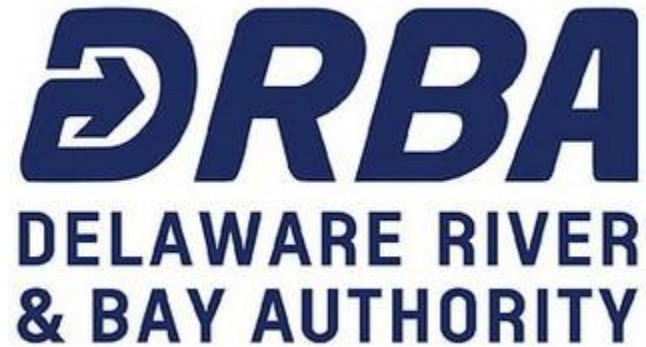


Delaware River and Bay Authority



2021 Capital Improvement Program and Five Year (2021-2025) Strategic Plan

December 2020

Contents

- INTRODUCTION 1
- 2021 CAPITAL IMPROVEMENT PROGRAM - \$110,490,0002
- AUTHORITY-WIDE FIVE YEAR (2021-2025) 3
- DELAWARE MEMORIAL BRIDGE- CONTINUING PROJECTS 4
- DELAWARE MEMORIAL BRIDGE- ANNUAL PROJECTS.....7
- DELAWARE MEMORIAL BRIDGE- NEW PROJECTS9
- DELAWARE MEMORIAL BRIDGE- OUT-YEAR PROJECTS.....10
- CAPE MAY-LEWES FERRY - CONTINUING PROJECTS12
- CAPE MAY-LEWES FERRY - ANNUAL PROJECTS15
- CAPE MAY-LEWES FERRY – NEW PROJECTS16
- CAPE MAY-LEWES FERRY – OUT-YEAR PROJECTS.....17
- FORTS FERRY – ANNUAL PROJECTS.....19
- NEW CASTLE AIRPORT - CONTINUING PROJECTS20
- NEW CASTLE AIRPORT – ANNUAL PROJECTS.....22
- NEW CASTLE AIRPORT – NEW PROJECTS23
- NEW CASTLE AIRPORT – OUT-YEAR PROJECTS.....24
- MILLVILLE AIRPORT - CONTINUING PROJECTS26
- MILLVILLE AIRPORT – ANNUAL PROJECTS.....27
- MILLVILLE AIRPORT – NEW PROJECTS.....28
- MILLVILLE AIRPORT – OUT-YEAR PROJECTS.....29
- CAPE MAY AIRPORT - CONTINUING PROJECTS.....30
- CAPE MAY AIRPORT - ANNUAL PROJECTS.....32
- CAPE MAY AIRPORT – NEW PROJECTS.....33
- CAPE MAY AIRPORT – OUT-YEAR PROJECTS34
- DELAWARE AIRPARK - CONTINUING PROJECTS36
- DELAWARE AIRPARK – ANNUAL PROJECTS.....37
- DELAWARE AIRPARK – OUT-YEAR PROJECTS38
- CIVIL AIR TERMINAL – ANNUAL PROJECTS.....39

Introduction

The Delaware River and Bay Authority (DRBA) is an agency created by a Congressionally sanctioned interstate compact between the States of New Jersey and Delaware and enacted pursuant to 53 Laws of Delaware, Chapter 145 (17 Del. C.S. 1701) and P.L. 1961, C.66 (C.32:11E-1 et. seq. of the Pamphlet Laws of New Jersey). The Mission of the DRBA is connecting people and places in the heart of the North East Corridor.

The DRBA has an extensive network of structures and facilities designed to provide the public with safe and efficient means of transportation as well as providing economic development and opportunities in the region. This transportation network includes the Delaware Memorial Bridge (DMB), the Cape May-Lewes Ferry (CMLF), and the Forts Ferry (FF). The Authority also operates and maintains through the auspices of long-term leases with a municipality, county or the state, five (5) Airport facilities in Delaware and New Jersey. These facilities include New Castle Airport, Delaware Airpark and Civil Air Terminal in Delaware and Millville and Cape May Airports in New Jersey.

The DRBA has developed five goals in support of its mission against which Capital projects are evaluated. These goals include:

- J Asset Preservation – The responsible stewardship of critical regional infrastructure through the preservation of the asset. Preservation of the asset is necessary to retain its existing value and maximize its useful life.
- J Efficiency and Sustainability - Increase operating efficiencies through the construction of sustainable infrastructure utilizing best available technologies and management practices.
- J Safety - Maintain or enhance safe and reliable infrastructure for our customers.
- J Security - Enhance the security of critical regional infrastructure in coordination with regional security agencies.
- J Economic Development - Support revenue producing growth through controlled investment in economic development opportunities.

Capital improvement projects generally occur in phases over multiple years. This Strategic Plan serves as a planning tool for directing resources to address the goals over the next five years to consistently maintain and enhance the Authority's facilities and address the increasing demands associated with an aging infrastructure. Implementation of this Strategic Plan will assure the public continues to enjoy quality transportation services in a safe and efficient manner as well as intelligently maintain and enhance facilities as necessary.

Included in the following pages are the identified multi-year capital improvement projects organized by asset class (DMB, CMLF, FF and each of the five Airports). Within each asset class, individual projects are further organized into the following classifications:

- J Continuing Projects – Projects which were previously authorized in the Capital Improvement Program, which are scheduled to continue in 2021.
- J Annual – Projects which require yearly authorization to continue.
- J New Projects – Projects which have not been authorized in a prior Capital Improvement Program and are seeking authorization in 2021.
- J Out Year Projects – Projects which will be seeking authorization in a future Capital Improvement program.

Airport projects which are contributed to by the Federal Aviation Administration are subject to grant approval and funding allocation.

This information, provided in tabular format, identifies the financial resources for each project. Descriptions for each project follow the tables and are keyed to the table by the project's rank number (projects are ranked in order of priority by the Authority, with a total of 97 projects). The Capital Improvement Program budget for 2021 is shown as the highlighted column within the table.

2021 Capital Improvement Program - \$110,490,000 Authority and External Funds

Capital Asset	2021		
<u>CONTINUING PROJECTS</u>	DRBA	External	Total
Delaware Memorial Bridge	\$ 16,677,000	\$ 5,500,000	\$ 22,177,000
Cape May-Lewes Ferry	\$ 17,109,000	\$ 1,428,000	\$ 18,537,000
Forts Ferry	-	-	-
New Castle Airport	\$ 435,000	\$ 6,922,000	\$ 7,357,000
Millville Airport	\$ 700,000	\$ 1,675,000	\$ 2,375,000
Cape May Airport	\$ 6,803,000	\$ 3,470,000	\$ 10,273,000
Delaware Air Park	\$ 742,000	\$ 2,312,000	\$ 3,054,000
Civil Air Terminal	-	-	-
Subtotal	\$ 42,466,000	\$ 21,307,000	\$ 63,773,000
<u>ANNUAL PROJECTS</u>			
Delaware Memorial Bridge	\$ 28,518,000	\$ -	\$ 28,518,000
Cape May-Lewes Ferry	\$ 14,819,000	\$ 12,000	\$ 14,831,000
Forts Ferry	\$ 20,000	\$ -	\$ 20,000
New Castle Airport	\$ 485,000	\$ -	\$ 485,000
Millville Airport	\$ 356,000	\$ 360,000	\$ 716,000
Cape May Airport	\$ 190,000	\$ -	\$ 190,000
Delaware Air Park	\$ 235,000	\$ 54,000	\$ 289,000
Civil Air Terminal	\$ 215,000	\$ -	\$ 215,000
Subtotal	\$ 44,838,000	\$ 426,000	\$ 45,264,000
<u>NEW PROJECTS</u>			
Delaware Memorial Bridge	\$ 460,000	\$ -	\$ 460,000
Cape May-Lewes Ferry	\$ 443,000	\$ -	\$ 443,000
Forts Ferry	-	\$ -	\$ -
New Castle Airport	\$ -	\$ -	\$ -
Millville Airport	\$ 150,000	\$ -	\$ 150,000
Cape May Airport	\$ 400,000	\$ -	\$ 400,000
Delaware Air Park	-	\$ -	\$ -
Civil Air Terminal	-	-	-
Subtotal	\$ 1,453,000	\$ -	\$ 1,453,000
Grand Total All Projects	\$ 88,757,000	\$ 21,733,000	\$ 110,490,000

