TRANSFORM THE WAY YOU WORK

Nearmap

WHAT MAKES NEARMAP DIFFERENT?

CURRENT High-res aerial imagery of U.S. urbanized areas are updated frequently

CLEAR Nearmap imagery is 2.8" (7cm) GSD

CHANGE All historical captures are maintained for easy change detection and analysis

CONSISTENT All forms of Nearmap imagery are provided at the same specs across all locations

CLOUD-BASED HD aerial maps are accessible instantly through the cloud

AWARD-WINNING INTEGRATION

esri iLOOKABOUT AUTODESK.

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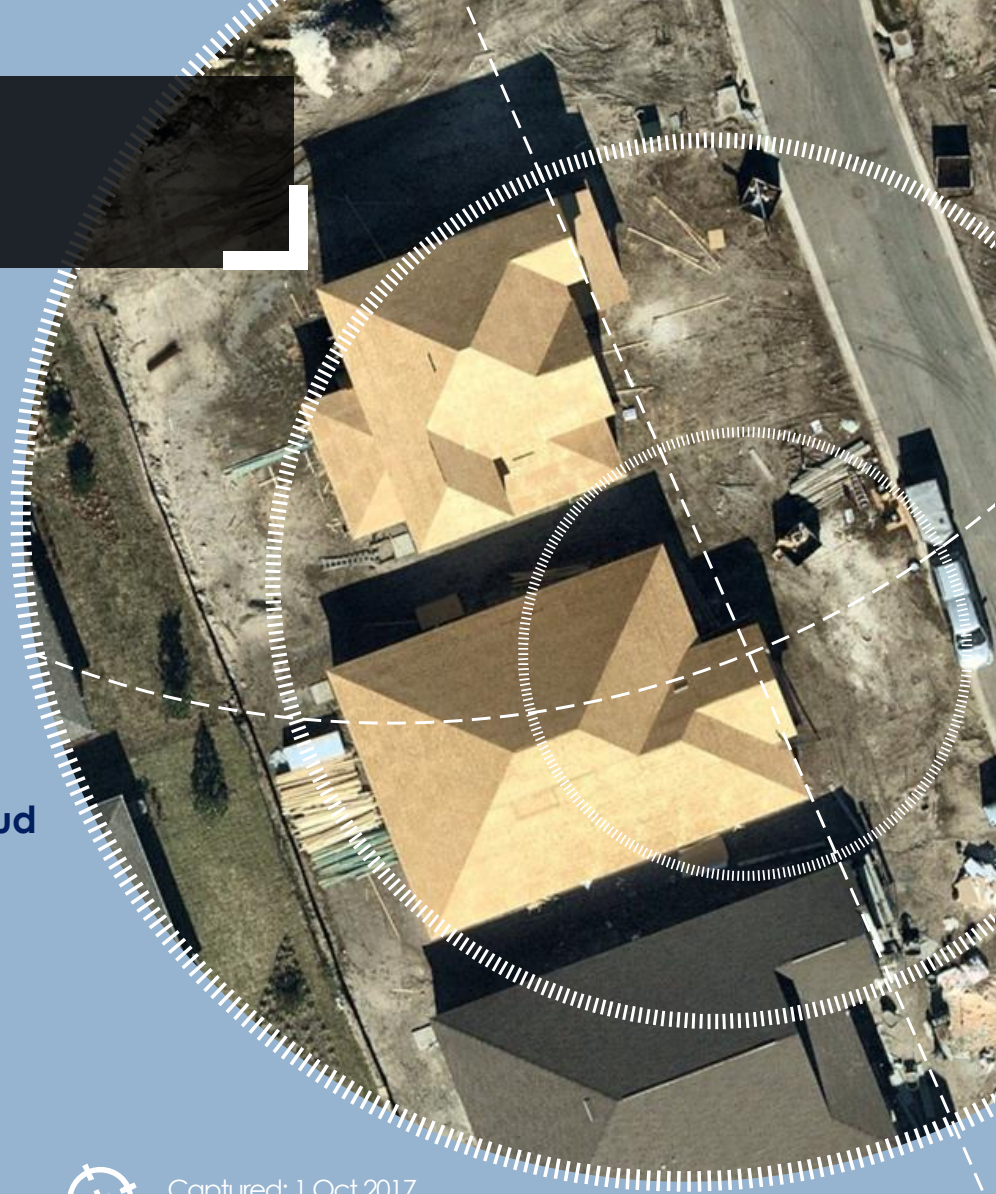
HOW NEARMAP CREATES AERIAL MAPS



Captured: 1 Oct 2017
Louisville, KY

LARGE AREA AERIALS

- Fast surveys with patented HyperCamera
- Consistent, sub 3” GSD imagery
- Planned coverage model
- Multi-dimensional data sets from one sensor

SCALABLE PROCESSING

- Cloud processing
- Available within days
- Identifies triangulation points
- Creates DEM
- Ortho-rectifies images
- Scales up and down

INSTANT ACCESS

- Industry-leading cloud service
- Accessible via MapBrowser
- Integrates with GIS, CAD
- API Integration

