

# UAV PHOTOGRAMMETRY AND VR

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# UNMANNED AERIAL SYSTEMS



# AERIAL PHOTOGRAPHY



# AERIAL PANORAMAS



# AERIAL PANORAMAS



HOW TO CAPTURE THE CURRENT CONDITION?

# AERIAL CAMERA MATCHING



# AERIAL CAMERA MATCHING





# AERIAL VIDEOGRAPHY



# AERIAL VIDEOGRAPHY



# AERIAL PEDESTRIAN TRACKING



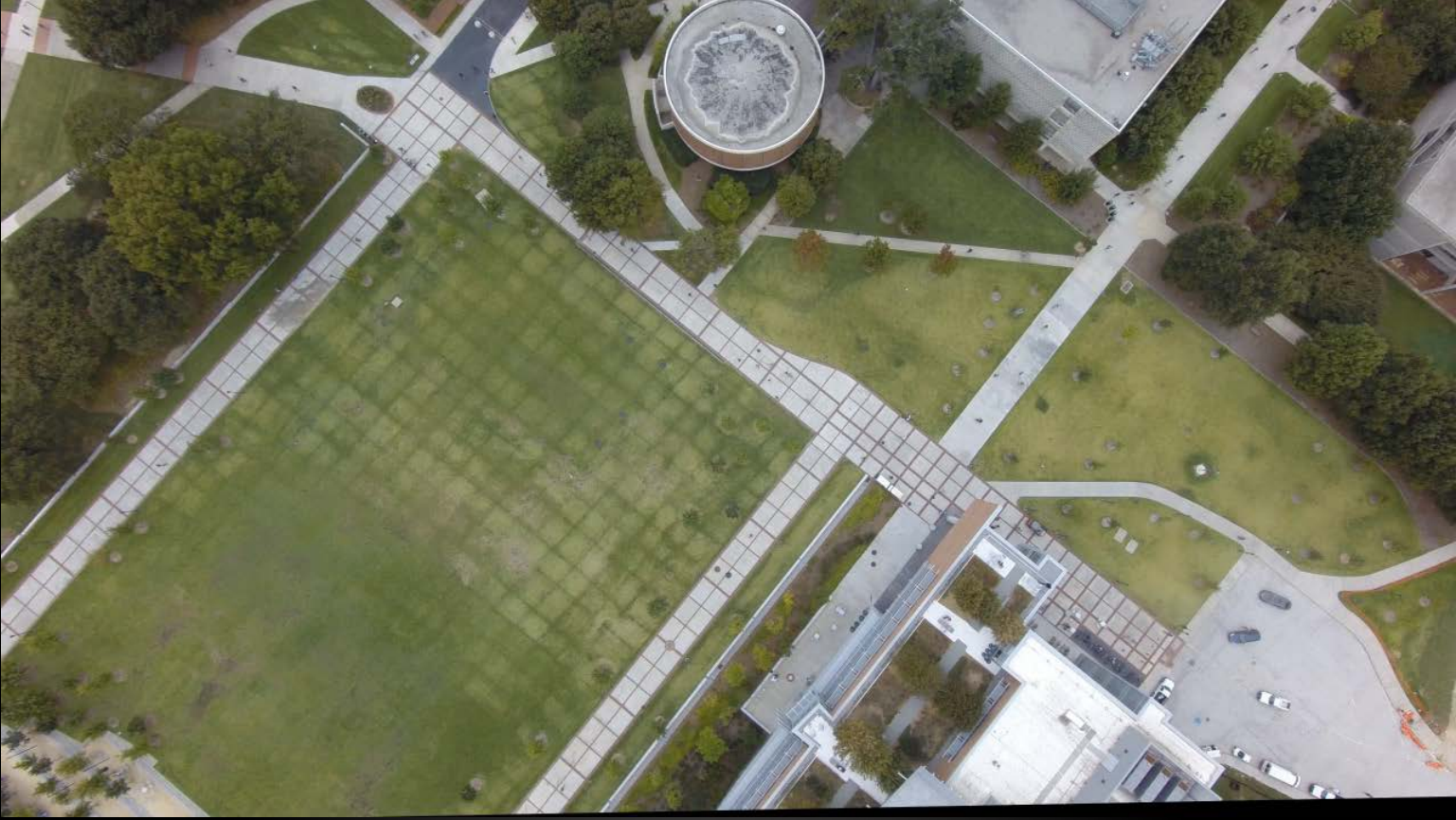
# AERIAL PEDESTRIAN TRACKING



# AERIAL PEDESTRIAN TRACKING



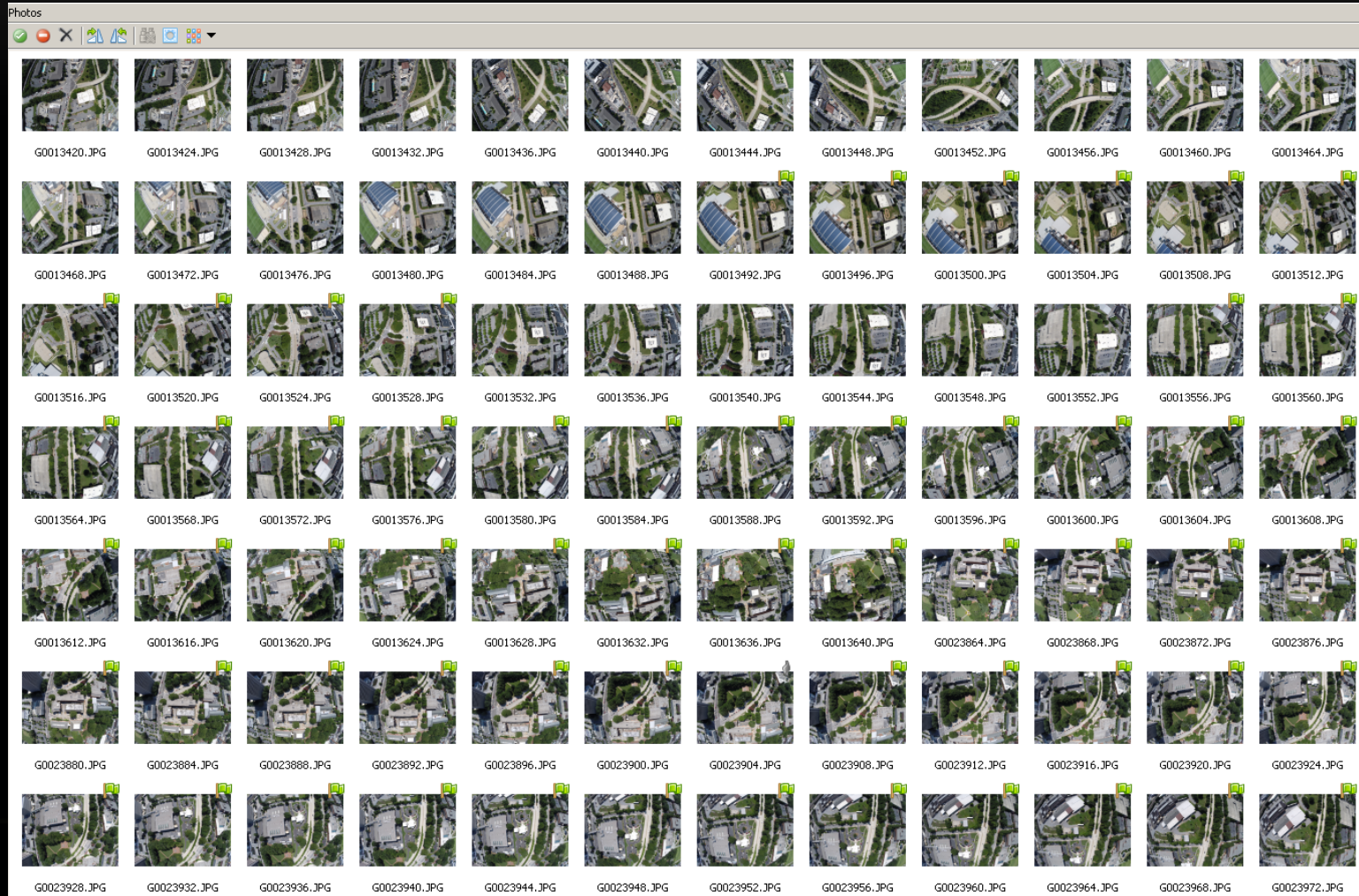
