ORIGINAL

ARCHITECT-ENGINEER CONTRACT

1. CONTRACT NO.
W911XK-04-D-0001

2. DATE OF CONTRACT
05 Mar 2004

3A. NAME OF ARCHITECT-ENGINEER
WESTERN AIR MAPS, INC.

3B. TELEPHONE NO (Include Area Code)
1-800-643-5177/(913) 652-9911

3C. ADDRESS OF ARCHITECT-ENGINEER (include zip code)
9401 REEDS ROAD
OVERLAND PARK KS 66207

CODE 0F9C7

4. DEPARTMENT OR AGENCY AND ADDRESS (include ZIP Code)
U S ARMY ENGINEER DISTRICT, DETROIT
ATTN: CELRE-CT POST OFFICE BOX 1027
DETROIT MI 48231-1027

W911XK

TEL: 313 226-5148 FAX: 313 226-2209

5. PROJECT TITLE AND LOCATION
PHOTOGRAMMETRIC MAPPING, REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEMS (GIS) SERVIVES FOR AREAS WITHIN THE GREAT LAKES AND OHIO RIVER DIVISION BOUNDARIES AND THE ST. LAWRENCE RIVER WATERSHEDS.

6. CONTRACT FOR (General description of services to be provided)
A/E Services to furnish the required personnel, material, and equipment necessary to perform aerial photography or remote sensing data collection, survey support, photogrammetric mapping, image processing, GIS Design and development, technical support and product output.

7. CONTRACT AMOUNT (Express in words and figures)
The Government is obligated to the monetary amount of $20,000.00

$0.00

8. NEGOTIATION AUTHORITY

9. ADMINISTRATIVE, APPROPRIATION, AND ACCOUNTING DATA **See Schedule**

SUBMIT INVOICES TO: CODE
TECHNICAL SERVICES BRANCH
DETROIT DISTRICT, USAED P.O. BOX 1027 477
DETROIT MI 48231-1027

PAYMENT WILL BE MADE BY: CODE T0B0200
U S ARMY CORPS OF ENGINEERS FINANCE AND
5700 WASP AVENUE
MILLINGTON TN 38054

TO BE DETERMINED BY EACH DELIVERY ORDER. Contract and/or Delivery Amounts not to exceed (NTE) $1,000,000.

10. The United States of America (called the Government) represented by the Contracting Officer executing this contract and the Architect-Engineer agree to perform this contract in strict accordance with the clauses and the documents identified as follows, all of which are made a part of this contract:

HEALTH AND SAFETY STANDARDS: The facilities, systems and equipment design standards of the occupational Safety and Health Act, Code of Federal Regulations, Title 29, Chapter XVII, Parts 1910 and 1926, or EM 385-1-1, U.S. Army Corps of Engineers, Safety and Health Requirements Manual, whichever is more stringent, will be incorporated into all Engineering, Design and Analysis furnished, pursuant to this contract. Any problem in incorporating these standards due to conflicts with other technical criteria will be promptly submitted to the Contracting Officer for decision. Contractor shall abide by the Safety Requirements specified EM 385-1-1.

U.S. ARMY CORPS OF ENGINEERS SAFETY AND HEALTH REQUIREMENTS MANUAL, EM 385-1-1:

This paragraph applies to contracts and purchase orders that require the contractor to comply with EM 385-1-1 (e.g., contracts that include the Accident Prevention Clause at FAR 52.236-16 and/or other safety provision s). EM 385-1-1 and its changes are available at http://www.hq.usace.army (at the HQ Homepage select Safety and Occupational Health). The contractor shall be responsible for complying with the current edition and all changes posted on the web as of the effective date of this solicitation.

If the parties to this contract are comprised of more than one legal entity, each entity shall be jointly and severely liable under this contract. The parties here to have executed this contract as of the date recorded in Item 2.

	SIGNATURES	NAMES AND TITLES (Typed)
11. ARCHITECT-ENGINEER OR OTHER PROFESSIONAL SERVICES CONTRACTOR		
A		
B		
C		
D		

12. THE UNITED STATES OF AMERICA

WILLIAM L BRUSS TEL: 313 226-3648

ADDED BY SUMI EMAIL: William. L. Bruss@lre02.usace.army.mil

Contracting Officer

Section 00010 - Solicitation Contract Form

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0001		100	Lump Sum	UNDEFINED	UNDEFINED

Basic Year - FY04 A/E Service Contract
FFP
Photogrammetric Mapping and Remote Sensing and Geographic Information Systems (GIS) services for areas within the Great Lakes and Ohio River DIvision boundaries and the St. Lawrence River watersheds.
See Attached Scope of Work.
PURCHASE REQUEST NUMBER: W56MES-2290-1241

MAX NET AMT		UNDEFINED

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0002 OPTION		UNDEFINED		UNDEFINED	UNDEFINED

First Option Year
FFP
A/E services within Great Lakes and Ohio River Division and St. Lawrence River Watersheds - FY05.

MAX NET AMT		UNDEFINED

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0003		UNDEFINED		UNDEFINED	UNDEFINED
OPTION	Second Option Year FFP A/E services within the Great Lakes and Ohio River Division and St. Lawrence River Watersheds - FY06.				
				MAX NET AMT	UNDEFINED

FOB: Destination

CLIN MINIMUM/MAXIMUM QUANTITY AND CLIN VALUE

The minimum quantity(s) and CLIN value(s) for all orders issued against the CLIN(s) on this contract shall not be less than the minimum quantity(s) and CLIN value(s) stated in the following table. The maximum quantity(s) and CLIN value(s) for all orders issued against the CLIN(s) on this contract shall not exceed the maximum quantity(s) and CLIN value(s) stated in the following table.

CLIN	MINIMUM QUANTITY	MINIMUM AMOUNT	MAXIMUM QUANTITY	MAXIMUM AMOUNT
0001	1.00	$2,500.00	100.00	$1,000,000.00

CLIN DELIVERY/TASK ORDER MINIMUM/MAXIMUM QUANTITY AND CLIN ORDER VALUE

The minimum quantity and order value for the given Delivery/Task Order issued for this CLIN shall not be less than the minimum quantity and order value stated in the following table. The maximum quantity and order value for the given Delivery/Task Order issued for this CLIN shall not exceed the maximum quantity and order value stated in the following table.

CLIN	MINIMUM QUANTITY	MINIMUM AMOUNT	MAXIMUM QUANTITY	MAXIMUM AMOUNT

0001	1.00	$2,500.00	100.00	$1,000,000.00
0003		$		$
0002		$		$

CLAUSES INCORPORATED BY REFERENCE

52.215-1	Instructions to Offerors--Competitive Acquisition	MAY 2001
52.215-20	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data	OCT 1997
52.216-27	Single or Multiple Awards	OCT 1995
52.217-5	Evaluation Of Options	JUL 1990
52.232-28	Invitation to Propose Performance-Based Payments	MAR 2000
52.247-34	F.O.B. Destination	NOV 1991
252.246-7000	Material Inspection And Receiving Report	MAR 2003

CLAUSES INCORPORATED BY FULL TEXT

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a firm fixed price contract resulting from this solicitation.

(End of clause)

52.233-2 SERVICE OF PROTEST (AUG 1996)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from U.S. Army Corps of Engineers, Room 617, 477 Michigan Ave., Detroit, MI 48226. The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of provision)

52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

www.arnet.gov/far

(End of provision

DISCIPLINES

Photogrammetric Mapping, Remote Sensing and Geographic Information Systems Services
Solicitation no. DACW35-03-R-0003

Labor Line Items:		**Unit**	**Unit Price**
Project Manager		hour	
Pilot		hour	
Instrumentation Specialists		hour	
Photographic Laboratory Supervisor		hour	
Photographic Laboratory Technician		hour	
Registered Land Surveyor		hour	
Survey Party Chief		hour	
Survey Technician		hour	
Certified Photogrammetrist	hour		
Compilation Specialist		hour	
CADD/GIS Technician		hour	
Image Analyst		hour	
GIS Specialist		hour	
Computer Programmer		hour	
Database Analyst		hour	
Engineering and/or Scientific Specialists		hour	
Clerk/Typist		hour	

Overhead on Direct labor & G&A percent
(To be applied to Labor only)

Equipment:

Aircraft with Camera and Airborne GPS	hour
Airborne Digital Camera	TBN/Job
Airborne Multispectral Digital Camera	TBN/Job
Airborne Multispectral Scanner	TBN/Job
Aircraft Mobilization	TBN/Job
LIDAR Acquisition	TBN/Job
LIDAR Mobilization	TBN/Job
Ground GPS Receiver	per day
GIS backpack GPS Receiver	per day
GPS RTK Sys (incl. 2 GPS units, radio & comp.)	per day
Low End Workstation (CADD/GIS)	hour
High End Workstation (multiple processor and/or UNIX)	hour
High Resolution input scanner	hour
Large format Input Scanner	hour
Digital photo index	each
Black and White film and processing	per foot
Natural Color film and processing	per foot
Color infrared film and processing	per foot
Set up Fee B/W film, print, Dia-ops	per roll/set-up
Set up Fee Color film, print, Dia-ops	per roll/set-up
Black & White Contact Prints (material & processing, 9"x9")	each
Color Contact Prints (material & processing, 9"x9")	each
Color Infrared Prints (material & processing, 9"x9")	each
Black & White Diapositives (material & processing, 9"x9")	each
Color Diapositives (material & processing, 9"x9")	each
Color Infrared Diapositives (material & processing, 9"x9")	each
Paper Plots (E-Size) Raster	each
Mylar Plot (E-size) Raster	each
Paper Plots (E-size) Vector	each
Mylar Plots (E-size) Vector	each
Miscellaneous supplies, rentals, and services	per job
Travel, (To be determined in accordance with JTR)	per diem
Profit, (To be negotiated on each delivery order.)	percent

SOW

C.1 GENERAL

The Contractor, shall furnish the required personnel, material, and equipment, necessary to perform the aerial photography or remote sensing data collection, survey support, photogrammetric mapping, image processing, GIS design and development, technical support, and product output as described herein, as the Government may request during the contract period as specified. Work may be required anywhere within the boundaries of the U. S. Army Corps of Engineers Great Lakes and Ohio River Division, or the watersheds of the Great Lakes and St. Lawrence River. During completion of all assigned work, the Contractor shall provide adequate professional supervision and quality control to assure that accuracy, quality,

completeness, and progress of work is sufficient to meet the Government's expressed project objectives.

The scope of this contract includes: image data collection or acquisition (via conventional and/or digital aerial photography, airborne remote sensing systems such as multi- or hyperspectral scanners, thermal sensors, laser profilers or radar sensors, and satellite remote sensing systems); survey support, including conventional and Global Positioning Systems (GPS) ground control, airborne GPS (AGPS), Inertial Measurement Unit (IMU), and quality control field studies; analytical and softcopy photogrammetric mapping, analytical and digital aerotriangulation, digital orthophotography production, digital elevation models and digital terrain models, and stereo compilation of topographic and planimetric mapping and/or digital ortho feature compilation; digital image processing, including image registration, enhancement, classification, and interpretation services using aerial or satellite imagery and ancillary information for land use/ land cover, wetland delineation, parcel mapping, and similar tasks; GIS database design, population (scanning, encoding, and digitizing), attribution, and digital modeling; product output, including generation of hard copy (photos, plots, reports, etc.) and digital files in specified formats, including but not limited to USGS Digital Elevation Models (DEM), Digital Orthophotography Quadrangles (DOQ) and Digital Line Graphs (DLG); and, training and technical on-site support services required from time to time during the period of this contract at locations determined by the government.

The Contractor shall provide all necessary remote sensing, surveying, photogrammetric instruments, aircraft, and ground equipment necessary to accomplish the required services.

The Contractor is expected to furnish to the Government all imagery, photogrammetric mapping, remote sensing data, GIS products, and all other supporting materials and reports, specified under each Task Order under this contract. Products that may be required include but not limited to negatives, positive, diapositives, digital photo indexes, photo reproductions, paper contact prints, mylar maps, digital elevation models, digital orthophotographs, survey control information, analytical and digital adjustments, compilation histories, planimetric and topographic manuscripts, remote sensing image products and/or GIS files in specified data formats. All materials and data used in the development of products is the property of the Government.

C.2 LOCATION OF WORK

All work under this contract will be performed in connection with projects assigned within the Great Lakes and Ohio River Division and the watersheds of the Great Lakes and St. Lawrence River as may be determined by the Contracting Officer. The Great Lakes and Ohio River Division jurisdiction includes drainage areas within the States of Michigan, Illinois, Indiana, Wisconsin, Minnesota, Ohio, Pennsylvania, New York, Kentucky, Tennessee, West Virginia, Virginia, Maryland, Mississippi, Alabama, Georgia, South Carolina and North Carolina. The watersheds of the Great Lakes and St. Lawrence River include both watersheds in the United States and Canada.

C.3 CRITERION, REGULATIONS, MANUALS AND STANDARDS

SECTION C - DESCRIPTION / SPECIFICATIONS / WORK STATEMENT

The following criterion, regulations, manuals and standards are referenced in this contract and shall take precedence over any other items employed in the conduct of this contract, unless superseded by specifications contained or referenced within Task Orders under this contract. Current versions of these documents can be acquired through the Contracting Officer, or his/her designated representative. The Contractor is expected to keep abreast of changes and updates to these documents.

