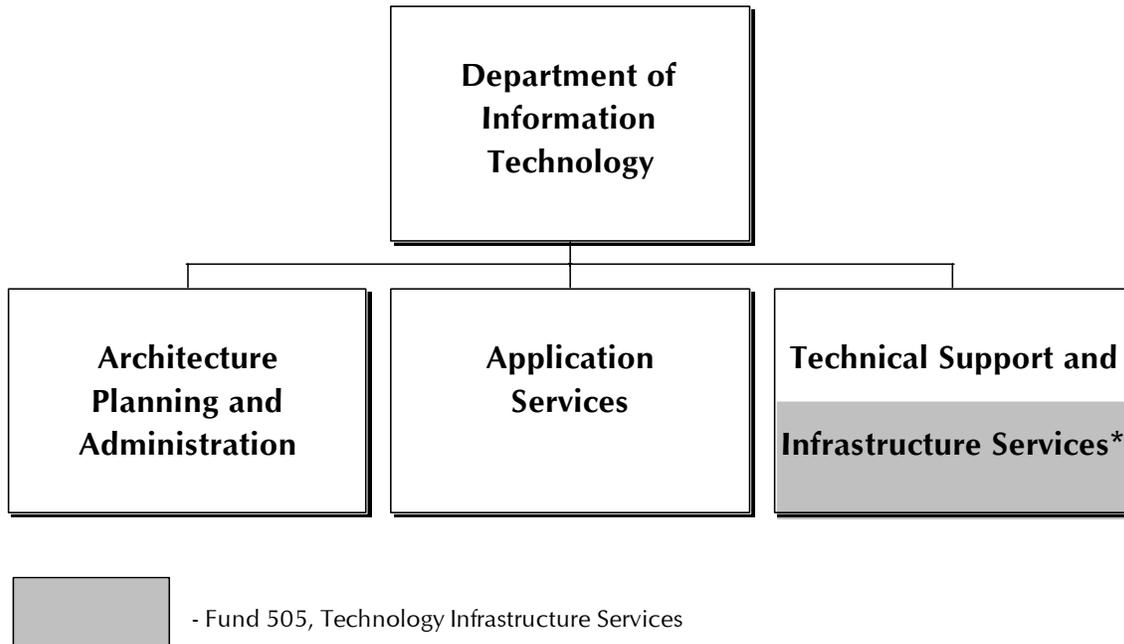


Fund 505 Technology Infrastructure Services



* All staffing and operating support for Infrastructure Services is found in Volume 2, Fund 505.

Mission

To provide a reliable and secure technology infrastructure foundation required to support County business processes and systems that strengthen the public service commitment of Fairfax County.

Focus

The infrastructure activity in the Department of Information Technology (DIT) provides the underlying technology foundation supporting information systems and communications for County government. DIT coordinates all aspects of information technology for the County and plays an enabling role in advancing the strategic value of technology to transform work processes and provide quality services to customers. Funding for DIT activities is included in the General Fund, two Funds that DIT manages (Funds 505 and 104), and in Fund 120, E-911 which supports public safety information technology projects. Fund 505, Technology Infrastructure Services, includes technology activities performed for County agencies such as replacement of County desktop computers and servers, operation of the County computer center (Enterprise Technology Operation Center, or ETOC), monitoring and maintenance of the enterprise data communications network, and Radio Center services. Fund 104, Information Technology, funds major information technology projects, including those with countywide strategic importance, such as infrastructure and application system modernization initiatives. Fund 120, E-911 funds DIT activities that support the County's emergency communications and emergency dispatch systems. These activities are reviewed by the Public Safety Policy Governance Board, established in FY 2005, to ensure the integration of public safety initiatives. One of the major infrastructure improvements for the County is the fiber Institutional Network (I-Net), which is currently being implemented. DIT staff are in the process of migrating the County's data and video functions to the I-Net, and have responsibility to plan for, authorize and manage the expenditures and implementation of this program. The equipment associated with this initiative is directly supported from the I-Net program funds within Fund 105, Cable Communications Fund.

Fund 505 Technology Infrastructure Services

Support for Fund 505 is derived from its customers (County agencies and other entities such as the Fairfax County Public Schools) and a General Fund Transfer, which helps support the new Public Service Radio System; expenditures are primarily driven by customer requests for information technology services (i.e., public safety radio system maintenance, enhanced telecommunications services, use of the data center infrastructure utility-like system for data processing and data storage requirements, and required software maintenance and licenses, etc.).