# AERIAL PEDESTRIAN TRACKING



# AERIAL FLIGHT PATHS WITH GPS WAYPOINTS



# AERIAL PHOTOGRAMMETRY





# PHOTOGRAMMETRY MATCHING



# PHOTOGRAMMETRY GROUND CONTROL POINTS



# PHOTOGRAMMETRY GROUND CONTROL POINTS



# PHOTOGRAMMETRY GROUND CONTROL POINTS



# PHOTOGRAMMETRY DENSE POINT CLOUD



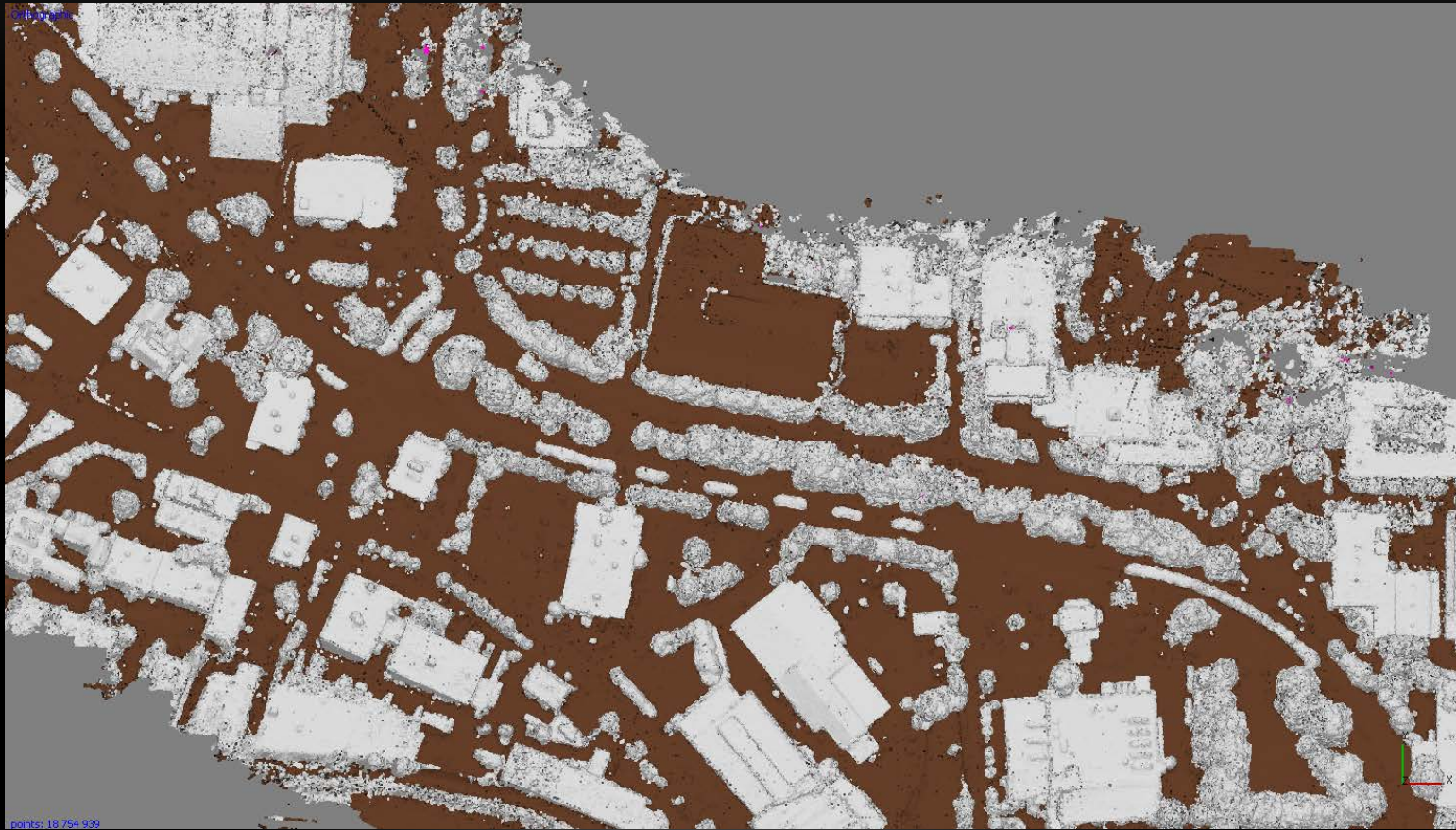
# PHOTOGRAMMETRY DENSE POINT CLOUD



# PHOTOGRAMMETRY DENSE POINT CLOUD



# PHOTOGRAMMETRY POINT CLASSIFICATION





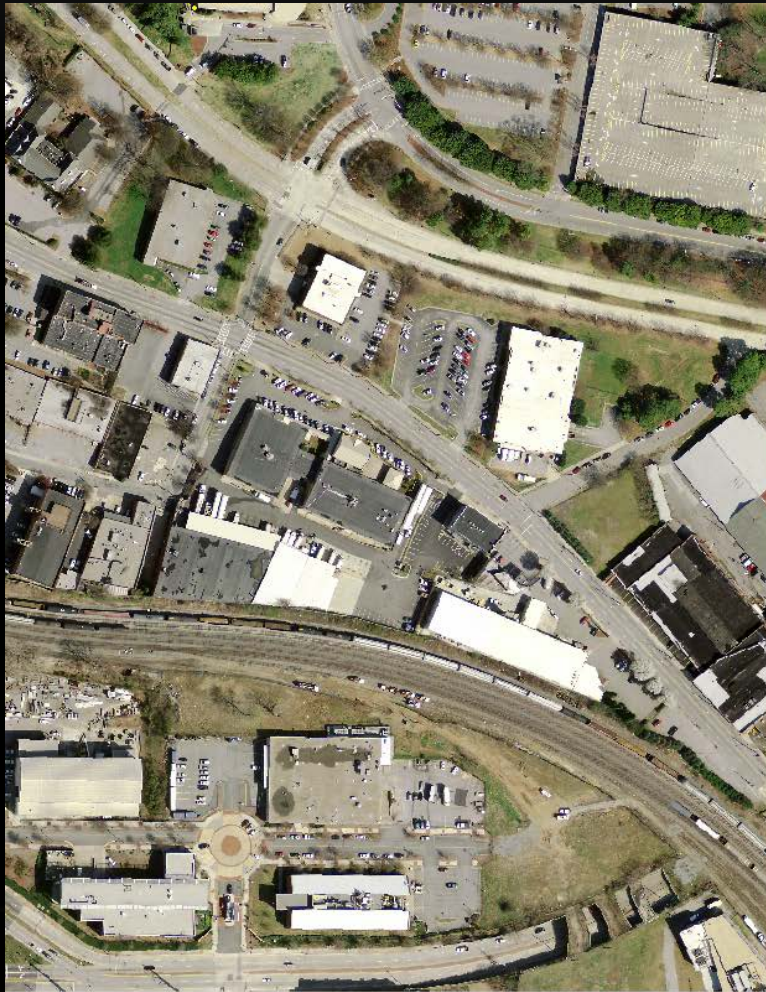
# PHOTOGRAMMETRY MESH GENERATION



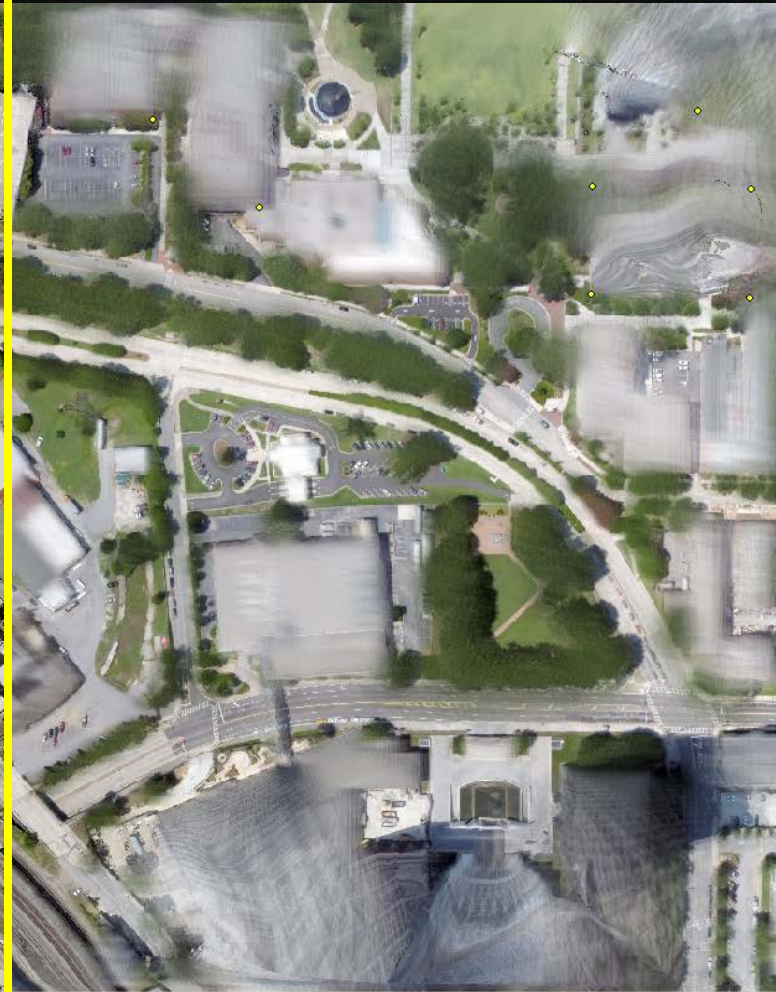
# PHOTOGRAMMETRY TEXTURE GENERATION



# GEOREFERENCED PHOTOGRAMMETRY MAPS



2010 City Aerial Photography