C.3.1 USACE EM 1110-1-1000, Photogrammetric Mapping, 31 Mar 93; *http://www.usace.army.mil/inet/usace-docs/*

C.3.2 USACE EM 1110-1-1002, Survey Markers and Monumentation, 14 Sep 90; *http://www.usace.army.mil/inet/usace-docs/*

C.3.3 USACE EM 1110-1-1003, Navstar Global Positioning System Surveying, 01 Aug 96; *http://www.usace.army.mil/inet/usace-docs/*

C.3.4 USACE EM 1110-1-1004, Deformation Monitoring and Control Surveying, 31 Oct 94; *http://www.usace.army.mil/inet/usace-docs/*

C.3.5 USACE EM 1110-1-1005, Topographic Surveying, 31 Aug 94; *http://www.usace.army.mil/inet/usace-docs/*

C.3.6 USACE EM 1110-2-1003, Hydrographic Surveying, 31 Oct 94; *http://www.usace.army.mil/inet/usace-docs/*

C.3.7 USACE EM 1110-1-2909, Engineering and Design, Geospatial Data and Systems, 01 Aug 96 (original), 01 Jul 98 (change 2); *http://www.usace.army.mil/inet/usace-docs/*

C.3.8 Tri-Service Spatial Data Standards (TSSDS), Release 1.8, February 1999; *http://tsc.wes.army.mil/products*

C.3.9 Tri-Service Facility Management Standards (TSFMS), Release 1.9, December 1999; *http://tsc.wes.army.mil/products*

C.3.10 Tri-Service A/E/C CADD Standard; *http://tsc.wes.army.mil/products*

C.3.11 ASPRS Draft Aerial Photography Standards, ASPRS, 1995, *http://www.asprs.org/resources.html*

C.3.12 ASPRS Interim Accuracy Standards for Large-Scale Maps, ASPRS, March 1990, *http://www.asprs.org/resources.html*

C.3.13 United States National Map Accuracy Standards, US Bureau of the Budget, June 1947, *http://mapping.usgs.gov/standards/index.html*

C.3.14 Content Standards for Digital Geospatial Metadata, Federal Geographic Data Committee, version 2.0, FGDC-STD-001-1998 (Use CORPSMET 95, Digital Geospatial Metadata File Generator, down-loadable via the Internet at *http://corpsgeo1.usace.army.mil)*

C.3.15 Spatial Data Transfer Standards (SDTS) FGDC-STD-002, *http://www.fgdc.gov/standards/status/textstatus.html*

C.3.16 Cadastral Data Content Standard FGDC-STD-003, *http://www.fgdc.gov/standards/status/textstatus.html*

C.3.17 Classification of Wetlands and Deep Water Habitats FGDC-STD-004, *http://www.fgdc.gov/standards/status/textstatus.html*

C.3.18 Vegetation Classification Standard, Vegetation Subcommittee FGDC-STD-005, *http://www.fgdc.gov/standards/status/textstatus.html*

C.3.19 Soils Geographic Data Standard, Soils Subcommittee FGDC-STD-006, *http://www.fgdc.gov/standards/status/textstatus.html*

C.3.20 Geospatial Positioning Accuracy Standard, *http://www.fgdc.gov/standards/status/textstatus.html*

C.3.21 *Content Standard for Digital Orthoimagery, FGDC-STD-008-1999, http://www.fgdc.gov/standards/status/textstatus.html*

C.3.22 *Content Standard for Remote Sensing Swath Data, FGDC-STD-009-1999, http://www.fgdc.gov/standards/status/textstatus.html*

C.3.23 *Utilities Data Content Standard, FGDC-STD-010-2000, http://www.fgdc.gov/standards/status/textstatus.html*

C.3.24 U.S. Geological Survey, Standards for Digital Elevation Models, January 1998, *http://mapping.usgs.gov/standards/index.html*

C.3.25 U.S. Geological Survey, Standards for Digital Line Graphs, September 1999, *http://mapping.usgs.gov/standards/index.html*

C.3.26 U.S. Geological Survey, Standards for Digital Orthophotography Quadrangles, December 1996, *http://mapping.usgs.gov/standards/index.html*

C.3.27 U.S. Geological Survey, National Aerial Photography Program (NAPP) Specifications, *http://edc.usgs.gov/glis/hyper/guide/napp*

C.3.28 Flood Insurance Study-Guidelines and Specifications for Study Contractors, Federal Emergency Management Agency (FEMA), Federal Insurance Administration, Publication FEMA 37, March 1991, *http://www.fema.gov/mit/tsd/DL_SCg.htm*

C.3.29 The Manual of Remote Sensing, 3rd Edition (a series), American Society for Photogrammetry and Remote Sensing, *http://www.asprs.org/publications.html*

C.3.30 The Manual of Photogrammetry, 4th Edition (and addendums), American Society for Photogrammetry and Remote Sensing, *http://www.asprs.org/publications.html*

C.4 WORK TO BE PERFORMED

The work to be conducted includes: collection of remotely sensed data from various sources, including but not limited to conventional and digital aerial photography, multi- and hyper-spectral scanners, thermal sensors, radar sensors, laser profilometers, and/or satellite imagery; photogrammetric mapping and products; related surveying; GIS database development and analyses; and consulting services. Unless otherwise indicated in this Scope of Work or in Task Orders thereto, each required service shall include field-to-finish effort. All mapping work will be performed using precise aerial and remote sensing acquisition techniques, photogrammetric aero-triangulation, mensuration, and/or compilation procedures, and GIS topology and database development and mapping methods and solutions, including quality control associated with these functions. The work will be accomplished in strict accordance with the mapping criteria contained in the technical references (paragraph C.3), except as modified within Task Orders.

C.4.1 GENERAL REQUIREMENTS

Typical projects assigned under a Task Order may include any or all of scales and tasks below.

a. Large scale (1"=10' to 1"=50'), low altitude photogrammetric mapping for detailed design and construction of engineering projects. Typical 1-foot contour intervals with detailed surface planimetry and utility mapping would be required. This mapping would be used for design/construction of bridges, highways, major hydraulic structures (gates, intake structures, dams, concrete channels, etc), real estate acquisition (property boundary delineation), marine structure location (piers, bulkheads, levees, dikes, breakwaters, groins, etc). Photogrammetric mapping compilation would require use of high precision soft-copy stereoplotters for mapping to detailed specifications given in Section C.3.

b. Moderate scale (1"=50' to 1"=1000') planimetric and topographic mapping for general site plan maps used for design, construction, operations and/or maintenance of large engineering projects. Photogrammetric mapping typically could include planimetric features (shorelines, transportation networks, hydrology, topography (including elevation models), and structure mapping. Compilation would require high precision soft-copy stereoplotters and would require usage of established specifications and/or standards outlined in Section C.3.

c. Small scale (1"=1,000' or above) planimetric and topographic line mapping for general planning, operations and/or maintenance of large area projects. Photogrammetric mapping typically could include planimetric features (shorelines, transportation networks, hydrology, topography (including elevation models), and structure mapping. Compilation would require high

precision soft-copy stereo plotters and would require usage of established specifications and/or standards outlined in Section C.3.

d. Remote Sensing Collection:

1) Aerial photography collection (film or digital) typically will require vertical collection, however oblique or other non-standard types of image collection may be required on particular projects. For the purpose of these specifications, they shall be considered as nonstandard or project-specific photography if they include oblique photography, non-standard film sizes (35mm, etc.), motion pictures, or videography. These data collections could be stand-alone deliveries or support of other required analysis. Products could include hardcopy or digital media, or both.

2) Aerial remote sensing collection could include multi- or hyperspectral scanner imagery, thermal sensors, radar imagery or laser profiler measuring techniques. These activities may be required to be collected individually or in combination, depending upon detailed requirements contained in a Task Order. These activities could be stand-alone or a part of other analysis and could include hardcopy or digital media, or both.

3) Satellite data collection typically would require that the Contractor research the availability of, contract for, acquire, and process datasets generally available through commercial or governmental means. These activities could be stand-alone or part of other analyses. Products could include hardcopy or digital media, or both.

e. The Contractor will be required to plan, conduct, and execute all data collection activities, including establishment of flight line networks to obtain project photography, imagery, and/or elevation data coverage.

f. The Contractor may be required to produce various photography products and/or digital photography products including but not limited to, diapositives and contact prints, enlargements, large format photographic prints, digital image prints (vector overlays on raster backdrops), and photomosaics. The contractor will also provide services related to high resolution, precision photo scanning, particularly in support of generation of digital orthophotos.

g. Survey support will include conventional and GPS ground control, IMU, and/or airborne GPS. Typically the recovery and establishment of all necessary vertical or horizontal ground control, including deployment of aerial photo panels and/or other photo identifiable points will be assigned to the Contractor. The Contractor may also be tasked to provide skilled staff for conducting quality control and/or ancillary field surveys, particularly for land use interpretation, wetland delineation and economic impact assessment studies.

h. Typical photogrammetric mapping and image processing projects will include, but not limited to, softcopy feature collection in the areas of planimetric, topographic, land use, land cover, wetland assessment, digital orthorectified products, digital elevation models, digital terrain models and others as assigned. The contractor may be assigned work for generation of image

processing products such as, but not limited to; manual and/or softcopy or "on screen" interpreted image classifications of remotely sensed data and/or digital orthorectified photography, and/or manual photography classification. The Contractor will be expected to furnish the Contracting Officer as part of the project deliverables, all observations, calculations, and adjustment reports used in production of specified datasets and/or maps.

i. The Contractor will be required to develop functional GIS products in specified file formats (Intergraph MGE, Bentley MicroStation, all ESRI product lines, ERDAS Imagine, Autocad, etc.), associated SQL relational data base (typically Oracle) and/or object oriented data base files, SDTS format, and a variety of image formats (i.e., .tif .tfw, .rgb, .cot, .geotif, .bil, .bip, jpeg, MrSID), as directed under a given Task Order. All digital spatial data will also be required to be suitably self-documented with required metadata, according to the specifications included in Section C.3.

j. The Contractor may be required to provide technical training and on-site support, including but not limited to any of the following: hardware/software operating system training; gis, remote sensing, image processing application software training; on-site GIS requirements analysis and system design; GIS database design, population and implementation; Internet web page design and development for GIS data distribution.

C.4.2 TASK ORDERS

Task Orders will contain individual scopes of work, and the types of services to be performed. At the completion of each order, all data required shall be delivered to the address designated in the Task Order and shall be accompanied by a properly numbered, dated and signed letter or shipping form, in duplicate, listing the materials being transmitted. Deliverables will be specified within each Task Order.

C.5 CONTRACTOR REQUIREMENTS

C.5.1 CONTRACTOR SUPERVISION AND INSPECTION

The Contractor shall designate a Project Manager with full supervisory authority over all personnel assigned under this contract. The Project Manager shall be responsible for maintaining fully staffed and equipped forces to meet the Task Order requirements and to act as a liaison between the Contractor and the Contracting Officer or his/her authorized representative.

During completion of the work, the Contractor shall provide adequate professional supervision to assure accuracy, quality, completeness, and progress of the work. The Contractor is expected to review work in progress to ensure meeting established completion dates. The Contractor shall furnish timely notification in the event that it is found that work cannot be completed within the timeframes set forth in the Task Order.

C.5.2 PERFORMANCE

It is required that the Contractor's personnel, plant, equipment, facilities, and supply of materials shall be sufficient in experience and capacity to ensure compliance with all provisions and instructions furnished with each Task Order, and suitable to meet all needs of any concurrent Task Orders.

C.5.3 PROFESSIONAL SERVICES

All ground survey work required under this contract shall be accomplished by or under the direct supervision of a Land Surveyor registered in the respective state where surveys are being conducted. Photogrammetry services provided by the Contractor shall be preformed by or under the supervision of a Photogrammetrist, with current ASPRS Certification. The Contractor will utilize ASPRS Certified Mapping Specialists whenever relevant to the tasks assigned for mapping, remote sensing, and GIS.

C.5.4 QUALITY OF MATERIALS

All materials, supplies, or articles required for work which are not addressed by the general requirements contained within this Scope of Work, or detailed within individual Task Orders, shall meet industry standards, be from reputable manufacturers, and be entirely suitable for the intended purpose. All materials shall be new and unused, unless otherwise specified, and will be subject to the approval of the Contracting Officer, or his/her designated representative.

C.5.5 PERSONNEL REQUIREMENTS

Personnel required in performance of Task Orders under this contract may include any, or all, of the disciplines listed below. Following this list are brief descriptions expected for each of these disciplines.

a. Project Manager(s);
b. Fixed Wing and/or Helicopter Pilot(s);
c. Airborne Instrumentation Specialists(s);
d. Photographic Laboratory Supervisor;
e. Photographic Laboratory Technicians;
f. Registered Land Surveyor(s);
g. Surveying Party Chief(s);
h. Surveying Technicians(s);
i. Certified Photogrammetrist(s);
j. Compilation Specialist(s);
k. CADD/GIS Technician(s);
l. Image Analyst(s);
m. GIS Specialist(s);
n. Computer Programmer(s);
o. Database Analyst(s); and,

p. Engineering and Scientific Specialists.
q. secretary

Project Manager(s) shall be thoroughly familiar with all phases of remote sensing data processing, photogrammetric mapping, GIS database design and development, product production and the interrelationships of these disciplines in meeting the objectives of each individual Task Order under this contract. The Project Manager(s) will exercise full managerial and quality control required to efficiently, economically, and technically administer all Contractor forces assigned to work performed under this contract, and shall be responsible for work conducted under major facets of a complex project.

Fixed-Wing and/or Helicopter Pilot(s) shall be well qualified and licensed, be experienced in aerial photography and/or remote sensing collection and shall have all required Federal Aviation Administration (FAA) and Civil Aeronautics Board (CAB) Certifications in current status. Per USACE EM 1110-1-1000, Photogrammetric Mapping (C.3.1 previously) pilots shall have a minimum of 400 hours experience in flying precise photogrammetric or remote sensing mapping missions.

Airborne Instrumentation Specialists(s) shall be thoroughly experienced in conducting airborne remote sensing assignments, including precise controlled vertical photography, digital camera operations, multi- or hyperspectral scanner operations, radar sensor operations, airborne laser profiling, inertial measurement units (IMU), and/or airborne GPS data collection operations.

Photographic Laboratory Supervisor(s) shall be thoroughly familiar with all facets of photo lab operations, including the operation and maintenance of all instrumentation and associated equipment needed to provide hardcopy products for each Task Order awarded under the contract. They should be experienced in designing and maintaining exacting quality control procedures and in supervising technical staff in completion of assigned work within timelines and in accordance with standard procedures.

Photographic Laboratory Technician(s) shall have experience in a wide range of photo lab operations including but not limited to aerial film processing and titling, production of contact prints, analytical and orthophoto diapositives, enlargements, photo indexes, orthoimage composites, and mylar reproducibles.

Registered Land Surveyor(s) shall be thoroughly familiar with all phases of cadastral, photogrammetric surveying and LIDAR collection surveying with particular emphasis on defining horizontal and vertical control networks. The individual(s) shall be thoroughly experienced in supervision of ground survey crews and in the administration of quality control surveys related to work required under individual Task Orders under this contract. Supervises subordinate Survey Party Chief(s) and Surveying Technician(s) involved in these operations. Proof of registration will be furnished to the Contracting Officer or his/her authorized representative upon request. Land surveyors shall be registered in the respective state where land/boundary survey services are required.

