

27-190: Deep Creek Fire Station #8 - Relocate

Department: **Public Safety Capital Projects**
 Project Type: New Facility
 Year Identified: 2015
 Start Date: 7/1/2014
 Est. Completion Date: 6/30/2020

Description:

This project will relocate Deep Creek Fire Station #8 to Moses Grandy Trail. Land was previously acquired.

Justification:

Fire Station #8 is over 50 years old and in poor condition. It also often floods during hurricanes, northeaster storms, or unusual tidal events. Firefighters have had to move vehicles to higher ground six times in recent years because of flooding. When this occurs, emergency equipment must relocate to another fire station outside of the district in order to answer emergency calls.

Comments:

This project was first identified in FY 2014.

After the budget for construction was revised for construction inflation, total estimated project cost rose to \$9.2 million, \$3.9 million more than originally appropriated. On January 14, 2020, City Council approved a budget amendment appropriating an additional \$3,910,890 from the Capital Project fund balance to complete construction.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Cash - Lockbox City		640,464			640,464
G.O. Debt - City		8,607,628			8,607,628
Total Revenue		9,248,092			9,248,092
Expense					
Design & Engineering		640,464			640,464
Construction		7,807,048			7,807,048
Equipment		266,860			266,860
Other		533,720			533,720
Total Expense		9,248,092			9,248,092

28-190: Dock Landing Fire Station #11 - Replace

Department: **Public Safety Capital Projects**
 Project Type: New Facility
 Year Identified: 2015
 Start Date: 7/1/2014
 Est. Completion Date: 7/30/2024

Description:

This project will relocate and construct a new Dock Landing Fire Station at a location that can accommodate a modern fire station and better meet the current and future needs of this growing area.

Justification:

The current building is over 50 years old, is in poor condition, and needs replacement. A new design is needed to accommodate gender separation and to comfortably expand the number of firefighters assigned each day. The current design also allows diesel exhaust in the living areas of the building, which creates an unsafe environment for firefighters. The initial plan was to rebuild on the existing parcel, but a better suited location for construction was identified (approved by City Council on Feb. 13, 2018).

Comments:

Sept. 18, 2018 - City Council amended the project to add \$320,000 to purchase on Joliff Road.
 Feb. 13, 2018 - City Council amended the project to add \$330,000 for land acquisition to relocate the station
 This project was first identified in FY 2014. Design is expected to start in FY 2021, and construction is expected to start in FY 2022.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	640,500	640,500	0
2022	6,211,000	6,211,000	0
	6,851,500	6,851,500	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund	650,000				650,000
G.O. Debt - City		640,500	6,211,000		6,851,500
Total Revenue	650,000	640,500	6,211,000		7,501,500
Expense					
Design & Engineering		640,500			640,500
Construction			4,870,200		4,870,200
Land Acquisition	650,000				650,000
Equipment			293,600		293,600
Other			1,047,200		1,047,200
Total Expense	650,000	640,500	6,211,000		7,501,500

80-250: Emergency Power Supply - Shelters

Department: **Public Safety Capital Projects**
 Project Type: Equipment
 Year Identified: 2020
 Start Date: 7/1/2020
 Est. Completion Date: 6/30/2023

Description:

This project will install emergency generators at three community centers. This will allow existing community centers to be used as shelters in order to lessen disruption at schools.

Comments:

Three generators will be installed over three years (2021-2023). The funding for this project is via a federal grant.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	170,000	170,000	0
2022	170,000	170,000	0
2023	170,000	170,000	0
	510,000	510,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Grant		170,000	340,000		510,000
Total Revenue		170,000	340,000		510,000
Expense					
Equipment		170,000	340,000		510,000
Total Expense		170,000	340,000		510,000

23-250: Fire - Biomedical Equipment Replacement

Department: **Public Safety Capital Projects**
 Project Type: Replacement
 Year Identified: 2021
 Start Date: 7/1/2024
 Est. Completion Date: 12/31/2025

Description:

This project will replace biomedical equipment that will be reaching the end of service life according to standards of the Food and Drug Administration and manufacturer warranty requirements.

Justification:

Biomedical devices are critical components for saving lives in cardiac and other emergencies. These devices are very effective at improving patient outcomes as demonstrated by five years of meeting the American Heart Association's Mission: Lifeline EMS Recognition standards, for which the City earned Gold Plus standards the last three years. Chesapeake has a cardiac arrest save percentage that is well above national standards. Placing this equipment on a scheduled replacement plan allows us to implement new, clinically-proven technologies as they emerge. The schedule also ensures the standardization of equipment throughout the City. Keeping the fleet consistent will reduce provider stress, increase provider retention, maintain consistent quality of care, and most importantly, improve patient outcomes. The last biomedical upgrade was in 2015, which will make the cardiac monitoring and defibrillation equipment over ten years old when this project is funded. Ten years is the accepted service life for biomedical equipment according to the FDA and the current equipment will be at the end of the allowable service contract life.

