Presented to: Los Angeles Region Imagery Acquisition Consortium

LAR-IAC Briefing #8

Project Wrap Up

April 19, 2007

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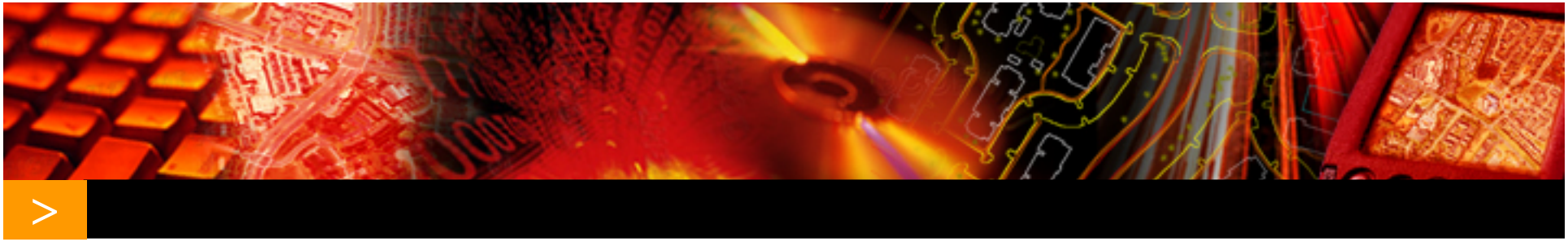
> Wrap Up Meeting

The Geospatial Experts

Agenda:

- Project Highlights
- Coloration Issues
- Lessons Learned
- Questions



Project Highlights

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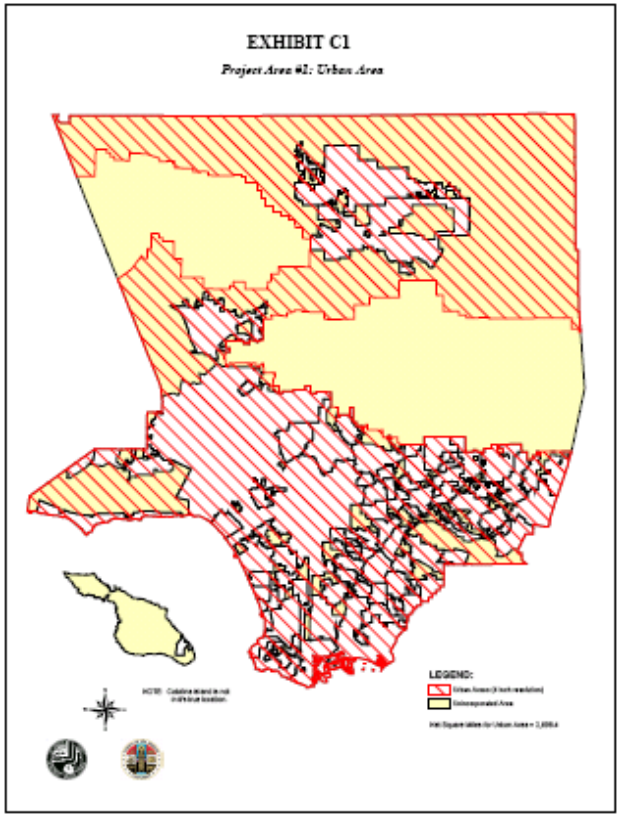
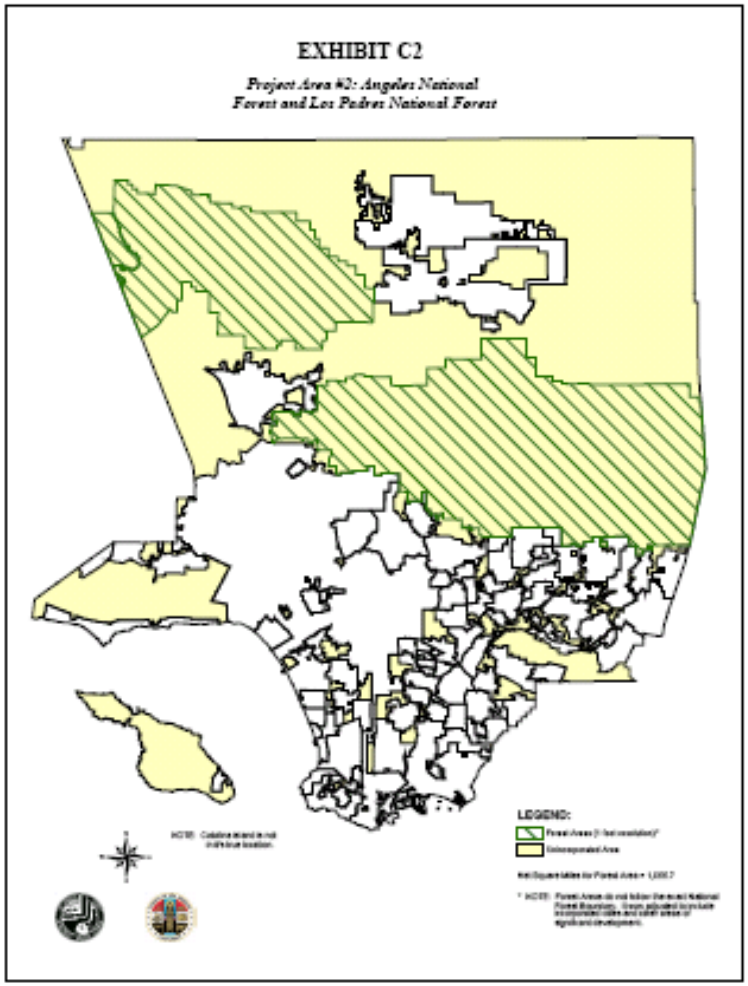
Area #1 (Urban Area)

