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HAYWOOD COUNTY BOARD OF COMMISSIONERS AGENDA REQUEST

**Must be presented to the County Manager's Office
no later than noon on Friday, 10 days before the meeting**

DATE OF REQUEST: September 17, 2019

FROM: Stephanie Parkins

MEETING REQUEST DATE: October 7, 2019

REQUEST: Presentation from Eagleview to fly Oblique imagery county wide.

BACKGROUND AND PLAN: The last oblique imagery was flown in 2007. With a new flyover staff can determine changes to structures as well as changes to land characteristics and determine points of access in an emergency situation. This additional tool will aid the Revaluation Team, Land Records, GIS, Addressing, Law Enforcement, Economic Development, Emergency Services and other departments.

FINANCIAL: Total cost of the project as quoted \$114,977. Cost can be divided with annual payments. First year payment is \$38,325.59 of which \$19,000 is budgeted with remaining \$19,000 to come out of contingency.

SUPPORTING ATTACHMENT: YES NO

POWERPOINT PRESENTATION: YES NO

PERSON MAKING PRESENTATION: Joe Wilson
TITLE: Direct Sales Manager, Eagleview
PHONE NUMBER: 704-649-2119
EMAIL: joe.wilson@eagleview.com



Joe Wilson, District Manager - North Carolina / South Carolina

Haywood County, NC

Pictometry Imagery

October 7, 2019



About Eagleview



98%

coverage in the U.S.
in terms of population



135

planes at
our disposal



130

domestic & international
patents granted



673

Eagleview
employees



1,800+

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

What is Pictometry Imagery? Aerial imagery captured by a plane; Provides views from all 5 directions (Top, North, South, East, West)



How's it done?



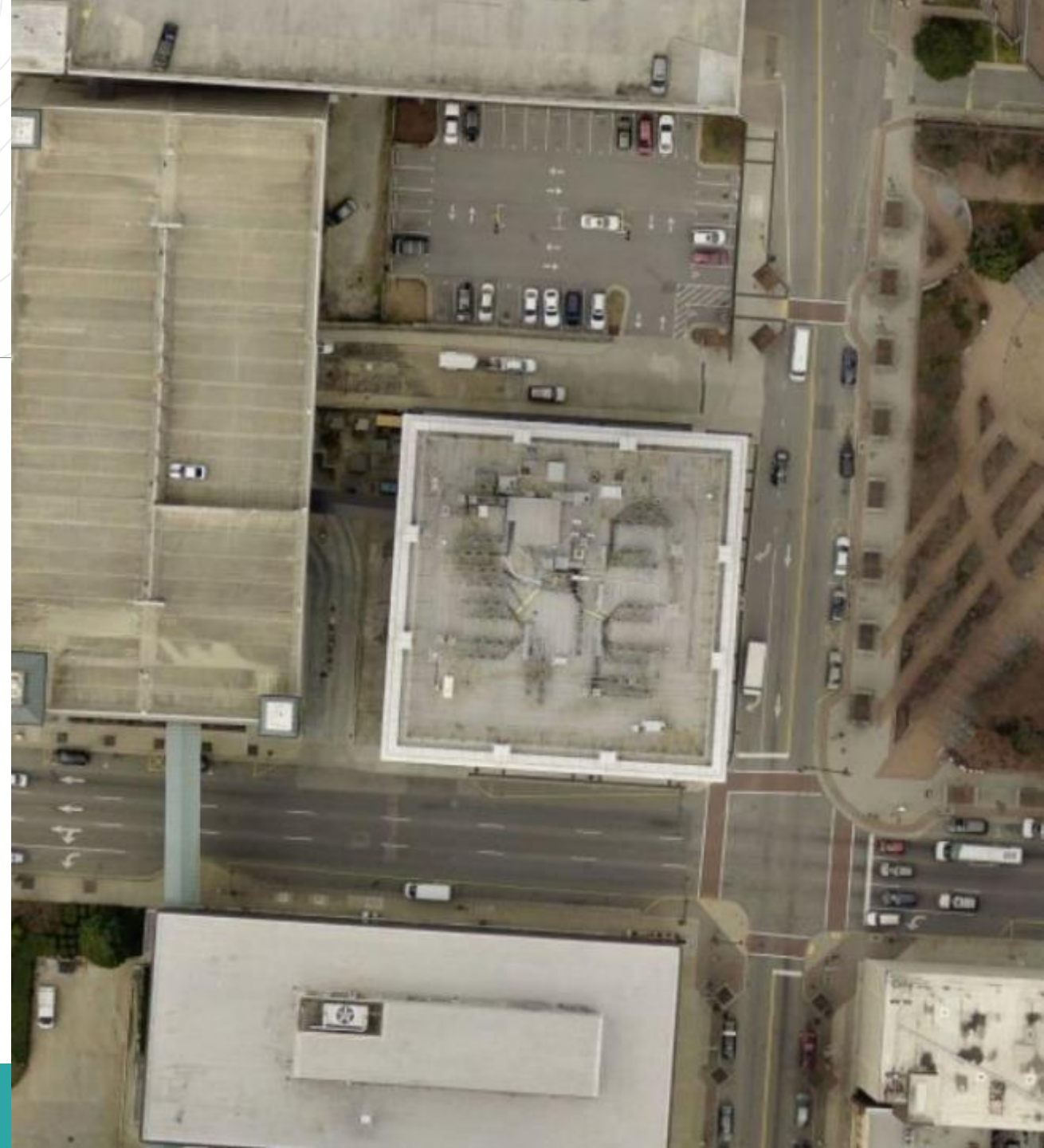
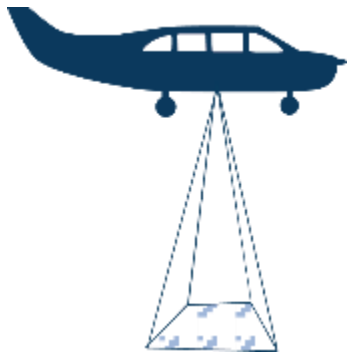
- Patented 5 camera system; invented, manufactured and maintained by our EagleView Rochester, NY office.