RAPID, INDUSTRY-LEADING DELIVERY

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NEARMAP HYPERCAMERA

Vertical and 4-Way Oblique Imaging System

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NEARMAP AERIALS

VERTICAL

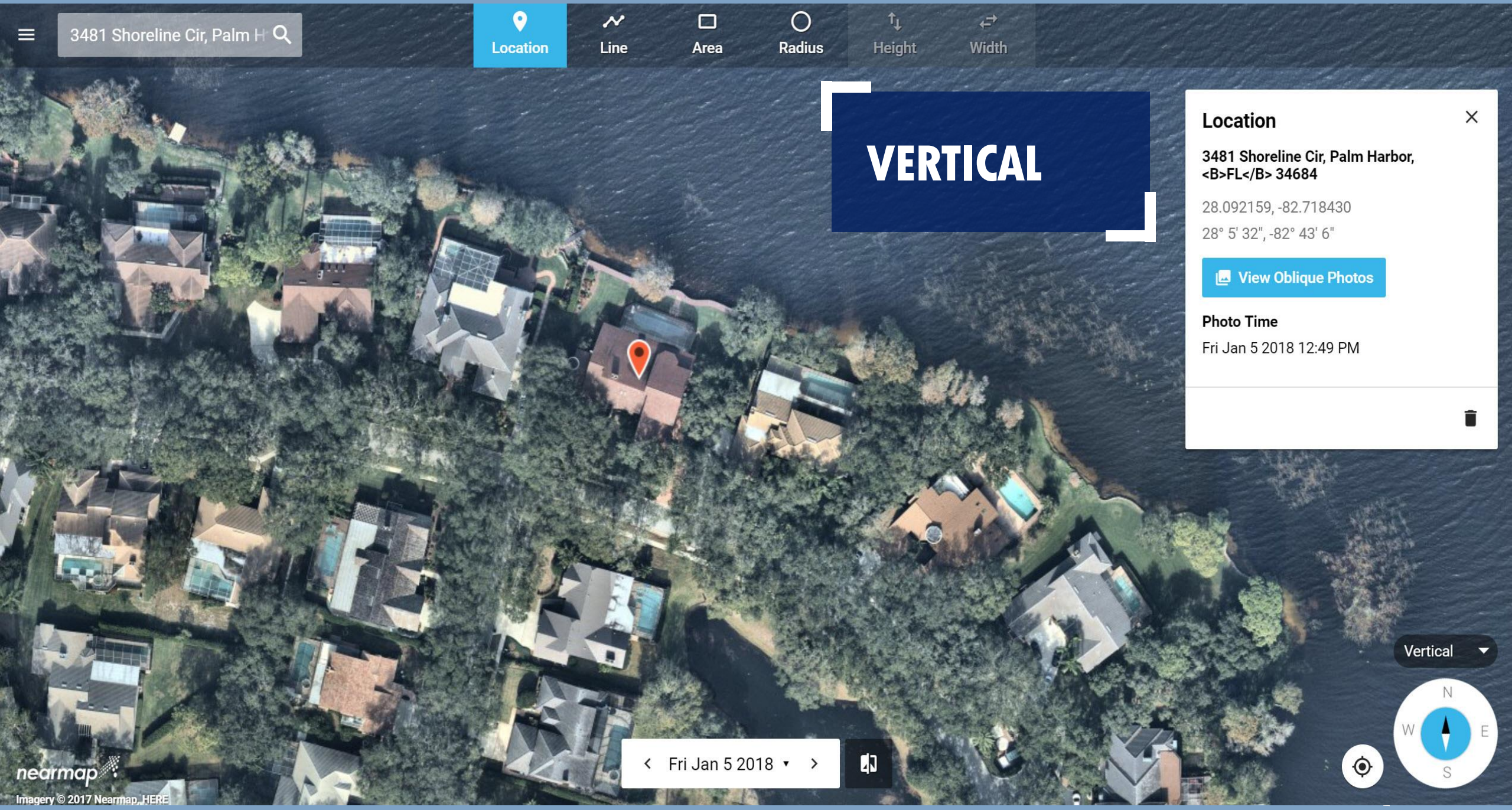
- High def, top down
- Consistently sub 3”
- Frequent updates
- Current and historical

PANORAMA

- Wide area perspectives
- Uninterrupted viewing
- High def look angles

OBLIQUE

- Measurable height & width
- All cardinal directions
- Same HD quality


3481 Shoreline Cir, Palm H
Location
Line
Area
Radius
Height
Width
VERTICAL
Location
3481 Shoreline Cir, Palm Harbor, <B>FL</B> 34684
28.092159, -82.718430
28° 5' 32", -82° 43' 6"
View Oblique Photos
Photo Time
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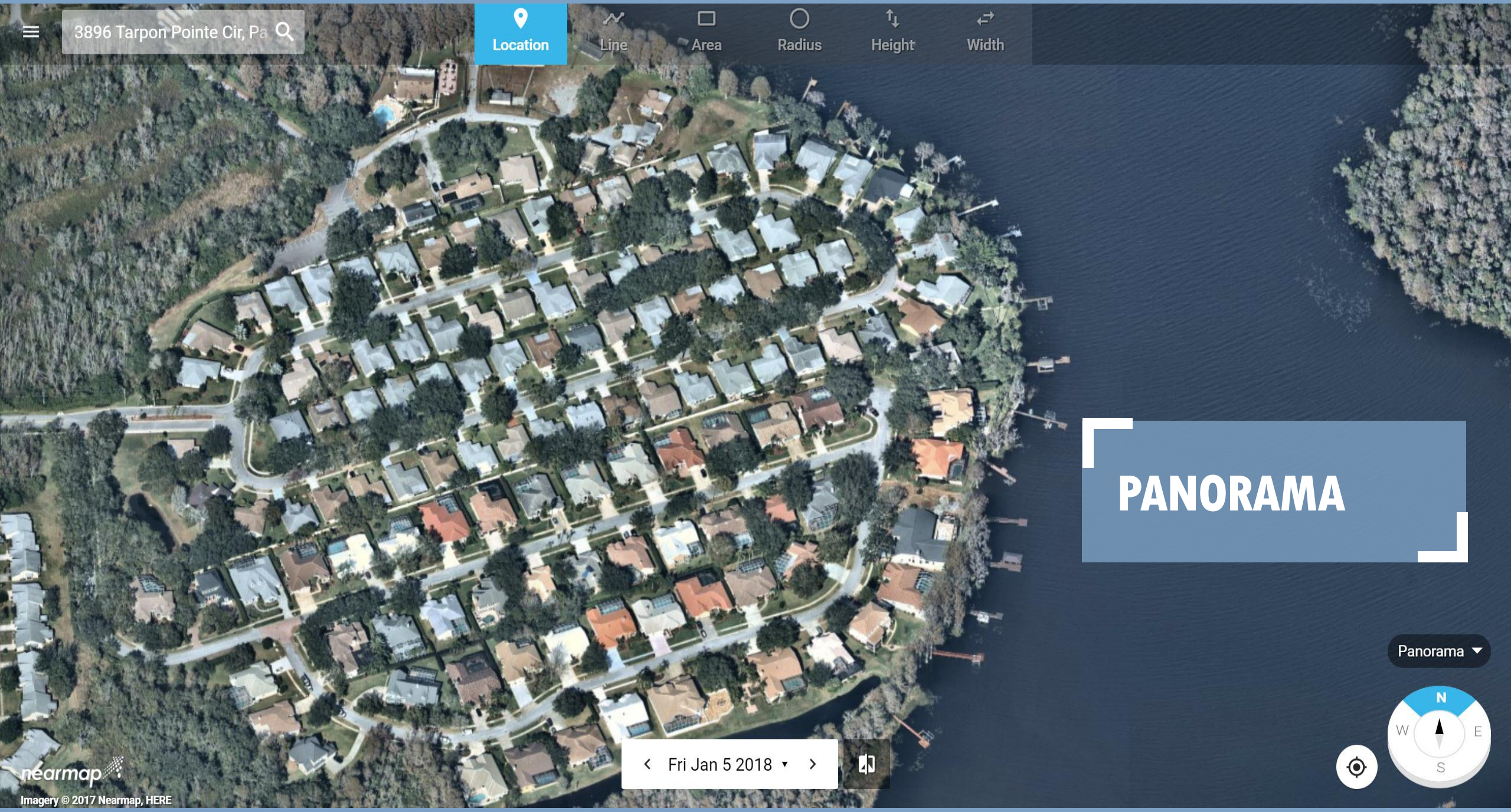
Imagery © 2017 Nearmap, HERE


