1) **Network and Systems Administration** - Client Server network using primarily SUN Solaris Operating system on SUN equipment integrating into PC's network and systems. The personnel will install and maintain software, back up and retrieve data, integrate peripherals into the network. Test and evaluate software, and trouble shoot network and system problems quickly. Assist and ensure the serving of data to the user community via intranet and internet.

    a. Install, generate, maintain, text and debug moderately complex system software programs.
    b. Develop instructions for use of operating system software.
    c. Modify and maintain system software packages.
    d. Prepare and edit documentation information provided by user, specialist, analyst, programmer, and operations personnel.
    e. Provide data entry support into a system that will collect and match the data against historical data files.
    f. The contractor may be required to travel to military installations, cost sharing partners or other COE customers to assist in system networking and data integration
    g. Provides expertise to resolve contingencies encountered during processing.
    h. Maintains the operational environment in a manner that is acceptable and in accordance with equipment vendor directives and COE agency standards.
    i. Reviews output products for printer quality, legibility and proper addressing for distribution to Users
    j. Provides for special handling of priority and mission essential work.
    k. Answers phone calls concerning the job and takes messages as applies to COE/UNIX duties.

2) **Data Storage and Retrieval**- Provides storage and structure for geospatial data including metadata, project data and corporate data.

    a. The contractor shall provide support for developing and maintaining a multi-scale corporate GIS data base compiled from a variety of sources. Integrate GIS and GIS related data into the existing corporate database, link to other databases to exploit and maximize information. Strive to Integrate geospatial data into a virtual single automated relational database. The databases will be logically organized and maintained. Additional data will be processed and added to the corporate database as it becomes available.
    b. Provide easy access and retrieval to geospatial data within the project and corporate data structure. Methods to accomplish this task will change with each new release of software and technology. Organization of the data is transparent to the user.

3) **Data Integration** – Integrate existing data into a corporate and project directory structure.
    a. Conversion – Convert digital and hardcopy data into a format that can be easily and readily used by customers. Examples include but are not limited to; format conversion, scanning, registering and rectifying, projecting, vectorizing and attributing data.
    b. Correction – Data sets may be erroneous and need to be corrected to ensure accuracy. An example is the PLSS data sets having incorrect attribution values. The GSC contacted counties to see what the correct values should be once discrepancies were discovered.

c. Mining – Data mining involves locating data through the web, locally, email, networking, phone calls and trading of data.
d. Incorporation – Integrate data into corporate structure in a timely manner. Follow USACE data standards when feasible.

4) **Data Recovery** - Provides data backup and COOP
   a. Corporate and Project data is backed up on a regular basis.
   b. Continuity Of Operations Plan requires that data is recoverable in the event of a major disruption or disaster. Storage of data is off site.

5) **Technical Support** – Provides support to USACE and its customers in the use and execution of Geospatial Technologies.
   a. Phone – The GSC provides phone support to all USACE personnel. Tracks the calls and time required to resolve problems.
   b. On-site – GSC personnel will go to the office or travel to a customer site when required to assist in resolving GIS related issues.
   c. Research and Development – GSC personnel will investigate new technologies
   d. Consulting – Provide advice and suggestions in the use of geospatial technologies for applications and project objectives.
   e. Tech Transfer – Transfers applications, data, methodology, software, etc to GSC customers.

6) **Web Page Maintenance**– Maintain GIS related web pages and Interactive Map Servers.

7) **Application development** - The contractor must be able to develop customized ArcView applications or related programs to facilitate the mission of the COE. Interview, develop, test and deploy GIS tools to the user community. Write Visual Basic, Avenue, AML, SQL, etc., programs to integrate, develop and model. These applications may include but not be limited to endangered species, soil erosion, flood modeling, ground water contamination, site locating, etc. Each application will have a training/user manual to assist COE personnel in learning how to use the application.

8) **Promote GIS** – Promote and facilitate the use of geospatial technologies to execute USACE business functions in the most cost effective and logical manner possible. Market USACE GIS capabilities to USACE and its customers