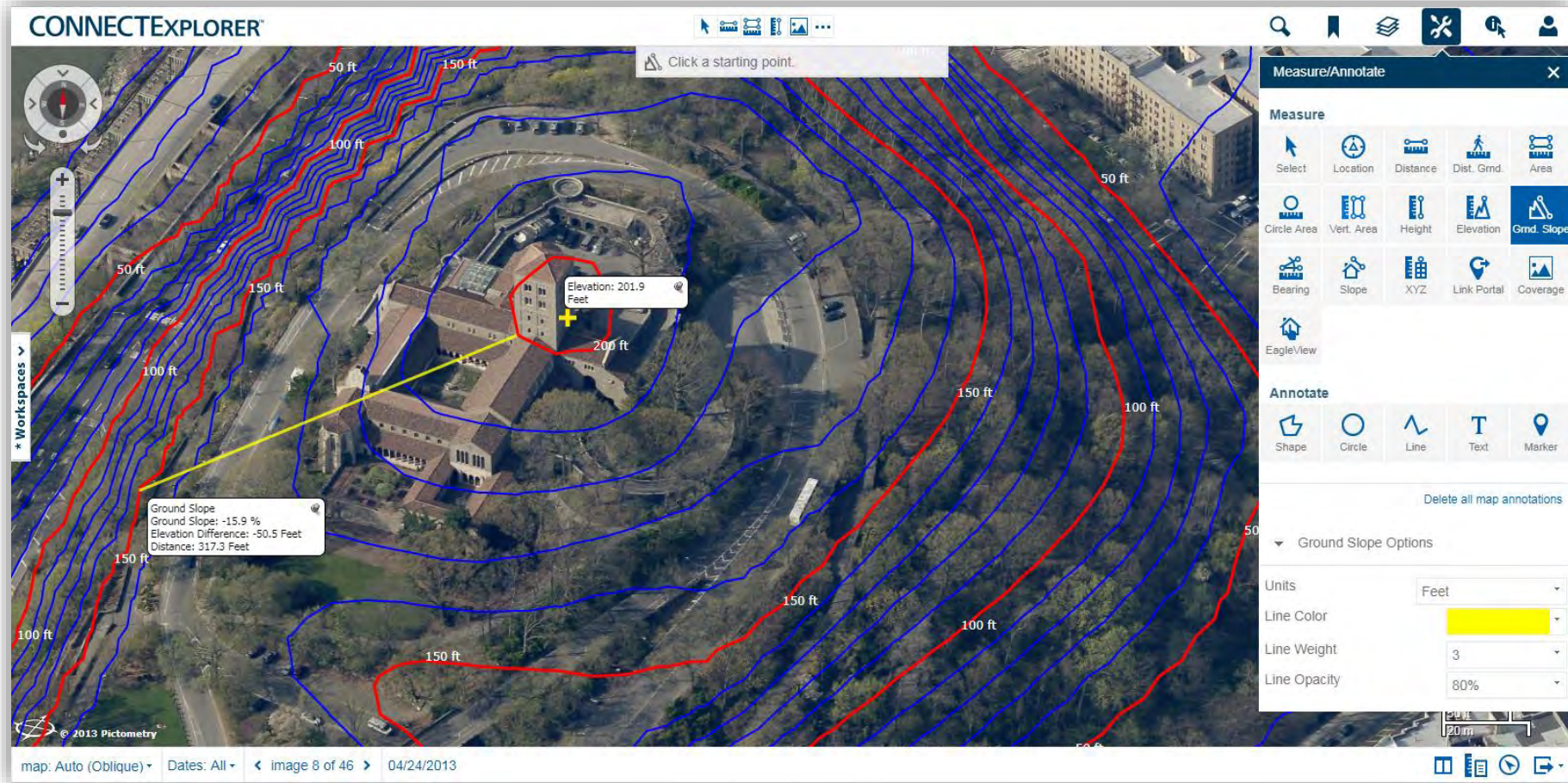


# SEE IT, MEASURE IT





# SEE IT, MEASURE IT



Elevation based on data available at time of capture





# OVERLAY GIS DATA



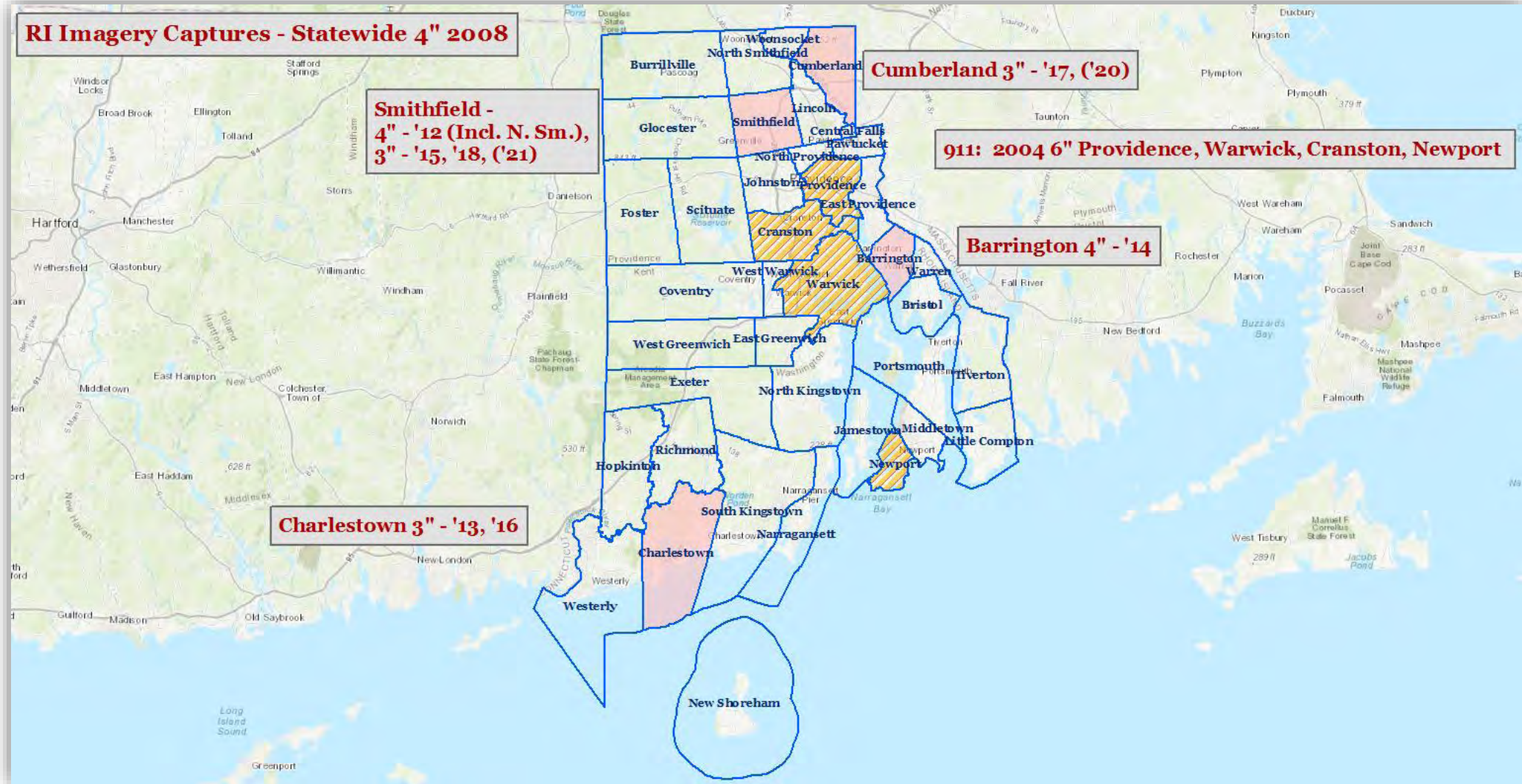


# DUAL PANE



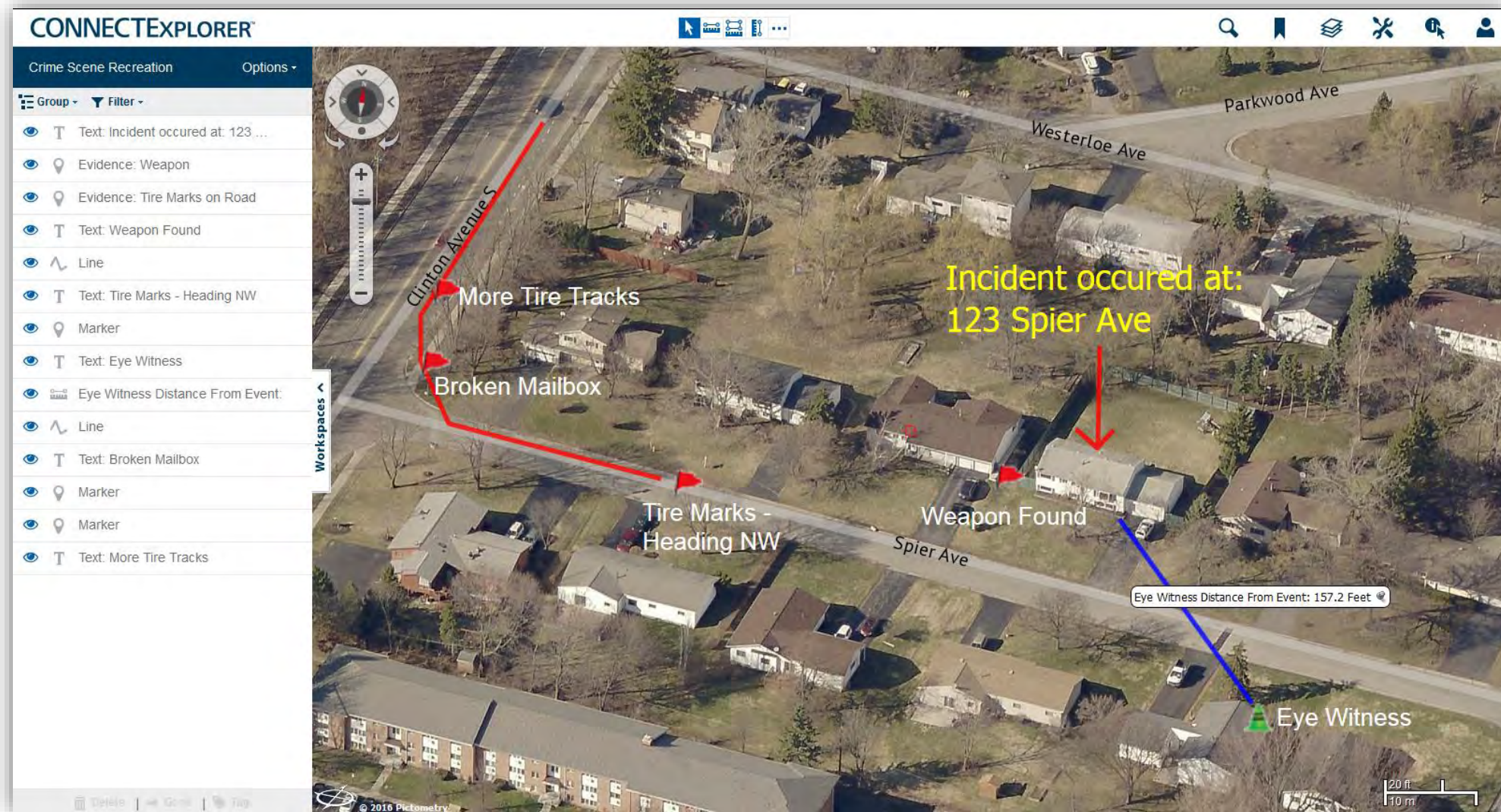


# RHODE ISLAND HISTORICAL IMAGERY ACCESS



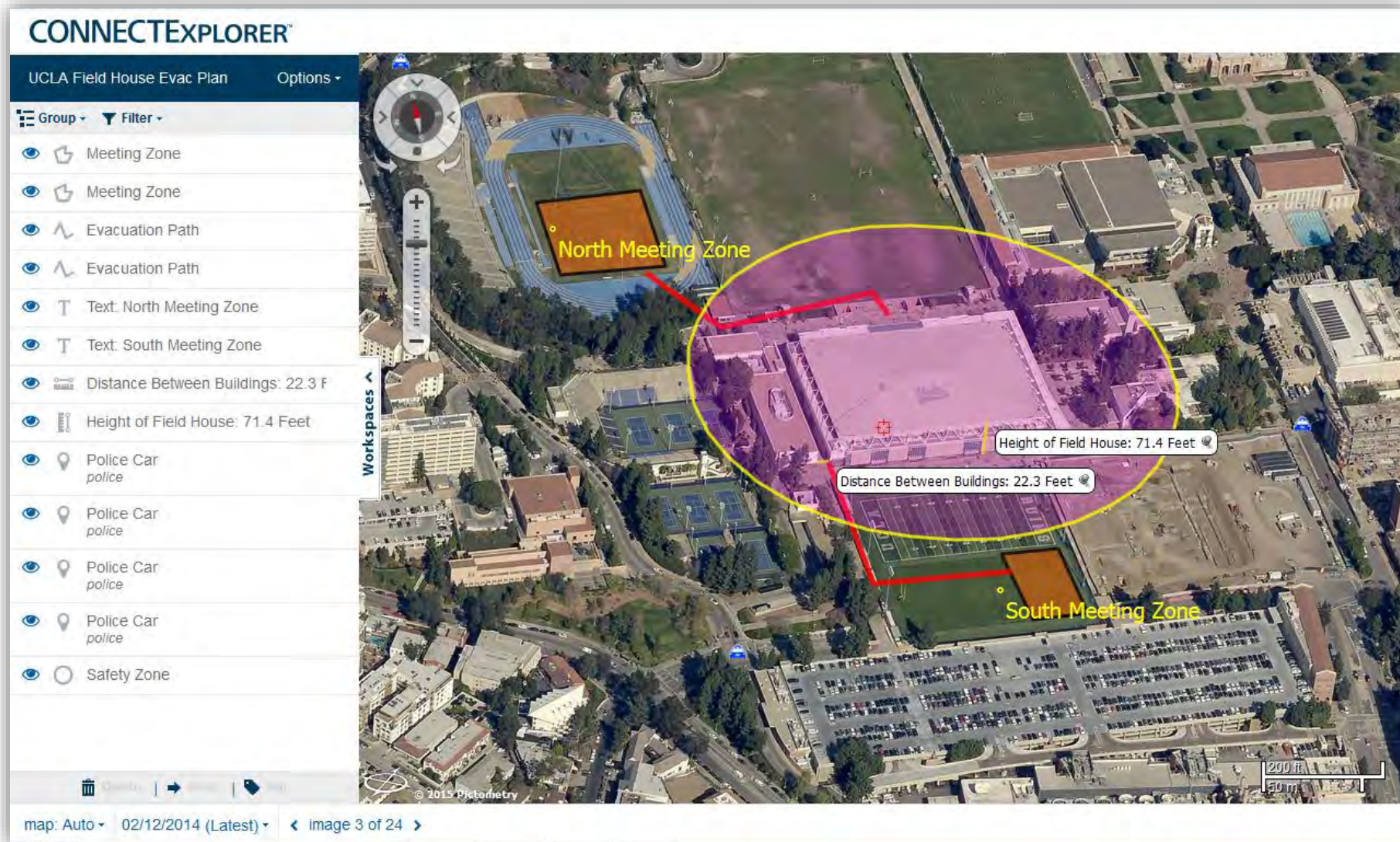


# USE CASE – CRIME SCENE RECREATION



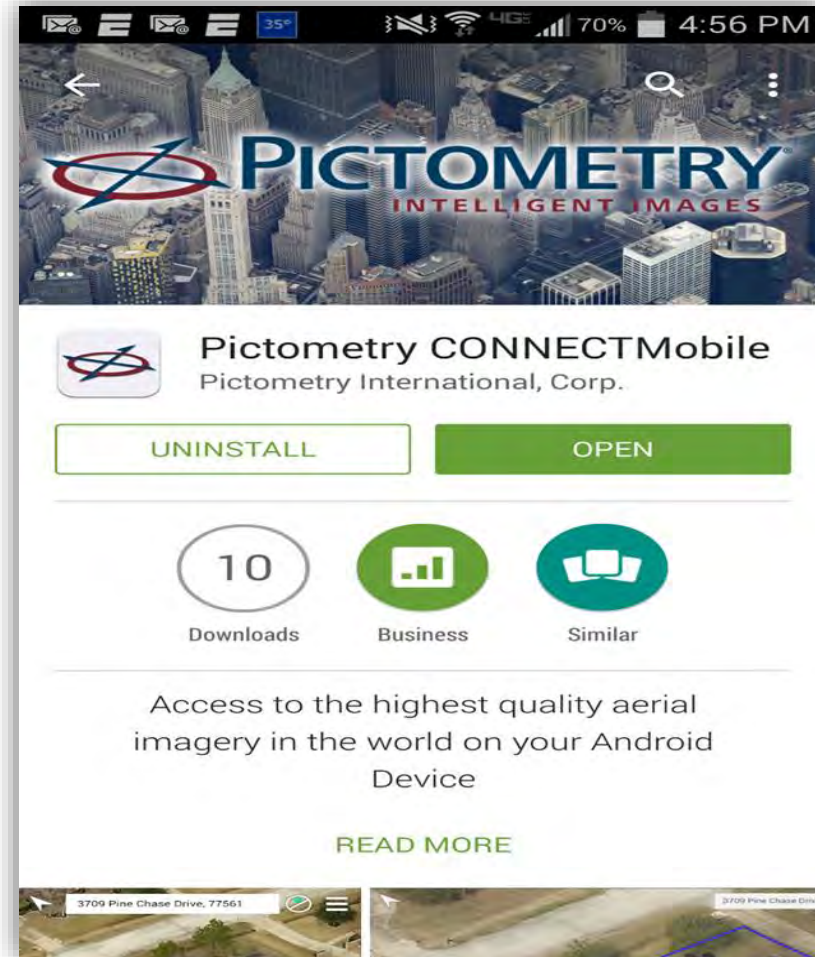
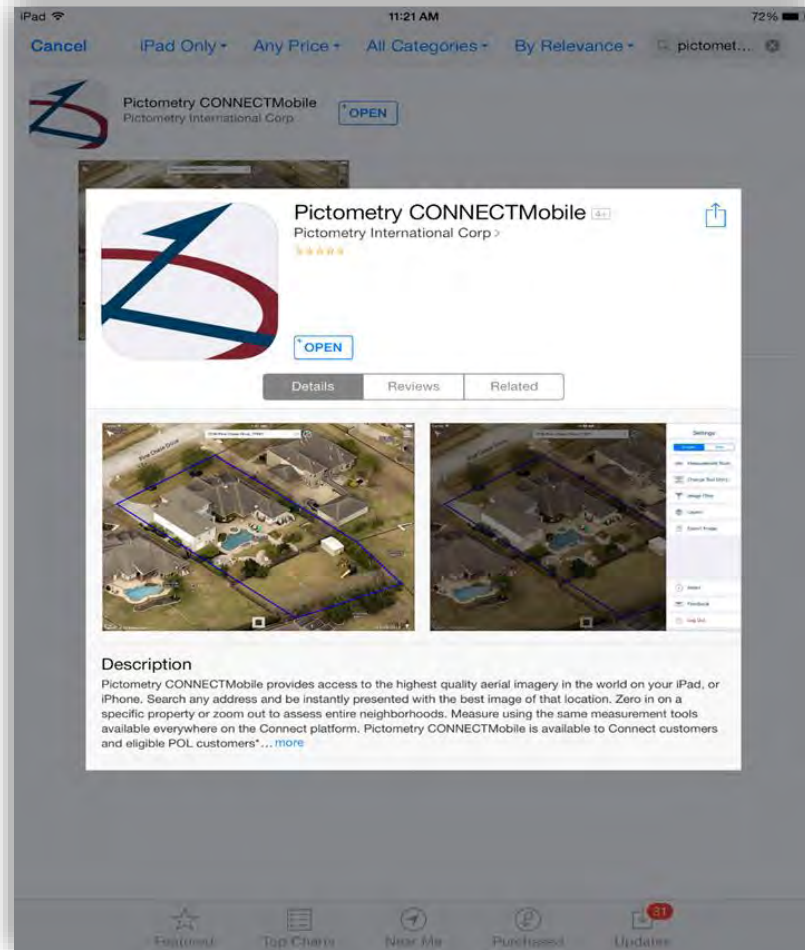