Comments:

Replace all Physio/Stryker LP 15 Cardiac Monitor / Defibrillators, all Physio/Stryker LP CR+ automatic external defibrillators and LP1000 automatic external defibrillators, LUCAS automated chest compression devices, RESQCPR manual active compression and decompression devices, and telemetry modems. Additionally, in order to maintain a quality standard of care, meet service life needs, be congruent with emerging technologies, and account for new apparatus entering service, the following items will also be included in this replacement schedule: video laryngoscopes, digital thermometers, intraosseous bone vascular access drivers, ultrasound probes and monitors, carbon monoxide and methemoglobin oximetry monitors, and thoracic elevation CPR devices, etc.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2025	3,500,000	3,500,000	0
	3,500,000	3,500,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund			3,500,000		3,500,000
Total Revenue			3,500,000		3,500,000
Expense					
Equipment			3,500,000		3,500,000
Total Expense			3,500,000		3,500,000

24-250: Fire - Enclosed Air Trailer

Department: **Public Safety Capital Projects**
 Project Type: Equipment
 Year Identified: 2021
 Start Date: 7/1/2020
 Est. Completion Date: 6/30/2022

Description:

This project will provide the Fire Dept. with an enclosed air trailer. This specialized equipment is used to fill SCBA bottles on the fire ground and during training evolutions. Furthermore, the enclosed air trailer has a workbench and tools for SCBA technicians to make repairs to breathing harnesses at the emergency incident and during training evolutions.

Justification:

The ability to supply, replenish, and repair air bottles and harnesses is critical, especially on high-rise and mid-rise structures. The development of Summit Pointe and the Dollar Tree high-rise, as well as intensive development and activity in the area, provides a much higher degree of risk. This makes it necessary to improve air supply for responders on scenes. Without the air trailer, we will not be able to establish an uninterrupted continuous air supply for our firefighters operating on elevated floors of the structures.

Comments:

The current compressor is over a decade old, has undergone numerous repairs, and is not operable. This specialized equipment is on a trailer that can be towed to different training sites and emergency scenes. It was originally purchased using grant funds, and thus supported by the department's operating budget. The compressor is not on an enclosed trailer and it does not provide the resources to conduct onsite SCBA repairs. Increased complexity and duration of fire/hazmat incidents require onsite availability to make repairs to emergency breathing systems and to fill air bottles during long incidents. On-site bottle refilling is preferable to reliance solely on pre-filled air bottles.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	150,000	150,000	0
	150,000	150,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund		150,000			150,000
Total Revenue		150,000			150,000
Expense					
Equipment		150,000			150,000
Total Expense		150,000			150,000

Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2022	5,000	0.0
2023	5,000	0.0
2024	5,000	0.0
2025	5,000	0.0

17-240: Fire - Hazardous Materials Monitoring and Detection Systems

Department: **Public Safety Capital Projects**
 Project Type: Replacement
 Year Identified: 2020
 Start Date: 7/1/2023
 Est. Completion Date: 7/30/2024

Description:

This project will replace/upgrade the Fire Dept.'s Hazardous Materials Monitoring and Detection Systems capabilities. The current meters are reaching the end of their service life and will no longer be supported by the manufacturer. This project will replace the monitoring equipment and the gas meters.

Justification:

The manufacturer of the current equipment will discontinue parts, software, and support by the end of 2019. The meters are a vital part of our monitoring and detection capabilities. The equipment is deployed and used on a regular basis to monitor Hot Zones and structures with remote monitoring features that avoid placing fire personnel in danger.

Comments:

The current meters have been in service since 2007. The meters provide the Fire Dept. and Hazmat Team the capability to respond to and then deem safe hazmat issues from any kind of harmful gas and explosives, including terrorist threats, that may pose a risk to citizens' homes, businesses, or public spaces. The Fire Dept. has assisted the State and Local Police, FBI, VDEM, Port Authority, and numerous other organizations with various incidents.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2024	265,000	265,000	0
	265,000	265,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund			265,000		265,000
Total Revenue			265,000		265,000
Expense					
Equipment			265,000		265,000
Total Expense			265,000		265,000

25-250: Fire - Hydraulic Rescue Tools

Department: **Public Safety Capital Projects**
 Project Type: Equipment
 Year Identified: 2021
 Start Date: 7/1/2024
 Est. Completion Date: 12/31/2025

Description:

This project will replace the hydraulic tools on the Rescue 15, Ladder 5, and Ladder 12. The tools include cutters, spreaders, combination tools, and rams.

Justification:

New, reliable, and up-to-date hydraulic tools for safe and rapid extrication of persons. Replacement of tools with the purchase of new apparatus has reduced the cost of this project to only those tools that require updating. Auto manufacturers constantly change the design, strength, and location of exotic metals inside vehicles which challenges the capabilities of current tools. Replacing and updating our current extrication equipment is needed to meet the demands that are being placed on rescue teams.

