



**SIN 899-7 Geographic Information Systems (GIS) Services:** Provide operational services, advice, or guidance in support of agencies' environmental programs utilizing Geographic Information Services. Services include but are not limited to: mapping and cartography, natural resource planning, site selection, migration pattern analysis, pollution analysis, and emergency preparedness planning. Provide services to support geologic analysis, topographic data development, 3D/4D interactive visualization packages, and data interpretation.

- Mapping and Cartography
  - Photogrammetry
  - Orthophotography
  - Digital Terrain Model (DTM) Development
  - Contour Generation
  - Lidar Data Integration
  - Photogrammetric scanning and Aerial Triangulation (AT)
  - GPS Field Data Collection
- Natural Resource Planning Tools (datasets)
- Site Selection / Analysis
- Topographic Data / TIN Surfaces
- 3D Interactive Visualization Packages
- Photo Interpretation for Base Mapping





## **GENERAL SERVICES ADMINISTRATION**

### **Federal Supply Service** *Authorized Federal Supply Schedule Price List*

On-line access to contract ordering information, terms and conditions, up-to-date pricing, and the option to create an electronic delivery order is available through **GSA Advantage!**<sup>TM</sup>, a menu-driven database system. The INTERNET address for **GSA Advantage!** is: <http://www.GSAAdvantage.gov>

**Schedule for Environmental Services**  
**Federal Supply Group:** 899      **Class:** F999  
**Contract Number:** GS-10F-0169S

For more information on ordering from federal Supply Schedules, click on the FSS Schedules button at <http://www.fss.gsa.gov>

**Contract Period: February 28, 2006 through February 27, 2011**

<b>Contractor:</b>	<b>GeoTerra, Inc., dba 3Di West</b> 3400 West 11 <sup>th</sup> Avenue Eugene, OR 97402-3039	<b>Business Size:</b> Small Business
<b>Telephone:</b>	541.343.8877	<b>FAX Number:</b> 541.343.8879
<b>Web Site:</b>	<a href="http://www.3diwest.com">www.3diwest.com</a>	<b>E-mail:</b> <a href="mailto:dhzell@3diwest.com">dhzell@3diwest.com</a>
<b>Contract Administration:</b>	Debbie Hazell	

## **CUSTOMER INFORMATION:**

- 1a. **Table of awarded special item number(s) with appropriate cross-reference to page numbers:** 899-7
- 1b. **Identification of the lowest priced model number and lowest unit price for that model for each special item number awarded in the contract. This price is the Government price based on a unit of one, exclusive of any quantity/dollar volume, prompt payment, or any other concession affecting price. Those contracts that have unit prices based on the geographic location of the customer, should show the range of the lowest price, and cite the areas to which the prices apply.** Not applicable.
- 1c. **If the Contractor is proposing hourly rates, a description of all corresponding commercial job titles, experience, functional responsibility and education for those types of employees or subcontractors who will perform services shall be provided.**



## **POSITION DESCRIPTIONS & QUALIFICATIONS**

### **PHOTOGRAMMETRIST**

Analyzes source data and prepares mosaic prints, contour maps, profile sheets and related cartographic materials requiring technical mastery of photogrammetric techniques and principles. Prepares original maps and charts from the interpretation of aerial photographs based on known survey data and applies standard mathematical formulas and photogrammetric techniques to identify scale and orient geodetic points, elevations, and other planimetric or topographic features in full cartographic detail. Graphically delineates aerial photographic detail, such as control points, drainage, topography and cultural features using Analytical Stereoplotters and or Softcopy Photogrammetric workstations.

Position Classification: Non-Exempt

Education required: BA/BS in Geography, or related, or equivalent directly relevant experience

Certifications: None required

Experience: 3 years

### **PRINCIPAL/SENIOR PROJECT MANAGER**

Certified Photogrammetrist in charge of complex projects or multiple projects. Responsible to estimate, schedule, initiate, direct and control contract performance. Manages performance of subcontractors. Responsible to customers for cost, schedule and technical conformance of contracts. Delegation of authority to Production Manager, GIS Manager, and/or Senior Photogrammetrists as appropriate. Accountable to company owners for company financial performance and viability.

