

# 08-250: ArcGIS Enterprise Implementation

Department: **Information Technology Capital Projects**  
 Project Type: System Acquisition or Upgrade  
 Year Identified: 2021  
 Start Date: 7/1/2020  
 Est. Completion Date: 6/30/2023

**Description:**

This project will implement ArcGIS Enterprise, an essential next step in the evolution and maintenance of the City's current GIS technology architecture. This project involves the re-architecture of our existing software and infrastructure to seamlessly integrate cloud and on-premise resources and provide new data access and tools capabilities.

**Justification:**

This project involves the upgrades of existing software and infrastructure to seamlessly integrate cloud and on-premise resources and to provide new data access and tools capabilities, including real-time data fed from sensors (e.g., automatic vehicle location); improved system monitoring capabilities; data analytics; and enhanced identity access management. ArcGIS Enterprise will improve data security and reduce downtime. The enhanced data analytics will provide actionable information for business units supporting data-driven decisions.

**Comments:**

The City invested in an ESRI Small Municipality Enterprise License Agreement (ELA) in September 2017 to consolidate product licensing and control future maintenance costs. With this ELA in place, the IT Department can now implement ArcGIS Enterprise.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2021	200,000	200,000	0
	<b>200,000</b>	<b>200,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund		200,000			200,000
<b>Total Revenue</b>		<b>200,000</b>			<b>200,000</b>
<b>Expense</b>					
Software		25,000			25,000
Personnel Costs		7,000			7,000
Other		168,000			168,000
<b>Total Expense</b>		<b>200,000</b>			<b>200,000</b>

**Operating Budget Impact:**

Year	Exp (Rev)	FTE Impact
2024	9,000	0.0
2025	9,000	0.0

# 10-240: Citizen Experience Study - City Digital Content

Department: **Information Technology Capital Projects**  
 Project Type: Study  
 Year Identified: 2020  
 Start Date: 7/1/2020  
 Est. Completion Date: 7/30/2022

**Description:**

This project will provide for a study to assess the current stakeholder experience while interacting with the City's digital tools, providing the following: (1) inventory of touchpoints; (2) assessment that includes user adoption and satisfaction; (3) offline options for similar services; and (4) benchmarks and methods for measuring the success of future initiatives.

The study will also include a stylebook for the City's digital services, including cross-platform branding. The second year of the study will be a pilot program that will be identified as part of the assessment.

**Justification:**

A comprehensive assessment of stakeholder interactions is the first step in creating an environment where people can interact with their government at the time and place they choose with the fewest obstacles possible. Study data will be used to identify services that are responsive to existing needs with interfaces that are easy to use, clear in purpose, and efficient for both the City and the people using them. A branding and style book, created collaboratively with department input and following existing branding requirements, will guide the development of new interfaces and ensure that customer needs are addressed throughout the development process. A pilot project will test/validate the study outcome and provide opportunities for knowledge transfer.

**Comments:**

Citizen interaction with the City requires accessing systems that are not integrated which results in using multiple access points and maintaining multiple accounts and passwords. For example, citizens can pay their parking tickets using the Treasurer's Office online bill pay system, however, they must use a separate State system to pay fines for other offenses online.

Note: For the purpose of this document, stakeholders are defined as anyone who uses the City's digital products, including citizens, businesses, and City employees.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2021	250,000	250,000	0
2022	250,000	250,000	0
	<b>500,000</b>	<b>500,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund		250,000	250,000		<b>500,000</b>
<b>Total Revenue</b>		<b>250,000</b>	<b>250,000</b>		<b>500,000</b>
<b>Expense</b>					
Other		250,000	250,000		<b>500,000</b>
<b>Total Expense</b>		<b>250,000</b>	<b>250,000</b>		<b>500,000</b>

# 04-220: City Fiber Optic Broadband Network

Department: **Information Technology Capital Projects**  
 Project Type: Addition or Expansion  
 Year Identified: 2018  
 Start Date: 7/1/2017  
 Est. Completion Date: 7/30/2020

**Description:**

This project will develop a citywide fiber optic broadband and wireless solution for the City of Chesapeake. There will be an initial assessment to develop the master plan for this project. This project will design and create a strong, diverse network with carrier-grade mixture of fiber optic broadband and wireless infrastructure to improve emergency services as well as reduce startup and ongoing costs for the City of Chesapeake's enterprise operations while improving the overall economic landscape of the City.

**Justification:**

This project will help the City control operating costs and improve access for residents, visitors, and businesses through competition among multiple providers. The project will also allow the City to participate in the regional broadband efforts and the deployment of a municipal open-access middle-mile infrastructure that attracts new businesses while offering tangible incentives for existing businesses.

**Comments:**

The City of Chesapeake has historically leased all of its network services at a significant expense to City operations. Economic development is hindered due to the limited competition within the City of Chesapeake for broadband installation and services.

On June 12, 2018, City Council amended the FY 2019 capital budget to revise project title, objectives and plans. Project was previously titled "Broadband Wireless". See also City Council Agenda dated 06/12/18, Item CM-8(F).

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
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**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund		4,000,000			4,000,000
<b>Total Revenue</b>		<b>4,000,000</b>			<b>4,000,000</b>
<b>Expense</b>					
Equipment		4,000,000			4,000,000
<b>Total Expense</b>		<b>4,000,000</b>			<b>4,000,000</b>

# 11-240: Citywide Security Assessment and Court Security Upgrade

Department: **Information Technology Capital Projects**  
 Project Type: Study  
 Year Identified: 2020  
 Start Date: 7/1/2019  
 Est. Completion Date: 7/30/2021

## Description:

This project will provide for a City-wide security assessment of all cameras, camera systems, video storage, and access control systems for the City of Chesapeake's facilities. Due to the critical need for courthouse security, this project will also replace the existing deteriorating cameras and door controllers in both the Juvenile & Domestic Relations (JDR) and General District Courts.