# USE CASE – EVACUATION PLAN

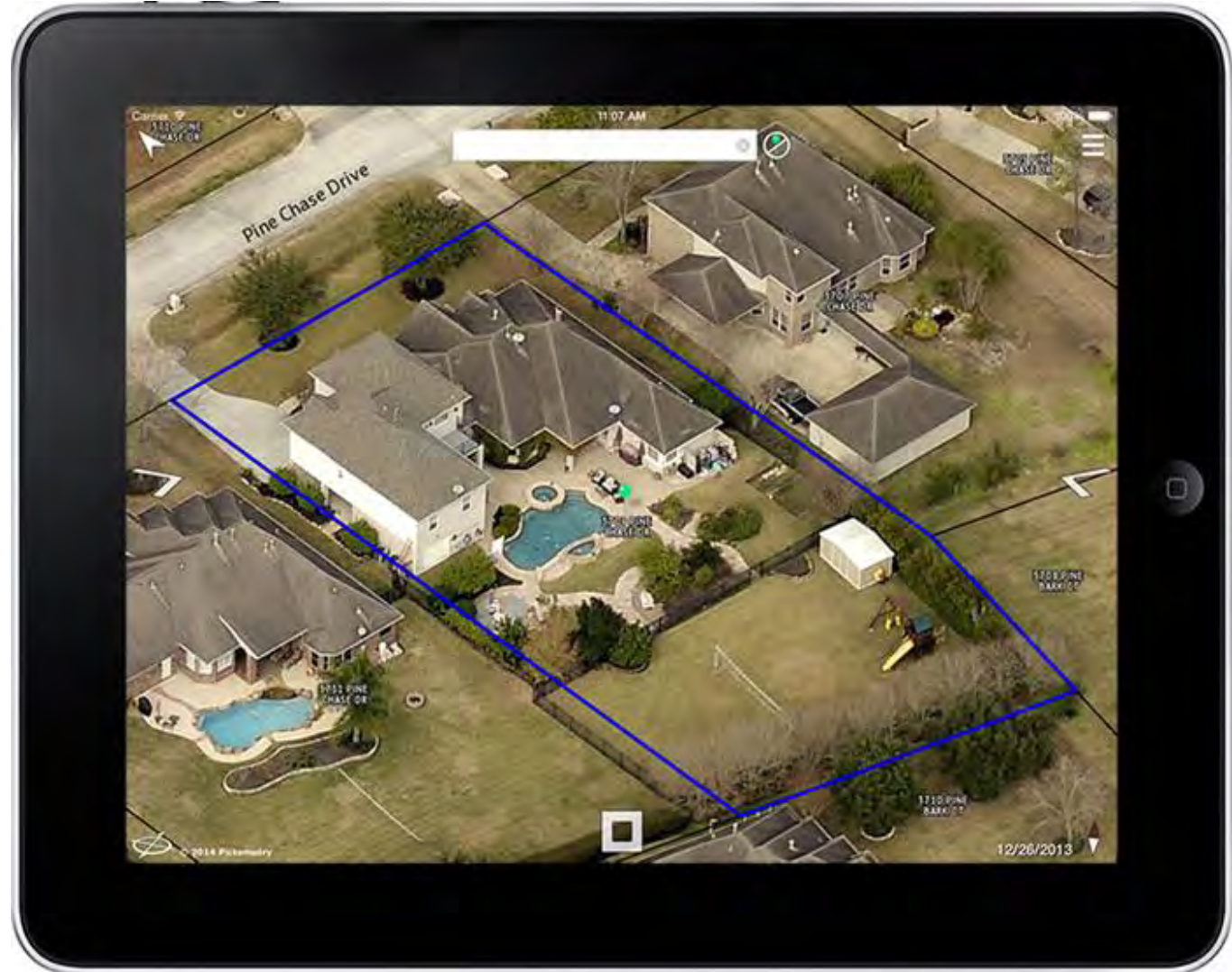




# MOBILE APPS



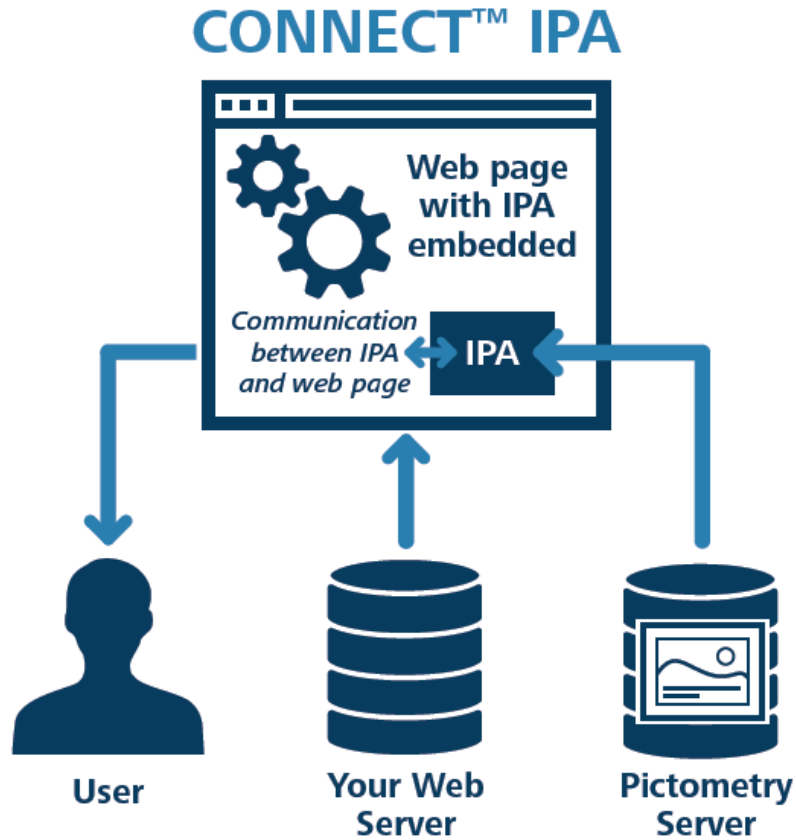
# MOBILE APPS





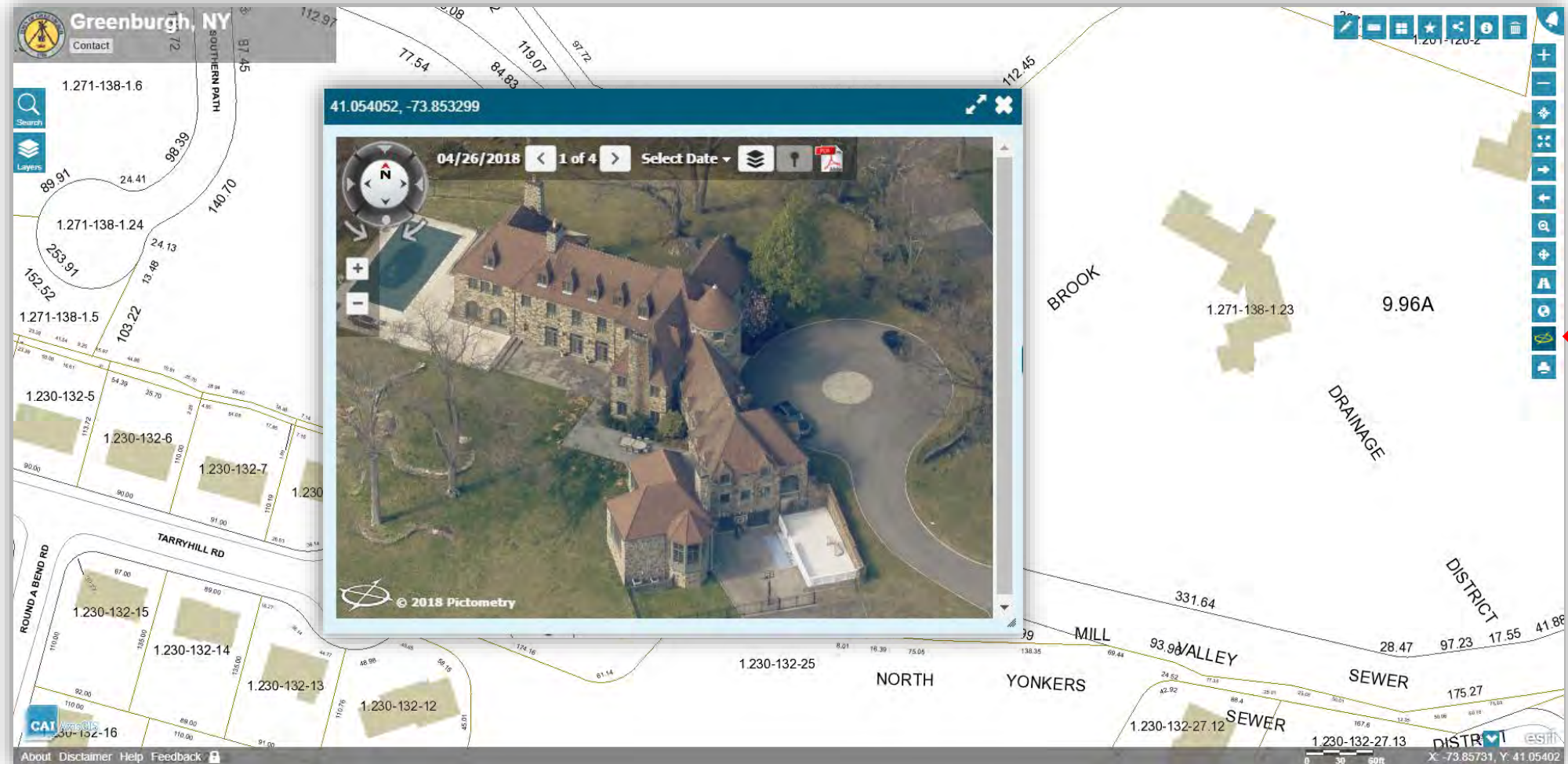
# INTEGRATED PICTOMETRY APPLICATION (IPA)

*Embed Pictometry into an existing application to streamline workflow*



# INTEGRATION SOLUTIONS - IPA

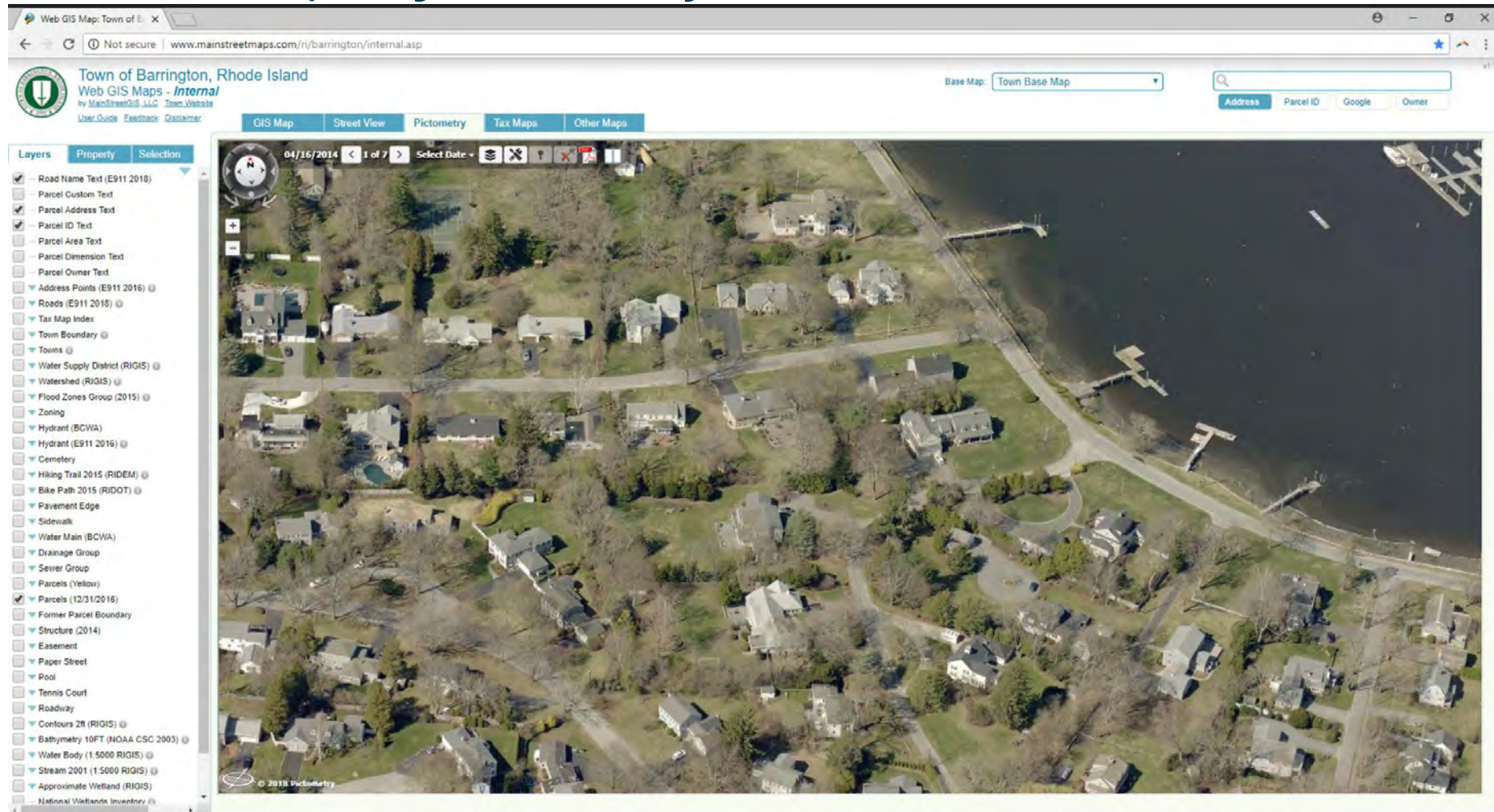
## *Example of Pictometry IPA with CAI Technologies' AxisGIS*





