

## INFORMATION TECHNOLOGY

### MISSION STATEMENT:

The mission of the Information Technology Department is to provide the highest quality support, guidance and direction for all City information resources.

### CORE FUNCTIONS:

- 1) Systems management** - Coordinate and support the design, implementation, operation, training procedures and documentation for all purchased and/or developed information systems
- 2) Network and systems security** – Configure and maintain information security infrastructure for internal and external systems
- 3) Systems, equipment, and managed services procurement** – Assure procurement efficiency and effectiveness of all information systems and equipment
- 4) General direction and support** – Oversee the streamlined technical operation and support of all departments and ensure it aligns with the business objectives of the City

## 2015-2016 WORK PLAN

### CORE FUNCTION: #1 Systems management

#### Action:

- Serve the City's business functions such as Finance, Human Resources, Utility Billing, Recreation Center and Municipal Court
- Manage and access the City's data such as data base management, data storage and backup and recovery
- Enable integration across all systems, including voice and email integration, citizen access interfaces and communications
- Analyze, optimize and refine systems in response to changing business and/or technological conditions
- Assure that critical business operations, that serve staff and public, are as current and problem-free as possible

#### Activity Measurement:

- Refine and enhance the Finance and Human Resource's Eden Software System quarterly
- Improve and enrich the City's cashiering and recreation systems annually
- Modify and heighten the City's document imaging system, call management systems and GIS Systems annually
- Implement vendor supplied changes to related backup management, server management and internet access management weekly
- Assure system integrity and integration daily

#### Meets City Council's Premier Statements:

Cedar Hill has Distinctive Character.

Cedar Hill has Strong and Diverse Economy.

## **CORE FUNCTION: #2 Network and systems security**

### **Action:**

- Secure the internal data and telephone network
- Protect all external links to and from the City's network
- Expand the City's Information Security Plan, including the Business Continuity Plan
- Increase security awareness and protection of sensitive information
- Assess Technology for Citywide security matters

### **Activity Measurement:**

- Analyze the Comprehensive Security Assessment for compliance annually
- Revise the City's Security Plan, which includes the Business Continuity Plan, the Backup Strategy Plan, the Server Maintenance Plan, the Network Protection Plan and test critical aspects of the plan annually
- Examine the Computer Security Sections of the Personnel Policy Manual annually
- Evaluate network security issues, such as intrusions and access violations, daily
- Review email security issues, such as spams and viruses, daily
- Observe internet access speed daily
- Monitor internet access content daily
- Renew all security certificates annually
- Implement security systems changes - to protect the City's systems from external and internal damage from attacks such as viruses, intrusion and spam daily

### **Meets City Council's Premier Statements:**

Cedar Hill has Distinctive Character.

Cedar Hill is Safe.

Cedar Hill is Clean.

Cedar Hill has Strong and Diverse Economy.

**CORE FUNCTION: #3 Systems, equipment and managed services procurement**

**Action:**

- Establish prerequisites for all new or modified systems and equipment
- Coordinate solicitation of vendor documentation and responses
- Manage changes to City's information systems and equipment with vendor personnel
- Recommend purchase options for all information systems and equipment acquired by the City
- Supervise contracted and managed services activities
- Research all available sources, especially Texas Department of Information Resources qualified vendors, for determining eligible sources of information systems and equipment
- Carry out the City's Computer Replacement Program
- Select vendors or service providers that provide the best value for the City, consistent with state law and defined user requirements
- Use industry standards for soliciting and documenting system requirements

**Activity Measurement:**

- Replace servers and major network components on a five-year replacement program
- Replace inoperable microcomputers, laptops and mobile devices within 24 hours

**Meets City Council's Premier Statements:**

Cedar Hill has Distinctive Character.

Cedar Hill has Strong and Diverse Economy.

**CORE FUNCTION: #4 General Direction and Support**

**Action:**

- Advise senior management on Information Technology issues
- Identify training and developmental requirements and opportunities
- Manage inventories of all systems and equipment in service
- Offer support for all users of City Information Technology, including employees, citizens and the general public
- Provide technical training to employees
- Prepare and implement a technology plan for the City's technology base
- Evaluate cost-effective IT training opportunities

**Activity Measurement:**

- Inventory Citywide IT resources annually
- Meet with directors and managers to assess status of installed systems and equipment and to forecast future requirements semi-annually
- Coordinate organizational or departmental reviews of existing or new computer systems quarterly
- Fulfill Technology Plan and update annually

**Meets City Council's Premier Statements:**

Cedar Hill has Distinctive Character.

