FY27 CIP SUBMISSION

Select if Revised	Roof Replacement	Date:	10/3/2025
Describe revision, if applicable		Year of First Submittal:	2023
Project Overview:	A roof replacement plan was created to estimate the timing for roof replacement of County facilities. Estimates reflect 30-year replacements, with 20-year alternatives available.		

Requesting Department	Facilities Management	**Est. Useful Life**	20-25 Years
Location (address)	7400 Justice DR.	**Start Year**	2027
Magisterial District	Ware	**Est. Completion Year**	2030
Annual Recurring Cost	click drop-down list	**Category**	Replacement/Maintenance Plan
Number of Residents Served		**Primary Board Priority**	Infrastructure

Expenditure Description	Total Project Request	5-Year CIP					
		Budget Year	Planning Years				Beyond 5 Years
		FY2027	FY2028	FY2029	FY2030	FY2031	FYI only
Land Acquisition	$ -						
A&E	-						
Construction	1,247,400	525,000	231,000	55,650	435,750		
Equipment	-						
Other	-						
Total Proposed Capital Costs	$ 1,247,400	$ 525,000	$ 231,000	$ 55,650	$ 435,750	$ -	$ -

Source of Funding	Total Funding	FY 2027	FY2028	FY2029	FY2030	FY2031	Beyond 5 Years
Grant	$ -						
Donations	-						
Fund Balance-Committed	-						
County Funds	1,247,400	525,000	231,000	55,650	435,750		
Total Capital Funding	$ 1,247,400	$ 525,000	$ 231,000	$ 55,650	$ 435,750	$ -	$ -

Insert picture or map of Project

Describe Funding Sources (If Not County Funds)	
Describe Annual Recurring Costs	

Select if Revised	Roof Replacement	Date: 10/3/2025

Project Element	Total Project Request	5-Year CIP					
		Budget Year	Planning Years				Beyond 5 Years
		FY2027	FY2028	FY2029	FY2030	FY2031	FYI only
Jail Roof Replacement	$ 525,000	525,000					
Building-2 Roof Replacement	231,000		231,000				
02 Courthouse Roof Replacement	435,750				435,750		
Building 1 Roof Replacement	55,650			55,650			
	-						
	-						
	-						
	-						
	-						
	-						
	-						
Total Proposed Capital Costs	$ 1,247,400	$ 525,000	$ 231,000	$ 55,650	$ 435,750	$ -	$ -

Describe project elements (if necessary)	

Space below is available for any additional details not provided above:

Jail: Replace 12,268 square feet of modified bitumen roofing. The existing roof has extensive failures and is beyond its 20-year warranty period.
Building 2: Replace 5,502 square feet of modified bitumen roofing on the main flat roof. Additional funding may be needed for potential repairs or partial replacement of the sloped shingled roof sections along the perimeter. No professional estimate is available due to unknown wear conditions and potential asbestos in existing shingles. 02 Courthouse measures and info.
02 Courthouse: Replace 11,918 square feet of modified bitumen roofing. The existing roof has extensive failures and is beyond its 20-year warranty period.
Building 1: Replace 2,249 square feet of modified bitumen roofing.

Project Alternative:

The alternative to this project would be the installation of lower cost 20 year shingles. However, deferring the planned roof replacement would accelerate deterioration, increase the risk of structural damage, and result in higher long-term maintenance costs.

Inspection Report

Client: Gloucester County Buildings/Grounds & Mosquito Contro

Facility: Jail

Report Date: 12/13/2022

Roof Section: Main Roof

Inspection Information

Inspection Date	12/13/2022	**Core Data**	No
Inspection Type	Visual Inspection	**Leakage**	No

Photo 1

Overview of the Main Roof to the East.

Photo 2

Overview of the Main Roof to the North.

