CITY OF RAPID CITY

RAPID CITY, SOUTH DAKOTA 57701-2724

PLANNING DEPARTMENT

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MEMORANDUM

TO: Legal and Finance Committee

FROM: Lisa Seaman, GIS Coordinator

DATE: September 5, 2002

RE: Request for Proposals for a Public Interface (KIOSK)

The above-referenced project will provide the public with an interface program (KIOSK) for public and staff to use to complement the ongoing implementation of an enterprise-wide geographic information system (GIS). This interface will allow the public to easily access the GIS data in a user friendly manner through the Internet and the Intranet. Funds for this proposal are included in the 2002 GIS Budget.

The LIS Task Force recommended approval of the above-referenced project on August 28, 2002.

Staff requests approval to advertise the Request for Proposals for a Public Interface.

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REQUEST FOR PROPOSALS
FOR
PUBLIC MAPPING INTERFACE

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Overview

The City of Rapid City requests proposals from qualified firms to provide a mapping interface for public and staff to use to complement the ongoing implementation of an enterprise-wide geographic information system (GIS). It is the City's intention to select the most qualified respondent to deliver these services.

Background

The City of Rapid City is located in Pennington County, South Dakota, in the western half of the state. It borders the eastern edge of the Black Hills and is roughly 46 square miles in size. The City has a current population of 60,000, with 21,000 tax parcels, and a mix of land uses. Pennington County has 88,565 persons in an area of 2,770 square miles, and 42,000 tax parcels, inclusive of Rapid City's tax parcels.

Over the years, the City and County have made incremental investments in automating these land records. Activities have focused on automating the tax parcel mapping in the County Department of Equalization, implementing address geocoding and map display within the County 911 Dispatch Center, and automating engineering design using AutoCad technology within the City Engineering Division. In addition, the City has acquired digital orthophotography and topographic mapping to support individual project data needs. Currently, the City and County have digital orthophotos and digital topographic data in Arc/INFO and AutoCad format. The City and County adopted the South Dakota South State Plane coordinate system.

In 1997, the City and County initiated a more coordinated program of land records modernization by developing a comprehensive strategic plan for implementing a computerized geographic/land information system (GIS/LIS). An update of the original plan is in progress. One of the update recommendations is the use of a mapping interface for public (both in a "kiosk" format and an internet format) and "untrained" staff for map browsing and query.

The City and County have invested in ESRI GIS software, including eight Arc/Info licenses, 78 copies of ArcView 3.2, and one ArcIMS 4.0 license. The GIS Division owns a number of ArcView 8.0 upgrades, but it is unlikely that these will be deployed in the near future because of the investment in 3.2 Avenue extensions created by Division staff. Relevant hardware includes a GIS data server that resides on the City/County network and a GIS internet server that resides outside of the network. Plans have been made to purchase a second GIS data server to hold the "published" form of the GIS data using Microsoft SQL Server 2000 and ArcSDE. It is also anticipated that the internet server will be repositioned inside the network with the appropriate security.

Currently, City and County staff utilize ArcView 3.2 to access GIS data. Those staff member that do not have access to ArcView 3.2 have used ArcExplorer, although this has proven a less robust solution than anticipated. Some ArcIMS applications have been built for the public by modifying the standard HTML viewer and JavaScript files. These may be viewed at http://164.154.143.14/interactive.htm.

Approximately 100GB of data have been created or acquired. Vector map data reside in Arc/Info coverages. Raster data include digital aerial photos in .tif/.tfw, .bil/.blw, .sid/.sdw file formats, and USGS DRGs in .tif/.tfw format. Vector data held on the internet server are shape files converted from the appropriate coverages, and are transferred from the network server via ftp. It is anticipated that coverages will be converted to geodatabases stored in SQL Server/ArcSDE once the geodatabase model has matured. Additional databases with links to spatial data are also utilized. The most widely used of these is one containing tax assessor data. These data are downloaded from an HP 3000 minicomputer nightly and converted to a .dbf format. The converted tables are joined in ArcView to the parcel coverages dynamically as a user loads the parcels, using a customized extension.