Surveying Party Chief(s) shall be thoroughly familiar with all phases of cadastral, photogrammetric surveys, and LIDAR collection surveys. Anticipated tasks include the design of horizontal and vertical control for second- and third-order surveys. Surveys could include any or all of the following: cadastral, topographic, construction layout, profiles, cross sections, and quantity takeoffs. Each party chief shall be qualified to make field computations for accomplishment of work assigned and be capable of planning the work for his party to obtain work efficiently and cost effectively.

Surveying Technician(s), including Instrument Person, Rod Person and Recorders shall be capable of operating semi-precise instruments, including total stations, GPS backpack receivers, theodolites, transits, levels, alidades, electronic distance meters and sonic depth recorders. They shall be experienced in keeping all forms of notes in a firm and legible hand.

Certified Photogrammetrist(s) shall be responsible for the technical management of all photogrammetric operations, specifically aerial photography project design, analytical and softcopy stereo-compilation, analytical and digital aerotriangulation, digital elevation / terrain model development, digital orthophoto production and LIDAR processing. Supervises subordinate Compilation and Digital Ortho Specialist(s), CADD Technicians and other specialists involved in these operations. Reviews all photogrammetric and LIDAR products to insure compliance with required specifications, accuracy standards, and completeness.

Compilation and Digital Ortho Specialist(s) shall be responsible for data capture using first-order softcopy stereo-compilation workstations. This includes planimetric and topographic feature collection, development of digital elevation/terrain models, and support of analytical and digital aerotriangulation adjustments. These specialists shall be responsible for performing input scanning, ortho-rectification, image enhancement and formatting of digital orthophoto data sets. They are also responsible for ensuring that quality control procedures are maintained throughout their assigned processes.

CADD/GIS Technician(s) are typically responsible for performing a variety of editing, encoding, scanning, digitizing and plotting tasks. Cartographic tasks may involve development and registration of map grids, margin data, and title block annotation for final map sheet production. CADD/GIS tasks may involve significant levels of digitizing of historic mapped data, including some minor, or on occasion major, adjustments linework positions and additions of new features based upon specified methods. Other tasks may include encoding new data into established data schema and the production of map products generated from a GIS.

Image Analyst(s) shall be responsible for conducting interpretative analyses of stereo aerial photography or digital orthophotography for land use analyses, wetland delineation and special feature determinations. These tasks may not require computer functions in some cases, but frequently require substantial expertise in feature discrimination. These specialists are expected to be thoroughly trained and experienced in the use of state-of-the science digital image processing techniques, including image registration, resampling, enhancements and supervised and unsupervised classification methodologies.

GIS Specialist(s) shall be responsible for the design, development, and implementation of GIS schema to meet specific project objectives outlined in each Task Order. They are also responsible for analytical modeling using GIS data themes in either vector or raster formats and should be thoroughly experienced in, but not limited to, current versions of all ESRI's product line including but not limited to ArcGIS, ArcView 3.x & 8.x, Spatial & 3D analyst, ArcSDE, and ArcIMS, Intergraph's MGE, and ERDAS software. These specialists should have current ASPRS Certification as a Mapping Specialist – GIS.

The Computer Programmer(s) shall be responsible for providing system design, coding, and testing support for any Task Order that requires substantial new software development or adaptation/customization of currently available commercial proprietary GIS software and Internet delivery applications. The programmers should have had substantial experience in coding in but not limited to Java, C++, and Fortran.

The Database Analyst(s) shall be responsible for providing substantial design, quality control, and implementation support for tasks associated with complex multi-user GIS and SQL relational database software, object oriented databases and distributed database networking.

Engineering and Scientific Specialist(s) – This category includes a variety of disciplines listed hereafter, depending upon specialized requirements outlined in individual Task Orders under this contract. This category includes Civil, Hydrologic, Hydraulic, Coastal and/or Electrical Engineers, Geologists, Geophysicists, Hydrologists, Geodesists, Oceanographers, Hydrographers, Biologists, Foresters, Landscape Architects, Economists and Urban/Regional Planners. The qualifications and expertise required for such specialties will be described in each individual Task Order and costs for these personnel will be negotiated accordingly.

Secretary - shall be proficient in word processing (Microsoft Office Suite) to write Scope of Works and/or reports as necessary to complete Tasks.

C.6 REMOTE SENSING DATA COLLECTION - CONVENTIONAL AERIAL PHOTOGRAPHY

C.6.1 FLIGHT OPERATIONS AND EQUIPMENT REQUIREMENTS

a. Aircraft. The aircraft used for work shall be capable of stable performance in the given geographical locale, at the necessary altitude and air speeds, and shall be equipped with all essential navigational and photographic instruments and accessories. When required by the project, the aircraft must have an onboard airborne GPS system and Inertial Measurement Unit (IMU). Costs are to include image collection, clearances, and all other factors, including standard mapping cameras specified elsewhere and will be computed on an hourly basis. Mobilization will be negotiated per Task Order.

b. Emergency Aircraft Standby. Under selected natural or national emergency conditions, the Government may outline requirements and conditions for emergency dedication of an aircraft for conventional aerial photography or Topographic LIDAR collection under a Task Order. The Contractor shall identify direct and indirect costs in establishing the crew-day rate for this line item under this contract.

c. Subcontract Photography. Before commencement of any aerial photography mission under this contract by a Subcontractor, the Contractor shall furnish in writing to the Contracting Officer the name of such Subcontractor, together with a statement on the scope and extent of the work to be done under the subcontract, including applicable aircraft and camera certifications and calibrations.

d. Flight Plan. The minimum area(s) to be photographed are to be indicated on maps that will be provided for each Task Order. Based upon Task Order specifications, the Contractor shall design a flight line network to obtain proper overlap, sidelap, and endlap for full stereoscopic photographic coverage. Maps of the flight lines to be flown shall be submitted to the Government for advance approval, unless prior consent is given to exclude this action.

e. Flight Log. For each flight day, the pilot or airborne instrumentation specialist shall prepare a flight log containing the date, project name, aircraft used, and names of crewmembers. The following shall be recorded for each flight line: altitude, camera, magazine serial number, f-stop, shutter speed, beginning and ending exposure numbers and times, and any other comments relative to the flight conditions. These flight logs, or copies thereof, may be required to be included in reports delivered to the Contracting Officer or designated representative.

f. Flying Conditions. Photography shall be undertaken only when well-defined images can be obtained. Photography shall not be attempted when the ground is obscured by haze, smoke, or dust or when the clouds or cloud shadows will appear on more than 5 percent of the area of any one photograph without the permission of the Contracting Officer or delegated representative. Unless otherwise specified, flying shall be limited to the period of 3 hours after local sunrise to 3 hours before local sunset or specified under a given Task Order. Photography shall not contain shadows caused by topographic relief, manmade features in urbanized areas, or sun angle of less than 35 degrees, whenever such shadows can be avoided during the time of year the photography must be taken. Photography of coastal areas shall be taken during lighting conditions that maximize detail on bluff faces and minimized light reflections from the water surface. Photography collected that obscures bluff detail because of excessive shadow will be rejected. It is also desirable to show bottom features in submerged areas if this can be accomplished without affecting the aforementioned requirements. Photography shall not be collected during periods of excessive wind conditions or turbulence that causes excess tilt, crab, or drift.

g. Ground Conditions. Photography collected for mapping or digital orthophoto production will normally be collected in leaf-off season conditions in areas of deciduous vegetation (late November through early May). Leaf-off photography will normally be collected when there is no snow on the ground nor ice on the lakes and beaches and water features are within their normal levels. The season and/or any special requirements concerning foliage, snow, or other conditions will be specified in the Task Order. If questions or concerns about conditions exist, consultation with the Contracting Officer or designated representative before undertaking or continuing the work is required.

C.6.2 CONVENTIONAL AERIAL CAMERA SPECIFICATIONS

a. Types of Cameras. Only a standard 6" (153mm + 3mm) focal length single-lens precise aerial mapping camera, equipped with a high resolution, distortion-free lens, and with a between-the-lens shutter with variable speed, shall be used. The aerial camera shall meet or exceed minimum specifications outlined in the Task Order. When large-scale (low altitude) photography is flown, the camera shall be equipped with forward image motion compensation.

b. Calibration. The aerial camera(s) furnished by the Contractor, or its Subcontractors shall have been calibrated by the USGS within three (3) years of the acceptance of each Task Order. The calibration report shall be presented to the Contracting Officer or designed representative prior to use under this contract. Calibrated tolerances shall be within the standards contained in EM 1110-1-1000. Certification shall also be provided indicating that preventative maintenance has been performed within the last two-(2) years.

C.6.3 AERIAL FILM SPECIFICATIONS AND PROCESSING REQUIREMENTS

a. General. Film materials and laboratory processing, developing, reproduction, and printing thereof, shall conform to recognized professional photogrammetric industry standards and practices, as outlined in EM 1110-1000 and in Chapter 6 of the ASPRS Manual of Photogrammetry, and other national standards or specifications referenced herein. For the purpose of negotiating prices, the cost of the film and processing thereof, will be computed on a per frame basis based upon an agreed mission plan negotiated under each Task Order.

b. Type of Film Required. The Contractor shall use only aerial film of a quality that is equal or superior to that specified in a Task Order. Only fresh, fine-grain, high-speed, dimensionally stable, and safety base aerial film emulsions shall be used. Outdated film shall not be used.

c. Unexposed Film. Whenever any part of an unexposed roll of film remains in the camera, before such film is used on a subsequent day, a minimum 3' section of the roll of film shall be forwarded and exposed, immediately preceding the beginning of photography.

d. Quality of Photography. The photographic negatives shall be taken so as to prevent appreciable image movement at the instant of exposure. The negatives shall be free from static marks, scratches, have uniform color tone, and have the proper degree of contrast for all details to show clearly in the dark-tone areas and highlight areas as well as in the halftones between dark and light. Negatives having excessive high or low contrast, scratches or other blemishes may be rejected.

e. Processing of Exposed Film. The processing, including development and fixation and washing and drying of all exposed photographic film, shall result in negatives free from chemical or other stains, containing normal and uniform density, and fine-grain quality. Before, during, and after processing, the film shall not be rolled tightly on drums or in any, way stretched, distorted, scratched, or marked, and shall be free from finger marks, dirt, or blemishes of any kind. Equipment used for processing shall be either rewind spool-tank or continuous processing machine, and must be capable of achieving consistent negative quality specified below without

causing distortion of the film. Drying of the film shall be carried out without affecting its dimensional stability.

f. The Camera Panel. The camera panel of instruments should be clearly legible on all processed negatives. Failure of instrument illumination during a sortie shall be cause for rejection of the photography. All fiducial marks shall be clearly visible on every negative.

g. Film Strip Documentation and Labeling. At minimum, the following information shall be supplied as leaders at the start and the end of each filmstrip:

1) Contract Number and/or Task Order designation;
2) film number;
3) flight line identification(s);
4) dates/times of photography;
5) effective negative numbers and run numbers;
6) approximate scale(s) of photography;
7) calibrated focal length of the camera; and,
8) Contractor's name.

h. Negative Numbering and Annotation. Each negative will be labeled clearly with the identification symbol and numbering convention recommended herein. The numbers will be sequential within each flight line and shall be in the upper right-hand corner of the negative image edge to be read. All lettering and numbering of negatives shall be approximately 1/5" high and shall result in easily read, sharp, and uniform letters and numbers. Numbering of negatives shall be carried out using heat-foil or indelible ink. Each negative shall be provided with the following annotation, which shall appear on all prints:

1) year, month, and day of flight;
2) USACE project-specific location/identification number;
3) photo scale (ratio);
4) film roll number; and,
5) negative number.

The date of the photography shall be in the upper left corner of each frame followed by USACE project number, and photo scale ratio. The frame number will be in the upper right-hand corner of each frame with the roll number printed 2" left of the frame number.

i. Film Storage and Deliveries. All negatives and uncut film positives are Government property and shall be archived by the Contractor unless otherwise specified in the Task Order. All negatives and/or uncut film positives will be stored on winding spools in plastic or metal canisters. All extra and rejected negatives shall be included in the roll(s). At least 3' of clear film shall be left on or spliced to each end of the roll. All splices shall be of a permanent nature. Exposed and unexposed film shall be handled in accordance with manufacturer's recommendations. Each canister should be labeled with the following minimum information:

1) name and address of the contracting agency;

2) name of the project;
3) designated roll number;
4) numbers of the first and last numbered negatives of each strip;
5) date of each strip;
6) approximate scale;
7) focal length of lens in millimeters;
8) name and address of the Contractor performing the photography; and,
9) contract number.

The Contractor may use negatives and/or film positives for its use, only with the express written consent of the Contracting Officer, or designated representative.

C.6.4 SCALE AND RELATED COVERAGE PARAMETERS

a. Photo-negative Scale and Flight Altitude. The required negative scale for these projects will be defined in each Task Order, and shall be consistent with the required map accuracy standard/class specified and the maximum allowable altitudes specified in EM 1110-1-1000 for maintaining horizontal and vertical tolerances relative to flight altitude. The flight height above the average ground elevation shall be designed such that the negatives have an average scale suitable for attaining required photogrammetric measurement, map scale, contour interval, and accuracy, given a fixed 6" mapping camera focal length, stereoplotter model, and quality control criteria. Any variation by the Contractor to change either the camera focal length or negative scale will constitute a change in the Scope of Work and therefore must be approved by the Contracting Officer or designated representative prior to utilization.

b. Stereoscopic Coverage Requirements. Unless otherwise modified in a Task Order, the overlap shall provide full stereoscopic coverage of the area to be photographed, as follows:

1) Boundaries. All of the area appearing on the first and last frame in each flight line extending over a boundary shall be outside the boundary of the project area. The principal point of two photographs on both ends of each flight line shall be taken past the boundary line of the project. Each strip of photographs along a boundary shall extend over the boundary not less than 15% of the strip width.

2) Endlap. Unless otherwise specified in a Task Order, the forward overlap shall be 60%. Endlap of less than 55%, may cause rejection of the photography.

3) Sidelap. The lateral sidelap shall average 30%. Any frame having sidelap less than 15% or more than 50% may be rejected. Variances to this requirement would be specified in the individual Task Order.