Authority-Wide Five Year (2021-2025) Strategic CIP Summary Authority Funds Only

Capital Asset	2021	2022	2023	2024	2025
CONTINUING PROJECTS					
Delaware Memorial Bridge	\$ 16,677,000	\$ 48,557,000	\$ 46,058,000	\$ 2,570,000	\$ 1,000,000
Cape May-Lewes Ferry	\$ 17,109,000	\$ 16,455,000	\$ 2,375,000	\$ 10,070,000	\$ 40,000,000
Forts Ferry	\$ -	\$ -	\$ -	\$ -	\$ -
New Castle Airport	\$ 435,000	\$ 1,125,000	\$ 575,000	\$ 75,000	\$ -
Millville Airport	\$ 700,000	\$ 700,000	\$ 240,000	\$ 1,273,000	\$ 264,000
Cape May Airport	\$ 6,803,000	\$ 875,000	\$ 350,000	\$ -	\$ -
Delaware Air Park	\$ 742,000	\$ 45,000	\$ 50,000	\$ 67,000	\$ 41,315,000
Civil Air Terminal	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal	\$ 42,466,000	\$ 67,757,000	\$ 49,648,000	\$ 14,055,000	\$ 82,579,000
ANNUAL PROJECTS					
Delaware Memorial Bridge	\$ 28,518,000	\$ 28,080,000	\$ 21,419,000	\$ 16,980,000	\$ 18,025,000
Cape May-Lewes Ferry	\$ 14,819,000	\$ 12,287,000	\$ 6,960,000	\$ 4,475,000	\$ 780,000
Forts Ferry	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
New Castle Airport	\$ 485,000	\$ 2,440,000	\$ 1,595,000	\$ 1,425,000	\$ 1,450,000
Millville Airport	\$ 356,000	\$ 1,517,000	\$ 605,000	\$ 480,000	\$ 490,000
Cape May Airport	\$ 190,000	\$ 565,000	\$ 135,000	\$ 50,000	\$ 45,000
Delaware Air Park	\$ 235,000	\$ 298,000	\$ 5,000	\$ -	\$ 20,000
Civil Air Terminal	\$ 215,000	\$ 280,000	\$ 5,000	\$ -	\$ 20,000
Subtotal	\$ 44,838,000	\$ 45,487,000	\$ 30,744,000	\$ 23,430,000	\$ 20,850,000
NEW PROJECTS					
Delaware Memorial Bridge	\$ 460,000	\$ 1,270,000	\$ 1,270,000	\$ -	\$ -
Cape May-Lewes Ferry	\$ 443,000	\$ 900,000	\$ -	\$ -	\$ -
Forts Ferry	\$ -	\$ -	\$ -	\$ -	\$ -
New Castle Airport	\$ -	\$ -	\$ -	\$ -	\$ -
Millville Airport	\$ 150,000	\$ 1,500,000	\$ -	\$ -	\$ -
Cape May Airport	\$ 400,000	\$ -	\$ -	\$ -	\$ -
Delaware Air Park	\$ -	\$ -	\$ -	\$ -	\$ -
Civil Air Terminal	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal	\$ 1,453,000	\$ 3,670,000	\$ 1,270,000	\$ -	\$ -
OUT-YEAR PROJECTS					
Delaware Memorial Bridge	\$ -	\$ 4,950,000	\$ 3,050,000	\$ 18,700,000	\$ 10,000,000
Cape May-Lewes Ferry	\$ -	\$ 4,100,000	\$ 1,160,000	\$ -	\$ -
Forts Ferry	\$ -	\$ -	\$ -	\$ -	\$ -
New Castle Airport	\$ -	\$ 10,000	\$ 53,000	\$ 193,000	\$ 350,000
Millville Airport	\$ -	\$ 300,000	\$ 125,000	\$ 1,761,000	\$ 63,000
Cape May Airport	\$ -	\$ 1,640,000	\$ 485,000	\$ 1,515,000	\$ 303,000
Delaware Air Park	\$ -	\$ -	\$ -	\$ 800,000	\$ -
Civil Air Terminal	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal	\$ -	\$ 11,000,000	\$ 4,873,000	\$ 22,969,000	\$ 10,716,000
Grand Total All Projects	\$ 88,757,000	\$ 127,914,000	\$ 86,535,000	\$ 60,454,000	\$ 114,145,000

Delaware Memorial Bridge - Continuing Projects

Crossings Strategic Capital Improvement Plan

Ranking	Project	2020 \$ Spent (EST.)	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	Continuing Projects											
3	Deck UHPC Overlay Program	\$ 5,750,000	\$ 1,200,000	\$ -	\$ 21,667,000	\$ -	\$ 43,333,000	\$ -	\$ -	\$ -	\$ -	\$ -
5	Deck Repairs	\$ 670,000	\$ 1,155,000	\$ -	\$ 1,500,000	\$ -	\$ 1,500,000	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -
7	Roof and Building Envelope Rehabilitation (DMB)	\$ 1,200,000	\$ 320,000	\$ -	\$ 1,000,000	\$ -	\$ 25,000	\$ -	\$ 70,000	\$ -	\$ -	\$ -
11	Admin Building Elevator Retrofits	\$ 575,000	\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15	Ship Collision Protection	\$ 450,000	\$ 7,000,000	\$ 5,500,000	\$ 20,940,000	\$ 16,340,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28	Catwalk Repairs	\$ 50,000	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
32	Miscellaneous Roadway Improvements	\$ 1,100,000	\$ 3,900,000	\$ -	\$ 1,000,000	\$ -	\$ 1,000,000	\$ -	\$ 1,000,000	\$ -	\$ 1,000,000	\$ -
34	Toll Booth HVAC Replacement	\$ 50,000	\$ 300,000	\$ -	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
35	Salt Bay Renovation	\$ 57,000	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
41	Police Parking Lot at Julia Building	\$ 26,000	\$ 777,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
42	Gantry Lane Markers	\$ -	\$ 200,000	\$ -	\$ 200,000	\$ -	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -
45	Replace Chillers in Administration Building Phase 2	\$ 625,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	Roadway LED Lighting Upgrades	\$ 200,000	\$ 250,000	\$ -	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
56	Facility Utility Survey (DMB)	\$ -	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
60	War Memorial Refurbishment	\$ -	\$ 200,000	\$ -	\$ 1,750,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Grand Total	\$ 10,753,000	\$ 16,677,000	\$ 5,500,000	\$ 48,557,000	\$ 16,340,000	\$ 46,058,000	\$ -	\$ 2,570,000	\$ -	\$ 1,000,000	\$ -

3 **Deck UHPC Overlay Program - Asset Preservation**

Both structures exhibit minor deck cracking and delamination as well as potholes due to age and heavy truck volumes. The project aims to demonstrate a proof of concept for Ultra High Performance Concrete (UHPC) overlays on the decks of the Delaware Memorial Bridge. As part of this project, areas will be identified on the bridge where UHPC overlays can be installed and cores taken for testing and evaluation. This project has an estimated DRBA cost of \$1,200,000 in 2021 and \$65,000,000 in the out years. This effort has no anticipated annual operating cost impact.

5 **Deck Repairs - Safety**

Both structures exhibit minor deck cracking and delamination as well as potholes due to age and heavy truck volumes. The project includes large lane-width concrete repairs to the bridge deck to maintain an appropriate level of service until the permanent overlay project is fully implemented. This project has an estimated DRBA cost of \$1,155,000 in 2021 and \$4,500,000 in the out years. This effort has no anticipated annual operating cost impact.

7 **Roof and Building Envelope Rehabilitation (DMB) - Asset Preservation**

The Authority is still in the early stages of a healthy roof management program having over 150 roof systems throughout its facilities. Each year, annual inspections and capital investments are strategically placed to provide a 30-year solution to establish a consistent and manageable replacement plan in the future. This project has an estimated DRBA cost of \$320,000 in 2021 and \$1,095,000 in the out years. This effort has no anticipated annual operating cost impact.

11 **Admin Building Elevator Retrofits - Efficiency and Sustainability**

Elevators in the Delaware Memorial Bridge Administrative Building are reaching the end of their design life and are in need of repair. The project programs the design and rehabilitation of two elevators. This project has an estimated DRBA cost of \$25,000 in 2021. This effort has no anticipated annual operating cost impact.

Delaware Memorial Bridge - Continuing Projects

15 **Ship Collision Protection - Safety**

The existing tower fender system on the twin spans is in poor repair and the design is insufficient for the current vessel traffic. The project programs the provision of protection system meeting current standards and consisting of eight 80 foot diameter dolphin structures, two at the approach of each tower pier. This project has an estimated DRBA cost of \$7,000,000 in 2021 and \$20,940,000 in the out years. The project is partially funded in the amount of approximately \$21,840,000 by the US Department of Transportation. This effort has no anticipated annual operating cost impact.

28 **Catwalk Repairs - Safety**

The steel framework of the catwalks on the Delaware Memorial Bridge are aging and showing signs of severe corrosion and section loss. The project aims to remove and replace deteriorated members of the catwalks and install new members. This project has an estimated DRBA cost of \$500,000 in 2021. This effort has no anticipated annual operating cost impact.

32 **Miscellaneous Roadway Improvements - Asset Preservation**

Large sections of hot mix pavement in the northbound direction are 12 or more years old, showing signs of distress, and have reached the end of their useful life. The project will remove the wearing surface and install a fresh wearing course in sections over a three year period. This project has an estimated DRBA cost of \$3,900,000 in 2021 and \$4,000,000 in the out years. This effort has no anticipated annual operating cost impact.

34 **Toll Booth HVAC Replacement - Asset Preservation**

The HVAC units for the Tolls building are at the end of their service life and operate on obsolete R-22 refrigerant, which is being phased out by the EPA. The project will begin the process of replacement with high efficiency units that operate on modern, environmentally-friendly refrigerant. This project has an estimated DRBA cost of \$300,000 in 2021 and \$250,000 in the out years. This effort has no anticipated annual operating cost impact.

35 **Salt Bay Renovation - Safety**

The salt bay at the Delaware Memorial Bridge complex has developed issues including a cracked foundation, concrete spalling, and cracks in the masonry. The project programs the design and construction of the necessary repairs for the salt bay building envelope. This project has an estimated DRBA cost of \$500,000 in 2021. This effort has no anticipated annual operating cost impact.

41 **Police Parking Lot at Julia Building - Efficiency and Sustainability**

Parking for police vehicles is greatly lacking at the Julia Building adding significant response time for officers when vehicles are parked in the administration building lot. The project programs the design and construction of 50 additional parking spaces at the Julia Building to address this shortage. This project has an estimated DRBA cost of \$777,000 in 2021. This effort has no anticipated annual operating cost impact.

42 **Gantry Lane Markers - Efficiency and Sustainability**

The existing gantry mounted lane status signals on each span are comprised of a series of LED lights. These lights are nearing the end of their anticipated life cycle (10 years). Each lane signal consists of 50 individual LED lights. The project programs the replacement of the 4,000 LED lights over a three year period. This project has an estimated DRBA cost of \$200,000 in 2021 and \$400,000 in the out years. This effort has no anticipated annual operating cost impact.

45 **Replace Chillers in Administration Building Phase 2 - Efficiency and Sustainability**

Several existing HVAC chiller units are at the end of their service life and operate on obsolete R-22 refrigerant, which is being phased out by the EPA. The project will begin the process of replacement with high efficiency units that operate on modern, environmentally-friendly refrigerant. This project has an estimated DRBA cost of \$250,000 in 2021. This effort has no anticipated annual operating cost impact.

Delaware Memorial Bridge - Continuing Projects

47 **Roadway LED Lighting Upgrades - Efficiency and Sustainability**

This is a continuation of an existing program to replace all existing high pressure sodium roadway lights with new, modern, longer lasting, and more efficient LED fixtures. The effort will continue for two more years to complete the Delaware approach roads. This project has an estimated DRBA cost of \$250,000 in 2021 and \$250,000 in the out years. This effort has no anticipated annual operating cost impact.

56 **Facility Utility Survey (DMB) - Efficiency and Sustainability**

Utility records and location services are not provided by the local utility companies for the majority of the Authority's properties and historical records are difficult to track without a common GIS platform. The project programs a field utility survey to include preliminary development of a GIS platform to record this data and track future changes. This project has an estimated DRBA cost of \$100,000 in 2021. This effort has no anticipated annual operating cost impact.