Position Classification: Exempt

Education required: MA/MS in Geography, or related, or equivalent directly relevant experience

Certifications: ASPRS Certified Photogrammetrist - Required

Experience: 15 years

### **PRODUCTION MANAGER/TEAM LEAD**

Requires the application of professional knowledge and skills in the mapping (GIS) sciences and relevant mathematics and statistics to plan, design, research, develop, construct, evaluate and modify mapping and charting systems and products. The manager/team lead must be proficient in and utilize the latest GIS-related software to perform these duties. Some of the products for which the manager/team lead is responsible include contour maps, digital terrain models, digital orthophotography, 3D – 4D Visualizations, and Remote Sensing products such as LiDAR data. Supervises Editors, Image Technicians, Senior Photogrammetrists and Photogrammetrists.

Position Classification: Exempt

Education required: BA/BS in Geography, or related, or equivalent directly relevant experience

Certifications: ASPRS Certified Photogrammetrist - Desirable

Experience: 10 years



### **QC TECHNICIAN**

Must be familiar with the work processes and acceptance criteria for services performed by Senior Photogrammetrists, Photogrammetrists, Image Technicians, and Editors. Applies internal and customer criteria to accept or reject work. Coordinates with Production Manager to resolve quality issues. Responsible to the Project Manager to assure the quality of services delivered to customers. Responsible for coordinating customer identified quality issues with production staff and managers. Reports planned and actual status of quality issues to management. Makes recommendations for quality improvements.

Position Classification: Non-Exempt

Education required: BA/BS in Geography, or related, or equivalent directly relevant experience

Certifications: None required

Experience: 3 years; previous experience as a Photogrammetrist, Image Technician, or Editor is desirable, but not required.

### **SENIOR PHOTOGRAMMETRIST**

The Senior Photogrammetrists may plan, design, research, develop, construct, evaluate and modify the aerial photography portion of projects. Once flown responsibility includes checking photography for proper stereo coverage and sidelay as well as ensuring that a project has been flown correctly. They are responsible that the imagery is pugged and prepped for Analytical Aerotriangulation (AT) as applicable to the project work flow. The Senior Photogrammetrists also do the bridging and run the AT software programs using both softcopy and analytical methods. They check and verify the ground control and check the output of the AT to ensure that the ground control is error free and that the mapping data will meet Map Accuracy Standards based on the AT results. They provide quality assurance checks of geodetic control networks, translations of geodetic datum shifts as well as technical oversight for projects. The Senior Photogrammetrist may supervise Photogrammetrists, Image Technicians, and Editors assigned to specific projects. They review the work of staff assigned to ensure that professional standards are adhered to throughout the production of photogrammetric products and their derivatives. The Senior Photogrammetrists verify that all mapping projects meet National Map Accuracy Standards, or equivalents.

Position Classification: Exempt

Education required: BA/BS in Geography, or related, or equivalent directly relevant experience

Certifications: ASPRS Certified Photogrammetrist - Desirable

Experience: 8 years

### **EDITOR**

This position requires a practical knowledge of the processes, practices, methods and techniques involved in the construction of new or the revision of existing maps and charts. This technician also performs pre and post-compilation tasks, assembling aerial photographs into mosaics, drafting, digitizing and editing. The editor must be familiar with and use both vector and raster editing programs.

Position Classification: Non-Exempt

Education required: AA/AS in Geography, or related, or equivalent directly relevant experience

Certifications: None required

Experience: 2 years

### **GIS PROJECT MANAGER**

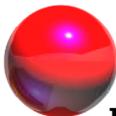
The GIS Manager designs, develops, and implements GIS databases and applications for clients. The responsibilities for this position include the procedures and algorithms for modeling, data distribution, information extraction, data translation, final product creation and reporting. Duties may also involve GIS needs assessments, and verification of hardware/software systems needed for customer GIS applications. The GIS Manager must be proficient in ArcGIS, ArcIMS, and ArcSDE. The GIS Manager also provides GIS support to 3DiWest staff to enhance the usefulness of mapping services delivered.