Cedar Hill has Texas Schools of Choice.

Cedar Hill has Strong and Diverse Economy.

**SUMMARY - INFORMATION TECHNOLOGY**

EXPENDITURES	ACTUAL FY 13	ACTUAL FY 14	BUDGET FY 15	EST. FY 15	CONTINUED	FISCAL YEAR 2015-2016
						GROWTH
						PROPOSED
Personnel	\$ 299,453	\$ 313,833	\$ 418,460	\$ 415,535	\$ 421,365	\$ 421,365
Supplies	12,488	42,955	12,300	18,460	39,950	39,950
Maintenance	198,673	130,960	154,835	159,205	256,510	256,510
Services	165,656	94,114	120,375	130,845	191,450	191,450
Utilities	25,864	24,297	7,035	7,475	6,480	6,480
Lease/Rentals	78,591	106,829	177,515	133,205	222,495	245,745
Sundry	18,079	16,913	21,040	12,280	29,590	29,590
<b>TOTAL Dept. Budget</b>	<b>\$ 798,804</b>	<b>\$ 729,901</b>	<b>\$ 911,560</b>	<b>\$ 877,005</b>	<b>\$ 1,167,840</b>	<b>\$ 1,191,090</b>
						<b>\$ 1,167,840</b>

STAFFING	ACTUAL FY 13	ACTUAL FY 14	BUDGET FY 15	EST. FY 15	CONTINUED	FISCAL YEAR 2015-2016
						GROWTH
						PROPOSED
Information Systems Director	0.0	1.0	1.0	1.0	1.0	1.0
Information Systems Manager	1.0	0.0	0.0	0.0	0.0	0.0
Senior Information Systems Analyst	1.0	1.0	1.0	1.0	1.0	1.0
Information Systems Analyst	1.0	1.0	2.0	2.0	2.0	2.0
Computer Technician	0.73	0.73	0.50	0.50	0.70	0.70
Part-Time Clerk	0.5	0.5	0.5	0.5	0.5	0.5
<b>TOTAL Staffing</b>	<b>4.23</b>	<b>4.23</b>	<b>5.00</b>	<b>5.00</b>	<b>5.20</b>	<b>5.20</b>
						<b>5.20</b>

REPLACEMENT VEHICLES & EQUIPMENT:	ACTUAL COST	LEASE COST	FUNDED
Desktop Computers (30)	\$ 24,000	\$ 6,200	Yes
SQL Server	\$ 14,000	\$ 2,842	Yes
Laptops (9)	\$ 41,400	\$ 10,695	Yes
Computer Monitors (14)	\$ 7,560	\$ 1,953	No
SQL Server	\$ 14,000	\$ 2,842	No

PROGRAMS:	PRIORITY	COST	FUNDED
Public Wi-Fi	\$ 1	\$ 23,250	No

## Proposed Program Description

### Information Technology Department

#### Program One (1), Public Wifi

**Program Cost: \$23,250**

**Tax Rate Impact: \$0.0008**

**Program Survey Cost: \$14,400**

**Included in City Manager's Budget: No**

#### **Program Description:**

The IT Department would like to deploy an outdoor wireless solution to provide public internet access for visitors and residents.

As sales of smart phones and tablets increase, and as phone companies begin eliminating unlimited data plans, wireless use is increasing drastically.

My research in this area has shown the following:

- Nearly 98% of Wi-Fi consumers log onto Wi-Fi networks once daily
- Nearly 57% log in multiple times every day
- 91% of those expect Wi-Fi when on the road
- 84% want citywide Wi-Fi
- People access Wi-Fi on their smart phones more often than their laptops
- 81% prefer Wi-Fi over 4G, and 82% want their service provider to offer special 4G/Wi-Fi packages
- 90% of patrons make hotel and travel decisions based on Wi-Fi availability
- Nearly 96% expect it to be free

In addition, the availability of wireless has been shown to increase the use of public space:

- 25% of the people who visit public spaces in cities with Wi-Fi availability would not have visited before wireless was available
- 70% said they came more often because of wireless access
- The average laptop user makes 2, one hour visits to a public space per week if wireless is an option

In an effort to enhance our public spaces and provide citizens and visitors a premier experience when visiting the City of Cedar Hill, public Wi-Fi would be an essential part increasing the City's visibility.