Photo 3

Alligatoring: is a result of the drying out and shrinking of the asphalt surface resulting in a "mud-cracking" pattern. The pattern is most pronounced in areas of exposed asphalt. It is caused by the heat and UV rays of the sun beating down on the exposed asphalt surface. If left untreated, the alligatoring condition can develop into splits in the roof membrane. As the surface continues to shrink and dry out, cracks will develop down to the depth of felts and may stress-crack the membrane in cold weather. These crack channels will allow water to penetrate and damage the roof system.

Photo 4

Blisters: Soft spongy pockets or swellings in the roofing material. They occur between layers of felt or between the roof membrane and substrate. Air or moisture vapor entrapped within a blister expands as the roof and outside air temperatures rise. This results in sufficient pressure to push the roofing felts upwards and apart. Blisters may be ruptured by roof traffic, expanding frozen water, or hail (especially during colder weather). Some blisters may become so large as to affect drainage, which may then cause ponding water. Laps could also be pulled apart, resulting in leakage. A ruptured blister will immediately allow water to penetrate and damage the roof system.

Photo 5

Blisters continued.

Photo 6

Blisters continued.

Photo 7

Membrane Buckling: An upward, elongated tenting displacement of a roof membrane frequently occurring over insulation or deck joints. A buckle may be an indication of movement within the roof assembly. Buckles may interfere with drainage, and can also cause premature failure in the membrane from creasing in the material.

Photo 8

Sealant around the roof penetration has deteriorated to the point of failure.

Photo 9

Improper detail of the roof's scupper. The membrane should extend into the scupper to prevent reliance on sealant as the only protection from water intrusion.

Photo 10

Debris – Leafs and Pine Needles: Pine needles and other leaves build up on the roof membrane causing plugged drains and scuppers thereby causing ponding water and structural weight loading. As the leaves and pine needles rot a "compost effect" occurs, this in effect causes soil to form on top of the roof membrane. This soil creates a perfect medium for plant and weed growth. When seeds take hold the roots will often penetrate through the membrane causing immediate leaks and damage internally.

Photo 11

Fish mouths: Wrinkles or openings at the edge of the membrane caused by poor adhesion or installation. Fish mouths are a common cause of early failure on 2-ply torch down and single ply roof systems. These systems are prone to workmanship error due to two factors (1) the manual heating/welding of the adhesive, which is very unpredictable for constant heat, and (2) the roof system only consists of 1 to 2 plies, which translates in to a very thin layer of water protection.

Photo 12

Roof penetration needs sealant and a pitch pocket to maintain watertight integrity.

Photo 13

Flashing Failure: The flashing along the parapet wall was not properly terminated & has come loose from the masonry. This may allow water to leak into the building.

Inspection Report

Client: Gloucester County Buildings/Grounds & Mosquito Contro

Facility: Building #2

Report Date: 12/13/2022

Roof Section: Main Roof

Inspection Information

Inspection Date	12/13/2022	**Core Data**	No
Inspection Type	Visual Inspection	**Leakage**	No

Photo 1

Overview of Building #2 main roof.

Photo 2

Modbit Flashing Seam Deterioration: Rising wall flashing seams had previously failed & opened allowing moisture penetration into the system. Roof cement has been applied to the seams as a repair; however over time UV exposure will cause the cement to fail & allow the seams to reopen.

Photo 3

Modbit Flashing Seam Deterioration continued.

Photo 4

Flashing Seam Failure: The flashing seam has split open, a credit card has been inserted into the seam to establish depth & size. This condition is a common cause for moisture penetration, and may be actively leaking.

Photo 5

Flashing Seam Deterioration: The mastic used on the flashing seams is deteriorating from age and UV exposure. As this condition progresses the seam will open allowing water to penetrate the system causing structural decay & interior damage.

Photo 6

Blisters: Soft spongy pockets or swellings in the roofing material. They occur between layers of felt or between the roof membrane and substrate. Air or moisture vapor entrapped within a blister expands as the roof and outside air temperatures rise. This results in sufficient pressure to push the roofing felts upwards and apart. Blisters may be ruptured by roof traffic, expanding frozen water, or hail (especially during colder weather). Some blisters may become so large as to affect drainage, which may then cause ponding water. Laps could also be pulled apart, resulting in leakage. A ruptured blister will immediately allow water to penetrate and damage the roof system.