Position Classification: Exempt

Education required: BA/BS in Geography, or related, or equivalent directly relevant experience

Certifications: None required

Experience: 5 years



**IMAGE TECHNICIAN**

Processes digital imagery from airborne cameras and/or sensors to enhance radiometric and/or geometric characteristics. Responsible for proper orthorectification of imagery to DEMs/DTMs and for edge matching of adjacent imagery. Analyses and enhances imagery to create derivative products for end-user applications. Familiar with and regularly uses image processing software.

Position Classification: Non-Exempt  
Education required: AA/AS in Geography, or related, or equivalent directly relevant experience  
Certifications: None required  
Experience: 2 years

**ADMINISTRATOR**

Position Classification: Exempt  
Education required: BA in business, or related, or equivalent directly relevant experience  
Certifications: none  
Experience: 5 years

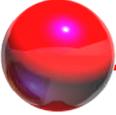
Tracks cost and schedule status on projects. Handles routine customer support inquiries. Supports writing of reports and final deliverables. Performs document quality control, word processing, graphics preparation, and related contract administration support tasks.

**CAD/GRAPHICS MANAGER**

Position Classification: Exempt  
Education required: BA/BS in Geography, or related, or equivalent directly relevant experience  
Certifications: none  
Experience: 10 years

Supervises editing staff and performs quality control of CAD and Graphics production. Generates contours, hardcopy map plots, Triangular Irregular Networks, lidar data editing, and is responsible for coordinating with other disciplines to produce final deliverables in customer specified formats.

- 2. Maximum Order:** \$5,000,000.00
- 3. Minimum Order:** \$100.00
- 4. Geographic Coverage (delivery area):** Domestic Only
- 5. Point(s) of production (city, county, and state or foreign country):** GeoTerra/3Di West, Lane County, Eugene, Oregon, United States of America
- 6. Discount from list prices or statement of net price:** Government net prices (discounts already deducted). See Attachment
- 7. Quantity discounts:** None Offered
- 8. Prompt payment terms:** Net 30 days
- 9a. Notification that Government purchase cards are accepted at or below the micro-purchase threshold:** Yes
- 9b. Notification whether Government purchase cards are accepted or not accepted above the micro-purchase threshold:** will not accept over \$2500



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**Contract Number: GS-10F-0169S**

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- 10. Foreign items (list items by country of origin):** None
- 11a. Time of Delivery:** Specified on the Task Order
- 11b. Expedited Delivery:** Contact Contractor / specified on task order
- 11c. Overnight and 2-day delivery:** Contact Contractor / specified on task order
- 11d. Urgent Requirements:** Contact Contractor / specified on task order
- 12. F.O.B Point(s):** Destination
- 13a. Ordering Address(es): Geoterra, Inc. dba 3Di West**  
3400 West 11<sup>th</sup> Avenue, Eugene, OR 97402  
PHONE: 541-343-8877 FAX: 541-343-8879
- 13b. Ordering Procedures:** For supplies and services, the ordering procedures, information on Blanket Purchase Agreements (BPA's) and a sample BPA can be found at the GSA/FSS Schedule homepage at <http://www.fss.gsa.gov/schedules>.
- In summary:
- For orders up to \$2500 – Develop a Scope of Work (SOW) and have your procurement office place the order directly with GeoTerra/3Di West.
- For orders over \$2,500 – Develop a performance-based SOW, send a Request for Quote to a minimum of three GSA contractors, evaluate quotes based on your criteria, and place the order with the best value contractor.
- To allow for continuity of data, quicker turn around, and to satisfy recurring requirements of updated data, consider a Blanket Purchase Agreement (BPA).
- 14. Payment Address(es):** Same as Company address
- 15. Warranty provision:** Contractor's standard commercial warranty
- 16. Export Packing Charges (if applicable):** N/A
- 17. Terms and conditions of Government purchase card acceptance (any thresholds above the micro-purchase level):** contact contractor
- 18. Terms and conditions of rental, maintenance, and repair (if applicable):** N/A
- 19. Terms and conditions of installation (if applicable):** N/A
- 20. Terms and conditions of repair parts indicating date of parts price lists and any discounts from list prices (if applicable):** N/A
- 20a. Terms and Conditions for any other services (if applicable):** N/A
- 21. List of service and distribution points (if applicable):** N/A
- 22. List of Participating Dealers (if applicable):** N/A
- 23. Preventive maintenance (if applicable):** N/A