- 12,412 4” ortho tiles delivered, RGB and CIR, by 10/31/06
- 1.5 Trillion pixels delivered – comparable to the biggest statewide ortho projects (VA, NY, IN, OH, PA, AR)
- 97% of tiles accepted on first delivery
- Accuracy well within specifications
- review and repairs completed 12/14/06



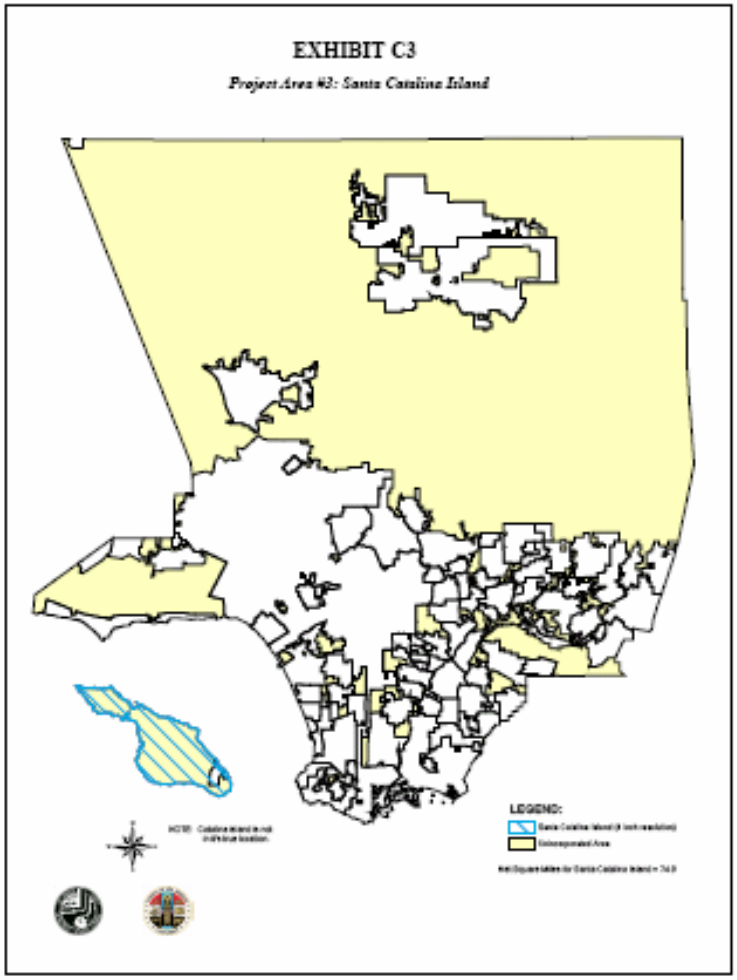
Area #2 (National Forest)

- 1,197 1' ortho tiles delivered, RGB and CIR, by 10/31/06
- 90% of tiles accepted on first delivery
- Accuracy well within specifications
- review and repairs completed 2/15/07



Area #3 (Catalina Island)

- 374 4” ortho tiles delivered, RGB and CIR, by 10/31/06
- 99% of tiles accepted on first delivery
- Accuracy well within specifications
- review and repairs completed 12/10/06



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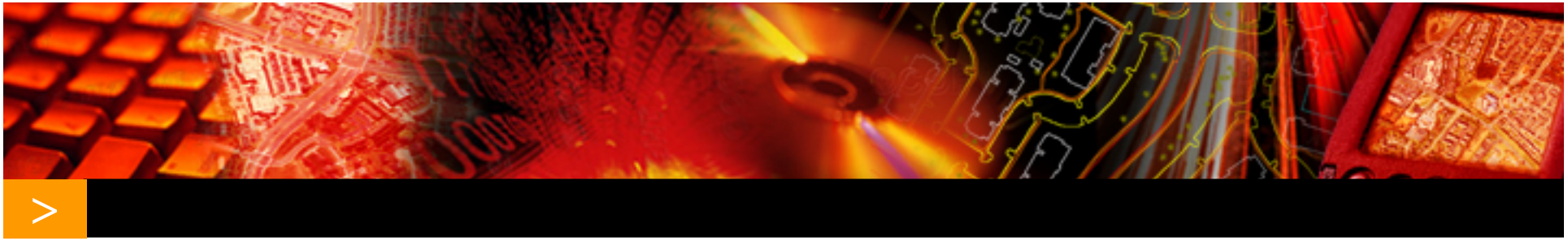
Project Delivery Products and Formats

The Geospatial Experts

Delivery Product	Format	Format	Format
Orthophoto	GeoTIFF	JPEG 2000	
Digital Surface Model	ASCII – points	ArcGIS shape file – points	Microstation (dgn) – points, lines
Digital Terrain Model	ArcGIS shape file – points, 3D lines	AutoCAD (dwg) points, lines	Microstation (dgn) – points, lines
Digital Elevation Model	ArcGIS raster	AutoCAD (dwg)	
Contours	ArcGIS shape file	AutoCAD (dwg)	

1. Digital Surface Model- contains the masspoints (from LiDAR or photogrammetric Compilation)
2. Digital Terrain Model represents the bare earth terrain including the breaklines and mass points
3. Digital Elevation Model represents the bare earth in grid format



Coloration Issues

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> Color Considerations

- **Seamless across 4,000 square miles**
  - Balance across many land cover types
  - Balance across many acquisition dates / times
  - Balance across multiple cameras
- **Preserve image detail**
  - Retain detail in shadows
  - Retain detail in highlights
- **Winter (leaf off) acquisition**
  - Lower sun angle
  - Less color, monochromatic
- **Adaptable for end user enhancement**
  - In Photoshop or ArcGIS