60 **War Memorial Refurbishment - Asset Preservation**

The War Memorial is aging and showing signs of deterioration. The project programs the design and restoration of the existing War Memorial. This project has an estimated DRBA cost of \$200,000 in 2021 and \$1,750,000 in the out years. This effort has no anticipated annual operating cost impact.

Delaware Memorial Bridge - Annual Projects

Crossings Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	Annual Projects										
1	Annual Bridge Steelwork Repairs	\$ 13,000,000	\$ -	\$ 10,000,000	\$ -	\$ 9,000,000	\$ -	\$ 9,000,000	\$ -	\$ 9,000,000	\$ 1
22	Annual Maintenance Bridge Span Painting	\$ 10,000,000	\$ -	\$ 14,500,000	\$ -	\$ 11,000,000	\$ -	\$ 7,500,000	\$ -	\$ 7,500,000	\$ 1
24A	Annual Minor Capital Maintenance (DMB)	\$ 1,821,000	\$ -	\$ 1,375,000	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ 1
25A	Annual Minor Capital Equipment (DMB)	\$ 917,000	\$ -	\$ 665,000	\$ -	\$ 455,000	\$ -	\$ -	\$ -	\$ -	\$ 1
27A	Annual Automation/Telecom Upgrades (DMB)	\$ 2,780,000	\$ -	\$ 1,540,000	\$ -	\$ 904,000	\$ -	\$ 420,000	\$ -	\$ 1,465,000	\$ 1
	Grand Total	\$ 28,518,000	\$ -	\$ 28,080,000	\$ -	\$ 21,419,000	\$ -	\$ 16,980,000	\$ -	\$ 18,025,000	\$ 5

1 Annual Bridge Steelwork Repairs - Asset Preservation

This project programs miscellaneous steelwork repairs found to be necessary as a result of comprehensive annual inspections. These repairs are necessary to preserve the bridge's steelwork while maintaining safety and operational service levels. Work typically includes replacement of worn bearing assemblies, access platforms, maintenance of steel connections, installing new safety features, and other items. This project has an estimated DRBA cost of \$13,000,000 in 2021 and \$37,000,000 in the out years.

22 Annual Maintenance Bridge Span Painting - Asset Preservation

The annual bridge report recommends repairs to the coating system of the Delaware Memorial Bridge to protect the structural steel on specific spans. The project programs funds to have deficient areas cleaned to bare metal and recoat with a 4- layer protective overcoat system. This project has an estimated DRBA cost of \$10,000,000 in 2021 and \$40,500,000 in the out years.

24A Annual Minor Capital Maintenance (DMB) - Asset Preservation

This project programs annual work activities necessary to accommodate changing regulations and to preserve existing infrastructure. Minor capital maintenance may include, but not be limited to: interior renovations, building upgrades, electrical/lighting improvements, installation of oil/water separators, fencing, guiderail replacement, signage replacement, HVAC upgrades, chiller upgrades, emergency generator improvements, miscellaneous office space improvements, miscellaneous toll booth improvements, as well as utility and general infrastructure improvements. This project has an estimated DRBA cost of \$1,821,000 in 2021 and \$1,555,000 in the out years.

25A Annual Minor Capital Equipment (DMB) - Efficiency and Sustainability

This project programs annual capital equipment purchases which may include but are not limited to: vehicles, trucks, specialty equipment, emergency generators, trailers, and other equipment that are utilized to preserve existing infrastructure assets. Purchases are based on established replacement guidelines considering useful life and condition. This project has an estimated DRBA cost of \$917,000 in 2021 and \$1,120,000 in the out years.

Delaware Memorial Bridge - Annual Projects

27A **Annual Automation/Telecom Upgrades (DMB) - Efficiency and Sustainability**

Automation upgrades and equipment enhancements are needed to maintain sustainable and efficient facilities. This yearly project includes but is not limited to: automation master planning, computer hardware replacement purchases, local and wide area network upgrades, software and hardware upgrades, file back-up system maintenance and upgrades, video teleconference system upgrades, document management storage systems, server replacements, business continuity hardware/software, network replacement/upgrades, storage area network upgrades, and various hardware/software installations or upgrades as necessary. This project has an estimated DRBA cost of \$2,780,000 in 2021 and \$4,329,000 in the out years.

Delaware Memorial Bridge - New Projects

Crossings Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	New Projects										
29	Bridge Worker Fall Protection	\$ 460,000	\$ -	\$ 1,270,000	\$ -	\$ 1,270,000	\$ -	\$ -	\$ -	\$ -	\$ -
	Grand Total	\$ 460,000	\$ -	\$ 1,270,000	\$ -	\$ 1,270,000	\$ -	\$ -	\$ -	\$ -	\$ -

29 **Bridge Worker Fall Protection - Safety**

The walkways underneath the bridges are original to the Delaware Memorial Bridges and are not up to safety standards. The project will install lifelines throughout the length of the bridge for personnel to tie-off while accessing the walkways. This project has an estimated DRBA cost of \$460,000 in 2021 and \$2,540,000 in the out years. This effort has no anticipated annual operating cost impact.

Delaware Memorial Bridge - Out Year Projects

Crossings Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding		External Funding		External Funding		External Funding	
			2021	2022	2022	2023	2023	2024	2024	2025
	Out Year Projects									
67	Cable Preservation (Both Structures)	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
68	Fall Prevention Fencing	\$ -	\$ -	\$ 2,000,000	\$ -	\$ -	\$ 10,000,000	\$ -	\$ 10,000,000	\$ -
73	Emergency Lighting for the Anchorages-Towers	\$ -	\$ -	\$ 515,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
74	Bridge Management and Monitoring System	\$ -	\$ -	\$ 500,000	\$ -	\$ 2,000,000	\$ -	\$ 1,000,000	\$ -	\$ -
75	DMB Tower Elevator Communications and Controls	\$ -	\$ -	\$ 800,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
78	Fitness Center Renovations (DMB)	\$ -	\$ -	\$ 100,000	\$ -	\$ 350,000	\$ -	\$ -	\$ -	\$ -
80	Administration Building Second Floor Renovations	\$ -	\$ -	\$ 35,000	\$ -	\$ 300,000	\$ -	\$ -	\$ -	\$ -
82	Route 9 Bridge Repairs	\$ -	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ 3,200,000	\$ -	\$ -
83	Norfolk RR Backwall Replacement	\$ -	\$ -	\$ -	\$ -	\$ 100,000	\$ -	\$ 2,500,000	\$ -	\$ -
84	1st Structure Safety Walk & Curb Drainage Retrofit	\$ -	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ 2,000,000	\$ -	\$ -
	Grand Total	\$ -	\$ -	\$ 4,950,000	\$ -	\$ 3,050,000	\$ -	\$ 18,700,000	\$ -	\$ 10,000,000

67 **Cable Preservation (Both Structures) - Asset Preservation**

As a result of the cable investigation it was determined that preventive measures are necessary to maintain the service life and capacity of the Delaware Memorial Bridge structures. The project installed a dehumidification system to preserve the main suspension cables in 2018 and maintains an active maintenance and monitoring program as part of the contract. This project has an estimated DRBA cost of \$1,000,000 in the out years. This effort has an anticipated annual maintenance and monitoring cost of \$54,000.

68 **Fall Prevention Fencing - Safety**

The project aims to install anti-climb mesh fencing along both spans of the Delaware Memorial Bridges. This project has an estimated DRBA cost of \$22,000,000 in the out years. This effort has no anticipated annual operating cost impact.

73 **Emergency Lighting for the Anchorages-Towers - Safety**

There is a need for emergency pathway lighting in the towers and anchorages of the Delaware Memorial Bridge. The project programs the assessment, design, and installation of emergency lighting systems for these areas. This project has an estimated DRBA cost of \$515,000 in the out years. This effort has no anticipated annual operating cost impact.

74 **Bridge Management and Monitoring System - Asset Preservation**

The 1st and 2nd Structures are aging and require significant monitoring and maintenance to ensure they continue to serve as an essential asset to the traveling public. The implementation of a bridge monitoring system is recommended to track the condition of critical structural elements and facilitate prioritization and documentation of corrective measures. This project has an estimated DRBA cost of \$3,500,000 in the out years. This effort has an anticipated annual operating cost of \$50,000.

75 **DMB Tower Elevator Communications and Controls - Efficiency and Sustainability**

There is a desire to monitor access and ensure proper usage of the recently rehabilitated Tower Elevators. The project programs the design and installation of communications to the towers and installation of card readers for the Tower Elevators. This project has an estimated DRBA cost of \$800,000 in the out years. This effort has no anticipated annual operating cost impact.

Delaware Memorial Bridge - Out Year Projects

78 **Fitness Center Renovations (DMB) - Efficiency and Sustainability**

The fitness center holds obsolete equipment and unused space. The purpose of this project is to renovate the area to effectively use the room and upgrade the equipment. This project has an estimated DRBA cost of \$450,000 in the out years. This effort has no anticipated annual operating cost impact.

80 **Administration Building Second Floor Renovations - Efficiency and Sustainability**

Extensive renovations have been performed throughout the east wing of the Delaware Memorial Bridge Administrative Building with exception of the upper foyer. The project programs renovations to the flooring, stairwells, and other features throughout this space. This project has an estimated DRBA cost of \$335,000 in the out years. This effort has no anticipated annual operating cost impact.

82 **Route 9 Bridge Repairs - Asset Preservation**

The Route 9 bridge deck is showing signs of deterioration near the joints. The project programs the removal and replacement of existing bridge joints along with the repair of the associated portions of the bridge deck. This project has an estimated DRBA cost of \$3,350,000 in the out years. This effort has no anticipated annual operating cost impact.

83 **Norfolk RR Backwall Replacement - Asset Preservation**

The backwall of west abutment of the bridge over the Norfolk Southern Railroad has developed a large longitudinal crack that extends through the length of the backwall. The project aims to replace this backwall and the expansion joint above with a jointless backwall that will be designed to perform better and eliminate leakages from the joint. This project has an estimated DRBA cost of \$2,600,000 in the out years. This effort has no anticipated annual operating cost impact.

84 **1st Structure Safety Walk & Curb Drainage Retrofit - Safety**

The 1st structure currently has an open grate safety walk which allows water, road salts, and sand to corrode the structural steel beneath the road level. The project programs the design and construction necessary to convert from an open grate safety walk to a solid surface. This project has an estimated DRBA cost of \$2,150,000 in the out years. This effort has no anticipated annual operating cost impact.