DIT's Technology Infrastructure Division provides intra-governmental services including the operation and maintenance of the County computer center and server platforms 24 hours a day, seven days per week; the safeguarding of County software license obligations, data repositories and information assets; the maintenance of County data and radio communication networks; and the provision of integrated communication service to all County agencies and other government customers. The County's enterprise network provides bandwidth securely connecting over 200 facilities to the vast array of business applications available on the County mainframe or server platforms. A General Fund Transfer is provided to maintain reserves for the replacement and upgrade of enterprise computer equipment.

THINKING STRATEGICALLY

Strategic issues for the department include:

- Maintaining communication interoperability within the County and with other government entities; and
- Providing adequate storage, backup and security for County data.

DIT also manages a PC replacement fund in Fund 505, ensuring funding is available for scheduled desktop device technology refresh to remain consistent with advancements in technology required for services. A comprehensive review conducted in FY 2004 resulted in recommendations to continue a four year replacement cycle, provide options for restructuring the end-user training, further review various service options for deploying equipment, increase the number of PCs in the program to account for additional purchases by agencies in prior years, and broaden the types of PCs that are provided for replacement to better match needs of users to types of available desktop technology. In addition, increasing demands on security at the desktop level and client software licensing are included in the cost to deploy PCs. This optimizes both allocation of IT assets and provides more efficient and predictable desktop maintenance and support. The annual amount collected per PC for FY 2008 remains \$500/year, so that the future year cash flow will be sufficient to support the hardware and software components of this essential program.

DIT is also responsible for coordinating radio repair and engineering support to County agencies and the Fairfax County Public School system. Operational maintenance of the radio network is of primary importance to the County public safety agencies, public works agencies, Fairfax County Public Schools (FCPS), and other County agencies. With the deployment of both the new public safety and public service radio systems, the operations of the Radio Center now include interoperability management to ensure 24/7 communication with other jurisdictions. To support the operational and maintenance requirements of the systems, costs will be recovered from user entities such as the FCPS and Fairfax Water, and with a General Fund Transfer.

Fund 505 Technology Infrastructure Services

New Initiatives and Recent Accomplishments in Support of the Fairfax County Vision

 Maintaining Safe and Caring Communities	Recent Success	FY 2008 Initiative
Ongoing implementation of radio system infrastructure and radio refresh, as well as support for the public safety and public service radio systems, ensuring network monitoring, system performance, database management, inter-jurisdictional compatibility coordination and interoperability, identity tracking, radio reprogramming, compliance with FCC band modifications (re-banding), and contingency and redundancy testing consistent with emergency management plans.	☑	☑
 Connecting People and Places	Recent Success	FY 2008 Initiative
Continue to implement the equipment required for 'lighting up' the County's fiber optic Institutional Network (I-Net), which will, over the next several years, replace most of the commercial carrier provided wide area network and provide the transport layer for the County and Schools voice, data and video traffic.	☑	☑
Continue to expand the use of remote access technology for providing secure, less bandwidth-intensive access to County systems for the County's workforce at small remote sites, and for supporting the expansion of telework.	☑	☑
 Exercising Corporate Stewardship	Recent Success	FY 2008 Initiative
Continue the implementation of a new enterprise-wide security architecture that: <ul style="list-style-type: none"> ▪ uses a multi-pronged approach to providing internal government, business partners and public access to appropriate electronic transactions and services; ▪ provides for an advanced authentication process to comply with security and privacy concerns supporting e-government programs; and ▪ provides improved monitoring, intrusion detection, and auditing capability. 	☑	☑
Continue to implement a multi-phase Network Security Perimeter that uses a multiple firewall strategy to safeguard corporate data, facilitating expansion of e-government transactions and fulfilling the Electronic Protected Health Information (ePHI) requirements of the Health Insurance Portability and Accountability Act (HIPAA).	☑	☑
Improved network security through implementation of Network Address Translation (NAT), which "hides" internal IP addresses from display to outside sources, and employ Open Standards.	☑	