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> Cerritos Civic Center - Before Radiometry Enhancement

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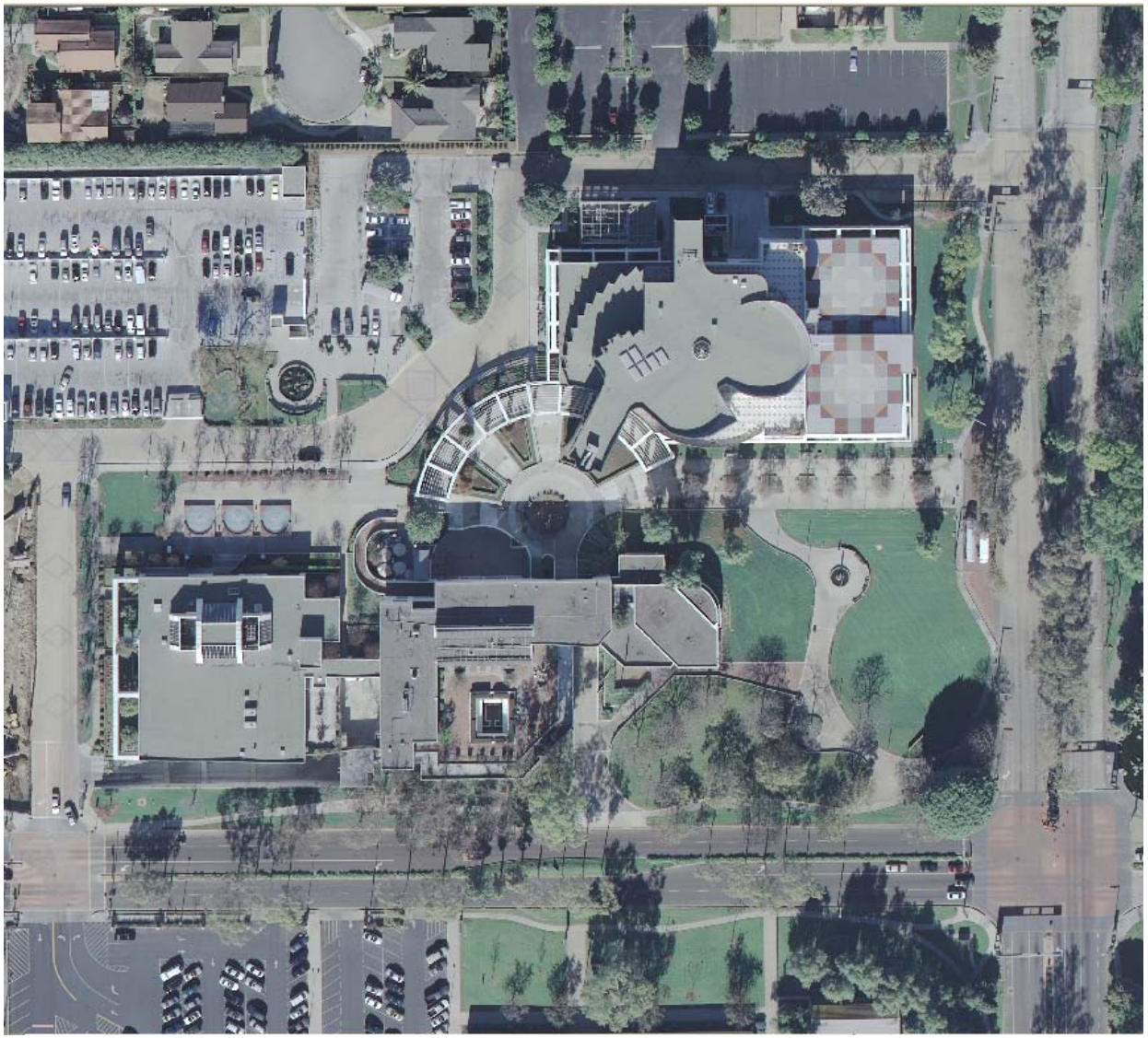

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> Cerritos Civic Center - After Radiometry Enhancement