Cape May Lewes Ferry - Continuing Projects

Crossings Strategic Capital Improvement Plan

Ranking	Project	2020 \$ Spent (EST.)	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
Continuing Projects												
2	Main Engine Repower and Dry Docking	\$ 4,953,000	\$ 4,054,000	\$ 210,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	Transfer Bridge Replacements	\$ 6,450,000	\$ 2,300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6	Freeman Highway Storage Building	\$ 2,200,000	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12	Monopile Repair	\$ 630,000	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14	Fender Replacements	\$ -	\$ 690,000	\$ -	\$ 850,000	\$ -	\$ 850,000	\$ -	\$ -	\$ -	\$ -	\$ -
26B	Roof and Building Envelope Rehabilitation (CMLF)	\$ 41,000	\$ 500,000	\$ -	\$ 75,000	\$ -	\$ 25,000	\$ -	\$ 70,000	\$ -	\$ -	\$ -
30	Production Kitchen	\$ 56,000	\$ 550,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
36	Cape May Master Plan Phase 1: Utility Corridor	\$ 260,000	\$ 1,000,000	\$ -	\$ 7,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
38	Motor Vessel Replacement Program	\$ 100,000	\$ 1,500,000	\$ -	\$ 1,500,000	\$ -	\$ 1,500,000	\$ -	\$ 10,000,000	\$ -	\$ 40,000,000	\$ -
40	Electrical Signage - Cape May and Lewes	\$ 15,000	\$ 70,000	\$ -	\$ 600,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
43	Cape May Approach Roads Rehabilitation	\$ 150,000	\$ 2,890,000	\$ 1,218,000	\$ 2,890,000	\$ 1,218,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
48	Lewes Terminal Master Plan Phase 1: Utility Corridor	\$ 200,000	\$ 800,000	\$ -	\$ 2,300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
50	Freeman Highway Repaving	\$ 30,000	\$ 1,900,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
57	Power Feed Replacement for Slips	\$ 40,000	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
58	Police Dispatch Center Upgrades	\$ 45,000	\$ 25,000	\$ -	\$ 1,240,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Total		\$ 15,170,000	\$ 17,109,000	\$ 1,428,000	\$ 16,455,000	\$ 1,218,000	\$ 2,375,000	\$ -	\$ 10,070,000	\$ -	\$ 40,000,000	\$ -

2 **Main Engine Repower and Dry Docking - Asset Preservation**

Two of the ferry vessels have older engines which are not efficient and difficult to maintain. The project provides for the replacement of the engines reduction gears, and other associated parts for one vessel, which will be installed in 2020-2021. This project has an estimated DRBA cost of \$4,054,000 in 2021. The project is partially funded in the amount of approximately \$210,000 by the Environmental Protection Agency. This effort has no anticipated annual operating cost impact.

4 **Transfer Bridge Replacements - Safety**

The transfer bridges in Cape May and Lewes are in need of updates pertaining to the age of the structures, deteriorated concrete, and structurally deficient supports. The project incorporates the design and construction of new transfer bridges. This project has an estimated DRBA cost of \$2,300,000 in 2021. This effort has no anticipated annual operating cost impact.

6 **Freeman Highway Storage Building - Efficiency and Sustainability**

The Freeman Highway Facility is in need of a permanent storage building for highway equipment. The project proposes the design and construction of a conditioned storage building. This project has an estimated DRBA cost of \$400,000 in 2021. This effort has no anticipated annual operating cost impact.

12 **Monopile Repair - Safety**

A monopile in Lewes, used to prevent errant vessels from causing damage to adjacent property, was recently damaged. The effort includes the design and installation of a replacement piling system. This project has an estimated DRBA cost of \$30,000 in 2021. This effort has no anticipated annual operating cost impact.

Cape May Lewes Ferry - Continuing Projects

14 **Fender Replacements - Asset Preservation**

High strength fiberglass fender panels were installed during the late 1990s at both terminals to resist vessel impact along the bulkhead. These panels have reached their lifespan and are being replaced with steel panels similar in shape and size. This project has an estimated DRBA cost of \$690,000 in 2021 and \$1,700,000 in the out years. This effort has no anticipated annual operating cost impact.

26B **Roof and Building Envelope Rehabilitation (CMLF) - Asset Preservation**

The Authority is still in the early stages of a healthy roof management program having over 150 roof systems throughout its facilities. Each year, annual inspections and capital investments are strategically placed to provide a 30-year solution to establish a consistent and manageable replacement plan in the future. This project has an estimated DRBA cost of \$500,000 in 2021 and \$170,000 in the out years. This effort has no anticipated annual operating cost impact.

30 **Production Kitchen - Efficiency and Sustainability**

Due to outsourcing of the Lewes Kitchen, the food preparation to supply the ferry vessels is now limited to Cape May. The project programs the study (completed in 2020) and construction of a new modular kitchen in Cape May to accommodate vessel F&R operations. This project has an estimated DRBA cost of \$550,000 in 2021. This effort has no anticipated annual operating cost impact.

36 **Cape May Master Plan Phase 1: Utility Corridor - Efficiency and Sustainability**

This is the first phase of implementing the Cape May Master Plan, which addresses the aging utility infrastructure. The project proposes the design and installation of a centralized utility corridor, which allows for easier access to perform maintenance and repairs. This project has an estimated DRBA cost of \$1,000,000 in 2021 and \$7,000,000 in the out years. This effort has no anticipated annual operating cost impact.

38 **Motor Vessel Replacement Program - Efficiency and Sustainability**

A marine master plan was completed in 2008 which recommended construction of new vessels primarily due to the age of the existing fleet. A new vessel is estimated to cost in the \$40 million range. The plan supports an update of the old master plan, and then the design and replacement of the first of the three (3) existing vessels in the out years. Federal funding is anticipated for this project, but not committed at this time. This project has an estimated DRBA cost of \$1,500,000 in 2021 and \$53,000,000 in the out years. This effort has no anticipated annual operating cost impact.

40 **Electrical Signage - Cape May and Lewes - Efficiency and Sustainability**

The current ferry facilities do not have modern indicators for toll lane status or advertisement boards. The project involves the supply and installation of both toll lane indicators and variable message signs for advertisement of terminal facilities. This project has an estimated DRBA cost of \$70,000 in 2021 and \$600,000 in the out years. This effort has an anticipated annual operating cost impact of \$5,000.

43 **Cape May Approach Roads Rehabilitation - Asset Preservation**

Roadway improvements are necessary for maintaining expected levels of service for the approach roads to the Cape May Terminal. The project proposes the design and construction for roadway reconfigurations at the terminal entrance, improvements to the approach roads, and the replacement of Cape May highway signage. This project has an estimated DRBA cost of \$2,890,000 in 2021 and \$2,890,000 in the out years. The project is partially funded in the amount of approximately \$2,436,000 by the New Jersey Department of Transportation. This effort has no anticipated annual operating cost impact.

48 **Lewes Terminal Master Plan Phase 1: Utility Corridor - Efficiency and Sustainability**

This is the first phase of implementing the Lewes Master Plan, which addresses the aging utility infrastructure. The project proposes the design and installation of a centralized utility corridor, which allows for easier access to perform maintenance and repairs. This project has an estimated DRBA cost of \$800,000 in 2021 and \$2,300,000 in the out years. This effort has no anticipated annual operating cost impact.

Cape May Lewes Ferry - Continuing Projects

50 **Freeman Highway Repaving - Asset Preservation**

Roadway improvements are necessary for maintaining expected levels of service for Freeman Highway, approaching the Lewes Terminal. The project includes the repaving, joint repairs, and restriping of the existing roadway. This project has an estimated DRBA cost of \$1,900,000 in 2021. This effort has no anticipated annual operating cost impact.

57 **Power Feed Replacement for Slips - Efficiency and Sustainability**

The P3 power feed and Davits are aging and in need of replacement. The project programs the design and construction of safe and reliable replacement infrastructure. This project has an estimated DRBA cost of \$400,000 in 2021. This effort has no anticipated annual operating cost impact.

58 **Police Dispatch Center Upgrades - Efficiency and Sustainability**

The existing monitoring equipment and console are obsolete. The purpose of the upgrade is to replace the outdated console and legacy systems to improve functionality, ergonomics, and monitoring capabilities. This project has an estimated DRBA cost of \$25,000 in 2021 and \$1,240,000 in the out years. This effort has an anticipated annual operating cost impact of \$10,000.

Cape May - Lewes Ferry - Annual Projects

Crossings Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	Annual Projects										
23	Annual Vessel Maintenance & Dry Docking	\$ 11,584,000	\$ -	\$ 8,750,000	\$ -	\$ 5,950,000	\$ -	\$ 3,500,000	\$ -	\$ -	\$ -
24B	Annual Minor Capital Maintenance (CMLF)	\$ 2,106,000	\$ 12,000	\$ 1,160,000	\$ -	\$ 275,000	\$ -	\$ 325,000	\$ -	\$ 275,000	\$ -
25B	Annual Minor Capital Equipment (CMLF)	\$ 307,000	\$ -	\$ 525,000	\$ -	\$ 170,000	\$ -	\$ -	\$ -	\$ -	\$ -
27B	Annual Automation/Telecom Upgrades (CMLF)	\$ 772,000	\$ -	\$ 1,372,000	\$ -	\$ 565,000	\$ -	\$ 250,000	\$ -	\$ 505,000	\$ -
64	Maintenance Dredging (CM)	\$ 50,000	\$ -	\$ 480,000	\$ -	\$ -	\$ -	\$ 400,000	\$ -	\$ -	\$ -
	Grand Total	\$ 14,819,000	\$ 12,000	\$ 12,287,000	\$ -	\$ 6,960,000	\$ -	\$ 4,475,000	\$ -	\$ 780,000	\$ -

23 Annual Vessel Maintenance & Dry Docking - Efficiency and Sustainability

The project programs annual capital expenditures for the three (3) vessels, particularly in areas that preserve these assets and improve passenger safety and operational reliability. Planned projects include but are not limited to: vessel shipyard dry-dockings, purchase of life saving equipment, seating replacements, systems efficiency upgrades, generator overhauls, and miscellaneous improvements. This project has an estimated DRBA cost of \$11,584,000 in 2021 and \$18,200,000 in the out years.

24B Annual Minor Capital Maintenance (CMLF) - Asset Preservation

These land-side projects include, but not be limited to: HVAC improvements, roofing, terminal improvements, electrical improvements, security enhancements, building and workshop improvements, fencing and signage improvements, and carpet replacement. This project programs annual work activities necessary to accommodate changing regulations and to preserve existing infrastructure. This project has an estimated DRBA cost of \$2,106,000 in 2021 and \$2,035,000 in the out years.