Comments:

Current tools were purchased in 2010 and are requiring maintenance each year. Extractions are continually becoming more complex and difficult. Challenges that we are currently faced include auto manufactures increased use of High Strength Low Alloy (HSLA) and Ultra High Strength Steel (UHSS/Boron).

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2025	335,000	335,000	0
	335,000	335,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund			335,000		335,000
Total Revenue			335,000		335,000
Expense					
Equipment			335,000		335,000
Total Expense			335,000		335,000

26-250: Fire - Mass Care / Mass Sheltering Upgrade

Department: **Public Safety Capital Projects**
 Project Type: System Acquisition or Upgrade
 Year Identified: 2021
 Start Date: 7/1/2023
 Est. Completion Date: 12/31/2024

Description:

This project replaces the Disaster Medical Support Unit (DMSU), Mass Casualty Incident trailer (MCI) and the Shelter Support Unit trailer (SSU) along with durable equipment currently on the units. It also provides a metal carport like structure for protection from weather elements, thus extending the useful life of the units.

Justification:

The updated trailers will enable critical support in three different and challenging environments. The first is natural disasters, including hurricanes, tornadoes, tropical storms, and rural-urban interface incidents. Second, the enhanced capabilities of the DMSU, MCI, and SSU will provide needed equipment/support during incidents such as large scale fires (Robert Hall Blvd) and expanded incidents such as bus accidents. The third type of challenging operating environment is the active threat incident which can involve an active shooter with casualties, or a cyber attack on our infrastructure, both requiring strong departmental support to our community.

Comments:

Existing trailers and equipment are over ten years old. Although consumables are currently rotated out through HRMMRS sustainment funding, it is reasonable to anticipate that some of the durable equipment on these units may need to be replaced as well due to age and constant exposure to the weather elements.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2024	150,000	150,000	0
	150,000	150,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund			150,000		150,000
Total Revenue			150,000		150,000
Expense					
Equipment			150,000		150,000
Total Expense			150,000		150,000

18-240: Fire - Multipurpose Tow/Rescue Vehicle Replacement

Department: **Public Safety Capital Projects**
 Project Type: Equipment
 Year Identified: 2020
 Start Date: 7/1/2023
 Est. Completion Date: 7/30/2025

Description:

This project will provide for a multi-purpose rescue apparatus that will function as a tow vehicle for the Structural Collapse Rescue Trailer (TECH 15). This unit will also function as a backup apparatus for RESCUE 15, capable of carrying a full complement of specialized rescue and firefighting equipment. This will allow the technical rescue team continuity of specialized rescue service delivery to the citizens of Chesapeake and the Hampton Roads Region when the RESCUE 15 apparatus is out of service. The vehicle will have the ability to function as a "ladder tender" apparatus, which will allow ladder companies to maintain vehicle extrication and firefighting capabilities in the event their apparatus is out of service for mechanical reasons and the single spare ladder apparatus is not available.

Justification:

Increased commercial and industrial development, including structures with poured in place and tilt slab concrete construction, requires specialized rescue capabilities for response to fire, natural and man-made disasters, and acts of terrorism. This project will allow for continuity of specialized rescue service delivery with the addition of a state-of-the-art multipurpose tow vehicle. This apparatus will ensure that the Chesapeake Fire Dept. Technical Rescue Team continues to provide responsive and caring service to the citizens of Chesapeake and Hampton Roads in the event of front-line apparatus failures.

Comments:

In 2014, the 1998 American LaFrance heavy rescue apparatus, SQUAD 15, was replaced with the state-of-the-art RESCUE 15 apparatus. Due to age and maintenance costs, the SQUAD 15 apparatus was transferred out of the Fire Dept.'s control and subsequently sold. This left no reserve apparatus to serve as backup for the RESCUE 15 apparatus, and therefore, a gap in the delivery of specialized rescue service.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2024	500,000	500,000	0
	500,000	500,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund			500,000		500,000
Total Revenue			500,000		500,000
Expense					
Equipment			500,000		500,000
Total Expense			500,000		500,000

Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2025	21,000	0.0

27-250: Fire - Portable Radio Replacement

Department: **Public Safety Capital Projects**
 Project Type: Replacement
 Year Identified: 2021
 Start Date: 7/1/2023
 Est. Completion Date: 12/31/2025

Description:

This project will provide the Fire Department with 351 replacement portable radios to replace the obsolete models. The currently deployed Motorola APX6000XE and APX7000XE portable radios; the APX6000 reaches end of service life in 2023.

Justification:

With the buildout of the Radio to CAD interface, the Fire Department can use new functionality these new radios will provide such as GPS and status updates via the radio.