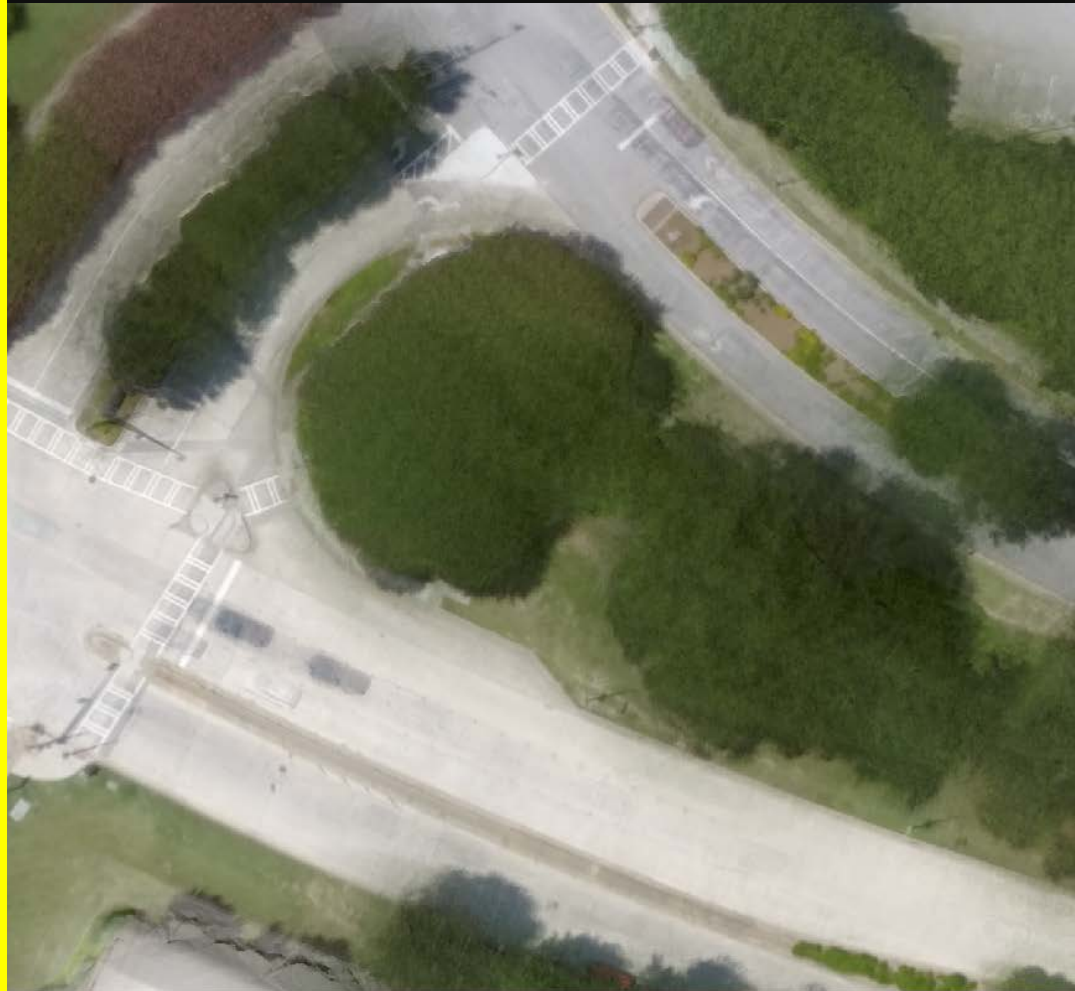


2014 Aerial Photogrammetry Map

# GEOREFERENCED PHOTOGRAMMETRY MAPS



2010 City Aerial Photography



2014 Aerial Photogrammetry Map

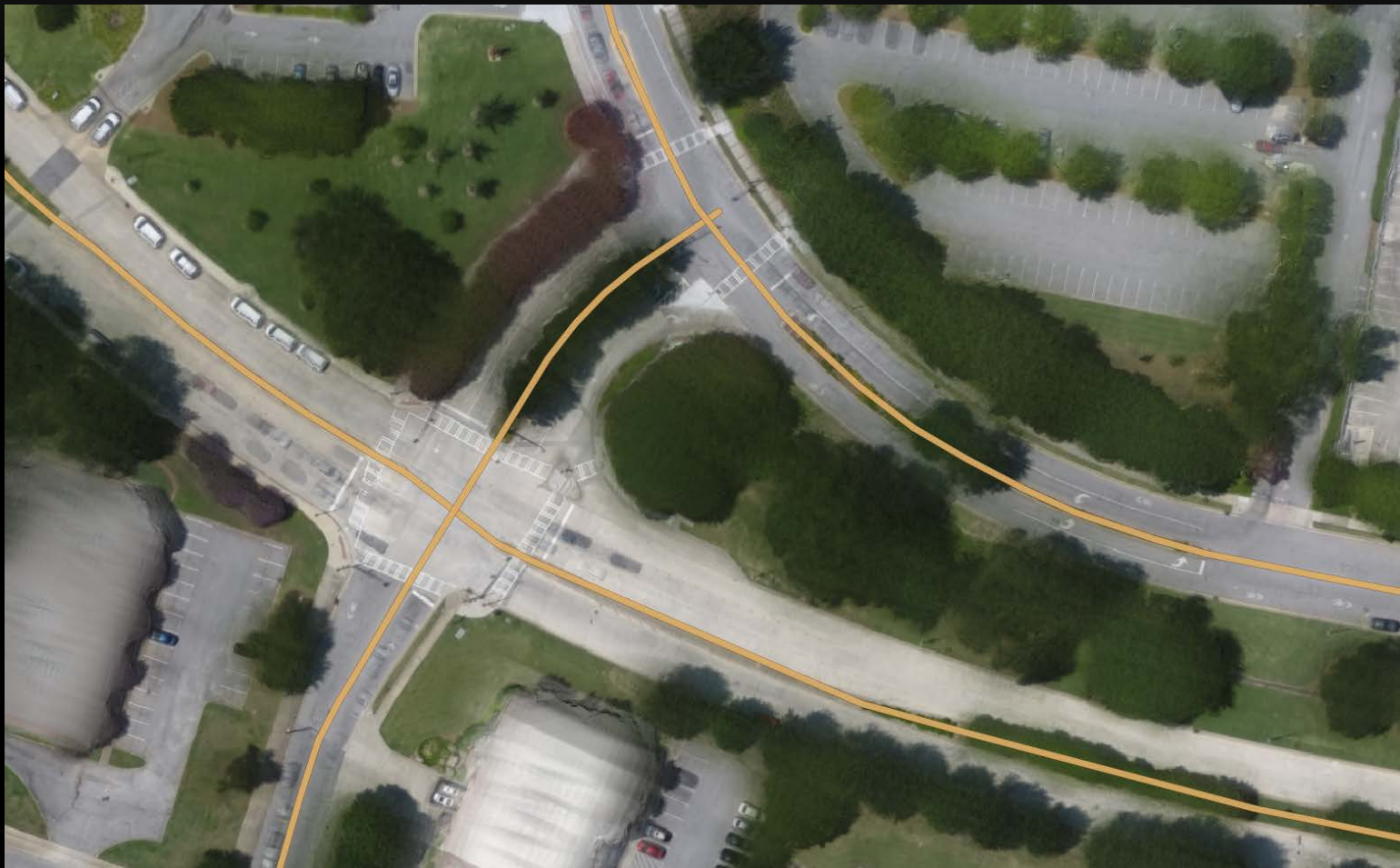
# PHOTOGRAMMETRY MAP DETAIL



# CENTERLINE ROAD LAYER CREATION IN QGIS



# CENTERLINE ROAD LAYER CREATION IN QGIS



# UC-WIN/ROAD GIS VIEW

The screenshot displays the UC-win/Road GIS View software interface. The window title is "UC-win/Road - GIS View - [techParkway2]". The interface includes a menu bar (File, Map, Layer, Object, Tools, Options, Help), a toolbar with various GIS tools, and a main map area showing a road network. A scale bar at the top indicates 0, 300, and 600 meters. The left sidebar shows a layer list with "Temporary" and "roads". Below the layer list, a panel displays the selected layer's properties: Name: roads, Type: Polyline, Label, and Count: 14. A red rectangle highlights a specific area on the map. The bottom status bar shows coordinates (X: 2224845.0000, Y: 1372788.3750), Elevation: 0, Scale: 19633.1424, and Map View.