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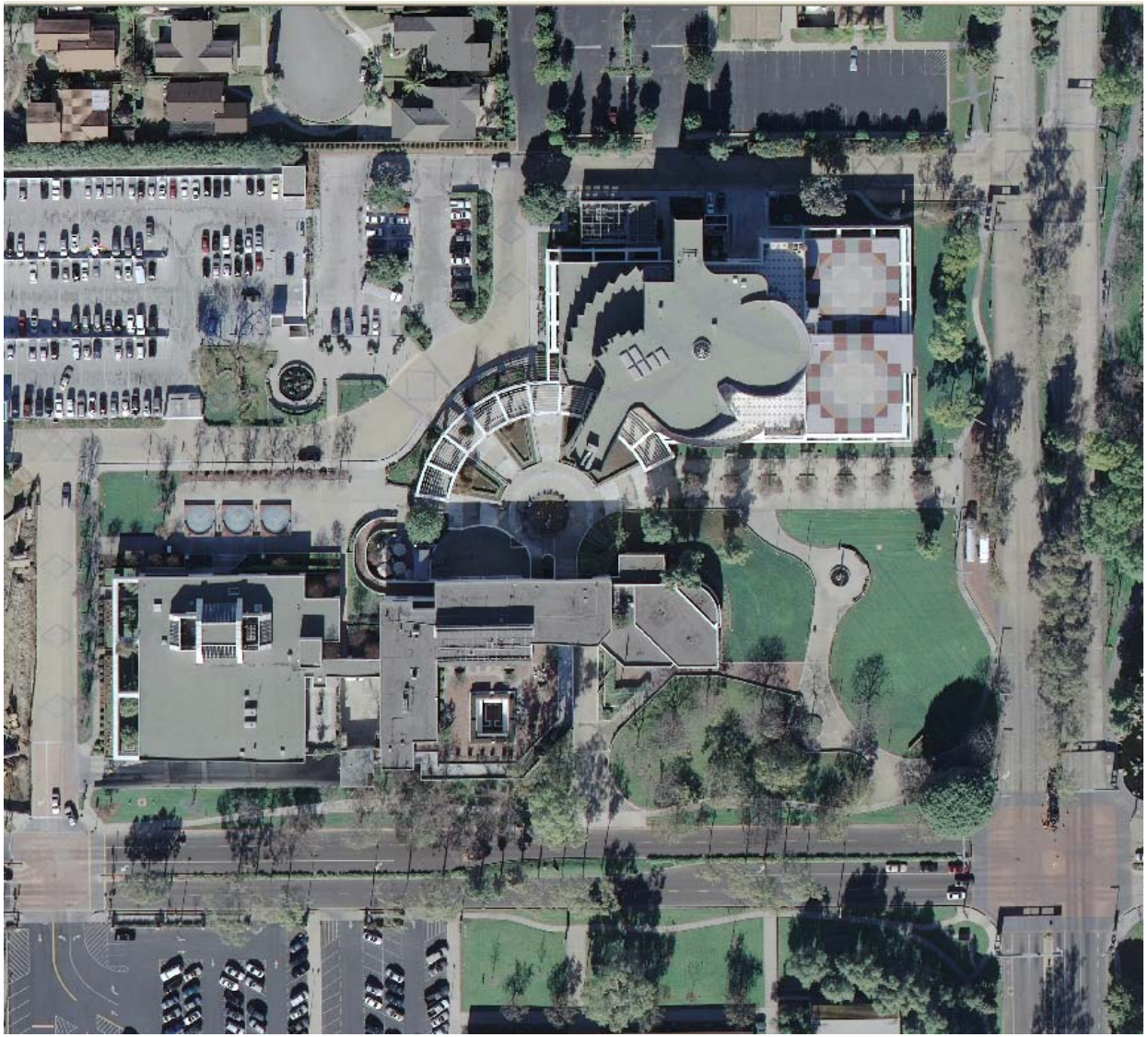

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> Cerritos Civic Center

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> DELIVERY-2 -- Before Radiometry Enhancement

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> DELIVERY-2 -- After Radiometry Enhancement

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> DELIVERY-1 -- Before Radiometry Enhancement

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> DELIVERY-1 -- After Radiometry Enhancement

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> DELIVERY-8 -- Before Radiometry Enhancement

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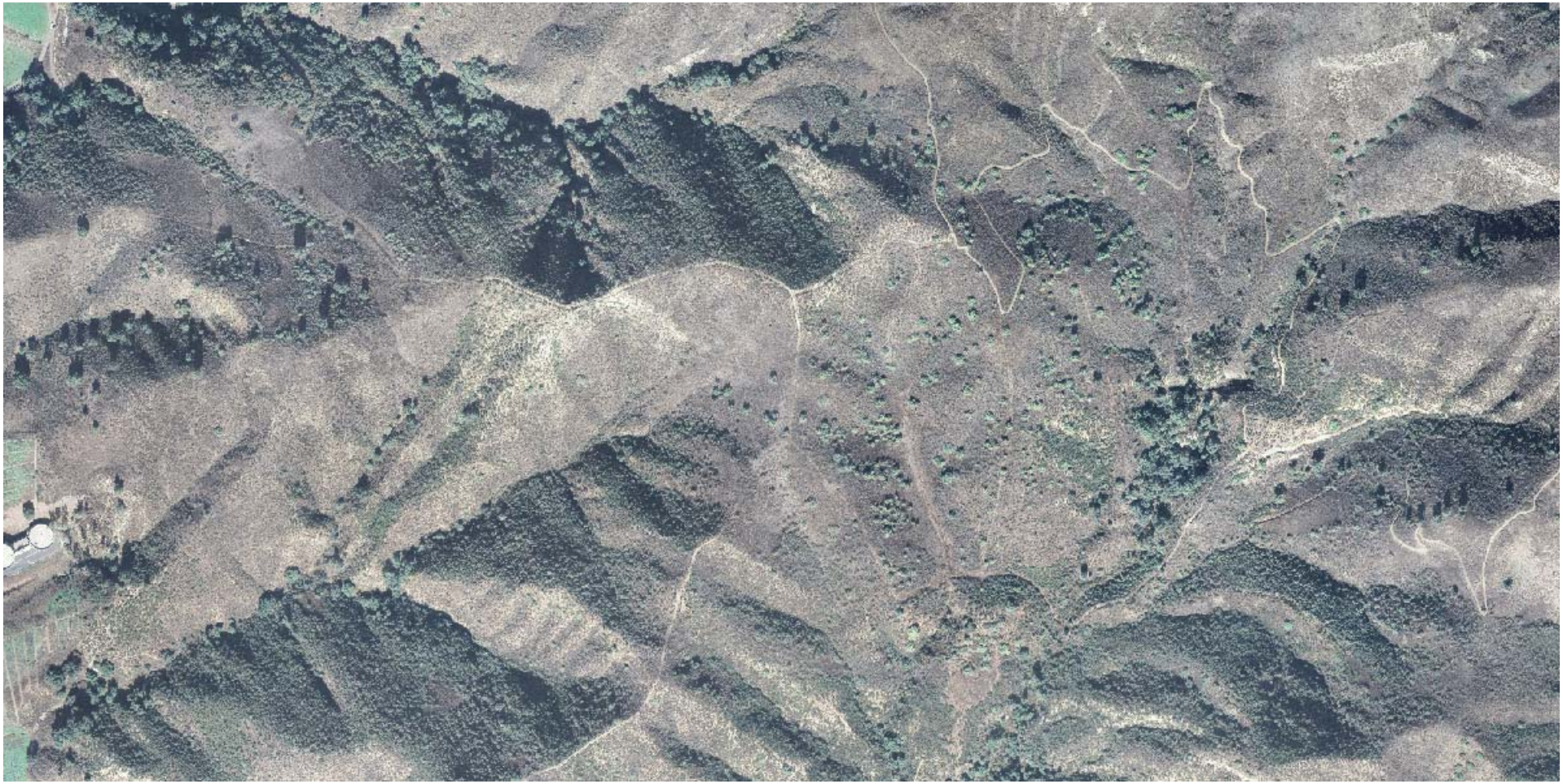