Comments:

This will provide an orderly transition to new Harris Radios. Neither Harris nor Motorola currently offers a Fire Service portable radio that meets the specifications for the new NFPA standard 1802. Since compliant units are not yet available, equipment costs are estimated based on the current cost of fire radios. Since firefighters and equipment are subject to very harsh environments, fire radios are typically more expensive than those used by police officers.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2024	2,679,000	2,679,000	0
	2,679,000	2,679,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Cash - Lockbox City			2,679,000		2,679,000
Total Revenue			2,679,000		2,679,000
Expense					
Equipment			2,679,000		2,679,000
Total Expense			2,679,000		2,679,000

Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2025	342,000	0.0

19-240: Fire - Structural/Trench Shoring System Replacement

Department: **Public Safety Capital Projects**
 Project Type: Replacement
 Year Identified: 2020
 Start Date: 7/1/2023
 Est. Completion Date: 7/30/2024

Description:

This project will replace current pneumatic structural and trench shoring equipment which is outdated and no longer serviceable or supported by the manufacturer. This specialized rescue equipment is used to stabilize heavy concrete structures that have suffered structural collapse resulting from natural and man-made disasters or acts of terrorism. In addition, this equipment is used to stabilize trench walls in order to rescue a trapped victim in a below grade construction accident. The new equipment includes increased safety features that will support responder safety and more rapid patient extrication. This project will also enhance our ability to lift, stabilize and extricate trapped patients from vehicles involved in serious accidents.

Justification:

The increase in commercial/ industrial occupancies in the City, including those with poured in place and tilt slab concrete construction, requires specialized rescue capabilities in emergency events (i.e. fires, natural and man-made disasters, or acts of terrorism). This project will help to ensure the Chesapeake Fire Dept. Technical Rescue Team maintains a high level of specialized rescue service delivery to the citizens of Chesapeake and the Hampton Roads area.

Comments:

Current shoring equipment is over fifteen years old and is no longer in production. Replacement parts and service are no longer available.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2024	150,000	150,000	0
	150,000	150,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund			150,000		150,000
Total Revenue			150,000		150,000
Expense					
Equipment			150,000		150,000
Total Expense			150,000		150,000

28-250: Fire - Thermal Imaging Cameras (TICs)/Forward-Looking Infrared Radar (FLIR) Units

Department: **Public Safety Capital Projects**
 Project Type: Equipment
 Year Identified: 2021
 Start Date: 7/1/2024
 Est. Completion Date: 12/31/2025

Description:

This project replaces the Thermal Imaging Cameras (TICs) on 27 Fire Department emergency vehicles. It also replaces the aging Forward-Looking Infrared Radar (FLIR) unit on the Marine Incident Response Team vessel along with three (3) chart plotters that are integral to the unit.

Justification:

Thermal Imaging Cameras have proven to be an exceptionally valuable tool for locating victims of a fire and determining the exact location of the fire. This equipment provides for a very high level of firefighter safety and significantly increases the survival of fire victims. FLIR Maritime Thermal Imaging Systems gives members of the MIRT to see clearly in total darkness through solar glare and through fog and smoke. They are used for Search and Rescue (SAR) operations and excel in the maritime environment. Thermal imaging also aids in identifying navigation markers, buoys, logs, and other debris floating in the water. When responding to a call at high speed, the enhanced vision is essential for ensuring the safety of our own vessels as well as surrounding civilian vessels.

Comments:

This project will ensure that the Thermal Imaging Camera/FLIR programs continue on a seven-year replacement schedule. Replacing this technology every seven years keeps the equipment up-to-date with the latest technology, standards, and optimal performance.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2025	395,000	395,000	0
	395,000	395,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund			395,000		395,000
Total Revenue			395,000		395,000
Expense					
Equipment			395,000		395,000
Total Expense			395,000		395,000

39-200: Fire - Vehicle Replacement

Department: **Public Safety Capital Projects**
 Project Type: Replacement
 Year Identified: 2016
 Start Date: 7/1/2015
 Est. Completion Date: 6/30/2025

Description:

This project will provide for the replacement of Fire Department telesquirts, ladder trucks, and pumps.

Justification:

This project will address the City's fire vehicle replacement backlog.

Comments:

For the FY 2020-24 CIP, the project plan was updated and funding was added for FY 2024 requirements. Historically fire vehicles were replaced through the City's vehicle replacement program, which is part of the annual operating budget. Unfortunately, vehicle replacement funding was not adequate to address the backlog of City vehicles requiring replacement.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	1,500,000	1,500,000	0
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	1,500,000	1,500,000	0
	7,500,000	7,500,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
G.O. Debt - Short Term Financing	750,000				750,000
Cash - Lockbox City	4,500,000	1,500,000	6,000,000	1,500,000	13,500,000
Total Revenue	5,250,000	1,500,000	6,000,000	1,500,000	14,250,000
Expense					
Equipment	5,250,000	1,500,000	6,000,000	1,500,000	14,250,000
Total Expense	5,250,000	1,500,000	6,000,000	1,500,000	14,250,000

17-220: Fire Station #16 - Joint Fire & Police Station - Grassfield/Scenic Pkwy.

