Specialty Equipment

COUNTY OF ROANOKE VIRGINIA
1838

County of Roanoke, Virginia
FY 2026 – FY 2035 Adopted Capital Improvement Program
Specialty Equipment Summary

Note: Projects with $0 in FY 2026-2035 are active projects that have been fully funded in prior fiscal years.

Category/Department/Project	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 26-35 Total
Specialty Equipment											
Emergency Communications											
Emergency Medical Dispatch	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Emergency Communications Total	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fire and Rescue											
Fire and Rescue Second Set of Turnout Gear	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,250,000	$ -	$ -	$ -	$ 1,250,000
Self-Contained Breathing Apparatus (SCBA) Replacement	-	-	-	-	-	2,500,000	-	-	-	-	2,500,000
Digital Vehicle Repeater System (DVRS)	-	-	-	-	-	-	-	-	-	-	-
Airshore Struts	-	-	-	-	-	-	-	-	-	-	-
Fire and Rescue Total	$ -	$ -	$ -	$ -	$ -	$ 2,500,000	$ 1,250,000	$ -	$ -	$ -	$ 3,750,000
Specialty Equipment Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 2,500,000**	**$ 1,250,000**	**$ -**	**$ -**	**$ -**	**$ 3,750,000**

Emergency Medical Dispatch

Department: Emergency Communications Center

Location: PSC 5925 Cove Rd., Roanoke, VA

Magisterial District: Catawba Magisterial District

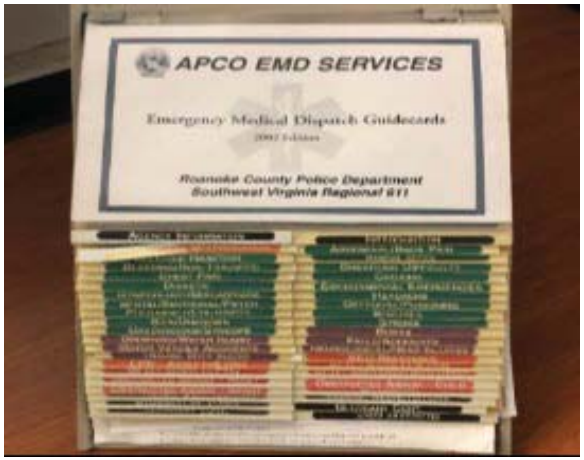
Category: Replacement

Est. Useful Life: 5 years

Project Status: Active

Financial Summary

	Total Cost	*Through FY 2025*	*FY 2026*	*FY 2027*	*FY 2028*	*FY 2029*	*FY 2030*	*FY 2031*	*FY 2032*	*FY 2033*	*FY 2034*	*FY 2035*	*Total FY 26 - FY 35*
Total Project Cost	$ 230,000	$ *230,000*	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Funding Sources													
Roanoke County - Unrestricted Cash	230,000	$ *230,000*	-	-	-	-	-	-	-	-	-	-	-
Total Funding Sources	$ 230,000	$ 230,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Impacts			-	-	-	-	-	-	-	-	-	-	-



Project Summary:

Roanoke County has used the same EMD Guide cards since December of 2006. The OMD has strongly encouraged an upgrade due to the outdated material. The Association of Public-Safety Communications Officials (APCO) Institute's comprehensive EMD program is based on the National Standard Curriculum for EMD and incorporates all of the current American Society for Testing and Materials and National Highway Traffic Safety Administrations guidelines. It is a cost-effective way for agencies to implement an EMD program and includes customization of EMD Guide cards and locally controlled training by APCO Institute certified instructors.

Emergency Medical Dispatch (continued)

Project Description and Justification:

This project will upgrade the Emergency Communication Center Emergency Medical Dispatch Program in FY 2026. Emergency Medical Dispatch (EMD) is a systematic program of handling medical calls. Trained telecommunicators, using procedures locally approved by the Operational Medical Director (OMD), quickly and properly determine the nature and priority of the call, dispatch the appropriate response, then give the caller instructions to help treat the patient until the responding Emergency Medical Services (EMS) unit arrives. A comprehensive EMD program can reduce agency liability by providing thorough and consistent dispatch instructions.

Additional Operating Impacts:

Depending on the upgrade chosen, the department may need an interface with our current Computer Aided Dispatch computers, licenses, continued training for ECC employees and software maintenance.