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DELIVERY-8 -- After Radiometry Enhancement

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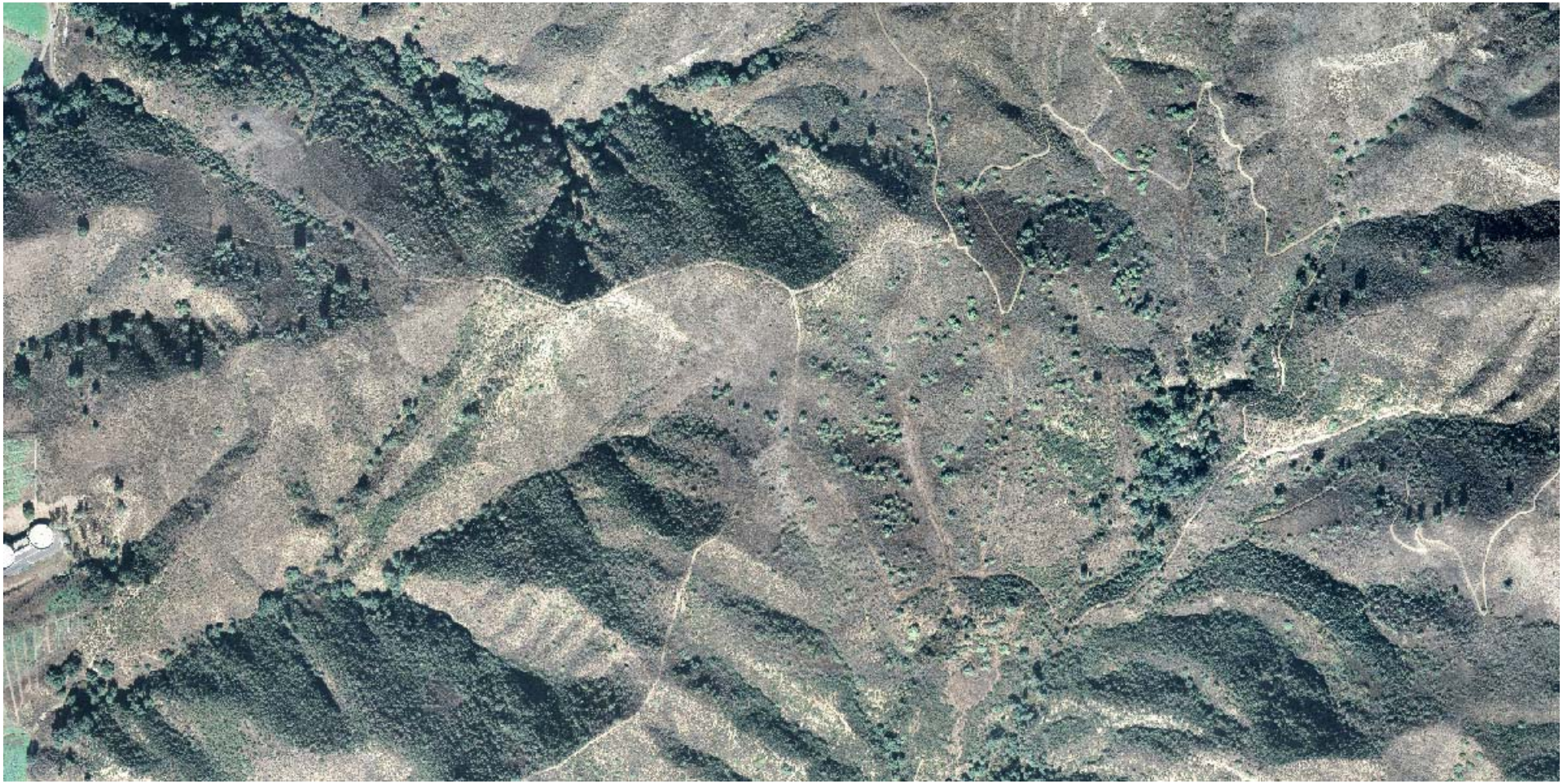

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DELIVERY-11 -- Before Radiometry Enhancement

