Pictometry Feature Mapping

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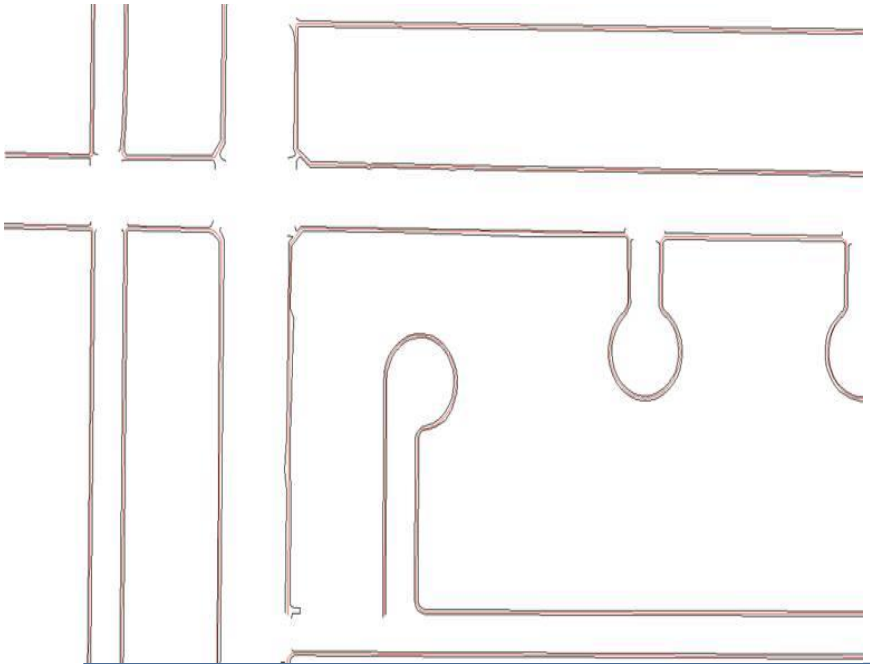
2D + Digitization Solutions

Thom S. Salter, CP, PSM
VP, Mapping and Photogrammetry

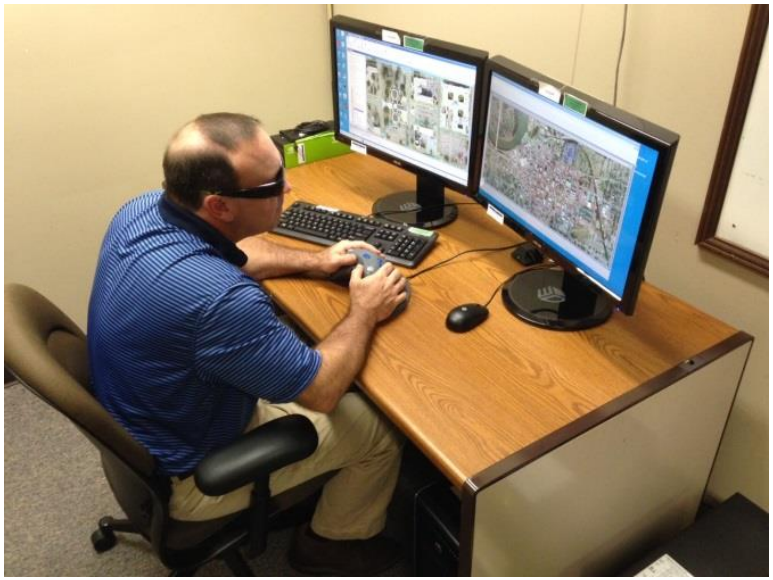
- Pictometry International Corp.
- 15 Years of Professional Experience
- Sensor Calibration, AT
- Orthogonal and Oblique Imagery, LiDAR

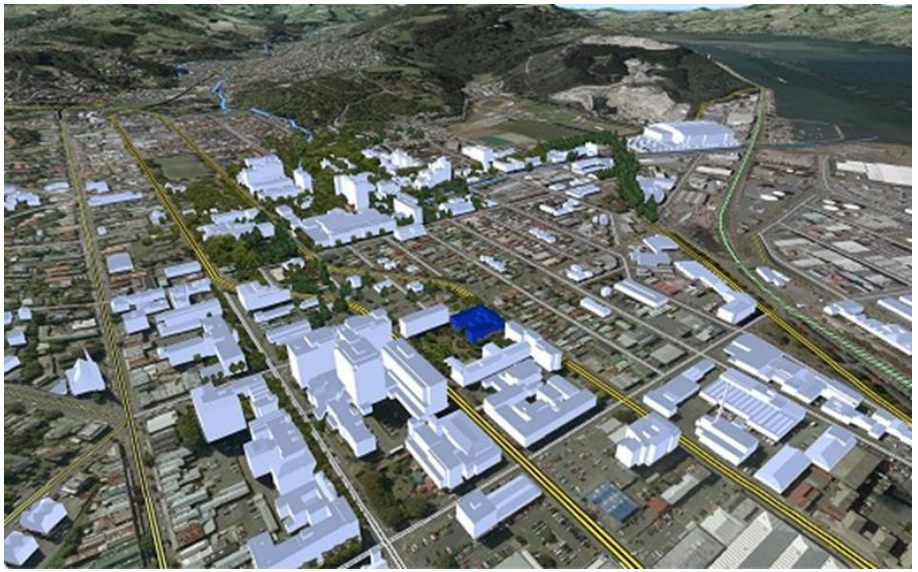


3D Stereo Mapping/ Planimetric Compilation

George Jones, Sales Manager, ISC

- Intergraph Services Company (ISC), Team Member
- 20 Years of Production Success
- Geospatial vector data capture – 2D or 3D
- Geospatial data services

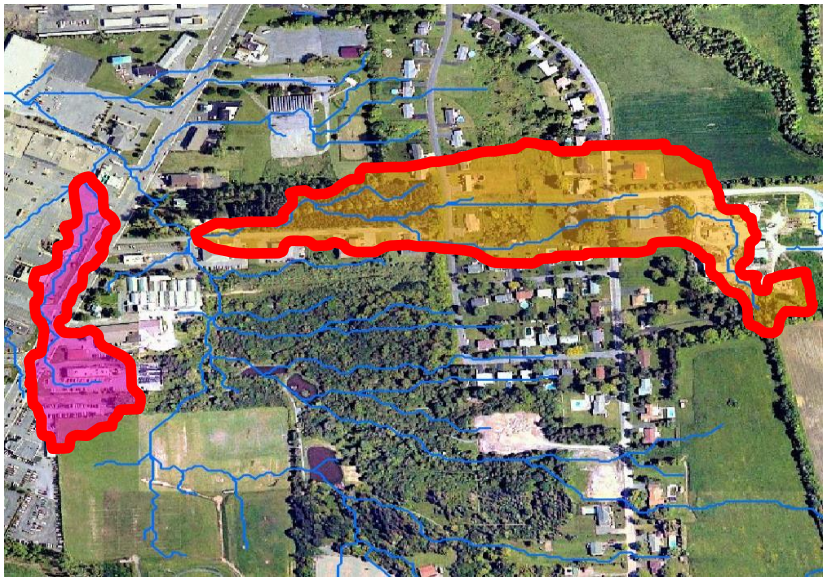




Topographic Data Products

Benjamin Houston, P.E., PMP, GISP

- GroundPoint Technologies, Team Member
- 20 years of Topographic Engineering
- Elevation Models, Contours, Derived Products
- Hydrography, Storm Water, Impervious, High Resolution Land Cover

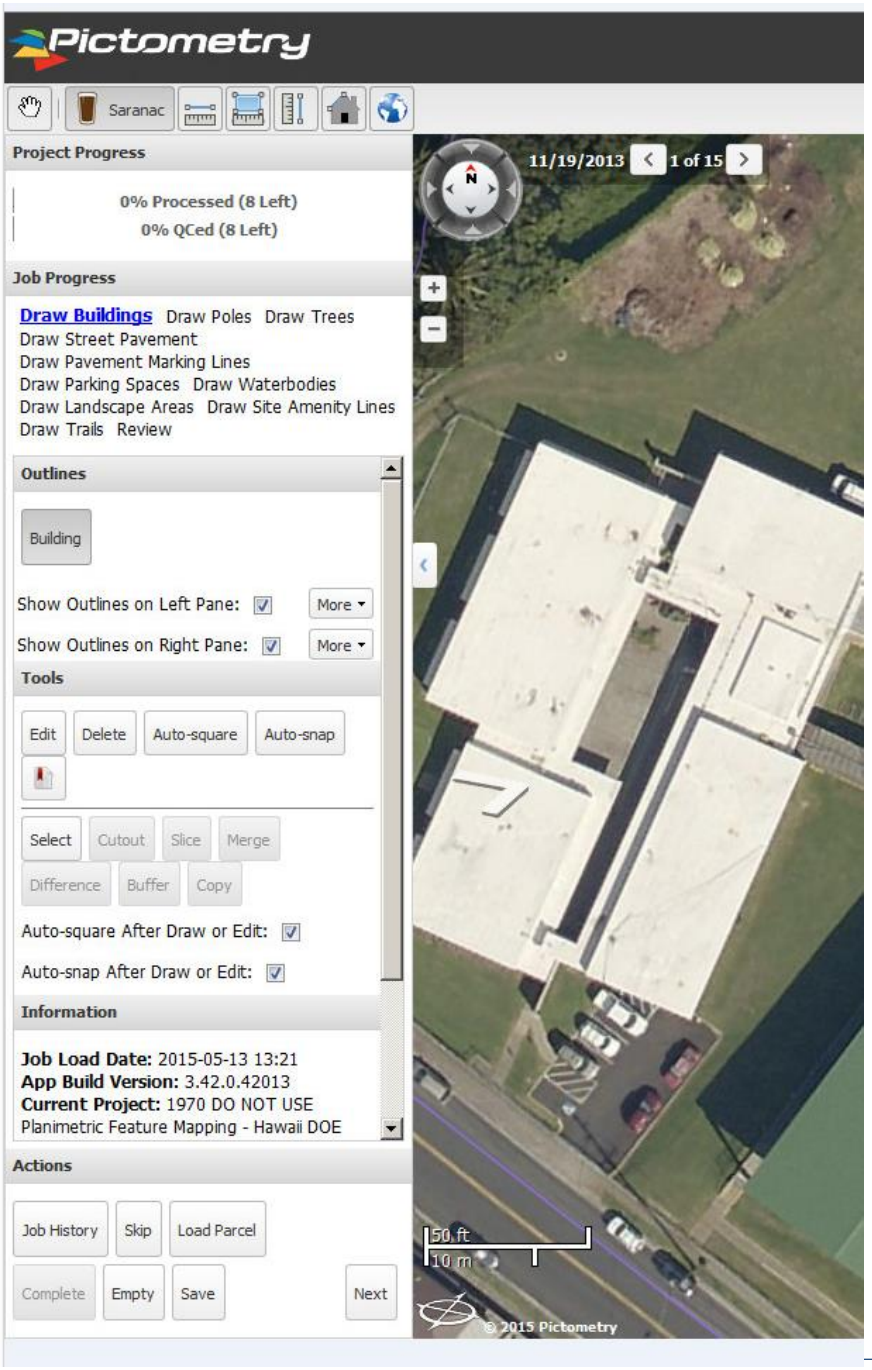


Pictometry Feature Mapping Environment

- 'Internal' Deployment

- Built on Pictometry Connect Technology
  - Web based application allowing techs to digitize features from anywhere in the world

- Compare multiple libraries and views



Mapping Environment

- Custom designed environment to support use of oblique imagery during digitization on orthogonal imagery
  - Permits more thorough analysis
  - See heights and sides of features
  - Superior accuracy
- Workflow management!
  - Full dual-pass review
  - Built in feedback mechanism