## Justification:

In the past, each City department was responsible for procuring and administering their own security camera and door card system. This has led to numerous contracts with multiple vendors. The different systems are not compatible. Public safety officials typically cannot access these individual systems during an incident.

The General District and Juvenile Courts' security systems are over 10 years old. The current camera system is starting to fail and needs to be replaced immediately. Furthermore, the courtroom doors and access to the building lack proper control by the Sheriff's Deputies that protect the court buildings. Should a situation arise, the Sheriff's Department may need to lock down the building in its entirety or by sections as well as have cameras inside to monitor the situation.

## Comments:

There are multiple types of cameras and door card systems throughout City facilities that need to be integrated. A review of all systems and their capabilities needs to be investigated. Developing a comprehensive plan with the goal of integrating all of these systems if feasible is needed. The current court security systems are exceeding their expected usefulness and need replacement so it does not negatively impact the City's ability to ensure public and employee safety.

## Project Forecast:

Year	Total Expense	Total Revenue	Difference
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## Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund		800,000			800,000
<b>Total Revenue</b>		<b>800,000</b>			<b>800,000</b>
<b>Expense</b>					
Design & Engineering		275,000			275,000
Equipment		525,000			525,000
<b>Total Expense</b>		<b>800,000</b>			<b>800,000</b>

## Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2022	79,000	0.0
2023	79,000	0.0
2024	79,000	0.0
2025	79,000	0.0

# 09-250: Data Access Governance Design and Implementation

Department: **Information Technology Capital Projects**  
 Project Type: System Acquisition or Upgrade  
 Year Identified: 2021  
 Start Date: 7/1/2020  
 Est. Completion Date: 6/30/2023

**Description:**

This project will improve cybersecurity by implementing a data access governance system that will help the City reduce the risk that sensitive information will get into the wrong hands.

**Justification:**

Data access governance is key to effective cybersecurity. Currently, we have limited visibility to what data exists across the enterprise, its classification under various regulatory requirements (HIPPA, HITECH, PII, PCI, CJIS, VCIN, etc.), where the data is located, and who has access to it which significantly limits our ability to combat both external and insider threats.

**Comments:**

The City maintains large amounts of data in on-premise and cloud systems. Ensuring the security of this information is critical to the City's operations. A data access governance solution will help classify and monitor City data and who accesses it, allowing quick identification of malicious attacks and mitigation of any impact. IT has performed a proof of concept and identified sufficient issues with the City's current data management practices where acquiring a data governance solution would be essential to maintain security and privacy. Such a system will also help with records management and will help set the stage for implementing a master data management program as part of the Enterprise Application Modernization efforts.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2021	285,000	285,000	0
2022	20,000	20,000	0
	<b>305,000</b>	<b>305,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund		285,000	20,000		305,000
<b>Total Revenue</b>		<b>285,000</b>	<b>20,000</b>		<b>305,000</b>
<b>Expense</b>					
Software		250,000			250,000
Other		35,000	20,000		55,000
<b>Total Expense</b>		<b>285,000</b>	<b>20,000</b>		<b>305,000</b>

**Operating Budget Impact:**

Year	Exp (Rev)	FTE Impact
2022	250,000	0.0
2023	250,000	0.0
2024	470,000	0.0
2025	470,000	0.0

# 12-240: Data Center Equipment Replacement

Department: **Information Technology Capital Projects**  
 Project Type: Replacement  
 Year Identified: 2020  
 Start Date: 7/1/2021  
 Est. Completion Date: 7/30/2024

### Description:

This project will replace the enterprise data center equipment at the City's two data centers and will also replace hardware at various critical, remote locations throughout the City to ensure that computing and storage requirements are met. The equipment will be replaced with new hardware when the existing older hardware becomes out-of-date or reaches end-of-life.

### Justification:

The City must maintain its computing and storage infrastructure in order to continue City operations. By maintaining the data center infrastructure, the City can better serve citizens by giving them the ability to conduct business and interact with the City. Regularly updating to newer supported equipment also ensures the equipment is capable of supporting the new security upgrades or patches that vendors release. For most data center equipment, upgrades are required at regular intervals over a period of time (approximately five years).

### Comments:

The typical equipment replacement cycle is three to five years. The new Public Safety Operations building had information technology and data center equipment installed during 2017-2018. After the building has been open for three years, this equipment will enter its replacement cycle, and full replacement will be needed after the building has been open for five years. The City's current data center and remote sites have been updated over the past few years, but this equipment also needs to be refreshed due to the replacement cycle.

### Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	1,500,000	1,500,000	0
2023	1,500,000	1,500,000	0
2024	1,500,000	1,500,000	0
2025	1,650,000	1,650,000	0
	<b>6,150,000</b>	<b>6,150,000</b>	<b>0</b>

### Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Lockbox City			6,150,000		<b>6,150,000</b>
<b>Total Revenue</b>			<b>6,150,000</b>		<b>6,150,000</b>
<b>Expense</b>					
Equipment			6,150,000		<b>6,150,000</b>
<b>Total Expense</b>			<b>6,150,000</b>		<b>6,150,000</b>

### Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2023	800,000	0.0
2024	800,000	0.0
2025	800,000	0.0

# 10-250: DIT Building Space and Condition Study

Department: **Information Technology Capital Projects**  
 Project Type: Study  
 Year Identified: 2021  
 Start Date: 7/1/2020  
 Est. Completion Date: 6/30/2022

**Description:**

This project seeks to conduct a study of the Information Technology (DIT) Building to assess its condition and ability to support the space needs of the Department.

**Justification:**

The IT Department's space requirements for staff, contractors, training facilities, meeting space, and equipment exceeds the building capacity as it is currently configured. This study is needed to determine if rehabilitation and reconfiguration of interior space can extend the useful life of the facility and meet the department's needs.

