



## Benefits to Project Delivery

The expertise and versatility of the Photogrammetry staff can help you achieve successful project delivery by providing:

- One Stop Shop for mapping products
- Planning assistance
- Data in a variety of formats to fit your needs
- Cost-Budget determination - no surprises
- Quality checked data
- On site assistance with our data
- Data Integration
- Existing data research and provision
- Updates or add-on to existing data
- Cost effective methodology
- Experienced staff & management
- Modern technology & software
- LIDAR acquisition and management

## Contact Information & Websites

509-734-6000 • 1-800-709-5533

### Photogrammetry WSDOT Internal Site

<http://wwwi.wsdot.wa.gov/PPSC/Photogrammetry/Default.htm>

### Photogrammetry WSDOT Public Site

<http://www.wsdot.wa.gov/Mapsdata/Photogrammetry/default.htm>

### Photogrammetry Electronic Order Form (Internal Only)

<http://wwwi.wsdot.wa.gov/PPSC/Photogrammetry/OrderForm.htm>

### Project Tools

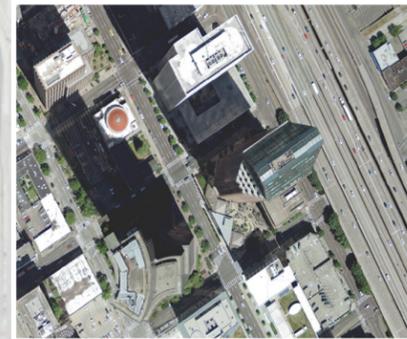
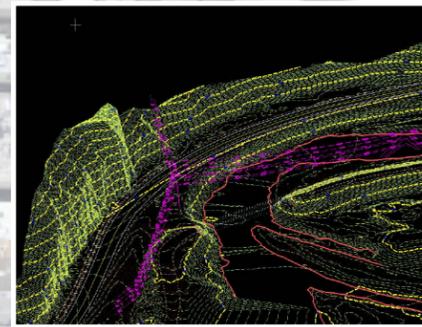
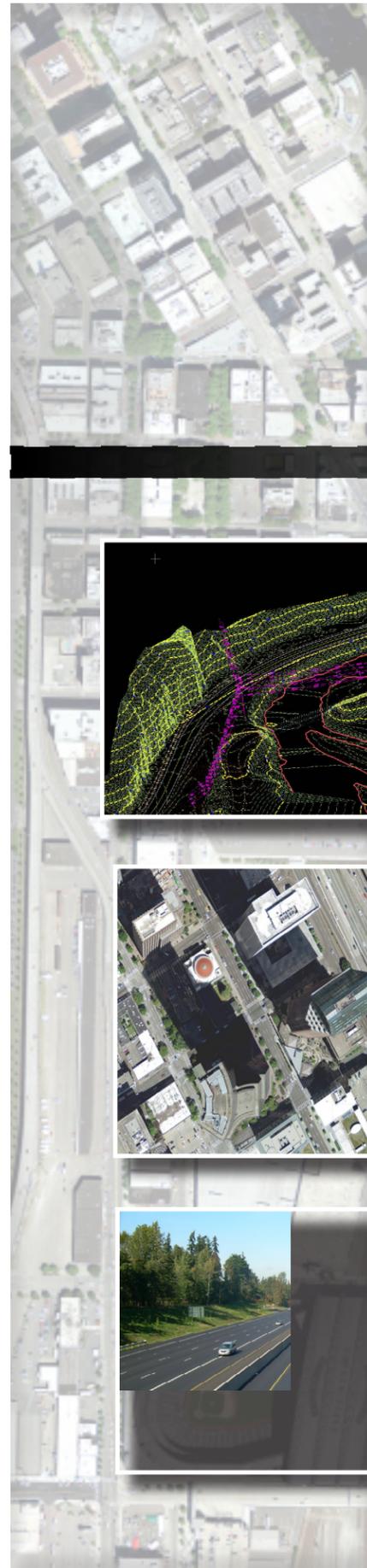
We know which tools and techniques will best meet your projects imaging, data and mapping needs. The key is to include us on your project delivery team and order early to take advantage of the services we offer.