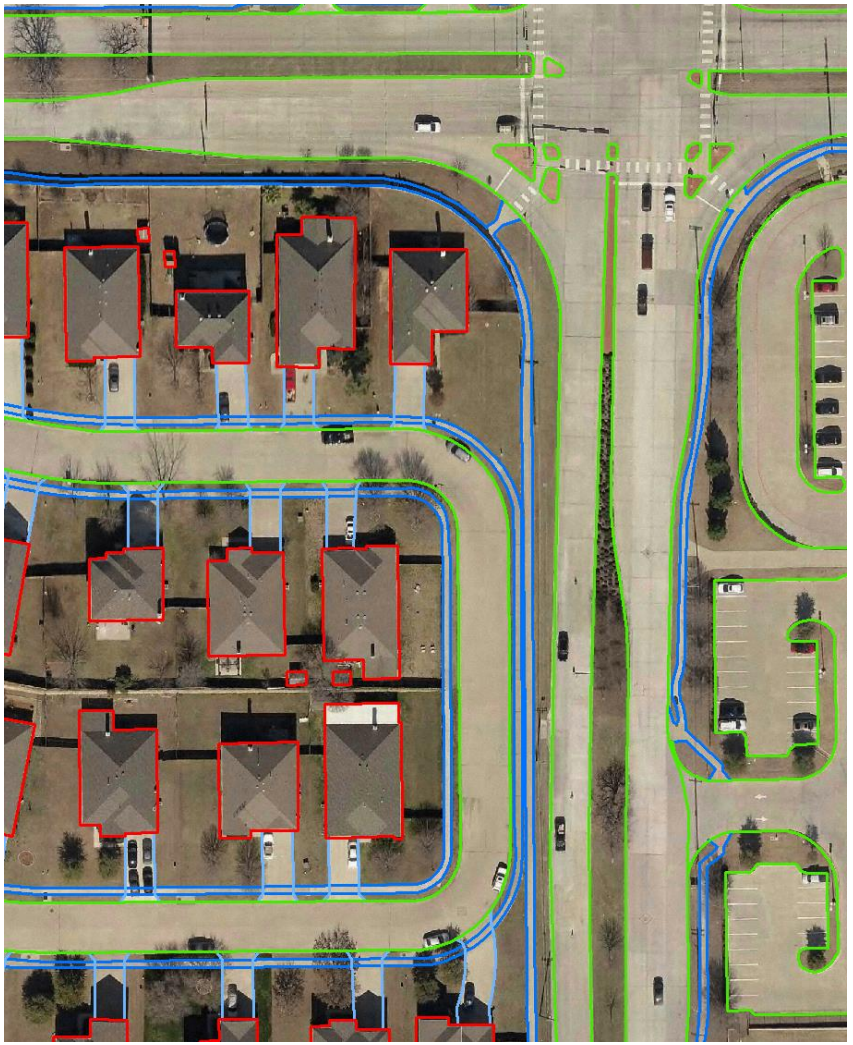
Feature Outlines

Draw Features

Draw Buildings

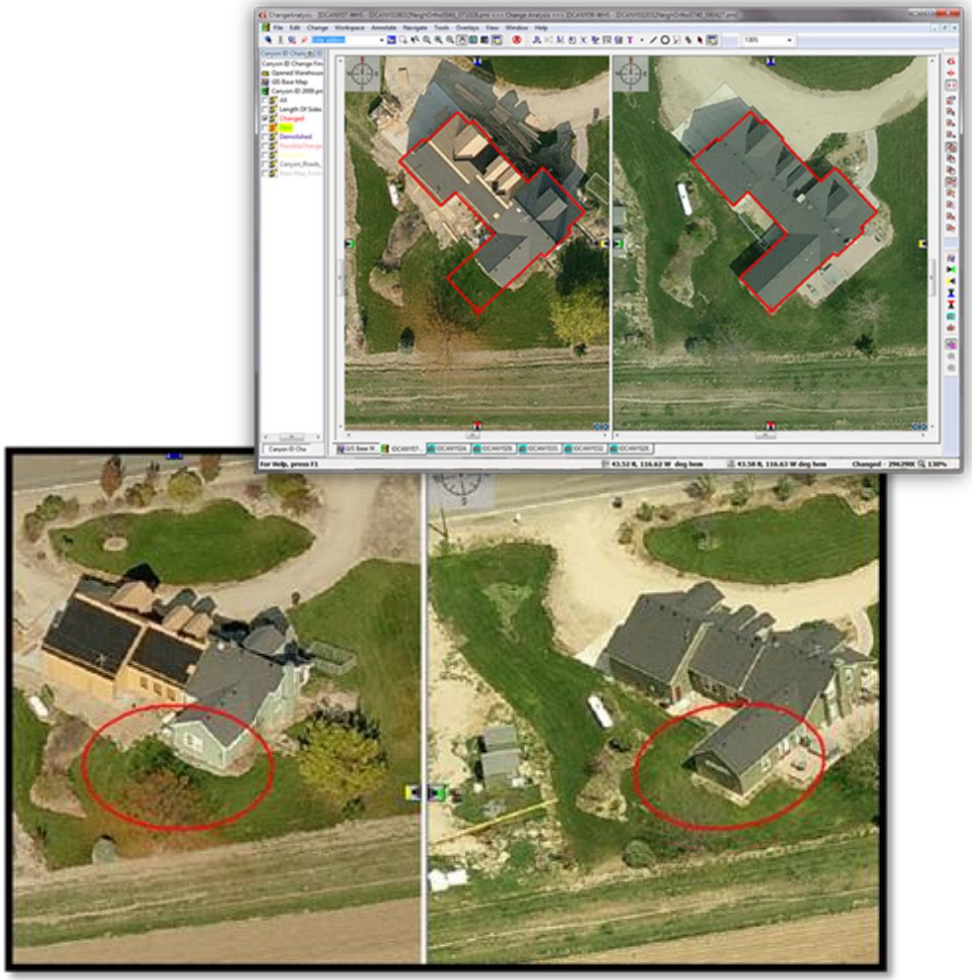
Example Offerings

- 2-D Planimetrics
  - Height attribution
- ChangeFinder: Building Outline Digitization plus Change Detection
- Impervious Surface Mapping



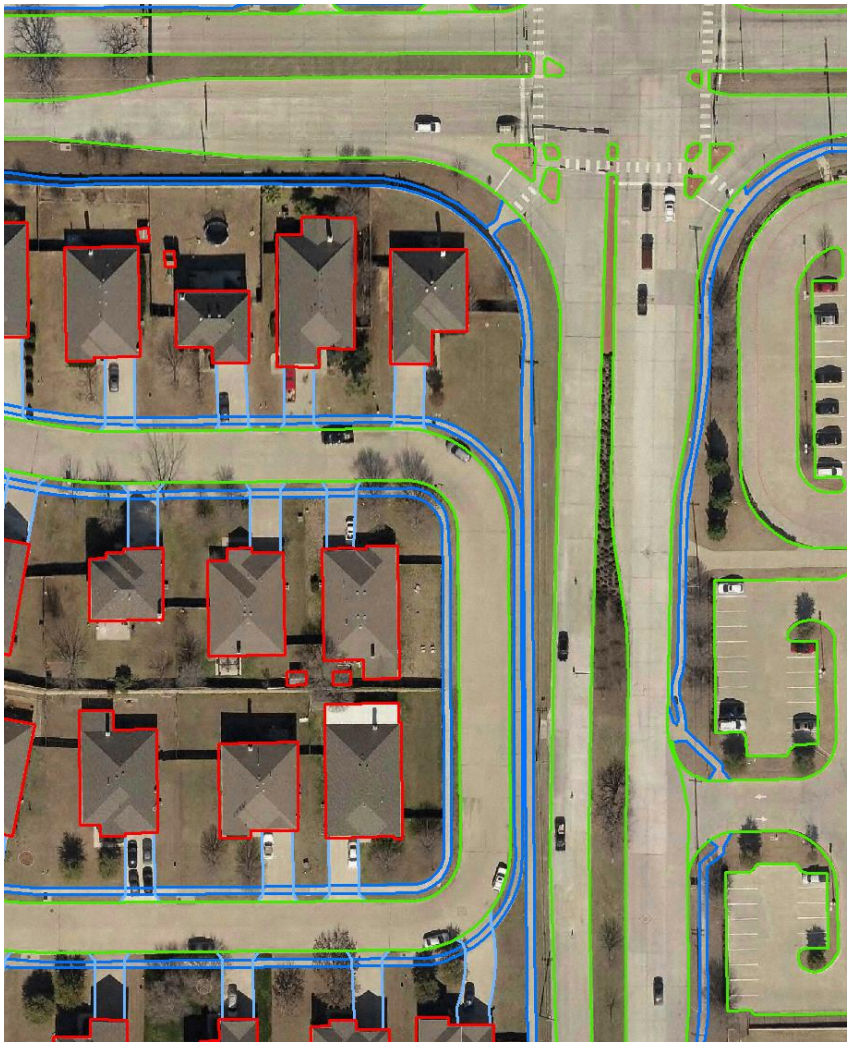
Pictometry ChangeFinder

- Dynamic Workflow
  - Full QC
  - Every parcel/outline reviewed by two technicians
- Inspection from full 360 degrees
  - Digitization on orthos
  - Obliques integrated for reference and ambiguity resolution!
- Connect Assessment



Example Offerings

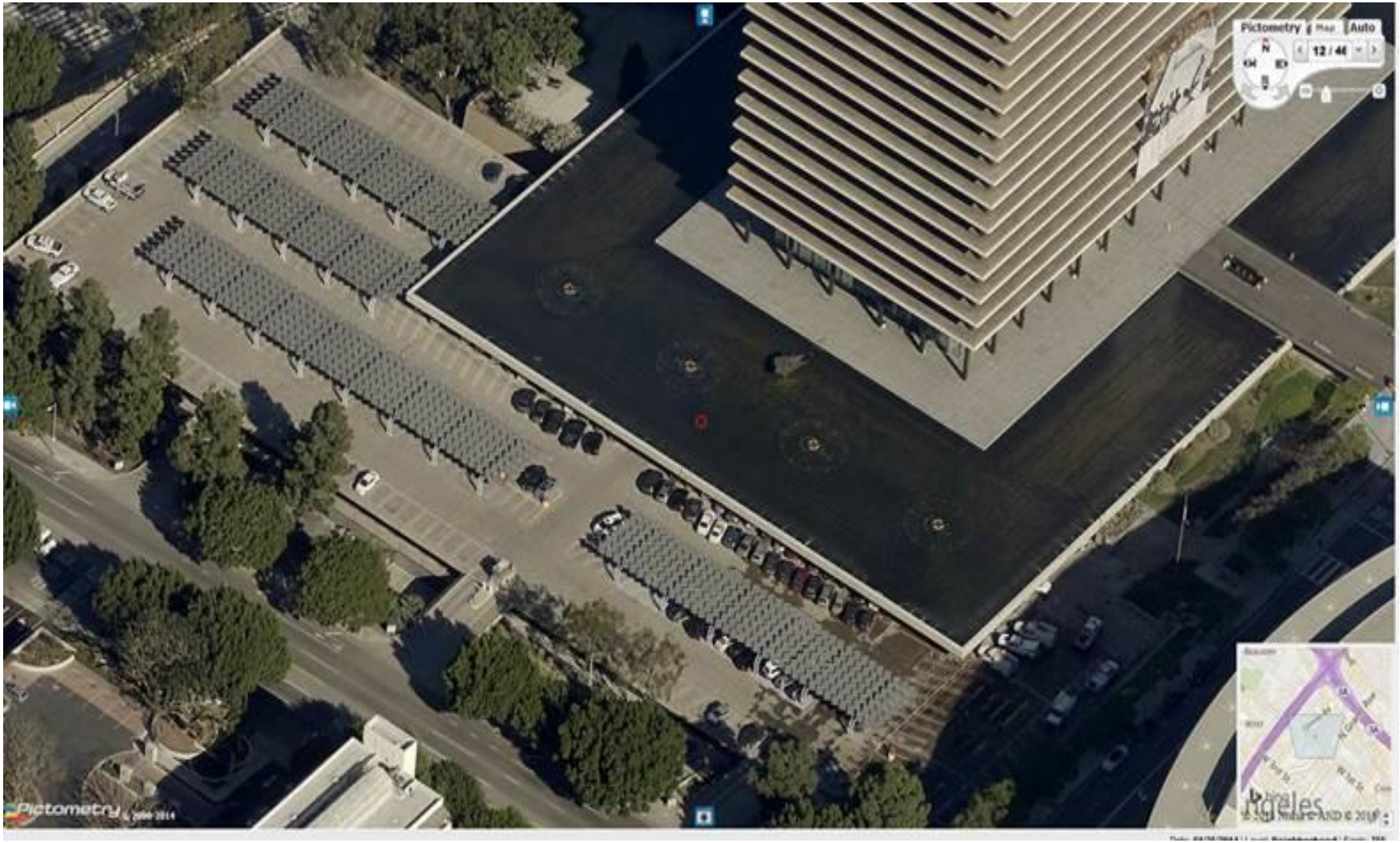
- Feature Point Mapping
  - Ideal for Asset Management and Inventory Projects
  - Pools, Hydrants, etc.
  - Anything you can see!
- High Consequence Area (HCA) Mapping
- Post-processing: Data Integration Services



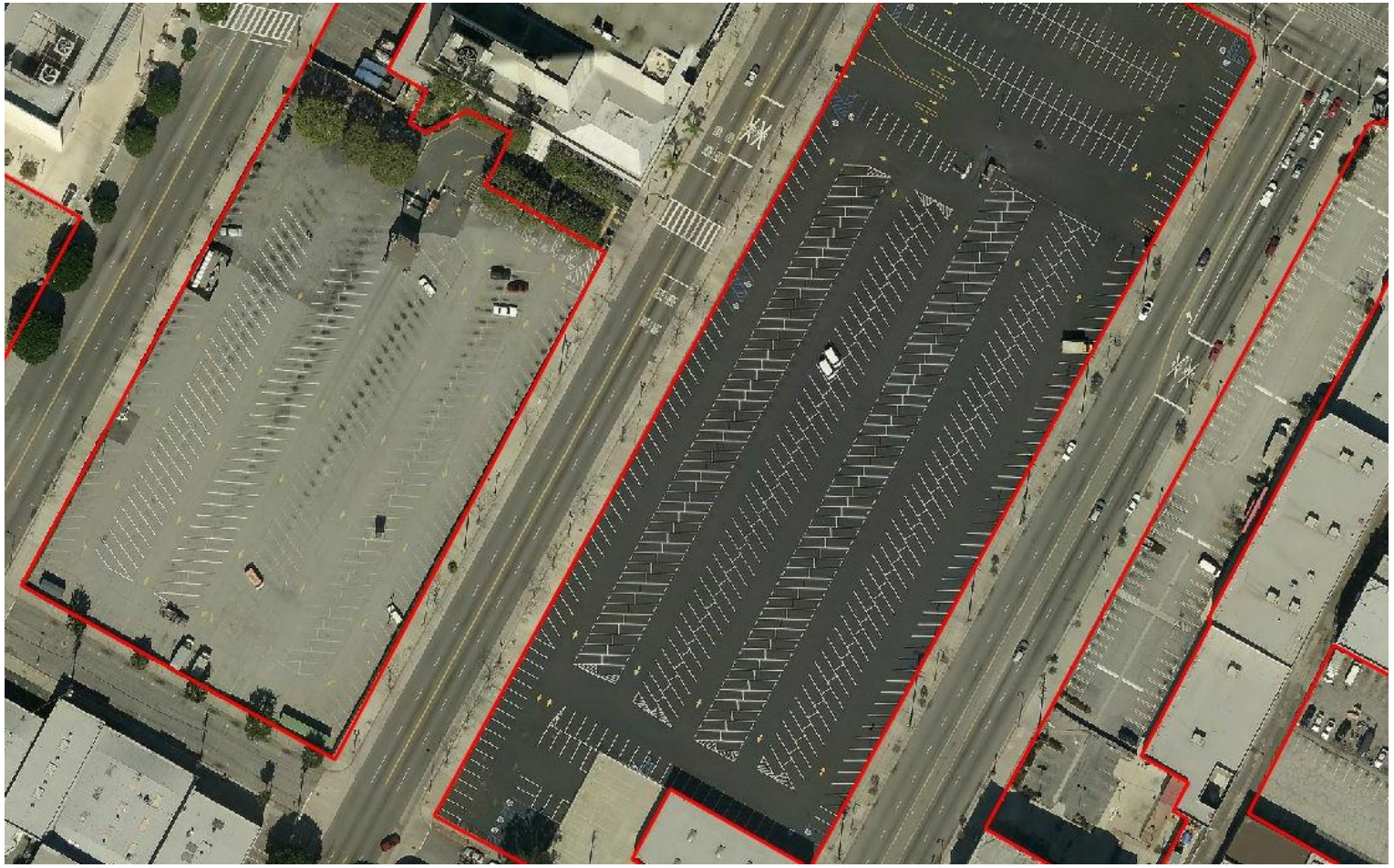
High Consequence Area (HCA) Mapping

- Oil and Gas Pipelines
- Identification of:
  - 4-story + structures
  - High occupancy locations (HOL)
  - Dwellings/Business Occupation
- Conflict detection:
  - Attribution based on parcel data, previous projects, etc.

Feature Mapping (2D)



Feature Mapping (2D)



Scope: Map parking lots across 190,947 commercial parcels throughout LA County, draw polygons for all ground level, paved parking lots.