**Comments:**

The DIT building was dedicated in 1962.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2021	40,000	40,000	0
	<b>40,000</b>	<b>40,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund		40,000			<b>40,000</b>
<b>Total Revenue</b>		<b>40,000</b>			<b>40,000</b>
<b>Expense</b>					
Design & Engineering		40,000			<b>40,000</b>
<b>Total Expense</b>		<b>40,000</b>			<b>40,000</b>

# 06-220: Enterprise Application Modernization (formerly Citywide ERP Solution)

Department: **Information Technology Capital Projects**  
 Project Type: Renovation or Rehabilitation  
 Year Identified: 2018  
 Start Date: 7/1/2017  
 Est. Completion Date: 6/30/2023

## Description:

This project will provide for a study for the consolidation of the City's operational management systems into one or two enterprise resource planning (ERP) systems, which will allow for more efficient utilization of resources. This project includes an assessment of the City's existing legacy mainframe applications. Once the study and system design have been completed, this project will provide for the future implementation of the selected ERP solution(s).

## Justification:

Currently, the City has approximately 80 individual systems that support City functions including internally developed and licensed applications. Some systems are hosted on premises, others are hosted off-site by third parties. All systems require support from the Information Technology Dept. This project is needed because it is extremely costly to support so many separate systems. Additionally, the separate systems create challenges whenever the City has to upgrade individual applications. These challenges cause delays in implementing upgrades; occasionally, upgrades cannot be completed because of disruption that would occur with obsolete systems that are still in use.

## Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	2,000,000	2,000,000	0
2022	2,000,000	2,000,000	0
2023	2,000,000	2,000,000	0
2024	2,000,000	2,000,000	0
2025	2,000,000	2,000,000	0
	<b>10,000,000</b>	<b>10,000,000</b>	<b>0</b>

## Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund	750,000	1,000,000	1,000,000		<b>2,750,000</b>
Cash - Lockbox City			1,000,000		<b>1,000,000</b>
G.O. Debt - City			4,000,000		<b>4,000,000</b>
Fund Balance - IT		1,000,000	2,000,000		<b>3,000,000</b>
<b>Total Revenue</b>	<b>750,000</b>	<b>2,000,000</b>	<b>8,000,000</b>		<b>10,750,000</b>
<b>Expense</b>					
Design & Engineering	750,000				<b>750,000</b>
Software		1,000,000	6,000,000		<b>7,000,000</b>
Other		1,000,000	2,000,000		<b>3,000,000</b>
<b>Total Expense</b>	<b>750,000</b>	<b>2,000,000</b>	<b>8,000,000</b>		<b>10,750,000</b>

## Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2024	1,350,000	0.0
2025	1,350,000	0.0



# 11-250: Enterprise Cybersecurity Incident Responses Planning and Policy Review

Department: **Information Technology Capital Projects**  
 Project Type: Addition or Expansion  
 Year Identified: 2021  
 Start Date: 7/1/2020  
 Est. Completion Date: 6/30/2022

## Description:

This project will utilize professional consulting services to develop an enterprisewide cybersecurity incident response plan for the City of Chesapeake.

## Justification:

With the constant threat of cybersecurity incidents looming, it has become clear from other government victims that an enterprise cybersecurity incident response plan must be put in place to address cyber incidents. While focusing on the technical aspects of an incident is important, recent attacks highlight the importance of including City Leadership, Legal, HR, Public Communications, Police, Emergency Management, and even external partners like the FBI and VDEM in developing and implementing a comprehensive incident response plan. When a cyber-attack occurs, minutes matter and we must plan in advance to avoid disruption in services.

## Comments:

Local governments across the world have been the victims of ransomware and other cybersecurity attacks, often with debilitating and costly effects. Recent notable attacks include Albany, NY in March 2019; Tallahassee, FL and Augusta, ME in April 2019, Baltimore, MD in May 2019, and Riviera Beach and Lake City, FL in June 2019. The IT department has a technical incident response plan. The potential impact of a cybersecurity attack, however, requires an enterprise plan that addresses political, operational, and technical needs of the City. This project would perform a comprehensive review of our incident-response policies and processes and recommend additional steps necessary to prepare for and respond to cyber-attacks.

## Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	120,000	120,000	0
	<b>120,000</b>	<b>120,000</b>	<b>0</b>

## Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund		120,000			<b>120,000</b>
<b>Total Revenue</b>		<b>120,000</b>			<b>120,000</b>
<b>Expense</b>					
Personnel Costs		120,000			<b>120,000</b>
<b>Total Expense</b>		<b>120,000</b>			<b>120,000</b>

# 09-170: Enterprise KRONOS Upgrade - Phase II

Department: **Information Technology Capital Projects**  
 Project Type: System Acquisition or Upgrade  
 Year Identified: 2013  
 Start Date: 7/1/2014  
 Est. Completion Date: 6/30/2021

**Description:**

This project will install and implement upgrades and new releases of commercial software used for the City's employee timekeeping and leave accrual systems.

**Justification:**

Kronos is constantly adding new functionality that is incorporated into new releases. As a new release becomes available, old releases are retired and no longer supported. This project will upgrade the Kronos application to the most current feasible version over the next five years.

**Comments:**

Funding was provided in FY 2017 and is scheduled for FY 2021.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2021	135,000	135,000	0
	<b>135,000</b>	<b>135,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Lockbox City	135,000	135,000			<b>270,000</b>
Fund Balance - IT	130,000				<b>130,000</b>
<b>Total Revenue</b>	<b>265,000</b>	<b>135,000</b>			<b>400,000</b>
<b>Expense</b>					
Other	265,000	135,000			<b>400,000</b>
<b>Total Expense</b>	<b>265,000</b>	<b>135,000</b>			<b>400,000</b>

# 08-210: Enterprise Wide Technology III

Department: **Information Technology Capital Projects**  
 Project Type: System Acquisition or Upgrade  
 Year Identified: 2017  
 Start Date: 7/1/2016  
 Est. Completion Date: 6/30/2025

**Description:**

This project will provide for the purchase of updates and replacements of the software that is used throughout the City government.