| Name  | Type     | Label | Count |
|-------|----------|-------|-------|
| roads | Polyline |       | 14    |

X: 2224845.0000 Y: 1372788.3750 Elevation: 0 Scale: 19633.1424 Map View



# UC-WIN/ROAD GIS VIEW – EXPORT

UC-win/Road - GIS View - [techParkway2]

File Map Layer Object Tools Options Help

Temporary  
roads

0 300

**Export to UC-win/Road**

**GIS Data Export Options**

**List of Layers to Export**

| Layer Name | Export Type |
|------------|-------------|
| roads      | Road        |

Layer Export Parameters

Layer Type : Polyline

Output Type :  Terrain  Road  Building  Satellite Image  
 Don't Export

Road Name Field \*None\*

**General Conversion Settings for UC-win/Road Objects**

Export Method  
 New File  Merge with Existing File

Conversion Method from Break Line to Curve  
 Keep as Break Line  Circle  Spline

Export Display Area as Satellite Image

Image Size 512 Divide by 5

Building Models  
Default Height 5  Detailed Surfaces Set Building Texture...

Change Coordinate System

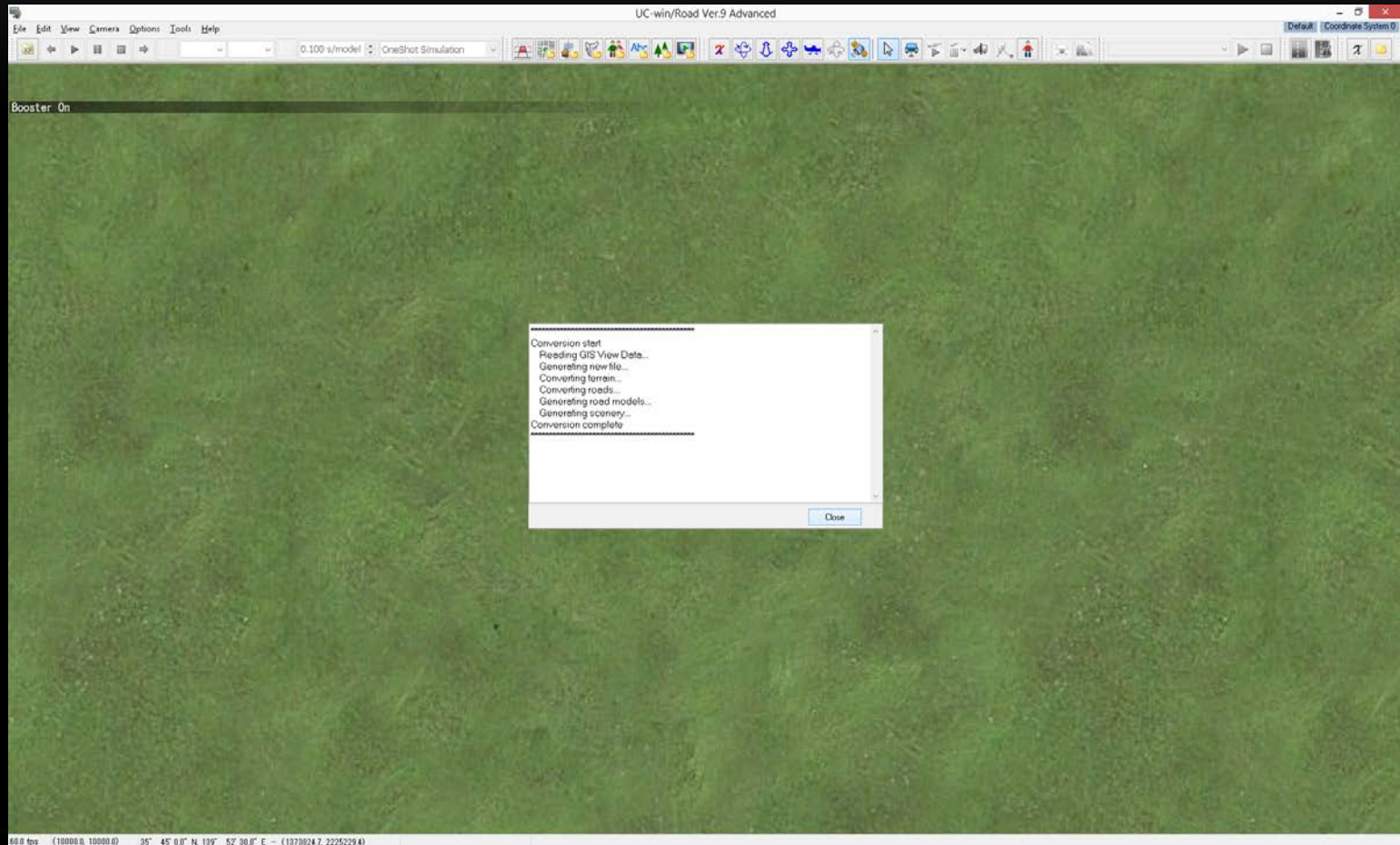
Current Coordinate System New Coordinate System