25B Annual Minor Capital Equipment (CMLF) - Efficiency and Sustainability

The project programs annual capital equipment purchases which may include but are not limited to: vehicles, trucks, specialty equipment, emergency generators, trailers, and other equipment that are utilized to preserve existing infrastructure assets. Purchases are based on established replacement guidelines considering useful life and condition. This project has an estimated DRBA cost of \$307,000 in 2021 and \$695,000 in the out years.

27B Annual Automation/Telecom Upgrades (CMLF) - Efficiency and Sustainability

Automation upgrades with equipment enhancements are required for maintaining sustainable and efficient facilities. The project includes but is not limited to: automation master planning, computer hardware replacement purchases, network upgrades, software and hardware upgrades, uninterruptible power supply improvements, camera installations, fire detection systems upgrades, and other miscellaneous upgrades or installations. This project has an estimated DRBA cost of \$772,000 in 2021 and \$2,692,000 in the out years.

64 Maintenance Dredging (CM) - Safety

Cape May requires dredging annually as areas are prone to siltation. The project programs hydrographic surveys for planning and scheduling of annual maintenance dredging at the ferry terminals. Scheduling of dredging at Lewes is on an as-needed basis. This project has an estimated DRBA cost of \$50,000 in 2021 and \$880,000 in the out years. This effort has no anticipated annual operating cost impact.

Cape May - Lewes Ferry - New Projects

Crossings Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	New Projects										
46	Lewes Approach Signage Improvements	\$ 353,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
49	Replace Chiller and Cooling Tower (LW)	\$ 90,000	\$ -	\$ 900,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Grand Total	\$ 443,000	\$ -	\$ 900,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

46 Lewes Approach Signage Improvements - Safety

Missing signage along Route 1 and outdated signage along Freeman Highway are needed to direct customers to the Lewes Ferry Terminal. The project adds a sign to a northbound Route 1 structure owned by DelDOT and replaces signs on Freeman Highway and Cape Henlopen Drive. This project has an estimated DRBA cost of \$353,000 in 2021. This effort has no anticipated annual operating cost impact.

49 Replace Chiller and Cooling Tower (LW) - Asset Preservation

Several existing HVAC chiller units are at the end of their service life and operate on obsolete R-22 refrigerant, which is being phased out by the EPA. The project will begin the process of replacement with high efficiency units that operate on modern, environmentally-friendly refrigerant. This project has an estimated DRBA cost of \$90,000 in 2021 and \$900,000 in the out years. This effort has no anticipated annual operating cost impact.

Cape May - Lewes Ferry - Out Year Projects

Crossings Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding		External Funding		External Funding		External Funding	
			2021	2022	2022	2023	2023	2024	2024	2025
	Out Year Projects									
69	Public/Private Shipyard Partnership	\$ -	\$ -	\$ 3,100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
76	Pedestrian Walkway Fascia Replacement (CM)	\$ -	\$ -	\$ 100,000	\$ -	\$ 800,000	\$ -	\$ -	\$ -	\$ -
77	Accomodation Hotel Barge	\$ -	\$ -	\$ 800,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
79	Fitness Center Renovations (CM)	\$ -	\$ -	\$ 100,000	\$ -	\$ 360,000	\$ -	\$ -	\$ -	\$ -
96	Cape May Master Plan Phases: 2 through 6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
97	Lewes Master Plan Phases 4 through 6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Grand Total	\$ -	\$ -	\$ 4,100,000	\$ -	\$ 1,160,000	\$ -	\$ -	\$ -	\$ -

69 **Public/Private Shipyard Partnership - Efficiency and Sustainability**

This effort provides funding for the Authority to partner with a local shipyard in the implementation of a floating dry-dock sufficient for Cape May – Lewes Ferry vessels. The project would also provide for ongoing dry-dock and repair services within the home state, saving time and money, and also providing local employment. The project foresees significant grant funding to become viable. This project has an estimated DRBA cost of \$3,100,000 in the out years. This effort has no anticipated annual operating cost impact.

76 **Pedestrian Walkway Fascia Replacement (CM) - Asset Preservation**

Fascia material which protects the supporting structural steel columns and walkway is showing signs of failure. A repair solution will be developed and implemented to protect the structure from the elements found in this marine environment This project has an estimated DRBA cost of \$900,000 in the out years. This effort has no anticipated annual operating cost impact.

77 **Accomodation Hotel Barge - Efficiency and Sustainability**

During peak season there is insufficient local lodging for employees. The procurement and installation of a pre-fabricated hotel barge will provide significant seasonal lodging capacity for employees in a more cost-effective manner than investing in local real estate. The project will include the design of shore side infrastructure and utilities as well as the procurement and installation of a pre-built hotel barge This project has an estimated DRBA cost of \$800,000 in the out years. This effort has no anticipated annual operating cost impact.

79 **Fitness Center Renovations (CM) - Efficiency and Sustainability**

The fitness center holds obsolete equipment and unused space. The purpose of this project is to renovate the area to effectively use the room and upgrade the equipment. This project has an estimated DRBA cost of \$460,000 in the out years. This effort has no anticipated annual operating cost impact.

96 **Cape May Master Plan Phases: 2 through 6 - Efficiency and Sustainability**

These are the remaining phases for implementing the Cape May Master Plan. This includes multiple projects to address the site’s aging infrastructure and aims to optimize the facility’s operations. Costs for the construction of these phases of the Master Plan fall outside of the five year strategic plan. This effort has no anticipated

Cape May - Lewes Ferry - Out Year Projects

97 **Lewes Master Plan Phases 4 through 6 - Efficiency and Sustainability**

These are the remaining phases for implementing the Lewes Master Plan. This includes multiple projects to address the site's aging infrastructure and aims to optimize the facility's operations. Costs for the construction of these phases of the Master Plan fall outside of the five year strategic plan. This effort has no anticipated annual operating cost impact.

Forts Ferry - Annual Projects

Crossings Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	Annual Projects										
24H	Annual Minor Capital Maintenance (FF)	\$ 20,000	\$ -	\$ 20,000	\$ -	\$ 20,000	\$ -	\$ 20,000	\$ -	\$ 20,000	\$ -
	Grand Total	\$ 20,000	\$ -	\$ 20,000	\$ -	\$ 20,000	\$ -	\$ 20,000	\$ -	\$ 20,000	\$ -

24H **Annual Minor Capital Maintenance (FF) - Asset Preservation**

This project programs annual work activities necessary to accommodate changing regulations and to preserve existing infrastructure. These land-side projects include, but are not be limited to: HVAC improvements, roofing, terminal improvements, electrical improvements, security enhancements, building and workshop improvements, fencing and signage improvements, and carpet replacement. This project has an estimated DRBA cost of \$20,000 in 2021 and \$80,000 in the out years.

New Castle Airport - Continuing Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2020 \$ Spent (EST.)	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	Continuing Projects											
10	Facility Utility Survey (ILG)	\$ 275,000	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13	Rehabilitate 1-19	\$ 55,000	\$ 400,000	\$ 6,922,000	\$ 325,000	\$ 2,925,000	\$ 550,000	\$ 4,950,000	\$ -	\$ -	\$ -	\$ -
26C	Roof and Building Envelope Rehabilitation (ILG)	\$ 1,000	\$ -	\$ -	\$ 800,000	\$ -	\$ 25,000	\$ -	\$ 75,000	\$ -	\$ -	\$ -
44	Perimeter Road Rehabilitation	\$ 31,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
52	Terminal Architectural Improvements Phase 2	\$ 2,462,000	\$ 25,000	TBD	\$ 0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
53	Parking Improvements Phase 2	\$ 2,000,000	TBD	TBD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Grand Total	\$ 4,824,000	\$ 435,000	\$ 6,922,000	\$ 1,125,000	\$ 2,925,000	\$ 575,000	\$ 4,950,000	\$ 75,000	\$ -	\$ -	\$ -

10 **Facility Utility Survey (ILG) - Efficiency and Sustainability**

Utility records and location services are not provided by the local utility companies for the majority of the Authority's properties and historical records are difficult to track without a common GIS platform. The project programs a field utility survey to include preliminary development of a GIS platform to record this data and track future changes. This project has an estimated DRBA cost of \$10,000 in 2021. This effort has no anticipated annual operating cost impact.

13 **Rehabilitate 1-19 - Efficiency and Sustainability**

The Runway 1-19 pavement area is in need of rehabilitation based on FAA pavement life cycles and the State of Delaware's pavement management study. The project programs for rehabilitation of the runway pavement, and any modifications to signage, markings, lighting or infrastructure which may be necessary. This project has an estimated DRBA cost of \$400,000 in 2021 and \$875,000 in the out years. The project is partially funded in the amount of approximately \$14,797,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

26C **Roof and Building Envelope Rehabilitation (ILG) - Asset Preservation**

The Authority is still in the early stages of a healthy roof management program having over 150 roof systems throughout its facilities. Each year, annual inspections and capital investments are strategically placed to provide a 30-year solution to establish a consistent and manageable replacement plan in the future. This project has an estimated DRBA cost of \$900,000 in the out years. This effort has no anticipated annual operating cost impact.

44 **Perimeter Road Rehabilitation - Efficiency and Sustainability**

The perimeter roads are exhibiting signs of damage from heavy vehicle loading. The project programs the design and construction of this rehabilitation, to include demolition and reconstruction of existing asphalt pavement. This project has an estimated DRBA cost of . This effort has no anticipated annual operating cost impact.

52 **Terminal Architectural Improvements Phase 2 - Asset Preservation**

The terminal facility is dated and has not had a unified visual update in its service life, as well as experiencing a modified usage case on the interior. The project programs funds to design and implement a consistent system of visual improvements to the exterior of the building, and to modify the interior of the building to suit current and future needs. This project has an estimated DRBA cost of \$25,000 in 2021 and \$0 in the out years. External funding is anticipated for this project, but is not yet committed. This effort has no anticipated annual operating cost impact.

New Castle Airport - Continuing Projects

53 Parking Improvements Phase 2 - Efficiency and Sustainability

The landside and airside parking facilities at the airport terminal require signage and marking updates, improvements and expansions, as well as the implementation of paid parking systems to accommodate anticipated commercial service. The project programs the design and construction of all necessary updates and expansions. This project DRBA cost in 2021 . External funding is anticipated for this project, but is not yet committed. This effort has no anticipated annual operating cost impact.