3896 Tarpon Pointe Cir, Pa
Location
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PANORAMA
Panorama
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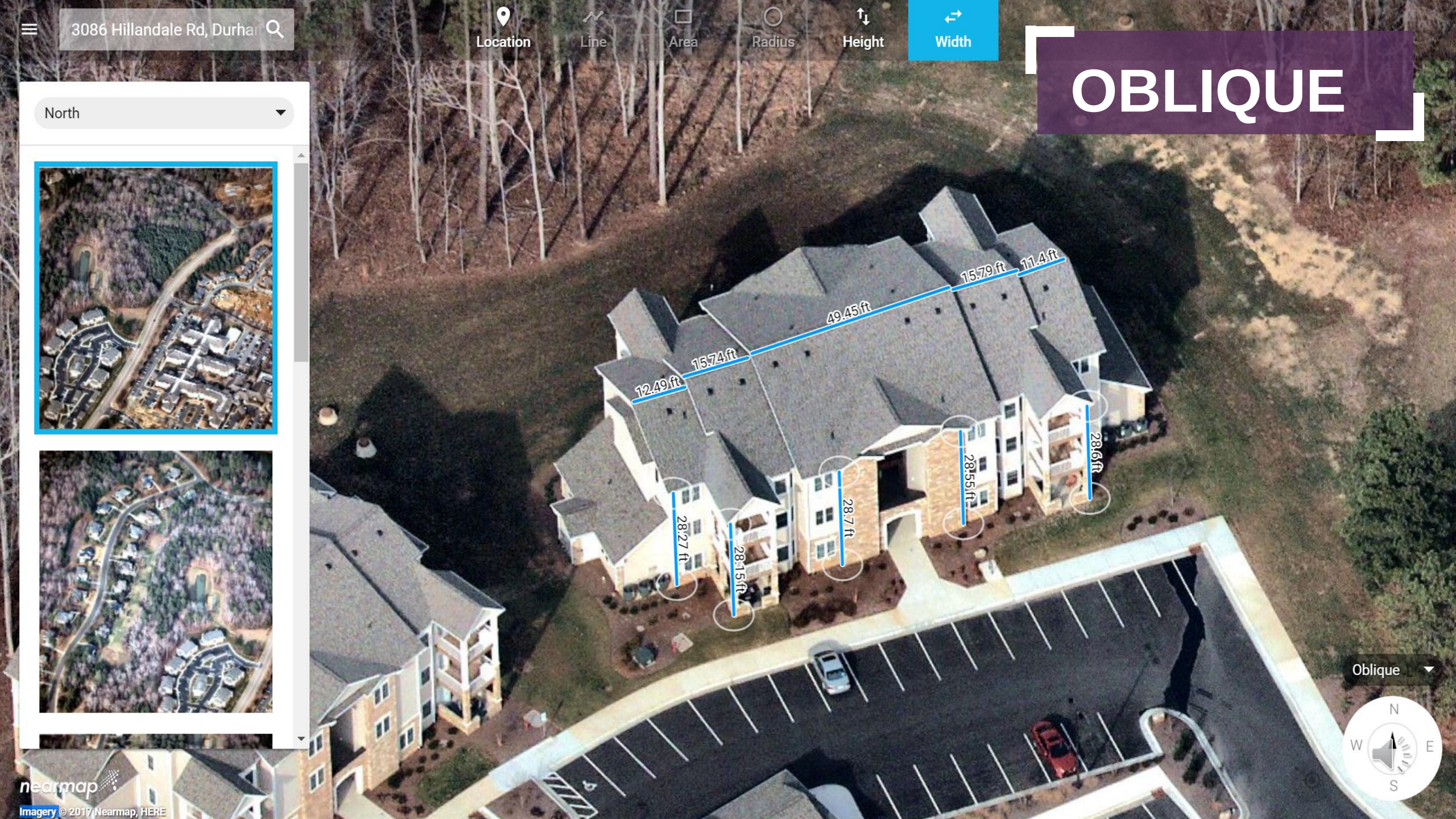
Imagery © 2017 Nearmap, HERE


3086 Hillandale Rd, Durha
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28.27 ft
28.15 ft
28.7 ft
28.55 ft
28.6 ft
Oblique
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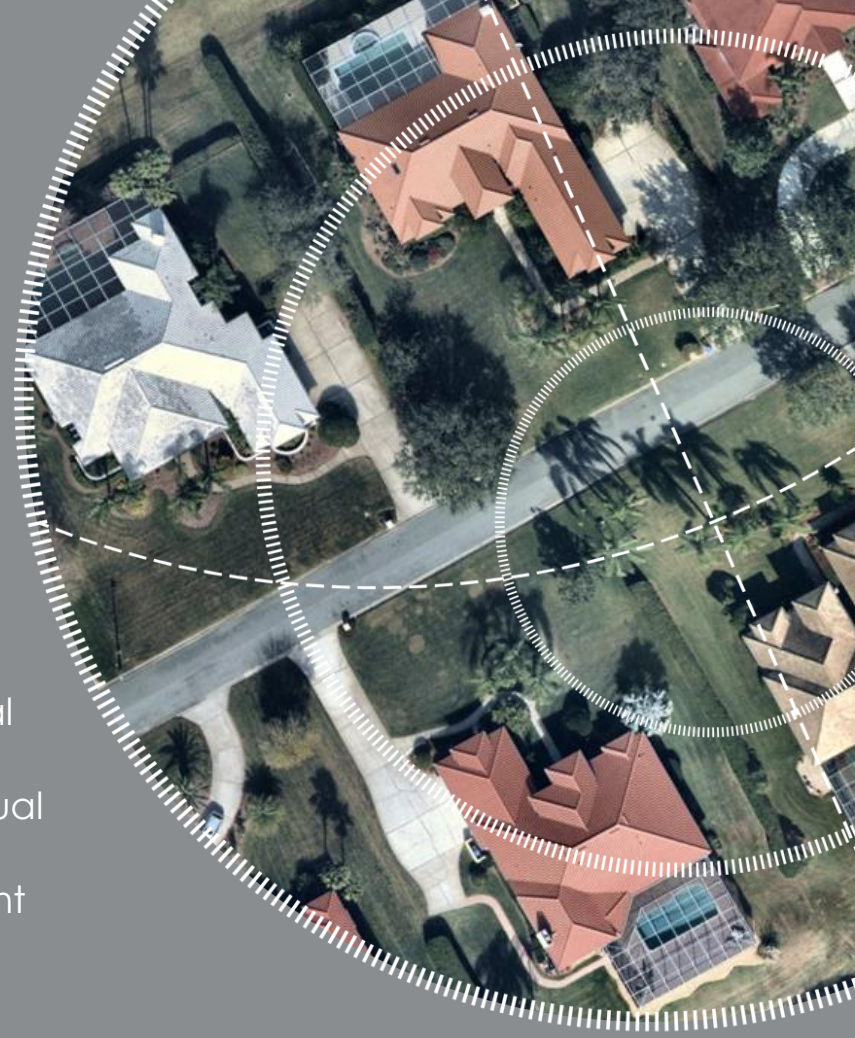
Imagery © 2017 Nearmap, HERE

3D derived from high quality imagery



Captured: 13 Dec. 2017
Lutz, FL

VERTICAL

- High-res top-down imagery
- Measure line, area, or radius
- Overlay roads
- Uninterrupted pan & zoom
- Integration with GIS &