# INTEGRATION SOLUTIONS - IPA

## *Example of Pictometry IPA with MainStreetGIS*



# INTEGRATED PICTOMETRY APPLICATION (IPA)

**\*No measurement tools  
on public viewers &  
small extra fee per year**

## Two Options:

**Visualization\***  
(Public-facing)

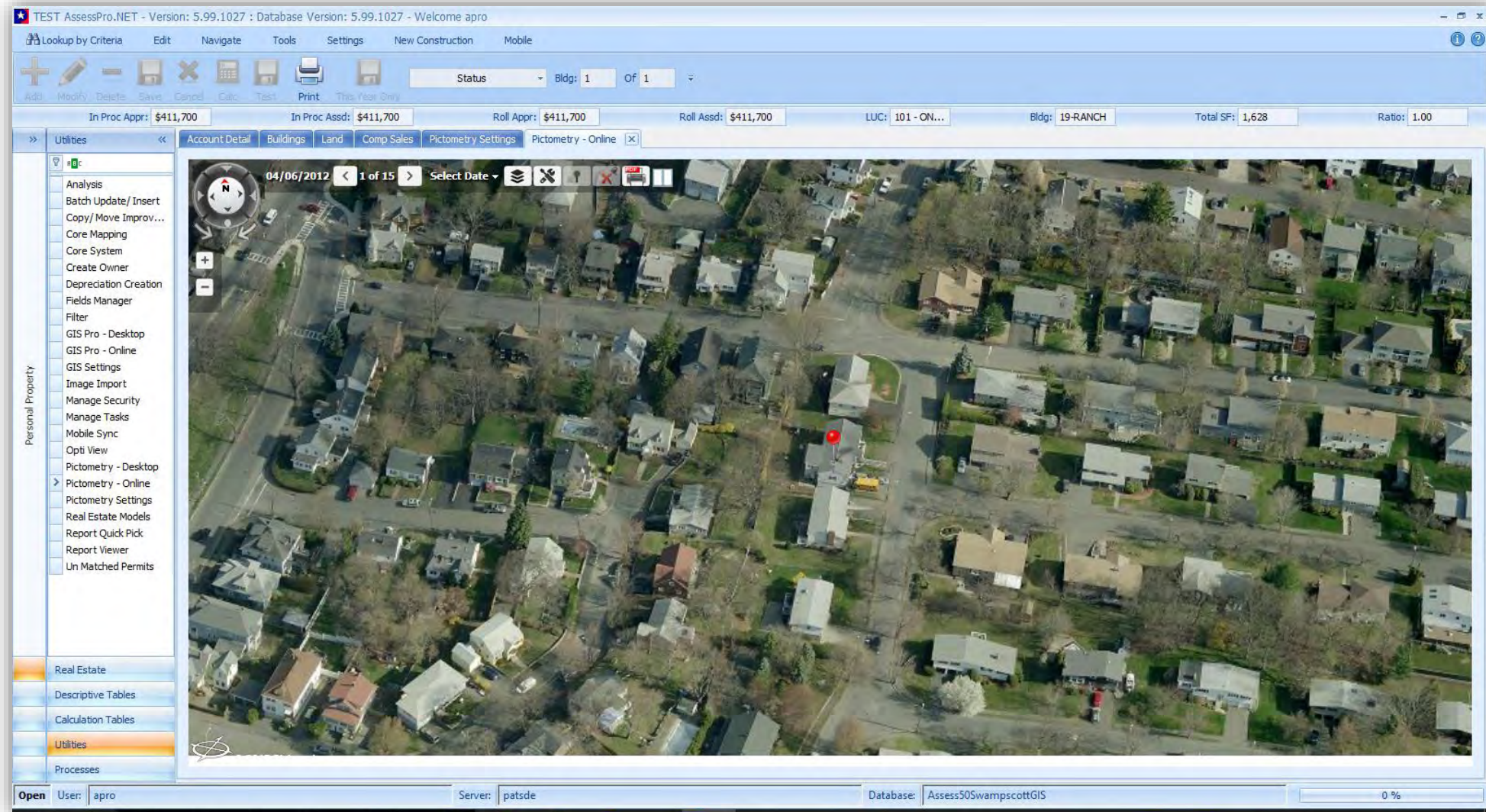
and

**Analytic**  
(Internal only)





# IPA IN CAMA- PATRIOT ASSESSPRO





# IPA IN – CAMA – TYLER'S IAS WORLD

**iasWorld**  
a tyler appraisal & tax solution

iasWorld Demonstration Site

David Boles | Role: Admin | Sign Out | My Account | Report Jobs | ?

Dashboard Maintain **Property Records** Inquire Respond Field Manager Analyze Admin Activity Center

Property Search Personal Property Map Search Advanced Search Sales Search List Management SQL Query

Profile  
Ownership History  
Sales  
Land  
Agricultural  
Residential  
Commercial  
Outbuildings  
Sketch  
Comparables  
Map  
**Pictometry**  
Documents  
Photos  
Permits  
Entrance Info  
Current Year Values  
Value History  
Appeals  
Parcel History  
Tax Summary  
Current Tax Distribution  
Tax Detail  
Escrow  
Tax History  
Payment History  
Special Assessment  
Special Asmt Payoff

PARID: 012011A131.  
NBHD: 04435000  
HAWK TERRY D & CINDY

JUR: 000  
ROLL: RP\_OH  
4298 TROTTERS WY

12/01/2013

1 of 4  
Return to Search Results

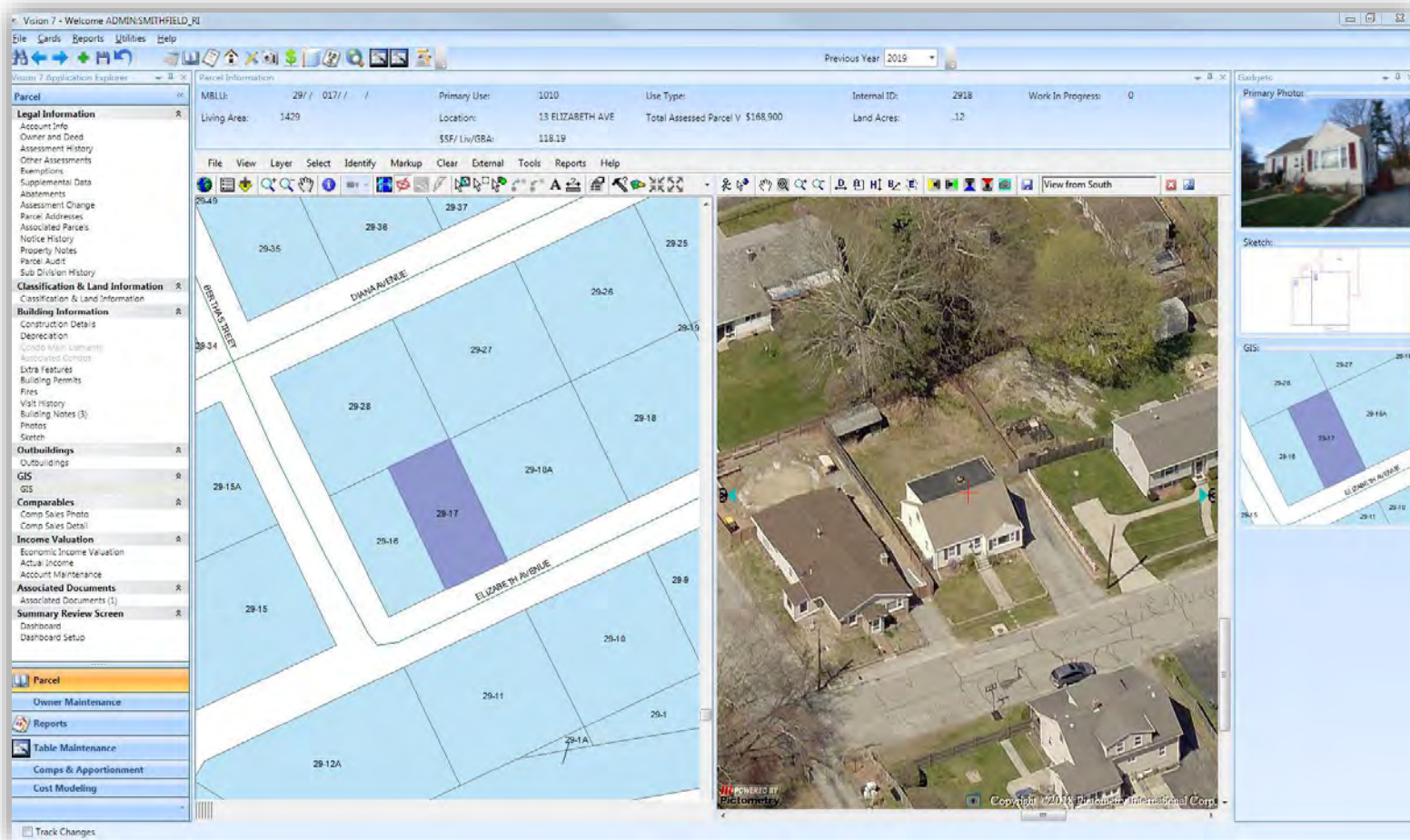
**Reports**  
Commercial PRC  
Comp Sheet  
Mailing List  
Residential PRC  
View Report Status **Go**

12/01/2013





# LOCAL INTEGRATION – CAMA – VISION



## Vision 8 integration?

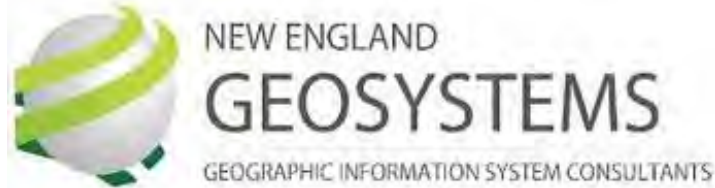
- On their road map
- Meeting with Vision 12.20.18 to discuss
- If interested, let your rep know!

**\*Vision 6.5 (w/ GIS module) & Vision 7 require physical libraries on prem.**



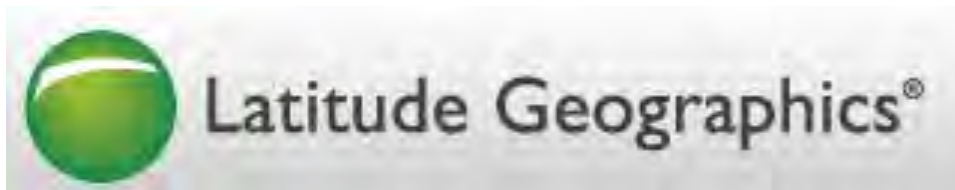
# Add Pictometry to a Program You Use Everyday