4) Crab. Absolute crab of any photograph relative to the flight line, or relative crab between any series of two or more consecutive photographs, in excess of 10 degrees, as indicated by displacement of the principal points of the photographs, may be considered cause for rejection of the photography. Average crab for any

flight line shall not exceed 5 degrees. For aerotriangulation, no photograph shall be crabbed in excess of five (5) degrees as measured from the line of flight.

5) Tilt. Frames exposed with the optical axis of the aerial camera in a vertical position are desired. Tilt (angular departure of the aerial camera axis from a vertical line at the instant of exposure) in any frame of more than four (4) degrees, or an average of more than two (2) degrees for any ten (10) consecutive frames, or an average tilt of more than one (1) degree for the entire project, or relative tilt between any two successive frames exceeding six (6) degrees may be cause for rejection.

6) Terrain elevation variances. When ground heights within the area of overlap vary by more than 10% of the flying height, a reasonable variation in the stated overlaps shall be permitted provided that the fore and aft overlaps do not fall below 55% and the lateral sidelap does not fall below 10% or exceed 50%. In extreme terrain relief where the foregoing overlap conditions are impossible to maintain in straight and parallel flight lines, the gaps created by excessive relief may be filled by short strips flown parallel and between the main flight lines.

7) Shoreline variances. Strips running parallel to a shoreline may be repositioned to reduce the proportion of water covered, provided the coverage extends beyond the limit of any land feature by at least 10% of the strip width. For specific applications in bluff erosion studies, flight lines may be required to be further offshore to provide ensure photo coverage of the bluff face. These conditions will be specified in the Task Order.

c. Adjoining Photo Strips. Where the ends of strips of photography join the ends of other strips or blocks flowing in the same general direction, there shall be an overlap of at least two stereoscopic models. In flight lines re-photographed to obtain substitute photography for rejected photography, all negatives shall be exposed to comply with original flight specifications, including scale and overlap requirements. The joining end frames in the replacement strip shall have complete stereoscopic coverage of the contiguous area on the portions not rejected.

C.6.5 PHOTOGRAPHIC INDEX REQUIREMENTS

a. General. Two hardcopy photo indexes, and one digital file thereof, are required for each Task Order under this contract. Additional index sheets may be required and priced accordingly. The photographic indexes shall be prepared as a vector overlay of photo corners overprinted on a U.S. Geological Survey (USGS) Digital Raster Graphic (DRG) covering the project area, normally on E-size sheets, unless specified otherwise under the Task Order. These indexes shall be plotted from a digital file in a vector format specified in the Task Order and in a GeoTIFF raster format for the DRG. These sheets shall be laid out in such a fashion that all photo identification numbers are clearly visible. Each photo index sheet shall have the following: a north arrow; a sheet index, if applicable; and, a title block in the lower right corner. The title block will contain, at a minimum, the following information: project name; Contractor's name; contract number; date of photography; scale of photography; and, scale of index.

C.6.6 CONTACT PRINT AND DIAPOSITIVE SPECIFICATIONS

a. Materials. All contact prints shall be made on an electronic printer on double-weight fiber-based paper or medium-weight resin-coated paper stock, on which ink, pencil, grease pencil, and other markers can be used on both sides, unless otherwise specified in the Task Order. All panchromatic, color, and color infrared diapositive transparencies generated shall be on a dimensionally stable base, equal or superior in quality to media specified in the Task Order. All diapositives will be clear of stains, blemishes, uneven spots, air bells, light streaks or fog, dust and other defects that would make them unacceptable.

b. Processing and Quality. The processing, including exposure development, washing, and drying, shall result in finished photographic prints having gloss finish, fine-grain quality, normal uniform density, and color tone and contrast that provide photographic details which show clearly in the darktone areas and highlight areas as well as in the halftones between the dark and the highlight. Excessive variance in color tone or contrast between individual prints may be cause for their rejection. All prints shall be clear and free of stains, blemishes, uneven spots, air bells, light fog or streaks, creases, scratches, and other defects that would interfere with their use or in any way decrease their usefulness.

c. Trimming and Packaging. All contact prints shall be trimmed to neat and uniform dimensional lines along image edges (without loss of image) leaving distinctly the camera fiducial marks. Prints lacking fiducial marks shall be rejected. All diapositive will be cut and inserted into appropriate plastic sleeves, unless specified otherwise in the Task Order.

C.7 REMOTE SENSING DATA COLLECTION - AIRBORNE DIGITAL SYSTEMS

C.7.1 AIRCRAFT AND FLIGHT SPECIFICATIONS

a. Aircraft. The aircraft used for work under this contract shall be capable of stable performance in the given geographical locale, at the necessary altitude and air speeds, and shall be equipped with all essential navigational and remote sensing instrumentation and accessories needed to accomplish the mission parameters. When required by the project, the aircraft must have an onboard GPS system and Inertial Measurement Unit (IMU). Costs are to include data collection, clearances and all other incumbent factors, and will be computed on a per-job basis. Since these missions may vary in type, scope, and range, mobilization will be negotiated per Task Order as well.

b. Flight Plan. The minimum area(s) to be covered by an airborne remote sensing mission shall be indicated on maps that will be provided for each Task Order. Based upon these specifications, the Contractor shall design a flight line network to obtain proper overlap, sidelap, and endlap for full project coverage. Maps of the flight lines to be flown shall be submitted to the Government for advance approval, unless prior consent is given to exclude this action.

c. Flying Conditions. Data collection shall be undertaken only when well-defined imagery, radar data collection or laser profilometry can be obtained as required by the Task Order. The flying

period shall be specified in each Task Order. Generally, airborne multispectral and hyperspectral data collection shall not contain shadows caused by topographic relief or sun angle of less than 30 degrees, whenever such shadows can be avoided during the time of year the imagery is collected. Image collection shall normally not be attempted when there is substantial atmospheric haze, moisture, smoke, or dust, or when the clouds or cloud shadows will appear on more than 5% of the area of any one image. Imagery shall also not be collected when snow cover exists unless otherwise specified in the Task Order. Imagery collected of coastal areas shall be taken during lighting conditions that minimize ground shadow of bluff areas and reflectance from the water surface. Airborne laser profiling surveys shall not be attempted when the ground or water body is obscured by haze, smoke, or dust. Data collection shall be taken only during lighting conditions that maximize water clarity for bathymetric LIDAR surveys.

d. Flight Log. For each flight day, the pilot or airborne instrumentation specialist shall prepare a flight log containing, at the minimum, the date, project name, aircraft used, and names of crewmembers. The following shall be recorded for each flight line: altitude, sensor type, serial number, beginning and ending time for each data file, and any other comments relative to the flight conditions. These flight logs, or copies thereof, may be required to be included in reports delivered to the Contracting Officer or designated representative.

e. Aircraft Transit Costs. Aircraft mobilization costs will be negotiated per Task Order, and will be computed by cost per statute mile distance.

C.7.2 INSTRUMENTATION SPECIFICATIONS

a. Types of Systems. All airborne digital cameras, multispectral or hyperspectral scanners, thermal sensors, radar systems, and laser profilers shall meet or exceed minimum specifications outlined in individual Task Orders under this contract.

1) Digital Cameras. Typically, digital cameras will be required for collection of image data across the visible and near infrared spectrum using a sensor array in lieu of photographic film.

2) Multispectral and Hyperspectral. Typically, airborne multispectral or hyperspectral scanners will be required for the collection of imagery from the ultraviolet through near infrared reflective energies. The specific scanner or radiometer to be used shall be specified in the individual Task Order.

3) Infrared and Thermal Sensors. Airborne infrared and thermal sensors may be required, as specified in an individual Task Order, to collect reflective and emissive energies, typically dealing with measuring heat losses or temperature differences across landscapes.

4) Radar. Airborne collection of radar imagery may be required to collect digital elevation model data for large landscape areas, especially under adverse atmospheric conditions.

Specific Task Orders may require access to interferometric synthetic aperture radar (IFSAR), or similar, for these type of data collection exercises.

5) LIDAR. Airborne collection of elevation profiles or regular spaced postings will be required under this contract using Light Detection and Ranging (LIDAR) profilers. These LIDAR profile surveys could require collection of topographic or bathymetric detail.

b. Calibration. The Contractor shall be capable of providing appropriate calibration data for any airborne remote sensing system utilized under this contract to insure that horizontal, vertical, and/or radiometric thresholds are maintained in accordance with Task Order details. Documentation may be requested on maintenance and repair records performed on any instrument within the last two-years.

C. 7.3 RESOLUTION, SCALE, COVERAGE AND DATUMS

The required resolution, scale and coverage will be defined in each Task Order. Overlap and sidelap and/or seamless coverage of digital data collection will be specified in the Task Order. Aircraft crab and tilt tolerances may also be specified in the Task Order. Horizontal and vertical datums will also be specified in the Task Order.

C.7.4 DIGITAL IMAGE INDICES

Two indexes are required for each airborne remote sensing mission and must be delivered under each Task Order. The photographic indexes shall be prepared as a vector overlay of image corners overprinted on a U.S. Geological Survey (USGS) Digital Raster Graphic (DRG) covering the project area, unless specified otherwise under the Task Order. These indices shall be delivered in both hard copy and digital format. The hard copy sheets shall be laid out in such a fashion that all swaths (or digital files) and labeling are clearly legible. Each index sheet shall have the following: a north arrow; a sheet index, if applicable; and, a title block in the lower right corner. The title block will contain, at a minimum, the following information: project name; Contractor's name; contract number; date of photography; scale of photography; and, scale of index. These indexes shall be delivered in an ArcView shape file format and in a GeoTIFF raster format for the DRG.

C.8 REMOTE SENSING DATA ACQUISITION - SATELLITE DATA

C.8.1 PRODUCT REQUIREMENTS

a. General. The government anticipates that various technological advances in spaceborne sensors will occur over the life of this contract. Datasets to be acquired by the Contractor may include any of the following systems: LANDSAT, SPOT, IRS, IKONOS, NOAA, DMSP, RADARSAT, etc. The Contractor would normally be responsible for the acquisition, conversion, and processing of all spaceborne remote sensing data. Individual Task Orders will include information on the specific sensor required, spectral bandwidths, desired resolution, temporal requirements, coverage, product scale and/or cloud cover and ground conditions. The Government anticipates that the Contractor will act as its agent in the identification of available

image datasets, programming of data collection, purchase and acquisition of the same, and identification and coordination of any particular licensing and ownership considerations.

b. Hard Copy Deliverables and Reports. The Contractor shall provide large format output plots of the satellite remote sensing data in accordance with detailed instructions contained in the Task Order. The Contractor also will provide a report on procedures, calibration data, metadata, and other ancillary information, unless directed otherwise per Task Order.

C.9 SURVEY SUPPORT

a. All horizontal and vertical control surveys required for photogrammetric mapping shall be performed using procedures and/or accuracy standards consistent with professional surveying practices. Project-specific projection control will be detailed in each Task Order including the horizontal datum, the vertical datum, the local grid reference system, projections, and units of measurement. The Contractor shall provide survey crews with professional survey personnel and equipment capable of performing observations and measurements that meet the required accuracy needed for the work. All field observational data shall be performed in accordance with standard survey practices, as specified under references outlined in Section C.3.

b. Survey data shall be recorded in bound survey books that will subsequently be delivered to the USACE. All survey work will be performed under the direct supervision and control of a licensed professional land surveyor. All survey work, including office computations and adjustments, is subject to USACE review and approval for conformance with prescribed accuracy standards.

c. Before commencement of any surveying under this contract by a Subcontractor, the Contractor shall furnish in writing to the Contracting Officer the name of such Subcontractor, together with a statement on the scope and extent of the work to be done.

C.9.1 PHOTO CONTROL SURVEYS

a. Surveys performed to establish horizontal or vertical locations of points used in controlling stereoscopic models shall be performed using recognized engineering and construction control survey methods, as necessary to meet mapping standards required in each Task Order. This usually requires, at minimum, third-order procedures performed relative to existing network or project control, using standard engineering survey traverse, differential leveling, GPS, Airborne GPS, or electronic total station measurement techniques.

b. Unless otherwise indicated, photo control points or paneled points may be temporarily installed by the Contractor according to their standard procedures. Any temporary control point should be adequately marked such that they would remain in place for at least the duration of the Task Order if quality control or assurance surveys are deemed necessary. If the USACE determines that existing project/network control should be utilized, the Contractor will check the adequacy of these points based on ground reconnaissance/recovery. The Contractor shall

maintain adequate documentation on all existing control points utilized, including the name of the source agency, coordinates, datum, and estimated accuracy for each point.

c. The Contractor shall perform surveys connecting existing project control to assure that such control has sufficient relative accuracy to control the overall project. Should these surveys indicate deficiencies in the existing control, the Contractor shall advise the Contracting Officer, or designated representative, and appropriate modification may be made by the USACE to the Task Order to direct the Contractor to perform resurveys of any existing point in the network.

d. All horizontal and vertical control points will be occupied as a station within a closed traverse or closed level loop. If it is not possible to occupy an individual control point or photo target, thus requiring spur shots, all angles shall be read at least three times and averaged, and all distances measured twice and averaged.

C.9.2 CONTROL PHOTOGRAPHS

All horizontal and vertical control points including supplemental control points shall be marked and labeled with appropriate point identification numbers. All control points not premarked shall be neatly pin-pricked and clearly identified and described on the back of the photograph. Coordinates and brief descriptions of marked control points shall be written on the back of each photo. Complete descriptions will be written for newly set, permanently monumented points. The marked-up control prints will be delivered to the USACE.

C.9.3 FIELD CLASSIFICATIONS AND QUALITY CONTROL SURVEYS

Field classification, inspection, and/or edit surveys may be required under a Task Order. This requirement may include field surveys to add topographic detail. A two-man survey crew will normally be required to perform field surveys to confirm cultural features, to clarify obscured detail, to add or correct incomplete features, to add topographic detail by conventional field survey methods or other acceptable measures (DGPS, etc.), and/or to perform internal quality control testing. Quality assurance / quality control (QA/QC) field tests may be required with a USACE representative present, if specified in the Task Order.