Not Connected Run New and Send Cancel Help

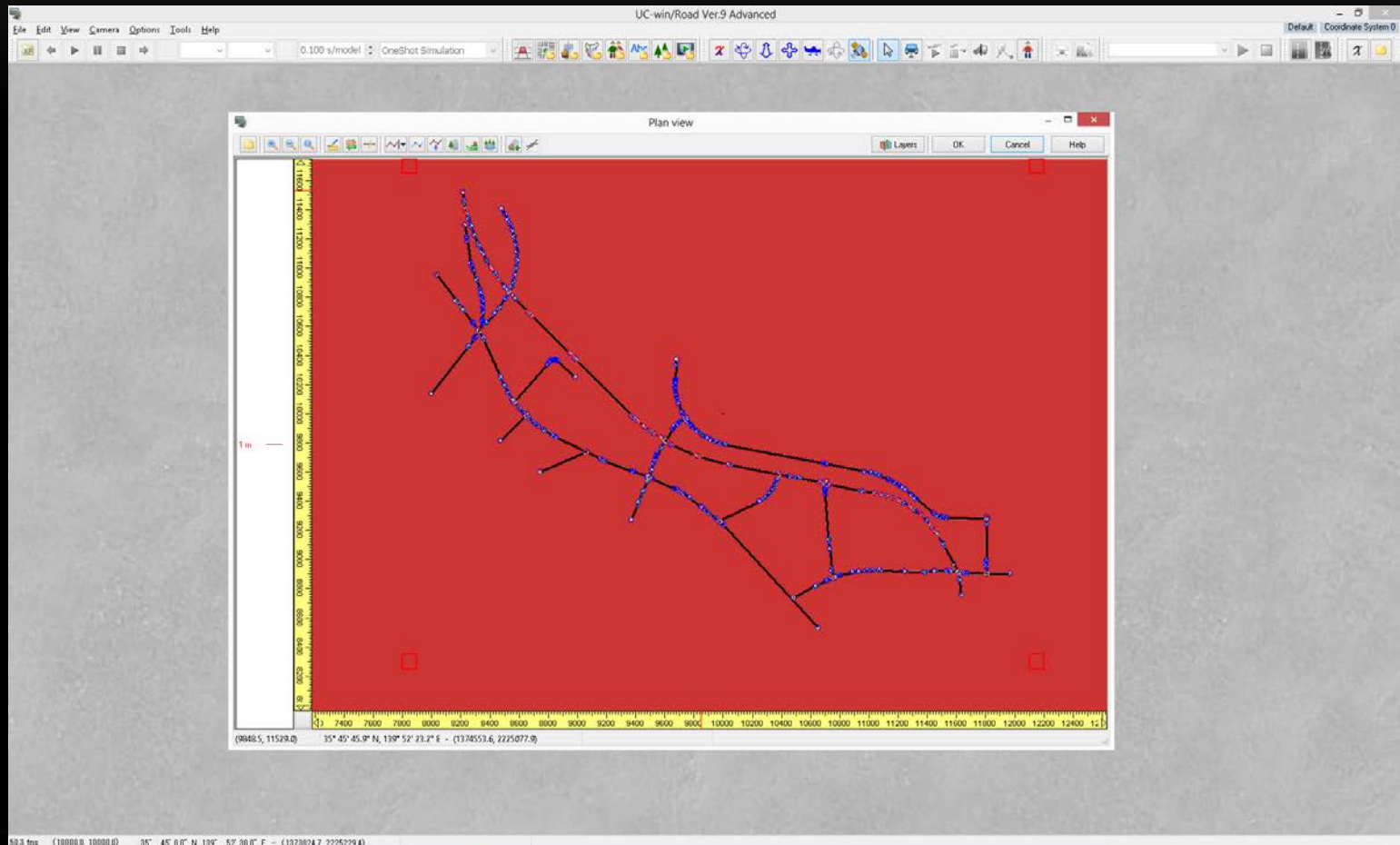
Name roads  
Type Polyline  
Label  
Count 14