*Local GIS & CAMA Vendors With a Current Pictometry Integration*



**PATRIOT PROPERTIES**

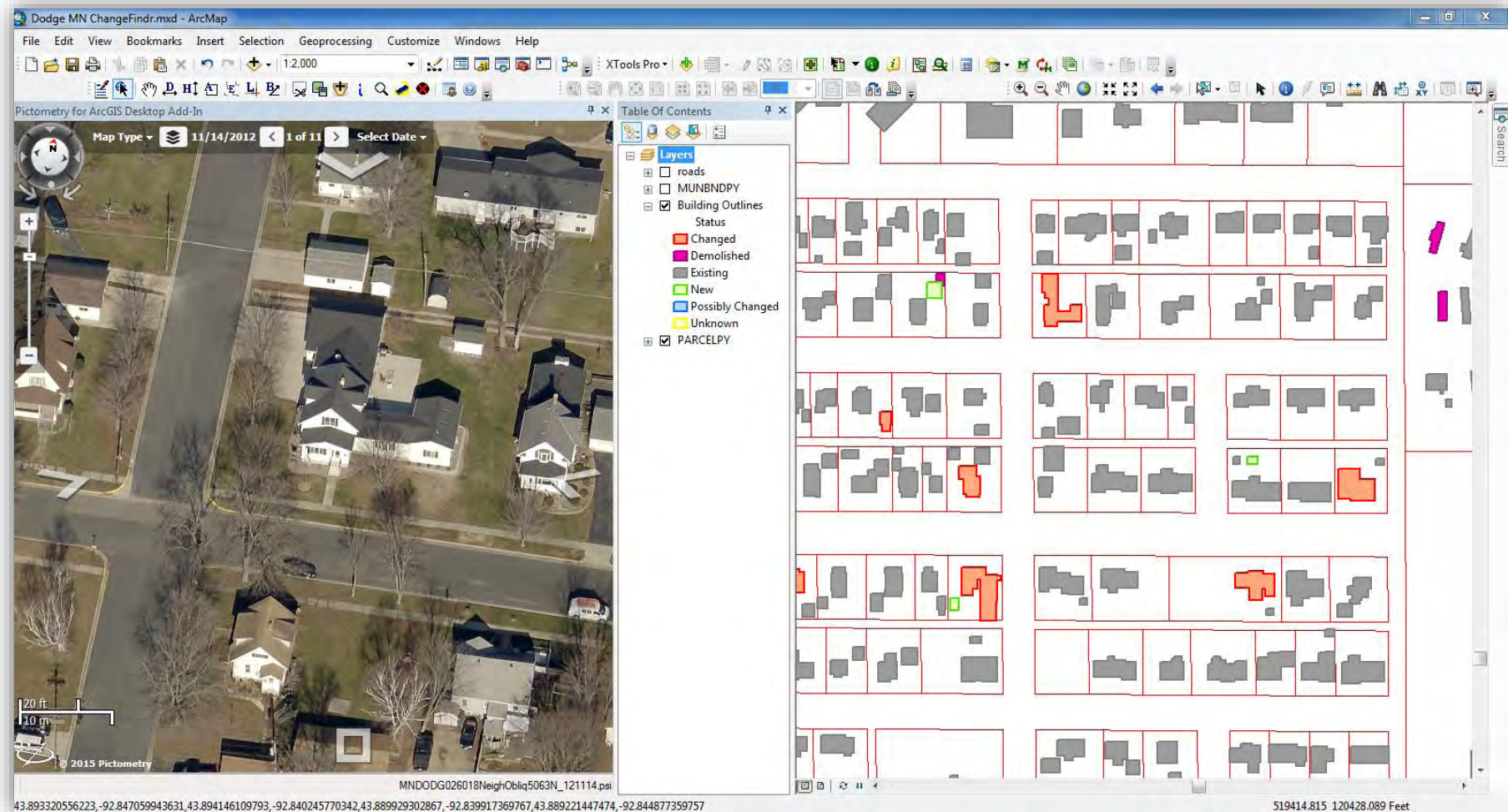
PEOPLEGIS





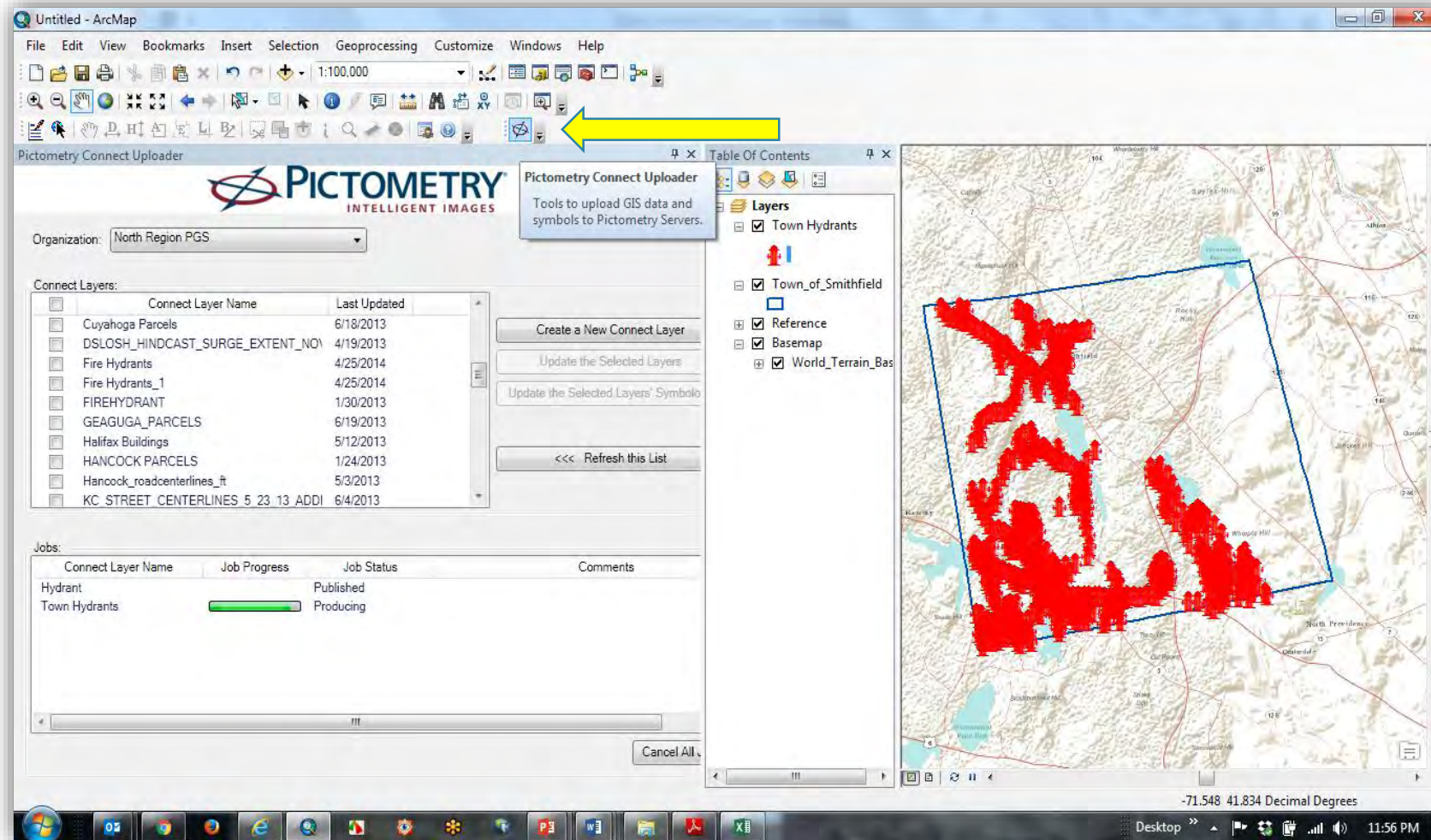
# PICTOMETRY FOR ARCGIS DESKTOP

*VIEW YOUR OBLIQUE LIBRARY FROM WITHIN ARCMAP*



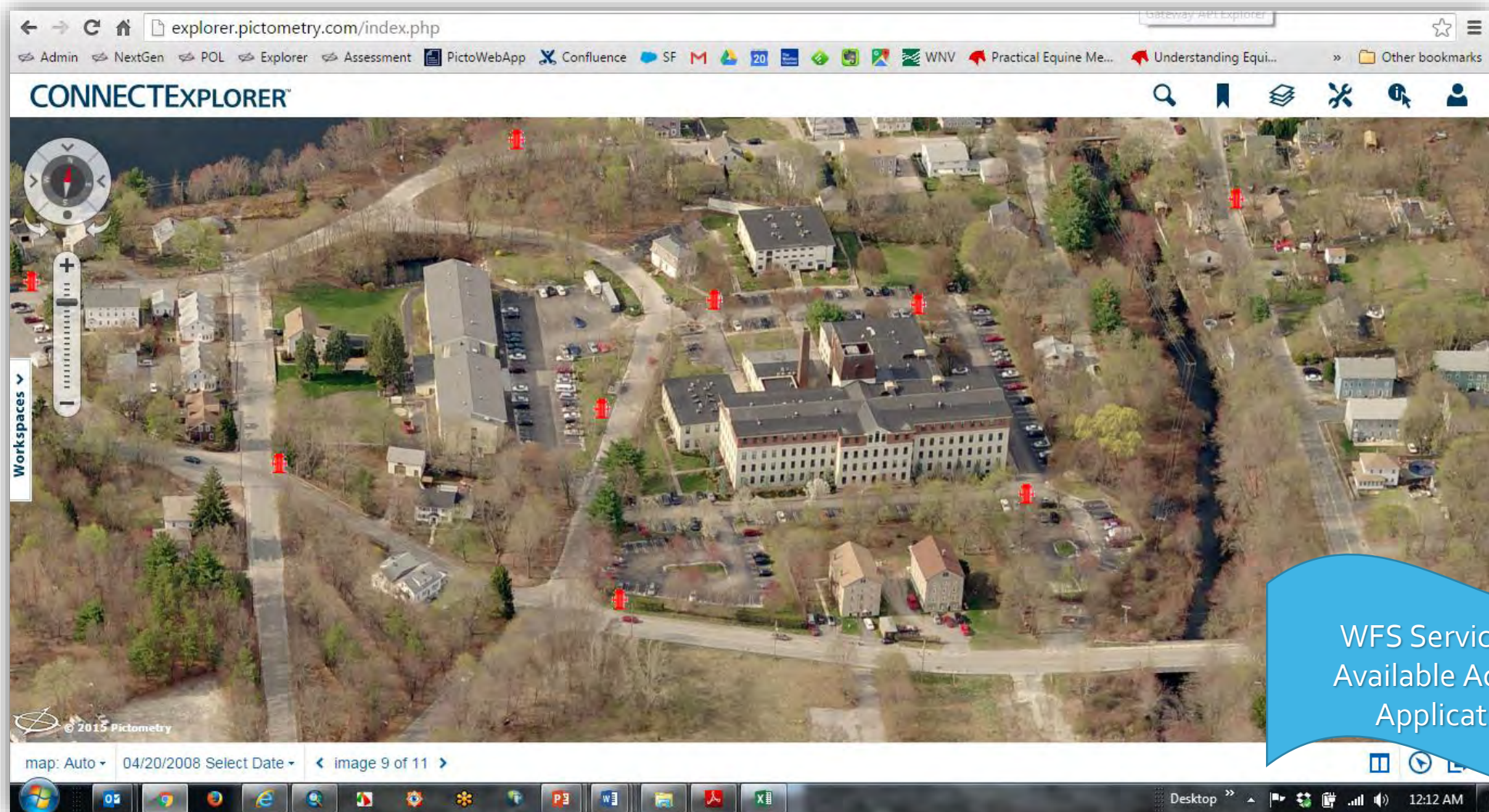
# PICTOMETRY'S ARCMAP UPLOADER

*Upload GIS data to your CONNECT account directly from ArcMap*



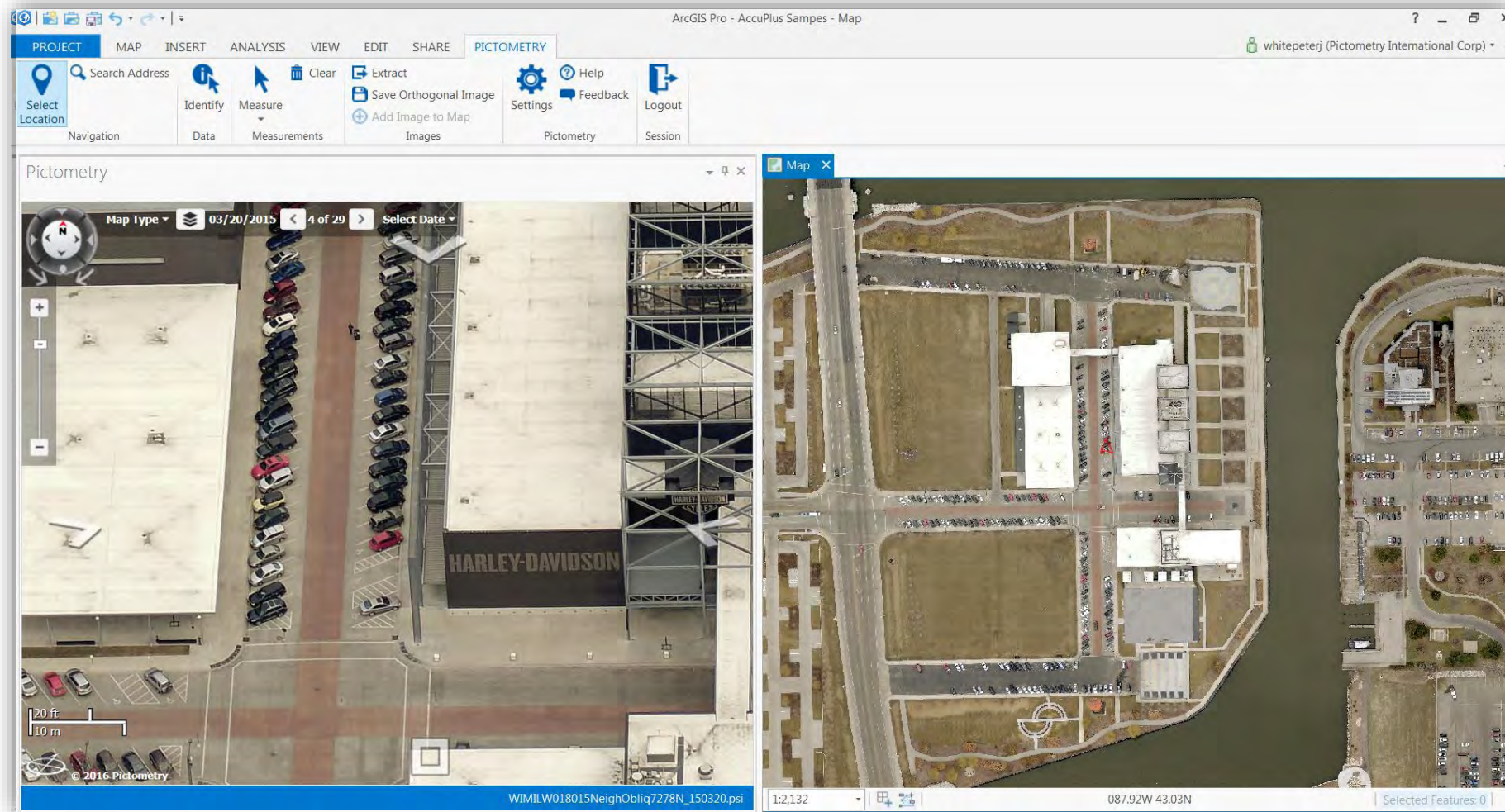


# PICTOMETRY'S ARCMAP UPLOADER





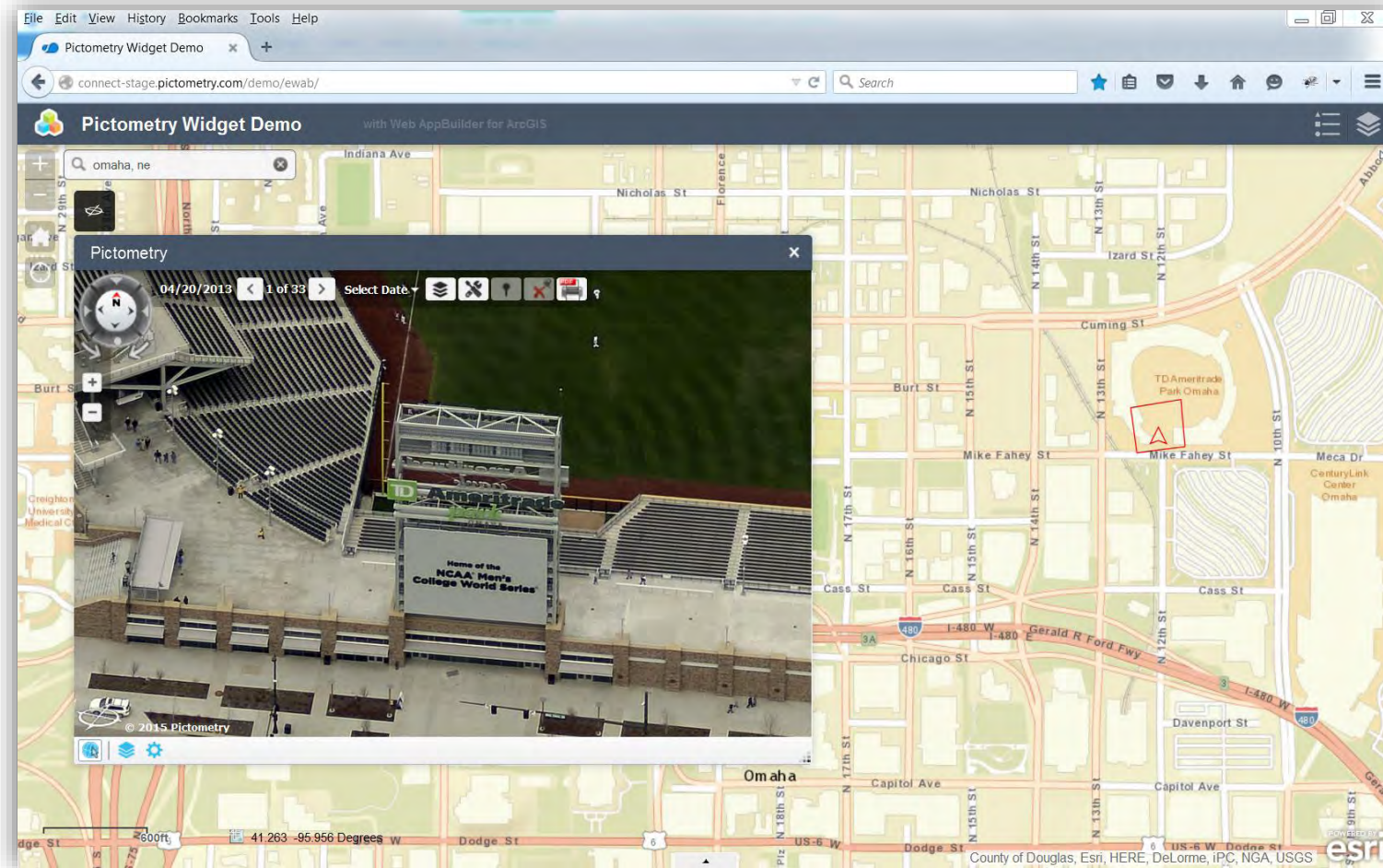
# PICTOMETRY FOR ARCGIS PRO





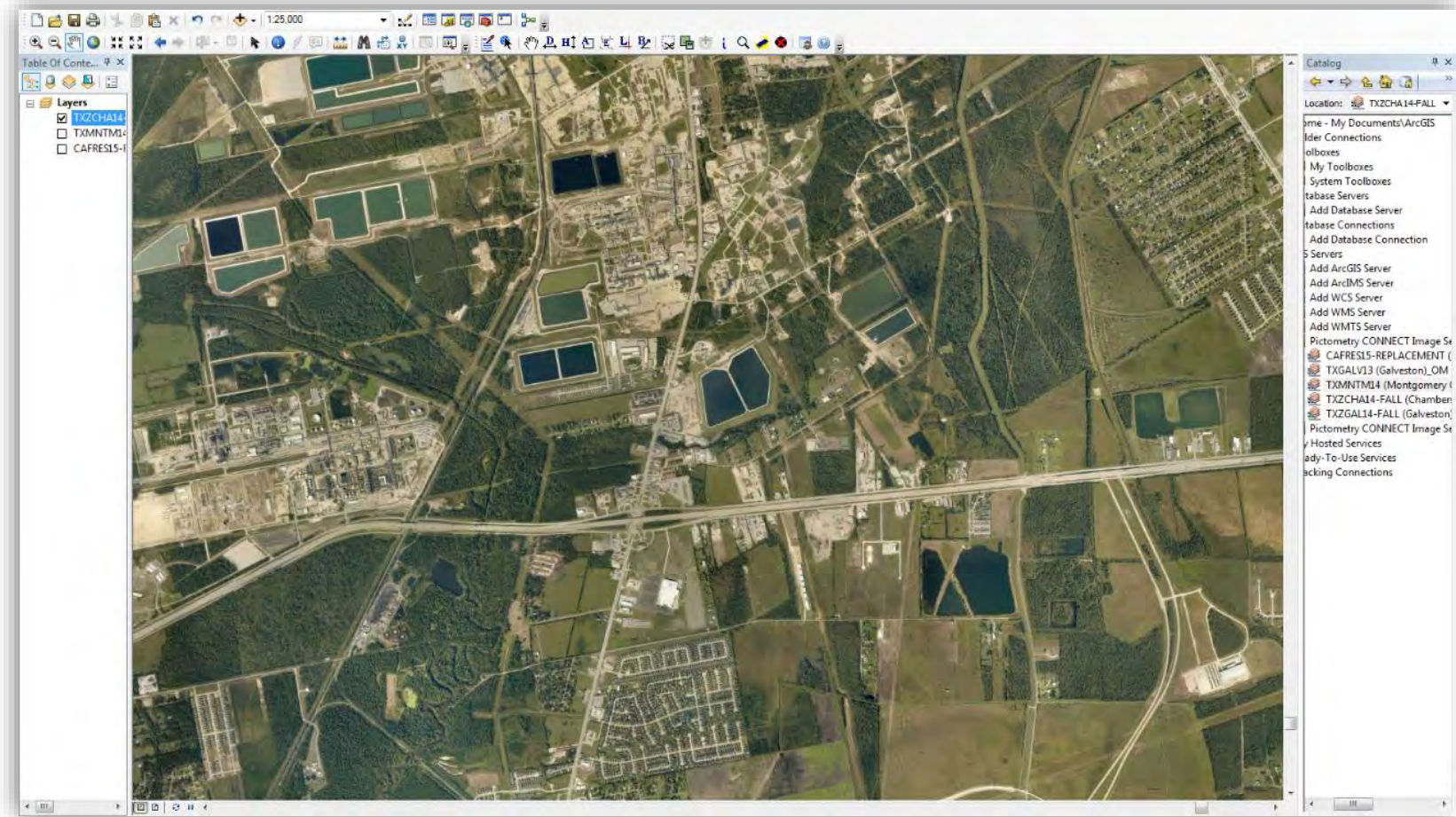
# PICTOMETRY FOR ESRI'S WEB APPBUILDER

*A new "widget" available from Pictometry for  
Integrating with **Web AppBuilder for ArcGIS (Developer Edition)***



# ORTHOMOSAICS

- Available through RIGIS –  
3 x year for next 3 years
- Base layer in ArcGIS  
Desktop
- Send to CAMA/GIS  
vendor to be used as a  
base layer
- Create your own web  
mapping service and push  
to AGOL







OFF-LINE ACCESS

# ELECTRONIC FIELD STUDY (EFS)

*Stand-alone desktop application*



- No internet required – connects to imagery locally
- No Additional Cost
- Unlimited usage
- Full analytic tools
- Can overlay GIS data
- Create custom searches and queries
- ROBUST