**Justification:**

This project addresses the ongoing need to update and replace software that is used citywide. This project will also ensure the availability of appropriate technology that can be supported by staff and vendors.

**Comments:**

Infrastructure improvements and software integration are needed to increase service reliability and improve enterprise business processes.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2022	250,000	250,000	0
2023	250,000	250,000	0
2024	250,000	250,000	0
2025	250,000	250,000	0
	<b>1,000,000</b>	<b>1,000,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund	250,000		1,000,000		<b>1,250,000</b>
<b>Total Revenue</b>	<b>250,000</b>		<b>1,000,000</b>		<b>1,250,000</b>
<b>Expense</b>					
Software	250,000		1,000,000		<b>1,250,000</b>
<b>Total Expense</b>	<b>250,000</b>		<b>1,000,000</b>		<b>1,250,000</b>

**Operating Budget Impact:**

Year	Exp (Rev)	FTE Impact
2021	25,000	0.0
2022	25,000	0.0
2023	25,000	0.0
2024	25,000	0.0
2025	25,000	0.0

# 09-230: Enterprise-wide Next Generation Identity Access Management

Department: **Information Technology Capital Projects**  
 Project Type: System Acquisition or Upgrade  
 Year Identified: 2019  
 Start Date: 7/1/2020  
 Est. Completion Date: 6/30/2024

**Description:**

This project implements a suite of tools and technologies for Identity Access Management (IDAM) across the enterprise for the City of Chesapeake. This will significantly help with the management of secure user authentication, user management, user authorization, and user access rights. These tools will further help the City with the Center for Internet Security (CIS) Critical Security Controls framework.

**Justification:**

As technologies continue to advance and we put more systems in the cloud and spread others across multiple sites in Chesapeake, the ability to fully manage user identities and control/track access to various systems becomes vital. The IDAM market is rapidly changing; artificial intelligence along with machine learning will significantly alter technologies and their capabilities. This project is expected to comprise a suite of products from multiple vendors. Gartner recommends looking at a "best of breed" approach for certain parts of IDAM. When implemented, synergies between selected tools will provide a full solution.

**Comments:**

Currently, the City primarily relies on an active directory to manage users and access, but this only works for a subset of our systems. Other systems rely on their own user databases. This fragmented approach prevents the ability to have a whole picture of Identity Access Management.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2021	100,000	100,000	0
2022	80,000	80,000	0
2023	50,000	50,000	0
	<b>230,000</b>	<b>230,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Lockbox City		100,000	130,000		<b>230,000</b>
<b>Total Revenue</b>		<b>100,000</b>	<b>130,000</b>		<b>230,000</b>
<b>Expense</b>					
Other		100,000	130,000		<b>230,000</b>
<b>Total Expense</b>		<b>100,000</b>	<b>130,000</b>		<b>230,000</b>

# 15-250: Fiber Optic - Conduit Installation - Mt. Pleasant Road Cost Share

Department: **Information Technology Capital Projects**  
 Project Type: Addition or Expansion  
 Year Identified: 2021  
 Start Date: 7/1/2020  
 Est. Completion Date: 6/30/2023

### Description:

This project installs conduit along Mt. Pleasant Road in coordination with existing projects of Public Works and Public Utilities. This project includes the acquisition of a 10' wide easement along Mt. Pleasant Road from Fall Ridge Rd. to NALF Fentress. The project will also include the placement of conduit along this section of Mt. Pleasant Rd.

### Justification:

During the widening of Mt Pleasant Rd project, IT will be utilizing the opportunity to dig once to install two (2) 4" HDPE tracer-wired conduits with hand holes every 500' for fiber innerducts.

### Comments:

This project will acquire the easement and place the conduit along with utility and road infrastructure. A future project will be needed to install fiber optic cables. This project covers marginal costs to add IT conduit to existing utility and road project.

### Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	60,000	60,000	0
2022	400,000	400,000	0
	<b>460,000</b>	<b>460,000</b>	<b>0</b>

### Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund		60,000	400,000		<b>460,000</b>
<b>Total Revenue</b>		<b>60,000</b>	<b>400,000</b>		<b>460,000</b>
<b>Expense</b>					
Construction			400,000		<b>400,000</b>
Land Acquisition		50,000			<b>50,000</b>
Other		10,000			<b>10,000</b>
<b>Total Expense</b>		<b>60,000</b>	<b>400,000</b>		<b>460,000</b>

### Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2023	10,000	0.0
2024	10,000	0.0
2025	10,000	0.0

# 11-210: Fire - Tri-City Automatic Aid CAD Interface (Regional 911 Dispatch Interface)

Department: **Information Technology Capital Projects**  
 Project Type: System Acquisition or Upgrade  
 Year Identified: 2017  
 Start Date: 7/1/2019  
 Est. Completion Date: 6/30/2020

**Description:**

This project will provide for the City's participation in a regional 911 Dispatch interface to integrate the individual CAD systems of surrounding public safety jurisdictions into one central system.

**Justification:**

An integrated automatic system will reduce dispatcher call processing times while improving response times and service delivery throughout South Hampton Roads. The regional interface will automatically allow emergency dispatchers to see the availability and status of units from surrounding cities and dispatch appropriate responses as necessary. It builds upon the current Tri-City Automatic Aid system recently implemented with Norfolk and Virginia Beach. This system will provide a redundant backup system for all area 911 dispatch centers in case of localized failures.