X 2226772.2500 Y 1374596.0000 Elevation 0 Scale 19633.1424 Map View

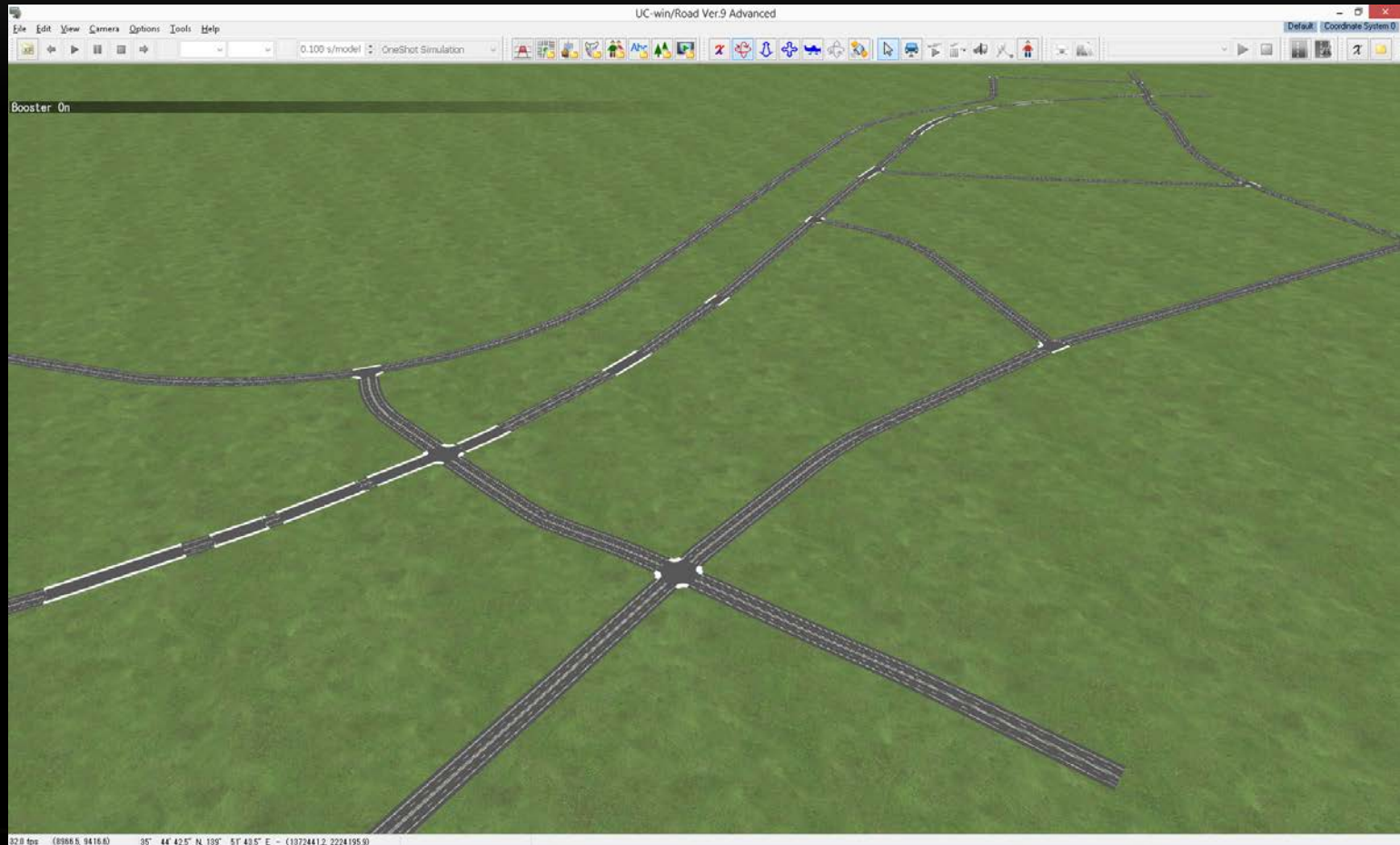
# UC-WIN/ROAD



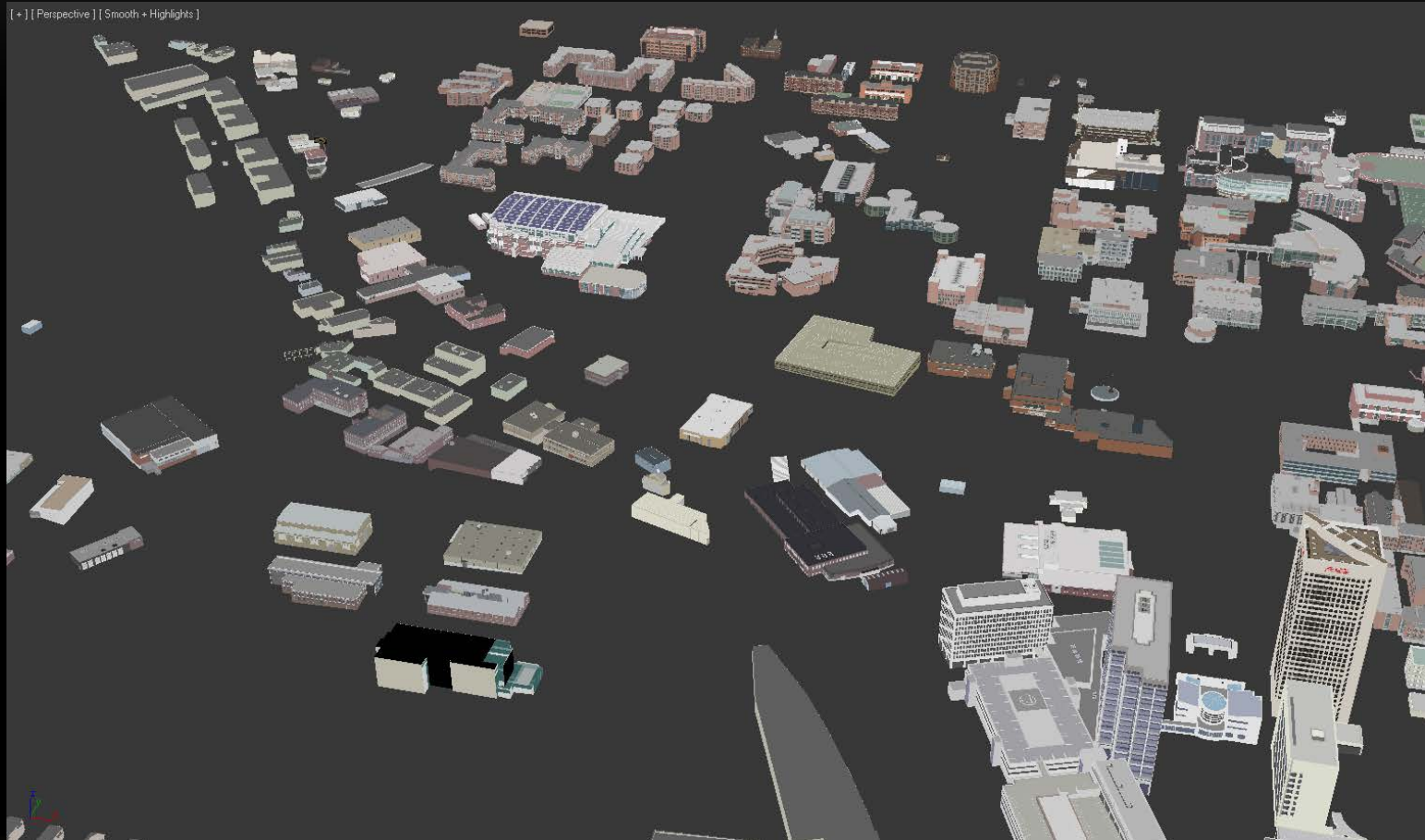
# UC-WIN/ROAD – BUILD ROADS



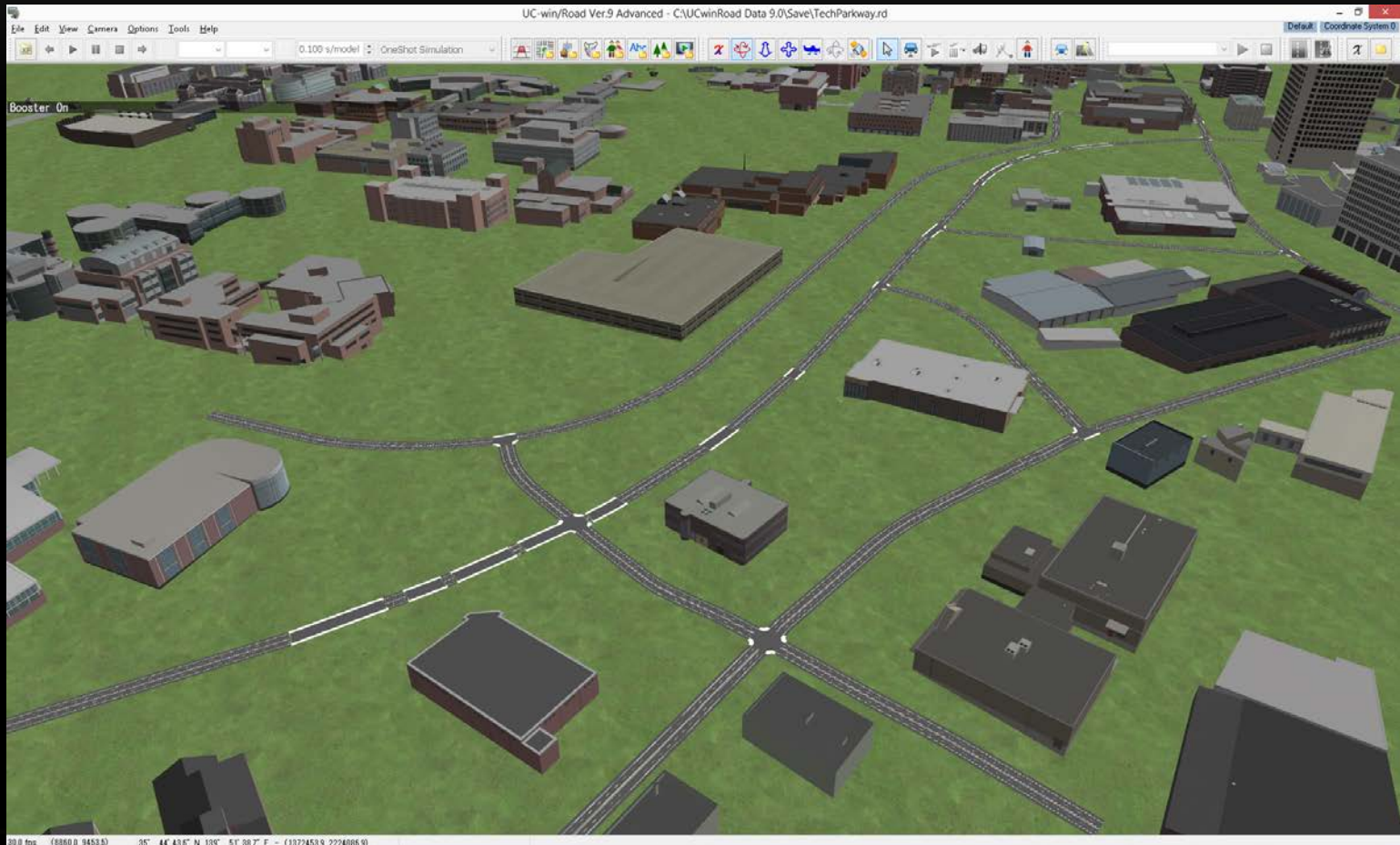