New Castle Airport - Annual Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	Annual Projects										
24C	Annual Minor Capital Maintenance (ILG)	\$ 25,000	\$ -	\$ 741,000	\$ -	\$ 415,000	\$ -	\$ 415,000	\$ -	\$ 420,000	\$ -
25C	Annual Minor Capital Equipment (ILG)	\$ 460,000	\$ -	\$ 405,000	\$ -	\$ 180,000	\$ -	\$ -	\$ -	\$ -	\$ -
27C	Annual Automation/Telecom Upgrades (ILG)	\$ -	\$ -	\$ 294,000	\$ -	\$ -	\$ -	\$ 10,000	\$ -	\$ 30,000	\$ -
65C	Reserve for Economic Development/Tenant Improve	\$ -	\$ -	\$ 1,000,000	\$ -	\$ 1,000,000	\$ -	\$ 1,000,000	\$ -	\$ 1,000,000	\$ -
	Grand Total	\$ 485,000	\$ -	\$ 2,440,000	\$ -	\$ 1,595,000	\$ -	\$ 1,425,000	\$ -	\$ 1,450,000	\$ -

24C **Annual Minor Capital Maintenance (ILG) - Asset Preservation**

The project programs repairs, renovations, and improvements to Authority owned and occupied facilities and infrastructure to include, but not be limited to: site grading, lighting, signage, utility upgrades, storm water, fire suppression, pavement, airfield security/safety, planning, permitting, and record document updates. The project is necessary to protect the facilities, maintain good repair, and provide for public safety. This project has an estimated DRBA cost of \$25,000 in 2021 and \$1,991,000 in the out years. This effort has no anticipated annual operating cost impact.

25C **Annual Minor Capital Equipment (ILG) - Efficiency and Sustainability**

The project programs annual capital equipment purchases which may include but are not limited to: vehicles, trucks, specialty equipment, emergency generators, trailers, and other equipment that are utilized to preserve existing infrastructure assets. Purchases are based on established replacement guidelines considering useful life and condition. This project has an estimated DRBA cost of \$460,000 in 2021 and \$585,000 in the out years. This effort has no anticipated annual operating cost impact.

27C **Annual Automation/Telecom Upgrades (ILG) - Efficiency and Sustainability**

Automation upgrades with equipment enhancements are required for maintaining sustainable and efficient facilities. The project includes but is not limited to: automation master planning, computer hardware replacement purchases, network upgrades, software and hardware upgrades, uninterruptible power supply improvements, camera installations, fire detection systems upgrades, and other miscellaneous upgrades or installations. This project has an estimated DRBA cost of \$334,000 in the out years. This effort has no anticipated annual operating cost impact.

65C **Reserve for Economic Development/Tenant Improvements (ILG) - Economic Development**

The Authority needs to program substantial capital infrastructure improvements to meet external needs. The project programs building repairs and site improvements for the airport tenants as needed per lease agreements with the Authority, as well as programming for proposed economical development efforts. This project has an estimated DRBA cost of \$4,000,000 in the out years. This effort has no anticipated annual operating cost impact.

New Castle Airport - New Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	New Projects										
31	Airfield markings (ILG)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54	Wetland Area Improvements - RW 14 APCH	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Grand Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

31 **Airfield markings (ILG) - Efficiency and Sustainability**

The pavement markings at the airport facilities have degraded over time or require updates to meet changing FAA marking requirements. The project programs the evaluation, design, and construction of markings at the airport facilities as needed. No costs are being committed to this project. This effort has no anticipated annual operating cost impact.

54 **Wetland Area Improvements - RW 14 APCH - Safety**

The recently cleared wooded area at the runway 14 approach is currently inaccessible by conventional mowing equipment. The project programs the initial clearing of critical obstacles and the design of long term softening of steep slopes. No costs are being committed to this project. This effort has no anticipated annual operating cost impact.

New Castle Airport - Out Year Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	Out Year Projects										
71	Construct Run-up Pad	\$ -	\$ -	\$ 10,000	\$ -	\$ 30,000	\$ 270,000	\$ -	\$ -	\$ 350,000	\$ 3,150,000
85	Reconstruct Taxiway K	\$ -	\$ -	\$ -	\$ -	\$ 15,000	\$ 300,000	\$ 15,000	\$ 300,000	\$ -	\$ -
86	Improve RSA Runway 1-19	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ 45,000	\$ 28,000	\$ 255,000	\$ -	\$ -
87	Obstruction Removal	\$ -	\$ -	\$ -	\$ -	\$ 3,000	\$ 25,000	\$ -	\$ -	\$ -	\$ -
89	Acquire Land for Runway 1 RPZ	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100,000	\$ 900,000	\$ -	\$ -
91	Relocate Airport Operations and Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,000	\$ -	\$ -	\$ -
	Grand Total	\$ -	\$ -	\$ 10,000	\$ -	\$ 53,000	\$ 640,000	\$ 193,000	\$ 1,455,000	\$ 350,000	\$ 3,150,000

71 Construct Run-up Pad - Efficiency and Sustainability

The construction of the Taxiway B and E project eliminated the run-up pad for the airport. The project programs for the design and construction of a new run-up pad in a more suitable location for the airport. This project has an estimated DRBA cost of \$390,000 in the out years. The project is partially funded in the amount of approximately \$3,420,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

85 Reconstruct Taxiway K - Asset Preservation

Taxiway K at the Runway 9 approach is not currently aligned with the rest of Taxiway K and there are runway safety issues with pavements in the vicinity. The project programs the relocation of Taxiway K which will align it with the rest of the parallel Taxiway K and eliminate the runway safety issues. This project has an estimated DRBA cost of \$30,000 in the out years. The project is partially funded in the amount of approximately \$600,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

86 Improve RSA Runway 1-19 - Safety

The approach end of runway 14-32 currently encroaches on the runway safety area for Runway 1-19. The project programs for the design and construction of modifications to the pavement and associated lighting systems to address this condition. This project has an estimated DRBA cost of \$33,000 in the out years. The project is partially funded in the amount of approximately \$300,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

87 Obstruction Removal - Safety

The project programs the removal of obstructions on airport property and on properties within the airport's immediate surroundings. The effort includes easement acquisition over the affected off-airport properties and brings the airport into compliance with federal airspace safety standards. This project has an estimated DRBA cost of \$3,000 in the out years. The project is partially funded in the amount of approximately \$25,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

89 Acquire Land for Runway 1 RPZ - Efficiency and Sustainability

The FAA strongly encourages airport sponsors to control all properties falling within the Runway Protection Zones at each runway end. The project programs the investigation and purchase of land adjacent to the Runway 1 approach. This project has an estimated DRBA cost of \$100,000 in the out years. The project is partially funded in the amount of approximately \$900,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

New Castle Airport - Out Year Projects

91 **Relocate Airport Operations and Maintenance - Efficiency and Sustainability**

The airport operations and maintenance facilities are currently located on opposite sides of the airfield with the maintenance facility located entirely within the secured perimeter of the Delaware Air National Guard. As part of the master plan process, a common site was selected and this project budgets for the development of the site to accommodate the operation and maintenance needs of the airport. Partial funding is anticipated from the Delaware Air National Guard and the Federal Aviation Administration for this project, but is not committed at this time. This project has an estimated DRBA cost of \$50,000 in the out years. This effort has no anticipated annual operating cost impact.

Millville Airport - Continuing Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2020 \$ Spent (EST.)	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
Continuing Projects												
18	South Apron Expansion	\$ 10,000	\$ -	\$ 1,450,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
26D	Roof and Building Envelope Rehabilitation (MIV)	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ -	\$ 25,000	\$ -	\$ 50,000	\$ -	\$ -	\$ -
37	Rehabilitate Taxiways "A", "C", and "G"	\$ -	\$ 25,000	\$ 225,000	\$ 25,000	\$ 225,000	\$ 215,000	\$ 1,935,000	\$ 223,000	\$ 2,007,000	\$ 264,000	\$ 2,376,000
51	Roadway Improvements	\$ -	\$ 425,000	\$ -	\$ 425,000	\$ -	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -	\$ -
Grand Total		\$ 10,000	\$ 700,000	\$ 1,675,000	\$ 700,000	\$ 225,000	\$ 240,000	\$ 1,935,000	\$ 1,273,000	\$ 2,007,000	\$ 264,000	\$ 2,376,000

18 South Apron Expansion - Economic Development

The project programs the design and construction of a new cargo apron in the vicinity of the intersection of Taxiways "B" and "E". The project will expand the apron pavement to provide for more diverse aircraft operations. The project is funded in the amount of approximately \$1,450,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

26D Roof and Building Envelope Rehabilitation (MIV) - Asset Preservation

The Authority is still in the early stages of a healthy roof management program having over 150 roof systems throughout its facilities. Each year, annual inspections and capital investments are strategically placed to provide a 30-year solution to establish a consistent and manageable replacement plan in the future. This project has an estimated DRBA cost of \$250,000 in 2021 and \$325,000 in the out years. This effort has no anticipated annual operating cost impact.

37 Rehabilitate Taxiways "A", "C", and "G" - Asset Preservation

In accordance with the findings of the latest Pavement Management Study taxiways A, C, and G are in need of repair. The project programs the design and construction costs for these repairs to include pavement resurfacing, lighting, signage, and associated drainage improvements. This project has an estimated DRBA cost of \$25,000 in 2021 and \$727,000 in the out years. The project is partially funded in the amount of approximately \$6,768,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

51 Roadway Improvements - Efficiency and Sustainability

The access roads for the airport are exhibiting signs of deterioration. The project programs the design and construction of this rehabilitation effort, to include demolition and reconstruction of existing asphalt pavement. This project has an estimated DRBA cost of \$425,000 in 2021 and \$1,425,000 in the out years. This effort has no anticipated annual operating cost impact.