C.10 PHOTOGRAMMETRIC MAPPING SPECIFICATIONS

C.10.1 AEROTRIANGULATION SPECIFICATIONS

a. General. When authorized within this contract and/or specified in the Task Order, the x-, y-, and z-coordinates for supplemental photo control points may be derived using fully analytical simultaneous block aerotriangulation adjustments or digital aerotriangulation methods. Industry-standard adjustment software, or that supplied with analytical or digital plotters, must be used to perform the computations. Use of different altitude photography is not allowed.

b. Equipment. The photogrammetric mensuration instruments shall have sufficient accuracy and utility for measuring the x and y photographic coordinates of the fiducial or other reference marks, targets, photographic images, and artificial points to achieve the required accuracies.

c. Ground and Supplemental Control Requirements. The Contractor shall be responsible for determining the optimum location, quality, and accuracy of all ground control points used for controlling the aerotriangulation adjustment, unless otherwise specified in the Task Order.

d. Resultant Accuracy of Aerotriangulation Adjustments. For class 1 maps, the root mean square (rms) error for the x-, y-, and coordinates of all supplemental control points determined by analytical aerotriangulation shall not be in error by more than 1:10,000 in horizontal position (x and y) and 1:8,000] in elevation (z), when expressed as a ratio fraction of the flying height. These adjustment statistics must be clearly identified on the adjustment software output that shall be delivered to the USACE prior to commencement of stereoplotting. A written report shall be submitted to the Contracting Officer or designated representative explaining any analytical control problems encountered prior to compilation. Aerotriangulation accuracy criteria for other map classes are contained in EM 1110-1-1000 and the ASPRS Manual “Digital Photogrammetry: An Addendum to the Manual of Photogrammetry.”

e. Control Prints. The image of all ground control and supplemental control points shall be appropriately marked and identified on a set of contact prints. The identifying number for each supplemental control point shall be related to the photograph on which it appears.

f. Deliveries. All materials, including the x-y-z coordinates for control points, final adjustment computations with error of closure, control prints, the marked/drilled diapositives, and any rolls or film negatives used by the Contractor, shall be provided to the USACE.

C.10.2 STEREOPLOTTER SPECIFICATIONS

Topographic and/or planimetric feature line maps are to be generated on an analytical or softcopy stereoplotter as specified in the Task Order. The stereoplotter must be capable of automatically performing/adjusting interior, relative, and absolute orientations, and output statistical data thereof, and generating digital data of observed topographic/feature information into spatial layers directly compatible with three-dimensional (3-D) design file criteria outlined in EM 1110-1-1807 (Reference C.3). Optical-mechanical terrain stereoplotters, of similar or equal design to a Wild A-10, may be used when upgraded or modified for direct digital data output. Stereoplotter operators shall have experience on the machine and types of terrain being compiled.

C.10.3 MAP COMPILATION SCALES

The Contractor shall furnish to the Contracting Officer, or designated representative, stereoplotter-derived drawings and/or finished maps at scales specified in the Task Order.

C.10.4 MODEL SETUP AND ORIENTATION DATA

Analytical and/or digital plotter orientation parameters and statistical outputs for each model setup shall be submitted with each project. These sheets shall be fully annotated by date, time, operator name, compilation dates/times, photo numbers, and other data, and confirmation that the mapping was compiled from the required negative scale.

C.10.5 COMPILATION HISTORY

A compilation history report (model diagram or model setup sheet) shall be prepared for each stereoscopic model used to accomplish the mapping. The report shall include at a minimum the final photographic fit of x, y, and z-coordinates to ground control and any problems encountered in model orientation and compilation. The report shall include the project name, flight date, photo scale, map scale, stereoplotter used, and the operator's name.

C.10.6 FEATURE COLLECTION

The maps shall contain all the planimetric, cultural, land use, land cover, and/or wetland features visible or identifiable on/or interpretable from the aerial photographs, and compatible with the type of project involved (i.e., detailed site mapping, planimetric and/or land use mapping, etc.) Since this work is typically highly specialized and dependant upon local conditions and/or various local/state/federal classification strategies, the detailed requirements will be contained within each Task Order requiring these services.

C.10.7 TOPOGRAPHIC DATA

If required in the Task Order, output maps shall contain all specified topographic features visible or identifiable on/or interpretable from the aerial photography. Topographic data may be generated by contour tracing and/or other digital terrain modeling techniques. The level of detail required for topographic mapping for each project and information on the required contour interval(s) will be specified in each Task Order.

C.10.8 METHODS FOR EVALUATING MAP ACCURACIES

a. General. All maps compiled shall be subject to map testing by the USACE, by independent third-party forces, or by Contractor forces working under direct USACE review to ensure that they comply with the applicable accuracy requirements specified in the Task Order. The map test results will be statistically evaluated relative to the defined accuracy criteria and pass/fail determination made accordingly. The decision of whether or not to perform rigid map testing on any project, Task Order, or portion of a project rests exclusively with the Contracting Officer or designated representative. In all cases, the Contractor will be advised in writing when such action will be taken.

b. Office and Field Checks. The party responsible for map testing may, during the course of the project, inspect map compilation in the Contractor's facility by comparison with aerial photographs. However, if QA/QC tests require it, final map compilation shall be checked by field

inspection and a horizontal and vertical accuracy check by conventional or GPS field survey checks to test selected points or features on the completed drawings.

c. Test Profiles for Topography. Whenever required, test profile traverses shall be made in the field to check for compliance with the vertical contour accuracy requirements. Such field profile checks should be at least 5" long at the map scale, and should cross at least 10 contour lines. Profiles should start and close upon map features or previously established control points. In flat areas and at principal road and rail intersections, spot elevations shall be checked. In general, one profile per map sheet or 3 per stereo models will be sufficient.

d. Spot Elevation Tests. Whenever required in the Task Order, spot elevation field tests may need to be performed. Such tests for vertical accuracy may be performed by comparing the elevations at well-defined points as determined from the map to corresponding elevations determined by a survey of higher accuracy. A minimum of 20 points shall be checked in these tests and shall be distributed throughout the sheet, or concentrated in critical areas.

e. Test Points for Planimetric Features. Whenever required in the Task Order, the accuracy of the planimetric map feature compilation shall be tested. These tests shall be conducted by comparing the ground coordinates (x and y) of at least 20 points (well-defined map features) per test per map sheet, as determined from measurements on the map at publication scale, to those for the same points, as provided by a check survey of higher accuracy. The check survey shall have an order of accuracy equal to or exceeding that specified for establishing the mapping control. Maps will also be examined for errors and/or omissions in defining features, structures, utilities, and other nomenclature, or for total gaps in compilation/coverage. The minimum of 20 points shall be distributed throughout the sheet or concentrated in critical areas.
f. Selection of Well-Defined Test Points. The term "well-defined map features" pertains to features that can be sharply defined as discrete points. Points that are not well-defined are excluded from any required accuracy test. The selection of well-defined points shall be made through agreement between the Contracting Officer and the Contractor. Generally, it may be more desirable to distribute the points more densely in the vicinity of important structures or drainage features and more sparsely in areas that are of lesser interest. Further definitions and requirements for selection of well-defined photo/map points may be found in the reference standard used. The locations and numbers of map test points and/or test profiles shall be mutually agreed to by the Contractor and the Contracting Officer.

C.10.9 CHECK PLOT MEDIA

Check plots shall be sufficiently neat and complete as to eliminate or minimize errors of misinterpretation on the part of the Quality Assurance Reviewer. Check plots shall be plotted on paper, on standard E-size sheets, or as specified in the Task Order.

C.10.10 FINAL MAP PRODUCT

a. Project Control Coordinates. Project specific projection control coordinates will be specified in the Task Order, including horizontal datum, vertical datum, the local grid reference system, projections, and units of measurement.

b. Control. All horizontal and vertical ground control and all supplemental control determined by either field or aerotriangulation methods shall be shown on the final map. All control points should be plotted in accordance with specifications contained in the Task Order.

c. Sheet Layout and Match Lines. The individual project will determine whether the Contractor shall design, or the USACE will provide, the sheet layout that provides optimum coverage of the project. This will be specified in the Task Order. Match lines shall be provided and properly labeled so that each sheet may be joined accurately to adjacent sheets.

d. Symbols and Names. The symbols to be used for major planimetric and topographic features shall be in accordance with symbols specified in the Task Order. The USACE will normally provide to the Contractor any cell libraries necessary for preparation of the final map product via digital input; Contractor developed cell libraries may be used with prior approval from the Contracting Officer or delegated representative. The names of cities, towns, villages, rivers, streams, roads, streets, highways, and other features of importance shall be obtained by the Contractor. All names and numbers shall be legible and clear and shall not interfere with map features. Names of towns, rivers, streams, etc., will generally be those appearing on USGS topographic quadrangles or contained in the Geographic Names Inventory System (GNIS) maintained by the USGS.

e. Title and Sheet Index. A title shall be placed on each final map to the size and arrangement specified in the Task Order, and shall include the name of the contracting agency, the project name, the date of photography used, the strip and photograph numbers, the map scale, the date of the mapping, the map number, and the name of the Contractor. If more than one map sheet is prepared for the project, a small-scale sheet index shall be drawn on each map sheet showing the position and the relationship of all map sheets to each other. The title block contents and sheet index requirements for finished maps will be furnished by the Contracting Officer or designated representative. The Contractor's name/address, contract /Task Order number, and logo will be placed on each map sheet.

f. All map products will be reviewed by an experienced editor for quality control during applicable stages of production.

C.10.11 FINAL PLOTTING MEDIA

The finished line maps shall be electronically printed from an acceptable industry standard digital file format onto standard E-size dimensionally stable, static-free polyester drafting film (e.g., mylar), of at least 0.004" thickness, unless specified differently in the Task Order. The map border will not exceed specifications contained in the Task Order and the sheet will be oriented north-south, unless otherwise specified. Locations of title blocks, revision blocks, border detail, line weights, etc., will normally be specified in the Task Order.

C.11 IMAGE PROCESSING

C.11.1 SCANNING

a. Scanning tasks under this contract is anticipated to be the encoding of panchromatic, color, or color-infrared aerial photography, although other tasks such as document scanning or scanning of large-format engineering drawings may be required. Scanning may be part of another project or stand-alone. Scanning projects include document or image preparation, scanning, clean-up, indexing, quality control, conversion, editing, and report completion.

b. Document and drawing preparation shall include unpacking, sorting, staple removal, labeling, taping damaged areas, and erasures of extraneous marks. Scanning shall include feeding documents through the scanning device, setting up scanning parameters such as resolution (microns or dots-per-inch(dpi)), contrast, image file format, and file size requirements, based upon Task Order specifications.

c. In the case of large format documents such as engineering drawings and/or maps, scanning settings may require a significant level of clean-up. Clean-up includes some level of speckle removal, deskewing and cropping of images to final size specifications.

d. Indexing shall include assigning meaningful codes to images based on the information in the documents and/or images. Indexing determines how images are located by a retrieval system and can vary from simple naming conventions to assigned values for key fields in a database record. The indexing specifications will be outlined in the Task Order.

e. Conversion could include changing digital formats for scanned files, raster to vector conversions, optical character recognition (OCR), intelligent character recognition (ICR), or document assembly and page definitions (tagging) for compound documents. Editing tasks could include performing detailed file modifications to create a clean final file.

C.11.2 IMAGE REGISTRATION

Image registration tasks under this contract could include image-to-map registration, image-to-image registration and a variety of image transformations, such as helmert, affine, projective, single- or multi-order polynomial, and finite elements. Image registration operations include translations from one projection system to another, as well as changes in rotation, skew, and scale. Image registration specifications will be outlined in the Task Order.

C.11.3 IMAGE ENHANCEMENT

Image enhancement tasks could include any of the following:

a. radiometric corrections, including scan line correction, destriping, radiometric correction, and atmospheric corrections;

b. contrast enhancements, including linear and equalization functions, thresholding, histogram matching, gamma corrections, and density slicing;

c. color enhancements/analyses such as RGB-to-HIS and HIS-to-RGB transformations, principal component analyses, and decorrelation stretches;

d. various filtering operations such as convolution, edge and texture detection, Fourier transforms, and user-defined operations;

e. radar image processing; and

f. mosaicking, collages, and splicing.

C.11.4 IMAGE CLASSIFICATIONS

Image classification tasks that may be required under this contract include standard arithmetic operations, band ratioing, vegetation indices, or more complex logical analyses such as resampling using nearest neighbor, bilinear, or cubic convolution techniques, unsupervised training, supervised training, or minimum distance, parallelipiped, maximum likelihood classifications.

C.11.5 RASTER TO VECTOR CONVERSIONS

The contractor should be capable of converting raw or processed raster datasets to vector themes for incorporation in GIS topologic themes. The specifications for this operations will either be included under the Task Order or generated under a consulting function provided by the Contractor or its Subcontractor.

C.11.6 RASTER MODELING AND ANALYSES

The Contractor shall be capable of conducting a variety of raster modeling/analyses operations. These include coincidency, proximity, and adjacency analyses, and other complex boolean operations. The level of detail required for these tasks will be included in the Task Order, or negotiated with the Contractor prior to proceeding.

C.11.7 THEMATIC MAP PRODUCTION

The Contractor shall be capable of generating a variety of different thematic map products as final products from the aforementioned processing, analyses and modeling operations. The detailed specifications of these thematic maps will be contained in the Task Order or negotiated with the Contractor prior to proceeding.

C.12 GIS DESIGN AND IMPLEMENTATION

a. The Contractor shall supply all necessary labor, material, and equipment to perform work under various phases of the design, development, implementation of a GIS. Each Task Order will vary. The Contractor may be required to perform all of the above mentioned phases together or a portion of these phases in a complex project as outlined in the Task Order.

b. The Contractor may be required to perform various user needs assessments and/or implementation planning in accordance with the specifications contained in the Task Order. Typically, the Contractor would evaluate prospective uses of the GIS, analyze and document all existing operations or business practices, and recommend data, software and systems requirements thereof.

c. As specified in the Task Order, the Contractor normally would conduct a system design study, including any or all of the following:

1) Database - how and where the data will be stored, who will have access to it, and how the data itself will interact;

2) Software - which versions and modules of the GIS software and/or CAD software are required for the GIS to be fully functional;

3) Hardware – what hardware configuration is required to provide appropriate system performance within the database and software design framework;

4) Applications - what programming that will be needed to automate or convert many of the routine and often requested GIS functions; and,

5) Personnel Requirements - who is responsible for maintaining and updating the data, who will use it; and how much training of staff will be required.

d. The Contractor may be required to implement the GIS, either directly under a Task Order or in combination with Government inhouse resources. This includes, but is not limited to the following: planning implementation steps, digitizing, encoding, data conversion, QA/QC procedure development, and technical training.