Fund 505 Technology Infrastructure Services

 Exercising Corporate Stewardship	Recent Success	FY 2008 Initiative
Continue server consolidation initiative to optimize allocation of server processing resources, reduce server footprint, operating and software licensing costs, and balance server resources across applications providing increased effectiveness and efficiency of the management and utility of the County's server farm.	☑	☑
Continue to provide additional storage capacities in the County's Storage Area Networks (SAN) that support the increasing portfolio of systems and data. Also provide local "Hot Site" backup capabilities for critical systems data. This initiative will strengthen the County's disaster recovery posture and provide recovery capabilities locally.	☑	☑
Continue on-going improvements to the County's critical Enterprise Technology Operations Center (ETOC) as part of a multi-year facility modernization initiative to ensure that the ETOC remains a highly reliable and secure resource supporting the technology systems critical to County business operations, thus improving operational effectiveness within an optimized fail-safe environment.	☑	☑
Continue to refresh desktop and laptop computers under the PC Replacement Program, thereby replacing obsolete equipment. PCs in the program are replaced at the end of a four-year cycle. Incorporate 'software assurance' coverage for all PCs on the County network to ensure software licensing obligation and ability to implement enhancements without having to purchase individual software upgrades.	☑	☑
Continue to improve utility and efficiency of corporate and agency specific business applications through the County's Enterprise Application Integrator (EAI) tool 'Webmethods', a middleware product that creates a seamless process between disparate applications.	☑	☑
Implemented automated tools within the mainframe processing environment to reduce manual intervention of systems processing, automate first tier problem notification, automated restarts, and escalation processes. The long-term goal is to move toward a "lights out" operation environment that would streamline processes and reduce the dependence of personnel resources for operations and redirect the focus to the growing area of server and network monitoring.	☑	☑

Fund 505 Technology Infrastructure Services

Budget and Staff Resources

Agency Summary				
Category	FY 2006 Actual	FY 2007 Adopted Budget Plan	FY 2007 Revised Budget Plan	FY 2008 Advertised Budget Plan
Authorized Positions/Staff Years				
Regular	67 / 67	67 / 67	67 / 67	67 / 67
Expenditures:				
Personnel Services	\$5,715,342	\$6,329,658	\$6,329,658	\$6,614,660
Operating Expenses	18,607,028	21,340,874	22,079,355	21,297,841
Capital Equipment	3,754,852	463,500	3,892,016	1,400,000
Total Expenditures	\$28,077,222	\$28,134,032	\$32,301,029	\$29,312,501

Position Summary		
<u>Network/Data Communication Services</u>	<u>Data Center Services</u>	<u>Radio Center Services</u>
1 Info. Tech. Program Director I	1 Info. Tech. Program Director II	1 Network/Telecom Analyst IV
1 Info. Tech. Program Manager I	3 Info. Tech. Program Managers II	3 Network/Telecom Analysts III
2 Network/Telecom Analysts IV	4 Systems Programmers III	1 Communications Engineer
12 Network/Telecom Analysts III	5 Systems Programmers II	2 Communications Technicians
4 Network/Telecom Analysts II	3 Systems Programmers I	2 Electronic Equipment Technicians II
1 Network/Telecom Analyst I	2 Programmer Analysts III	1 Administrative Assistant III
1 Management Analyst I	1 Programmer Analyst II	
	1 Programmer Analyst I	
	5 IT Technicians III	
	8 IT Technicians II	
	1 IT Technician I	
	1 Business Analyst I	
TOTAL POSITIONS		
67 Positions / 67.0 Staff Years		

FY 2008 Funding Adjustments

The following funding adjustments from the FY 2007 Revised Budget Plan are necessary to support the FY 2008 program:

- Employee Compensation** **\$417,963**
 An increase of \$417,963 associated with salary adjustments necessary to support the County's compensation program.
- Personnel Services Reduction** **(\$132,961)**
 A decrease of \$132,961 in Personnel Services as part of an across-the-board reduction to meet budget limitations based on available revenues as a result of a flattening residential real estate market.
- Infrastructure Services** **(\$1,226,204)**
 A net decrease of \$1,226,204 due to the savings of \$2,430,372 in telecommunication charges resulting from implementation of the I-Net and the concurrent termination of commercial data circuits. The I-Net is the mechanism to transmit data across and between County and school sites in lieu of paying a commercial vendor for these services. This decrease is partially offset by an increase of \$1,204,168 to purchase software license and maintenance contract renewals; support the replacement of network switches that will no longer be supported by the manufacturer and are necessary to maintain the County's Wide Area network; and augment security measures for daily application operations and incident investigation required to further protect the County from unauthorized entry into County systems, attacks, viruses, data destruction and other cyber threats.