# UC-WIN/ROAD – ROADS



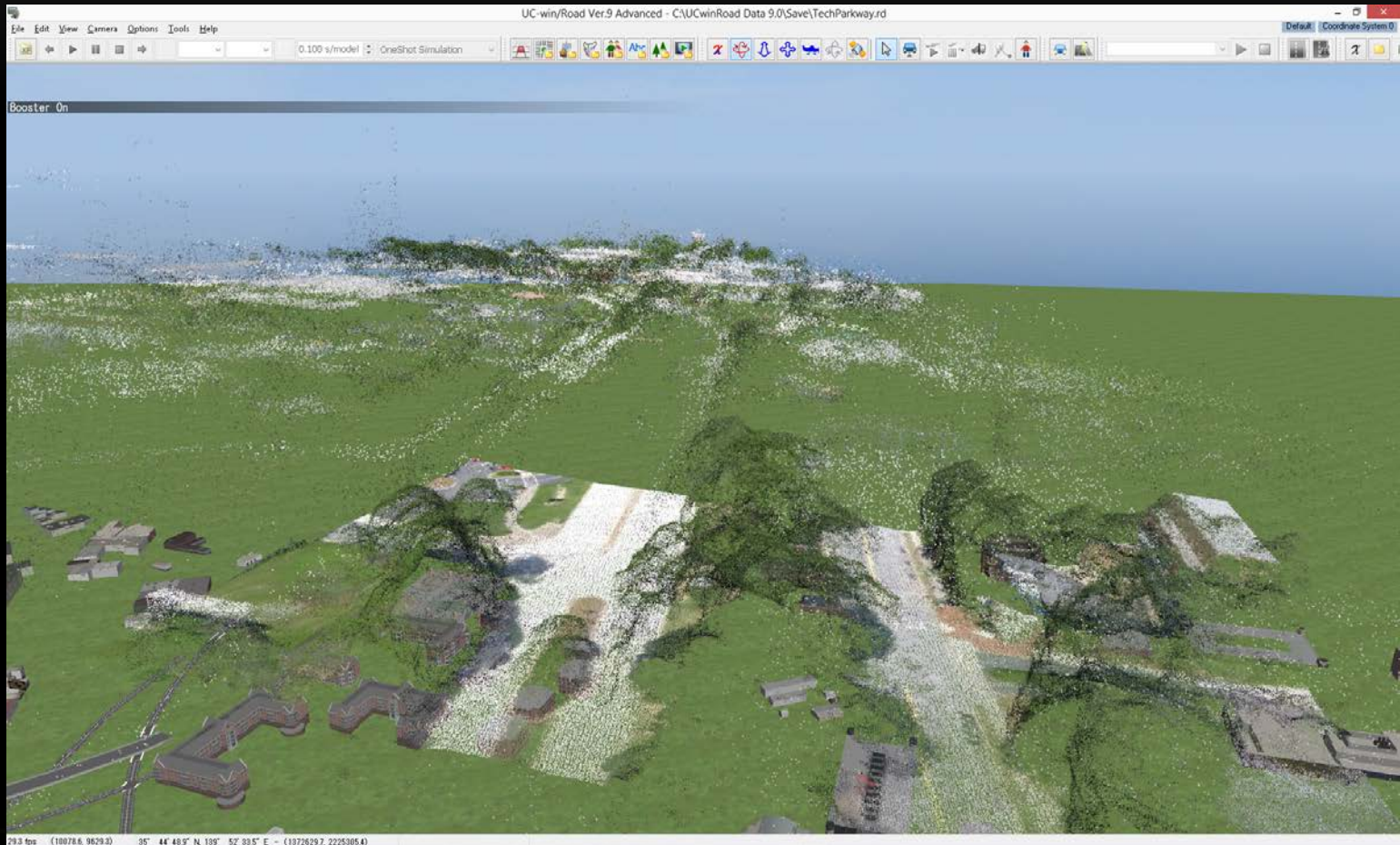
# CURRENT BUILDINGS (FROM 3DS MAX)



# UC-WIN/ROAD – WITH FBX BUILDINGS



# SPARSE POINT CLOUD IMPORT



# PHOTOGRAMMETRY SPARSE/DENSE SAMPLE





THANK YOU

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