Conformance with Plans, Policies, and Legal Obligations:

This project conforms with the stated mission of the Board of Supervisors to provide high quality services at reasonable costs to the citizens of Roanoke County.

Project Highlights and Key Milestones:

- Roanoke County Emergency Communications Center began Emergency Medical Dispatch in January of 2000.
- The Emergency Medical Dispatch Guide Cards were updated in December of 2006.
- The project was placed on hold due to COVID and low staffing numbers in 2020
- Work group developed with Roanoke County F&R and the OMD (Medical Director) for Roanoke County in 2022.

Community Strategic Plan

Ensure Citizen Safety

Public Safety Facilities & Equipment

Fire and Rescue Second Set of Turnout Gear

Department: Fire & Rescue

Location: Countywide

Magisterial District: Countywide

Category: New

Est. Useful Life: 10 years

Project Status: New

Financial Summary

	Total Cost	*Through FY 2025*	*FY 2026*	*FY 2027*	*FY 2028*	*FY 2029*	*FY 2030*	*FY 2031*	*FY 2032*	*FY 2033*	*FY 2034*	*FY 2035*	*Total FY 26 - FY 35*
Total Project Cost	$ 1,250,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ *1,250,000*	$ -	$ -	$ -	$ *1,250,000*
Funding Sources													
Roanoke County - Unrestricted Cash	1,250,000	-	-	-	-	-	-	-	*1,250,000*	-	-	-	*1,250,000*
Total Funding Sources	$ 1,250,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$1,250,000	$ -	$ -	$ -	$ 1,250,000
Operating Impacts			-	-	-	-	-	-	-	-	-	-	-

Project Summary:

Firefighters are exposed to countless carcinogens when fighting fires. A typical home or business contains an unknown number of plastics and other materials that release harmful and toxic substances when burned. When firefighters respond to a fire scene, their gear absorbs the harmful toxic substances. Crews return to the station, then later in the same shift, the same firefighters may respond to a second fire call and must wear the same dirty gear. The risk of re-contamination is significant and unavoidable. An available set of second clean turnout gear resolves these issues and provides a higher level of protection.

Fire and Rescue Second Set of Turnout Gear(continued)

Project Description and Justification:

The National Fire Protection Association (NFPA) requires firefighting protective clothing to go through advanced cleaning every time it is exposed to products of combustion. The gear should be cleaned by separating the layers and washing them in a gear washer extractor. This is difficult to accomplish while the firefighters remain on shift without a second set of clean gear to be used while the dirty set is being cleaned. Firefighters currently have just one set of gear, which requires them to wear dirty, contaminated gear after a fire scene.

Additional Operating Impacts:

There are no additional operating impacts identified at this time.

Conformance with Plans, Policies, and Legal Obligations:

This project conforms with the Community Strategic Plan initiative to Ensure Citizen Safety, specifically the major component of Public Safety Facilities & Equipment.

Project Highlights and Key Milestones:

- Second set of gear is the new industry standard for firefighters so that when they return from a fire scene, they can send gear off to be washed.
- The second set of gear is used while the initial set is being cleaned and decontaminated.
- A second set of gear would keep firefighters and their team medically safer.