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Optional Feature Mapping Solutions

INTERGRAPH SERVICES COMPANY (ISC)

Pictometry

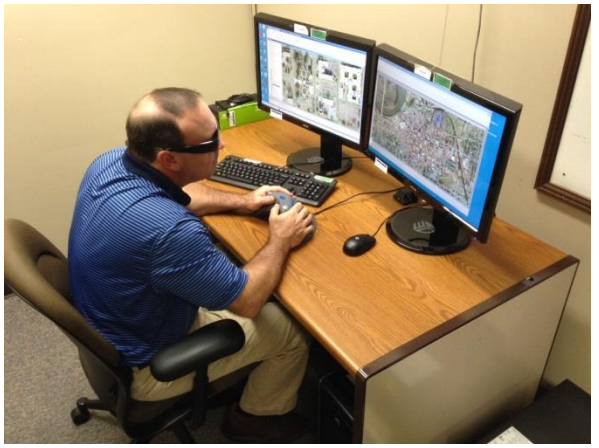
- Feature extraction
- Image analysis
- Data Conflation/Integration
- Database design and development

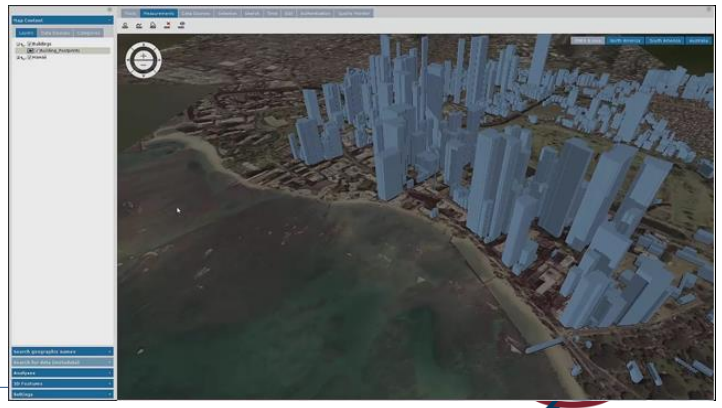
* Photogrammetric Services
* GIS implementation
* Cartography
* Map and chart production

Hardware

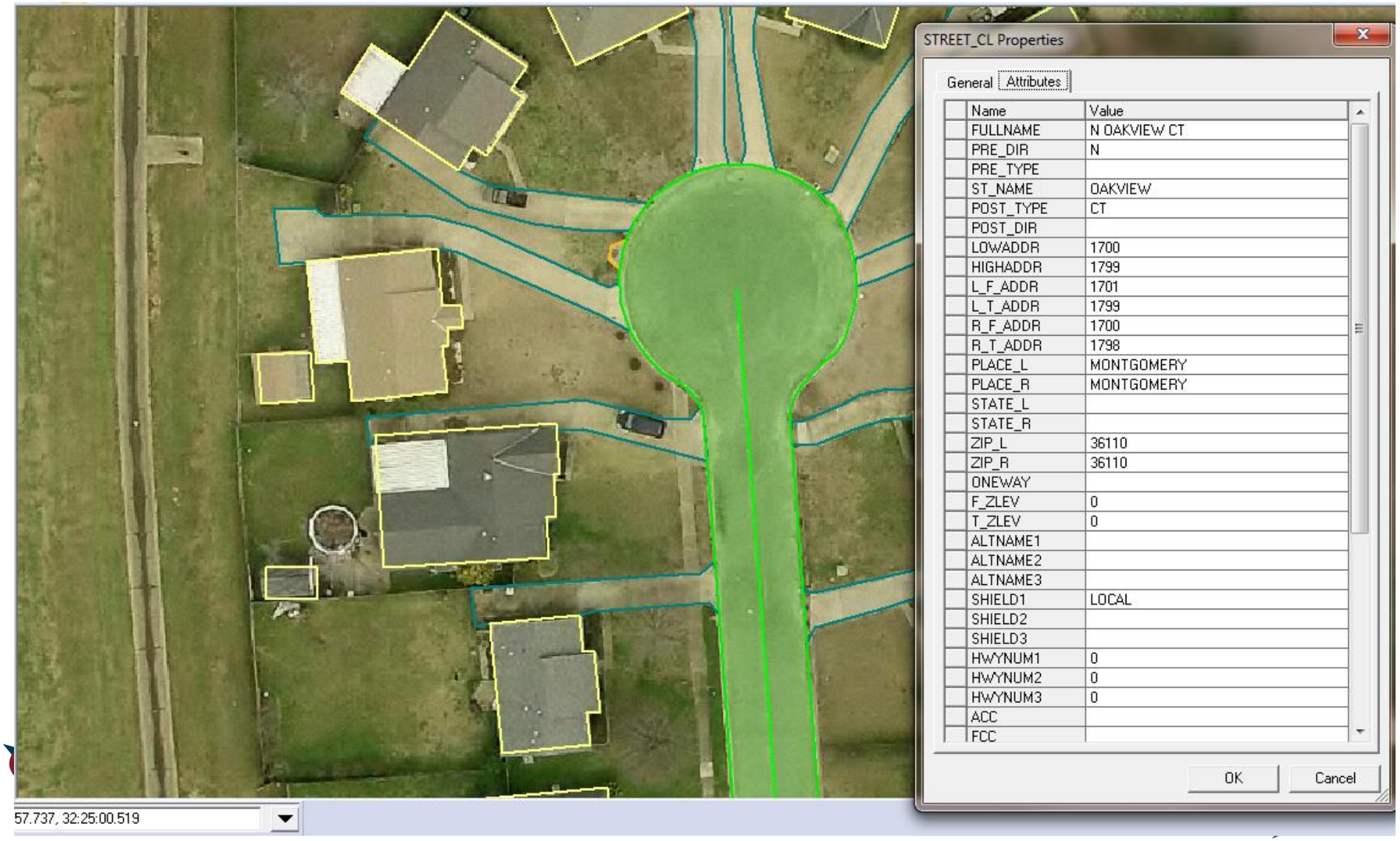
State-of-the-Art Hardware

- 47 Stereo Workstations
- 118 Workstations
- 44 Laptops
- 30 Servers
- 2 Large Format Scanners
- 3 HP Large Format Color Plotters

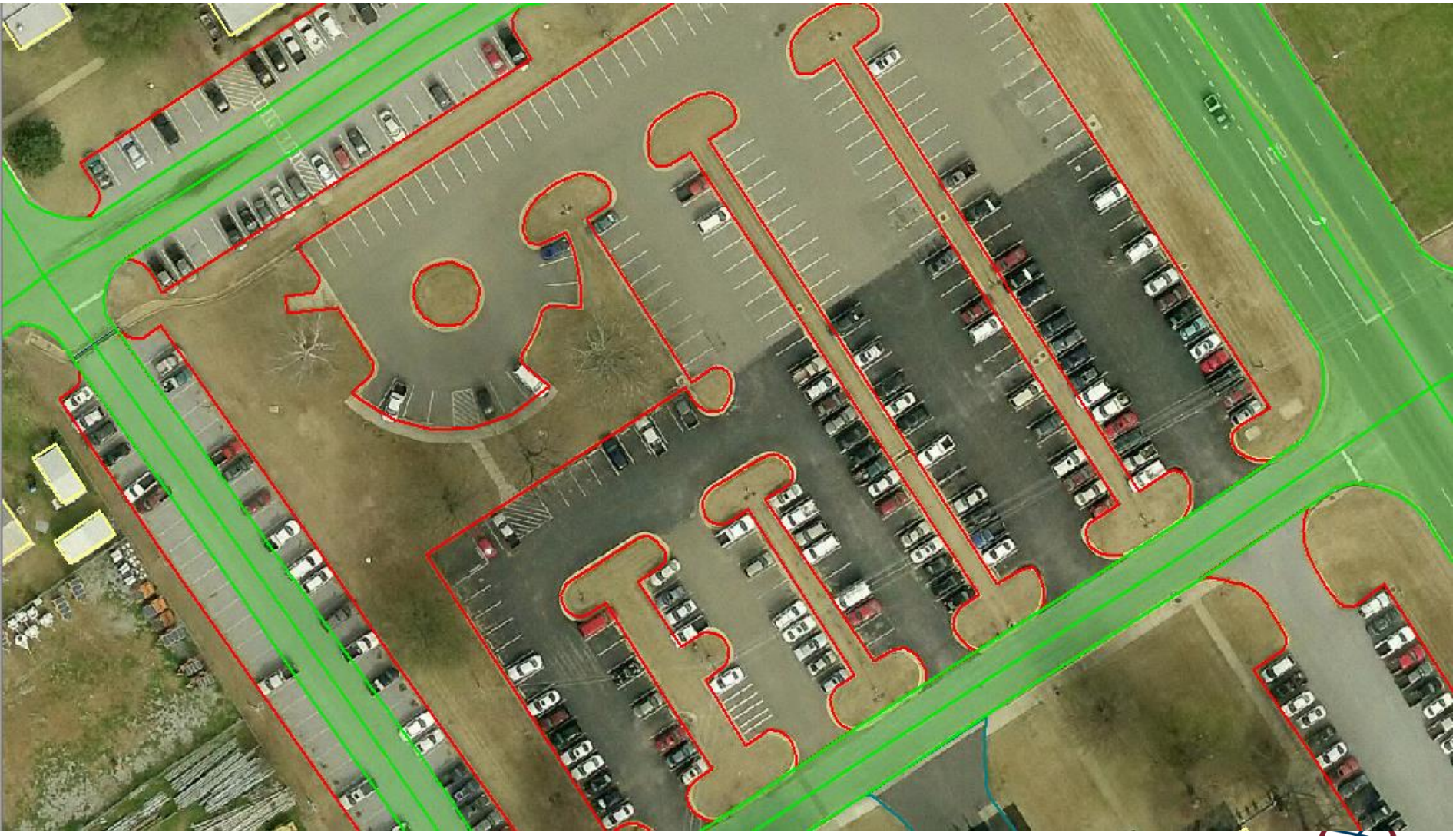




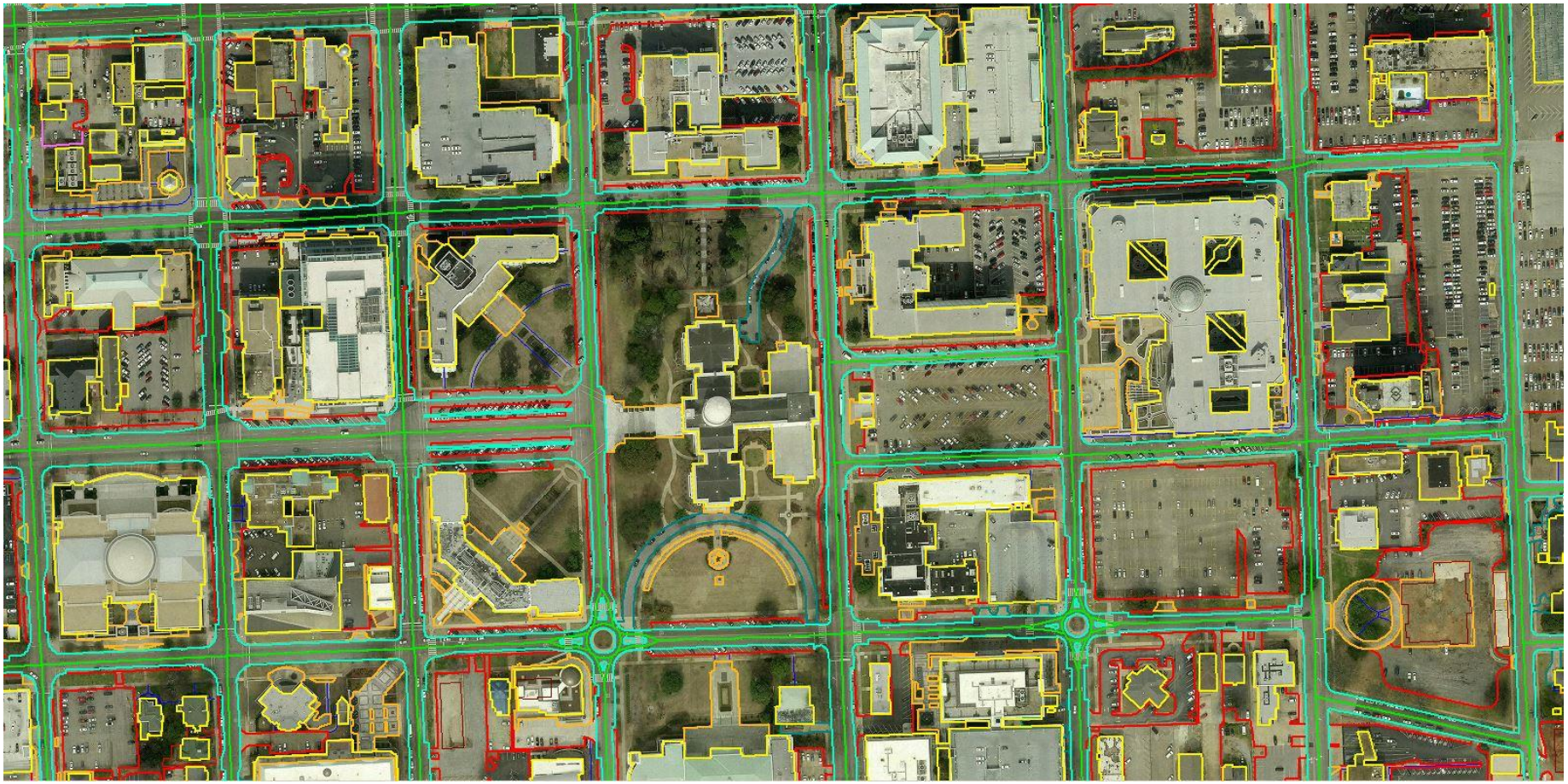
Extraction of Features from Pictometry Orthos