Millville Airport - Annual Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
Annual Projects											
24D	Annual Minor Capital Maintenance (MIV)	\$ 66,000	\$ -	\$ 465,000	\$ -	\$ 125,000	\$ -	\$ 125,000	\$ -	\$ 125,000	\$ -
25D	Annual Minor Capital Equipment (MIV)	\$ 125,000	\$ 360,000	\$ 265,000	\$ -	\$ 120,000	\$ -	\$ -	\$ -	\$ -	\$ -
27D	Annual Automation/Telecom Upgrades (MIV)	\$ 115,000	\$ -	\$ 37,000	\$ -	\$ 10,000	\$ -	\$ 5,000	\$ -	\$ 15,000	\$ -
65D	Reserve for Economic Development/Tenant Improvements (MIV)	\$ 50,000	\$ -	\$ 750,000	\$ -	\$ 350,000	\$ -	\$ 350,000	\$ -	\$ 350,000	\$ -
Grand Total		\$ 356,000	\$ 360,000	\$ 1,517,000	\$ -	\$ 605,000	\$ -	\$ 480,000	\$ -	\$ 490,000	\$ -

24D **Annual Minor Capital Maintenance (MIV) - Asset Preservation**

The project programs repairs, renovations, and improvements to Authority owned and occupied facilities and infrastructure to include, but not be limited to: site grading, lighting, signage, utility upgrades, storm water, fire suppression, pavement, airfield security/safety, planning, permitting and record document updates. The project is necessary to protect the facilities, maintain good repair, and provide for public safety. This project has an estimated DRBA cost of \$66,000 in 2021 and \$840,000 in the out years.

25D **Annual Minor Capital Equipment (MIV) - Efficiency and Sustainability**

The project programs annual capital equipment purchases which may include but are not limited to: vehicles, trucks, specialty equipment, emergency generators, trailers, and other equipment that are utilized to preserve existing infrastructure assets. Purchases are based on established replacement guidelines considering useful life and condition. This project has an estimated DRBA cost of \$125,000 in 2021 and \$385,000 in the out years. The project is partially funded in the amount of approximately \$360,000 by the Federal Aviation Administration.

27D **Annual Automation/Telecom Upgrades (MIV) - Asset Preservation**

Automation upgrades with equipment enhancements are required for maintaining sustainable and efficient facilities. The project includes but is not limited to: automation master planning, computer hardware replacement purchases, network upgrades, software and hardware upgrades, uninterruptible power supply improvements, camera installations, fire detection systems upgrades, and other miscellaneous upgrades or installations. This project has an estimated DRBA cost of \$115,000 in 2021 and \$67,000 in the out years.

65D **Reserve for Economic Development/Tenant Improvements (MIV) - Economic Development**

The Authority needs to program substantial capital infrastructure improvements to meet external needs. The project programs building repairs and site improvements for the airport tenants as needed per lease agreements with the Authority, as well as programming for proposed economical development efforts. This project has an estimated DRBA cost of \$50,000 in 2021 and \$1,800,000 in the out years. This effort has no anticipated annual operating cost impact.

Millville Airport - New Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2021		2022		2023		2024		2025	
			External Funding		External Funding		External Funding		External Funding		External Funding
	New Projects										
61	Building M319 Demolition	\$ 150,000	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Grand Total	\$ 150,000	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

61 **Building M319 Demolition - Efficiency and Sustainability**

Building M319 is vacant and is at the end of its life cycle. The project programs the assessment, design, and demolition of the building. This project has an estimated DRBA cost of \$150,000 in 2021 and \$1,500,000 in the out years. This effort has no anticipated annual operating cost impact.

Millville Airport - Out Year Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	Out Year Projects										
70	Airfield markings (MIV)	\$ -	\$ -	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
88	T-Hangar Replacements	\$ -	\$ -	\$ -	\$ -	\$ 125,000	\$ -	\$ 1,250,000	\$ -	\$ -	\$ -
93	Facility Utility Survey (MIV)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 511,000	\$ -	\$ -	\$ -
95	Master Plan (MIV)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 63,000	\$ 563,000
	Grand Total	\$ -	\$ -	\$ 300,000	\$ -	\$ 125,000	\$ -	\$ 1,761,000	\$ -	\$ 63,000	\$ 563,000

70 Airfield markings (MIV) - Safety

The pavement markings at the airport facilities have degraded over time or require updates to meet changing FAA marking requirements. The project programs the evaluation, design, and construction of markings at the airport facilities as needed. This project has an estimated DRBA cost of \$300,000 in the out years. This effort has no anticipated annual operating cost impact.

88 T-Hangar Replacements - Economic Development

The existing portable T-Hangars at the airport have reached the end of their serviceable life and can no longer be economically maintained. The project programs the design and construction costs for a new ten bay T-hangar building to be constructed at the T-hangar site which was recently constructed with the benefit federal airport improvement program funds. This project has an estimated DRBA cost of \$1,375,000 in the out years. This effort has no anticipated annual operating cost impact.

93 Facility Utility Survey (MIV) - Asset Preservation

Utility records and location services are not provided by the local utility companies for the majority of the Authority's properties and historical records are difficult to track without a common GIS platform. The project programs a field utility survey to include preliminary development of a GIS platform to record this data and track future changes. This project has an estimated DRBA cost of \$511,000 in the out years. This effort has no anticipated annual operating cost impact.

95 Master Plan (MIV) - Asset Preservation

The current master plan is outdated and is eligible for update in accordance with the federal Airport Improvement Program. The Authority intends to develop a dynamic master plan to set goals and plan the future development of the airport. The plan will reflect current industry trends and incorporate feedback from all stakeholders. This project has an estimated DRBA cost of \$63,000 in the out years. The project is partially funded in the amount of approximately \$563,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

Cape May Airport - Continuing Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2020 \$ Spent (EST.)	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
Continuing Projects												
16	Rehabilitate 10-28 & Remove Taxiway E	\$ 34,000	\$ -	\$ 3,220,000	\$ 175,000	\$ 1,575,000	\$ 350,000	\$ 3,150,000	\$ -	\$ -	\$ -	\$ -
17	Second Multi-Tenant Building	\$ 1,200,000	\$ 2,300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
19	Replace 10-28 PAPIs	\$ 15,000	\$ 70,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20	Replace Airport Beacon	\$ 24,000	\$ 203,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
55	Multi-Purpose Building (Hornet Road)	\$ 619,000	\$ 3,750,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
62	Terminal Parking Lot Pavement Improvements	\$ 55,000	\$ 100,000	\$ -	\$ 700,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
63	Facility Utility Survey (WWD)	\$ -	\$ 380,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Total		\$ 1,947,000	\$ 6,803,000	\$ 3,470,000	\$ 875,000	\$ 1,575,000	\$ 350,000	\$ 3,150,000	\$ -	\$ -	\$ -	\$ -

16 **Rehabilitate 10-28 & Remove Taxiway E - Asset Preservation**

Results from the most recent pavement management study indicate the pavement on Runway 10-28 is deteriorating and is in need of rehabilitation. Work will include pavement resurfacing, lighting, signage, and associated drainage improvements as well as the removal of an unnecessary connector taxiway. This project has an estimated DRBA cost of \$525,000 in the out years. The project is funded in the amount of approximately \$7,945,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

17 **Second Multi-Tenant Building - Economic Development**

Cape May Airport has experience increased development and business interest and there is little available space to accommodate demand. The project provides for the construction of a second multi-tenant light industrial building to accommodate new tenancy requests. This project has an estimated DRBA cost of \$2,300,000 in 2021. This effort has no anticipated annual operating cost impact.

19 **Replace 10-28 PAPIs - Asset Preservation**

The existing Precision Approach Path Indicator (PAPI) at both ends of the runway have reached the end of their serviceable life and can no longer be maintained. The project programs the replacement of these critical navigational aids. This project has an estimated DRBA cost of \$70,000 in 2021. This effort has no anticipated annual operating cost impact.

20 **Replace Airport Beacon - Efficiency and Sustainability**

The existing airport beacon is attached to the terminal building and is difficult and dangerous to maintain. The project provides for the a new separate tilt down beacon to provide easy and safe maintenance access. This project has an estimated DRBA cost of \$203,000 in 2021. This effort has no anticipated annual operating cost impact.

55 **Multi-Purpose Building (Hornet Road) - Efficiency and Sustainability**

The existing terminal building's layout and condition are not conducive to future terminal functions and the facility is poorly located. Cape May County is investing significant funds in the development of a new airport entrance at Hornet Road and this project provides for the planning, design, and construction of a new terminal facility at the end of Hornet Road immediately adjacent to the airport's FBO and fueling facilities. This project has an estimated DRBA cost of \$3,750,000 in 2021. The project is cost shared in the amount of approximately \$250,000 by the Cape May County. This effort has no anticipated annual operating cost impact.

Cape May Airport - Continuing Projects

62 Terminal Parking Lot Pavement Improvements - Efficiency and Sustainability

The terminal parking lot pavement is in poor condition and is in need of rehabilitation. Work will include pavement resurfacing and associated drainage improvements. This project has an estimated DRBA cost of \$100,000 in 2021 and \$700,000 in the out years. This effort has no anticipated annual operating cost impact.

63 Facility Utility Survey (WWD) - Efficiency and Sustainability

Utility records and location services are not provided by the local utility companies for the majority of the Authority's properties and historical records are difficult to track without a common GIS platform. This project programs a field utility survey to include preliminary development of a GIS platform to record this data and track future changes. This project has an estimated DRBA cost of \$380,000 in 2021. This effort has no anticipated annual operating cost impact.

Cape May Airport - Annual Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
Annual Projects											
24E	Annual Minor Capital Maintenance (WWD)	\$ 135,000	\$ -	\$ 300,000	\$ -	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ 25,000	\$ -
25E	Annual Minor Capital Equipment (WWD)	\$ 25,000	\$ -	\$ 135,000	\$ -	\$ 80,000	\$ -	\$ -	\$ -	\$ -	\$ -
27E	Annual Automation/Telecom Upgrades (WWD)	\$ 30,000	\$ -	\$ 130,000	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ 20,000	\$ -
Grand Total		\$ 190,000	\$ -	\$ 565,000	\$ -	\$ 135,000	\$ -	\$ 50,000	\$ -	\$ 45,000	\$ -

24E **Annual Minor Capital Maintenance (WWD) - Asset Preservation**

The project programs repairs, renovations, and improvements to Authority owned and occupied facilities and infrastructure to include, but not be limited to: site grading, lighting, signage, utility upgrades, storm water, fire suppression, pavement, airfield security/safety, planning, permitting and record document updates. The project is necessary to protect the facilities, maintain good repair, and provide for public safety. This project has an estimated DRBA cost of \$135,000 in 2021 and \$425,000 in the out years.

25E **Annual Minor Capital Equipment (WWD) - Efficiency and Sustainability**

The project programs annual capital equipment purchases which may include but are not limited to: vehicles, trucks, specialty equipment, emergency generators, trailers, and other equipment that are utilized to preserve existing infrastructure assets. Purchases are based on established replacement guidelines considering useful life and condition. This project has an estimated DRBA cost of \$25,000 in 2021 and \$215,000 in the out years.