Photo 7

Membrane Deterioration: In this photo we can see where the membrane has deteriorated, leaving the scrim reinforcement exposed. In a single-ply membrane the primary waterproofing layer sits on top of the scrim which acts as a reinforcement for the elastomers. For this reason an exposed scrim indicates that a membrane is offering little protection from moisture penetration into the substrate.

Photo 8

Membrane Deterioration: In this photo we can see where the membrane has deteriorated, leaving the scrim reinforcement exposed. In a single-ply membrane the primary waterproofing layer sits on top of the scrim which acts as a reinforcement for the elastomers. For this reason an exposed scrim indicates that a membrane is offering little protection from moisture penetration into the substrate.

Photo 9

Alligatoring: is a result of the drying out and shrinking of the asphalt surface resulting in a "mud- cracking" pattern. The pattern is most pronounced in areas of exposed asphalt. It is caused by the heat and UV rays of the sun beating down on the exposed asphalt surface. If left untreated, the alligatoring condition can develop into splits in the roof membrane. As the surface continues to shrink and dry out, cracks will develop down to the depth of felts and may stress-crack the membrane in cold weather. These crack channels will allow water to penetrate and damage the roof system.

Photo 10

Flashing on the roof penetration depicted has started to deteriorate and lift away from the roof system.

Photo 11

Lap Seam Deterioration: The lap seams are deteriorating from age and UV exposure. As this condition progresses the seams will open allowing water to penetrate the system causing structural decay & interior damage.

Photo 12

Lap seam deterioration continued.

Photo 13

Lap seam deterioration continued.

Photo 14

2-ply membrane composition.

Photo 15

Exterior view of the deck.

Inspection Report

Client: Gloucester County Buildings/Grounds & Mosquito Contro

Facility: 02 Courthouse

Report Date: 12/13/2022

Roof Section: Lower Roof

Inspection Information

Inspection Date	12/13/2022	**Core Data**	No
Inspection Type	Visual Inspection	**Leakage**	No

Photo 1

Overview of the Lower Roof field.

Photo 2

Ponding Water: Ponding has several adverse effects on a roof membrane. In the winter months, ponding water freezes & expands. This expansion weakens small imperfections in the roof systems. Hairline cracks and small tears will widen to the point of rupture, allowing water to leak into the building. Ponding water also accelerates the aging of a roof, as water magnifies the effects of UV degradation.

Photo 3

Membrane beginning to separate from the flashing at the scupper.

Photo 4

Improper detail of the roof's scupper. The membrane should extend into the scupper to prevent reliance on sealant as the only protection from water intrusion.

Photo 5

Pitch Pocket Deterioration: Metal protrusions that penetrate the roof system to allow conduits to run from the rooftop into the building. Movement from the protrusion can break the waterproofing compound, creating cracks. Over time, the release of solvents from the compound can cause the material to shrink, leaving gaps along the edges of the pan and around structural support. Water can enter through a defective pitch pan and find its way into the interior of the building. Moisture can also penetrate into the roof system leading to premature failure.

Photo 6

Previous repair to fill an opening in the brick and mortar is not water tight.

Photo 7

Perimeter Flashing Deterioration: Most roof failures start at perimeter and penetration locations. Metal edge conditions that are poorly designed and improperly installed fail due to the extreme expansion and contraction that is typical with metal. Perimeter wall flashings can also be damaged due to normal seasonal building movement and thermal shock. Additional damage can also be see from UV degradation as well. At all of these deteriorated or failed points, moisture can gain direct access to the roof system insulation and the buildings interior.

Photo 8

Improper detail: The pipe boots depicted here is the incorrect detail to waterproof a penetration. The pipe should be flashed or have a pitch pocket created to ensure that no water can get into the system.