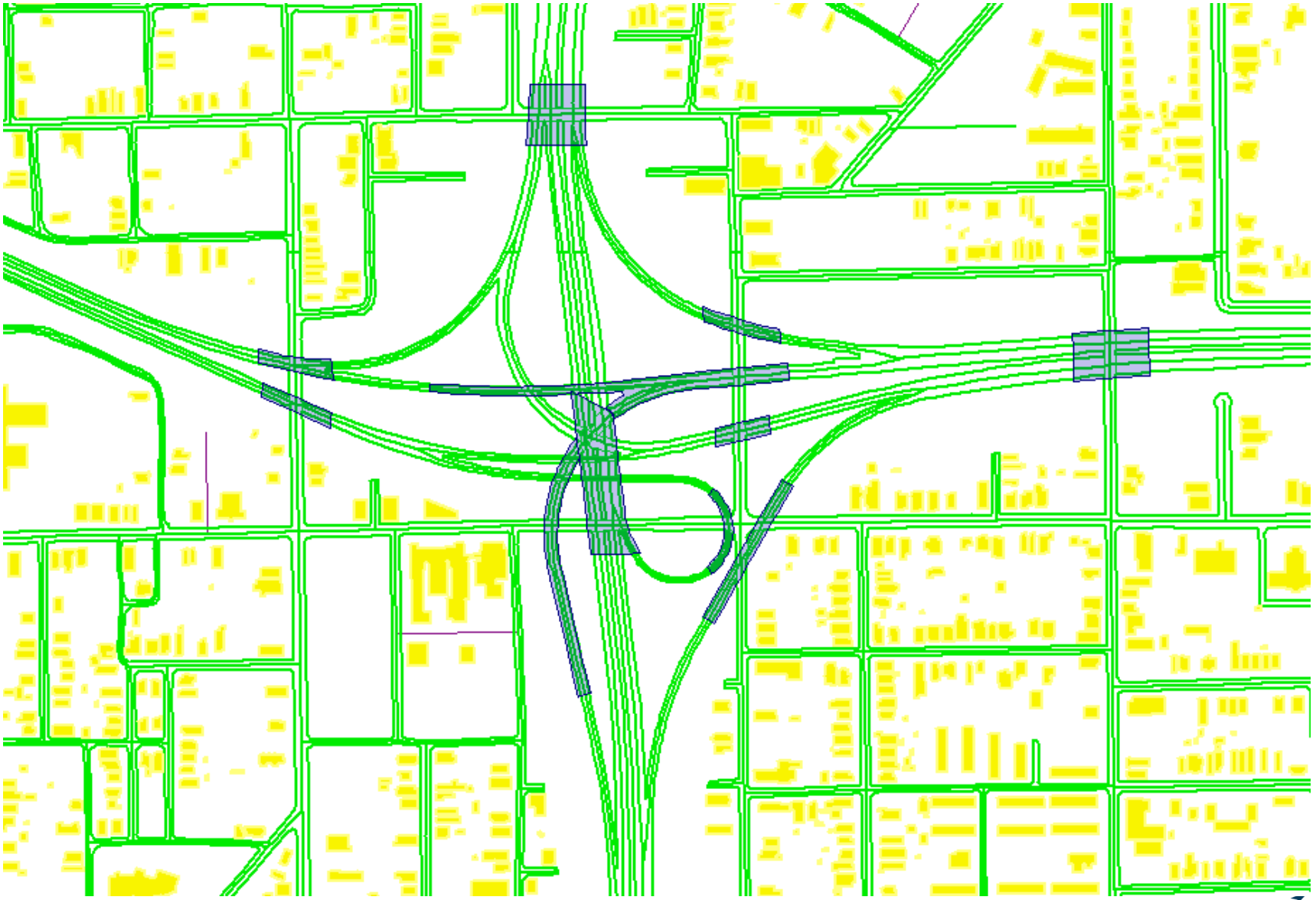
Impervious Surface



Impervious Surface Capture



Transportation and Buildings



Why 3D Data (Stereo Capture)

To support decision processes through better visualization

3D GIS…

- Is a requirement to generate 3D rendered models
- Provides more accurate and in-depth analysis of existing infrastructure
- Accommodates enhanced visualization for future projects (Urban planning, then presentation to local leaders, and finally to the public)
- Insures superior data for collaboration between stakeholders
- Provides better visualization for first responders and EMA
- Noise propagation analysis
- Is a requirement for flooding and plume movement simulations

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Example Customer uses for 3D Data

3 Dimensional Spatial relationship to other features

Feature Elevation/Heights

Monotonicity

Storm drain elevations

Line of sight analysis

Vertical obstruction analysis

3-Dimensional Analysis through perspective display

Discernment of elevation detail – (example: retaining walland ramps)

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LiDAR & Optional Terrain Mapping Solutions

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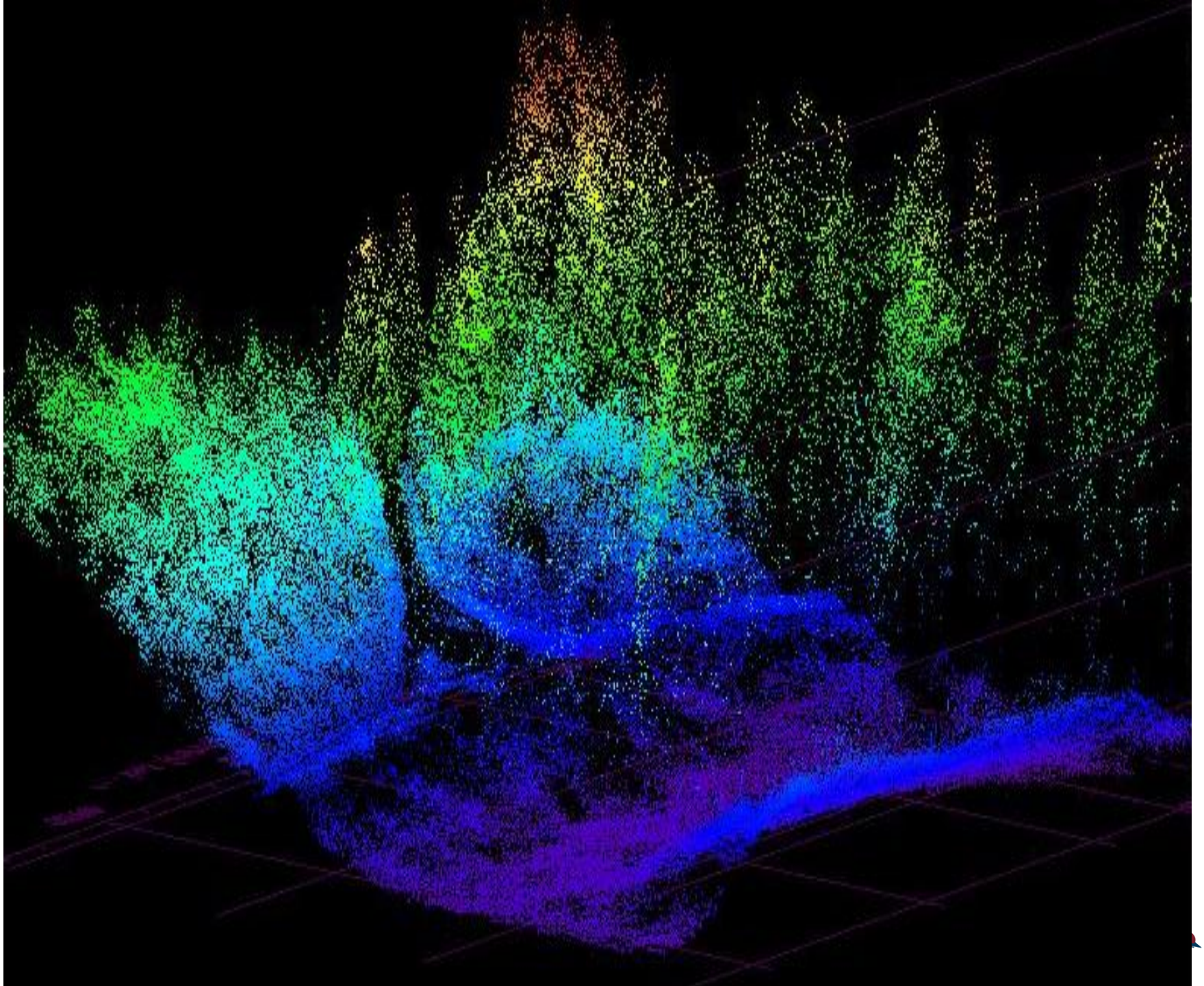
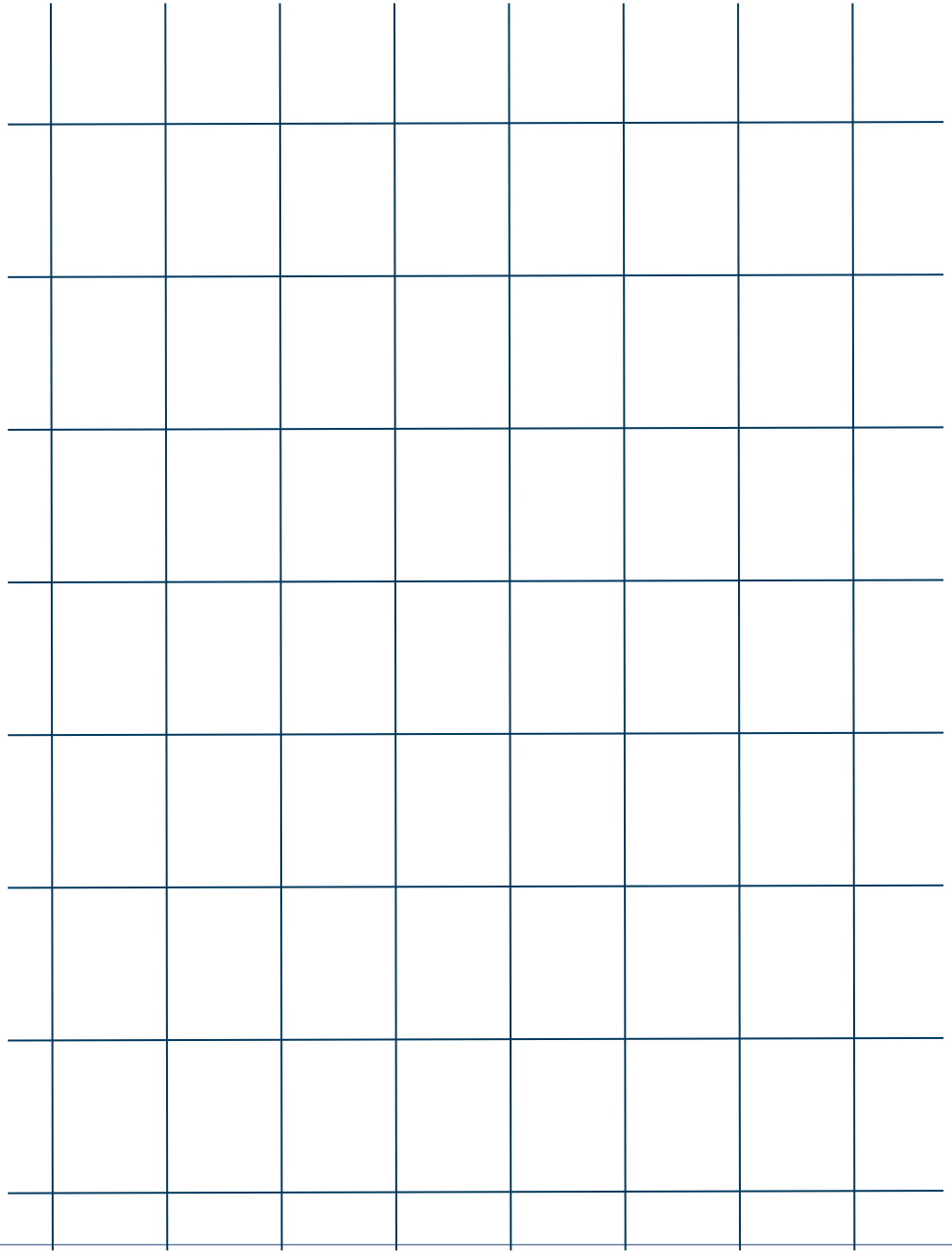
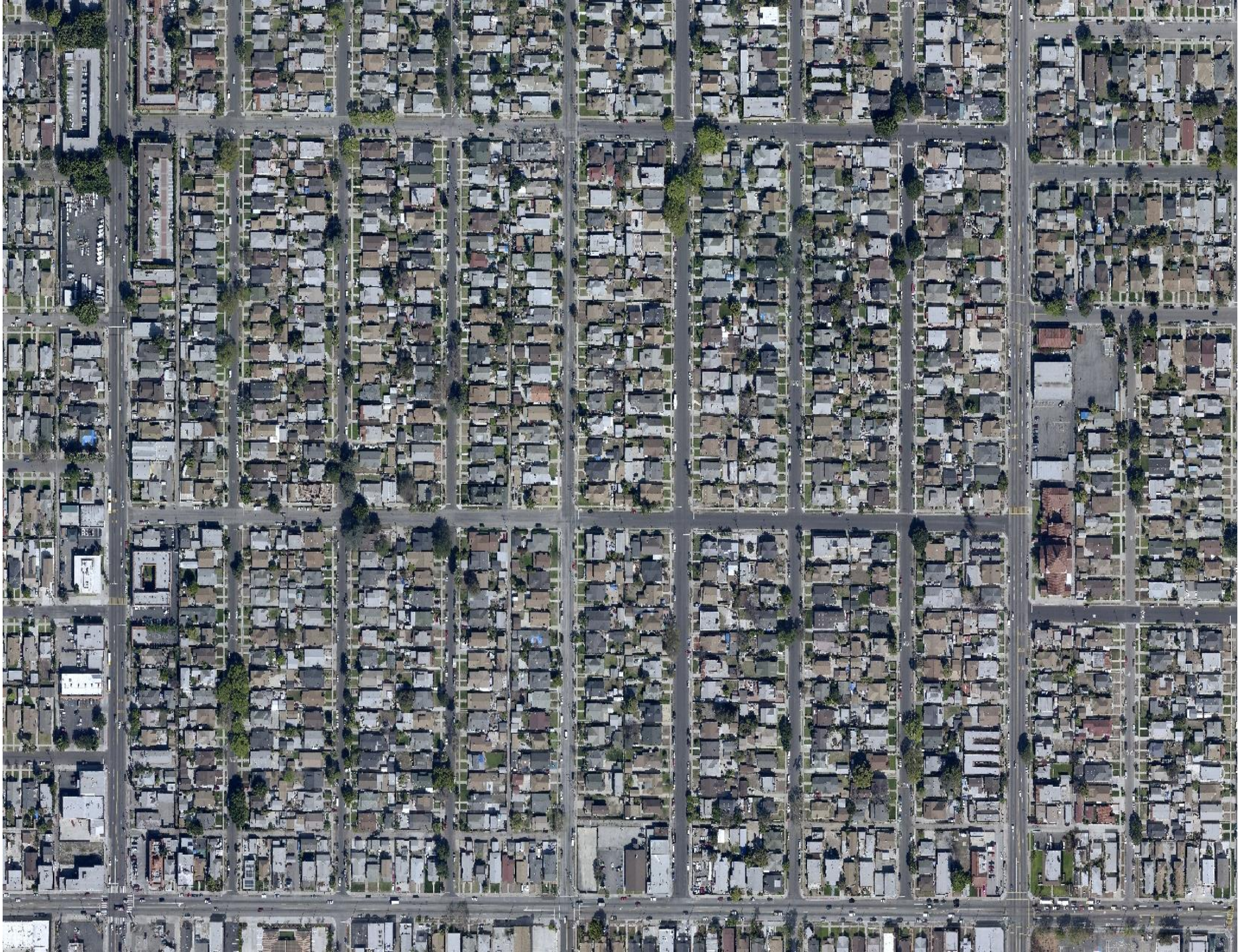
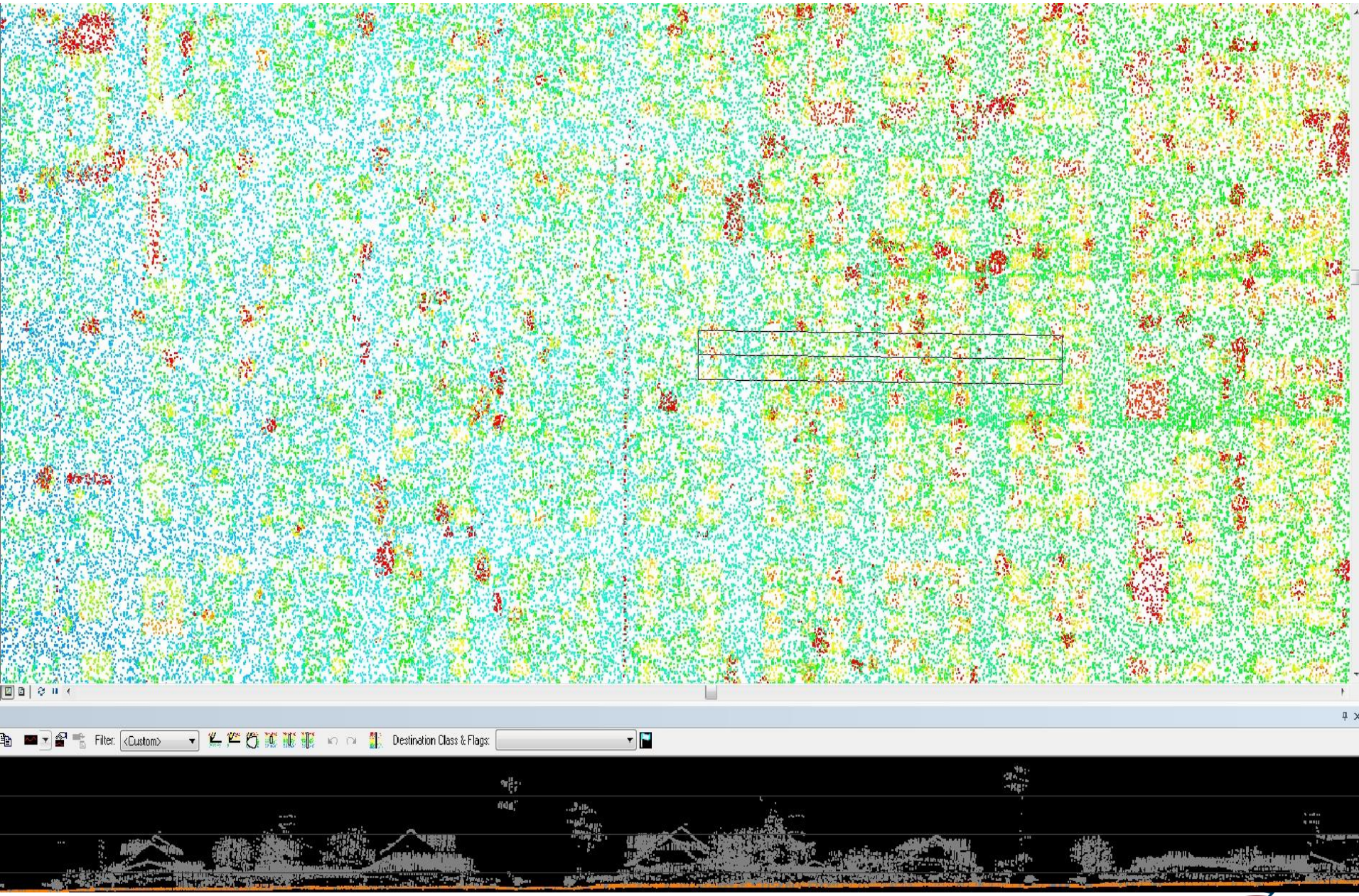