Department: **Public Safety Capital Projects**
 Project Type: New Facility
 Year Identified: 2018
 Start Date: 7/1/2021
 Est. Completion Date: 7/30/2027

Description:

This project provides for land acquisition and construction of a new Fire/EMS facility in the Grassfield area near the northern end of Dominion Boulevard. The new facility will be a joint Fire/EMS and Police Station.

Justification:

This project addresses proposed development in the Dominion Corridor Study that will increase demands for Fire and EMS service. The new station is necessary to maintain the City's ISO rating, which impacts insurance premiums paid by businesses and citizens. (ISO is an advisory organization that provides information about property/casualty insurance risk.)

Comments:

Project design and construction has been delayed beyond FY 2025. Currently, this area is served by Fire Station #13 (Cornland) and Fire Station #15 (Bells Mill). This area has experienced significant growth over the past ten years, with the development of commercial, residential, and multi-family dwellings. Intensive commercial and residential development is expected to continue in this area.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	500,000	500,000	0
2022			0
2024			0
	500,000	500,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Cash - Lockbox City		500,000			500,000
G.O. Debt - City				13,220,000	13,220,000
Total Revenue		500,000		13,220,000	13,720,000
Expense					
Design & Engineering				975,000	975,000
Construction				6,612,000	6,612,000
Land Acquisition		500,000			500,000
Equipment				4,896,000	4,896,000
Other				737,000	737,000
Total Expense		500,000		13,220,000	13,720,000

16-220: Fire Station #4 Replacement

Department: **Public Safety Capital Projects**
 Project Type: Replacement
 Year Identified: 2018
 Start Date: 7/1/2021
 Est. Completion Date: 7/30/2026

Description:

This project provides for the replacement of Fire Station #4 located on North Battlefield Boulevard on a different site.

Justification:

The replacement of Fire Station #4 was identified as a critical need for several years. The station was built in 1962 and serves the North Battlefield Boulevard/West Greenbrier area. It is small, outdated, and does not meet current demands for training, meetings, or personal space. Since it was built, the station has been remodeled and enlarged several times. The ventilation system is inadequate causing exhaust fumes from the bay to flow into living areas. The current parcel of land is only one acre and too small to accommodate a modern fire station.

Comments:

The project first appeared in the 2020-25 CIP.
 Cost estimates include land, design and construction of a new facility.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022			0
2024			0
2025	975,000	975,000	0
	975,000	975,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Cash - Lockbox City	900,000				900,000
G.O. Debt - City			975,000	9,072,000	10,047,000
Total Revenue	900,000		975,000	9,072,000	10,947,000
Expense					
Design & Engineering			975,000		975,000
Construction				6,638,000	6,638,000
Equipment				1,558,000	1,558,000
Other	900,000			876,000	1,776,000
Total Expense	900,000		975,000	9,072,000	10,947,000

29-250: Fire/Police - Base Station Radio Replacement

Department: **Public Safety Capital Projects**
 Project Type: Replacement
 Year Identified: 2021
 Start Date: 7/1/2022
 Est. Completion Date: 11/30/2025

Description:

This project will replace the 65 obsolete Motorola XTL5000 Consolette radios (Base Stations) in Fire Stations, Police Precincts, and Public Safety headquarters/administrative offices to provide reliable radio communications for Public Safety first responders during routine and emergency incidents.

Justification:

These radios are essential for maintaining reliable communications for Public Safety first responders with the Emergency Operations Center during extreme weather events due to their higher power and elevated antenna systems.

Comments:

Existing Consolettes have been in service for over 12 years. They have reached end-of-life and need to be replaced. The manufacturer will no longer provide support for these devices after July 1, 2022.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2023	250,000	250,000	0
2024	250,000	250,000	0
2025	250,000	250,000	0
	750,000	750,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - Other Funds			750,000		750,000
Total Revenue			750,000		750,000
Expense					
Equipment			750,000		750,000
Total Expense			750,000		750,000

Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2024	25,000	0.0
2025	50,000	0.0

26-210: Jail and Sheriff HQ - Renewal and Replacements

Department: **Public Safety Capital Projects**
 Project Type: Renovation or Rehabilitation
 Year Identified: 2017
 Start Date: 7/1/2016
 Est. Completion Date: 7/30/2024

Description:

The project will provide for repair or replacement of the Jail and the Sheriff's Headquarters (HQ) facilities, including HVAC, other mechanical systems, security and alarms systems, elevators, generators, interior renovation, roofs, carpet, etc. Larger maintenance items such as HVAC duct cleaning are also included.