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- 24a. Special attributes such as environmental attributes:** N/A
- 24b. Section 508:** N/A
- 25. Data Universal Number System (DUNS):** 11-856-9172
- 26. Notification regarding registration in the Central Contractor Registration (CCR) database:** REGISTERED
- 27. Uncompensated overtime:** Not used / Not applicable.

**GEOTERRA, INC., DBA 3DI WEST**

Federal Supply Schedule Price List for  
Environmental Services; Special Item No. 899-7  
Geographic Information System (GIS) Services

Contract Number: GS-10F-0169S                      Effective: February 28, 2006

GSA Labor Category	Government Hourly Rate
Administrator	\$ 48.68
CAD/Graphics Manager	\$ 69.98
Editor	\$ 47.31
GIS Program Manager	\$ 73.20
Image Technician	\$ 45.22
Photogrammetrist	\$ 55.00
Principal/Senior Project Manager	\$102.41
Production Manager/Team Leader	\$ 74.34
QC Technician	\$ 59.01
Senior Photogrammetrist	\$ 61.31

**Note:**

- a. Above labor rates are fully burdened and include the Industrial Funding Fee (IFF), payable directly to GSA by GeoTerra, Inc.
- b. Travel costs will be in addition to above listed labor rates. Travel will be in accordance with the Joint Travel Regulations (JTR) and will be burdened with approved General and Administrative (G&A) rates.

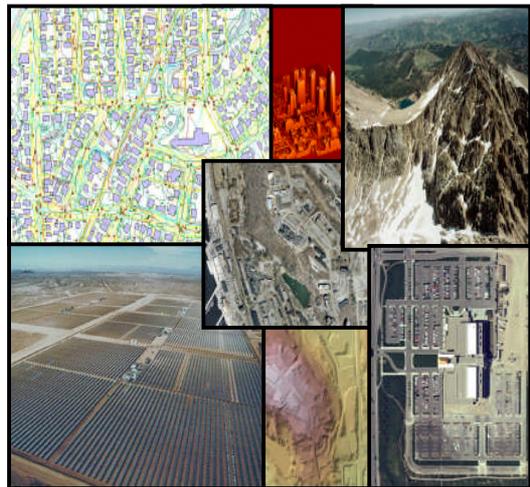


# 3DiWEST

## COMPANY PROFILE

3Di West (GeoTerra, Inc.) traces its history back to 1949 when H.G. Chickering opened our office in Eugene, Oregon, as one of the first photogrammetric mapping companies in the Western United States. For 60 years, our mapping professionals have continued the legacy and achieved success through professional service and the production of high quality map products.

Today the company, as 3Di West, offers full mapping, GIS, LIDAR data integration, and 3D visualization related services, utilizing the latest in equipment and techniques to achieve success.



The photogrammetric mapping of the DTM, planimetric feature layers and orthophotography required by projects are created in our two U.S. based production offices under the supervision of a highly experienced technical staff with full photogrammetric certification. Over the past 7 years, we have demonstrated our ability to provide high quality custom map products at a reasonable cost to the client. Our reputation for accuracy and on-time delivery has earned us a top-ranked position in the geographic information field.