Traditional Ortho Imagery vs. Pictometry



What type of structure is this? How tall?

Traditional Ortho Image





More than Imagery...

OBLIQUE IMAGERY





© 2009 Pictometry



© 2009 Pictometry



© 2009 Pictometry



© 2009 Pictometry

West facing Oblique



How many county departments
are authorized users?

UNLIMITED



Key government applications

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

PUBLIC
SAFETY



PROPERTY
APPRAISAL &
ASSESSMENT



PUBLIC WORKS
& UTILITIES



GIS
DEPARTMENTS



PLANNING &
ZONING



FIRE
DEPARTMENTS



EMERGENCY
MANAGEMENT



SURVEYOR



Key Government Applications



- Remote inspection saves times and money
- View property details to assess accurate value and determine tax rates
- Direct integration with CAMA for improved workflow
- Rely on imagery when processing appeals



Key Government Applications



- 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

- 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
- Impervious surface calculation



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

Key Government Applications

- 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



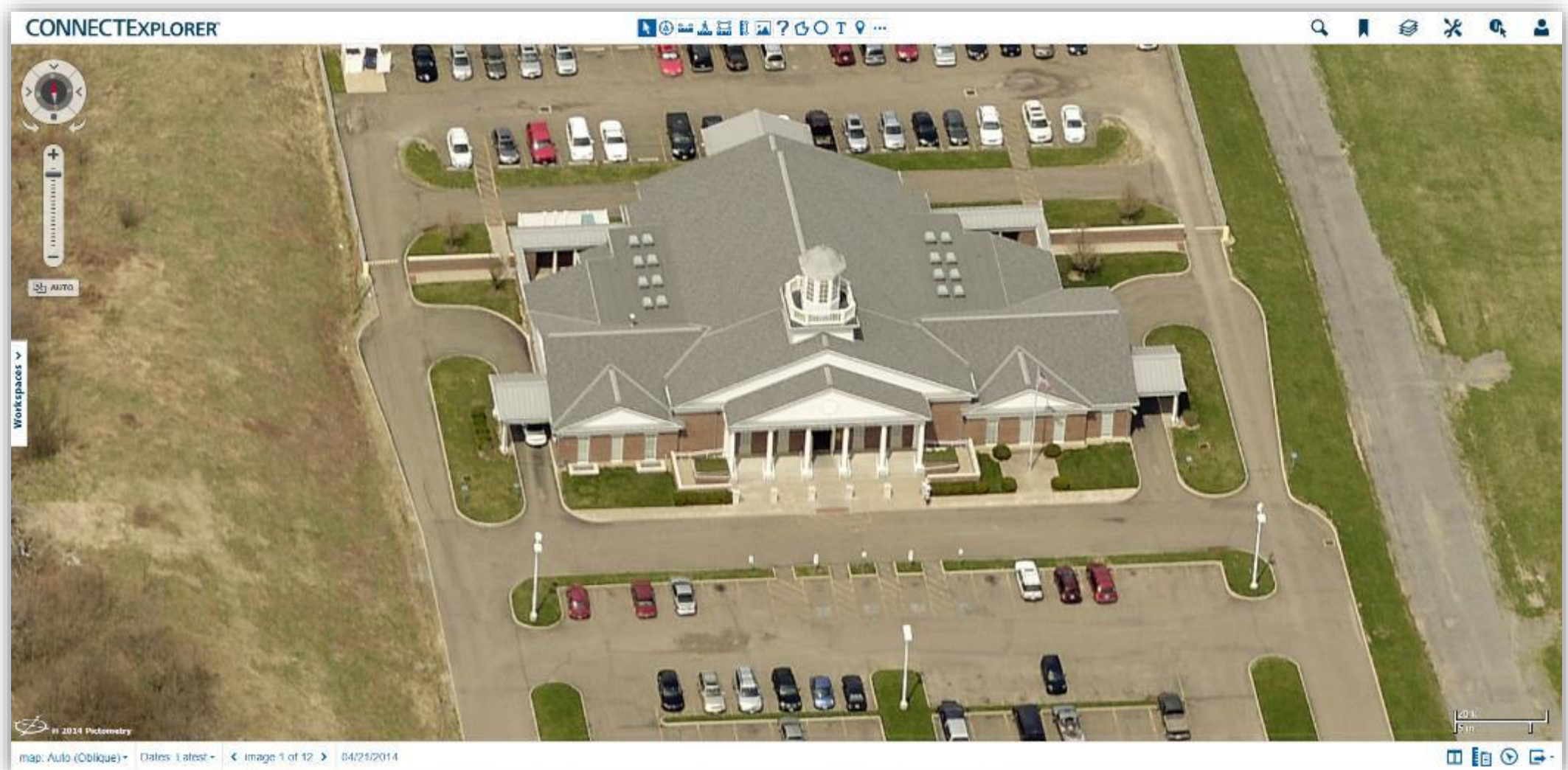
- Determines property boundaries



eagleview™

Access

CONNECTExplorer



Overlay GIS Data

CONNECTEXPLORER

Labels

- Contours
- US Parcels
- FIRE HYDRANTS
- MC Colleges
- MC Schools
- MC Roads
- MC Areas of Interest
- MC Parks
- MC Towns
- IMC Parcels
- 2011_Council_Districts
- Total Coverage (2015-03-01)