3ft cell resolution

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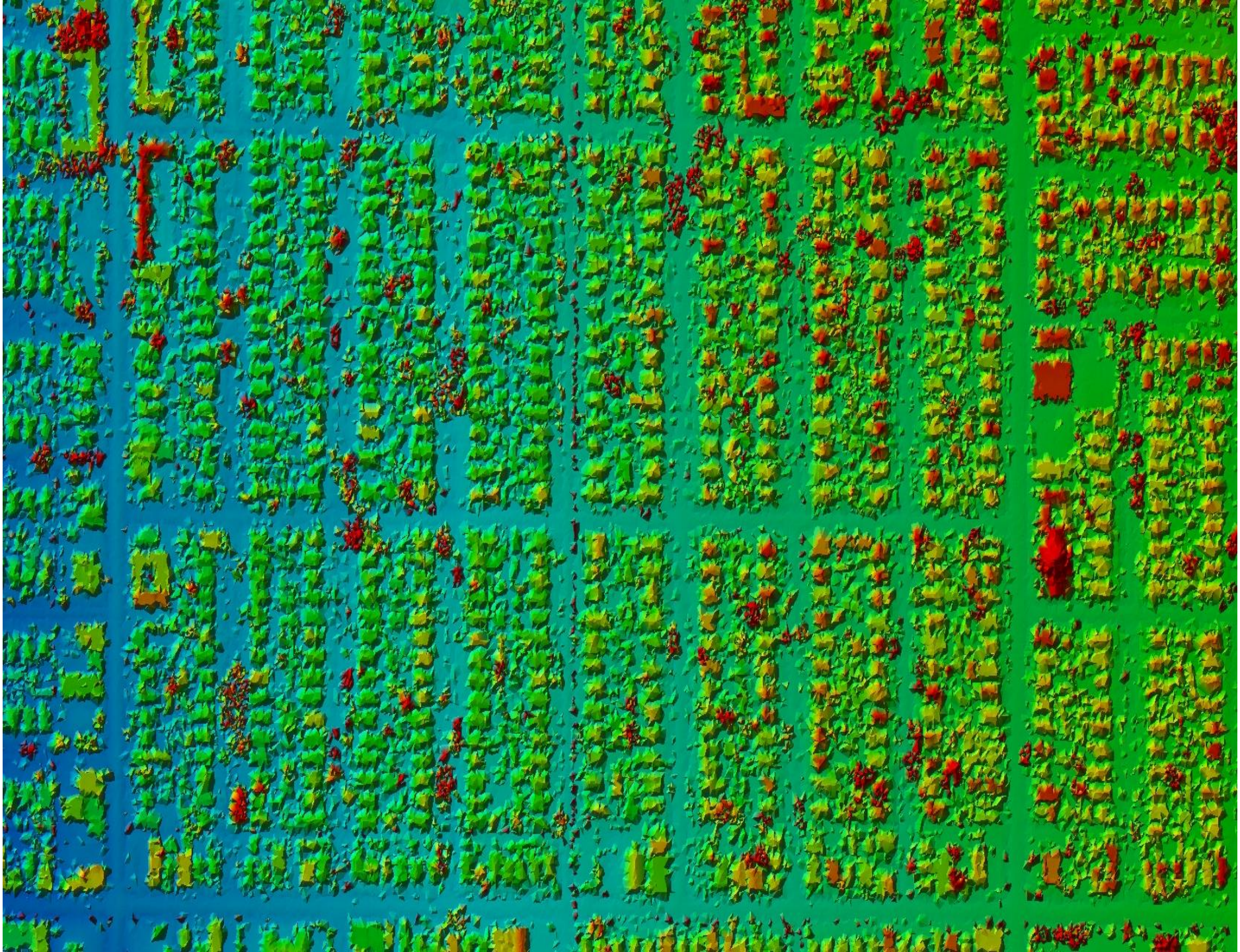
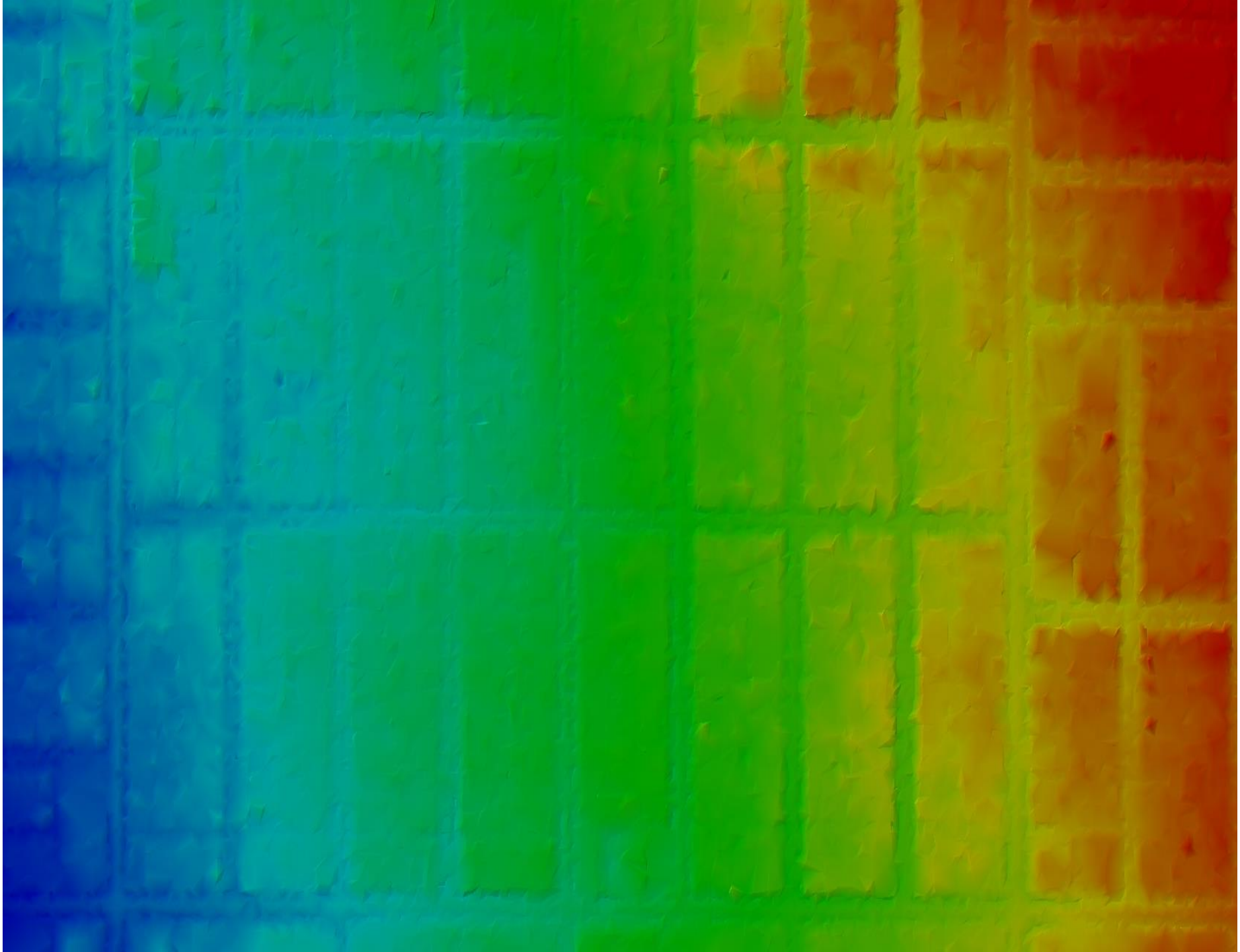
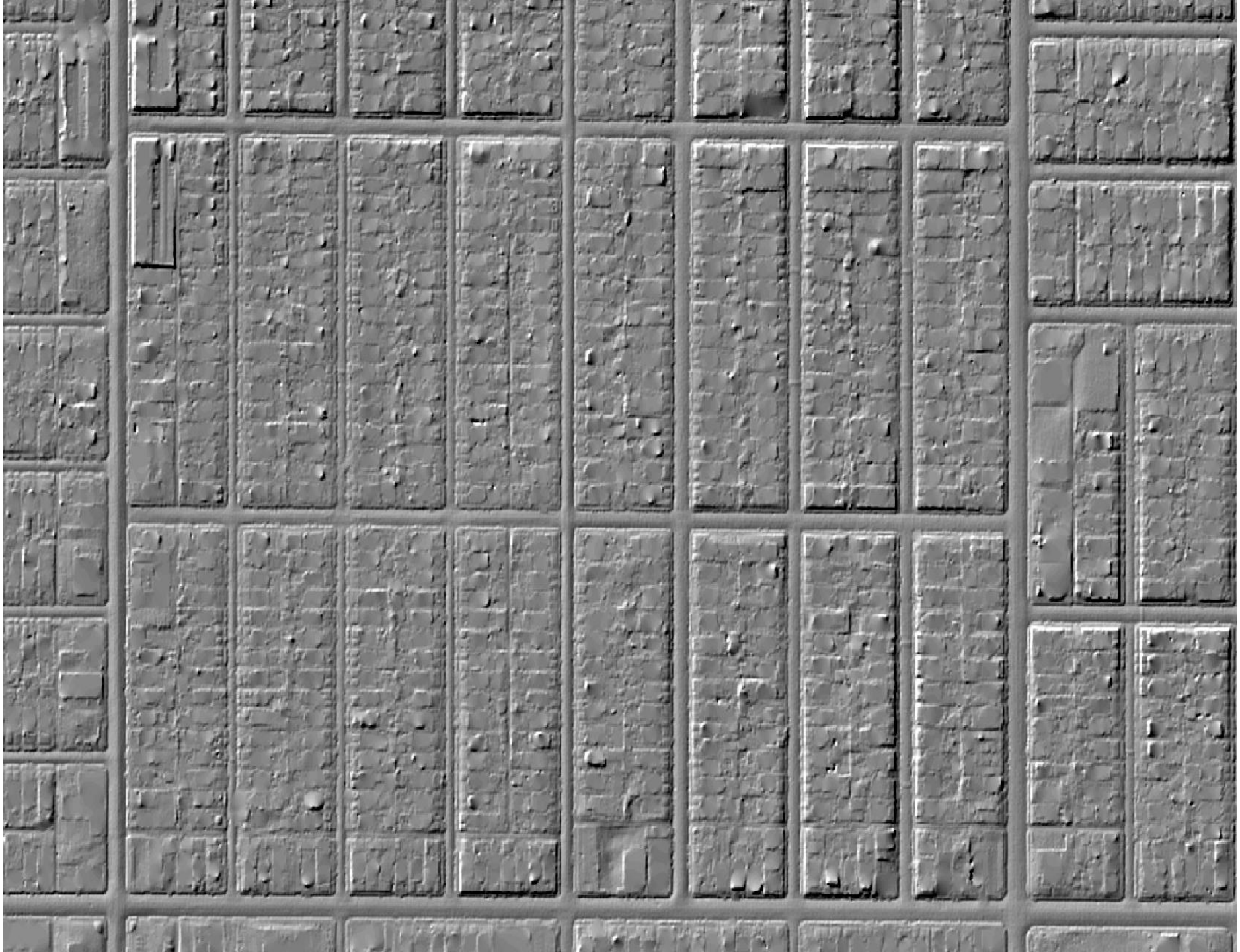
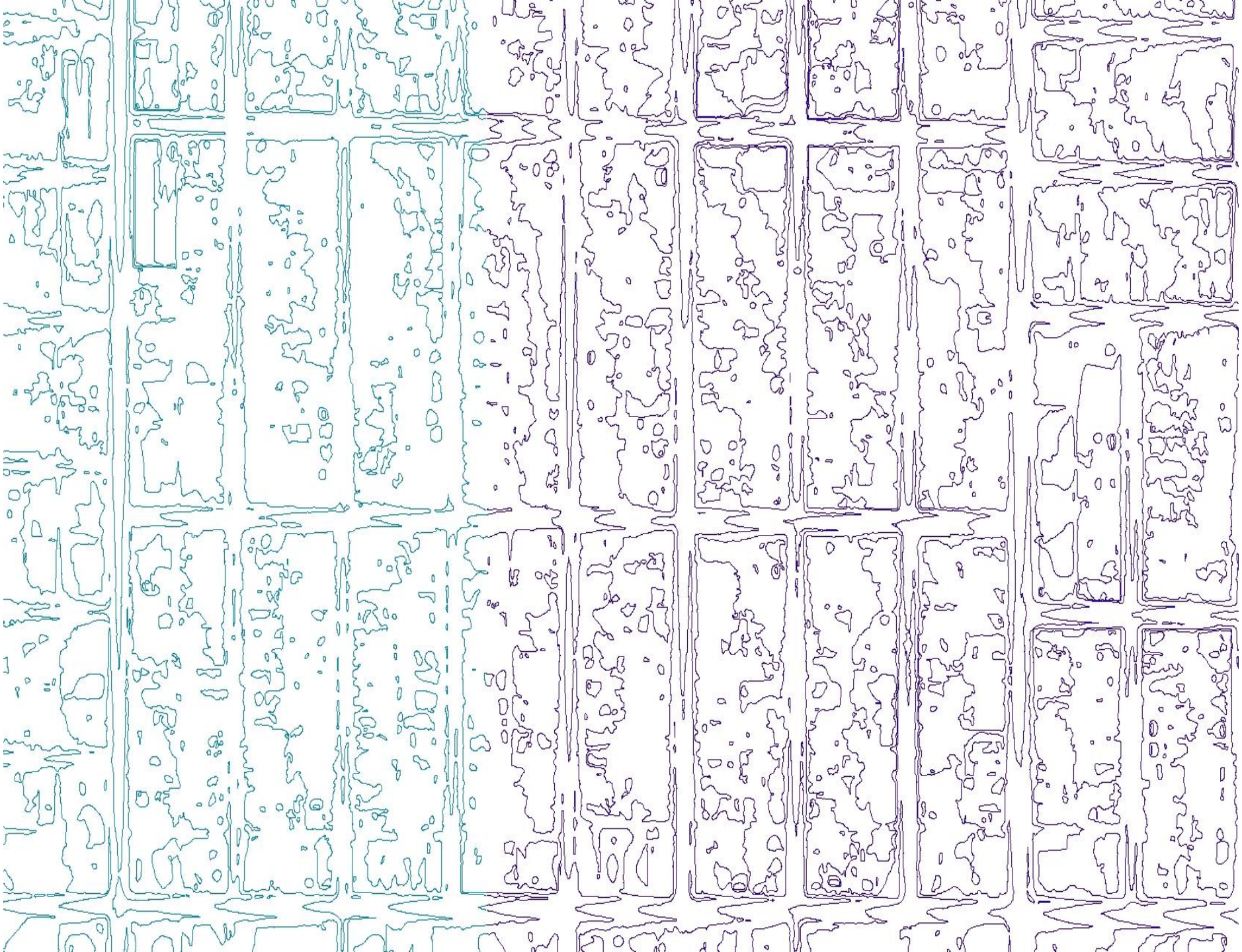
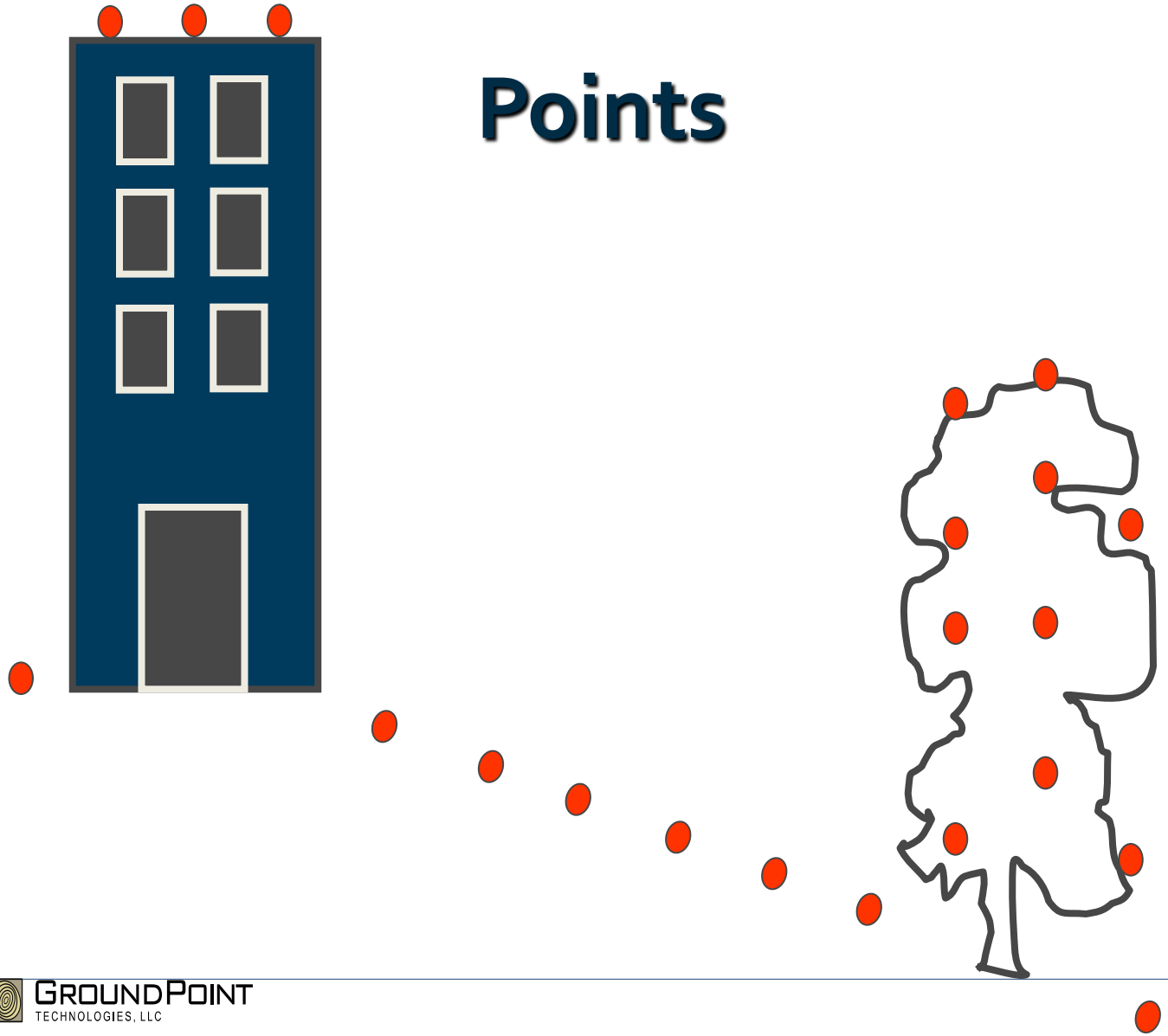








