Lauer

United States Department of the Interior

GEOLOGICAL SURVEY
EROS Data Center
Sioux Falls, South Dakota 57198

IN REPLY REFER TO:

OC 2-3

MEMORANDUM

February 15, 1994

To: Chief, National Mapping Division

From: Donald T. Lauer
Chief, EROS Data Center

Subject: EROS Data Center Building Addition

The EROS Data Center building was completed in 1973. During the last 20 years the interior has been regularly modified in response to changing mission requirements, but the building has never been expanded. Increased programmatic responsibility has caused staff and equipment requirements to grow. Combined government and contractor staff has increased from about 50 employees to almost 400 and is expected to reach 500 over the next 3 to 5 years. The Center's budget has grown from about $5 million to $25 million annually, and will continue to grow as program responsibilities increase. The planned building addition will support the following new and expanded programs.

1. The building addition will house the Earth Observing System Data and Information System (EOSDIS) Land Processes Distributed Active Archive Center (LPDAAC) which is part of the National Aeronautics and Space Administration's (NASA) Mission to Planet Earth Program. Space will be provided for high performance computer systems, advanced telecommunications networks, and skilled personnel required to process and distribute EOS land data. These data will be used for mapping the extent and distribution of natural resources, monitoring land surface changes and assessing environmental conditions. Specialized equipment (costing about $100 million) and associated operations and maintenance personnel are scheduled to begin to arrive at the Data Center in early 1996. The equipment will be provided through NASA's $700 million EOSDIS contract with Hughes Information Technology Company.

2. The Department of the Interior's legislatively mandated responsibility to operate the National Satellite Land Remote Sensing Data Archive cannot be met within the existing building. The present archive includes 8,000,000 aerial photos and over 2,000,000 satellite images, archived in photographic and/or digital form. Space needed to archive these data exceeds the space available in the existing building. Increasing costs for off-site storage space drives budget requirements upward at the expense of other vital programs and creates growing logistical problems in

the data processing and production cycle. This situation worsens daily as new data are acquired and processed and made available to a growing user community. An example of this activity is the National Aerial Photography Program (NAPP). This interagency program, administered by the USGS, gives the archiving responsibility to the Data Center. This archive increases at a rate of approximately 1200 rolls of film per year. Other programs contribute an additional 500 rolls annually.

3. The Intelligence Community is concluding discussions that will result in the shipment of 15-20,000 rolls of declassified space photography to the Data Center within the next 1-2 years. This will increase current photographic data holdings by over 50 percent. These and future planned shipments cannot be accommodated in the existing building. Similar opportunities to preserve and make available important earth resources data will continue to arise.

4. Office, work and conference space has become a serious problem at the Data Center. Many professional offices are double-occupant, while some are triple-occupant. Much of the software development, facility operations and technical information staff are in cramped quarters not originally designed as offices (no windows, block walls, cold exterior walls, etc.). The Digital Line Graph-Enhanced (DLG-E) software development group is currently officed in off-site rental space at a cost of almost $80,000 per year. The documents library has been relocated to inadequate space in an area of the building designed for service and logistics operations. Any future staff or workspace requirements must be met through expansion or added space elsewhere. There is no additional space at the Data Center.

   The Data Center has developed a National and International reputation for its experience in data management, image processing, GIS technology and its application of geo-spatial data to varied resource management problems. It is becoming increasingly involved in inter-agency studies, hosting teams of scientists from other Federal agencies for several weeks at a time, for example, the Science and Assessment Strategy Team (SAST) studying the Great Flood of 1993 on the Mississippi River. Two of three Data Center conference rooms had to be temporarily reconfigured into office/work space to accommodate the team of 15-20 scientists. The new facility will allow more opportunities for these programs thus increasing or facilitating the use of Interior's data and expertise in programs of National scope.

   As a result of our programmatic activities, we will be hosting many meetings, workshops, seminars, etc. related to remote sensing, GIS, spatial data management, etc., for example, Landsat Users Conference, EOS Science Advisory Panel meetings, World Data Center-A meetings, etc. Similarly, as our responsibilities develop with regard to the National Satellite Land Remote Sensing Data archive and the EOSDIS LPDAAC, we will be hosting numerous meetings of science advisory panels and other scientific bodies. These requirements cannot be accommodated in the existing building space.

5. The Landsat Program has received intense scrutiny from NASA, DoD, and the President's Office of Science and Technology Policy, to define a Landsat 7 mission that fits within the overall funding profile approved by Congress. At this time, options regarding ground segment responsibility and location are being evaluated. However, all options require transfer of all Landsat data to the National Satellite Land Remote Sensing Data Archive, which will be located in the building addition.

6. The United Nations Environment Programme/Global Resource Information Database (UNEP/GRID), USGS, and NASA have a cooperative agreement to operate a GRID facility for North America at the Data Center. Their mission is to provide timely, reliable georeferenced data and information services which address environmental issues at global, regional and national levels. GRID's presence since 1990 has significantly expanded and we anticipate that this activity will undergo further expansion. This activity also will be housed in the building addition.

The successful completion of the Data Center building addition is vital not only to NASA's Mission to Planet Earth Program but also to the continued viability of several key Survey and Interior programs. The requirement was actively supported by Congressional representatives, endorsed by the Office of Management and Budget, and specifically mandated by appropriations language. The Earth science community will continue to be challenged by resource management and environmental problems. In many cases, the Department's ability to respond will be dependent on the availability of land remotely sensed data and analytical capabilities resident at the Data Center.

Copies to: Senior Staff

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