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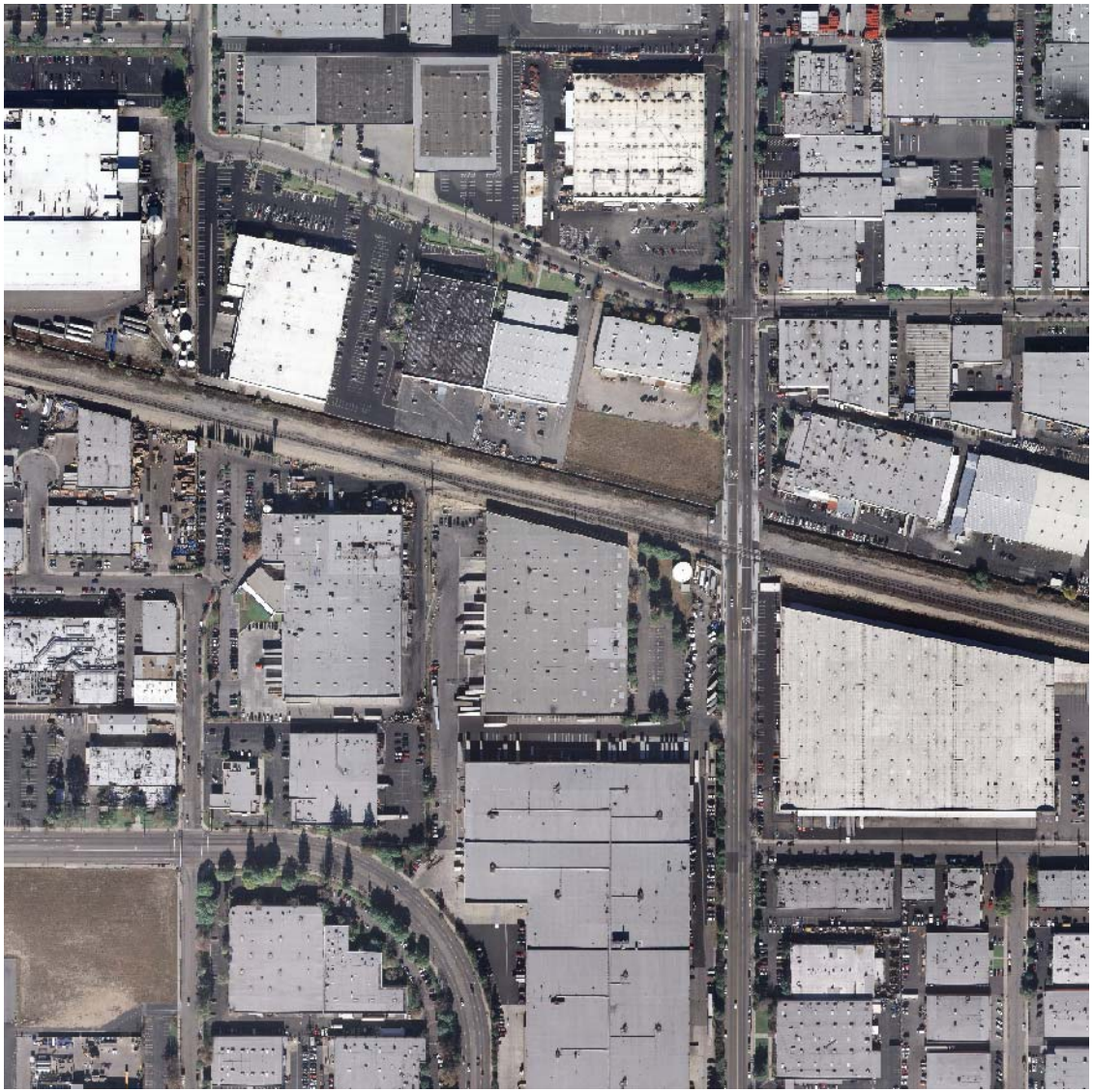

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> DELIVERY-11 -- After Radiometry Enhancement