Justification:

The repair and replacement items for the Jail and Sheriff's HQ facilities were previously funded from the "Facilities - High Priority Renewal & Replacements" project # 02-150. The Jail and Sheriff's HQ buildings operate 24/7, and the Jail endures very intensive use which results in components, systems, and interior finishes that deteriorate and wear out much faster than in other buildings. A focused project was needed to properly address these facility needs.

Comments:

This project is a multi-year program established in FY 2017 to make major repairs and replacements of building components and equipment at the Jail and Sheriff's HQ building. The Jail and Sheriff's HQ buildings have a backlog of deferred maintenance, and the Jail is subject to inspections by the Department of Justice and Health Department that require interior finishes and systems to meet strict requirements. This project will address the previously deferred maintenance needs. Future improvements planned as part of this project include replacing the roof at the Sheriff's HQ building, replacing the water chiller/heating piping at the Jail, as well as re-coating the lobby roof, replacing obsolete locks, various painting, and other general renovations at the Jail.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	506,000	506,000	0
2022	472,000	472,000	0
2023	516,000	516,000	0
2024	577,000	577,000	0
2025	625,000	625,000	0
	2,696,000	2,696,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund	925,000				925,000
Cash - Lockbox City	870,000	506,000	2,190,000		3,566,000
Total Revenue	1,795,000	506,000	2,190,000		4,491,000
Expense					
Design & Engineering	100,000				100,000
Construction	1,695,000	506,000	2,190,000		4,391,000
Total Expense	1,795,000	506,000	2,190,000		4,491,000

30-250: P25 Radio System Upgrade

Department: **Public Safety Capital Projects**
 Project Type: System Acquisition or Upgrade
 Year Identified: 2021
 Start Date: 7/1/2020
 Est. Completion Date: 10/31/2023

Description:

This project will upgrade the City's P25 radio system to: 1) improve the security of the radio system by implementing TLS 1.2 in accordance with cyber-security best practices and US DoD requirements; 2) establish an interface between the P25 radio system and the City's Computer-Aided Dispatch (CAD) system to allow for instant status text messages from first responders and standardized TIA-102 Tier 2 subscriber radio location services to aid dispatch and incident commanders with first responder locations; and 3) add additional redundancy and resilience in the supporting application server infrastructure.

Justification:

The P25 radio system is critical to the daily operations of many City departments, especially Public Safety emergency responders. The upgraded P25 radio system with enhanced functionality is paramount to providing for the safety and coordination of Public Safety emergency responders. P25 radio system and the Computer-Aided Dispatching system interface will allow information such as GPS coordinates and status alerts to pass between the systems to save critical time during emergencies.

Comments:

The P25 radio system has served the City's emergency responders and others well over the last few years. The system is being used by Schools and Regent University Police Department. This upgrade will take the P25 radio system to the next level, and will allow for an interface to the CAD system to provide real-time GPS locations of Public Safety emergency responders to greatly enhance incident response.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	1,100,000	1,100,000	0
	1,100,000	1,100,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - Other Funds		1,100,000			1,100,000
Total Revenue		1,100,000			1,100,000
Expense					
Equipment		968,000			968,000
Software		132,000			132,000
Total Expense		1,100,000			1,100,000

Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2022	330,000	0.0
2023	330,000	0.0
2024	330,000	0.0
2025	330,000	0.0

31-250: Police - 911 Recording Solution Replacement

Department: **Public Safety Capital Projects**
 Project Type: Replacement
 Year Identified: 2021
 Start Date: 7/1/2023
 Est. Completion Date: 6/30/2024

Description:

This project will replace the 911 recording solution for phone and radio traffic.

Justification:

State Law requires the 911 center to record telephone and radio transmission coming into and exiting the 911 center. This equipment is mission critical to the 911 center and to the City.

Comments:

The current VPI recording solution will go end of life on 12/31/2023 and needs to be replaced.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2024	300,000	300,000	0
	300,000	300,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund			300,000		300,000
Total Revenue			300,000		300,000
Expense					
Equipment			300,000		300,000
Total Expense			300,000		300,000

Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2025	30,000	0.0

34-240: Police - Electronic Summons Collection Equipment

Department: **Public Safety Capital Projects**
 Project Type: System Acquisition or Upgrade
 Year Identified: 2020
 Start Date: 7/1/2019
 Est. Completion Date: 7/30/2026

Description:

This project will provide for the acquisition and maintenance of the electronic summons system.

Justification:

On May 14, 2019, City Council authorized a five dollar (\$5) summons fee to fund the cost to acquire and maintain an electronic summons system. Estimates indicate annual collections of between \$116,000 and \$138,000 annually. The Police Dept. has identified the need to acquire five units. This project will fund the purchase of three units in FY 2020 and two more in FY 2021.

Comments:

On June 25, 2019, City Council approved an amendment to the FY 2020-24 CIP that added this as a new project and appropriated \$120,000 for FY 2020. See also City Council Agenda Item CM-4(B).