**Comments:**

Currently, each locality is unable to view or monitor the status of emergency response vehicles / apparatus from surrounding cities. If a neighboring locality requests assistance, dispatchers must manually contact the other dispatch center to request assistance creating delays in notifications.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
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**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund	50,000				50,000
<b>Total Revenue</b>	<b>50,000</b>				<b>50,000</b>
<b>Expense</b>					
Software	50,000				50,000
<b>Total Expense</b>	<b>50,000</b>				<b>50,000</b>

# 13-240: Fire/EMS - Mobile Data Terminal Replacements

Department: **Information Technology Capital Projects**  
 Project Type: Replacement  
 Year Identified: 2020  
 Start Date: 7/1/2021  
 Est. Completion Date: 7/30/2022

**Description:**

This project will provide for the routine replacement of 60 mobile routers, 10 Rugged Mobile Data Terminals for Fire Marshalls (tablets), and communications hardware and software to allow communications from the apparatus to Emergency Dispatch and/or Medical facilities.

**Justification:**

Due to the rapidly changing requirements of cellular communication, replacement of communication devices will be required more frequently. We anticipate a technology upgrade from 4G to 5G technology in the next 3 years. The tablet model is a commercial off-the-shelf computer that offers a much lower cost of ownership than the previous rugged laptops. Utilizing tablets with updated communications equipment will allow the Fire Dept. to continue using the mobile application specifically designed for the tablet model. Staying with this brand of computers will allow the re-use of existing computer mounts already in the apparatus with fast, reliable, and cost-effective mobile data terminals.

**Comments:**

In FY 2019, the Fire Dept. apparatus converted to using tablets that allow the use of mobile software products. The tablets replaced previous rugged computer terminals. These lightweight devices, with a life expectancy of three to four years in adverse environments, require replacement at regular intervals. The peripheral equipment also require regular updates as technology continues to advance. Finally, Fire Marshalls require rugged laptops (similar to the model used by Police Officers) because of extremely adverse environments. A non-rugged laptop will not withstand these conditions.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2022	200,000	200,000	0
	<b>200,000</b>	<b>200,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund			200,000		200,000
<b>Total Revenue</b>			<b>200,000</b>		<b>200,000</b>
<b>Expense</b>					
Equipment			200,000		200,000
<b>Total Expense</b>			<b>200,000</b>		<b>200,000</b>

# 14-250: HR - Learning Management System

Department: **Information Technology Capital Projects**  
 Project Type: System Acquisition or Upgrade  
 Year Identified: 2021  
 Start Date: 7/1/2021  
 Est. Completion Date: 6/30/2023

## Description:

This project provides a citywide Learning Management System (LMS) for the administration, documentation, tracking, reporting, and delivery of educational courses and training programs. The LMS helps instructors deliver material to students, administers tests and assignments, tracks student progress, and manages record-keeping. LMS focuses on online learning delivery but supports a range of uses. LMS can provide a platform for fully online courses as well as hybrid/blended forms and flipped classrooms wherein participants are introduced to the learning materials before class and the classroom time is used to deepen understanding through discussion with peers and facilitated problem-solving activities. The advantages of an LMS include: (1) reducing time spent on enrollment and tracking of learning and development attendance, (2) organizing e-learning content in one location, (3) providing unlimited access to e-learning materials, (4) reducing learning and development time by reducing travel, and (5) improving compliance with regulations (e.g. EEO, HIPAA) and emerging issues (e.g. electronic data use, workplace violence).

## Justification:

The City of Chesapeake HR Department currently has 1.40 FTEs (full-time equivalent portions of 15 staff members) devoted to Learning and Development. Personnel in numerous other departments in the City are also responsible for the training of City employees. Additional resources are needed to deliver and track learning and development offerings to the City's over 3,800 FTEs.

## Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021			0
2022	100,000	100,000	0
2023			0
2024			0
2025			0
	<b>100,000</b>	<b>100,000</b>	<b>0</b>

## Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund			100,000		<b>100,000</b>
<b>Total Revenue</b>			<b>100,000</b>		<b>100,000</b>
<b>Expense</b>					
Software			50,000		<b>50,000</b>
Personnel Costs			50,000		<b>50,000</b>
<b>Total Expense</b>			<b>100,000</b>		<b>100,000</b>



# 13-210: Laserfiche Upgrade

Department: **Information Technology Capital Projects**  
 Project Type: System Acquisition or Upgrade  
 Year Identified: 2017  
 Start Date: 7/1/2017  
 Est. Completion Date: 7/30/2024

**Description:**

This project provides for ongoing upgrades to the City's document management system, Laserfiche.

**Justification:**

New features and functionality are included in new versions. As new version are released, old versions are retired and no longer supported. This project will upgrade Laserfiche to the most current feasible version.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2022	100,000	100,000	0
2024	100,000	100,000	0
	<b>200,000</b>	<b>200,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund	100,000		100,000		<b>200,000</b>
Cash - Lockbox City			100,000		<b>100,000</b>
<b>Total Revenue</b>	<b>100,000</b>		<b>200,000</b>		<b>300,000</b>
<b>Expense</b>					
Software	100,000		200,000		<b>300,000</b>
<b>Total Expense</b>	<b>100,000</b>		<b>200,000</b>		<b>300,000</b>

# 12-191: Libraries - Automated Handling System - Phase II

Department: **Information Technology Capital Projects**  
 Project Type: Addition or Expansion  
 Year Identified: 2019  
 Start Date: 7/1/2018  
 Est. Completion Date: 6/30/2020

**Description:**

This project covers the purchase, installation, and implementation of an automated materials handling (AMH) system at Greenbrier and Russell Memorial Libraries. The project will also add radio-frequency identification (RFID) enabled book drops in four other libraries that do not have AMH. RFID will allow for quicker re-shelving in smaller branches.

**Justification:**

AMH is designed to receive, check-in, and sort library materials for shelving. In 2014, the three busiest libraries circulated 1.7 million items, each of which was handled a minimum of five times by employees from the time the item was retrieved from the book-drop until it was replaced on the shelf to be checked out again by patrons. AMH reduces the time required to re-shelve materials and increases efficiency by allowing staff to perform other higher level essential tasks. Materials will also be available to patrons more quickly. Similar equipment already exists at neighboring libraries.