PANORAMA

- Multi-perspective aerial views
- View four cardinal directions
- Uninterrupted pan & zoom
- Mosaic continuous view without “geo-fencing”

OBLIQUE

- Multi-perspective aerial views
- Mosaic view or individual source images
- Accurate measurement

3D

- Immersive 3D visualization
- 3D point cloud and mesh

DSM

- Highly accurate Digital Surface Models
- Visualize earth surface objects

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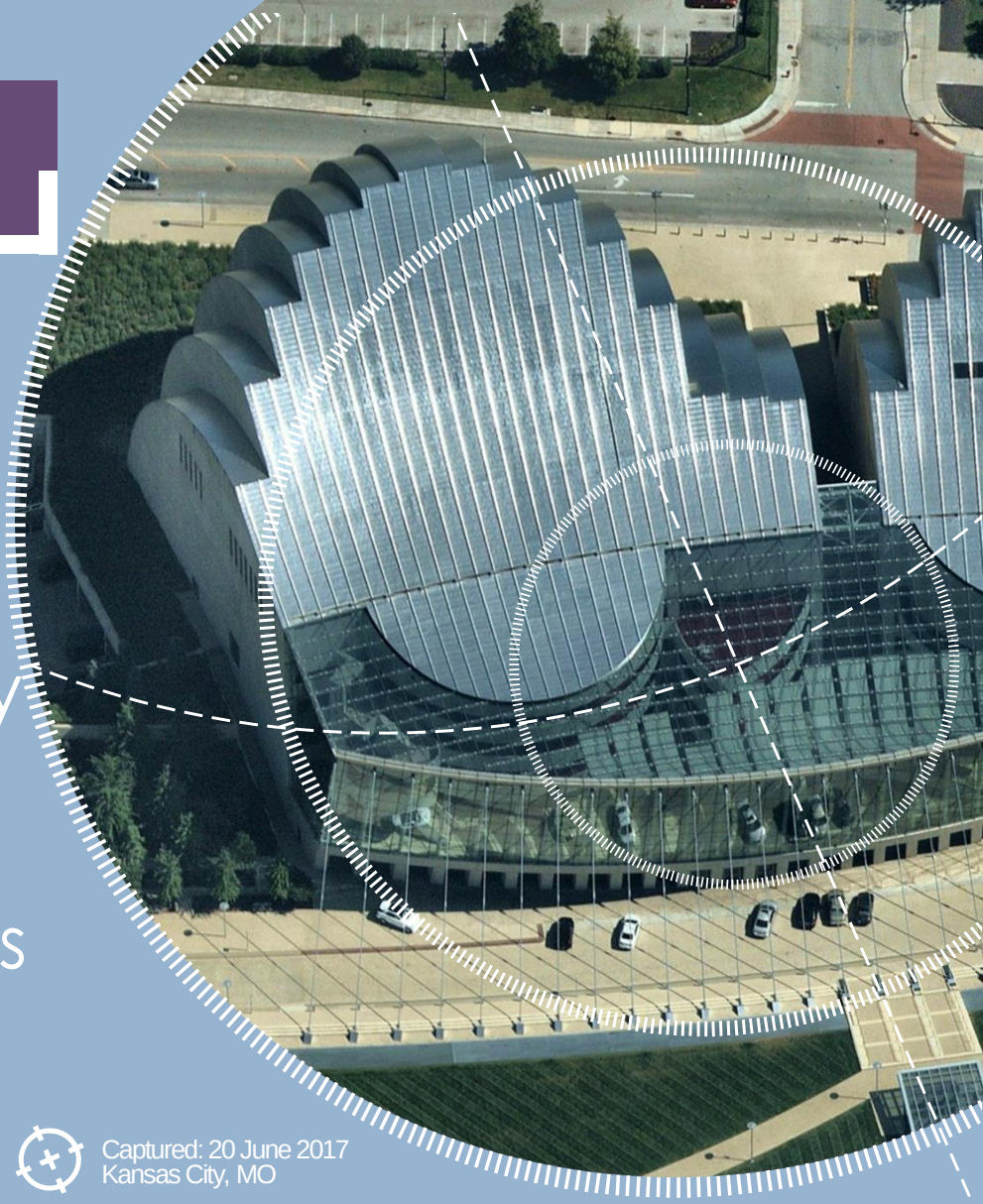
LOCATION CONTENT INNOVATION

- **HD, Multi-dimensional Datasets**
  from a single patented sensor system
  consistent across imagery to 3D!
- **Capture & Delivery Efficiencies**
  never seen before in mapping industry
  enable change detection current
  year!
- **Innovative, Disruptive Business Model** enables
  Reality-as-a-Service
  respond to emerging issues quickly
- **Time as a Relevant Dimension**
  provides basis for analyzing data in 4D
  time and location drive fast



Captured: 20 June 2017
Kansas City, MO

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Enhancing all your GIS applications

- Fast, consistent ortho base maps
- Systematic high quality processing
- No stitch lines, min parallax error
- All high resolution to see detail
- Supporting accurate measurement
- Frequency and leaf off to see reality
- Available via API's and Mapbrowsers
- ML and Portals don't impact servers
- All products align for cross product use
- Fast access to 3D Mesh and DSM
- Economical and predictable flat costs
- Offload storage and bandwidth from your network
- We deliver imagery before your payment is due!

Captured: 20 June 2017
Kansas City, MO

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Nearmap expands from 278 to 430 urban AOI's