## *A few cons to consider...*

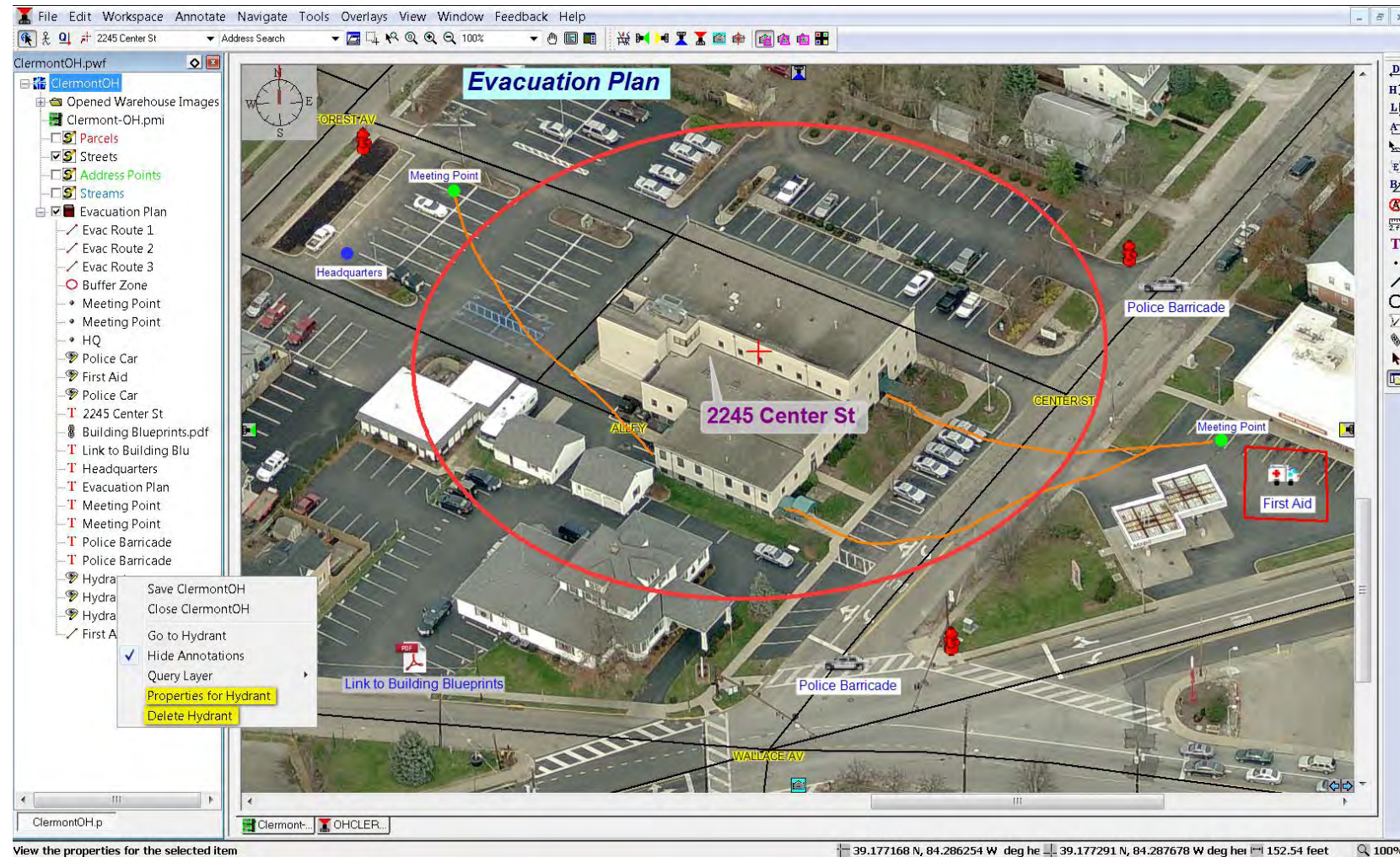
- Clunky
- Connects to imagery locally
- Steeper learning curve
- Hard to administer and deploy
- IT/Network Reliance





# ELECTRONIC FIELD STUDY (EFS)

*Stand-alone desktop application*



# LOCAL INTEGRATION INTO 911 CAD SOFTWARE

---



- Helps Locate Callers
- Verify Addresses
- An “eye in the sky,” conveying pertinent information to those on the scene



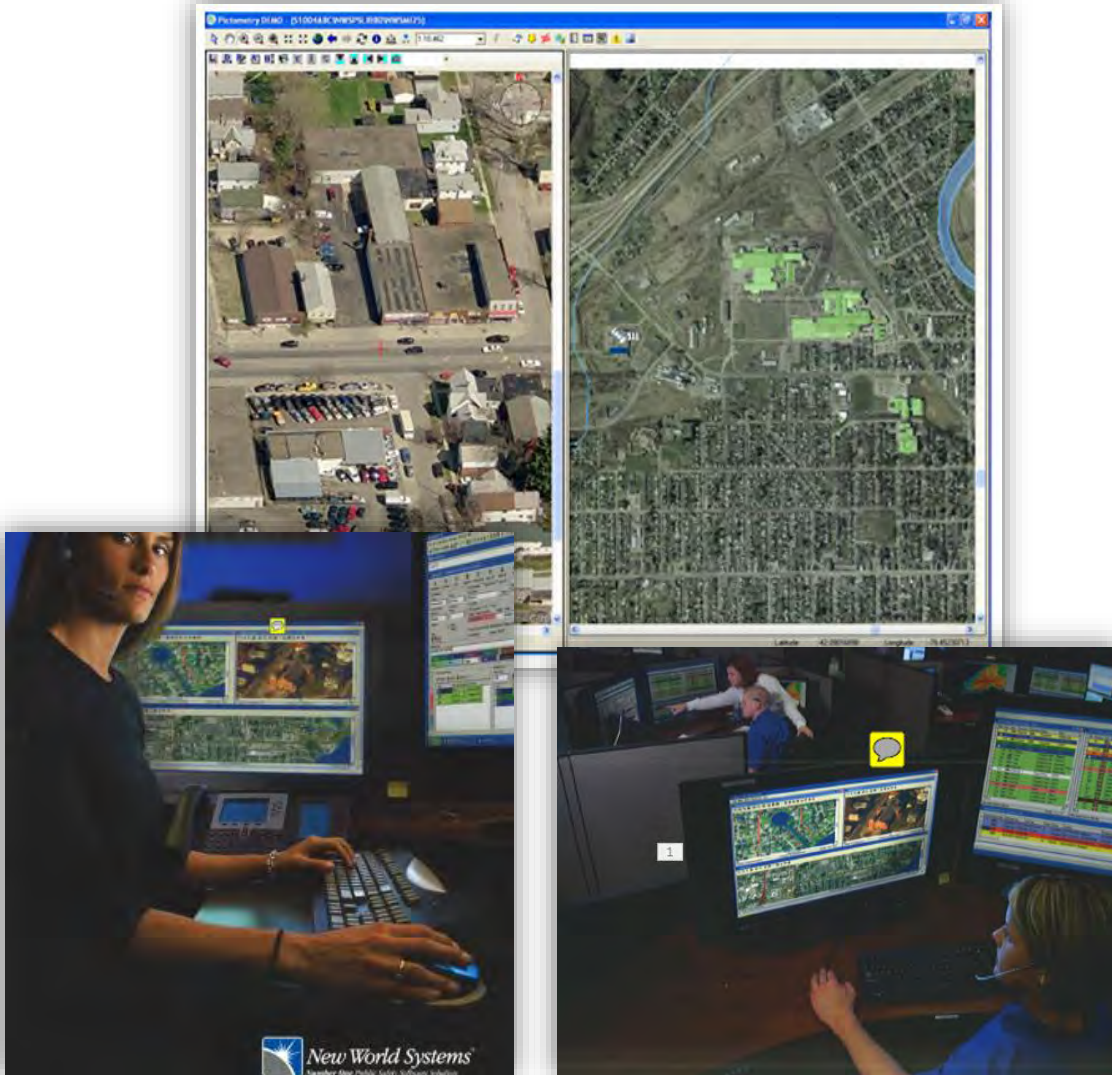


# NEW WORLD CAD INTEGRATION



## Active-X Control

- No software installation required
- No separate monitor needed.
- Imagery/data housed on local server or on individual stations
- CAD passes X,Y to display appropriate image
- Can be automatic or manual
- 40+ installations nationwide





Training and  
Supppport



# TRAINING & SUPPORT

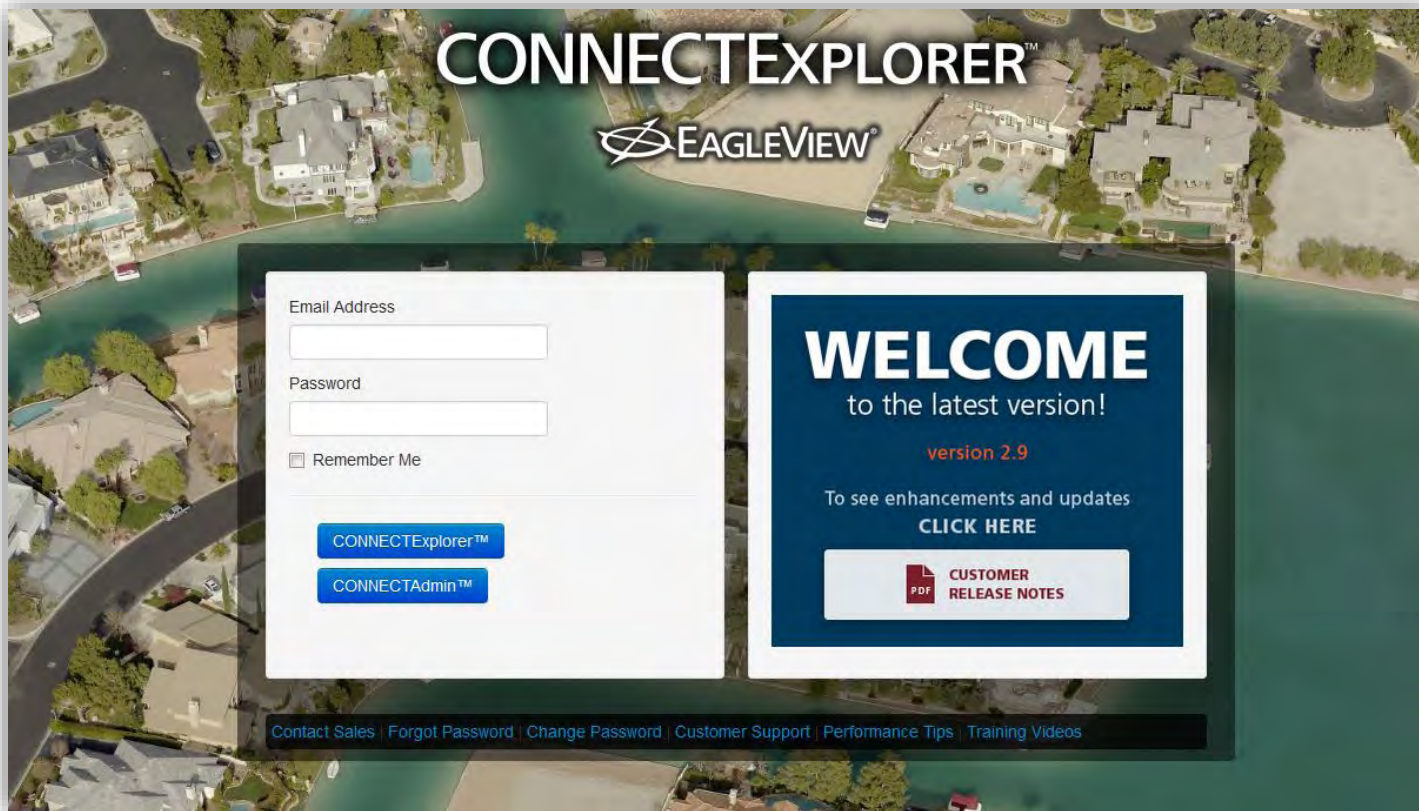
---

- Completely covered within your contract!
  - No “limit” to training or support hours available
- Dedicated Technical Trainer
- On-site Training
- Virtual Training
  - Attend a custom sessions from your desk
  - Attend monthly generic sessions
  - Recording available
- Self-paced
  - Brand New Training Website
  - Documentation
  - Videos
- Custom documents
- Regional Technical Manager