**Comments:**

This project was initially planned for the Greenbrier branch; however, plan revisions permit installation of AMH at both Greenbrier and Russell Memorial.

In FY 2020, the remaining balance (\$239) from Project #12-190 Libraries - Automated Handling System - Phase I was rolled over to this project.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
------	---------------	---------------	------------

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund		353,539			353,539
<b>Total Revenue</b>		<b>353,539</b>			<b>353,539</b>
<b>Expense</b>					
Construction		75,000			75,000
Equipment		278,539			278,539
<b>Total Expense</b>		<b>353,539</b>			<b>353,539</b>

**Operating Budget Impact:**

Year	Exp (Rev)	FTE Impact
2022	27,000	0.0
2023	27,000	0.0
2024	27,000	0.0
2025	27,000	0.0

# 12-192: Libraries - Automated Handling System - Phase III

Department: **Information Technology Capital Projects**  
 Project Type: Addition or Expansion  
 Year Identified: 2019  
 Start Date: 7/1/2019  
 Est. Completion Date: 6/30/2022

**Description:**

This project will provide for the replacement of the automated materials handling (AMH) system currently in use at the Central Library.

**Justification:**

AMH is designed to receive, check-in, and sort library materials for shelving. In 2014, the three busiest libraries circulated 1.7 million items, each of which was handled a minimum of five times by employees from the time the item was retrieved from the book-drop until it was replaced on the shelf to be checked out again by patrons. AMH reduces the time required to re-shelve materials and increases efficiency by allowing staff to perform other higher level essential tasks. Materials will also be available to patrons more quickly. Similar equipment already exists at neighboring libraries.

**Comments:**

This project was originally planned to install AMH at Russell Memorial Library. Changes in plans allow for both Russell and Greenbrier to be addressed with companion project 12-192. That frees up funding to replace the AMH system that was installed in 2015. Improvements in technology will allow increased capacity at a lower cost than the original installation.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
------	---------------	---------------	------------

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund	300,350				300,350
<b>Total Revenue</b>	<b>300,350</b>				<b>300,350</b>
<b>Expense</b>					
Construction	100,000				100,000
Equipment	200,350				200,350
<b>Total Expense</b>	<b>300,350</b>				<b>300,350</b>

**Operating Budget Impact:**

Year	Exp (Rev)	FTE Impact
2022	15,000	0.0
2023	15,000	0.0
2024	15,000	0.0
2025	15,000	0.0

# 10-230: Libraries - Data Center Technology and Switching Replacement

Department: **Information Technology Capital Projects**  
 Project Type: System Acquisition or Upgrade  
 Year Identified: 2019  
 Start Date: 7/1/2022  
 Est. Completion Date: 6/30/2024

**Description:**

This project is designed to ensure that the Library's data center and switching gear is kept up to date and supported by the technology vendors. All Library data center technologies and switching gear require replacement on a 5-year schedule to ensure full functionality and support.

**Justification:**

This project is needed to avoid end-of-life issues with unsupported equipment, and to ensure there is no downtime of Library Information Technology systems due to unsupported equipment.

**Comments:**

The Library's data center and switching gear were installed in FY 2018 through the Library Switching and Routing Refresh project and Library Data Center redundancy/DIT co-location projects.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2023	600,000	600,000	0
	<b>600,000</b>	<b>600,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Lockbox City			600,000		<b>600,000</b>
<b>Total Revenue</b>			<b>600,000</b>		<b>600,000</b>
<b>Expense</b>					
Design & Engineering			5,000		<b>5,000</b>
Equipment			550,000		<b>550,000</b>
Software			45,000		<b>45,000</b>
<b>Total Expense</b>			<b>600,000</b>		<b>600,000</b>

# 13-250: Libraries - Expansion of Services

Department: **Information Technology Capital Projects**  
 Project Type: Addition or Expansion  
 Year Identified: 2021  
 Start Date: 7/1/2023  
 Est. Completion Date: 6/30/2026

## Description:

The project will allow the Library to expand its community reach and services via emerging technologies available in the library industry. This will include a number of possible solutions including, but not limited to, library kiosks, hold lockers, and self-service storefronts.

## Justification:

The Library's mission is to educate and enrich the lives of all citizens by providing free access to information, materials, technology and cultural opportunities. Two of our core values are equal access and inclusion. However, at least ten neighborhoods in the City of Chesapeake are located more than 2 miles from existing library locations. Several of these neighborhoods are in underserved areas like Bowers Hill and Crestwood. In FY20, we are addressing neighborhoods in southern Chesapeake with a book vending kiosk for browsing materials, holds pick-up closer to home and Wi-Fi access. This project will allow us to reach our goal of expanding services to the remaining nine (9) underserved areas. This project will get the library closer to its goal of all Chesapeake residents having free and equal access to circulating library materials and internet access within 2 miles of their homes.

## Comments:

There are nine (9) areas identified for this project that will benefit from varying technologies to expand services and community reach. Five (5) areas will have library kiosks installed to allow customers to pick up holds, checkout items and provide Wi-Fi connectivity. Four (4) areas will have self-service storefronts that offer a collection of materials, holds pick-up, self-checkout and internet PCs.