Extracting Information



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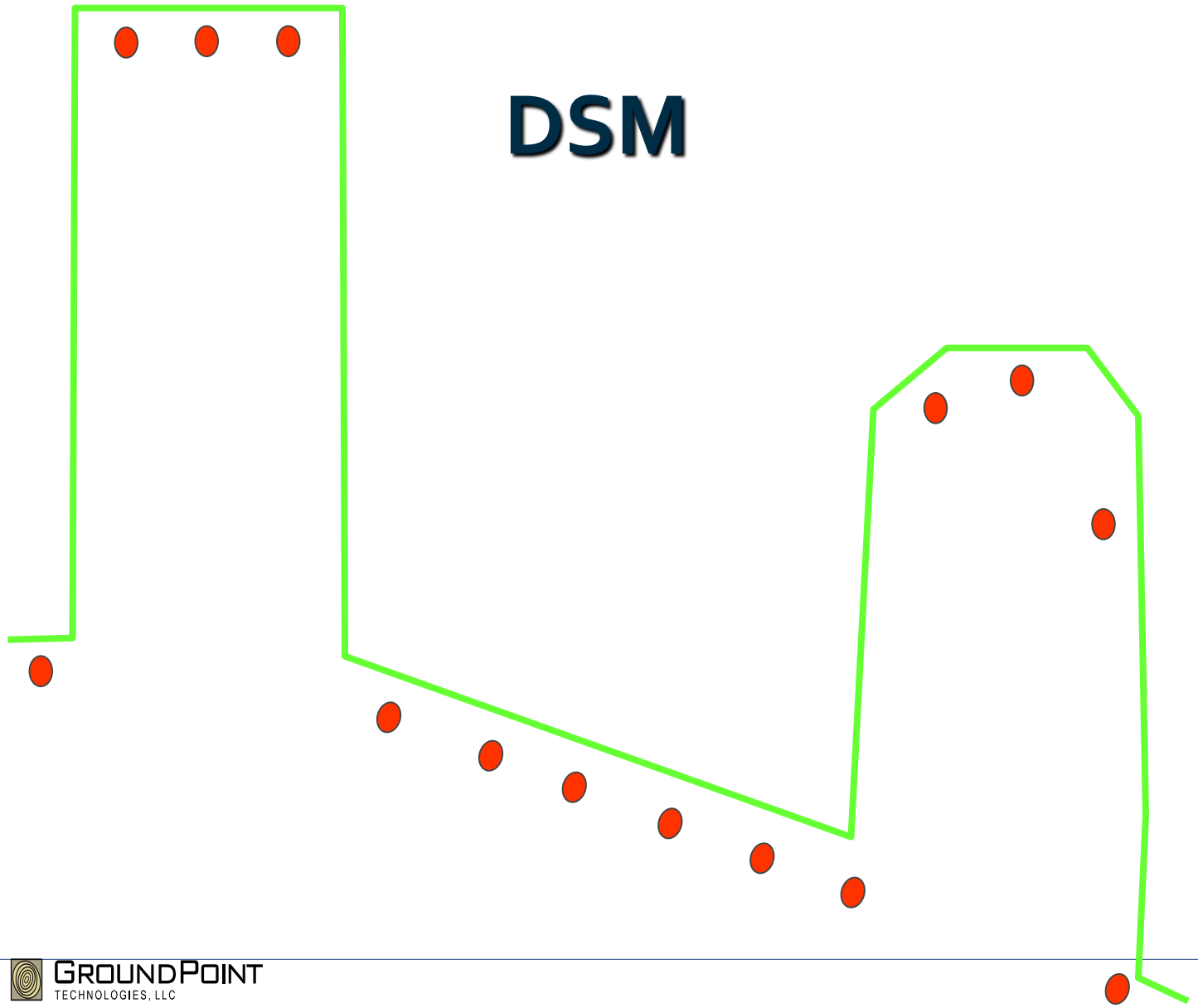
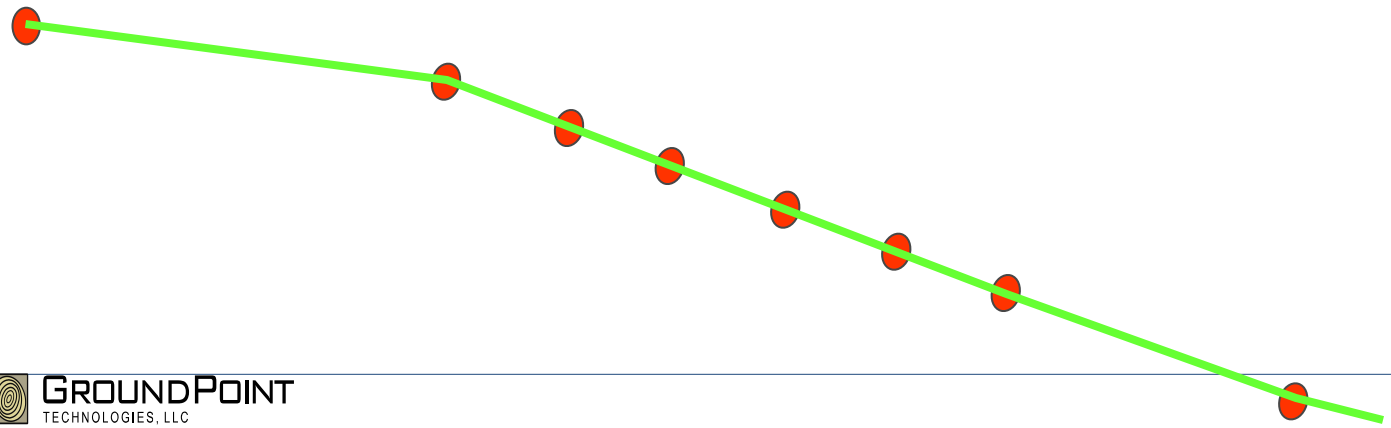