# FREE 60 DAY TRIAL TO CONNECT IS AVAILABLE

---



- Access to all CONNECT services
- 100 concurrent users
- Documentation Available
- Training included





# SO....HOW MUCH?????

---

## 100% Free Option

- RIEg11 will provide each muni with hard drive of imagery from Fall '18 flight (and again in '21)
- Unlimited usage Electronic Field Study (EFS) & local ArcGIS extensions
- Unlimited GIS addition
- Full suite of measurement tools
- 911 Integration\*
- Training & Support

\* - Free to install EFS in 911. Will need to work with your CAD vendor if not currently a partner. Also, we cannot control if your CAD charges you to implement

## CONNECT

### CA50 - \$2200 per year (per muni)

- Every employee in the muni can get an account
- **SHARED SERVICE! Will help get others on board.**
- 50 people online at the same time
- **Access to all RIDOT ortho-only flights**
- **Access to entire state's image library, including historical**
- Unlimited GIS Addition
- Access to CONNECTExplorer, Mobile Apps & ArcGIS plug-ins
- Staff-side integrations with 3<sup>rd</sup> Party Vendors
  - Making imagery public adds an extra **\$750** per year
- Training & Support included

**Best strategy** – get multiple municipal dept.'s interested! We can help.







# QUESTIONS?







# THANK YOU!





# OPEN ACCESS TO PICTOMETRY ORTHO IMAGERY

via RIGIS

Greg Bonyngre URI Geospatial Extension Specialist





# Open Access to Pictometry Ortho Imagery via RIGIS

GREG BONYNGE, GISP  
RIGIS DATA MANAGER  
UNIVERSITY OF RHODE ISLAND

[GREG@EDC.URI.EDU](mailto:GREG@EDC.URI.EDU)



# IN A NUTSHELL...

- OPEN, FREE, NO ACCOUNT NEEDED
- ORTHOS ONLY
- ACCESS METHODS...
  - TRADITIONAL DOWNLOAD (GeoTIFF, JPEG2000)
  - ESRI ARCGIS ONLINE HOSTED TILE LAYER
    - SOLELY FOR THE ARCGIS ECOSYSTEM
  - ESRI TILE PACKAGE
  - ESRI IMAGE SERVICE
    - JSON, SOAP, WMS, WCS





## Other RIGIS Collections



Browse Base Maps



Browse Imagery Collections



Browse Elevation Data



Download the standalone vector  
data geodatabase

<http://www.rigis.org>  
(not https!)



2016 USDA NAIP  
Digital True Color  
Orthophotography

URIEDC\_RIGIS



2016 Rhode Island  
Eelgrass Mapping Task  
Force  
Orthophotography

URIEDC\_RIGIS



2014 USGS Digital True  
Color  
Orthophotography

URIEDC\_RIGIS



2014 USDA NAIP  
Digital True Color  
Orthophotography

URIEDC\_RIGIS



2014 NOAA NGS IOCM  
35cm  
Orthophotography

URIEDC\_RIGIS



2012 Rhode Island  
Eelgrass Mapping Task  
Force  
Orthophotography

URIEDC\_RIGIS



2011 RIDEM Digital  
True Color  
Orthophotography

URIEDC\_RIGIS



2008 RIDEM Digital  
Aerial Photography

URIEDC\_RIGIS





# 2014 USGS Digital True Color Orthophotography

**Contributor:** U.S. Geological Survey, Fugro EarthData, Inc.

Multispectral (4-band), 0.3-meter (~1-foot) spatial resolution orthorectified digital aerial photographs of the State of Rhode Island collected April 9-10 and 17, 2014. These images were contracted by a partnership consisting of the United States Geological Survey, National Geospatial-Intelligence Agency, and the Rhode Island Department of Administration, Statewide Planning Program.

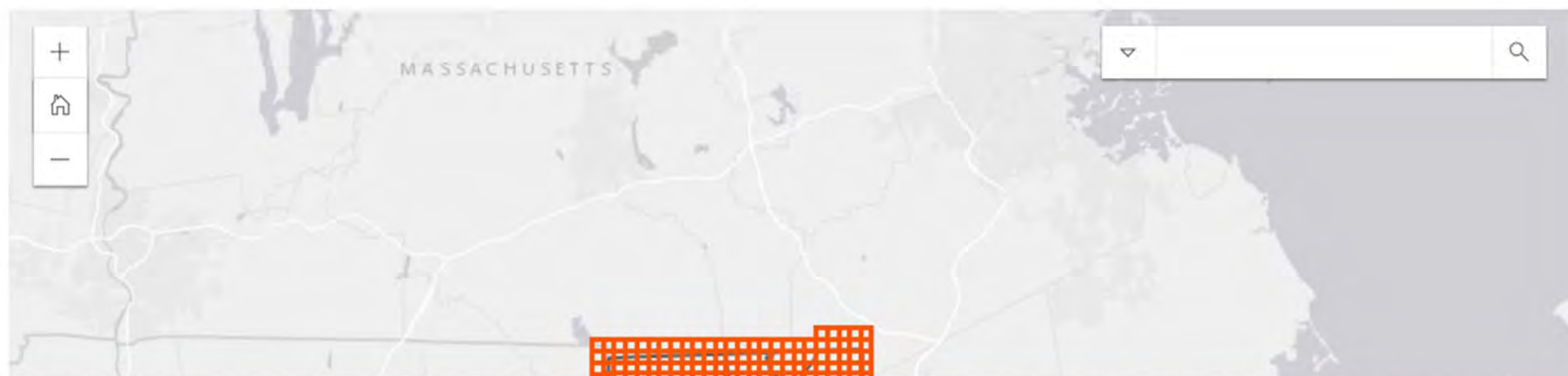
This downloadable **supplemental documents** file, originally delivered by the USGS, includes survey reports, flightlogs, and accuracy reports.

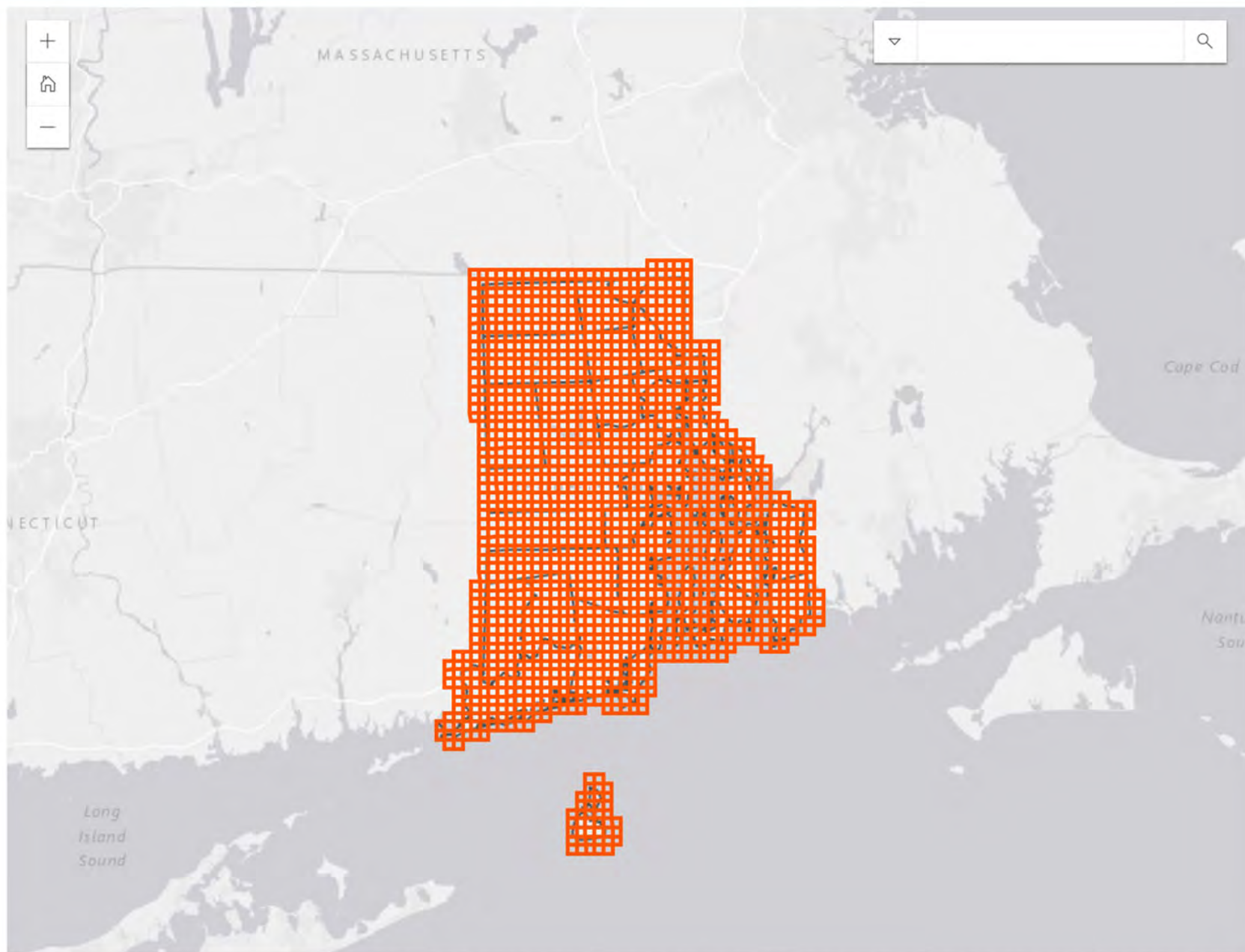
This **tile index** shapefile is helpful for GIS users to display the approximate location of each aerial photograph, helping to identify which images to download. This index shapefile is the same for both GeoTIFF and JP2 images. Most of the GeoTIFF formatted files are approximately 100 MB large (amounting to a total collection size of 151 GB), while the ~10:1 compressed JPEG2000 formatted files are about 20 MB large (total collection size of 30 GB). The JPEG2000 file formatted files are of excellent quality and are recommended unless if you have a specific need for the larger file size.

**[Download all JPEG2000 images in collection here!](#)**

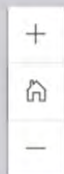
**[Download all GeoTIFF images in collection here!](#)**

**[Preview metadata here!](#)**









▼

🔍



☐ ✕

**Tile Name: 0310000350**

Image formats available for download:

[GeoTIFF](#)

[JPEG2000](#)

🔍 Zoom to

## 2014 USGS Digital True Color Orthophotography - GeoTIFF

Multispectral (4-band), 0.3-meter (~1ft) spatial resolution orthorectified digital aerial photographs of Rhode Island flown in April 2014.

To easily download all copies of the files below, use a **download manager**!

0220000800.zip  
0220000850.zip  
0225000750.zip  
0225000800.zip  
0225000850.zip  
0225000900.zip  
0225001100.zip  
0225001150.zip  
0225001200.zip  
0230000750.zip  
0230000800.zip  
0230000850.zip  
0230000900.zip  
0230000950.zip  
0230001000.zip  
0230001050.zip  
0230001100.zip  
0230001150.zip  
0230001200.zip  
0230001250.zip  
0235000800.zip  
0235000850.zip  
0235000900.zip  
0235000950.zip  
0235001000.zip  
0235001050.zip

Spring 2018 has 12,527 images...  
use a download manager!

GeoTIFF: ~1.7 TB

JPEG2000: ~485 GB

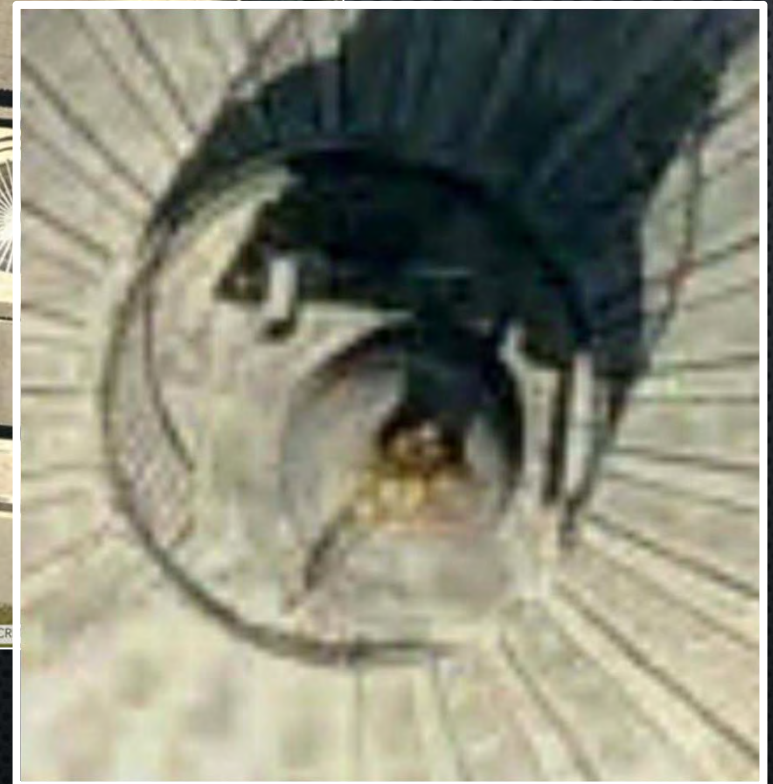


# ARCGIS ONLINE HOSTED TILE LAYER

- PRE-CACHED, “SLIPPY” MAP SERVICE
- LIMITED ZOOM TO 1:564



1:564



1:70



ArcGIS ▾ My Map

Details

+ Add ▾

Basemap |

Save ▾

Print ▾

Meas



ArcGIS Online ▾

Q RIGIS Spring 2018



3 layers



2018)

by URIEDC\_RIGIS

Updated: 12/11/18



Rhode Island Aerial Photographs (Spring 2018; State Plane)