### Advanced Planning

Weather, the process itself, and geography still define our windows of opportunity for mapping flights and data collection. The sooner we are included in your project planning, the better we can get the data you need when you need it.

# Mapping Transportation Corridors and Facilities

Efficient Technical Support for Project Delivery



The best people, tools, methods, and products for your project are “in-house” and available to assist your WSDOT project delivery team!

WSDOT Geographic Services has Surveying, Remote Sensing, Photogrammetry and Aerial photography all “in-house” to help with your project. We have current technology and expertise in base mapping, structural modeling, aerial orthophotos, and control surveying to meet your project needs.

## Benefits to the Transportation System

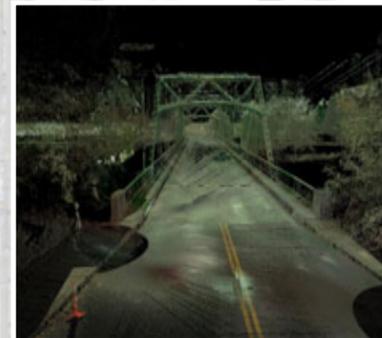
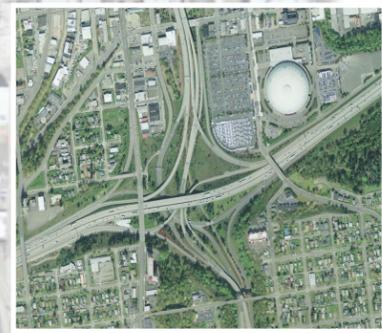
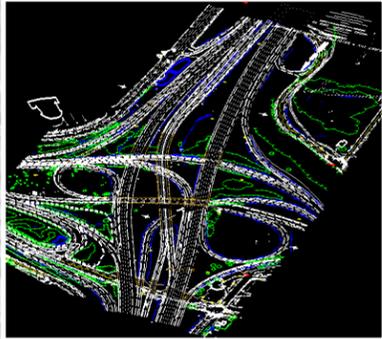
When you use our services, you also contribute to the agency’s enterprise database. We make sure your maps and images are compatible with other WSDOT data. We maintain the data for use by others for many purposes and for future use and reference.

## MAPPING OPTIONS

1. **3-D CAD** files for design base maps are made from large scale (low altitude) aerial photos and accurate ground control surveys.
2. The type of mapping described above can be enhanced by adding **orthophotos (corrected aerial photos)**. There is roughly a 5-10% additional cost to make the orthos once the 3-D CAD data and aerial photos are already done.
3. **Orthophotos** can also be created as “stand alone products” without the need to create design-quality CAD data. This requires less labor than is needed to collect the very detailed CAD data for design use, so the cost is a fraction of that to produce CAD mapping alone. However, the photos and survey used to make this special product cannot be used to go back and make precise CAD files for design work. One would have to start over with new photos and ground control for 3-D CAD files as described in number (1) above.

**3D Terrestrial Laser Scanning (3DTL)** This technology offers a new way to accurately survey areas that may be inaccessible using traditional survey or photogrammetric methods. We have a team of professionals that have already completed both large and small 3DTL projects. We have been working closely with WSDOT CAD and CAE coordinators to ensure the compatibility of 3DTL mapping products with WSDOT design software and procedures.

**3DTL technology is not a replacement for Survey and Photogrammetry but rather an additional tool to enhance the high accuracy mapping process.**



## PHOTOGRAPHY BASED MAPPING

Photogrammetric Mapping uses pictures taken with special metric calibrated cameras (either film or digital) from airplane, helicopter or satellite. It works best if the pictures are taken on a clear day during the summer, but we have completed successful mapping jobs using pictures taken in midwinter.



## LASER SCANNER BASED MAPPING

**Laser scanning based mapping is comprised of:**

- Ground Level or Terrestrial Laser Scanning (scanner on a tripod)
- Mobile Laser Scanning (scanner on ground vehicle)
- Airborne Laser Scanning (helicopter or fixed wing aircraft)

**Some of the benefits to LiDAR mapping:**

- Greater safety for motorists and survey crews by working away from traffic
- Decreased traffic disruption by collecting data from a distance
- Reduce time collecting field data
- Expand data collection to difficult to reach areas like unstable slopes, tunnels, bridges, and structures