Scope Of Services Requested

The City anticipates leaning upon the expertise of the selected developer in meeting the specifications listed below. It is recognized that the developer may have different methods of meeting the project goals than those envisioned by the GIS Division. It is undecided as to whether the developer's solution will replace or supplement the existing ArcIMS applications; however, the GIS Division shall be provided with the developer's source code in order to standardize the look of the internet site, if desired.

Prior to the installation of the software, it is anticipated that the selected developer will require phone contact with the GIS staff in order to ascertain the specifics of the data and network, with at least one trip to Rapid City in order to set up and/or train the GIS staff in the administration and use of the software.

I.   General

    A.   This project requires a mapping interface to vector and raster data to serve three groups:

        1.   staff
        2.   the general public using a kiosk-type setup in City and County buildings, and
        3.   the general public using the internet.

    B.   Access to map layers and databases will be different for the public and staff. More map layers are anticipated for staff use. At a minimum, the following map layers and databases will be used for all groups:

        1.   roads

2. tax parcels
3. orthophotograpy
4. topographic data

C. Menus, buttons, and/or tools may be simplified, depending upon the recommendations of the selected developer.

D. The software solution provided by the selected developer is anticipated to be an ArcIMS or MapObjects application, and may include the use of other software such as ArcReader or Cold Fusion. An ArcIMS solution is preferred.

E. The software solution should include a full user manual and online help. Additionally, it will include an "administrator's" manual if special provisions are made for separate administrator functions, such as adding map layers.

F. The developer should provide training to the GIS staff in the administration of the solution.

II. Input format

A. The solution should be capable of reading Arc/Info coverages, digital aerial photos in .tif/.twf, .sid/.sdw files and .bil/.blw formats, and DRGs in .tif/.tfw format.

B. Software that reads other vector file formats, such as shape files, will also be considered. If such a solution is offered, the developer should provide the appropriate conversion program for automating the daily conversion of the large volume of data. Note that this is not the preferred solution due to the anticipated staff and computer time that may be needed to convert files. It is recognized, however, that this may be the only solution available for use with ArcIMS until ArcSDE is installed.

C. The solution should either be capable of reading ArcSDE data (coverages and/or geodatabases) or some upgrade path should be provided.

D. The solution should be capable of accessing external database files that will be linked to some attribute in the coverages.

E. It is anticipated that the map layers or external files may change or be different for the various user groups, so some capability for an administrator or user to change the input data, including file links, is required.

III. Interface display

A. The interface should be intuitive.

B. The interface may be simplified for public use.

C. The interface should include buttons for at least the following mapping functions:

    1.   zoom in
    2.   zoom out
    3.   pan
    4.   zoom to full map
    5.   zoom to selected (also built into queries)
    6.   identify (show a feature database record)
    7.   other buttons, etc. to satisfy functionality requirements listed in Section IV below.

D. The map display should be able to show feature labels such as road names as well as displaying Arc/Info annotation.

IV. Interface functionality

A. In addition to the general mapping functions listed above, the interface should have the following search capabilities for parcel information. Note that there should be some "zoom to selected" capability in the interface.

    1.   search by Parcel Identification Number (PIN)
    2.   search by address (not geocoding, but from database)
    3.   search by owner name (note that this will not be available to the public for searches)
    4.   search by legal description (may require "fuzzy logic" search).

B. Geocoding against the road centerline coverage or address point coverage is desired but not a project requirement.

C. The interface should have some provision for turning map layers on and off. It should also include that capability for adding or deleting layers. This may be a user or an administrator function. Additionally, some capability for turning layers on and off at specified scales is desired.

D. The ability to use map features as hyperlinks is required.

V.   Printing functionality

   A.   The solution should include printing functionality for standardized layouts containing the elements listed below:

   1.   map shown on screen
   2.   scale bar
   3.   north arrow (note that SD state plane data is offset from grid north by approximately 2 degrees to the east)
   4.   date
   5.   disclaimers (see Attachment 1 for the two disclaimers to be used).
   6.   map title. Note that users should be able to specify or change the title.