by URIEDC\_RIGIS

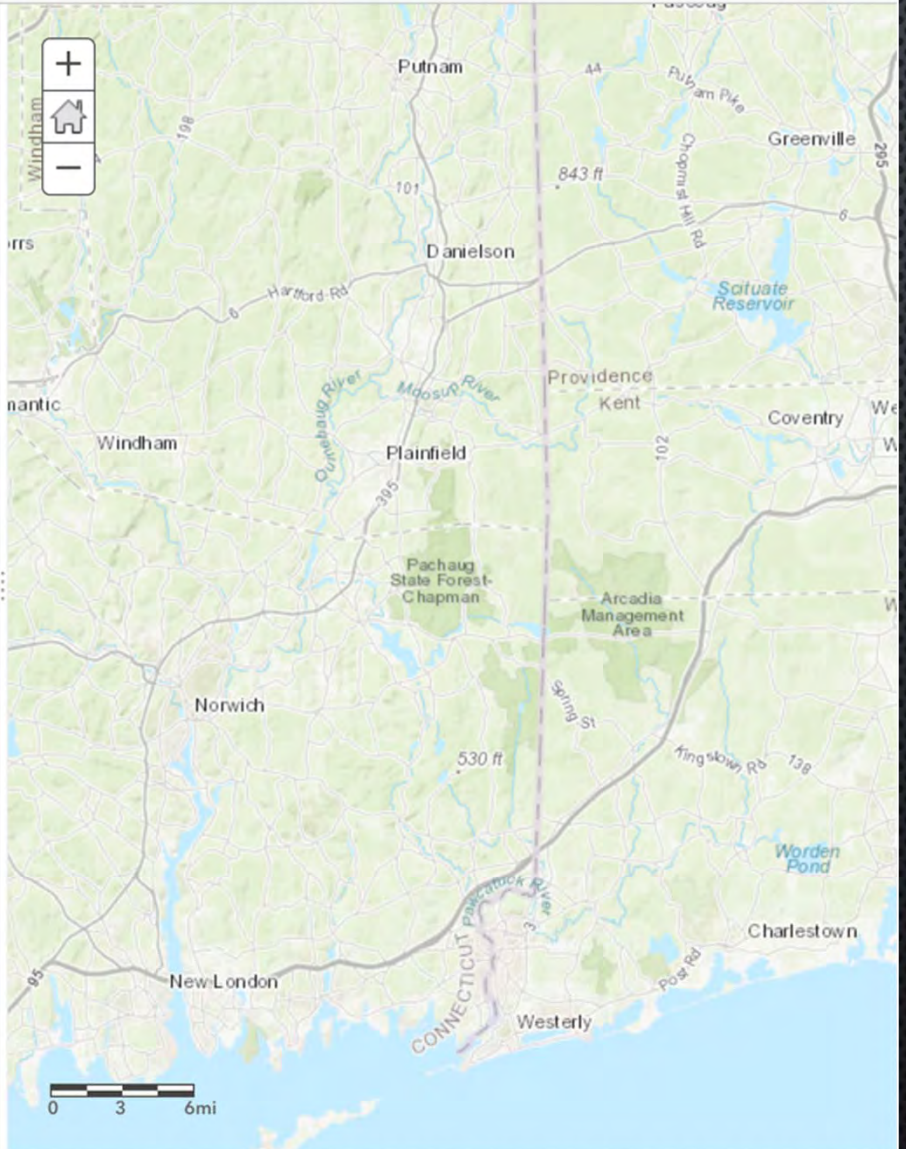
Updated: 12/11/18



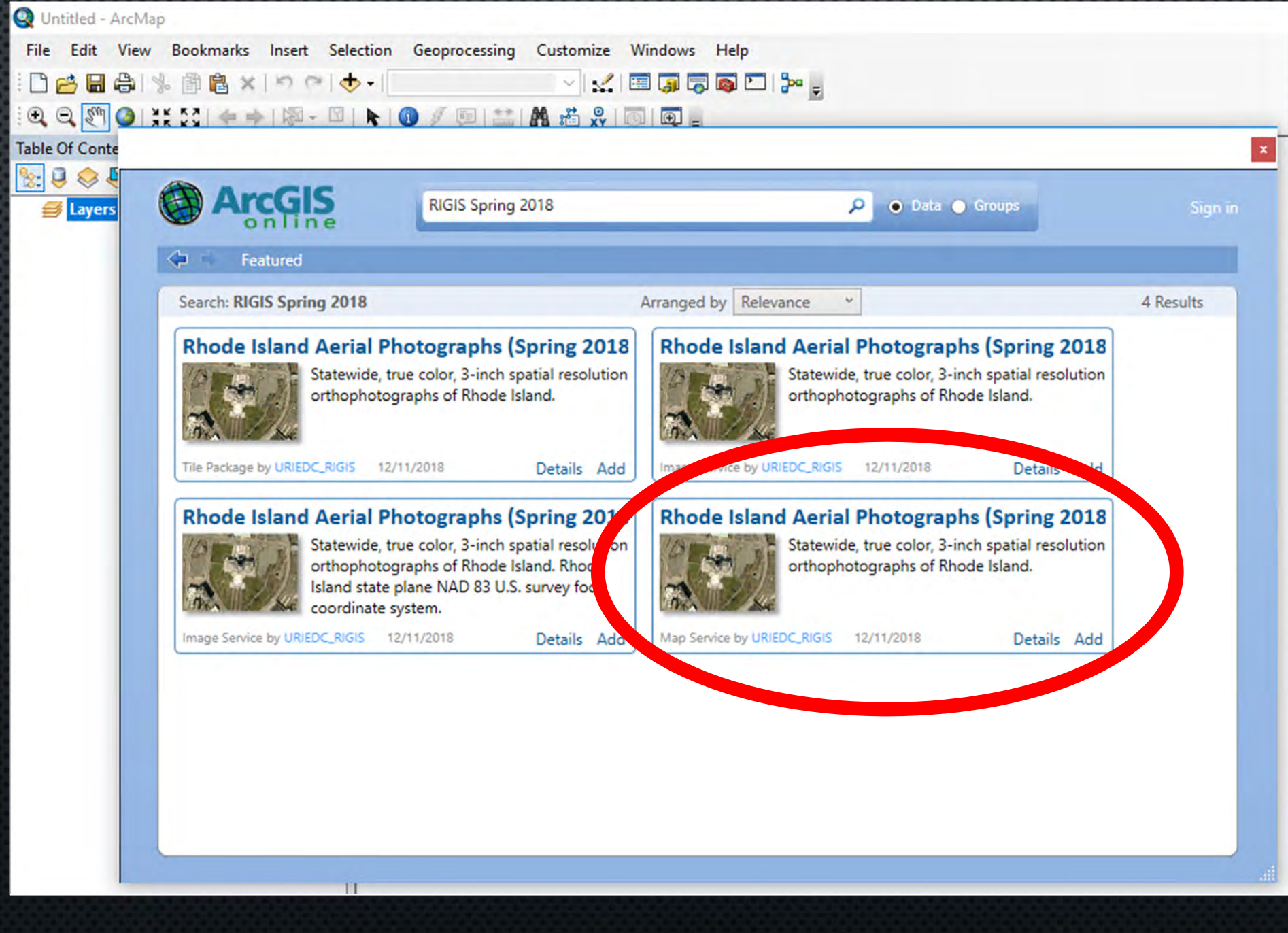
Rhode Island Aerial Photographs (Spring 2018)

by URIEDC\_RIGIS

Updated: 12/11/18







ArcGIS Pro - RIGIS\_demo - Map

Project | Map | Insert | Analysis | View | Edit | Imagery | Share

Clipboard | Navigate | Layer | Selection | Inquiry | Labeling | Offline

Contents | Catalog | Map X

Search

Drawing Order

Map

Topographic

Add Data

Portal | All Portal | Search Result for 'RIGIS Spring 2018'


RIGIS Spring 2018

Organize | New Item

Name	Type	Date	Owner
Rhode Island Aerial Photographs (Spring 2018)	Tile Layer (Hosted)	12/11/2018 4:01 PM	URIEDC_RIG
Rhode Island Aerial Photographs (Spring 2018)	Imagery Layer	12/11/2018 4:01 PM	URIEDC_RIG
Rhode Island Aerial Photographs (Spring 2018; State Plane)	Imagery Layer	12/11/2018 4:01 PM	URIEDC_RIG
Rhode Island Aerial Photographs (Spring 2018)	Tile Package	12/11/2018 4:00 PM	URIEDC_RIG

Name: Rhode Island Aerial Photographs (Spring 2018) | Default

OK | Cancel

Name	Type	Date	Owner
 Rhode Island Aerial Photographs (Spring 2018)	Tile Layer (Hosted)	12/11/2018 4:01 PM	URIEDC_RIGIS



# TILE PACKAGE & COLLECTOR OFFLINE USE

## Rhode Island Aerial Photographs (Spring 2018)



Statewide, true color, 3-inch spatial resolution

Tile Package by [URIEDC\\_RIGIS](#)

Created: Nov 1, 2018 Updated: Dec 11, 2018



ArcGIS My Map

Details Add Basemap

ArcGIS Online

RIGIS Spring 2018

3 layers

2018)

by URIEDC\_RIGIS

Updated: 12/11/18

Rhode Island Aerial Photographs (Spring 2018; State Plane)

by URIEDC\_RIGIS

Updated: 12/11/18

Rhode Island Aerial Photographs (Spring 2018)

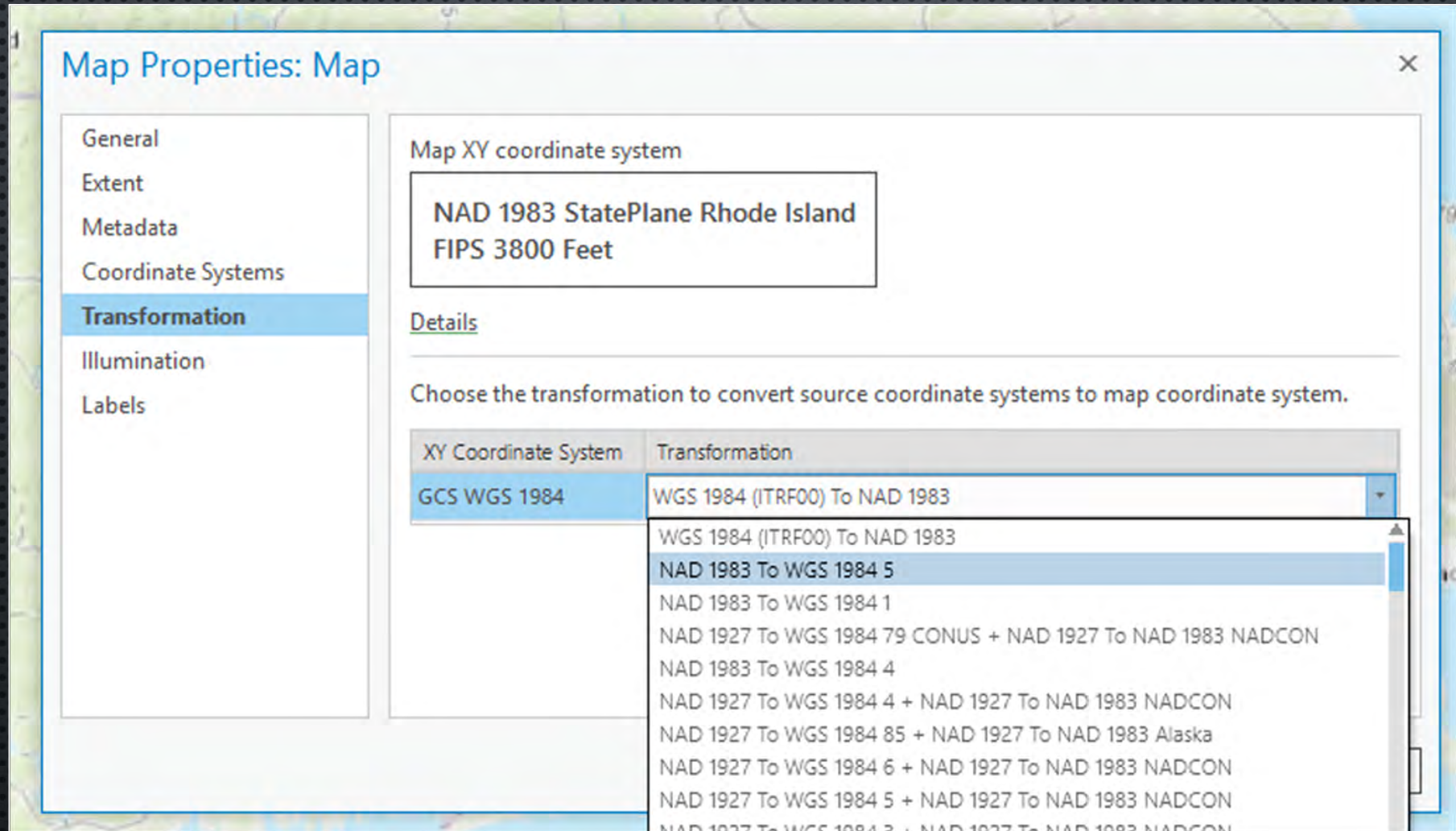
by URIEDC\_RIGIS

Updated: 12/11/18

Map showing locations: Windham, Norwich, New London.

Scale: 0 3 6mi

# DATUM TRANSFORMATION



SEE THE RIGIS INFO WEBSITE FOR MORE!

[HTTP://INFO.RIGIS.ORG](http://info.rigis.org)



# ESRI IMAGE SERVICES

- AVAILABLE IN TWO COORDINATE SYSTEMS:
  - WGS 84 WEB MERCATOR (METERS)
  - NAD 83 RHODE ISLAND STATE PLANE (US SURVEY FEET)
- DISADVANTAGES:
  - POTENTIALLY SLOWER
  - NOT A CLOUD-BASED SERVICE
  - DOESN'T WORK WITH COLLECTOR FOR OFFLINE USE





ArcGIS Online ▾

Q RIGIS Spring 2018

3 layers

2018)

by URIEDC\_RIGIS

Updated: 12/11/18



Rhode Island Aerial Photographs (Spring 2018; State Plane)

by URIEDC\_RIGIS

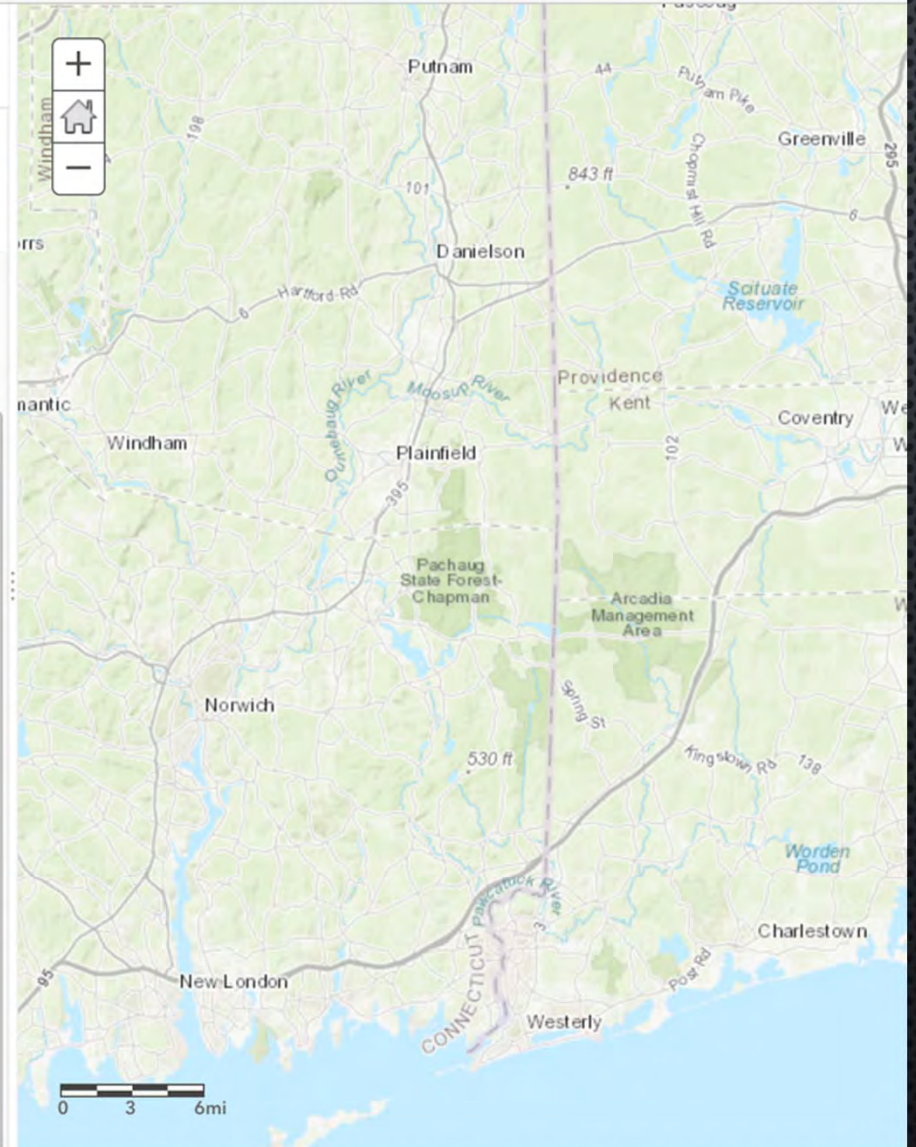
Updated: 12/11/18



Rhode Island Aerial Photographs (Spring 2018)

by URIEDC\_RIGIS

Updated: 12/11/18





Untitled - ArcMap

File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help



Table Of Contents



RIGIS Spring 2018



☒ Data ☐ Groups

Sign in

Featured

Search: RIGIS Spring 2018

Arranged by Relevance

4 Results

### Rhode Island Aerial Photographs (Spring 2018)



Statewide, true color, 3-inch spatial resolution orthophotographs of Rhode Island.

Thumbnail Image by URIEDC\_RIGIS 12/11/2018

[Details](#) [Add](#)

### Rhode Island Aerial Photographs (Spring 2018)



Statewide, true color, 3-inch spatial resolution orthophotographs of Rhode Island.