Inspection Report

Client: Gloucester County Buildings/Grounds & Mosquito Contro

Facility: 02 Courthouse

Report Date: 12/13/2022

Roof Section: Main Roof

Inspection Information

Inspection Date	12/13/2022	**Core Data**	No
Inspection Type	Visual Inspection	**Leakage**	No

Photo 1

Overview of the Main Roof to the North.

Photo 2

Overview of the Main Roof to the South.

Photo 3

Lap Seam Deterioration: The lap seams are deteriorating from age and UV exposure. As this condition progresses the seams will open allowing water to penetrate the system causing structural decay & interior damage.

Photo 4

Improper Detail: Incorrect pipe boot. This pipe should be flashed or has a pitch pocket created to ensure water is unable to infiltrate the system.

Photo 5

Blisters: Soft spongy pockets or swellings in the roofing material. They occur between layers of felt or between the roof membrane and substrate. Air or moisture vapor entrapped within a blister expands as the roof and outside air temperatures rise. This results in sufficient pressure to push the roofing felts upwards and apart. Blisters may be ruptured by roof traffic, expanding frozen water, or hail (especially during colder weather). Laps could also be pulled apart, resulting in leakage. A ruptured blister will immediately allow water to penetrate and damage the roof system.

Photo 6

Blisters continued.

Photo 7

Penetration that my have been an antenna at one point but has now pulled the membrane flashing away from the wall allowing for runoff to go directly into the wall.

Photo 8

Similar antenna footprint from another area was removed and sealed but that sealant is starting to deteriorating.

Photo 9

Single Ply Flashing Deterioration: A typical single ply EPDM rubber roof membrane is approximately 1 millimeter thick. Therefore, it is extremely easy to puncture or tear.

Photo 10

Flashing Seam Deterioration: The mastic used on the flashing seams is deteriorating from age and UV exposure. As this condition progresses the seam will open allowing water to penetrate the system causing structural decay & interior damage.

Inspection Report

Client: Gloucester County Buildings/Grounds & Mosquito Contro

Facility: Building #1

Report Date: 12/13/2022

Roof Section: Main Roof

Inspection Information

Inspection Date	12/13/2022	**Core Data**	No
Inspection Type	Visual Inspection	**Leakage**	No

Photo 1

Overview of Building #1's main roof.

Photo 2

Mineral Roof Granule Deterioration: It is very common for mineral finished roofs to experience bare felts as early as five years after installation. Manufacturing quality control issues as well as weather “washing off” the factory applied mineral coating causes these areas. Typically this is indicated by accumulations of mineral where ponding is present. Bare felts cause exposure of the membrane to the sun/UV rays, which cause rapid membrane deterioration. Therefore, it is extremely important to coat these areas as soon as they appear.

Photo 3

Alligatoring: is a result of the drying out and shrinking of the asphalt surface resulting in a "mud- cracking" pattern. The pattern is most pronounced in areas of exposed asphalt. It is caused by the heat and UV rays of the sun beating down on the exposed asphalt surface. If left untreated, the alligatoring condition can develop into splits in the roof membrane. As the surface continues to shrink and dry out, cracks will develop down to the depth of felts and may stress-crack the membrane in cold weather. These crack channels will allow water to penetrate and damage the roof system.

Photo 4

Caulking Deterioration: As caulking is exposed to UV rays and temperature fluctuations it loses its flexibility and develops cracks. Once this occurs splits develop allowing water to penetrate walls and buildings causing damage as well as leaks.

Photo 5

Blisters: Soft spongy pockets or swellings in the roofing material. They occur between layers of felt or between the roof membrane and substrate. Air or moisture vapor entrapped within a blister expands as the roof and outside air temperatures rise. This results in sufficient pressure to push the roofing felts upwards and apart. Blisters may be ruptured by roof traffic, expanding frozen water, or hail (especially during colder weather). Some blisters may become so large as to affect drainage, which may then cause ponding water. Laps could also be pulled apart, resulting in leakage. A ruptured blister will immediately allow water to penetrate and damage the roof system.

Photo 6

Roof's 2-ply composition.

Photo 7

Exterior view of the wood deck.