### **Program benefits and outcomes:**

- ✓ Would bring more visitors and residents into public areas and extend their stay once they arrive
- ✓ Attracting and retaining “Digital Nomads” – sales people, consultants, web workers, technical workers and students who work on the go
- ✓ Increased use of outdoor spaces such as parks, Recreation Center and library plazas
- ✓ Increasing street activity

### **Parameters:**

- Service is intended to be used primarily outdoors, on streets, sidewalks, and in parks and other public gathering areas. Extension into buildings is not required, but not necessarily prohibited.
- The goal is not to supplant current services designed for businesses and residents. The primary audience will be citizens and visitors to The City.
- Service should not prevent businesses from providing their own wireless service to their customers nor should it prevent businesses or residents from subscribing to the wireless service of their choice.
- The system should protect against misuse, ranging from hogging bandwidth to illegal activities.

## **Program Survey:**

It is recommended that the city hire a consultant to conduct an outdoor wireless survey for the planning phase of this project to create a blueprint for the execution phase that would follow. The results of the survey would provide detailed design recommendations and a specific project plan which would be essential to a successful implementation.

The following Wireless site survey tasks will be performed for the city during this engagement:

- Site Information – City of Cedar Hill
  - Indoor and outdoor wireless coverage
  - Network aggregation sites
  - City facilities
  - Public areas
- Access Points
  - Aesthetic requirements
  - Outdoor requirements
  - Antenna requirements
  - Lift and ladder availability
  - Access point (AP) model selection
  - Cabling requirements
  - Power requirements
  - AP installation responsibilities
  - Cabling responsibilities
- Unified WLAN Controller
  - Number of Aps required
  - Controller type
  - Cabling requirements
  - Capacity/redundancy
  - Power requirements
  - Prime Infrastructure
  - Server requirements
  - Licensing requirements
  - Guest Access/Roles
  - Guest management
  - Authentication method
  - Guest portal

- Splash page settings
- AAA requirements
- Wireless Configuration
  - Security requirements
  - SSID requirements
  - Data rates required
  - 802.11a/g/n/ac required
  - Site maps available with dimensions/scale in electronic format
  - Type of building/wall construction
  - Mounting height
  - Mounting locations
  - Predictive site survey (RF modeling) to estimate wireless coverage
  - Wireless AP self-healing requirements
  - AAA requirements
- Client Requirements
  - *Client Density*
  - *Types of client devices used*
- *Application Requirements*
  - Guest access
  - Location-based services
  - VPN
  - RFID
  - Voice

**Finance Department's Comments:**

This program is eligible for the Equipment Lease Fund. The budgeted cost of the Program is \$90,000 with a lease term of \$23,250 per year for 5 years.

**This program reflects City Council's Premier Statement:**

- ✓ Cedar Hill has an integrated, Safe and Efficient Infrastructure.

INFORMATION TECHNOLOGY  
VEHICLES & EQUIPMENT

ITEM	X IF ITEM IS UNRELIABLE	QTY	YEAR	DESCRIPTION OF REPLACEMENT ITEM	COST	ESTIMATED LIFE	CM APPROVED
<b>MICROCOMPUTERS:</b>							
<b>In-Service</b>							
Group B - Pentium 4 >3.0 Mhz 1-5GB RAM		30	2016	Replace with HP Core 2 Duo 2 GB Ram	\$ 24,000	5 Years	Yes
Group C - Pentium 4 >3.0 Mhz 1-2 GB RAM		70	2012				
Group D - Pentium 4 > 3.0 Mhz 2 GB Ram		50	2013				
Group A - Pentium 4 3.0 Mhz 1 GB RAM		55	2014				
Group E - Pentium 4 <>3.0 Mhz 1 GB RAM		30	2015				
<b>In-Service Microcomputers Subtotal:</b>		<b>235</b>					
<b>LAPTOPS/Mobile Units:</b>							
<b>In-Service</b>							
IT Department							
for use with Projectors		2	2004				
Loaners		12	2011				
Loaners		16	2005				
Loaners		13	2006				
Loainer (assigned to ACM)		1	2007				
Training		10	2008				
Director/Analysts		3	2008				
Police Dept (Laptops/Mobile Units/PDA's)		62					
Library		6					
Administration		3					
Court		3					
EDC		1					
HR		1					
Fire		12					
Parks		3					
Public Works		3					
Code		4					
Police Dept (Laptops/Toughbook Mobile Units)		10	2015				
Police Dept (Laptops/Toughbook Mobile Units)		9	2016		\$ 41,400	5 years	Yes
<b>In-Service Laptops/Mobile Units Subtotal:</b>		<b>174</b>					
<b>PROJECTORS:</b>							
IT Dept (Loaner)		2	2004				
Library		1	before 2005				
Police Dept		1	before 2005				
Recreation Center		3	before 2005				
IT Dept (Spare)		1	2005				
Administration		1	2005				
Fire		1	2006				
Conference Room		1	2006				
EDC		1	2006				
Gov't Center Conference Rooms		9	2008	Conference Room D			
IT Dept Training		1	2008				
IT Dept Demonstrations		1	2009				
<b>Projectors Subtotal:</b>		<b>23</b>					
<b>PRINTERS:</b>							
<b>In-Service</b>							
Color Laser Printers		24	Before 2005				
B/W Laser Printers		58	Before 2005				
Inkjet Printers		32	Before 2005				
Plotters		5	Before 2005				
B/W Laser Printers		8					
B/W Laser Printers (purchased FY05)		3	2005				
Inkjet Printers (purchased FY05)		3	2005				
Color Laser Printers (purchased FY06)		15	2006				
Color Laser Printers (purchased 2007)		15	2007				
<b>In-Service Printers Subtotal:</b>		<b>133</b>					