Image Service by URIEDC\_RIGIS 12/11/2018

[Details](#) [Add](#)

### Rhode Island Aerial Photographs (Spring 2018)



Statewide, true color, 3-inch spatial resolution orthophotographs of Rhode Island. Rhode Island state plane NAD 83 U.S. survey foot coordinate system.

Image Service by URIEDC\_RIGIS 12/11/2018

[Details](#) [Add](#)

### Rhode Island Aerial Photographs (Spring 2018)



Statewide, true color, 3-inch spatial resolution orthophotographs of Rhode Island.

Map Service by URIEDC\_RIGIS 12/11/2018

[Details](#) [Add](#)

ArcGIS Pro - RIGIS\_demo - Map

Project | Map | Insert | Analysis | View | Edit | Imagery | Share

Clipboard | Navigate | Layer | Selection | Inquiry | Labeling | Offline

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Search

Drawing Order

Map

Topographic

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Portal | All Portal | Search Result for 'RIGIS Spring 2018'

RIGIS Spring 2018

Organize | New Item

Name	Type	Date	Owner
Rhode Island Aerial Photographs (Spring 2018)	Tile Layer (Hosted)	12/11/2018 4:01 PM	URIEDC_RIGIS
Rhode Island Aerial Photographs (Spring 2018)	Imagery Layer	12/11/2018 4:01 PM	URIEDC_RIGIS
Rhode Island Aerial Photographs (Spring 2018; State Plane)	Imagery Layer	12/11/2018 4:01 PM	URIEDC_RIGIS
Rhode Island Aerial Photographs (Spring 2018)	Tile Package	12/11/2018 4:00 PM	URIEDC_RIGIS

Name: Rhode Island Aerial Photographs (Spring 2018; State Plane) | Default

OK | Cancel

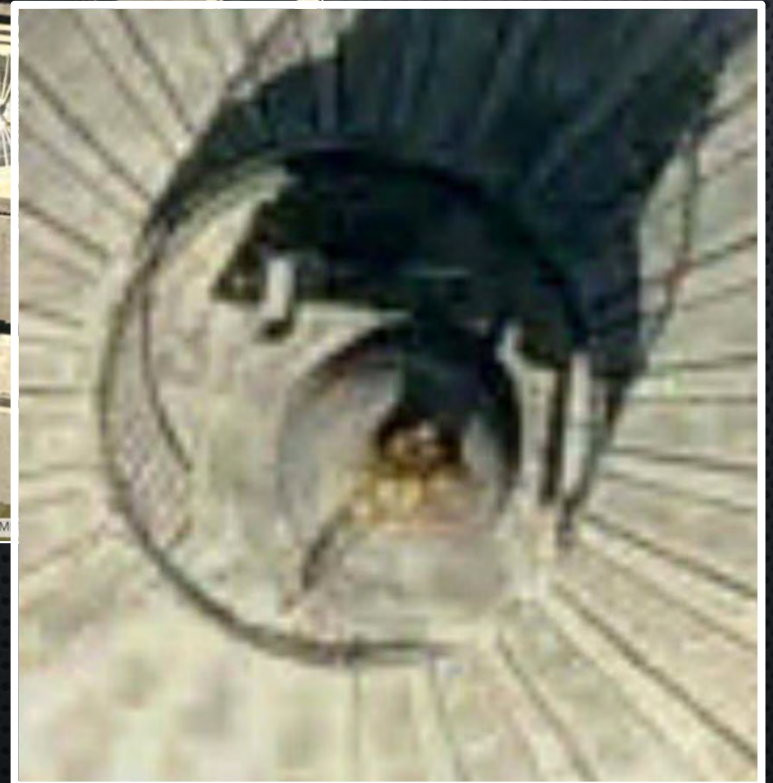
Rhode Island Aerial Photographs (Spring 2018; State Plane) | Imagery Layer | 12/11/2018 4:01 PM | URIEDC\_RIGIS



# ADVANTAGE: UNLIMITED ZOOM



1:564



1:70



# ADVANTAGE: MODIFY APPEARANCE



Default

Percent Clip Stretch





# ADVANTAGE: MODIFY APPEARANCE

Symbology - Rhode Island Aerial Photog... ▾ ⓘ ✕

Rhode Island Aerial Photographs (Spring 2018) ≡

Primary symbology

RGB ▾

▼ Band Combination

Red Red ▾


Green Green ▾


Blue Blue ▾

Alpha None ▾


▼ Background

☐ Display background value

0 0 0 

Nodata  ▾

▼ Stretch

Stretch type Percent Clip ▾ 

Min 2.000 Max 2.000

Gamma 1.0 1.0 1.0

Statistics Dataset ▾

Percent Clip Stretch





ADVANTAGE: BETTER PRINT QUALITY



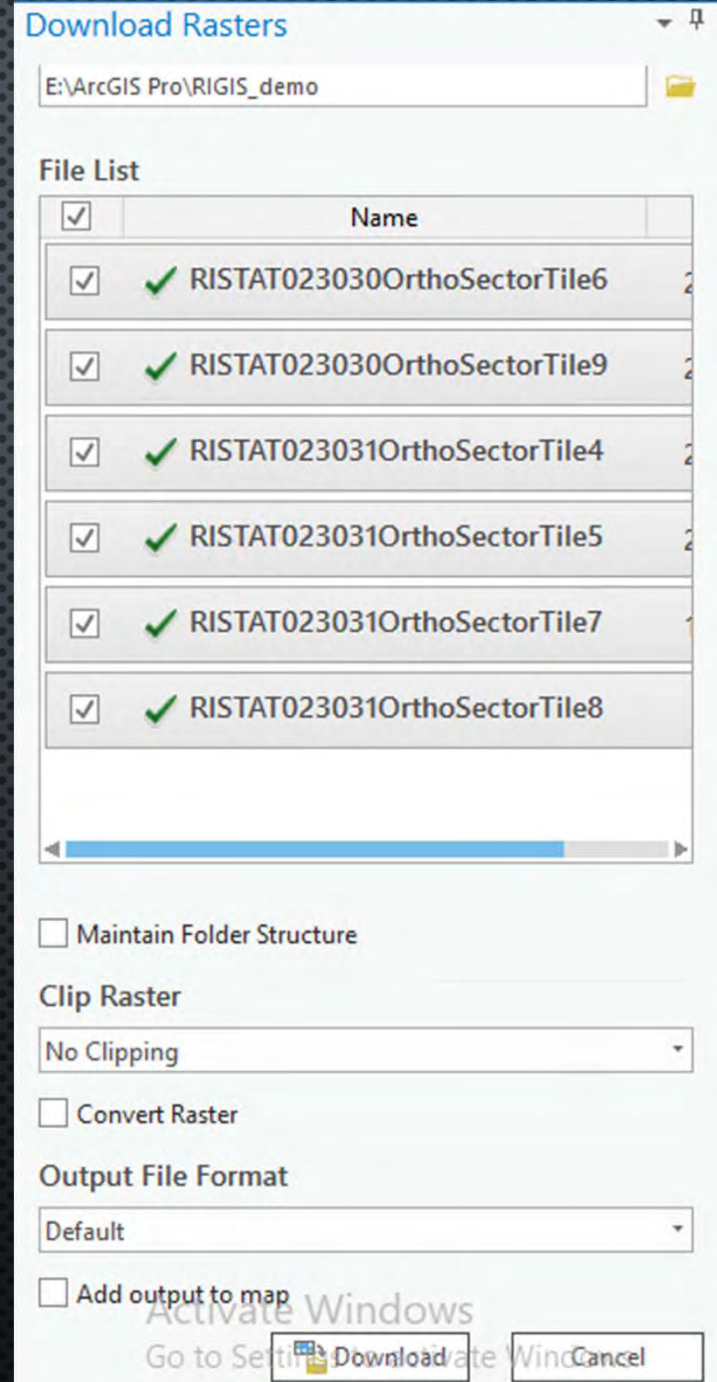
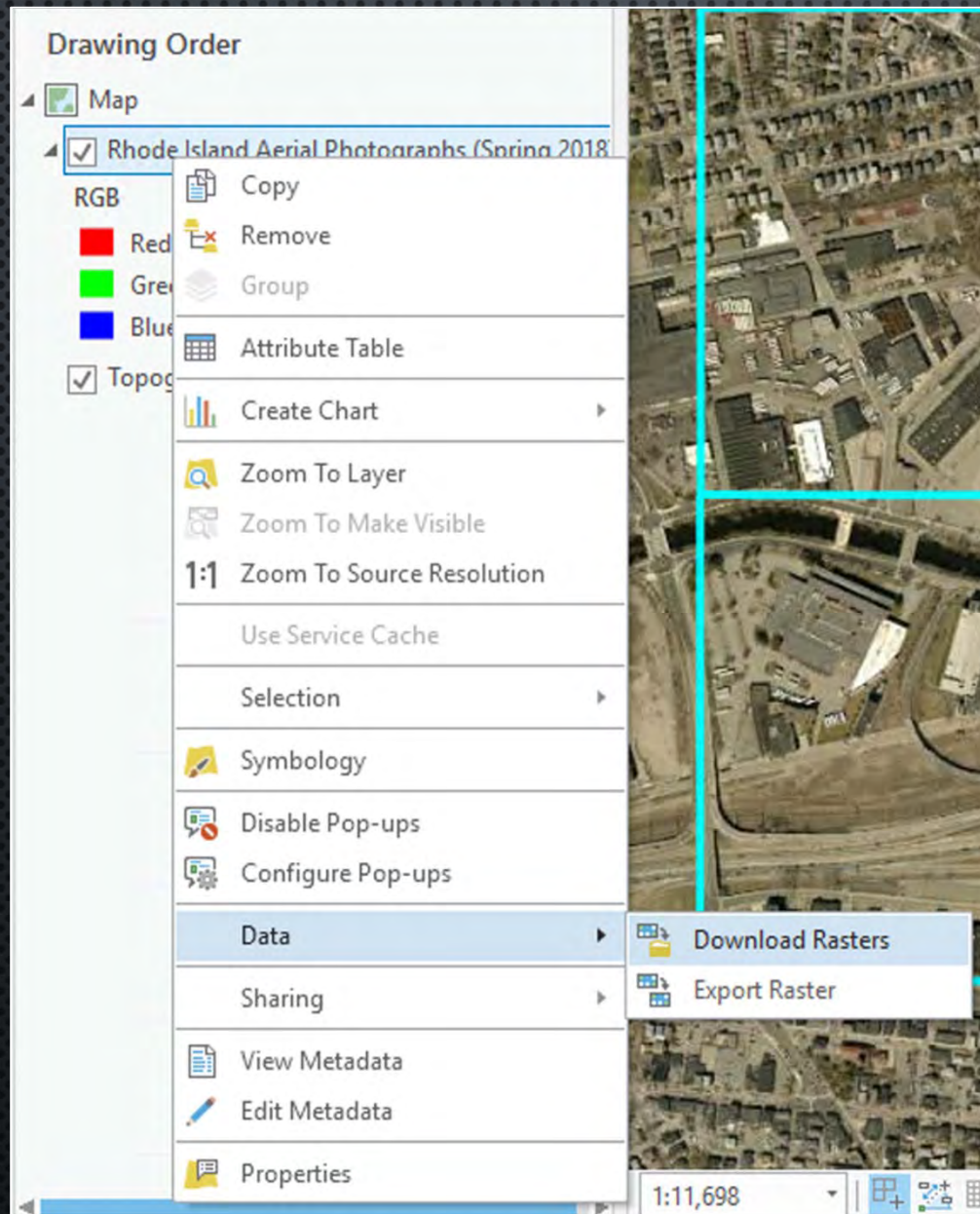


# ADVANTAGE: DIRECTLY DOWNLOAD DATA



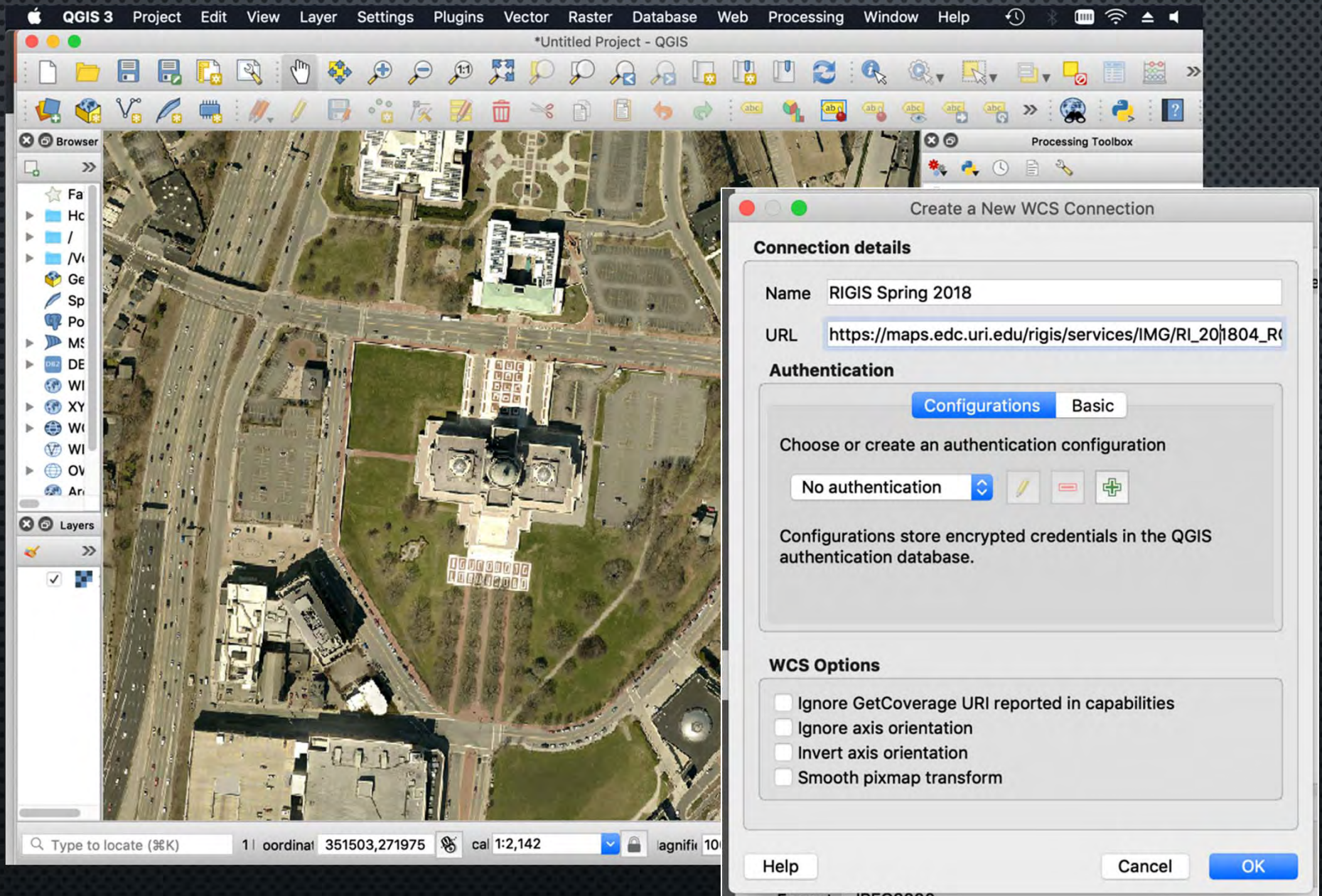


# ADVANTAGE: DIRECTLY DOWNLOAD DATA





# ADVANTAGE: NOT JUST FOR ESRI SOFTWARE





## MORE TO COME...

- TRADITIONAL FILE DOWNLOAD, TBD
- AUGUST 2018 ORTHOS
- PLANNED BLOG POSTS FOR [HTTP://INFO.RIGIS.ORG](http://info.rigis.org):
  - ADDING SPRING 2018 ORTHOS VIA WCS/WMS TO QGIS
  - DOWNLOADING DATA VIA AN IMAGE SERVICE
  - ADJUSTING IMAGE SERVICE SYMBOLOGY
  - OFFLINE USE WITH COLLECTOR
  - HOW TO USE A DOWNLOAD MANAGER
- TRANSITION TO NEW SERVER INFRASTRUCTURE



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- OR -

RIGIS@URI.EDU



Created by Danil Polshin  
from Noun Project