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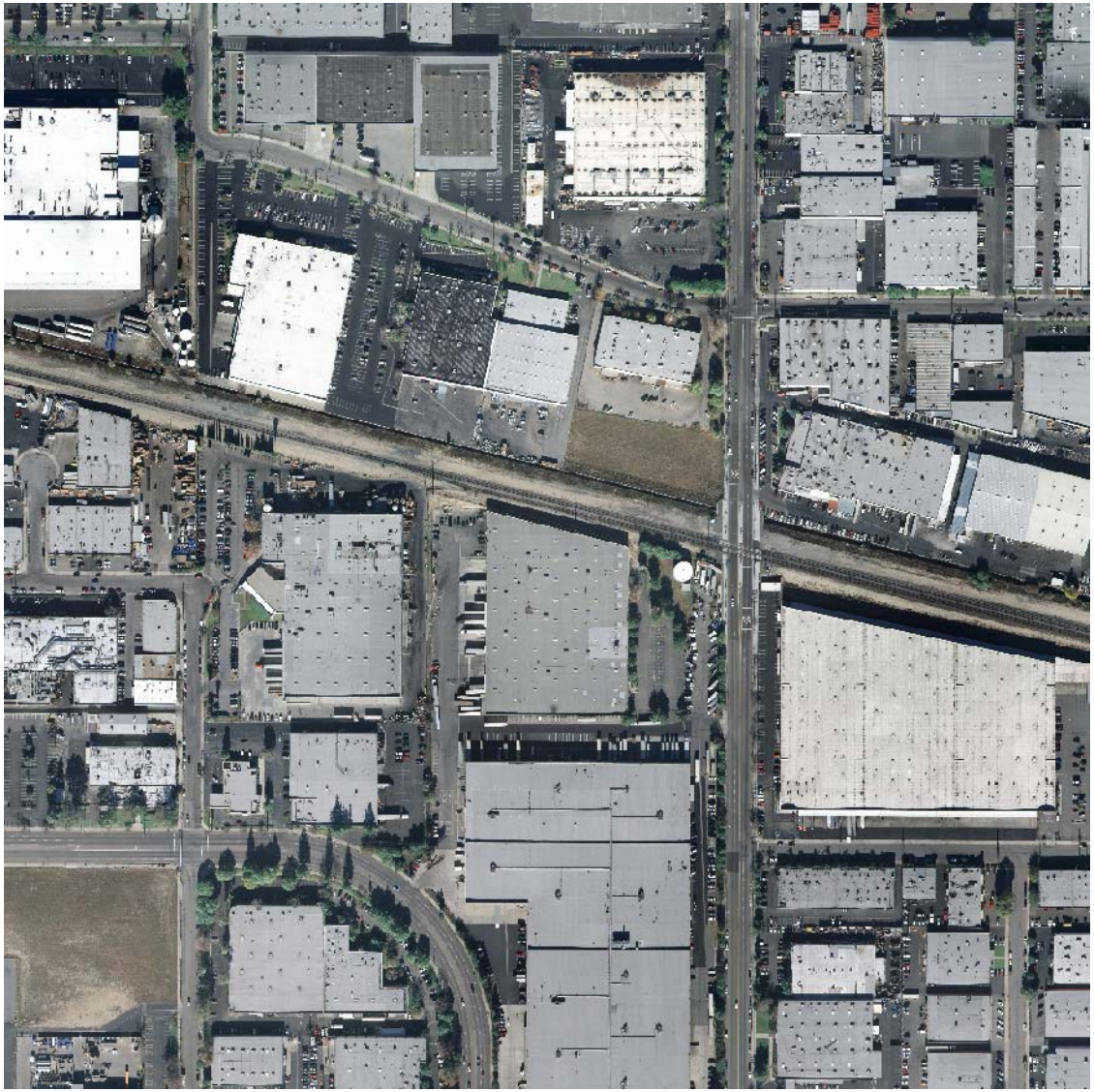
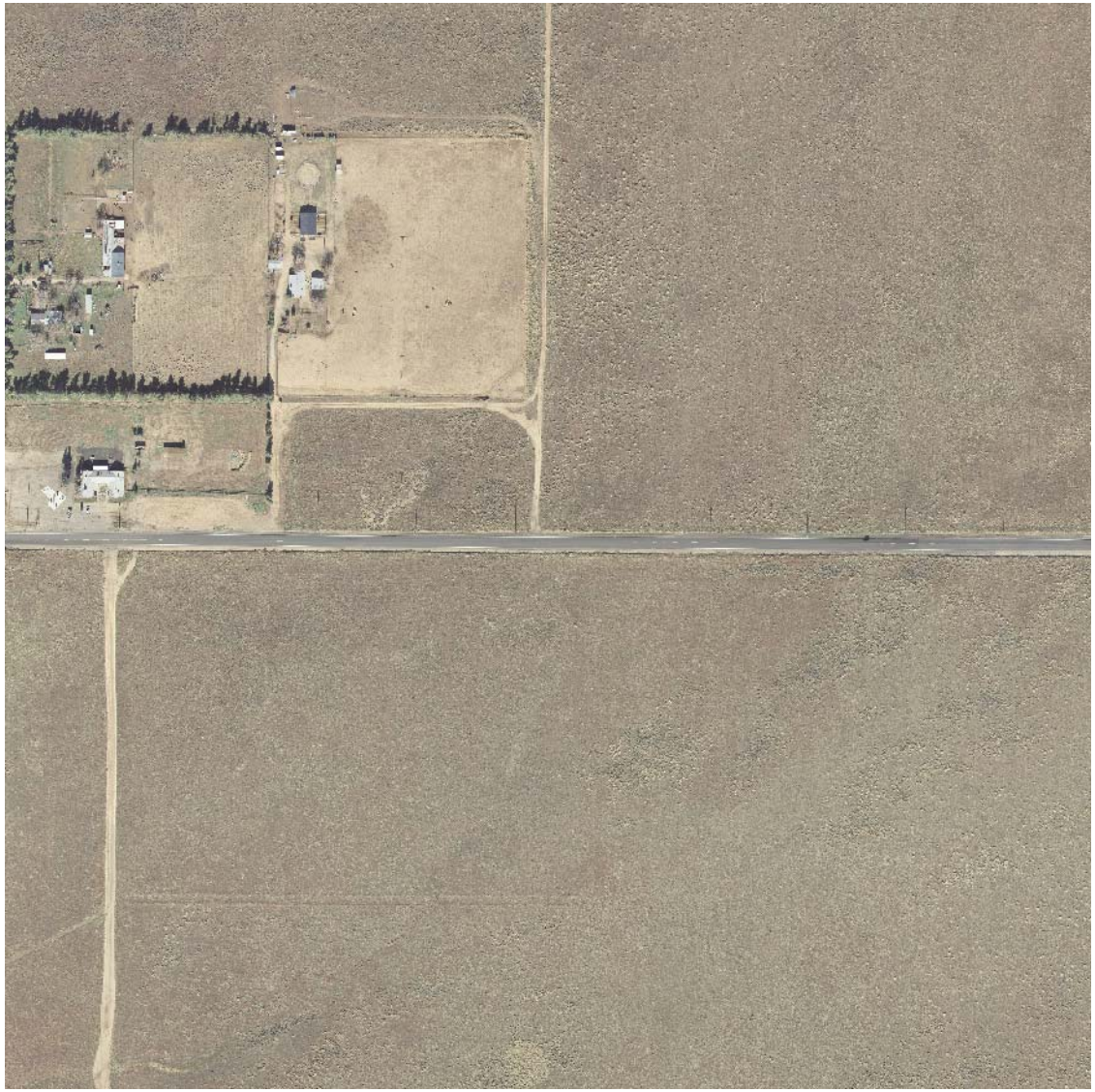


