5. **Including, but not limited to, the following items in connection with construction of a new Hon Mario E. Ramirez, Jr. Juvenile Detention Facility:**
a) General status report by project architect (when necessary) or purchasing department
b Other related items

NO ACTION taken on item #5 a & b.

6. **Requesting authority to advertise and approval of draft specifications as attached hereto for "Additional Auctioneer Serivces", project.**

On motion of Commissioner Handy, seconded by Commissioner Garza, the Court made a UNANIMOUS.

7. **Approval of Request for Payment No. 23 in the amount of $146,046.10 from Descon Construction, L.P., contracted vendor for the "Mario E. Ramirez, Jr. Juvenile Justice Center" and certified for payment by project architect, V-A Architecture; C-05-007-08-02**

On motion of Commissioner Palacios, seconded by Commissioner Handy, the Court made a UNANIMOUS vote of approval.

8. **Presentation for discussion, consideration and approval of an "Addendum" to the current Interlocal Agreement between the County of Hidalgo and the Texas Conference of Urban Counties "Urban Counties" and related contracts in order to participate in the "Urban Counties" TechShare Program for the purpose of conducting & completing an assessment and developing an implementation plan for the Odyssey integrated justice software from "Urban Counties" awarded vendor Tyler Technologies in an amount not to exceed $19,400.00 with authority for County Judge to execute all applicable documents.**

On motion of Commissioner Palacios, seconded by Commissioner Garza, the Court made a UNANIMOUS vote of approval.

At this time Commissioner Handy steps out of the Court.

9. **Presentation by contracted engineer, S & B Infrastructure a status report for the: "GIS-Architectural And System Design-Phase I Review and Assessment" Project including responses to the survey distributed to all "Team Departments" with approval to identify funding for the purposes of proceeding to commence Phase II of the project.**

Presentation made by Mr. Bo Blackmon.

10. **Presentation by Precincts on the aftermath of the torrential rains and/or ongoing damages/problems/corrective actions taken or necessary with authority/approval to proceed to purchase (through all resources available from awarded vendors from state and/or cooperative purchasing programs & interlocals) equipment, goods and/or services necessary to address and alleviate those situations or conditions (as a result of torrential rains).**

Presentation made.

AI-4736
STATUS ON GIS PROJECT
CC REGULAR

15.A.9.

Date: 07/24/2007
Submitted By: Vangie Garcia, PURCHASING DEPT.
Submitted For: Marty Salazar
Department: PURCHASING DEPT.
Agenda Area: Purchasing Department **Purchasing only:** Hidalgo County

Information

CAPTION

Presentation by contracted engineer, S & B Infrastructure a status report for the : "GIS-Architectural And System Design-Phase I Review and Assessment" Project including responses to the survey distributed to all "Team Departments" with approval to identify funding for the purposes of proceeding to commence Phase II of the project.

BACKGROUND

Fiscal Impact

Attachments

No file(s) attached.

Form Routing/Status

Route Seq	Inbox	Approved By	Date	Status
1	Purchasing Department	Marty Salazar	07/19/2007 12:27 PM	APRV
2	Budget & Management	Dina Trevino	07/19/2007 01:57 PM	APRV
3	Dale Kennan	Dale Kennan	07/19/2007 02:40 PM	APRV
4	Auditor's Office		07/20/2007 03:05 PM	NEW

Form Started By: Vangie Garcia Started On: 07/18/2007 04:52 PM
Final Approval Date: 07/20/2007

Hidalgo County / Hidalgo County Drainage District No. 1
Review and Assessment of Final GIS Architectural and System Design Requirements Plan

DRAFT COPY

Submitted to:

Hidalgo County /
Hidalgo County Drainage District No. 1

May 2007

Submitted by:

S&B INFRASTRUCTURE, LTD.

HIDALGO COUNTY DEPARTMENT SURVEY

List all computers and/or computer hardware that you have purchased since January, 2006.
Examples: PCs, Scanners, Printers, Plotters, Servers, Routers, etc.

_____ _____

_____ _____

_____ _____

_____ _____

List all GIS related software that you have purchased since January, 2006.
Examples: ESRI ArcGIS, ESRI Extensions, AVL tracking devices, Microsoft Access, etc.

_____ _____

_____ _____

_____ _____

_____ _____

List and describe any GIS related data (coverages, layers, geodatabases, etc.) that you have bought, received and/or created since January, 2006.

_____ _____

_____ _____

_____ _____

_____ _____

List any GIS related topics, personnel training, concerns and/or ideas that you may have had since January, 2006.

_____

_____

_____

_____

If you have any questions or topics that you would like to discuss, please call Bo Blackmon at 956-926-5031.