Fund 505

Technology Infrastructure Services

- ◆ **Replacement and Upgrade of Computer Equipment** **\$1,400,000**
A net increase of \$1,400,000 to continue implementing the County's disaster recovery program for non-mainframe applications. As part of the County's Continuity of Operations Plan (COOP), the \$1.4 million will be used to continue to develop and implement a disaster recovery process for the critical server-based applications that must remain operational in order for the County to perform its essential functions. Examples of these types of applications include the document imaging and automated clearing house payment applications in the Department of Finance, wireless applications supporting inspectors in the Department of Public Works and Environmental Services and GIS applications across the County.

- ◆ **PC Replacement Program** **\$719,671**
A net increase of \$719,671 in the PC Replacement Program based on the number of PCs scheduled to be replaced in FY 2008, according to the four-year replacement cycle.

- ◆ **Carryover Adjustments** **(\$4,166,997)**
A decrease of \$4,166,997 as a result of one-time funding at the *FY 2006 Carryover Review*.

Changes to FY 2007 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2007 Revised Budget Plan since passage of the FY 2007 Adopted Budget Plan. Included are all adjustments made as part of the FY 2006 Carryover Review and all other approved changes through December 31, 2006:

- ◆ **Carryover Adjustments** **\$4,166,997**
As part of the *FY 2006 Carryover Review*, FY 2007 expenditures increased \$4,166,997 due to encumbered carryover of \$3,462,879 and unencumbered carryover of \$704,118 to complete purchases towards the development of a disaster recovery program for non-mainframe applications.

Key Performance Measures

Objectives

- ◆ To maintain the number of business days to fulfill Telecommunications service requests for a) non-critical requests at a standard of 4 days; b) critical requests at a standard of next business day; and c) emergency requests at a standard of the same day.

- ◆ To maintain the percentage of LAN/PC workstation calls to Technical Support Services closed within 72 hours by at 92 percent.

- ◆ To maintain the resolution rate for the average first-call problem for the Technical Support Center (TSC), DIT Help Desk at 80 percent.

Fund 505 Technology Infrastructure Services

Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 2004 Actual	FY 2005 Actual	FY 2006 Estimate/Actual	FY 2007	FY 2008
Output:					
Responses to calls for repairs on voice devices	4,836	4,139	4,600 / 4,351	4,500	4,500
Moves, adds or changes (voice and data)	2,498	2,858	2,400 / 2,919	2,300	2,300
Calls resolved	29,117	22,557	24,800 / 24,610	24,800	24,800
Customer requests for service fulfilled by Technical Support Center (TSC) (1)	74,872	66,538	73,000 / 75,649	79,431	79,431
Efficiency:					
Cost per call	\$102	\$92	\$105 / \$98	\$105	\$105
Average number of hours annually spent per staff member to resolve calls	1,407	1,042	1,042 / 1,034	1,042	1,042
Customer requests for service per TSC staff member	6,239	5,545	6,100 / 6,304	6,619	6,619
Service Quality:					
Customer satisfaction with telecommunication services	90.0%	90.0%	95.0% / 93.5%	95.0%	95.0%
Percent of customers reporting satisfaction with resolution of LAN/PC workstation calls	80%	75%	80% / 79%	82%	82%
Percent satisfaction of County employees with support from Technical Support Center	86%	85%	89% / 85%	89%	89%
Outcome:					
Business days to fulfill service requests from initial call to completion of request for non-critical requests	4	4	4 / 4	4	4
Business days to fulfill service requests from initial call to completion of request for critical calls	2	2	2 / 2	2	2
Business days to fulfill Telecommunications service requests for emergencies	2	1	1 / 1	1	1
Percent of calls closed within 72 hours	78%	85%	88% / 95%	92%	92%
Percent of first-contact problem resolution	80%	63%	70% / 76%	80%	80%

(1) The FY 2004 merger of the Human Services IT help desk with DIT increased customer requests for TSC service.