Workspaces

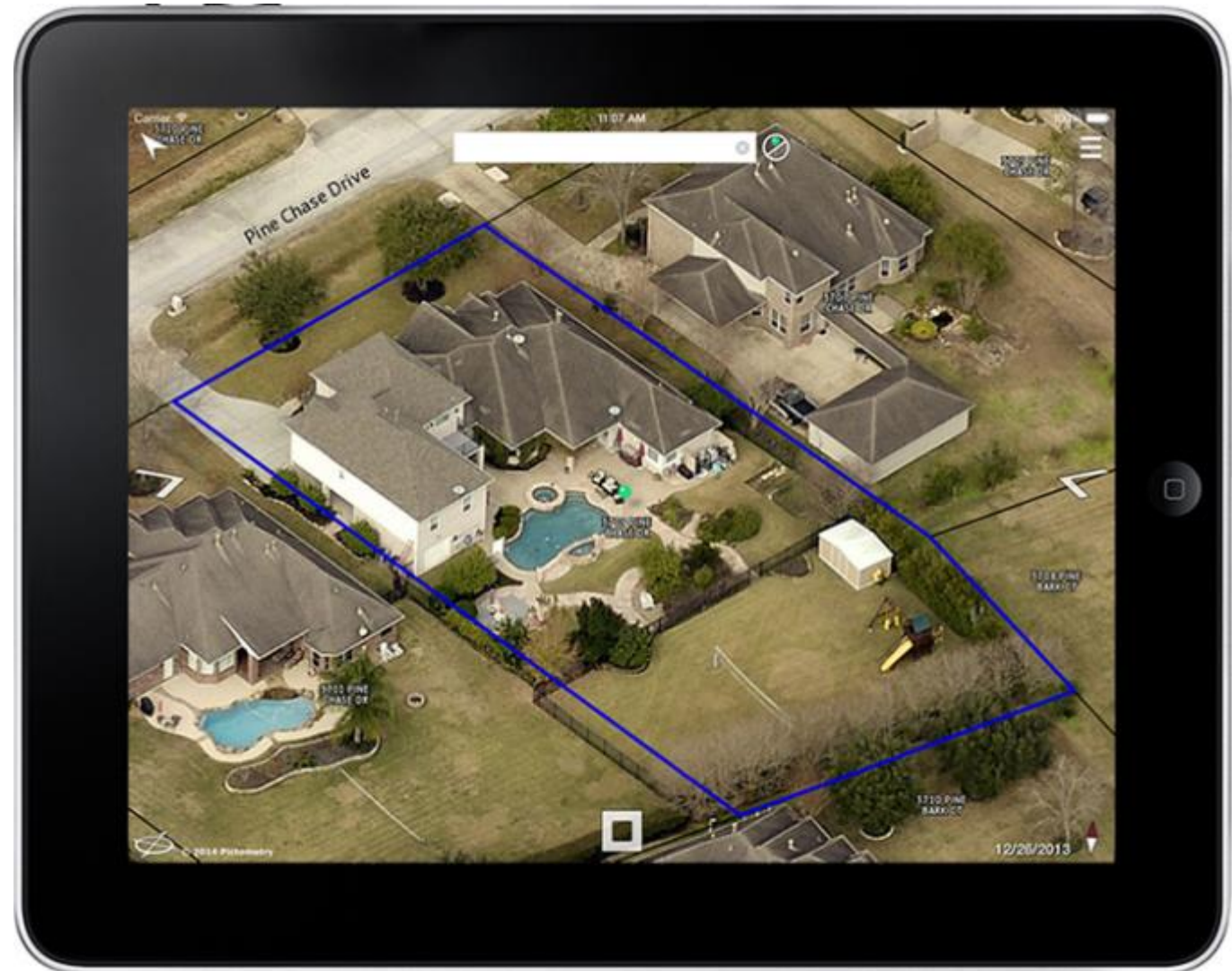
Nightfrost Ln

Wintergarden Dr

50 ft