C.13 DIGITAL FILE SPECIFICATIONS

a. General. All digital data shall become the exclusive property of the USACE upon submittal.

b. Formats. The contractor shall deliver all digital files in accordance with specific formats specified in a given Task Order.

1) Vector Data. All final vector data are to be delivered in a format specified in the Task Order, typically being the most current versions of Bentley 3D Microstation, ESRI point, line, and polygon formats. The Contractor shall provide all cell libraries used in preparing drawings and a digital version of all compilation history required for photogrammetric tasks. On occasion digital files may be required to be delivered in the SDTS format (see Section C.3.15) or in the USGS Digital Line Graph, Level 3 format.

2) Raster Data. Normally all raster or grid cell data formats will be specified in the Task Order. Typical formats would include ASCII, BIP, BIL, BSQ, TIFF, BMP, PCX, GeoTIFF, GIF and others. The Contractor shall be capable of importing the following industry standard remote sensing formats including Landsat, SPOT, IRS, ERS, RADARSAT, AVHRR and others. The Contractor also shall be capable of compressing / decompressing digital image files formats including JPEG, RLE, MrSid, etc. Other required formats for USGS products could include DOQQ and DEM specifications. On occasion digital files may be required to be delivered in the SDTS format (see Section C.3.15). Typically output formats would need to be readily importable and fully functional into the most current version of ERDAS IMAGINE, Intergraph Image Analyst or ESRI ArcView and Arc/Info.

c. Media. Datasets are to be delivered typically on a CD-ROM, or other suitable media specified in the Task Order.

C.14 METADATA REQUIREMENTS

a. For all new data created by the contractor, the contractor will be required to generate a metadata file using "TKME", a metadata file generator. This metadata file generator is available at the United States Geological Survey's homepage: http://geology.usgs.gov/tools/metadata/. The metadata file must have a *.met file extension.

b. The Government will check the metadata using "MP" a compiler for formal metadata. This check will ensure all metadata is in compliance with the most current FGDC Standard. This program can be found at: http://geology.usgs.gov/tools/metadata/.

c. All metadata must comply with FGDC-STD-002 1998, or newer standard.

C.15 TECHNICAL SUPPORT & SERVICES

a. As described in a Task Order, the Contractor may be required to provide technical support to the Government, including consultation and training. This support may include short term or long term assignments, located at Government facilities, Contractor facilities or at third-party locations.

b. Typically, consultation can include but not limited to project aid in the areas of GIS product development, GIS system administration, GIS database development and/or analysis, data encoding and digitizing, imagery processing and analysis, file management, and Internet web page development and maintenance. Typical training may be required for GIS application software, image processing techniques, and system integration.

c. Under this contract, a short-term assignment away from the Contractor's normal work site is considered less than 60 days, and a long-term assignment is considered greater than 60 days. This distinction will determine the amount of per diem that the Government will negotiate for

under a Task Order. Short-term assignments will constitute 100% of normal per diem paid for by the Government under the Joint Travel Regulations (JTR). Long-term TDY will equate to 55% of normal per diem rates for the locations involved.

C.16 QA/QC REQUIREMENTS

C.16.1 CONTRACTOR QUALITY CONTROL

a. General. All photogrammetric mapping data submitted under this contract shall conform to the accuracy standards outlined in EM 1110-1-1000 unless modified or supplemented below. The Contractor shall be responsible for internal quality control functions involved with field surveying, photography, laboratory processing, stereocompilation, feature collection, field checking, and editing of photogrammetric measurements and compiled maps, to ascertain their completeness and accuracy. Also, the Contractor shall make all additions and corrections necessary to complete the maps and photogrammetric measurements based upon USACE review comments. All GIS schema (graphics and attributes) submitted under this contract shall conform to reference C.3.8, the Tri-Service Spatial Data Standards (TSSDS), Release 1.8, February 1999 or most current version thereof, unless specified otherwise in the Task Order.

b. Materials. All materials, supplies, or articles required for work that are not covered specifically herein, or by work order specifications, shall be standard products of reputable manufacture and entirely suitable for the intended purpose. Unless otherwise specified, they shall be new and unused; otherwise, use of these materials is subject to the approval of the Contracting Officer.

C.16.2 CORRECTION OF UNSATISFACTORY WORK

Failure to meet map test criteria will require recompilation of the project at the Contractor's expense. When a series of sheets are involved in a mapping project, the existence of errors (i.e., map test failure) on any individual sheet will constitute prima facie evidence of deficiencies throughout the project (i.e., all other sheets are assumed to have similar deficiencies), and field map testing will cease. The Contractor will be responsible for all costs for correction of the work and for map testing on the corrected drawings. When such efforts are performed by USACE survey crews, these costs will be deducted from the Task Order payment estimates.

C.17 CONTRACTOR-FURNISHED MATERIALS

The Contractor shall furnish all transportation, instruments, plant equipment, tools, materials, and related survey and office equipment necessary to perform the work, including, but not limited to the following:

a. vehicular transportation, including gas, oil, tires, and repairs;

b. all necessary field photo control for each assignment;

c. all survey equipment required for the work;

d. all necessary photogrammetric equipment and photo reproduction equipment;

e. all necessary plotting equipment, supplies, and materials;

f. all necessary software for survey control reduction, photogrammetric processing, image processing, feature collection, GIS database development, and report product development; and,

g. all necessary supplies.

C.18 SUBMITTAL REQUIREMENTS

C.18.1 REVIEW SUBMITTALS

a. Photographic Acceptance. Upon completion of the aerial photography phase for each assignment, the Contractor shall submit a representative sample of contact prints/diapositives to the Contracting Officer or designated representative for review of exposure quality, color balances, and reproduction quality. Review comments will be relayed to the Contractor telephonically and/or by letter within prescribed time period outlined in the Task Order. This review is necessary to preclude non-acceptance by the USACE of photographic submittals due to unacceptable exposure/print qualities and to reduce potential delays in any subsequent photogrammetric mapping phases of the Task Order.

b. Photogrammetric Acceptance. Upon completion of the photogrammetric phase for each assignment, the Contractor shall submit a check plot of all mapping for review to the Contracting Officer or representative. Review comments will be relayed to the Contractor telephonically and/or by letter within prescribed time period outlined in the Task Order.

c. Digital File Acceptance. Upon completion of any digital file creation phases, the Contractor will submit advance versions of these files to the Contracting Officer or designated representative. This review may be conducted in conjunction with the above hardcopy review. Review comments will be related to the Contractor telephonically and/or by letter within prescribed time period(s) outlined in the Task Order.

d. Hard Copy Acceptance. The advance reviews of hardcopy and digital products are intended to determine that all materials conform to the technical requirements and specifications of the Contract / Task Order. This review is also intended to preclude against having to return final submittals for minor errors or omissions.

C.18.2 CORRECTIONS

All review comments are to be addressed by the Contractor in a timely manner and within accuracy specifications. When such errors need to be corrected by USACE staff or by another Contractor, these costs will be charged to the Contractor.

C.18.3 PROFESSIONAL CERTIFICATION REQUIREMENTS

Per ER 1110-1-8152, all A-E Contract deliverables require that the Contractor provide all final submittals with Professional Engineering, Registered Land Surveying, and/or Certified Photogrammetrist annotation, whenever relevant and required by the Task Order, including:

a. A cover document showing, for each discipline involved, the name and stamp or seal of the professional who supervised the work, and the date each stamp or seal was affixed;

b. One set of properly signed, stamped or sealed and dated final maps; and,

c. An electronic equivalent that indicates for each discipline involved, the name of the professional who supervised the work, his/her certification/ registration number and the date each stamp or seal was affixed.

C.18.4 COMPLETION OF WORK

The Contractor shall furnish all work completed in an accurate and thorough manner within the time schedules specified in the Task Order. The Contractor's personnel, plant, equipment, transportation facilities, and supply of materials shall be sufficient to ensure compliance with all provisions and instructions furnished with each Task Order, and suitable to meet all needs of any concurrent Task Orders. Completion of work shall include satisfactory performance on all facets of negotiated work for the Task Order.

D.1 PACKAGING AND MARKING INSTRUCTIONS

Packaging of completed work shall be accomplished such that the materials will be protected from handling damage. Each package shall contain a transmittal letter or shipping form, in duplicate, listing the materials being transmitted, being properly numbered, dated, and signed. Shipping labels shall be marked as follows:

U.S. Army Corps of Engineers - Detroit District
Design Branch, Technical Support Section
ATTN: (Name of USACE Project Manager), CELRE-EC-D
Contract No. _____
Task Order No. _____
P.O. Box 1027
Detroit, Michigan 48231-1027

(b) Hand carried submissions shall be marked as follows:

U.S. Army Corps of Engineers - Detroit District
Design Branch, Technical Support Section
ATTN: (Name of USACE Project Manager), CELRE-EC-D
Contract No. _____
Task Order No. _____
477 Michigan Avenue
Detroit, Michigan 48226

(End of Clause)

END OF SECTION D

WAGE DETERMINATION
94-2307 MO,KANSAS CITY

WAGE DETERMINATION NO: 94-2307 REV (26) AREA: MO,KANSAS CITY

HEALTH AND WELFARE LEVEL - INSURANCE ONLY **OTHER WELFARE LEVEL WD: 94-2308**

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REGISTER OF WAGE DETERMINATIONS UNDER | U.S. DEPARTMENT OF LABOR
THE SERVICE CONTRACT ACT | EMPLOYMENT STANDARDS ADMINISTRATION
By direction of the Secretary of Labor | WAGE AND HOUR DIVISION
| WASHINGTON D.C. 20210
|
|
|
| Wage Determination No.: 1994-2307
William W.Gross Division of | Revision No.: 26
Director Wage Determinations| Date Of Revision: 08/29/2003
_____|_____

States: Kansas, Missouri

Area: Kansas Counties of Anderson, Atchison, Doniphan, Douglas, Franklin, Johnson, Leavenworth, Linn, Miami, Wyandotte
Missouri Counties of Adair, Andrew, Atchison, Bates, Buchanan, Caldwell, Carroll, Cass, Chariton, Clay, Clinton, Cooper, Daviess, De Kalb, Gentry, Grundy, Harrison, Henry, Holt, Howard, Jackson, Johnson, Lafayette, Linn, Livingston, Macon, Mercer, Nodaway, Pettis, Platte, Putnam, Ray, Saline, Schuyler, Sullivan, Worth

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Fringe Benefits Required Follow the Occupational Listing

OCCUPATION CODE - TITLE	MINIMUM WAGE RATE
01000 - Administrative Support and Clerical Occupations	
01011 - Accounting Clerk I	9.46
01012 - Accounting Clerk II	11.70
01013 - Accounting Clerk III	13.47
01014 - Accounting Clerk IV	16.15
01030 - Court Reporter	13.76
01050 - Dispatcher, Motor Vehicle	15.83
01060 - Document Preparation Clerk	9.23
01070 - Messenger (Courier)	9.23
01090 - Duplicating Machine Operator	11.29
01110 - Film/Tape Librarian	11.02
01115 - General Clerk I	9.72
01116 - General Clerk II	11.51
01117 - General Clerk III	13.36
01118 - General Clerk IV	15.79
01120 - Housing Referral Assistant	17.64
01131 - Key Entry Operator I	10.26
01132 - Key Entry Operator II	12.85
01191 - Order Clerk I	10.72
01192 - Order Clerk II	13.70
01261 - Personnel Assistant (Employment) I	12.70
01262 - Personnel Assistant (Employment) II	14.48
01263 - Personnel Assistant (Employment) III	16.09
01264 - Personnel Assistant (Employment) IV	17.50
01270 - Production Control Clerk	16.11
01290 - Rental Clerk	12.36
01300 - Scheduler, Maintenance	12.92
01311 - Secretary I	12.92
01312 - Secretary II	15.11
01313 - Secretary III	17.64
01314 - Secretary IV	20.94
01315 - Secretary V	23.57
01320 - Service Order Dispatcher	21.18
01341 - Stenographer I	11.18
01342 - Stenographer II	12.77
01400 - Supply Technician	20.94
01420 - Survey Worker (Interviewer)	13.76
01460 - Switchboard Operator-Receptionist	10.85
01510 - Test Examiner	15.11
01520 - Test Proctor	15.11

01531 - Travel Clerk I 10.29
01532 - Travel Clerk II 11.12
01533 - Travel Clerk III 11.94
01611 - Word Processor I 11.80
01612 - Word Processor II 14.43
01613 - Word Processor III 15.02
03000 - Automatic Data Processing Occupations
03010 - Computer Data Librarian 12.89
03041 - Computer Operator I 13.86
03042 - Computer Operator II 14.88
03043 - Computer Operator III 18.60
03044 - Computer Operator IV 22.85
03045 - Computer Operator V 23.87
03071 - Computer Programmer I (1) 18.58
03072 - Computer Programmer II (1) 23.82
03073 - Computer Programmer III (1) 27.62
03074 - Computer Programmer IV (1) 27.62
03101 - Computer Systems Analyst I (1) 23.66
03102 - Computer Systems Analyst II (1) 27.62
03103 - Computer Systems Analyst III (1) 27.62
03160 - Peripheral Equipment Operator 13.86
05000 - Automotive Service Occupations
05005 - Automotive Body Repairer, Fiberglass 20.03
05010 - Automotive Glass Installer 18.59
05040 - Automotive Worker 18.59
05070 - Electrician, Automotive 19.32
05100 - Mobile Equipment Servicer 16.51
05130 - Motor Equipment Metal Mechanic 20.03
05160 - Motor Equipment Metal Worker 18.59
05190 - Motor Vehicle Mechanic 20.03
05220 - Motor Vehicle Mechanic Helper 15.47
05250 - Motor Vehicle Upholstery Worker 17.54
05280 - Motor Vehicle Wrecker 18.59
05310 - Painter, Automotive 19.32
05340 - Radiator Repair Specialist 18.59
05370 - Tire Repairer 15.18
05400 - Transmission Repair Specialist 20.03
07000 - Food Preparation and Service Occupations
(not set) - Food Service Worker 8.54
07010 - Baker 12.00
07041 - Cook I 10.01
07042 - Cook II 11.28
07070 - Dishwasher 7.51
07130 - Meat Cutter 13.71
07250 - Waiter/Waitress 8.04
09000 - Furniture Maintenance and Repair Occupations
09010 - Electrostatic Spray Painter 19.30
09040 - Furniture Handler 14.32
09070 - Furniture Refinisher 19.30
09100 - Furniture Refinisher Helper 15.46
09110 - Furniture Repairer, Minor 17.52
09130 - Upholsterer 19.30
11030 - General Services and Support Occupations
11030 - Cleaner, Vehicles 8.73