## Project Forecast:

Year	Total Expense	Total Revenue	Difference
2024	354,000	354,000	0
2025	300,000	300,000	0
	<b>654,000</b>	<b>654,000</b>	<b>0</b>

## Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Lockbox City			654,000		<b>654,000</b>
<b>Total Revenue</b>			<b>654,000</b>		<b>654,000</b>
<b>Expense</b>					
Equipment			510,000		<b>510,000</b>
Other			144,000		<b>144,000</b>
<b>Total Expense</b>			<b>654,000</b>		<b>654,000</b>

## Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2024	184,450	2.0
2025	368,900	2.0

# 10-220: Libraries - Technology Upgrade/Replacement - Phase III

Department: **Information Technology Capital Projects**  
 Project Type: Renovation or Rehabilitation  
 Year Identified: 2018  
 Start Date: 7/1/2019  
 Est. Completion Date: 6/30/2022

## Description:

This project is Phase III of an ongoing project to address the renewal and replacement needs of the Library's core data center processing, storage, and interconnection hardware platform. Additionally, the existing hardware will be used to create a testing infrastructure platform for the Library. Over five years starting in FY 2018, Phase III will replace the firewall, implement a backup solution, upgrade the Voice over Internet Protocol (VoIP) phone system, refresh the wireless access point, and upgrade the web security appliance.

## Justification:

The Chesapeake Public Library system is one of the most technologically advanced libraries in the Hampton Roads area due to the City's investment in core infrastructure and technology. This project is needed to ensure that the technology offered remains first rate. As with all technology, the life-cycle replacement schedule is about five years. This project will replace the data center hardware installed in 2014 and modernize several functions of the library system. This project will also ensure the upgraded hardware will align with planned changes for project # 09-220 "Library-Data Center Redundancy/DIT Colocation", which will remove the need for a separate backup structure as the hardware/software platforms contain built-in backup, replication, and recovery capabilities.

## Comments:

FY 2020 project activity replaced equipment at remote fail-over site with the same platform that will be used in the Library's core data center. This will enable the City to update the core data center and use the existing investment in a safe testing environment where failure is not a concern. The remaining project timeline is as follows:  
 - FY 2021: Upgrade/replace firewalls to combat the continuously growing threat to data centers. Upgrade/replace the phone system.  
 - FY 2022: Upgrade the web security appliance and wireless access points (purchased in FY 2016).

## Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	160,000	160,000	0
2022	90,000	90,000	0
	<b>250,000</b>	<b>250,000</b>	<b>0</b>

## Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Cash - Lockbox City	350,000	160,000	90,000		<b>600,000</b>
<b>Total Revenue</b>	<b>350,000</b>	<b>160,000</b>	<b>90,000</b>		<b>600,000</b>
<b>Expense</b>					
Equipment	300,000	100,000			<b>400,000</b>
Software	50,000	60,000			<b>110,000</b>
Other			90,000		<b>90,000</b>
<b>Total Expense</b>	<b>350,000</b>	<b>160,000</b>	<b>90,000</b>		<b>600,000</b>

## Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2022	(13,320)	0.0
2023	(13,320)	0.0
2024	(13,320)	0.0
2025	(13,320)	0.0

# 12-220: Network Equipment Replacement - Phase II

Department: **Information Technology Capital Projects**  
 Project Type: Replacement  
 Year Identified: 2018  
 Start Date: 7/1/2019  
 Est. Completion Date: 7/30/2024

### Description:

This project will upgrade the enterprise networking equipment that provides systems connectivity and communications throughout the City. The upgrades will be completed over a period of time (approx. 7 years). Equipment will be replaced with new hardware when the existing older hardware becomes out-of-date or reaches end-of-life. This upgrade will provide benefits citywide and will also benefit the Sheriff's Office network infrastructure, which needs an overhaul. This project will also include the replacement of network fiber connections at various critical locations throughout the City to ensure that connectivity requirements are met for the foreseeable future.

### Justification:

The existing enterprise network is a mix of networking equipment, some of it is at the end-of-life and some is newer. Most components are serviceable for 5 to 7 years, but then must be replaced. The equipment requiring replacement includes core switching, routers, and edge switches. The newer equipment will provide better features and improved performance. These upgrades need to be done in phases.

### Comments:

Up-to-date network equipment is vital to City operations. In order for the network to remain robust, dependable, and durable, the aging components of the existing system require regular replacement. Newer Power over Ethernet (PoE) network switches are also required as the City pursues a strategic move towards a Voice over Internet Protocol (VoIP) based telephone system and increased wireless network access.

### Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	600,000	600,000	0
2022	600,000	600,000	0
2023	600,000	600,000	0
2024	600,000	600,000	0
2025	660,000	660,000	0
	<b>3,060,000</b>	<b>3,060,000</b>	<b>0</b>

### Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund	600,000	600,000	2,460,000		<b>3,660,000</b>
<b>Total Revenue</b>	<b>600,000</b>	<b>600,000</b>	<b>2,460,000</b>		<b>3,660,000</b>
<b>Expense</b>					
Design & Engineering	15,000	15,000	45,000		<b>75,000</b>
Construction	150,000	150,000	450,000		<b>750,000</b>
Equipment	200,000	200,000	1,260,000		<b>1,660,000</b>
Other	235,000	235,000	705,000		<b>1,175,000</b>
<b>Total Expense</b>	<b>600,000</b>	<b>600,000</b>	<b>2,460,000</b>		<b>3,660,000</b>

### Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2022	99,000	0.0
2023	99,000	0.0
2024	99,000	0.0
2025	99,000	0.0

# 11-220: PeopleSoft Update Manager & PeopleTools Upgrade

Department: **Information Technology Capital Projects**  
 Project Type: System Acquisition or Upgrade  
 Year Identified: 2018  
 Start Date: 7/1/2018  
 Est. Completion Date: 6/30/2024

**Description:**

This project will provide for the additional resources needed to complete the planning, testing, and deployment of the updates in PeopleSoft Update Manager. All system updates and new functionality for PeopleSoft are delivered by this tool.

**Justification:**

This project is needed due to specialized configuration and customization within the PeopleSoft environment. Ensuring these settings are preserved is essential for successful upgrades. To have continuous access to vendor support, the City must use recently released versions of PeopleSoft.