## STAFF

- Principal in Charge: Bret Hazell, RPP, CP, ([bhazell@3diwest.com](mailto:bhazell@3diwest.com)) works with a wide range of clients and insures project timelines are maintained without sacrificing data quality.
- General Manager: Ron Sluggett, RPP, CP, ([rsluggett@3diwest.com](mailto:rsluggett@3diwest.com)) manages all aspects of production, supported by an experienced staff.
- Principal/Vice President: Shelby Griggs, PLS (in CA, OR, WA, and ID) is a leading GPS surveyors and has an extensive background in GPS control networks, photo control, cadastral and boundary surveying.
- GIS Program Manager: Luke Savage, GISP, ([LSavage@3diwest.com](mailto:LSavage@3diwest.com)) manages all aspects of GIS support services.



### **Orthophotography Production**

Sometimes the best of both worlds is possible by producing a product having the geometric accuracy of a map but containing the immense detail of a photograph. Essentially an image map, the digital orthophoto provides detail and accuracy within a two-dimensional raster environment. They can be used as drawing backgrounds, for project layout and even heads-up digitizing. Orthophotos are a critical data layer for most engineering and planning projects.



### **Geographic Information Systems (GIS)**

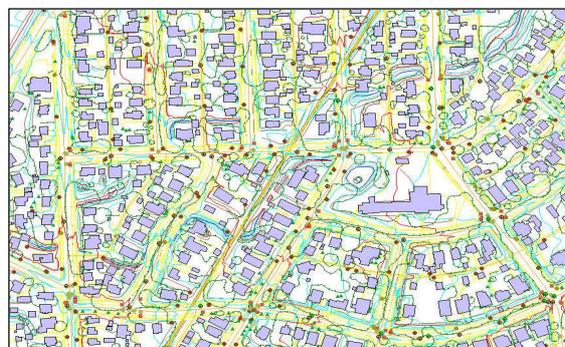
Maps should not sit on a shelf or in a cabinet. Our staff will assist clients in their move towards a practical and economical Geographic Information Systems (GIS). Most of our products are created for both engineering and general GIS functionality. Our services include Needs Assessment, Utility GPS collection with GIS integration, database design support, GIS system design and training support, web customization, and integrating CAD maps into an Enterprise geodatabase workflow process. As a 3D mapping provider, we have the expertise to help you better utilize your data in a GIS environment.



3Di West is an authorized ESRI Business Partner and Beta Test site.

### **Feature Mapping**

Utilizing stereo photography, we can collect all visible and identifiable features, placing each one on the applicable layer or coverage. Feature categories such as transportation, vegetation, utilities, structures and hydrology form the basis for many GIS base maps.





### **3D Modeling and Visualization**

Accurate 2-dimensional mapping and modeling is used to create three-dimensional scenes with amazing visual results. Used for transportation, general planning, architectural design, recreation and military purposes. See a plan before it's ever built or view a current scene for a fly through simulation or within a photo realistic virtual scene.



### **Aerial Photography / Imagery Acquisition**

Precision mapping cameras acquire photography for a wide variety of purposes. The 9" x9" format cameras are versatile, accurate, flexible and cost effective. 3Di West is able to capture GPS triggered photo locations or we can control a flight through Airborne GPS control. Photography is always flown using USGS calibrated mapping cameras with forward motion compensation (FMC) and precision navigational GPS for accurate execution of flight plans. Digital mapping cameras are starting to offer amazing results, especially for orthophoto generation.





### **Photogrammetric Scanning and Aerial Triangulation**

A Leica 600 series scanning system is used to support orthophoto generation. The system is one of the leading photogrammetric scanners available, providing dynamic range scans to 7 microns with excellent repeatability and image quality.