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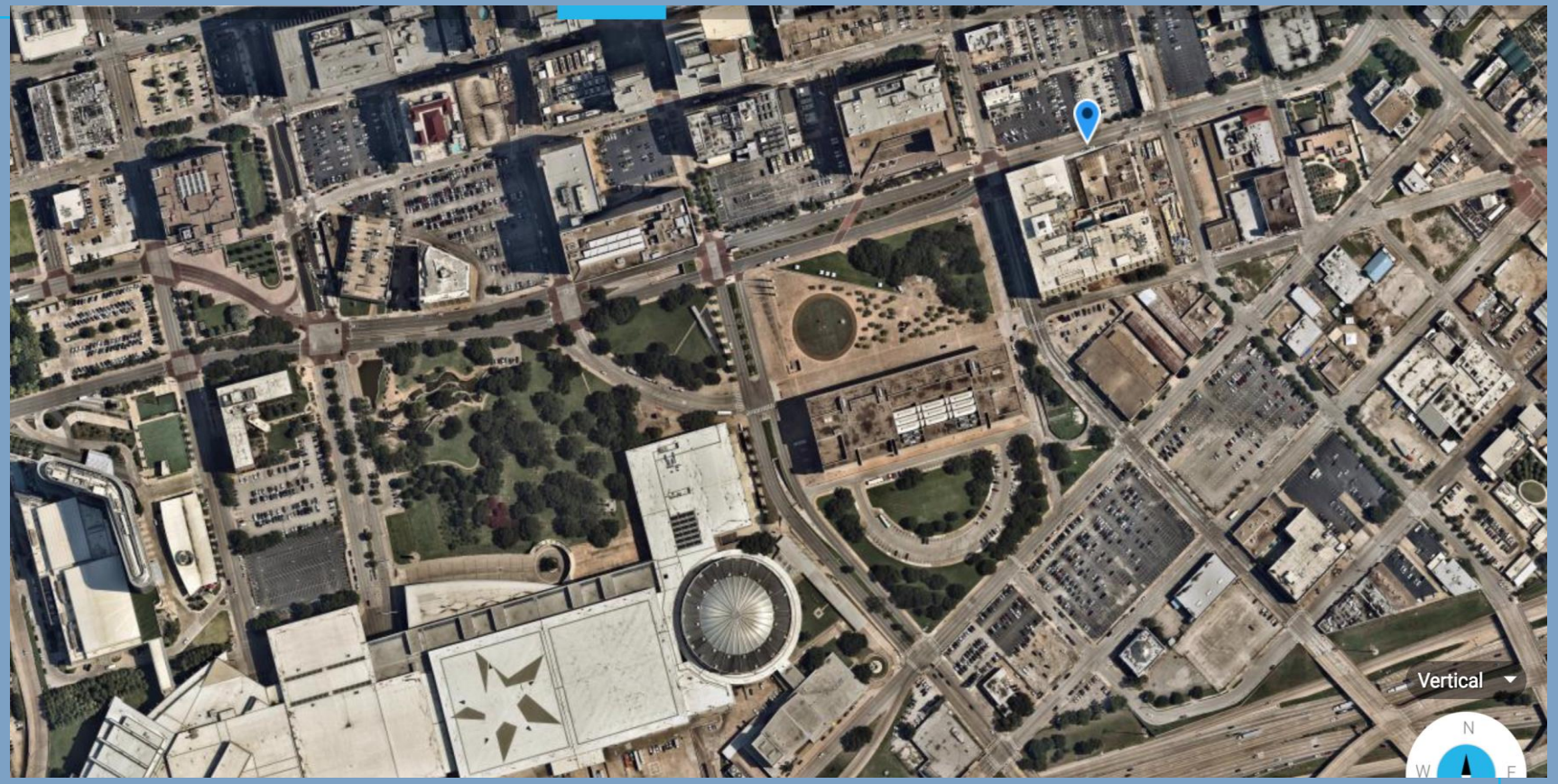
Nearmap in Local Gov.

- Fixed Price
- 3 captures per year
- 3 Ortho’s, 1 Oblique
- 11 Historical Captures
- GIS/CAD integration
- Imagery online in days
- Instant access on first day



We capture, manage, and deliver current, consistent location content faster than anyone.

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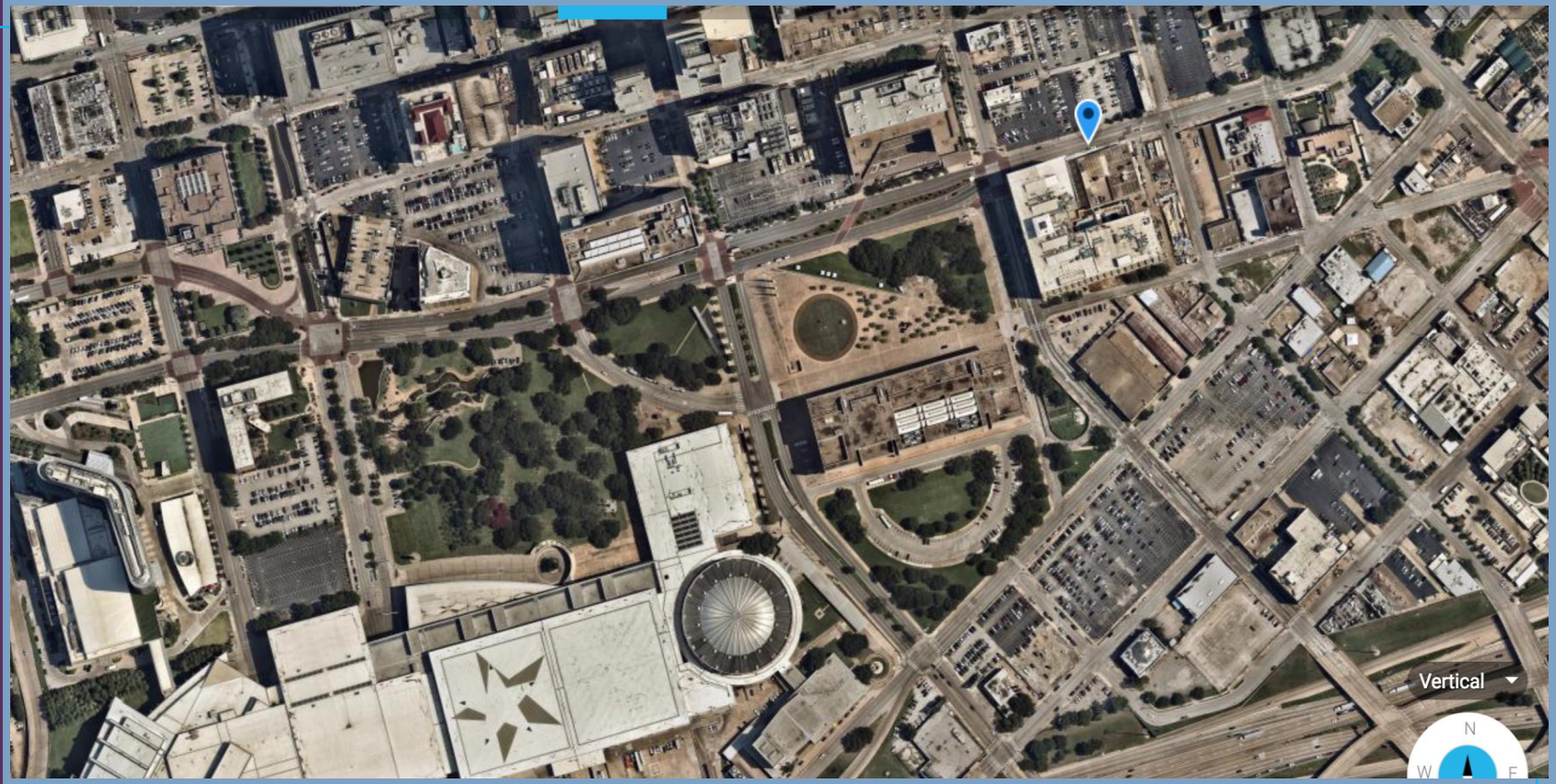
Benefits

- Reduce IT costs
- No effort to get new captures online
- Faster Base Layers
- Easy Integration via API’s
- Seamless Obliques
- Offload ML tasks
  - Change Detection
  - Asset ID
  - Feature Extraction