**Comments:**

Regular upgrades ensure the financial system remains current and receives the annual tax updates.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2022	400,000	400,000	0
2024	400,000	400,000	0
	<b>800,000</b>	<b>800,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund			400,000		400,000
Cash - Lockbox City	400,000		400,000		800,000
<b>Total Revenue</b>	<b>400,000</b>		<b>800,000</b>		<b>1,200,000</b>
<b>Expense</b>					
Software	400,000		800,000		1,200,000
<b>Total Expense</b>	<b>400,000</b>		<b>800,000</b>		<b>1,200,000</b>



# 35-240: Regional Broadband Ring

Department: **Information Technology Capital Projects**  
 Project Type: Study  
 Year Identified: 2020  
 Start Date: 7/1/2019  
 Est. Completion Date: 7/30/2025

**Description:**

This project will provide for a design study in FY 2020 for regional and local broadband investments. Since this is a regional project, the Hampton Roads Planning District Commission (HRPDC) is coordinating the project with the participating localities.

**Justification:**

The City is working with neighboring localities to study improvements in the regional broadband capacity. This project will provide for regional (Southside) and local broadband investments and operating costs. The objectives include improved municipal services, but more importantly, improved capacity for economic development. The estimated construction cost of \$20 million will be shared among four localities. Although the cost allocation for each city is not yet defined, Chesapeake's share is estimated to be between \$4 and \$6 million. This project enables the City to complete the design study during FY 2020.

**Comments:**

On June 25, 2019, City Council amended the FY 2020 Capital Budget to add this project and appropriate \$160,000. See also City Council Agenda Item CM-4(C).

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2025	5,000,000	5,000,000	0
	<b>5,000,000</b>	<b>5,000,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund	160,000				<b>160,000</b>
G.O. Debt - City			5,000,000		<b>5,000,000</b>
<b>Total Revenue</b>	<b>160,000</b>		<b>5,000,000</b>		<b>5,160,000</b>
<b>Expense</b>					
Design & Engineering	160,000		5,000,000		<b>5,160,000</b>
<b>Total Expense</b>	<b>160,000</b>		<b>5,000,000</b>		<b>5,160,000</b>

# 16-250: Standardize Interactive Displays - Conference Rooms and Digital Signs

Department: **Information Technology Capital Projects**  
 Project Type: System Acquisition or Upgrade  
 Year Identified: 2021  
 Start Date: 7/1/2020  
 Est. Completion Date: 11/30/2022

**Description:**

This project will establish citywide standards for video equipment used in conference rooms and on digital signs.

**Justification:**

As currently installed systems age, users seek assistance from the IT Department for replacement. A standardized solution set will improve our ability to support these requests, minimize cyber-security risks, and lower the cost of maintenance over time. Standardizing the solution set will make it easier for end-users to operate systems in various conference rooms across the City improving overall productivity. Departments will continue funding their own equipment needs based on standards.

**Comments:**

Video display technology has been acquired without defined standards resulting in a plethora of incompatible equipment. This project will establish standards to guide departments on new and replacement equipment.

**Project Forecast:**

Year	Total Expense	Total Revenue	Difference
2021	50,000	50,000	0
2022			0
	<b>50,000</b>	<b>50,000</b>	<b>0</b>

**Project Details 2021:**

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund		50,000			<b>50,000</b>
<b>Total Revenue</b>		<b>50,000</b>			<b>50,000</b>
<b>Expense</b>					
Personnel Costs		24,000			<b>24,000</b>
Other		26,000			<b>26,000</b>
<b>Total Expense</b>		<b>50,000</b>			<b>50,000</b>

# 14-210: Telephone System - Replace Existing PBX with VoIP

Department: **Information Technology Capital Projects**  
 Project Type: Replacement  
 Year Identified: 2017  
 Start Date: 7/1/2018  
 Est. Completion Date: 6/30/2021

## Description:

This project will replace the City's current PBX system, move all of the users (approx. 2,000) to Voice Over IP (VoIP) technology, and implement Unified Communications (UC) for many of those users.

## Justification:

Moving all City users to one VoIP telephone system will enable users to operate on the most current technology and provide many features that will become even more important in conducting business over the next decade. The addition of interactive voice response (IVR), unified communications (UC), web-collaboration, and web chat technology for use with customers will provide better customer service and make conducting business with the City more efficient. Transitioning from the dated PBX telephone technology will also reduce maintenance costs over time. The VoIP application will be able to run in a virtual environment and allow the City to move everything to session initiation protocol (SIP) trunks for VoIP phones, which are less expensive and provide more flexibility than traditional trunks. Expected savings are estimated to be \$40,000-\$50,000 per year from reduced maintenance and line costs. This project is dependent on the network replacement capital project because some equipment will have to be upgraded and many sites will have to be moved to Power over Ethernet (PoE) to power phones.

## Comments:

The City currently uses two primary phone systems, a PBX phone system and a Voice over IP phone system (VoIP). This project will transition all users on the PBX system to the VoIP system so the City will have one, unified phone system. Project estimates include new phones and computer clients with headsets, additional servers to support the increased user base, Unified Communications software, replacement of network switches with PoE (Power over Ethernet) switches to provide power to the phones, and additional cabling for various buildings with State users such as the Court buildings and Human Services.

## Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	165,170	165,170	0
	<b>165,170</b>	<b>165,170</b>	<b>0</b>

## Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
<b>Revenue</b>					
Fund Balance - General Fund	1,197,830	80,170			1,278,000
Fund Balance - IT	1,270,000	85,000			1,355,000
<b>Total Revenue</b>	<b>2,467,830</b>	<b>165,170</b>			<b>2,633,000</b>
<b>Expense</b>					
Construction	680,000	20,000			700,000
Equipment	1,787,830	145,170			1,933,000
<b>Total Expense</b>	<b>2,467,830</b>	<b>165,170</b>			<b>2,633,000</b>