   B.   The users should be able to change the page size between 8-1/2" x 11" and 11" x 17".

   C.   It is desired that users be able to print at standardized scales, such as 1"=200' (1:4800).

   D.   Users should be able to choose the page orientation based on the layout design of the property.

   E.   It is desired that the layout be capable of being changed by the GIS staff. The GIS Division will determine the final layout solution proposed.

Proposed Project Schedule

Proposals shall be governed by the following estimated schedule:

- Written Proposals Due at the   October 11, 2002
  Rapid City Planning Department

- Interviews of selected respondents   October 25, 2002

- Select consultant and complete contract   November 1, 2002
  negotiations

   Detailed scheduling of the project will be negotiated during the contract negotiations by the selected consultant and the City.

   The date for initiation of the contract as well as the overall contract performance period will be negotiated with the selected consultant based on the tentative time schedule listed below.

- Notice to Proceed with Services   November 19, 2002

- Project Complete   February 28, 2003

A.   General Instructions

Inquiries

Questions about the proposal may arise while preparing responses. Inquires are to be made in writing prior to October 1, 2002 and answers thereto will be mailed to all firms who have received or requested copies of the Request for Proposals. Origin of the questions will not be identified. Please direct questions to:

Lisa Seaman, GIS Coordinator
GIS Division
300 6th Street
Rapid City, SD 57701
(605) 394-4120 (phone)
(605) 394-6636 (fax)
email: lisa.seaman@rcgov.org

Signature Requirements

Proposals must be signed by a duly authorized official of the proposer. Consortia, joint ventures, or teams submitting proposals, although permitted and encouraged, will not be considered responsive unless it is established that all contractual responsibility rests solely with one contractor or one legal entity which shall not be a subsidiary or affiliate with limited resources. Each proposal should indicate the entity responsible for execution on behalf of the proposal team.

Minimum Services of the Consultant

In addition to providing the mapping interface software/code and the items identified in the Scope of Services, the consultant shall provide the following basic products:

- Assistance in setting up the mapping interface
- Training for GIS staff in the administration and use of the mapping interface
- One year minimum technical support
- Deliverables:
    - 2 copies of the mapping interface on CD-ROM
    - 2 copies of the user guide, suitable for reproduction
    - 1 copy of the Administrator's guide

Proposal of Submission

The City of Rapid City must receive your proposal no later than 4:00 p.m. MDT, October 11, 2002. The background information, experience and descriptive examples of the proposers work must be submitted with information to accompany the proposal at the required time of submittal. Eight (8) copies of each proposal must be submitted to the City of Rapid City. Submissions will be directed to:

>	Lisa Seaman, GIS Coordinator
>	GIS Division
>	300 Sixth Street
>	Rapid City, SD 57701

Addenda and Supplements to RFP

In the event that it becomes necessary to revise any part of the Request for Proposals or if additional information is necessary to enable the proposer to make adequate interpretation of the provisions of this Request for Proposal, a supplement to the Request for Proposals will be provided to each proposer.

Rejection Rights

The City of Rapid City retains the right to reject all proposals and to re-solicit if deemed to be in its best interests.

Selection is also dependent upon the negotiation of a mutually acceptable contract with the successful proposer.

Cost of Proposal Preparation

No reimbursement will be made by the City of Rapid City or any other party to this agreement for any costs incurred prior to a formal notice to proceed under a contract.

Proposals to be in Effect

Each proposal shall state it is valid for a period of not less than ninety (90) days from the date of receipt.

Prohibited Interest

No member, officer, employee of the City or member of its governing body or of a local public body having jurisdiction within the City's service area, during his or her tenure or one year thereafter, shall have any interest, direct or indirect, in any resultant contract or the proceeds thereof.

<u>Taxes</u>

The contract amount submitted by the consultant should take into consideration the fact that all sponsoring entities associated with the proposed project are exempt from all state taxation, including state sales tax.

<u>Selection Process</u>

A study team will review responses to the Request for Proposal that meet the requirements enumerated and are received prior to the designated closing date.