**INFORMATION TECHNOLOGY  
VEHICLES & EQUIPMENT**

ITEM	X IF ITEM IS UNRELIABLE	QTY	YEAR	DESCRIPTION OF REPLACEMENT ITEM	COST	ESTIMATED LIFE	CM APPROVED
<b>SCANNERS:</b>							
In-Service							
Mid Speed 8.5 x 14		9	2003				
Hi Speed 8.5x14 Scanner		4	2003				
Hi Speed 8.5x17 Scanner		1	2003				
E-sized Scanner		2	2003				
Desktop Scanners		6	2004/05				
Desktop Scanners		6	2006				
Desktop Scanners		4	2007				
Mid Speed 8.5 x 14		1	2008				
Desktop Scanners		5	2008				
<b>In-Service Scanners Subtotal:</b>		<b>33</b>					
<b>SERVERS:</b>							
Sigma 3.0:1GB RAM: 160 GB (Class Payment Server)		1	2004				
Sigma 3.2:1GB RAM: 160 GB (Image Server)		1	2005				
Dell Xeon 3.0 Mhz,2GB RAM, 160 GB (Scada)		1	2005				
Dell Xeon 3.0 Mhz,2GB RAM, 160 GB (Scada Bkup)		1	2005				
Xenon 3.0 Mhz,2GB RAM, 320 GB (LaserFiche)		1	2005				
Dual Xenon 3.0 Mhz, 2GB, (ESRI)		1	2005				
Server for PD TLETS		1	2006				
Dual Xenon 1.8,3GB RAM,18/275GB		1	2006				
Compellent SAN Server		1	2012				
Dell Dual Xeon 3.2 MHz: 4 GB RAM CRM Server		1	2006				
Dell Dual Xeon 3.2 MHz: 4 GB RAM Internet Server		1	2006				
Teleworks Call Management Server w/ Dig Interface		1	2006				
Dual Core 2x2.66Mhz w/ 16GB Ram (VMWare)		2	2007				
PowerEdge 860 Xeon 3040 w/ 4GB Ram (AD Svrs)		2	2008				
Dual Core 2x2.66Mhz w/ 16GB Ram (VMWare)		2	2008				
Cisco IP Telephony System		5	2008				
Dual Core 64 Bit w/ 16MB Ram (Exchange)		1	2009				
Dual Core 2x3.16Mhz w/ 16GB Ram (VMWare)		3	2009				
2x Intel® Xeon® E5-4620 2.20GHz,		2	2016	SQL Servers replacement	\$ 28,000	7 Years	Partial (1)
<b>In-Service Servers Subtotal:</b>		<b>23</b>					
<b>SERVER EQUIPMENT</b>							
AIT3 Tape Drive Upgrades		1	2007				
Backup Server Storage System		1	2008				
Backup Server Storage System		1	2009				
<b>NETWORK EQUIPMENT</b>							
<b>In-Service</b>							
Routers/Switches		2	before 2004				
Backup Master Switch/Router		1	before 2004				
SWRCC Switch		1	2006				
Routers/Switches		2	2007				
Network Security System		1	2007				
Wireless Access Points		7	before 2008				
Routers/Switches		23	2008				
Master Router/Switch		1	2008				
Wireless Access Points		15	2008				
Wireless Access Points		2	2009				
Routers/Switches		2	2009				
Fiber Optic Network			2014				
<b>OTHER:</b>							
Outbound Call Line		1	2005				