20 m

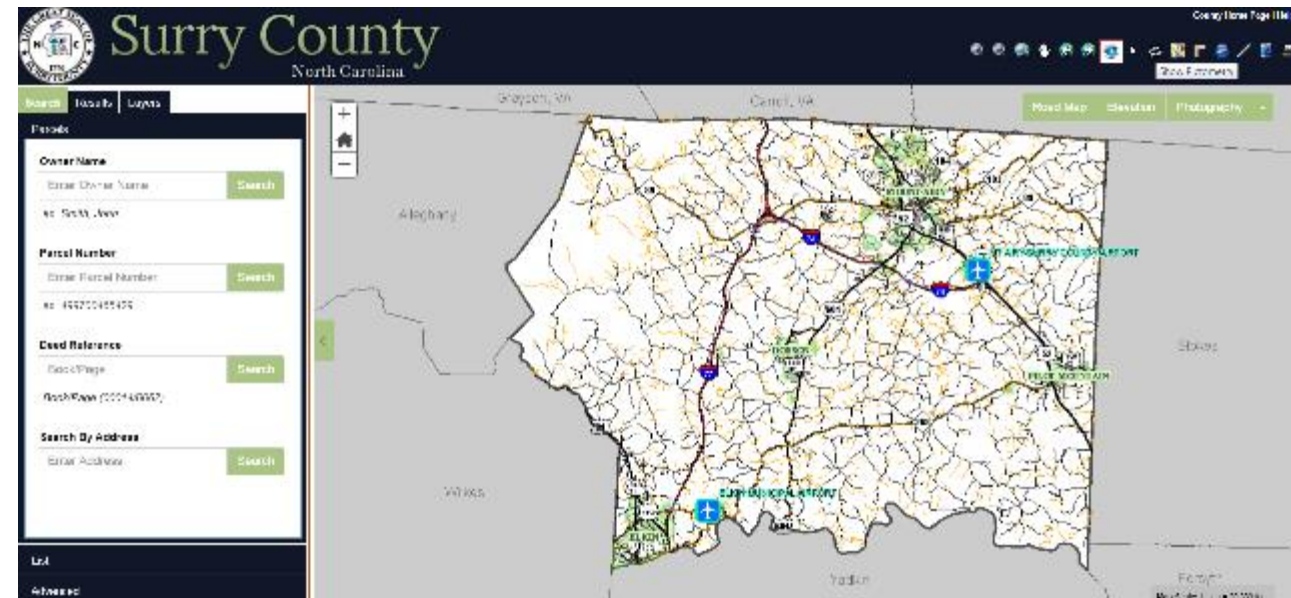
map: Auto 04/12/2015 (2015) image 1 of 2