11060 - Elevator Operator 10.79
11090 - Gardener 12.85
11121 - House Keeping Aid I 7.73
11122 - House Keeping Aid II 9.70
11150 - Janitor 10.28
11210 - Laborer, Grounds Maintenance 10.71
11240 - Maid or Houseman 7.70
11270 - Pest Controller 12.90
11300 - Refuse Collector 10.32
11330 - Tractor Operator 12.33
11360 - Window Cleaner 11.12
12000 - Health Occupations
12020 - Dental Assistant 13.31
12040 - Emergency Medical Technician (EMT)/Paramedic/Ambulance Driver 13.08
12071 - Licensed Practical Nurse I 12.05
12072 - Licensed Practical Nurse II 13.57
12073 - Licensed Practical Nurse III 15.16
12100 - Medical Assistant 12.17
12130 - Medical Laboratory Technician 13.20
12160 - Medical Record Clerk 12.44
12190 - Medical Record Technician 13.62
12221 - Nursing Assistant I 8.76
12222 - Nursing Assistant II 9.86
12223 - Nursing Assistant III 10.75
12224 - Nursing Assistant IV 12.07
12250 - Pharmacy Technician 12.26
12280 - Phlebotomist 11.21
12311 - Registered Nurse I 18.41
12312 - Registered Nurse II 23.45
12313 - Registered Nurse II, Specialist 23.45
12314 - Registered Nurse III 29.73
12315 - Registered Nurse III, Anesthetist 29.73
12316 - Registered Nurse IV 34.11
13000 - Information and Arts Occupations
13002 - Audiovisual Librarian 17.42
13011 - Exhibits Specialist I 19.46
13012 - Exhibits Specialist II 22.88
13013 - Exhibits Specialist III 27.22
13041 - Illustrator I 16.95
13042 - Illustrator II 19.75
13043 - Illustrator III 23.50
13047 - Librarian 24.81
13050 - Library Technician 12.89
13071 - Photographer I 12.28
13072 - Photographer II 15.79
13073 - Photographer III 17.01
13074 - Photographer IV 20.79
13075 - Photographer V 25.17
15000 - Laundry, Dry Cleaning, Pressing and Related Occupations
15010 - Assembler 7.49
15030 - Counter Attendant 7.49
15040 - Dry Cleaner 9.67
15070 - Finisher, Flatwork, Machine 7.49
15090 - Presser, Hand 7.49

15100 - Presser, Machine, Drycleaning 7.49
15130 - Presser, Machine, Shirts 7.49
15160 - Presser, Machine, Wearing Apparel, Laundry 7.49
15190 - Sewing Machine Operator 10.39
15220 - Tailor 11.10
15250 - Washer, Machine 8.24
19000 - Machine Tool Operation and Repair Occupations
19010 - Machine-Tool Operator (Toolroom) 19.30
19040 - Tool and Die Maker 26.12
21000 - Material Handling and Packing Occupations
21010 - Fuel Distribution System Operator 16.50
21020 - Material Coordinator 19.16
21030 - Material Expediter 19.16
21040 - Material Handling Laborer 14.72
21050 - Order Filler 12.29
21071 - Forklift Operator 13.86
21080 - Production Line Worker (Food Processing) 15.32
21100 - Shipping/Receiving Clerk 11.69
21130 - Shipping Packer 11.69
21140 - Store Worker I 14.89
21150 - Stock Clerk (Shelf Stocker; Store Worker II) 10.86
21210 - Tools and Parts Attendant 15.32
21400 - Warehouse Specialist 15.32
23000 - Mechanics and Maintenance and Repair Occupations
23010 - Aircraft Mechanic 19.43
23040 - Aircraft Mechanic Helper 15.01
23050 - Aircraft Quality Control Inspector 20.07
23060 - Aircraft Servicer 17.01
23070 - Aircraft Worker 18.03
23100 - Appliance Mechanic 19.30
23120 - Bicycle Repairer 15.18
23125 - Cable Splicer 24.24
23130 - Carpenter, Maintenance 20.30
23140 - Carpet Layer 19.15
23160 - Electrician, Maintenance 23.00
23181 - Electronics Technician, Maintenance I 19.21
23182 - Electronics Technician, Maintenance II 26.65
23183 - Electronics Technician, Maintenance III 27.20
23260 - Fabric Worker 17.52
23290 - Fire Alarm System Mechanic 20.01
23310 - Fire Extinguisher Repairer 16.50
23340 - Fuel Distribution System Mechanic 20.01
23370 - General Maintenance Worker 18.57
23400 - Heating, Refrigeration and Air Conditioning Mechanic 20.01
23430 - Heavy Equipment Mechanic 20.01
23440 - Heavy Equipment Operator 20.16
23460 - Instrument Mechanic 20.01
23470 - Laborer 10.25
23500 - Locksmith 19.30
23530 - Machinery Maintenance Mechanic 20.49
23550 - Machinist, Maintenance 20.01
23580 - Maintenance Trades Helper 15.46
23640 - Millwright 22.68
23700 - Office Appliance Repairer 19.30

23740 - Painter, Aircraft 20.77
23760 - Painter, Maintenance 19.30
23790 - Pipefitter, Maintenance 27.22
23800 - Plumber, Maintenance 22.10
23820 - Pneudraulic Systems Mechanic 20.01
23850 - Rigger 20.01
23870 - Scale Mechanic 18.57
23890 - Sheet-Metal Worker, Maintenance 23.12
23910 - Small Engine Mechanic 18.57
23930 - Telecommunication Mechanic I 20.92
23931 - Telecommunication Mechanic II 21.59
23950 - Telephone Lineman 20.92
23960 - Welder, Combination, Maintenance 20.01
23965 - Well Driller 20.01
23970 - Woodcraft Worker 20.01
23980 - Woodworker 16.50
24000 - Personal Needs Occupations
24570 - Child Care Attendant 8.56
24580 - Child Care Center Clerk 12.08
24600 - Chore Aid 8.40
24630 - Homemaker 13.70
25000 - Plant and System Operation Occupations
25010 - Boiler Tender 19.51
25040 - Sewage Plant Operator 19.36
25070 - Stationary Engineer 20.93
25190 - Ventilation Equipment Tender 15.46
25210 - Water Treatment Plant Operator 19.30
27000 - Protective Service Occupations
(not set) - Police Officer 19.85
27004 - Alarm Monitor 14.17
27006 - Corrections Officer 17.29
27010 - Court Security Officer 19.24
27040 - Detention Officer 17.29
27070 - Firefighter 17.32
27101 - Guard I 10.21
27102 - Guard II 16.62
28000 - Stevedoring/Longshoremen Occupations
28010 - Blocker and Bracer 21.17
28020 - Hatch Tender 18.40
28030 - Line Handler 18.40
28040 - Stevedore I 17.38
28050 - Stevedore II 19.13
29000 - Technical Occupations
21150 - Graphic Artist 23.00
29010 - Air Traffic Control Specialist, Center (2) 29.53
29011 - Air Traffic Control Specialist, Station (2) 20.36
29012 - Air Traffic Control Specialist, Terminal (2) 22.42
29023 - Archeological Technician I 13.06
29024 - Archeological Technician II 14.60
29025 - Archeological Technician III 18.09
29030 - Cartographic Technician 22.95
29035 - Computer Based Training (CBT) Specialist/ Instructor 24.92
29040 - Civil Engineering Technician 19.26
29061 - Drafter I 14.52

29062 - Drafter II 15.70
29063 - Drafter III 19.48
29064 - Drafter IV 22.71
29081 - Engineering Technician I 15.54
29082 - Engineering Technician II 19.08
29083 - Engineering Technician III 21.95
29084 - Engineering Technician IV 24.41
29085 - Engineering Technician V 29.54
29086 - Engineering Technician VI 32.73
29090 - Environmental Technician 20.48
29100 - Flight Simulator/Instructor (Pilot) 27.62
29160 - Instructor 22.12
29210 - Laboratory Technician 17.64
29240 - Mathematical Technician 19.26
29361 - Paralegal/Legal Assistant I 13.46
29362 - Paralegal/Legal Assistant II 17.52
29363 - Paralegal/Legal Assistant III 21.42
29364 - Paralegal/Legal Assistant IV 25.92
29390 - Photooptics Technician 18.62
29480 - Technical Writer 21.98
29491 - Unexploded Ordnance (UXO) Technician I 18.77
29492 - Unexploded Ordnance (UXO) Technician II 22.70
29493 - Unexploded Ordnance (UXO) Technician III 31.11
29494 - Unexploded (UXO) Safety Escort 18.77
29495 - Unexploded (UXO) Sweep Personnel 18.77
29620 - Weather Observer, Senior (3) 21.07
29621 - Weather Observer, Combined Upper Air and Surface Programs (3) 17.29
29622 - Weather Observer, Upper Air (3) 17.29
31000 - Transportation/ Mobile Equipment Operation Occupations
31030 - Bus Driver 16.03
31260 - Parking and Lot Attendant 9.06
31290 - Shuttle Bus Driver 13.04
31300 - Taxi Driver 10.65
31361 - Truckdriver, Light Truck 13.04
31362 - Truckdriver, Medium Truck 17.49
31363 - Truckdriver, Heavy Truck 17.81
31364 - Truckdriver, Tractor-Trailer 17.81
99000 - Miscellaneous Occupations
99020 - Animal Caretaker 8.65
99030 - Cashier 7.59
99041 - Carnival Equipment Operator 10.65
99042 - Carnival Equipment Repairer 11.36
99043 - Carnival Worker 8.61
99050 - Desk Clerk 8.95
99095 - Embalmer 18.77
99300 - Lifeguard 9.86
99310 - Mortician 18.77
99350 - Park Attendant (Aide) 12.38
99400 - Photofinishing Worker (Photo Lab Tech., Darkroom Tech) 11.65
99500 - Recreation Specialist 13.26
99510 - Recycling Worker 12.89
99610 - Sales Clerk 9.93
99620 - School Crossing Guard (Crosswalk Attendant) 8.68
99630 - Sport Official 9.25

99658 - Survey Party Chief (Chief of Party)	17.09
99659 - Surveying Technician (Instr. Person/Surveyor Asst./Instr.)	14.55
99660 - Surveying Aide	10.63
99690 - Swimming Pool Operator	14.59
99720 - Vending Machine Attendant	12.13
99730 - Vending Machine Repairer	14.59
99740 - Vending Machine Repairer Helper	12.13

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: $2.36 an hour or $94.40 a week or $409.07 a month

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 8 years, and 4 weeks after 15 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as numbered):

1) Does not apply to employees employed in a bona fide executive, administrative, or professional capacity as defined and delineated in 29 CFR 541. (See CFR 4.156)

2) APPLICABLE TO AIR TRAFFIC CONTROLLERS ONLY - NIGHT DIFFERENTIAL: An employee is entitled to pay for all work performed between the hours of 6:00 P.M. and 6:00 A.M. at the rate of basic pay plus a night pay differential amounting to 10 percent of the rate of basic pay.

3) WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a regular tour of duty, you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employed (40 hours a week) and Sunday is part of your regularly scheduled workweek, you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordance, explosives, and pyrotechnic compositions such as lead azide, black powder

and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordance, explosives, and incendiary material differential pay.

** UNIFORM ALLOWANCE **

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of $3.35 per week (or $.67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

** NOTES APPLYING TO THIS WAGE DETERMINATION **

Source of Occupational Title and Descriptions:

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the Third Supplement, dated March 1997, unless otherwise indicated. This publication may be obtained from the Superintendent of Documents, at 202-783-3238, or by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of specific job descriptions may also be obtained from the appropriate contracting officer.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE {Standard Form 1444 (SF 1444)}

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. {See Section 4.6 (C)(vi)} When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

1) When preparing the bid, the contractor identifies the need for a conformed occupation) and computes a proposed rate).

2) After contract award, the contractor prepares a written report listing in order proposed classification title), a Federal grade equivalency (FGE) for each proposed classification), job description), and rationale for proposed wage rate), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).

4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.

5) The contracting officer transmits the Wage and Hour decision to the contractor.

6) The contractor informs the affected employees.

Information required by the Regulations must be submitted on SF 1444 or bond paper.

When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a classification already listed in the

wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.