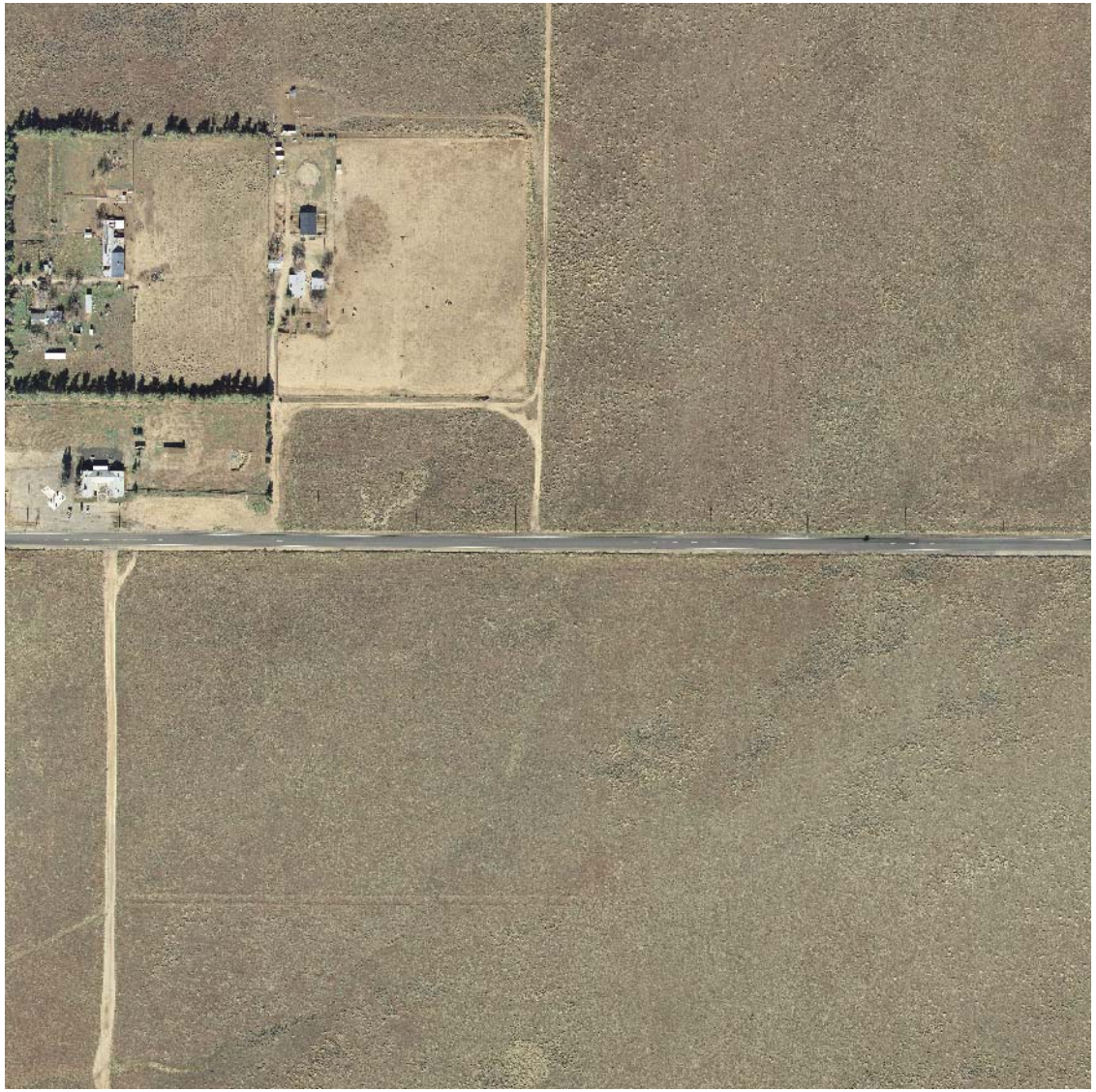
> DELIVERY-18 -- Before Radiometry Enhancement

> DELIVERY-18 -- After Radiometry Enhancement

> DELIVERY-23 -- Before Radiometry Enhancement



> DELIVERY-23 -- After Radiometry Enhancement



> Effects of Enhancement - Loss of details in Shadows

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Lessons Learned

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> Lessons Learned

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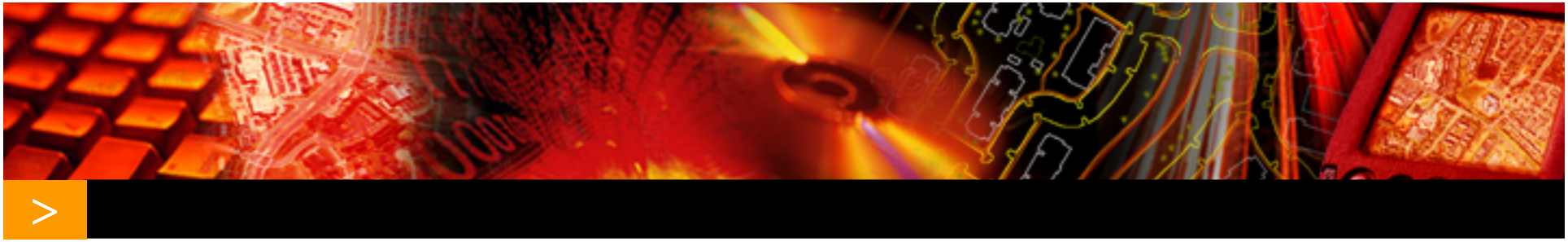
- **LiDAR Processing was a roadblock**
  - Large area processing is difficult
  - Should have reduced to smaller geographic units
- **Contours from LiDAR require compromise**
  - Quantity of points creates unwanted squiggles
  - Balance between detail and aesthetics
  - Normalization of points on roads required
- **Team resource management a benefit**
  - Ability to reallocate resources as needed
  - Infotech took on more of final production than expected



Questions

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