Mobile Apps



Integrations

- CAMA – Computer-Aided Mass Appraisal
- GIS – Geographic Information Systems
- CAD – Computed-Aided Dispatch
- Public Access



CAMA Integration / Desktop Review

(Tyler, Patriot, Bi-Tek, Farragut, Harris, Thompson Reuters, etc...)

The screenshot displays the CAMA software interface, which is used for property management and review. The interface is divided into several main sections:

- Top Left: Property Details Panel**
 - File, Tools, Help, Support menu.
 - Property ID: PIN 12293-5215-00000
 - Structure: Residential 1 of 1
 - Occupancy: Single-Family / Owner Occupied
 - Year Built: 1996
 - Style: 2 Story Frame
 - Main Area: 512
 - Cond./Dep: Normal
 - Heating: FIA - Gas
 - Air Cond: Yes
- Top Right: Aerial View**
 - Interactive map showing the property location within a neighborhood.
 - Navigation tools (pan, zoom, home, etc.) and a scale of 100.0.
- Bottom Left: Floor Plan**
 - Architectural drawing of the property.
 - Labels for various areas: CONC PATIO (163), 150 FT² (103), 200 FT² FRAME (242), 1800 (187), 1800 (187), SELF-SERVING.
- Bottom Center: Structure Reference**
 - Tree view listing property components and their areas:
 - Res. Bldg.: 20 1-2 Story Frame Area (542)
 - Main Area (542)
 - Basement Finish (100)
 - Porch: 10 Frame Open Area (52)
 - Area (52)
 - Basement
 - QDS Area
 - Deck: 30 Concrete Patio Deck (100)
 - Deck: 30 Wood Deck 4 on (100)
 - Vendor: 10 1 Story Brick LF (28)
 - Addition: 1: 1 Story Frame; Yr: 1996
 - Area (281)
 - Basement (283)
 - Attic
 - Addition: 2: 1 Story Frame; Yr: 1996
 - Area (63)
 - Basement
 - Attic
 - Addition: 3: 1 Story Frame; Yr: 1996
 - Area (18)
 - Basement
 - Attic
 - Garage: 1: 1.5 Story Frame; Yr: 1996
 - Area (440)
 - QDS Area (254)
- Bottom Right: PhotoVision**
 - Photo of the property: A two-story house with a garage.
 - Date taken: 4/2/2011
 - Type: Picture
 - Sub Type: NONE
 - Keywords: (empty)
 - Latitude: 0.000000
 - Longitude: 0.000000
 - Photo 1 of 2
 - Last edit: 5/3/2011
 - Photos [2] of 30