Table of Contents

Section I: Review

During November, 2005, S&B Infrastructure attended meetings and conducted interviews with six Hidalgo County Departments to determine the objectives and goals for an enterprise-wide GIS System for Hidalgo County. The Hidalgo County Departments were:

- Elections Department
- Hidalgo County Drainage District #1
- Health Department
- IT Department
- Planning Department
- Sheriff's Department.

Below are the objectives and goals each of the six Hidalgo County Departments collected during the meetings and interviews.

1) **Hidalgo County Drainage District #1**
   - **a)** INVENTORY
   - **b)** GIS data (Raymondville Drain)
   - **c)** T1 Internet Connection
   - **d)** NEEDS
     - **i)** Desktop PCs (2)
     - **ii)** Servers and Network Configuration Equipment
     - **iii)** Plotter
     - **iv)** Staff
     - **v)** GIS Software
     - **vi)** Recommendation
     - **vii)** ArcIMS Website
   - **e)** HCCD #1 wants to be independent from Hidalgo County. HCCD #1 will need to sign inter-local agreement with county departments to avoid a connectivity issue.

The second department interviewed by S&B was Hidalgo County Elections Department on Wednesday, November 16, 2005.

2) **Elections Department**
   - **a)** GIS data
     - **i)** Geocode Voters
     - **ii)** Voting Districts
   - **b)** Dell Workstations
   - **c)** IBM Internal IMS Server – needs to be replaced
   - **d)** Own a HP 1055 Plotter – 36"
   - **e)** GIS Software
     - **i)** Arcview 9.1 (7 licenses)
   - **f)** Want ArcIMS Website – Housed on central IMS web server in IT.

Also on Wednesday, November 16, S&B conducted interviews with the

Section I: Review

Hidalgo County Health Department and Hidalgo County Planning Department. The two departments are located in the same building and share the Health Department's server.

3) **Health Department**
   - **a)** Disease control and tracking
   - **b)** Track all immunizations (TB etc.)
   - **c)** Track vector control (sprayers for mosquitoes and other insects)
   - **d)** Track bioterrorism issues (unusual & uncommon diseases; high security and sensitive data)
   - **e)** Assist Emergency Management
   - **f)** IT Assets
     - **i)** They have servers but none for GIS
     - **ii)** Dell servers running Server 2000 & 2003
     - **iii)** Currently has one ArcView license
     - **iv)** Need to upgrade some servers
     - **v)** Central offsite storage & local storage of data
   - **g)** Expanding Licensing Issues and Maintenance
     - **i)** Add one license of ArcINFO 9.1
     - **ii)** Add ArcSDE/ArcIMS
     - **iii)** Need separate DB server for sensitive data
     - **iv)** Needs funding for new server
     - **v)** Need expandability of Data Collection
     - **vi)** Needs to be HIPAA compliant because of security audit
     - **vii)** Health Department has two on-site power generators.

4) **Planning Department**
   - **a)** Review subdivision plans for the county
   - **b)** Review subdivision inspections
   - **c)** Need two ArcView licenses
   - **d)** Willing to house data on central repository
   - **e)** Use Health Department for storing local data (located in same building as Health Department)
   - **f)** Will have two CAD techs performing GIS who will need training.

The fourth interview conducted by S&B was with Hidalgo County Sheriff's Department, on Wednesday, November 16.

5) **Sheriff's Department**
   - **a)** Speed concerns. Currently using T1 through IT, complaints of lots of traffic
   - **b)** Needs for GIS
     - **i)** Query data between municipalities
     - **ii)** Crime analysis
     - **iii)** Office tracking. Preferably squad cars only (AVL)
     - **iv)** Crime mapping

Section I: Review

c) IT needs
   i) Needs own server for sensitive data
   ii) Faster bandwidth
   iii) 10 ArcView & one ArcInfo 9.1 license
d) GIS Personnel
   (1) 5 Dispatchers
   (2) 2 Data Analysts
   (3) 2 – 3 Data input techs
e) Facility is fully functional in emergency situations w/ power generator and lock down environment.

The fifth interview was conducted was on Thursday, November 17, with Hidalgo County IT Department.

6) **IT Department**
   a) IT handles all infrastructure support including phones, Internet, & all other connectivity
   b) Majority of county severs are housed within the IT Dept
   c) Currently has 7 ArcView 9.1 licenses & 1 ArcIMS license
   d) Dell shop and would like it to stay that way
   e) Prefer Windows, not trained in Unix
   f) Would like to host database server at IT dept
   g) Possibly integrate HelpStar Helpdesk software
      i) Needs
         (1) Upgrade outgoing T1 to DS3 to internet
         (2) Need training hours to learn administration of new server and software
         (3) ArcINFO 9.1.