Fund 505

Technology Infrastructure Services

Performance Measurement Results

This fund provides critical infrastructure services, including integrated communication service to all County agencies and other government customers; response to service requested through the help desk; and maintenance of the County data communication networks. The performance measures for this fund focus on delivering and securing a stable IT environment.

Overall, many factors continue to affect agency performance, including more calls seeking assistance with complex technology; new agency-specific applications that the Technical Support Center had not been trained to help with; increased use of remote access for telework; older generation PCs on the network; and many customized desk-top configurations in agencies.

DIT expects that customer requests for service will continue to increase in FY 2007 and FY 2008. Recent changes in TSC help desk software have contributed to streamlined call-processing and call-escalation workflows. These improvements have been combined with improved system monitoring and greater reliance on remote interventions to resolve service problems. As a result, in FY 2006 both the percentage of LAN/PC calls resolved within 72 hours and the percentage of all calls resolved on first contact exceeded the performance objectives set. It is also worth noting that these better-than-expected results occurred at the same time that the number of customer requests per staff member were slightly above the total number originally projected.

Fund 505

Technology Infrastructure Services

FUND STATEMENT

Fund Type G50, Internal Service Funds

Fund 505, Technology Infrastructure Services

	FY 2006 Actual	FY 2007 Adopted Budget Plan	FY 2007 Revised Budget Plan	FY 2008 Advertised Budget Plan
Beginning Balance	\$6,397,996	\$2,454,182	\$7,646,278	\$3,388,046
Revenue:				
Radio Services Charges	\$634,034	\$584,949	\$584,949	\$621,490
PC Replacement Charges	5,184,138	5,580,000	5,580,000	6,180,000
DIT Infrastructure Charges				
County Agencies and Funds	17,077,812	18,596,119	18,596,119	18,463,158
Fairfax County Public Schools	1,305,229	1,357,438	1,357,438	1,411,736
Outside Customers	108,000	108,000	108,000	108,000
Subtotal DIT Infrastructure Charges	<u>\$18,491,041</u>	<u>\$20,061,557</u>	<u>\$20,061,557</u>	<u>\$19,982,894</u>
Total Revenue	\$24,309,213	\$26,226,506	\$26,226,506	\$26,784,384
Transfer In:				
General Fund (001) ¹	\$5,016,291	\$1,816,291	\$1,816,291	\$1,814,103
Total Transfer In	<u>\$5,016,291</u>	<u>\$1,816,291</u>	<u>\$1,816,291</u>	<u>\$1,814,103</u>
Total Available	\$35,723,500	\$30,496,979	\$35,689,075	\$31,986,533
Expenditures:				
Infrastructure Services	\$17,694,688	\$20,069,461	\$22,572,799	\$19,085,441
Radio Center Services	833,713	901,240	923,366	935,593
Computer Equipment Replacement Program	6,173,629	5,663,331	5,677,745	6,391,467
Upgrade/Replacement of Technology				
Infrastructure Equipment	3,375,192	1,500,000	3,127,119	2,900,000
Total Expenditures	<u>\$28,077,222</u>	<u>\$28,134,032</u>	<u>\$32,301,029</u>	<u>\$29,312,501</u>
Total Disbursements	\$28,077,222	\$28,134,032	\$32,301,029	\$29,312,501
Ending Balance²	\$7,646,278	\$2,362,947	\$3,388,046	\$2,674,032
Infrastructure Replacement Reserve (CERF) ³	\$4,871,948	\$115,114	\$711,461	\$208,914
PC Replacement Reserve ⁴	2,774,330	2,247,833	2,676,585	2,465,118
Unreserved Balance	\$0	\$0	\$0	\$0

¹ A General Fund Transfer will support the system wide charges of the new Public Safety and Public Service radio program for General Fund and General Fund Supported agencies, as well as to maintain funding for the replacement and upgrade of enterprise computer equipment.

² The fluctuation in ending balance is primarily due to the operation of the PC Replacement and Computer Equipment Reserve Programs. The programs collect funding each year, hold it in reserve until needed, and then expend the funds for replacement equipment. The time period for this action varies based on the needs of the programs.

³ A reserve program to assist in the scheduled replacement of mainframe computer and network assets. The funds are held in this Computer Equipment Replacement Fund (CERF).

⁴ The balance in the PC Replacement Reserve fluctuates annually based on scheduled PC replacements which are on a four-year replacement cycle.