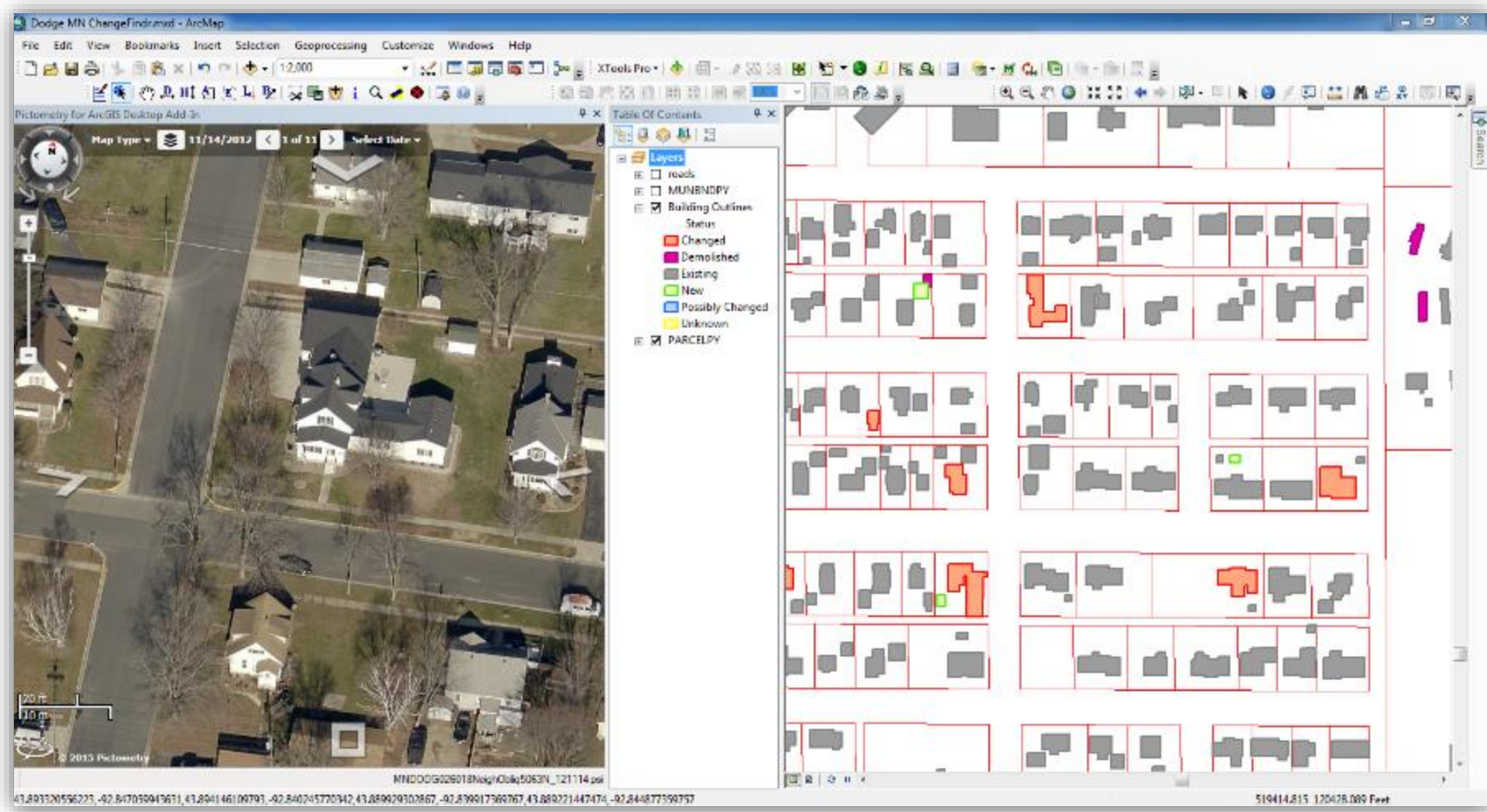
Local Integration into 911 CAD Software



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

PICTOMETRY FOR ARCGIS DESKTOP / ARCPRO

View your oblique library from within Esri software



Public Access



Search Results Layers

[x] Close Dialog

Results List

Clear Zoom To Options ▾

2 records found

Maximum number records is 2500

WILSON MICHAEL WAYNE
129 MAGICAL WATER LN
MOUNT AIRY NC 27030-6893
Parcel ID: 590800146820

Zoom Details

WILSON MICHAEL GRAY
WILSON THERESIAH
177 WELCH RD
MOUNT AIRY NC 27030-5274
Parcel ID: 592906399515

Zoom Details



Details






Buffer

Pictometry ChangeFinder

Full Change Detection Solution

The screenshot displays the Pictometry ChangeFinder software interface. The main window is split into two panels showing aerial imagery of a residential property. The left panel shows the property as of 01/19/2014, and the right panel shows it as of 12/17/2012. Both panels have white outlines highlighting the building's footprint. The interface includes a search bar at the top with the text "CONNECTASSESSMENT" and "Enter pin". Below the search bar is a toolbar with various icons. On the left side, there is a "Filters" panel with dropdown menus for "Change Type" (set to "changed"), "pct_change" (set to "> 75%"), "isd_name" (set to "GEORGETOWN, I.S.D"), "proptype" (set to "Any"), and "Review Status" (set to "Any"). Below the filters is a "Matches" section showing "32" matches and a "Start" button. The "Actions" panel includes a "Highlight" toggle (turned on), "Matches" navigation buttons ("Back", "7 of 32", "Next"), and a "Status" dropdown menu. Below the actions are "View/Add Comments" and "Export Selected" buttons. The "Data" panel at the bottom left displays the following information: "Review Status: Not Reviewed", "Determination: Est. Value Change", "Change Type: changed", "percent change: 120.9301211543", "pin: R042806", "isd_name: GEORGETOWN, I.S.D", "proptype: Residential", "area: 4919.8085085073", and "previous area: 2226.8617942496". A "Activity History" button is located at the bottom of the data panel. The main window also features a "Map Type" dropdown, a "pin" dropdown, and "Bookmarks" and "Joe Oddi" dropdown menus. The bottom of the interface shows a scale bar for 20 ft / 5 m and a copyright notice for 2013 Pictometry.

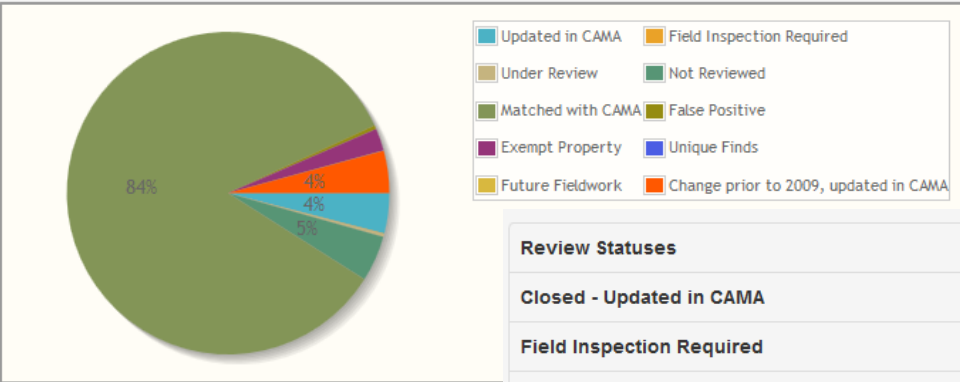
Legend

-  existing
-  new
-  changed
-  demolished
-  unknown



ChangeFinder - Track Results

Overall Project Summary



Review Statuses	unknown	demolished	changed	existing	new	Total
Closed - Updated in CAMA	6	178	342	192	248	966
Field Inspection Required	0	0	0	11	0	11
Under Review	0	3	8	42	21	74
Not Reviewed	0	0	0	1,100	1	1,101
Closed - Matched with CAMA	65	1,530	668	16,625	1,282	20,170
Closed - False Positive	21	7	45	2	16	91
Exempt Property	6	35	21	440	34	536
Unique Finds	0	0	3	0	1	4
Future Fieldwork	0	0	0	4	0	4
Closed - Change prior to 2009, updated in CAMA	0	0	12	1,000	4	1,016
Total	98	1,753	1,099	19,416	1,607	23,973
Est. Value Change	\$5,730.00	\$-221,930.00	\$1,143,005.00	\$1,669,508.00	\$1,125,810.00	\$3,722,123.00

[Download as CSV](#)

Total Reviewed	22,872
Total Closed	22,243
Percent of Work Reviewed (Excl. Existing)	99.98%

Pictometry ChangeFinder Results – Guilford County, NC

- Net discovered value: \$50,458,169
- \$344,687 revenue to be realized per year at the current tax rate.
- Recouped investment in 1.3 years