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	80,000	80,000	0
	80,000	80,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund	120,000	80,000			200,000
Total Revenue	120,000	80,000			200,000
Expense					
Other	120,000	80,000			200,000
Total Expense	120,000	80,000			200,000

34-250: Police - Portable Radio Replacement

Department: **Public Safety Capital Projects**
 Project Type: Replacement
 Year Identified: 2021
 Start Date: 7/1/2021
 Est. Completion Date: 6/30/2025

Description:

This project replaces existing Motorola radios and provides an additional 349 units to the Police Department's current inventory. It replaces Motorola units that are at end of service life.

Justification:

The Motorola APX6000 radios are coming to end of life and support in 2023. This project will allow the orderly transition to new units.

Comments:

With the upgrade of the P25 radio system, new radios will provide greater functionality. This project includes an additional 349 Harris XL185P portable radios to complete replacement of 507 CPD APX6000 portable radios. 158 Harris XL185P portable radios were ordered with remaining FY 2019 funds.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2022	550,000	550,000	0
2023	550,000	550,000	0
2024	550,000	550,000	0
	1,650,000	1,650,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund			1,650,000		1,650,000
Total Revenue			1,650,000		1,650,000
Expense					
Equipment			1,650,000		1,650,000
Total Expense			1,650,000		1,650,000

Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2023	55,000	0.0
2024	110,000	0.0
2025	165,000	0.0

22-240: Police & Sheriff - Virtual Firearm Training/Safety Awareness System

Department: **Public Safety Capital Projects**
 Project Type: Equipment
 Year Identified: 2020
 Start Date: 7/1/2019
 Est. Completion Date: 7/30/2021

Description:

This project will provide for virtual firearms training and safety awareness system and equipment that the Police Dept. and Sheriff's Office will use for training. Through virtual simulation, we will better train Police Officers and Sheriff's Deputies in firearms manipulation. From active shooter scenarios in the courts, hostile traffic stops, to proper grip and stance, the virtual simulator can better hone those skills. With the portability of the simulator, we will be able to educate the public on some of the same simulations connecting Public Safety employees and those they serve. We will also continue to educate the private sector through community centers, events, etc. with increased safety because the need for live ammo is eliminated by the virtual simulator.

Justification:

Virtual Simulators are able to create better shooters through increased trigger time without increasing the use of live ammo or increasing the cost. It presents a safer way to train, allows for training that is nearly impossible on a traditional firing range, and develops finer skills of acquiring a target while moving. While training takes place in a classroom setting, the virtual simulation allows the trainee to implement learned techniques safely and repeatedly. Further, the realism of the simulation offers the public a look into what our Public Safety officers face daily.

Comments:

With the increased officer related issues in our communities we want to better train our Public Safety Employees. Our current firing range is not up-to-date with the latest technologies. It is not currently suited to offer the extra level of training like that of Virtual Simulation. Also, the training space does not offer the public a view of what we do and the reasons of why it needs to be done.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	40,000	40,000	0
	40,000	40,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund	300,000	40,000			340,000
Total Revenue	300,000	40,000			340,000
Expense					
Equipment	300,000	40,000			340,000
Total Expense	300,000	40,000			340,000

Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2022	37,000	0.0
2023	37,000	0.0
2024	37,000	0.0
2025	37,000	0.0

13-230: Police and Fire - Door Card Control Panel Replacement and Fire Station Access

Department: **Public Safety Capital Projects**
 Project Type: System Acquisition or Upgrade
 Year Identified: 2019
 Start Date: 7/1/2019
 Est. Completion Date: 7/30/2021

Description:

This project will replace the door card control panels in the Police / Fire Dept. Headquarters (HQ) building and the Juvenile and Domestic Relations (J&DR) Court building because the panels have reached end of life. It will also install door card access systems at all fire stations.

Justification:

This project is needed to replace outdated equipment, provide better security, and unify the door card system across public safety.

Comments:

The door card system control panels need to be replaced in the Police/Fire HQ and J&DR Court buildings because the panels have reached end of life and the systems have expanded beyond the capacity these panels can handle. Additionally, the fire station buildings need to be placed on the door security system.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	23,500	23,500	0
	23,500	23,500	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund	110,000				110,000
Cash - Lockbox City		23,500			23,500
Total Revenue	110,000	23,500			133,500
Expense					
Equipment	110,000	23,500			133,500
Total Expense	110,000	23,500			133,500

15-230: Police, Fire, and Sheriff - New World App

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

Description:

This project will provide for the acquisition of the New World App to be utilized by the Police, Fire, and Sheriff.

Justification:

This application will provide better and faster access to mission critical information.