Community Strategic Plan

Ensure Citizen Safety

Public Safety Facilities & Equipment

Self-Contained Breathing Apparatus (SCBA) Replacement

Department: Fire & Rescue

Location: Countywide

Magisterial District: Countywide

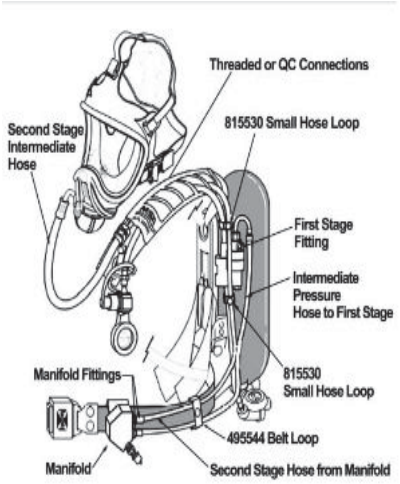
Category: Replacement

Est. Useful Life: 15 years

Project Status: Planned

Financial Summary

	Total Cost	*Through FY 2025*	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 26 - FY 35
Total Project Cost	$ 2,500,000	$ -	$ -	$ -	$ -	$ -	$ -	$2,500,000	$ -	$ -	$ -	$ -	$ 2,500,000
Funding Sources													
Grant	1,250,000	-	-	-	-	-	-	1,250,000	-	-	-	-	1,250,000
Roanoke County - Unrestricted Cash	1,250,000	-	-	-	-	-	-	1,250,000	-	-	-	-	1,250,000
Total Funding Sources	$ 2,500,000	$ -	$ -	$ -	$ -	$ -	$ -	$2,500,000	$ -	$ -	$ -	$ -	$ 2,500,000
Operating Impacts			-	-	-	-	-	-	-	-	-	-	-



Project Summary:
Self-contained breathing apparatus (SCBA), or air packs, are respirators worn to provide breathable air in environments that might otherwise be dangerous to life or health. This includes environments that are oxygen-deficient or where the air contains smoke, dust, dangerous gases and vapors, or other airborne contaminants.

According to the National Fire Protection Association (NFPA), all composite air cylinders are taken out of service at the end of their service life of 15 years from the manufacturer's date. The current SCBA equipment's 15-year warranty will expire in 2032.

Self-Contained Breathing Apparatus (SCBA) Replacement (continued)

Project Description and Justification:

Self-contained breathing apparatus (SCBA) is a critical device worn by firefighters to provide breathable air in environments with oxygen deficiency, smoke, dangerous gases, and other airborne contaminants that may be otherwise dangerous to breathe. This equipment has a lifespan of 15 years, according to the National Fire Protection Association (NFPA) guidelines. A self-contained breathing apparatus has four main components: A face mask or mouthpiece with connected air supply pipes; a pressure regulator; a carrying frame or pack; and one or two high-pressure tanks with compressed air or oxygen.

The current SCBA equipment was purchased in 2017 with capital funds at a cost of about $1.75 million. The next replacement SCBA equipment must be ordered in 2031, then placed in service in 2032. We anticipate the cost of the same equipment with increased personnel for the new Bonsack Station #12 will be approximately $2.5 million. The replacement of these SCBA devices is critical to firefighter safety and is required by the National Fire Protection Association (NFPA).

Additional Operating Impacts:

There are no additional operating impacts identified at this time.

Conformance with Plans, Policies, and Legal Obligations:

This project conforms with the Community Strategic Plan initiative to Ensure Citizen Safety, specifically the major component of Public Safety Facilities & Equipment.

Community Strategic Plan

Ensure Citizen Safety

Public Safety Facilities & Equipment

Project Highlights and Key Milestones:

- Current SCBA placed in service in 2018.
- Vendors require 12-month lead time.
- RFP and Order will need to be placed in 2031.
- Current SCBA will reach end of life in 2032.

Digital Vehicle Repeater System (DVRS)

Department: Fire & Rescue

Location: Countywide

Magisterial District: Countywide

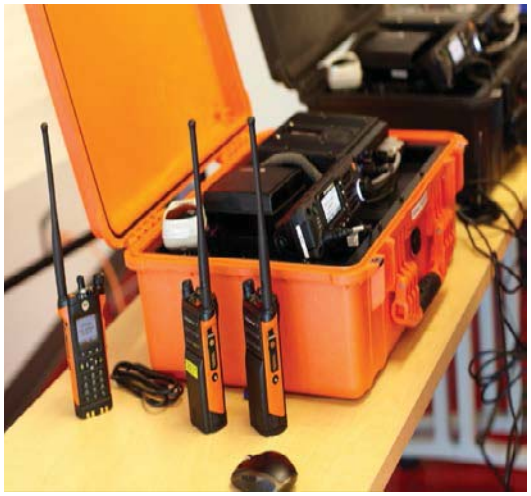
Category: Replacement

Est. Useful Life: 15 years

Project Status: New

Financial Summary

	Total Cost	*Through FY 2025*	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 26 - FY 35
Total Project Cost	$ 150,000	$ *150,000*	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Funding Sources													
Roanoke County - Unrestricted Cash	150,000	*150,000*	-	-	-	-	-	-	-	-	-	-	-
Total Funding Sources	$ 150,000	$ *150,000*	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Impacts			-	-	-	-	-	-	-	-	-	-	-



Project Summary:

A digital vehicle repeater system (DVRS) improves portable radio communication coverage for fire/rescue, police, and other emergency personnel by using the higher power of the mobile radio in the vehicle to extend the range of the portable back to the radio system. It allows emergency personnel to drive a transmitter closer to the incident to allow for more penetration than units may have from the mountain-top repeater that is already in place.