DISCIPLINES

DISCIPLINES

Photogrammetric Mapping, Remote Sensing and Geographic Information Systems Services
Solicitation no. DACW35-03-R-0003

Labor Line Items:	**Unit**	**Base Year Unit Price**	**Option Year 1**	**Option Year 2**
Project Manager	hour	35.50	36.74	38.03
Pilot	hour	22.50	23.29	24.10
Instrumentation Specialists	hour	22.50	23.29	24.10
Photographic Laboratory Supervisor	hour	20.00	20.70	21.42
Photographic Laboratory Technician	hour	15.50	16.04	16.60
Registered Land Surveyor	hour	32.15	33.28	34.44
Survey Party Chief	hour	18.50	19.15	19.82
Survey Technician	hour	16.25	16.82	17.41
Certified Photogrammetrist	hour	28.85	29.86	30.90
Compilation Specialist	hour	20.25	20.96	21.69
CADD/GIS Technician	hour	19.00	19.67	20.35
Image Analyst	hour	19.00	19.67	20.35
GIS Specialist	hour	24.00	24.84	25.71
Computer Programmer	hour	28.87	29.88	30.93
Database Analyst	hour	26.88	27.82	28.79
Engineering and/or Scientific Specialists	hour	32.50	33.64	34.81
Clerk/Typist	hour	13.50	13.97	14.46
Overhead on Direct labor & G&A (To be applied to Labor only)	percent	**170%**		

EQUIPMENT

Photogrammetric Mapping, Remote Sensing and Geographic Information Systems Services
Solicitation no. DACW35-03-R-0003

		Base Year Unit Price	Option Year 1	Option Year 2
Aircraft with Camera and Airborne GPS	hour	$ 450	465.75	482.05
Airborne Digital Camera	TBN/Job			
Airborne Multispectral Digital Camera	TBN/Job			
Airborne Multispectral Scanner	TBN/Job			
Aircraft Mobilization	TBN/Job			
LIDAR Acquisition	TBN/Job			
LIDAR Mobilization	TBN/Job			
Ground GPS Receiver (3 – static)	per day	$ 450	465.75	482.05
GIS backpack GPS Receiver	per day	$ 150	155.25	160.68
GPS RTK Sys (incl. 2 GPS units, radio & comp.)	per day	$ 300	310.50	321.37
Low End Workstation (CADD/GIS)	hour	$ 7.50	7.76	8.03
High End Workstation (multiple processor and/or UNIX)	hour	$ 15	15.53	16.07
High Resolution input scanner	hour	$ 10	10.35	10.71
Large format Input Scanner	hour	$ 5	5.18	5.36
Digital photo index	each	$ 25	25.88	26.78
Black and White film and processing	per foot	$ 3.17	3.28	3.40
Natural Color film and processing	per foot	$ 8.24	8.53	8.83
Color infrared film and processing	per foot	$ 10.62	10.99	11.38
Set up Fee B/W film, print, Dia-ops	per roll/set-up	$ 35	36.23	37.49
Set up Fee Color film, print, Dia-ops	per roll/set-up	$ 40	41.40	42.85
Black & White Contact Prints (material & processing, 9"x9")	each	$ 4	4.14	4.28
Color Contact Prints (material & processing, 9"x9")	each	$ 5.60	5.80	6.00
Color Infrared Prints (material & processing, 9"x9")	each	$ 7.40	7.66	7.93
Black & White Diapositives (material & processing, 9"x9")	each	$ 9	9.32	9.64
Color Diapositives (material & processing, 9"x9")	each	$ 11.50	11.90	12.32

Color Infrared Diapositives (material & processing, 9"x9")		each		$ 13.50	13.97 14.46
Paper Plots (E-Size) Raster	each		$ 35	36.23	37.49
Mylar Plot (E-size) Raster		each		$ 45	46.58 48.21
Paper Plots (E-size) Vector	each		$ 15	15.53	16.07
Mylar Plots (E-size) Vector	each		$ 20	20.70	21.43
Miscellaneous supplies, rentals, and services			per job		
Travel, (To be determined in accordance with JTR)	per diem				
Profit, (To be negotiated on each delivery order.)	percent				

Section 00600 - Representations & Certifications

CLAUSES INCORPORATED BY REFERENCE

52.203-11	Certification And Disclosure Regarding Payments To Influence Certain Federal Transactions	APR 1991
52.204-3	Taxpayer Identification	OCT 1998
52.204-5	Women-Owned Business (Other Than Small Business)	MAY 1999
52.209-5	Certification Regarding Debarment, Suspension, Proposed Debarment, And Other Responsibility Matters	DEC 2001
52.215-6	Place of Performance	OCT 1997
52.219-1 Alt I	Small Business Program Representations (Apr 2002) Alternate I	APR 2002
52.219-22 Alt I	Small Disadvantaged Business Status (Oct 1999) Alternate I	OCT 1998
52.222-22	Previous Contracts And Compliance Reports	FEB 1999
52.222-25	Affirmative Action Compliance	APR 1984
52.222-38	Compliance With Veterans' Employment Reporting Requirements	DEC 2001
52.223-13	Certification of Toxic Chemical Release Reporting	AUG 2003
52.226-2	Historically Black College or University and Minority Institution Representation	MAY 2001
252.204-7001	Commercial And Government Entity (CAGE) Code Reporting	AUG 1999
252.209-7001	Disclosure of Ownership or Control by the Government of a Terrorist Country	MAR 1998
252.225-7031	Secondary Arab Boycott Of Israel	APR 2003

Section 00700 - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.202-1 Alt I	Definitions (Dec 2001) --Alternate I	MAY 2001
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-6	Restrictions On Subcontractor Sales To The Government	JUL 1995
52.203-7	Anti-Kickback Procedures	JUL 1995
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	JUN 2003
52.204-4	Printed or Copied Double-Sided on Recycled Paper	AUG 2000
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	JUL 1995
52.215-2	Audit and Records--Negotiation	JUN 1999
52.215-8	Order of Precedence--Uniform Contract Format	OCT 1997
52.215-11	Price Reduction for Defective Cost or Pricing Data--Modifications	OCT 1997
52.215-13	Subcontractor Cost or Pricing Data--Modifications	OCT 1997
52.215-15	Pension Adjustments and Asset Reversions	DEC 1998
52.215-21	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data--Modifications	OCT 1997
52.219-1	Small Business Program Representations	APR 2002
52.219-8	Utilization of Small Business Concerns	OCT 2000
52.219-9	Small Business Subcontracting Plan	JAN 2002
52.219-16	Liquidated Damages-Subcontracting Plan	JAN 1999
52.222-1	Notice To The Government Of Labor Disputes	FEB 1997
52.222-3	Convict Labor	JUN 2003
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	DEC 2001
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans	DEC 2001
52.222-41	Service Contract Act Of 1965, As Amended	MAY 1989
52.223-14	Toxic Chemical Release Reporting	AUG 2003
52.226-1	Utilization Of Indian Organizations And Indian-Owned Economic Enterprises	JUN 2000
52.227-1	Authorization and Consent	JUL 1995
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	AUG 1996
52.229-3	Federal, State And Local Taxes	APR 2003
52.230-2	Cost Accounting Standards	APR 1998
52.232-10	Payments under Fixed-Price Architect-Engineer Contracts	AUG 1987
52.232-23 Alt I	Assignment of Claims (Jan 1986) - Alternate I	APR 1984
52.232-25	Prompt Payment	OCT 2003
52.232-26	Prompt Payment for Fixed-Price Architect-Engineer Contracts	OCT 2003
52.233-1	Disputes	JUL 2002
52.233-3	Protest After Award	AUG 1996

52.236-23	Responsibility of the Architect-Engineer Contractor	APR 1984
52.236-24	Work Oversight in Architect-Engineer Contracts	APR 1984
52.236-25	Requirements for Registration of Designers	JUN 2003
52.242-13	Bankruptcy	JUL 1995
52.242-14	Suspension of Work	APR 1984
52.243-1 Alt III	Changes--Fixed Price (Aug 1987) - Alternate III	APR 1984
52.243-5	Changes and Changed Conditions	APR 1984
52.244-4	Subcontractors and Outside Associates and Consultants (Architect-Engineer Services)	AUG 1998
52.244-6	Subcontracts for Commercial Items	APR 2003
52.246-1	Contractor Inspection Requirements	APR 1984
52.249-7	Termination (Fixed-Price Architect-Engineer)	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies	MAR 1999
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7004	Required Central Contractor Registration	NOV 2001
252.205-7000	Provision Of Information To Cooperative Agreement Holders	DEC 1991
252.209-7000	Acquisition From Subcontractors Subject To On-Site Inspection Under The Intermediate Range Nuclear Forces (INF) Treaty	NOV 1995
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	MAR 1998
252.215-7000	Pricing Adjustments	DEC 1991
252.219-7003	Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (DOD Contracts)	APR 1996
252.219-7011	Notification to Delay Performance	JUN 1998
252.223-7004	Drug Free Work Force	SEP 1988
252.225-7012	Preference For Certain Domestic Commodities	FEB 2003
252.225-7016	Restriction On Acquisition Of Ball and Roller Bearings	APR 2003
252.227-7022	Government Rights (Unlimited)	MAR 1979
252.232-7003	Electronic Submission of Payment Requests	MAR 2003
252.243-7001	Pricing Of Contract Modifications	DEC 1991
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.244-7000	Subcontracts for Commercial Items and Commercial Components (DoD Contracts)	MAR 2000
252.247-7023	Transportation of Supplies by Sea	MAY 2002
252.247-7024	Notification Of Transportation Of Supplies By Sea	MAR 2000

CLAUSES INCORPORATED BY FULL TEXT

52.216-18 ORDERING. (OCT 1995)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from date of award through one (1) year.

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

(End of clause)

52.216-19 ORDER LIMITATIONS. (OCT 1995)

(a) Minimum order. When the Government requires supplies or services covered by this contract in an amount of less than $2,500.00, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) Maximum order. The Contractor is not obligated to honor:

(1) Any order for a single item in excess of $1,000,000.00;

(2) Any order for a combination of items in excess of $1,000,000.00; or

(3) A series of orders from the same ordering office within one (1) year that together call for quantities exceeding the limitation in subparagraph (1) or (2) above.

(c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum order limitations in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within five (5) days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

(End of clause)

52.216-22 INDEFINITE QUANTITY. (OCT 1995)

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum". The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum".

(c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after one (1) year after expiration of this contract.

(End of clause)

52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

(a) The Government may extend the term of this contract by written notice to the Contractor within 30; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed three (3) years.
(End of clause)

52.222-26 EQUAL OPPORTUNITY (APR 2002)

(a) Definition. United States, as used in this clause, means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of $10,000, the Contractor shall comply with paragraphs (b)(1) through (b)(11) of this clause, except for work performed outside the United States by employees who were not recruited within the United States. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. However, it shall not be a violation of this clause for the Contractor to extend a publicly announced preference in employment to Indians living on or near an Indian reservation, in connection with employment opportunities on or near an Indian reservation, as permitted by 41 CFR 60-1.5.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi) layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. The Contractor shall also file Standard Form 100 (EEO-1), or any successor form, as prescribed in 41 CFR part 60-1. Unless the Contractor has filed within the 12 months preceding the date of contract award, the Contractor shall, within 30 days after contract award, apply to either the regional Office of Federal Contract Compliance Programs (OFCCP) or the local office of the Equal Employment Opportunity Commission for the necessary forms.

(8) The Contractor shall permit access to its premises, during normal business hours, by the contracting agency or the OFCCP for the purpose of conducting on-site compliance evaluations and complaint investigations. The Contractor shall permit the Government to inspect and copy any books, accounts, records (including computerized records), and other material that may be relevant to the matter under investigation and pertinent to compliance with Executive Order 11246, as amended, and rules and regulations that implement the Executive Order.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended; in the rules, regulations, and orders of the Secretary of Labor; or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraphs (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting officer may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

(End of clause)

52.236-22 DESIGN WITHIN FUNDING LIMITATIONS (APR 1984)

(a) The Contractor shall accomplish the design services required under this contract so as to permit the award of a contract, using standard Federal Acquisition Regulation procedures for the construction of the facilities designed at a price that does not exceed the estimated construction contract price as set forth in paragraph (c) below. When bids or proposals for the construction contract are received that exceed the estimated price, the contractor shall perform such redesign and other services as are necessary to permit contract award within the funding limitation. These additional services shall be performed at no increase in the price of this contract. However, the Contractor shall not be required to perform such additional services at no cost to the Government if the unfavorable bids or proposals are the result of conditions beyond its reasonable control.

(b) The Contractor will promptly advise the Contracting Officer if it finds that the project being designed will exceed or is likely to exceed the funding limitations and it is unable to design a usable facility within these limitations. Upon receipt of such information, the Contracting Officer will review the Contractor's revised estimate of construction cost. The Government may, if it determines that the estimated construction contract price set forth in this contract is so low

that award of a construction contract not in excess of such estimate is improbable, authorize a change in scope or materials as required to reduce the estimated construction cost to an amount within the estimated construction contract price set forth in paragraph (c) below, or the Government may adjust such estimated construction contract price. When bids or proposals are not solicited or are unreasonably delayed, the Government shall prepare an estimate of constructing the design submitted and such estimate shall be used in lieu of bids or proposals to determine compliance with the funding limitation.

(c) The estimated construction contract price for the project described in this contract is $

(End of clause)

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

www.arnet.gov/far

(End of clause)

ACCOUNTING AND APPROPRIATION DATA

AA: 96X49020000 082427 3230RF6104NA NA 96203
AMOUNT: $20,000.00

CLAUSES INCORPORATED BY FULL TEXT

Security Contract Language for all Corps of Engineers' Unclassified Contracts (PIL 2003-06, 19 Feb 03)

All Contractor employees (U.S. citizens and Non- U.S. citizens) working under this contract *(to include grants, cooperative agreements and task orders)* who require access to Automated Information Systems (AIS), (stand alone computers, network computers/systems, e-mail) shall, at a minimum, be designated into an ADP-III position (non-sensitive) in accordance with DoD 5220-22-R, Industrial Security Regulation. The investigative requirements for an ADP-III position are a favorable National Agency Check (NAC), SF-85P, Public Trust Position. The contractor shall have each applicable employee complete a SF-85P and submit to the (insert the name and address of the Division/ District) Security Officer within three (3) working days after award of any contract or task order, and shall be submitted prior to the individual being permitted access to an AIS. Contractors that have a commercial or government entity (CAGE) Code and Facility Security Clearance through the Defense Security Service shall process the NACs and forward visit requests/results of NAC to the (insert the name and address of the Division/ District) Security Officer. For those contractors that do not have a CAGE Code or Facility Security Clearance, the (insert the name and address of the Division/ District) Security Office will process the investigation in coordination with the Contractor and contract employees.

In accordance with Engineering Regulation, ER 380-1-18, Section 4, foreign nationals who work on Corps of Engineers' contracts or task orders shall be approved by the HQUSACE Foreign Disclosure Officer or higher before beginning work on the contract/task order. This regulation includes subcontractor employees. (NOTE: exceptions to the above requirement include foreign nationals who perform janitorial and/or ground maintenance services.) The contractor shall submit to the Division/District Contract Office, the names of all foreign nationals proposed for performance under this contract/task order, along with documentation to verify that he/she was legally admitted into the United States and has authority to work and/or go to school in the US. Such documentation may include a US passport, Certificate of US citizenship (INS Form N-560 or N-561), Certificate of Naturalization (INS Form N-550 or N-570), foreign passport with I-551 stamp or attached INS Form I-94 indicating employment authorization, Alien Registration Receipt Card with photograph (INS Form I-151 or I-551), Temporary Resident Card (INS Form I-688), Employment Authorization Card (INS Form I-688A), Reentry Permit (INS Form I-327), Refugee Travel Document (INS Form I-571), Employment Authorization Document issued by the INS which contains a photograph (INS Form I-688B).

Classified contracts require the issuance of a DD Form 254 (Department of Defense Contract Security Classification Specification).

(End of Clause)