Comments:

This application will allow designated members of the Fire and Police Departments and Sheriff's Office to use tablets and smart phones in the field to access critical information in the current CAD and Records Management System.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	102,000	102,000	0
	102,000	102,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund		102,000			102,000
Total Revenue		102,000			102,000
Expense					
Other		102,000			102,000
Total Expense		102,000			102,000

Operating Budget Impact:

Year	Exp (Rev)	FTE Impact
2023	21,300	0.0
2024	21,300	0.0
2025	21,300	0.0

16-230: Public Safety Facility Issue Studies - Feasibility & Conceptual Design

Department: **Public Safety Capital Projects**
 Project Type: Study
 Year Identified: 2019
 Start Date: 7/1/2018
 Est. Completion Date: 7/30/2023

Description:

This project will provide for feasibility studies and conceptual designs to address several public safety facility issues. Once the studies have concluded, future funding will be needed to implement the recommendations.

Justification:

The current public safety academy and scenario-based training facilities have major condition and logistics issues that require attention. The Public Safety Building (located behind City Hall) also has condition issues, and unoccupied office space (with the opening of the new Public Safety Operations Building) that requires evaluation to determine the best reuse. The current police evidence storage facility is at capacity and requires additional storage space (localities must store some evidence for 100 years). Studies are needed to provide the best plan to address all of these needs. The feasibility study for the Public Safety Building located on Albemarle Drive will evaluate all building conditions, city space needs, and police evidence storage space needs. The conceptual design will address the best reuse of the facility, building refurbishments, and adequate evidence storage requirements.

Comments:

Several studies are planned to evaluate the following four public safety facility issues: 1) feasibility and cost of a joint public safety academy training facility, 2) feasibility and cost to replace scenario-based training facilities for field training, 3) the best reuse of the former Dispatch Center located in the Public Safety Building on Albemarle Drive behind City Hall, and 4) feasibility and cost to enlarge the Albemarle Drive facility to add customer service and storage space for police evidence.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
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Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund	750,000				750,000
G.O. Debt - City				16,696,000	16,696,000
Total Revenue	750,000			16,696,000	17,446,000
Expense					
Design & Engineering				1,500,000	1,500,000
Construction				15,196,000	15,196,000
Other	750,000				750,000
Total Expense	750,000			16,696,000	17,446,000

17-230: Public Safety Two Factor Authentication System Upgrade

Department: **Public Safety Capital Projects**
 Project Type: System Acquisition or Upgrade
 Year Identified: 2019
 Start Date: 7/1/2020
 Est. Completion Date: 7/30/2023

Description:

This project will provide for the upgrade or replacement of the Two Factor Authentication system used by the City's Public Safety departments.

Justification:

The FBI's Division of Criminal Justice Information Services (CJIS) mandates that public safety agencies utilize Two Factor Authentication systems for security. Compliance with this mandate is enforced by the FBI and the Virginia State Police. This project will ensure the existing system is updated or replaced to stay in compliance.

Comments:

The current Two Factor Authentication system was purchased in 2013, and is now due for upgrade or replacement.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	100,000	100,000	0
	100,000	100,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund		100,000			100,000
Total Revenue		100,000			100,000
Expense					
Other		100,000			100,000
Total Expense		100,000			100,000

Operating Budget Impact:

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

43-250: Sheriff - Radio Replacement

Department: **Public Safety Capital Projects**
 Project Type: Replacement
 Year Identified: 2021
 Start Date: 7/1/2020
 Est. Completion Date: 6/30/2025

Description:

This project will replace the 430 radios used by the Sheriff's Office, which include 208 radios that are already at the end of useful service life.

Justification:

While working in the public safety environment, it is imperative that all deputies are safe and secure. The first part of accomplishing that safety is communication. These radios enable the deputies to know what is going on around them and reach out for help when necessary. The radios are also equipped with distress buttons that contact police dispatch if a deputy is unable to speak.

Comments:

The Sheriff's Office previously took over possession of 208 radios along with maintenance plans from the Police Department to outfit all Sheriff's deputies and support staff. The radios have reached the end-of-life cycle, and have been unsupported since 2018. This project would phase in the total radio replacement needs over five years. The unsupported radios will be replaced first (replaced by 2021). The project will also replace the other radios, which also need replacement. The project includes the cost of each radio plus a five-year warranty. The Sheriff's Office will plan for continued warranty and support after five years in the annual operating budget.

Project Forecast:

Year	Total Expense	Total Revenue	Difference
2021	90,000	90,000	0
2022	90,000	90,000	0
2023	90,000	90,000	0
2024	90,000	90,000	0
2025	90,000	90,000	0
	450,000	450,000	0

Project Details 2021:

	Prior Years	2021	2022 - 25	Future Years	Total Amount
Revenue					
Fund Balance - General Fund		90,000	360,000		450,000
Total Revenue		90,000	360,000		450,000
Expense					
Equipment		90,000	360,000		450,000
Total Expense		90,000	360,000		450,000