The committee will designate the most qualified firms as finalists based on professional qualifications, costs, and financial data after reviewing the qualified proposals. The selected finalists will be interviewed by phone by the committee. The selected consultant will be notified and contract negotiations will commence. Upon the completion of negotiations, the City of Rapid City must approve the contract before any work can begin.

<u>Project Approach</u>

The proposer should identify the processes utilized on other significant projects of similar scope and magnitude as well as the process envisioned for this project. Include within this proposal the process envisioned for incorporating the specialized disciplines of geographic information systems and information management systems. The specific procedures and methods proposed for meeting the requirements of the City of Rapid City shall be detailed in the proposal.

<u>Qualifications, Costs, and Financial Data</u>

Those firms submitting proposals will be evaluated according to the qualification of the firm in terms of experience, the ability to perform and manage the work, the ability to work within a schedule, and within a fixed budget. The firm is asked to submit a description of prior work that is related to the scope of work previously described. Particular emphasis will be placed on the qualifications of the firm's key staff, such as the project manager and all staff involved in the project.

The contract for the scope of work will be based on a fee schedule with a not-to-exceed amount, inclusive of any direct reimbursable expenses. Project fee and cost estimates are not considered binding evaluation criteria. Each firm submitting a proposal must provide an estimate for each phase of the project based on the services enumerated and an assumed project time frame. Each estimate for each phase of the project should contain a cost breakdown including the cost of material, direct salaries, labor overhead, general overhead, and other direct costs and profit. Costs should include the software price (by system or number of users), set up, training, any annual license fees, technical support, anticipated upgrade prices, and prices for additional software needed.

Proposers should clearly state the licensing agreements required for the use of their software.

<u>Specialized Experience</u>

The following criteria will be used in evaluating the qualifications of each consultant.

1. Capacity and Capability (15% of total)
   - Key personnel and individual relevant experience and capability, and outside consultants
   - Diversity of skills – geographic information systems applications, database interfacing
   - Total number of firm employees in project technical disciplines and current workload of personnel

2. Technical Ability and Understanding of Requirements (20% of total)
   - Technical approach proposed for meeting tasks
   - Understanding and experience in meeting tasks
   - Understanding and experience in addressing implementation issues
   - Project schedule
   - Personnel assigned to tasks
   - Quality of examples of previous work

3. Project Organization and Management (10% of total)
   - Project team
   - Management procedure – work reports
   - Controlling costs
   - Quality control

4. Past Record of Performance (5% of total)

5. Completion time – quality – cost comparison (10% of total)

6. Knowledge with GIS interface design (20% of total)

7. Knowledge of database interfacing with map data (20% of total)

<u>General Expertise Required</u>

The services envisioned within this Request for Proposal includes all of the geographic information system and information management system disciplines necessary for the proper execution of the project desired.

<u>Miscellaneous</u>

The following information will be made available to the selected consultant: access to information regarding existing hardware, software, operating systems, network, and

database resources currently in use within the City and County organizations; and any other maps or documents pertinent to design and deploy a mapping interface.

The City of Rapid City retains the right to amend the contract with the successful proposer to include other possible areas of concern with this project.

<u>Non-Discrimination/Americans with Disabilities Act</u>

The successful consultant shall comply with the requirements of Title 49 CFR Part 21 and Title VI of the Civil Rights Act of 1964. The successful consultant shall provide services in compliance with the Americans with Disabilities Act of 1990.

<u>Summary</u>

All plans, calculations, maps, reports, correspondence, minutes of meetings, and related data generated for the interface design will be included in the final documents submitted to the City of Rapid City.

ATTACHMENT 1
Disclaimers

The following two disclaimers are required on the map layout for printing.

> This GIS Data is provided "as is" without warranty of any representation of accuracy, timeliness, or completeness. The burden for determining accuracy, completeness, timeliness, merchantability, and fitness for or the appropriateness for use rests solely on the user. Rapid City and Pennington County make no warranties, express or implied, as to the use of the Data. There are no implied warranties of merchantability or fitness for a particular purpose. The user acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction, and update.

> Mapping by aerial methods. Does not represent a survey of the ground.