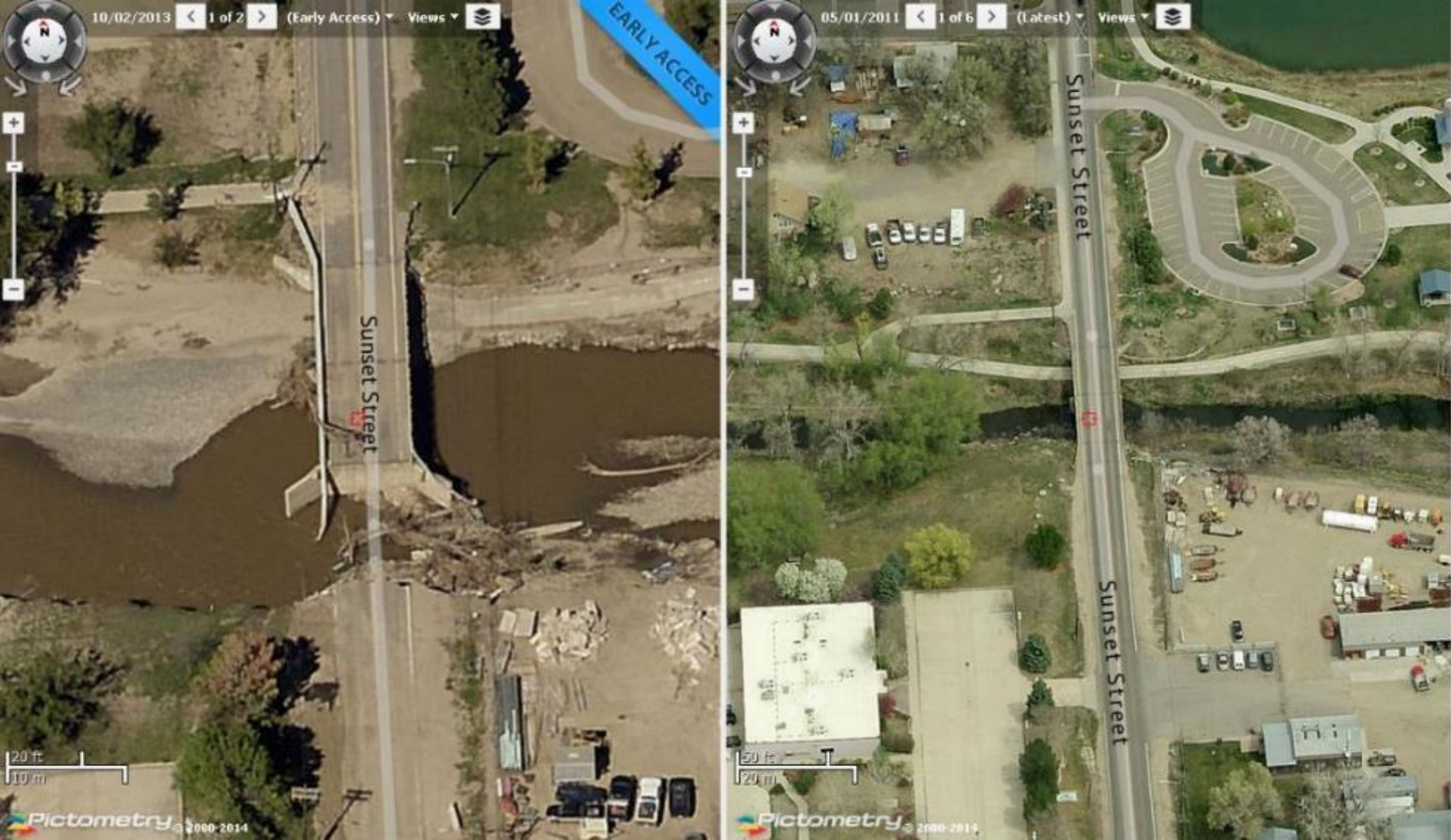


Pictometry SketchCheck

- Verify accuracy of your CAMA sketches from your desk
- Sketches are categorized by degree of consistency
 - Match
 - Minor Mismatch
 - Major Mismatch



Disaster Response – Damage Assessment



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
- RTM Outreach





Questions?