Extracting Information

DEM



Extracting Information

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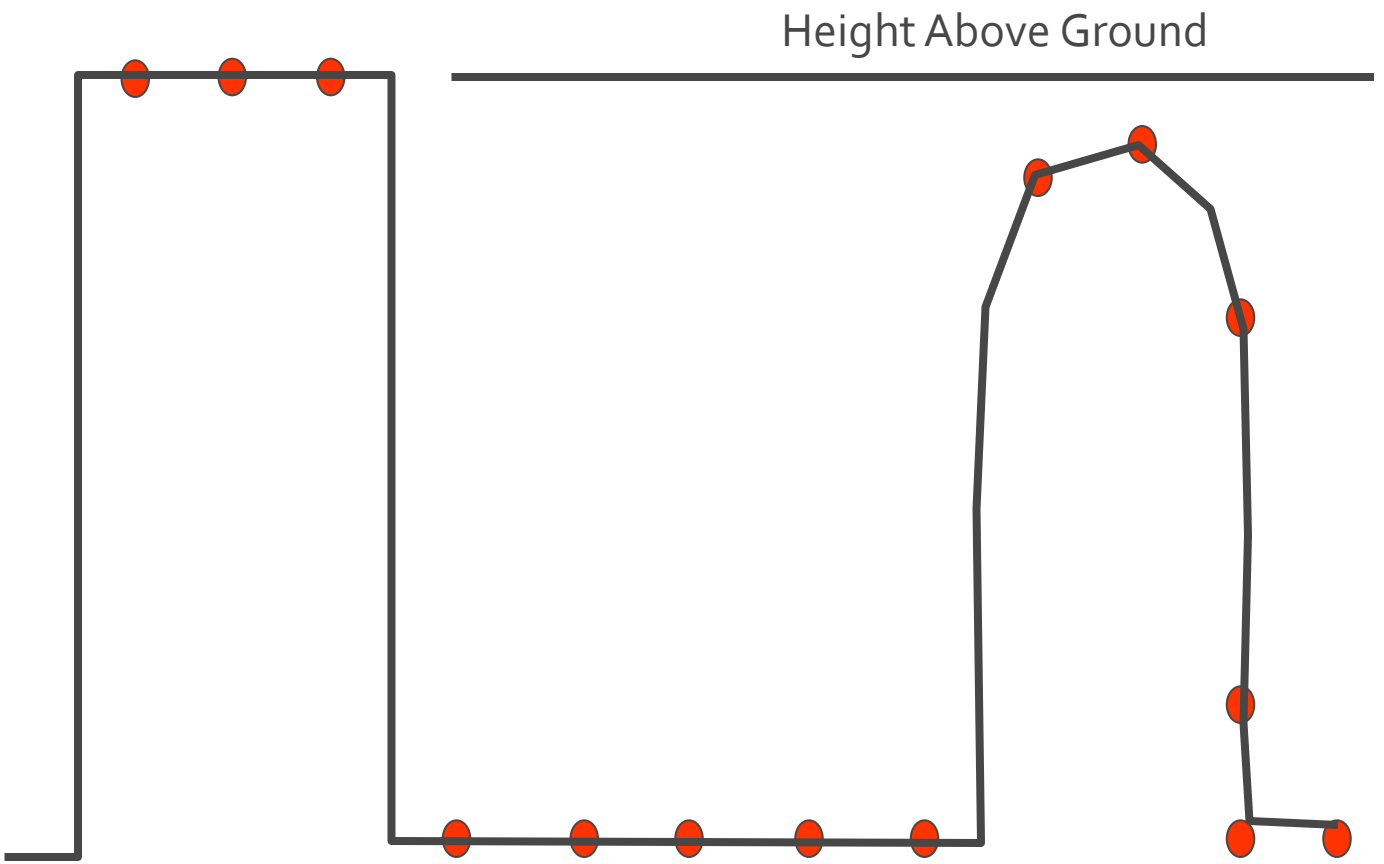
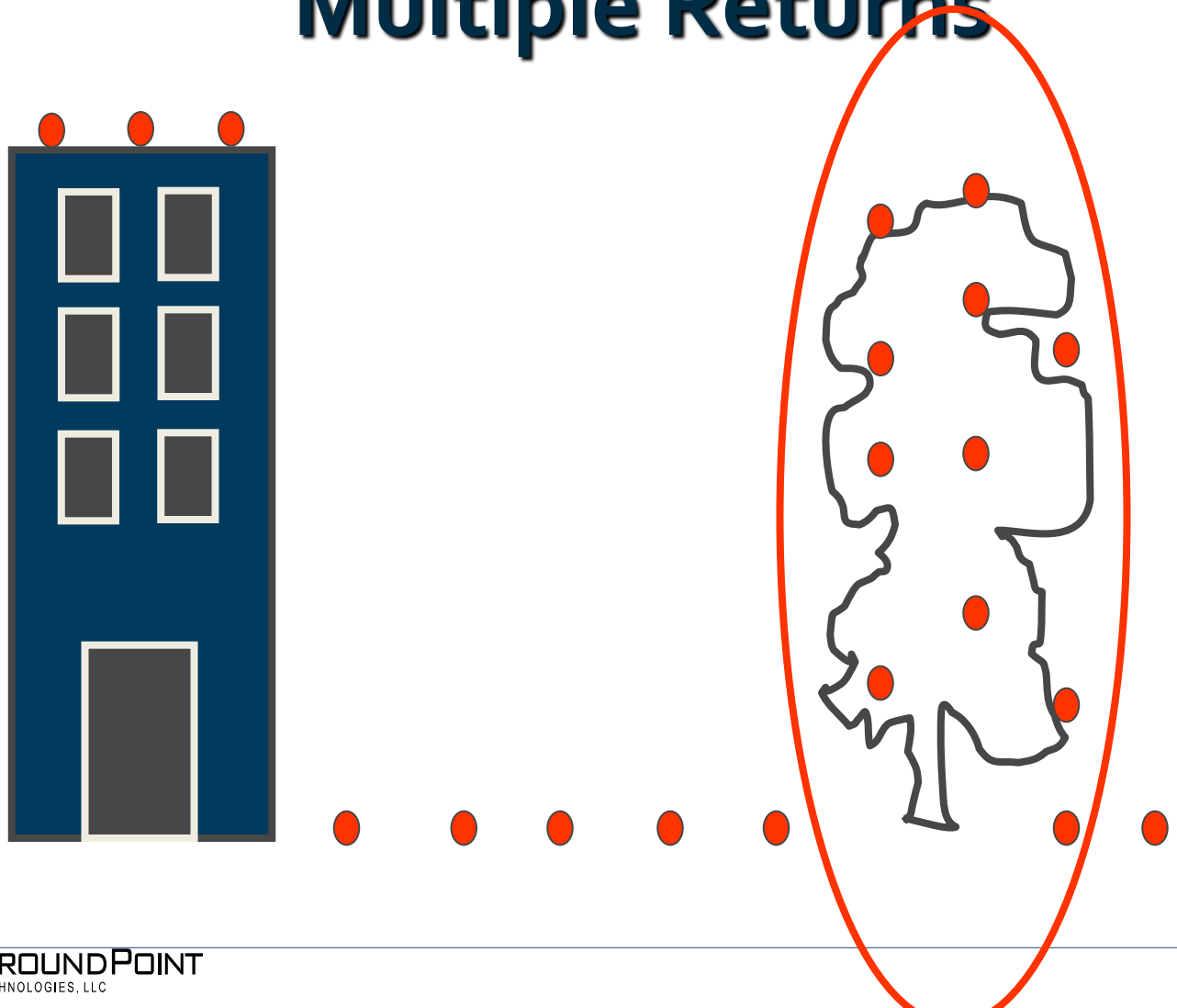
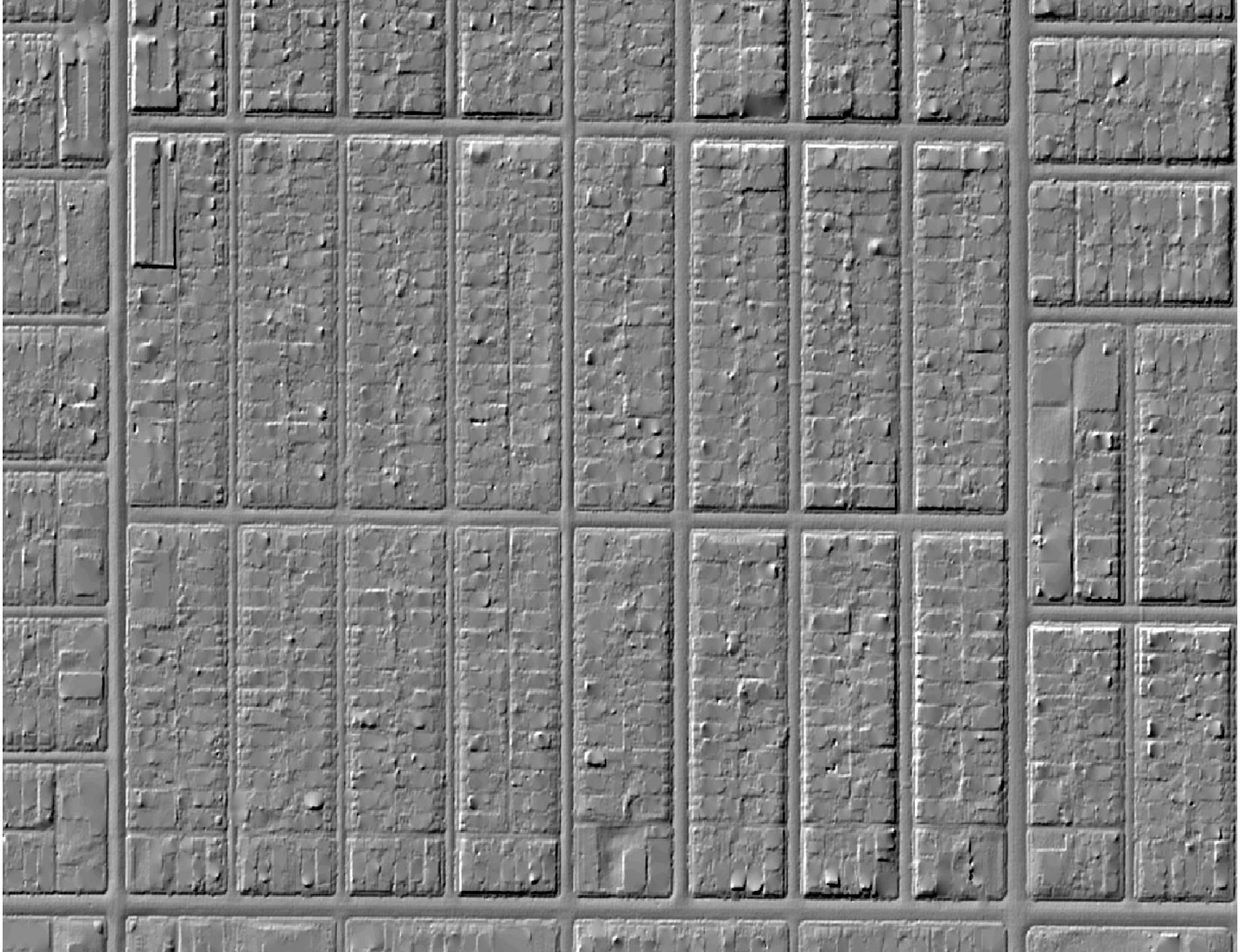
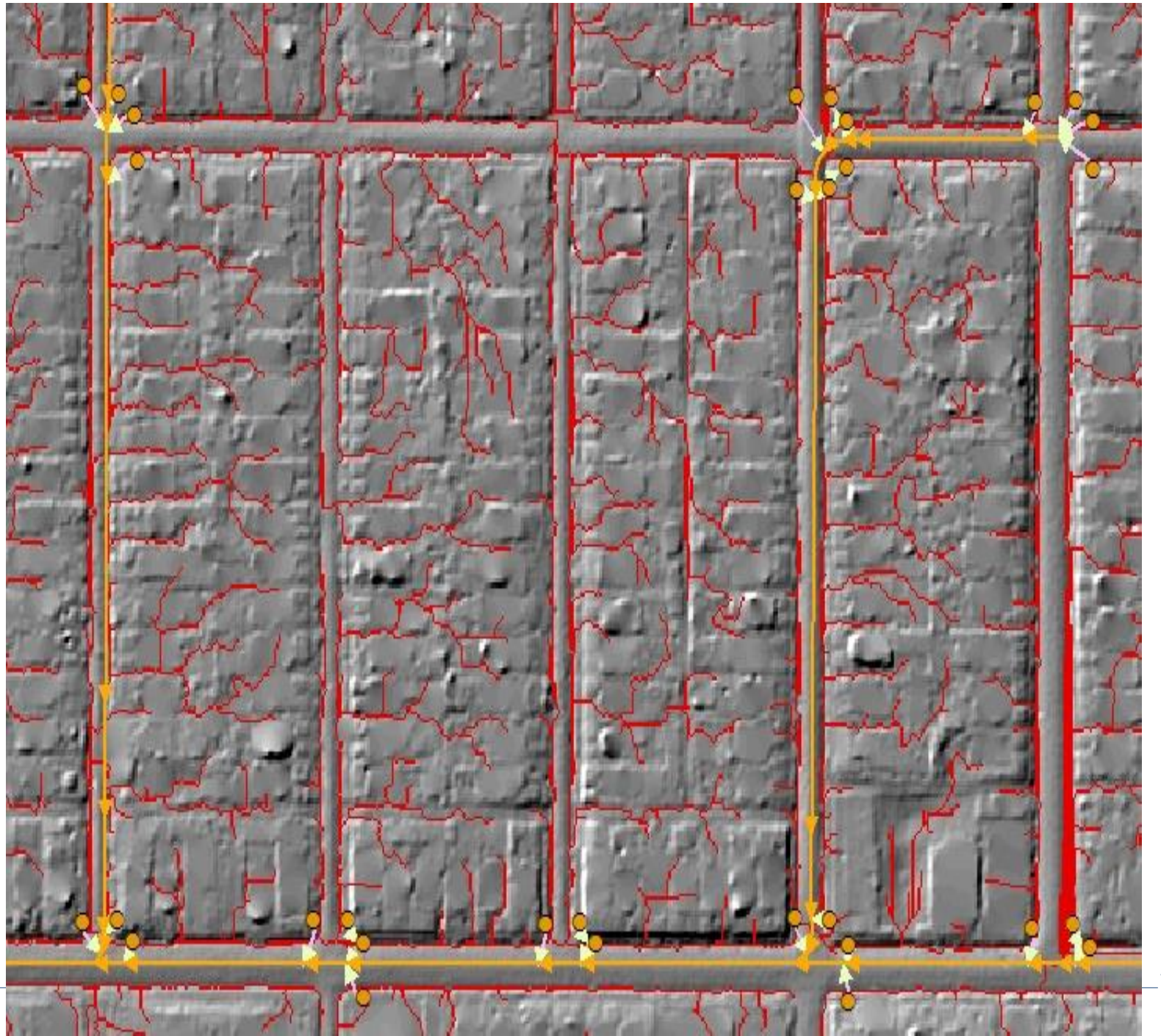


