

# Spatial Data Services



**Bohannon**  **Huston**

- ▲ **Mapping**
    - Digital Photogrammetry
    - Digital Orthophotography
    - LiDAR Acquisition
    - Aerial Imagery
  - ▲ **GIS Feature Coverage**
  - ▲ **GIS/LIS**
    - GIS Consulting
    - Database Development
    - Asset Management
- 

# The Innovation Edge

The Spatial Data Group at Bohannon Huston, Inc., (BHI) is in relentless pursuit of the “innovation edge” to deliver the most accurate and technologically advanced products to our clients. Photogrammetry and remote sensing provide large quantities of data about the landscape very rapidly, and are often used for disaster monitoring, environmental assessment and rapid mapping of specific areas. **We deliver the highest quality data products** to customers whose needs include mapping, built and natural terrain modeling, survey, GIS/LIS technologies, geospatial web, and asset inventory.

## Our Clients

Spatial Data Group clientele includes federal, state and local governments, municipal organizations and the private sector. They include FEMA, the National Geodetic Survey, other federal agencies, as well as small and large real estate developers.

### *City of Wheat Ridge* GIS Feature Data, USGS LiDAR



The City's GIS program contracted with BHI to produce new GIS base data for the City. BHI co-developed a database feature schema with the City. This included feature classes for all visible feature data at a 1"=100' horizontal scale. Over 52,000 individual features within a 10.8 sq. mi. area were compiled in stereo and in 3-dimensions with on-the-fly topology checking, both automated and manual attribution, and web-based collection guidance.

### *Denver Regional Council of Governments* Regional Aerial Acquisition



BHI provided digital four-band multi-resolution orthophotography for the DRCOG jurisdictional area centered on the Denver metropolitan area. The aerial photography was captured within a split acquisition window. BHI communicated project acquisition progress in near real-time via a project website. Our programming staff provided data distribution systems for delivery of final products by custom orders. Data requests were conducted through a web interface and written to hard drives in selected formats for delivery to the requesting agency.

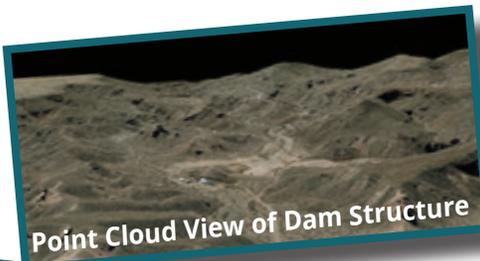
## Our Team

Our knowledgeable and experienced staff integrates the disciplines of mapping, geodetic and engineering surveying, photogrammetry, remote sensing, aerial and ground-based LiDAR surveys, geographic and land information systems (GIS/LIS), and spatial computing and analysis.

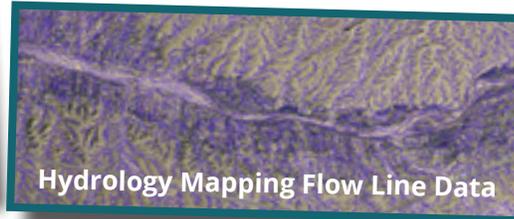
## Customized Systems

BHI's customized systems make our data processing and production more efficient. Our systems:

- automate geospatial data processing steps
- dramatically cut distribution time for our products
- ensure flawless map creation that avoids reworking
- ensure document data production results
- emphasize customer communication and relationships
- supply rapid response capabilities
- help our customers meet their obligations
- reduce customer costs



Point Cloud View of Dam Structure



Hydrology Mapping Flow Line Data



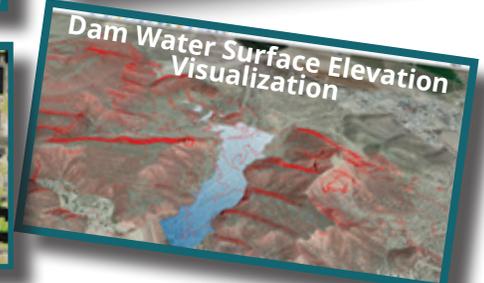
LIDAR Derived Vegetation Outline over Imagery



Contours Generated from Digital Surface Model



Greenness Mask and Building Change Detection



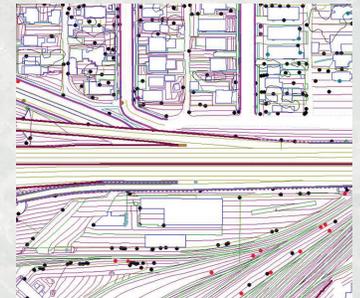
Dam Water Surface Elevation Visualization

We offer technology solutions to support data driven planning and risk assessment to help build resilient communities. We offer expertise in:

Terrain Mapping	Vegetation Mapping	Hydrology Mapping
<p>Key Benefits: High resolution elevation data is obtained from stereo aerial imagery.</p> <p>Applications: Flow line detection, dam breach analysis, change detection, geomorphic analysis and terrain/slope analysis.</p>	<p>Key Benefits: Analysis of 3D light detection and ranging data helps to identify vertical vegetation, and data can be filtered by height.</p> <p>Applications: Green space analysis, mitigation estimation, change detection, fire risk, ordinance compliance and environmental assessment.</p>	<p>Key benefits: High vertical and horizontal resolution datasets combined with computing platforms are facilitating wide-area drainage basin and hydrologic flow line delineation.</p> <p>Applications: Building permit analysis, flood mitigation estimation, transportation and fire risk assessment.</p>

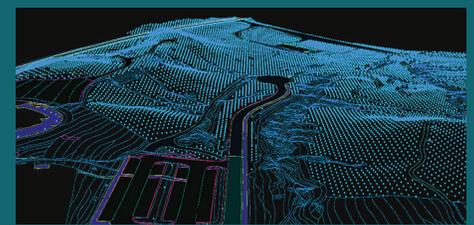
### CDOT I-70 3D Planimetric, Terrain & Field GPS Survey Mapping

BHI provided engineering design quality stereo topographic mapping of an 11-mile corridor centered on Interstate 70 in Denver. The mapping was supplemented with a field utility survey, terrestrial LiDAR and orthophotography. These datasets were integrated into a seamless Bentley InRoads planimetric and surface deliverable. A total of 960 acres of highly urban area were mapped and surveyed. BHI worked in conjunction with the Atkins North America and the Lund Partnership to coordinate control systems, comply with CDOT Design Standards and validate mapping/survey accuracy.



### City of Lubbock Orthophotography

The Digital Orthophotography project for the City of Lubbock, TX, included delivery of new orthorectified digital aerial imagery and mapping of building footprint planimetrics for a 350 square mile area. Tasks included flight planning, aerial image acquisition, ground control survey, aerial triangulation, elevation data and orthophoto production, and building footprint planimetric data. The project expanded the LiDAR coverage for the City of Lubbock and obtained larger watershed area coverage for support of water modeling and City planning functions.



# Who We Are...

With nearly 6 decades of expertise in the Spatial Data industry, BHI is a recognized leader known for providing the perfect solution for our customers' needs. Our leadership and expertise in geospatial data creation has advanced our reputation in the geospatial community as providers of the most precise, complete and valuable geospatial solutions in the marketplace.



Albuquerque



Denver



Las Cruces

## Excellence in Quality

*BHI mapping products adhere to the most exacting standards for quality in the world, set by the International Standards Organization (ISO). Every map feature is rigorously tested according to these standards to guarantee the error-free results and integrity our customers expect.*



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