27E **Annual Automation/Telecom Upgrades (WWD) - Efficiency and Sustainability**

Automation upgrades with equipment enhancements are required for maintaining sustainable and efficient facilities. The project includes but is not limited to: automation master planning, computer hardware replacement purchases, network upgrades, software and hardware upgrades, uninterruptible power supply improvements, camera installations, fire detection systems upgrades, and other miscellaneous upgrades or installations. This project has an estimated DRBA cost of \$30,000 in 2021 and \$155,000 in the out years.

Cape May Airport - New Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	New Projects										
59	Way Finding	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Grand Total	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

59 Way Finding - Safety

The airport attracts visitors from the outside public due to the multiple businesses and museums. The project aims to help visitors navigate their way through the site with ample signage and pedestrian maps. This project has an estimated DRBA cost of \$400,000 in 2021. This effort has no anticipated annual operating cost impact.

Cape May Airport - Out Year Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	Out Year Projects										
65E	Reserve for Economic Development/Tenant Improve	\$ -	\$ -	\$ 250,000	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -
66E	Roof and Building Envelope Rehabilitation (WWD)	\$ -	\$ -	\$ 1,375,000	\$ -	\$ 50,000	\$ -	\$ 25,000	\$ -	\$ -	\$ -
72	Rehabilitate Taxiway "A"	\$ -	\$ -	\$ 15,000	\$ -	\$ 35,000	\$ 300,000	\$ 140,000	\$ 1,350,000	\$ 140,000	\$ 1,350,000
81	Airfield Markings (WWD)	\$ -	\$ -	\$ -	\$ -	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -
92	Roadway Improvements (WWD)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,250,000	\$ -	\$ -	\$ -
94	Master Plan (WWD)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 63,000	\$ 563,000
	Grand Total	\$ -	\$ -	\$ 1,640,000	\$ -	\$ 485,000	\$ 300,000	\$ 1,515,000	\$ 1,350,000	\$ 303,000	\$ 1,913,000

65E **Reserve for Economic Development/Tenant Improvements (WWD) - Efficiency and Sustainability**

The Authority needs to program substantial capital infrastructure improvements to meet external needs. The project programs building repairs and site improvements for the airport tenants as needed per lease agreements with the Authority, as well as programming for proposed economical development efforts. This project has an estimated DRBA cost of \$550,000 in the out years. This effort has no anticipated annual operating cost impact.

66E **Roof and Building Envelope Rehabilitation (WWD) - Asset Preservation**

The Authority is still in the early stages of a healthy roof management program having over 150 roof systems throughout its facilities. Each year, annual inspections and capital investments are strategically placed to provide a 30-year solution to establish a consistent and manageable replacement plan in the future. This project has an estimated DRBA cost of \$1,450,000 in the out years. This effort has no anticipated annual operating cost impact.

72 **Rehabilitate Taxiway "A" - Asset Preservation**

In accordance with the findings of the latest Pavement Management Study taxiway A is in need of repair. The project programs the design and construction costs for these repairs to include pavement resurfacing, lighting, signage, and associated drainage improvements. This project has an estimated DRBA cost of \$330,000 in the out years. The project is partially funded in the amount of approximately \$3,000,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

81 **Airfield Markings (WWD) - Efficiency and Sustainability**

The pavement markings at the airport facilities have degraded over time or require updates to meet changing FAA marking requirements. The project programs the evaluation, design, and construction of markings at the airport facilities as needed. This project has an estimated DRBA cost of \$300,000 in the out years. This effort has no anticipated annual operating cost impact.

92 **Roadway Improvements (WWD) - Economic Development**

The access roads for the airport are exhibiting signs of deterioration. The project programs the necessary improvement needed to maintain the airport roadway pavements. This project has an estimated DRBA cost of \$1,250,000 in the out years. This effort has no anticipated annual operating cost impact.

Cape May Airport - Out Year Projects

94 **Master Plan (WWD) - Efficiency and Sustainability**

The current master plan is outdated and is eligible for update in accordance with the federal Airport Improvement Program. The Authority intends to develop a dynamic master plan to set goals and plan the future development of the airport. The plan will reflect current industry trends and incorporate feedback from all stakeholders. This project has an estimated DRBA cost of \$63,000 in the out years. The project is partially funded in the amount of approximately \$563,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

Delaware Airpark - Continuing Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2020 \$ Spent (EST.)	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	Continuing Projects											
8	New Aviation Fuel Farm	\$ 220,000	\$ 443,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	Master Plan (33N)	\$ 19,000	\$ 4,000	\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
21	Expand Apron	\$ 11,000	\$ -	\$ 1,897,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
33	Remove Obstructions (33N)	\$ -	\$ 285,000	\$ 300,000	\$ -	\$ -	\$ 50,000	\$ 450,000	\$ 67,000	\$ 603,000	\$ 51,000	\$ 455,000
39	Acquire Land For Airfield Protection	\$ -	\$ 10,000	\$ 90,000	\$ 45,000	\$ 405,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Grand Total	\$ 250,000	\$ 742,000	\$ 2,312,000	\$ 45,000	\$ 405,000	\$ 50,000	\$ 450,000	\$ 67,000	\$ 603,000	\$ 51,000	\$ 455,000

8 **New Aviation Fuel Farm - Economic Development**

The project programs the installation of a new dual (Jet A and 100 LL) aviation fuel farm. The project will replace the existing fuel farm which is nearing the end of its design life and also includes relocation of the facility to a more appropriate location. This project has an estimated DRBA cost of \$443,000 in 2021. This effort has no anticipated annual operating cost impact.

9 **Master Plan (33N) - Efficiency and Sustainability**

The current master plan is outdated and is eligible for update in accordance with the federal Airport Improvement Program. The Authority intends to develop a dynamic master plan to set goals and plan the future development of the airport. The plan will reflect current industry trends and incorporate feedback from all stakeholders. This project has an estimated DRBA cost of \$4,000 in 2021. The project is partially funded in the amount of approximately \$25,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

21 **Expand Apron - Economic Development**

The existing apron space is predicted to become more heavily utilized as a result of the runway relocation and facility expansion. The project programs the design and construction of additional apron space, placed appropriately to serve the increased demand. The project is funded in the amount of approximately \$1,897,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

33 **Remove Obstructions (33N) - Safety**

The project programs the removal of obstructions on airport property and on properties within the airport's immediate surroundings. The effort includes easement acquisition over the affected off-airport properties and brings the airport into compliance with federal airspace safety standards. This project has an estimated DRBA cost of \$285,000 in 2021 and \$168,000 in the out years. The project is partially funded in the amount of approximately \$1,808,000 by the Federal Aviation Administration. There is anticipated annual operating cost impact of \$7,000 for this project.

39 **Acquire Land For Airfield Protection - Safety**

The airport has expanded as part of the airport master plan, as have the safety areas surrounding the airport. The project programs the investigation and purchase of land adjacent to the airport to protect the new footprint. This project has an estimated DRBA cost of \$10,000 in 2021 and \$45,000 in the out years. The project is partially funded in the amount of approximately \$495,000 by the Federal Aviation Administration. This effort has no anticipated annual operating cost impact.

Delaware Airpark - Annual Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	Annual Projects										
24F	Annual Minor Capital Maintenance (33N)	\$ 215,000	\$ 54,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
27F	Annual Automation/Telecom Upgrades (33N)	\$ 20,000	\$ -	\$ 48,000	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ 20,000	\$ -
	Grand Total	\$ 235,000	\$ 54,000	\$ 298,000	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ 20,000	\$ -

24F **Annual Minor Capital Maintenance (33N) - Asset Preservation**

The project programs repairs, renovations, and improvements to Authority owned and occupied facilities and infrastructure to include, but not be limited to: site grading, lighting, signage, utility upgrades, storm water, fire suppression, pavement, airfield security/safety, planning, permitting, and record document updates. The project is necessary to protect the facilities, maintain good repair, and provide for public safety. This project has an estimated DRBA cost of \$215,000 in 2021 and \$250,000 in the out years. The project is partially funded in the amount of approximately \$54,000 by the Federal Aviation Administration.

27F **Annual Automation/Telecom Upgrades (33N) - Efficiency and Sustainability**

Automation upgrades with equipment enhancements are required for maintaining sustainable and efficient facilities. The project includes but is not limited to: automation master planning, computer hardware replacement purchases, network upgrades, software and hardware upgrades, uninterruptible power supply improvements, camera installations, fire detection systems upgrades, and other miscellaneous upgrades or installations. This project has an estimated DRBA cost of \$20,000 in 2021 and \$73,000 in the out years.

Delaware Airpark Airport - Out Year Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	Out Year Projects										
90	New Box Hangars	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	800,000	\$ -	\$ -	\$ -
	Grand Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	800,000	\$ -	\$ -	\$ -

90 New Box Hangars - Economic Development

There is a need for additional hangers at the Delaware Air Park. The project programs the construction of additional box hangers to address this demand. This project has an estimated DRBA cost of \$800,000 in the out years. This effort has no anticipated annual operating cost impact.

Civil Air Terminal - Annual Projects

Airports Strategic Capital Improvement Plan

Ranking	Project	2021	External Funding 2021	2022	External Funding 2022	2023	External Funding 2023	2024	External Funding 2024	2025	External Funding 2025
	Annual Projects										
24G	Annual Minor Capital Maintenance (CAT)	\$ 195,000	\$ -	\$ 280,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
27G	Annual Automation/Telecom Upgrades (CAT)	\$ 20,000	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ 20,000	\$ -
	Grand Total	\$ 215,000	\$ -	\$ 280,000	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ 20,000	\$ -

24G Annual Minor Capital Maintenance (CAT) - Asset Preservation

The project programs repairs, renovations, and improvements to Authority owned and occupied facilities and infrastructure to include, but not be limited to: site grading, lighting, signage, utility upgrades, storm water, fire suppression, pavement, airfield security/safety, planning, permitting, and record document updates. The project is necessary to protect the facilities, maintain good repair, and provide for public safety. This project has an estimated DRBA cost of \$195,000 in 2021 and \$280,000 in the out years.

27G Annual Automation/Telecom Upgrades (CAT) - Efficiency and Sustainability

Automation upgrades with equipment enhancements are required for maintaining sustainable and efficient facilities. The project includes but is not limited to: automation master planning, computer hardware replacement purchases, network upgrades, software and hardware upgrades, uninterruptible power supply improvements, camera installations, fire detection systems upgrades, and other miscellaneous upgrades or installations. This project has an estimated DRBA cost of \$20,000 in 2021 and \$25,000 in the out years.