The GIS Architectural and System Design Requirements report was delivered to the Hidalgo County Elections Department in January, 2006. A Hidalgo County GIS Steering Committee made up of members from all six county departments started the process for funding through a Capital Improvement Plan. After almost one year, S&B was asked to attend a meeting on January 18, 2007 to revisit where Hidalgo County stands in implementing an enterprise-wide GIS.

It was determined during this meeting that since so much time had passed, that it would be a good idea to survey each county department to see if there had been any changes as far as equipment, software, staff, training, etc. A Hidalgo County GIS Survey Form was developed by S&B Infrastructure and delivered to the Hidalgo County Purchasing Department to distribute to all six county departments on April 10, 2007. The last survey form was received by S&B Infrastructure on April 25, 2007. The following information was gathered from the survey forms by each county department.

Section I: Review

Hidalgo County Drainage District #1

Hardware Purchased

Dell Precision 670 Workstation
HP Designjet 4500 Plotter
Tape Library Powervault 124T
Web Server – Sun Microsystems Sunfire V240
Sun PowerEdge 3320 SCSI Disk Array
Central Backup – Dell PoweErdge 1850
Hummingbird 10
1500 RPM Disk Assembly

Software Purchased

ARCInfo 9.2
Microsoft Office 2007
AUTOCAD MAP 3D 2006

GIS Data

HCDD #1 Drainage System Geodatabase
Hidalgo County FIRM Geodatabase
Hidalgo County Appraisal District Geodatabase
Hidalgo County Road Data

GIS Related Topics (Training)

Intro to ArcGIS I & II
Building Geodatabases
Data Production & Editing Techniques

Hidalgo County Elections Department

Hardware Purchased

3 Dell Precision 670s
3 Dell Precision 380s
OCE TCS 500/Printer/Scanner/Controller
CISCO Switch Catalyst 3750

Software Purchased

ESRI ArcGIS
ESRI ArcINFO
ESRI ArcIMS

GIS Data

Tele Atlas North America, Inc Street Index
Tele Atlas State and County Data
Tele Atlas Zip Code Data & City
City of Pharr, McAllen, Edinburg Street Centerline Data
Appraisal District Parcel Data Geo-coded Address/all data converted to feature class into geodatabase
LRGV (911) Data

GIS Related Topics (Concerns)

Demand for GIS services has skyrocketed over the past few years. GIS

Section I: Review

requires new skills and knowledge. Maps play critical roles in Hidalgo County. Increased demand for GIS services has forced us to rethink traditional approaches as to how we find, analyze and use GIS information. Presenting mapping content in more-compelling ways is a priority for us. There is enough knowledge and data as well as correspondence and rapport between county and civil entities to support a GIS Department. An important enhancement in GIS applications is the ability to "push" information to the public. Interactive services provide the public with richer, more useful online experiences (i.e. GIS online, computers, etc.).

Additional classes since January 1, 2006
Intro to ArcView I & II
ArcIMS Administration I & II
All ESRI related classes online for v. 9.2
Intro to ArcGIS I & II
South Texas College – Intro to GIS (one semester)

Hidalgo County Health Department

Hardware Purchased
HP XS9300 Workstation
HP 2355 PC Monitors (2)
HP Proliant DL 360 Server
HP 1055 CMPlus Plotter

Software Purchased
ArcGIS Server 9.2
ArcView 9.2

GIS Data
None

GIS Related Topics (Concerns)
Need a good base map

Hidalgo County Planning Department

Hardware Purchased
In the process of purchasing an HP XW6400 Workstation

Software Purchased
ArcGIS 9.2

GIS Data
None

GIS Related Topics
None

evaluation. Categories under the 100-point system include response to RFQ. RFQ submittal evaluation will be based on the criteria outlined in Exhibit B

Hidalgo County Sheriff's Department

Hardware Purchased
None

Software Purchased
None

GIS Data
None

GIS Related Topics
Need a records management system that will support GIS geocoding. Need to implement AVL tracking devices for patrol fleet and investigation fleet. Need a cost effective solution to XML-based field reporting with GPS stamping.

Hidalgo County IT Department

Hardware Purchased
None

Software Purchased
None

GIS Data
None

GIS Related Topics
None

Section II: Assessment

Participants attending the Hidalgo County GIS Steering Committee Meeting on January 18, 2007, noticed how much more informed and knowledgeable those in attendance were on GIS. This new understanding showed that the committee recognizes the need and benefits of GIS in our daily tasks and within our community. Most committee members seemed very anxious to get GIS going, and seemed to be growing frustrated that it has taken so long to start implementing GIS.

Although there have been significant changes by the Hidalgo County Drainage District #1 with IT and GIS system additions and upgrades, other county departments have done very little, and in some cases, nothing at all. It should be noted that Hidalgo County Drainage District #1 has been considered a separate entity when it comes to the overall GIS architectural design and plan for Hidalgo County.