Once film is scanned and survey control has been received, softcopy aerial triangulation (AT) of the imagery occurs. When completed, each image within the project will have 3 to 5 measured or known points established within it with most of these being AT derived points. This process serves as an excellent method to do a quality control of the ground survey with problems showing up as obviously high error residuals in the AT report. When successfully performed, control will be extended through all the project photography with the ability now to subsequently collect 3D feature data, define terrain points and generate orthorectified images.

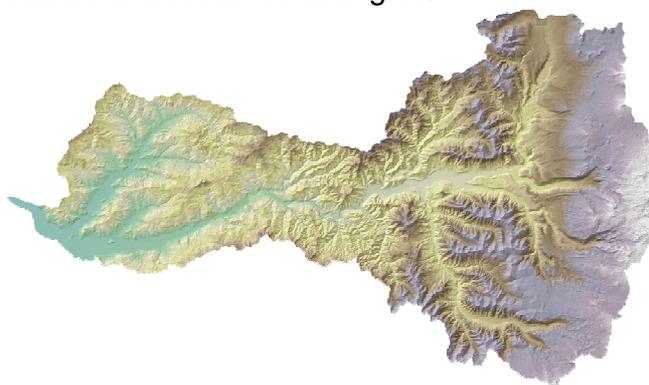
### **Airborne GPS for Project Map Control**

For over 10 years, our staff has utilized airborne GPS technology to control large project areas. This technology reduces the number of required ground points through the utilization of precise locations for the aerial camera at the time of exposure. Though not applicable to all projects, this technology has been critical in keeping costs down for large area mapping projects while still insuring map accuracy specifications are met.



### **DTM Development / Contour Generation / TIN / Lidar Data Integration**

Using photogrammetric means, skilled Photogrammetrists map the terrain surface in 3 dimensions, delivering highly accurate DTM, contour and TIN data sets to point accuracies of less than one-tenth of a foot when required. When optimal, Lidar data sets are integrated with photogrammetric DTM to provide a superior ground surface realizing the advantages inherent in both technologies.





## Quality Control

A recurring theme at 3Di West is “Quality Processes Throughout”, meaning that each element of production has been integrated with quality control and quality assurance measures.



3Di West has an unparalleled record of customer satisfaction. Our reputation for accuracy and high quality data delivery has earned 3Di West a top-ranked position in the geographic information field. Our performance and commitment to customer satisfaction has led to recognition both from colleagues and the business community at large, and has resulted in lasting relationships with many of our clients.

## Data Delivery

Key to any project is providing the data to the client in clean and workable data sets. 3Di West supports vector data delivery in AutoCAD, ESRI and Intergraph data formats with in-house capability for each software package. Unlike many of our competitors, we have in-house GIS technicians that utilize ESRI Arc/GIS software.

Orthophoto data is provided in both compressed and uncompressed formats. Compressed data sets are provided in either ER Mapper .ECW format or in Lizard Tech .SID format. Uncompressed imagery is provided in a TIF/TFW or GEOTIFF format.

Large data sets are normally provided on a USB 2.0 external hard drive. Smaller data sets are provided on DVD and CD-ROM.

### Feature Data Sets

- **Transportation**
- **Buildings**
- **Hydrology**
- **Vegetation**
- **Recreation**
- **Utility Poles**
- **Manholes**
- **Catch Basins**
- **Fire Hydrants**
- **Sign Poles**
- **Facilities**
- **Impervious Areas**
- **Fence Lines**
- **Pools / Yard Structures**
- **Transmission Lines / Towers**
- **Parking / Paint Lines**



**3Di WEST, PROJECT STAFF**

**BRET J. HAZELL, RPP, CP**  
**PROJECT MANAGER, PRESIDENT**

Bret holds a Master of Science (MS) in Geography from Oregon State University and a Bachelor of Arts (BA) in Geography from California State University, Chico. He served 9 years as an Engineer and Topographic Officer in the U.S. Army Corps of Engineers (Active Duty Military). Bret is an ASPRS Certified Photogrammetrist and a Registered Professional Photogrammetrist (RPP) in the State of Oregon.