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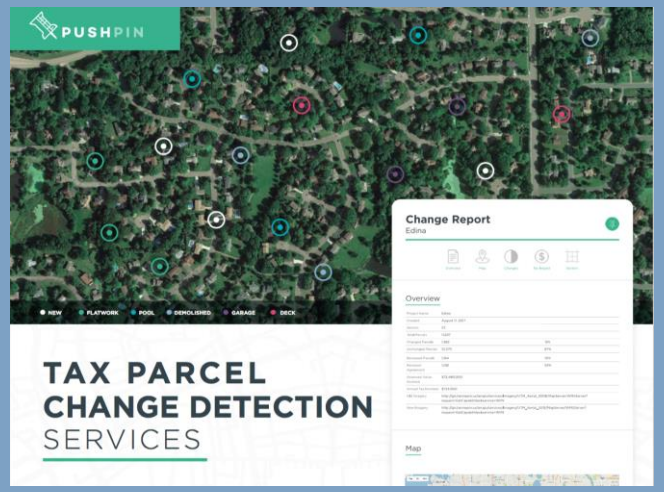
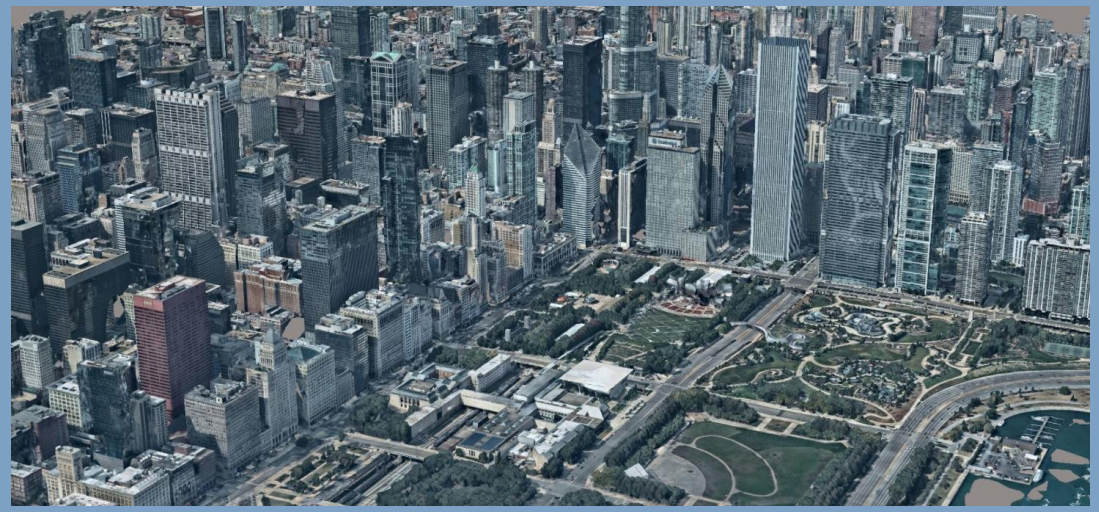
Nearmap - The Right Partner for…





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Nearmap 3D

- HyperCamera2
- 3D Point Cloud
  - Efficient vector analysis
  - Line of Sight
- DSM
  - Building Footprints
  - X, Y AND Z coordinates
- 3D Mesh
  - Line of Sight

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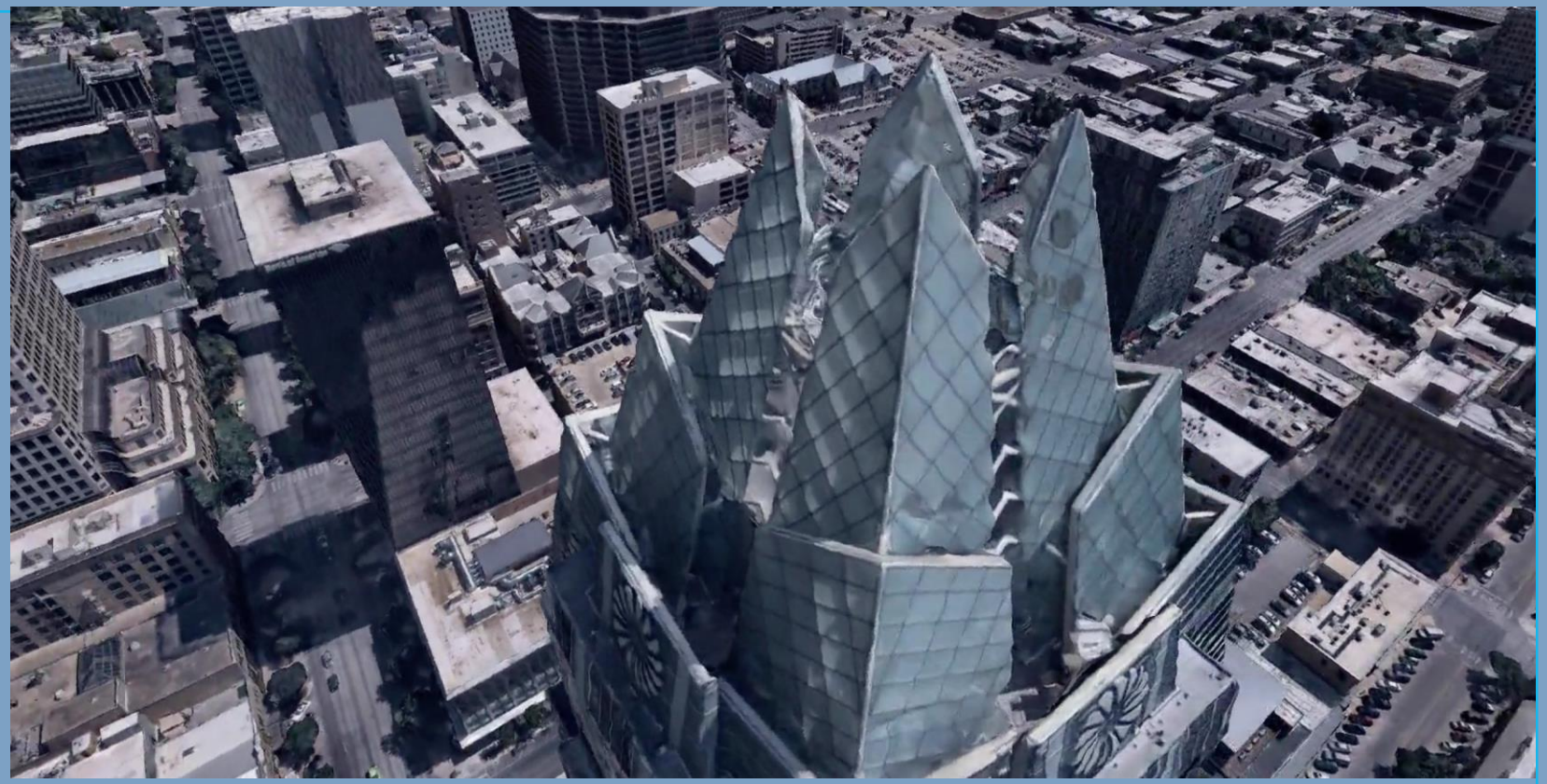
Nearmap 3D

- HyperCamera2
- 3D Point Cloud
- DSM
- 3D Mesh
  - Urban Planning
  - CAD view perspective
  - Public Safety
- Offload ML tasks



We created the largest 3D Mesh covering 50% of the US and 100,000 square miles!