With that being said, the other five Hidalgo County departments still need to implement the GIS Architectural and System Design Report that was developed and delivered in January 2006. There seems to be a consensus among the county departments to support the idea of a local firm to host and maintain the County GIS Repository until the county IT Department is ready to take on those responsibilities. This would allow the county IT Department the flexibility of having an IT and GIS system maintained and operational 24 hours a day, 7 days a week, without having the pressure and responsibility of the system until they are ready and have been trained to take over those duties. A local firm would allow for faster connection speeds to the various county departments, and would make for a much smoother transition when it comes to handing over hardware and software duties to the County IT Department. A local firm will also be beneficial for the county when it comes to training and continued technical support by being readily available and willing to be onsite within a few minutes, should a question arise.

There have been changes to GIS software and IT hardware in the past 16 months since the GIS Architectural and System Design Requirements report was delivered to the county, so those things will need to be considered. One of the major changes with GIS software has been the development of ESRI's ArcGIS Server, which now includes ArcSDE and ArcIMS capabilities, and the discontinued support of stand-alone ArcIMS software. S&B proposed to purchase and use ArcGIS Server, ArcSDE and ArcIMS software in the GIS Architectural and System Design Requirements report during GIS Phase I. With the continued development of ArcGIS Server by ESRI, there is no longer the need to purchase ArcSDE or ArcIMS separately because they are both included in the new ArcGIS Server Enterprise Advanced Edition. Some of the added benefits and functionality of ArcGIS Server Enterprise Advanced Edition are:

Section II: Assessment

1. User is able to develop task specific mapping applications thereby reducing the chance of data corruption due to wrong task being preformed.
2. User has the ability to not only develop a website based on GIS data that the county has accumulated, but also the ability to design web based applications for the user to add or edit data (including advanced analysis if needed) or to simply view the data without the need for additional ArcGIS licenses.
3. ArcGIS Server allows for all GIS specific information to be stored in one location.
4. ArcGIS Server has the ability not only to assign users permissions to access or edit data, but to also assign permissions so that a user without the proper security will not even be able to see other data in the same location.
5. ArcGIS Server gives the user the ability to publish straight to Google Earth as a means of relating GIS to the community. This would allow the user the ability to distribute a kml file to link directly to Google Earth (example: voting locations on election day).
6. ArcGIS Server allows mobile application development including AVL Tracking devices.
7. ArcGIS Server can be maintained in a single location and require data to be checked back in at a specific time.

The ability of ArcGIS Server to maintain data and applications from a single location also supports the hosting and maintenance of a GIS Repository by a local firm outside of the county departments.

A subject that has been brought up in the past is for the county to use a "free hosting" service. There are several reasons why this would not be in the best interest of the county, but one of the most important reasons not to go in this direction would be the ability to develop custom applications and graphical user interfaces (GUI) for all of the different county departments involved in this project. These custom applications will allow the county to use existing staff, and not have to hire GIS experts to update and operate the GIS. Another reason would be the testing of various processes that it takes to make a complex system work. The "free hosting" services will take pictures, scanned documents and some of your data and provide a platform for them to be viewed and downloaded by the public. But these organizations will not test your applications or maintain them free of charge. If these organizations will perform these types of functions at all, it would happen without a cost. Furthermore, the county does not want all of the information available for the general public. For example, some of the information that belongs to the Sheriff's Department that will be updated using custom applications will not be available to anyone without proper security clearance. The IT/GIS system that is being proposed for Hidalgo County is a very complex system that will require many different custom GIS applications for the county departments involved with this project. This IT/GIS system will also require the

Section II: Assessment

development and maintenance of a huge data repository that will require different levels of security for different users within all county departments. It is always best for the GIS developers to understand the objectives and applications needed and wanted by the users to make sure that all concerns are taken seriously. Another huge benefit of using a local firm would be for the training of Hidalgo County staff. S&B will train all users on the custom applications that have been developed, and will always be available by phone to assist any time we are needed. By being a local firm, S&B has the flexibility of working with the different county department's schedules to provide training, instead of offering a limited number of training sessions that may not be convenient for the county staff. S&B also has the capability of providing on-site training to the different county departments thereby cutting down on the amount of time that a county employee is away from their job duties. These are just a few reasons why a local firm that specializes in GIS would be the best choice for Hidalgo County.

Assessment Summary/Recommendations

- Hidalgo County departments have done very little and in some cases nothing at all in the last year to move closer to a GIS system.
- A local firm should be hired to host and maintain the county GIS system until the county is ready to take on that responsibility. A local firm can provide faster connection speeds to the County, better training options and can be onsite within minutes if a question arises.
- Purchase ArcGIS Server Enterprise Advance Edition
- The GIS system being proposed for the county is complex and has the ability to limit what may be viewed by the public; this keeps sensitive and confidential data separate and private.