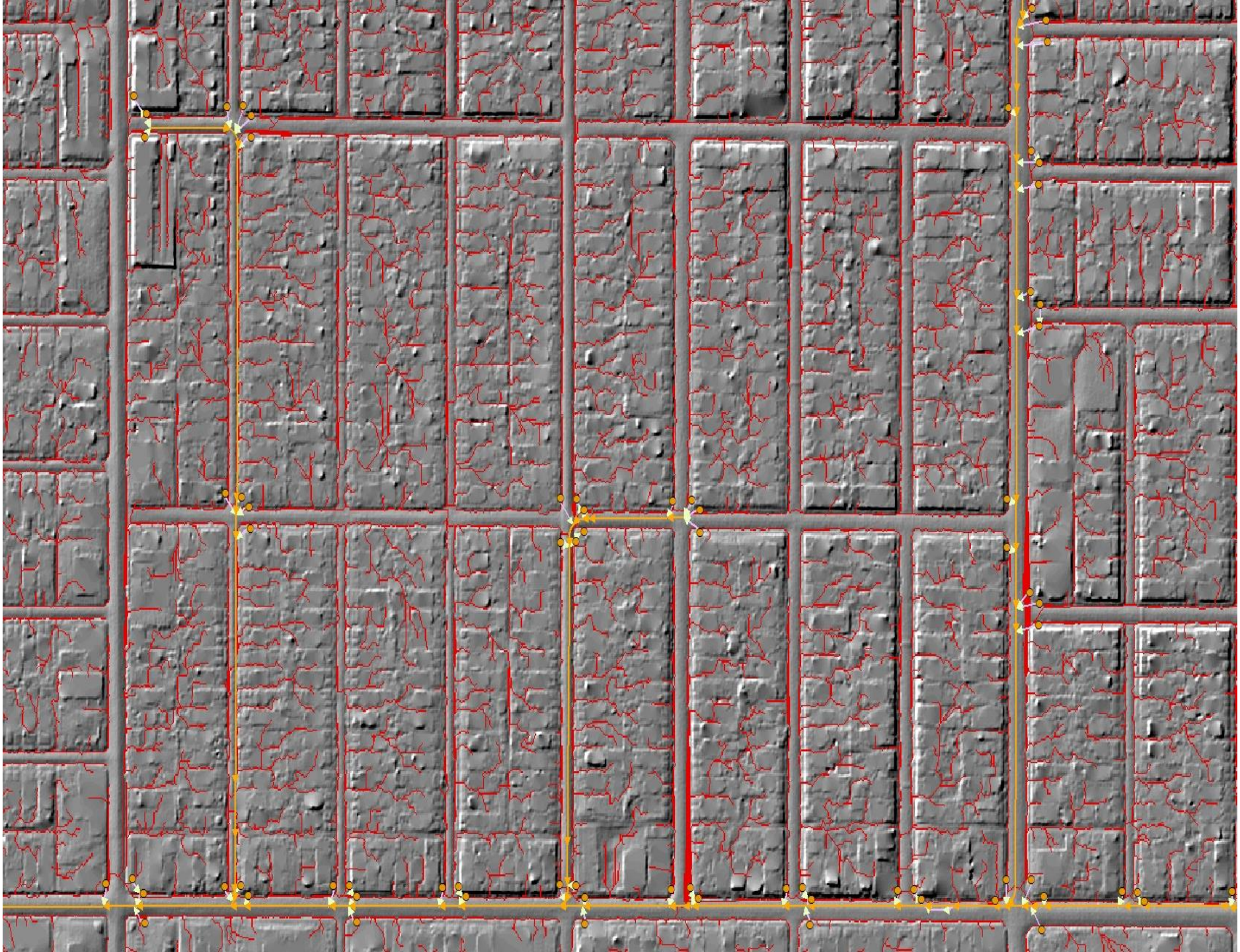
Extracting Information

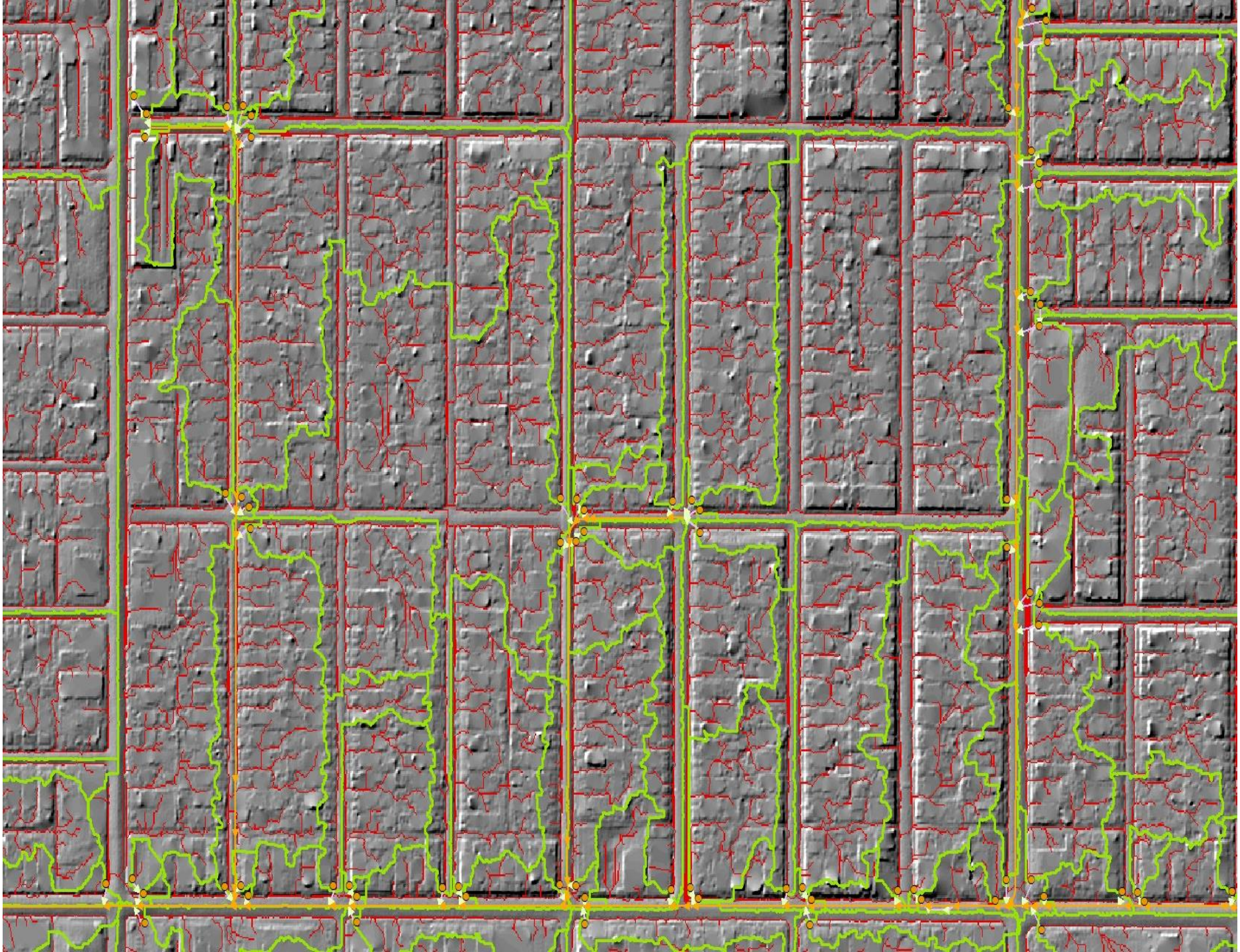
Multiple Returns

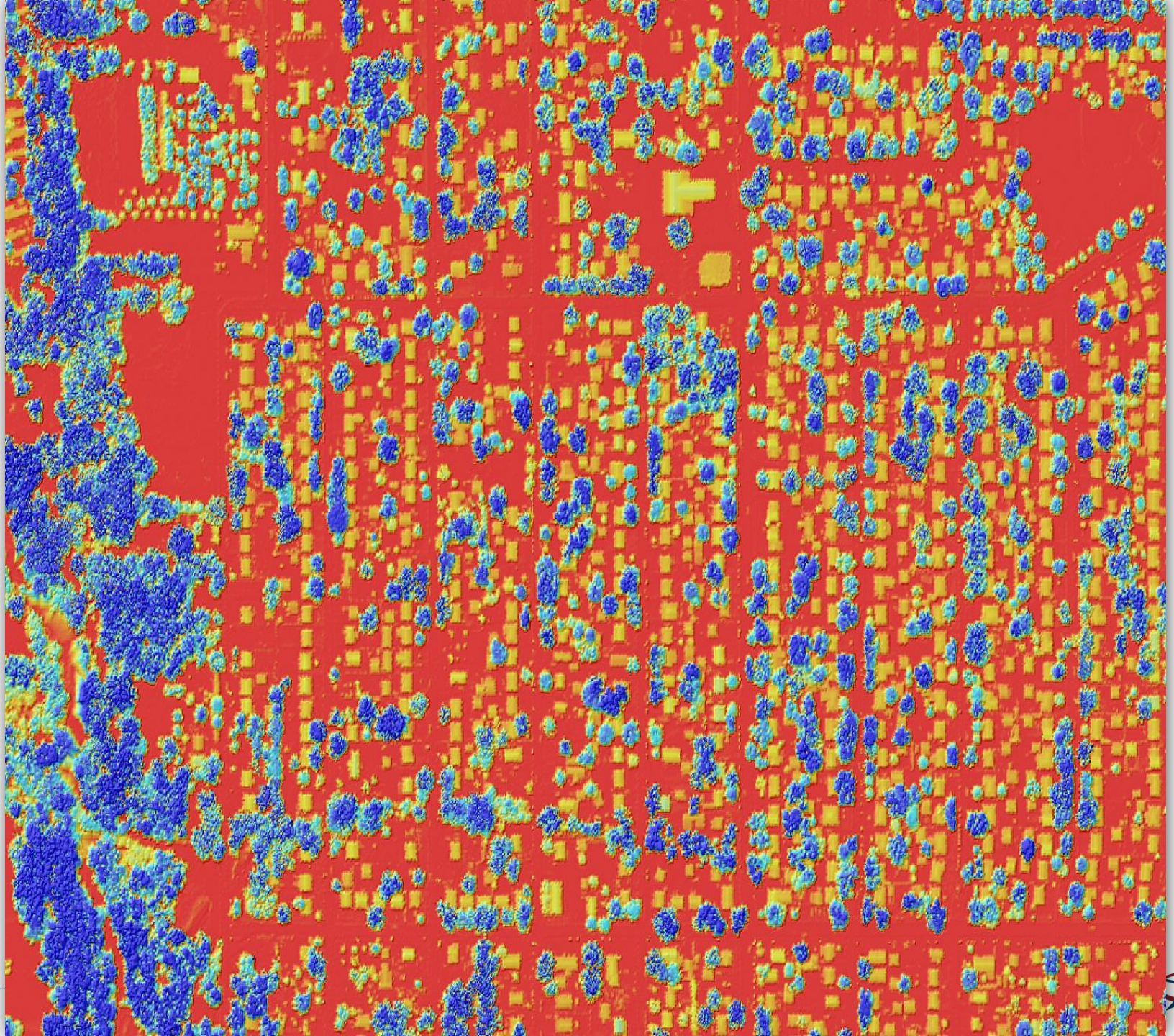


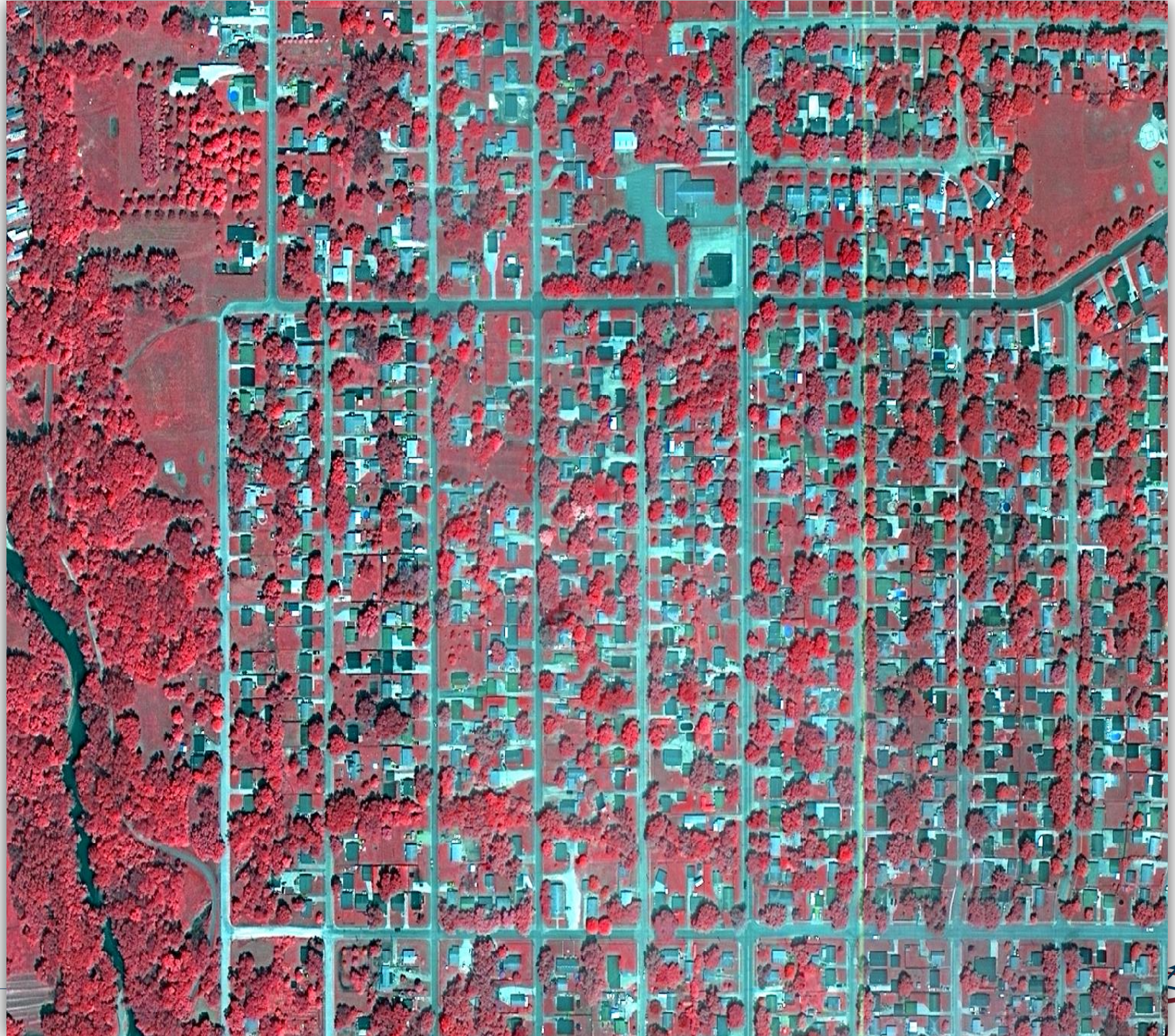












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Tree Canopy
Grass/Shrub
Bare Earth
Water
Buildings
Roads
Other Paved Surfaces

Presenters

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