In general, radio waves travel in straight lines. They can go around and through things, but this can drastically affect the strength and clarity of the signal. This causes problems when operating a radio system in a built-up, hilly, or mountainous area. Sometimes, even on flatter terrain, the sheer distance between the transmitting radio and the receiving radio weakens the signal to an unacceptable quality, or the signal may be lost altogether. A radio repeater simultaneously receives a radio signal and re-transmits it at a higher power so it can cover greater distances. This enables communication between radio users where obstructions or distance are a problem.

Digital Vehicle Repeater System (DVRS) (continued)

Project Description and Justification:

Fire & Rescue is requesting funds to purchase six digital vehicle repeaters (DVR) that will include six mobile compatible radios. This equipment will improve portable radio communication in areas of the County with "dead" spots, including parts of Carvins Cove, Dragon's Tooth, Hollins College, large warehouses, and mid-rise buildings to name a few. One repeater and radio each would be placed on the three Battalion Chief shift supervisor vehicles, the EMS2 supervisor vehicle, and the two ladder trucks housed on opposite sides of Roanoke County.

For the past decade, we have had one digital vehicle repeater and transmitting radio that has been transported to a poor coverage location when there is a call for service that is ongoing. The current repeater is stationed at the Public Safety Center and transported to the scene when needed.

Additional Operating Impacts:

There are no additional operating impacts identified at this time.

Conformance with Plans, Policies, and Legal Obligations:

This project conforms with the Community Strategic Plan initiative to Ensure Citizen Safety, specifically the major component of Public Safety Facilities & Equipment.

Community Strategic Plan

Ensure Citizen Safety

Public Safety Facilities & Equipment

Project Highlights and Key Milestones:

- Establish sole source information for Motorola/ Futurecom DVRS.
- Work with Fleet Services and Communication Shop to install repeaters after initial configuration & testing.
- Develop & Train personnel on usage and functionality.

Airshore Struts

Department: Fire & Rescue

Location: Countywide

Magisterial District: Countywide

Category: Replacement

Est. Useful Life: 15 – 20 years

Project Status: New

Financial Summary

	Total Cost	*Through FY 2025*	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 26 - FY 35
Total Project Cost	$ 160,000	$ *160,000*	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Funding Sources													
Roanoke County - Unrestricted Cash	160,000	*160,000*	-	-	-	-	-	-	-	-	-	-	-
Total Funding Sources	$ 160,000	$ *160,000*	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Impacts			-	-	-	-	-	-	-	-	-	-	-

Project Summary:

Airshores are lightweight, positive locking, aluminum support struts which are activated manually or by air power. Designed for vertical, horizontal, and angled support and stabilization, the Airshore struts provide a secure rescue environment for both the victim and the firefighter. Whether supporting the walls of a collapsed trench, stabilizing a wrecked vehicle, providing structural support, or forming a system such as a Tripod or a Raker Rail, Airshores make rescues as simple and efficient as possible.

Airshore Struts (continued)

Project Description and Justification:

The Fire & Rescue Department is part of the Region 6 Heavy Technical Rescue (HTR) Team that can be deployed at any time for an HTR rescue event in our region. Airshores are used for heavy technical rescue situations such as vehicle extrication and building collapse. The current equipment is not compatible with our Regional HTR partners-Roanoke City Fire-EMS and Salem Fire-EMS.

Additional Operating Impacts:

There are no additional operating impacts identified at this time.

Conformance with Plans, Policies, and Legal Obligations:

This project conforms with the Community Strategic Plan initiative to Ensure Citizen Safety, specifically the major component of Public Safety Facilities & Equipment.

Project Highlights and Key Milestones:

- Current Airshores were purchased in the year 2000 and the manufacturer is no longer in business.
- New Airshores will provide reliable equipment that is in good working condition.
- New Airshores will allow us to work in conjunction with our local HTR team partners when needed and required on large scale incidents.

Community Strategic Plan

Ensure Citizen Safety

Public Safety Facilities & Equipment

COUNTY OF ROANOKE VIRGINIA
1838