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Nearmap 3D

- HyperCamera2
- 3D Point Cloud
- DSM
- 3D Mesh
- Offload ML tasks
  - Accurate Change Detection
  - High Resolution drives better accuracy
  - Fast enough to matter

We capture, manage, and deliver current, consistent location content fast!
Finally allowing your to systematically classify changes that matter in the current year!

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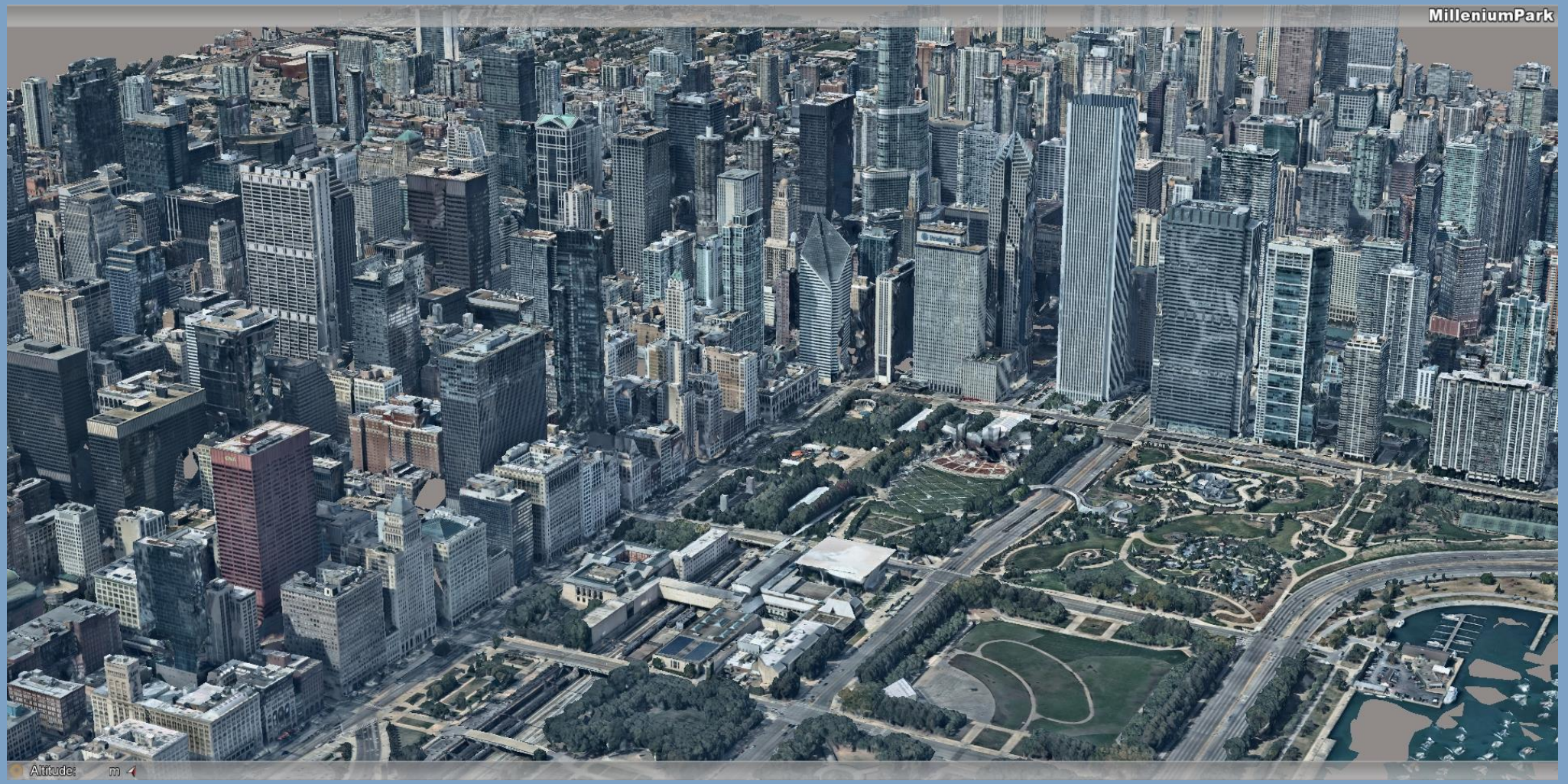
3D Mesh in Chicago



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PUSHPIN

Highest-accuracy, fastest turnaround,
lowest cost parcel change detection

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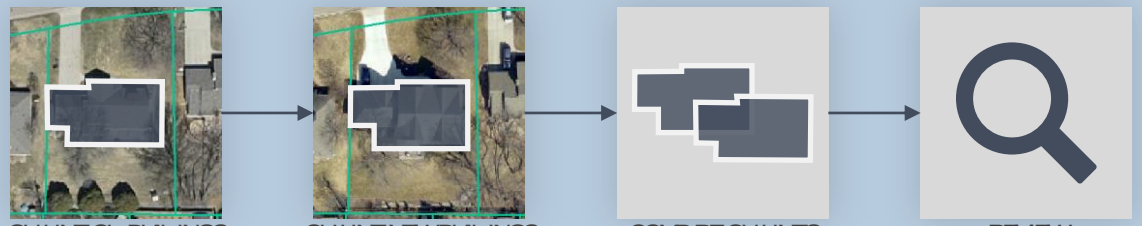
What makes us Better?

COMPE,I,ION

Manual ¡utomated



PUSHPIN

HOW G,N WE HELP?