Bret has 25 years of progressively responsible management experience with documented success in the areas of photogrammetry, cartography, geo-positioning systems, human resource management, and military construction. He acts as the Senior Project Manager, managing general operations and principal projects. On a daily basis he assists clients with project management, project development, and contracting.

Bret has successfully managed a wide range of mapping related work across the United States. He has led project teams in support of multimillion dollar mapping and GIS efforts with a total project resume exceeding 1000 projects. He is the principal owner of 3Di West and GeoTerra, Inc. and one of the most experienced project managers for mapping related work in the industry.

**RON SLUGGETT, RPP, CP**  
**GENERAL MANAGER**

Ron has more than 30 years of experience in cartography and photogrammetry with 20 of those years in progressively responsible management positions. Ron has worked at all levels of photogrammetry including compilation, editing, program planning, project manager and senior management. He has extensive experience managing municipal, state and federal government and industry projects.

Ron is an ASPRS Certified Photogrammetrist and a State of Oregon Registered Professional Photogrammetrist (RPP.)

**LUKE SAVAGE, GISP, GIS PROGRAM MANAGER**

Luke possesses a fantastic blend of GIS and Information Technology (IT) experience, having worked over 9 years in support of federal, county and municipal projects. He has successfully managed programs as a GIS consultant, GIS project manager, systems engineer and GIS strategic planning and implementation project manager. He has been certified by the GIS Certification Institute as a Geographic Information Systems Professional (GISP) and holds a B.S. in Geography with a minor in Regional Planning from Grand Valley State University, Allendale, Michigan



**SHELBY GRIGGS, PLS, PRINCIPAL/VICE PRESIDENT**

Shelby is one of the leading surveyors in the industry, specializing in high accuracy GPS surveying. He has an extensive background in cadastral and boundary surveying, having worked regionally and on numerous DOD installations throughout the United States. Shelby is Vice President and Principal of GeoTerra / 3Di West, providing outstanding technical training and support to staff.

Shelby is a Professional Registered Land Surveyor in Oregon, Washington, Idaho and California. He holds an A.E. in Surveying Engineering Technology, Oregon Institute of Technology and is active in regional GPS/Surveying organizations.

**GORDON PEET, RPP, CP, SENIOR PHOTOGRAMMETRIST**

Gordon has over 25 years of experience in cartographic drafting and photogrammetry. His experience includes planning, compilation and quality control of large-scale topographic maps. Gordon has an expertise in orthophotography, aerial triangulation, cross sections, digital terrain models, cartographic drafting, and aerial photo mosaics.

Gordon has extensive experience with the following equipment: Santoni IIc, IIIc, G6, and G7, Kelsh plotter, Multiplex plotter, Kelsh/White triple bucket orthophoto plotter, Wild AMH, Zeiss C120 and P33, Wild BC2s. He is an ASPRS Certified Photogrammetrist, a Registered Professional Photogrammetrist (RPP) in the State of Oregon, and has completed advanced courses in Cartography & Photogrammetry at the Defense Mapping School.

**W. LYNN ENGEL, RPP, CP, LSIT, PHOTOGRAMMETRIC PRODUCTION MANAGER**

Lynn has over 15 years experience in aerial mapping and surveying with photogrammetric mapping and surveying firms. He has experience performing map compilation on the following instruments: Wild BC-2S, Zeiss P-33, Semi-analytical Quasco SD-2, Wild AMH, Santoni IIc stereoplotters, and LH Systems SOCET SET softcopy workstations using CADMAP and VROne compilation software packages. He also has experience in aerial triangulation and point transfer with a Wild Pug 3 transfer device.

Lynn holds a B.S. in Surveying from Oregon Institute of Technology, Klamath Falls, Oregon; He is an ASPRS Certified Photogrammetrist; a State of Oregon Registered Professional Photogrammetrist (RPP) and holds an Oregon LSIT certificate with three years field surveying experience.