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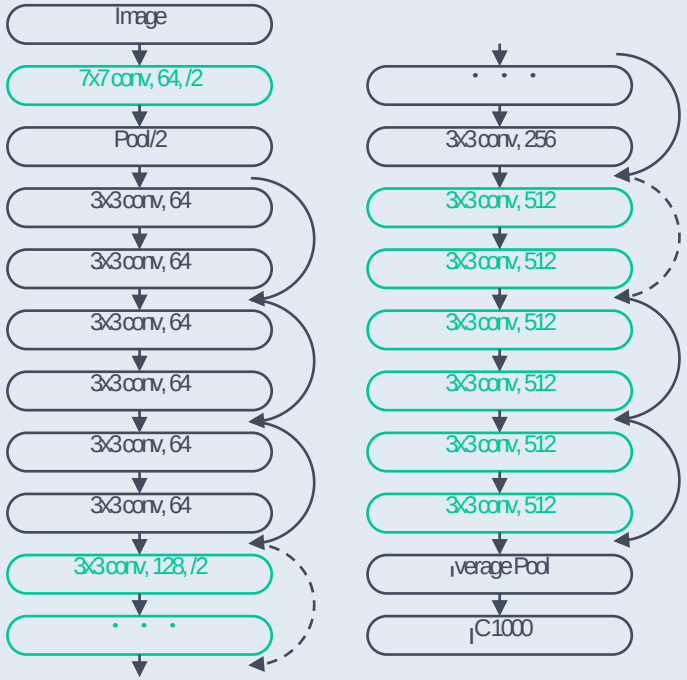
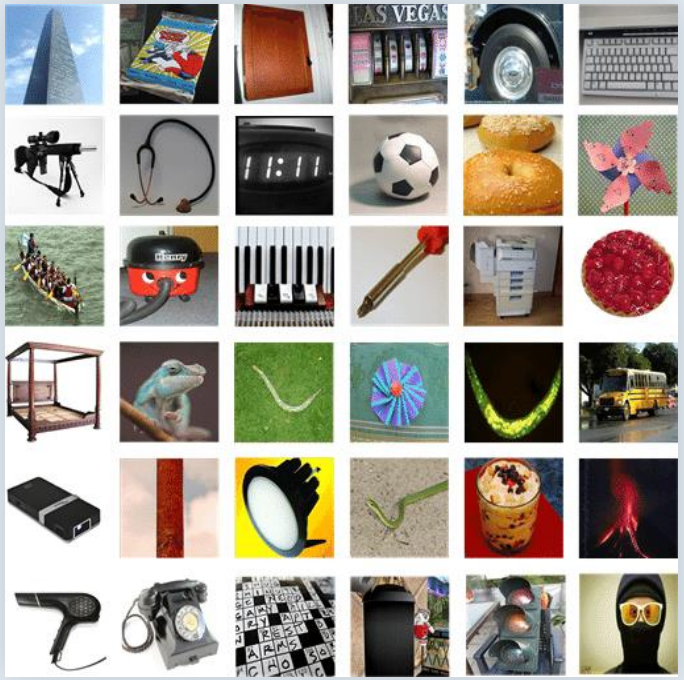
Parcel change detection

Automatic classifier





1 STARTING WITH AN OFF-THE-SHELF NEURAL NETWORK BASED ON RESNET 50

- ResNet 50 is the 50-layer residual network that won the ImageNet Large Scale Visual Recognition Competition (ILSVRC) in 2015
- Pushpin customized this network for parcel change detection (e.g. supporting two input images)

2 PRE-TRAINING USING IMAGENET DATASET

- Pushpin pre-trained the network using the ImageNet dataset
- This dataset includes 1.2 million images of everyday objects manually classified into 1,000 categories

3 TRAINING USING PUSHPIN PARCEL DATASET

- Pushpin further trained the network using 100K image pairs manually classified as changed or unchanged
- Changed parcels also include one or change type (addition, construction, deck, demolished, flatwork, garage, new, other, pool, shed)

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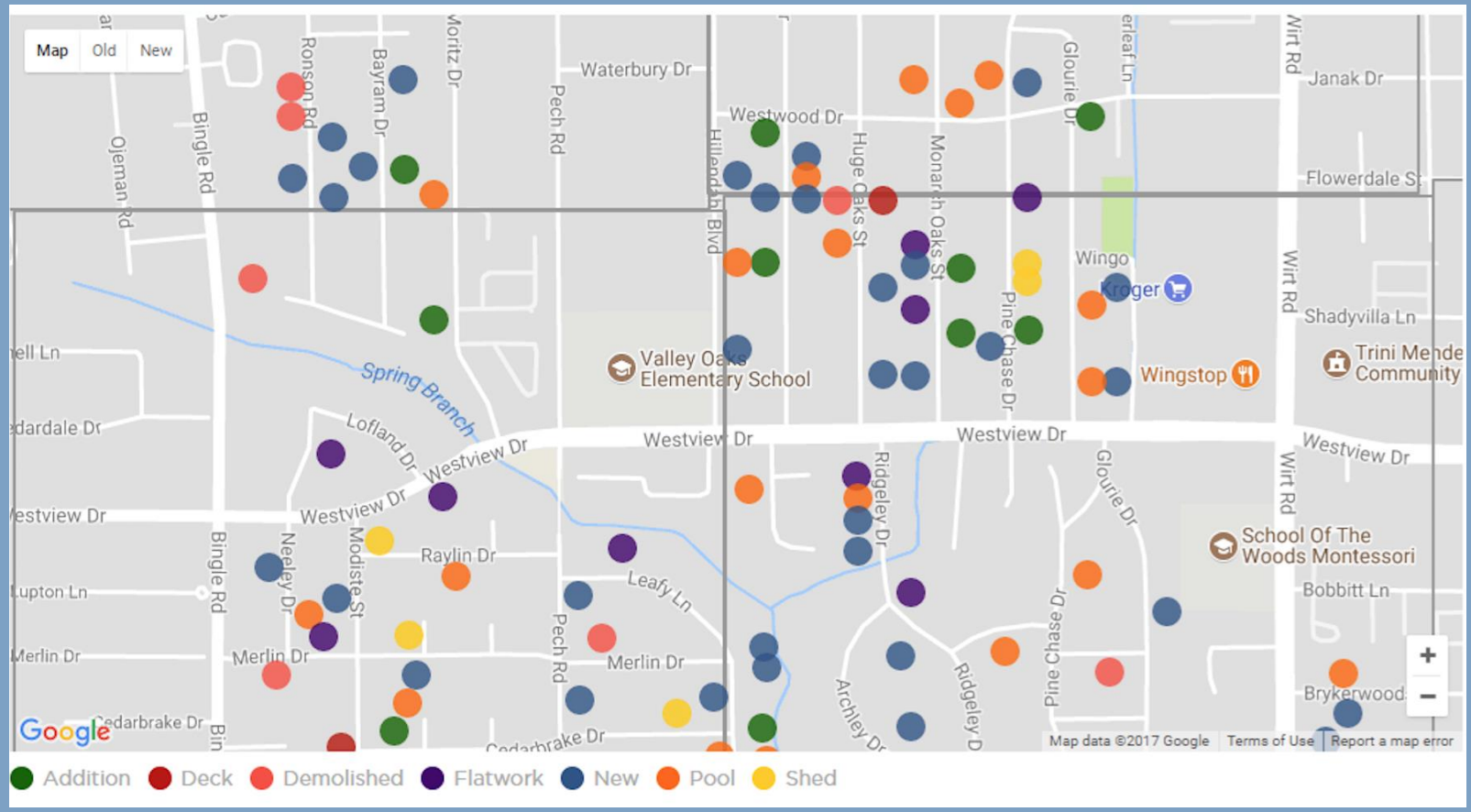
Fast, Affordable Change Detection

- Nearmap & Pushpin

- 11 historic captures
- Resolution AND leaf-off is key
- New captures online fast

- Delivery in 4 weeks
- 12 classification types
- Detects subtle changes
- 15 cents a parcel!
- Free for 1000 parcels!



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THANK YOU
See latest captures, read blogs, & watch videos
Learn more at
http://go.nearmap.com
Captured: 27 Oct 2017
Roadways near JFK Airport
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