Northeast Florida Regional Council
Military Installation Readiness Review

Naval Station Mayport

Adaptation Package #5: Adaptation for Mobility Corridor Mayport Road

This package includes two strategic projects that in combination improve roadway resilience on this mission-critical corridor. It encompasses gray and technical infrastructure improvement recommendations that can be led by state, regional, and local authorities and agencies.

This study was prepared under contract with the Northeast Florida Regional Council with financial support from the Office of Local Defense Community Cooperation, Department of Defense.

The content herein reflects the views of the Northeast Florida Regional Council and does not necessarily reflect the views of the Office of Local Defense Community Cooperation or the Department of Defense.

How to Read this Document

Project Summary Packages provide details on recommendations, background, and context to facilitate and accelerate implementation. The summaries are presented by mission-critical priority assets in the study area. The recommendations may include physical projects, new partnerships, and modernized policies identified over the course of the project. Presented in three sections, **Background and Context, Recommendations, and Implementation Tools**, each summary package can be used to brief decision makers and to complete funding requests and/or grant applications.

The first section, **Background and Context**, situates the reader to the Military Installation Readiness Review (MIRR) project, the study area location, and the military installations. It includes the following subsections:

- **Mission of the Installation of the Package**, which reminds the reader of the installations' purpose and importance of readiness
- **Mission-Critical Priority Assets** for the installation as identified through stakeholder engagement and vulnerability assessment
- **Current Conditions** of the mission-critical asset of the package, which illustrate the issues in local context
- **MIRR Adaptation Strategy Framework**, which is aligned to the region's vision for a Resilient First Coast and is the foundation of this body of work

The second section, **Recommendations**, dives into the issues challenging the region and study area and presents recommendations in the form of investments through projects, policy modernization, and/or by forging new partnerships among diverse stakeholder groups. This section is informed by the vulnerability assessment findings, stakeholder insight on ongoing projects and priorities, and best practices research. Information on the following topics is included in this section:

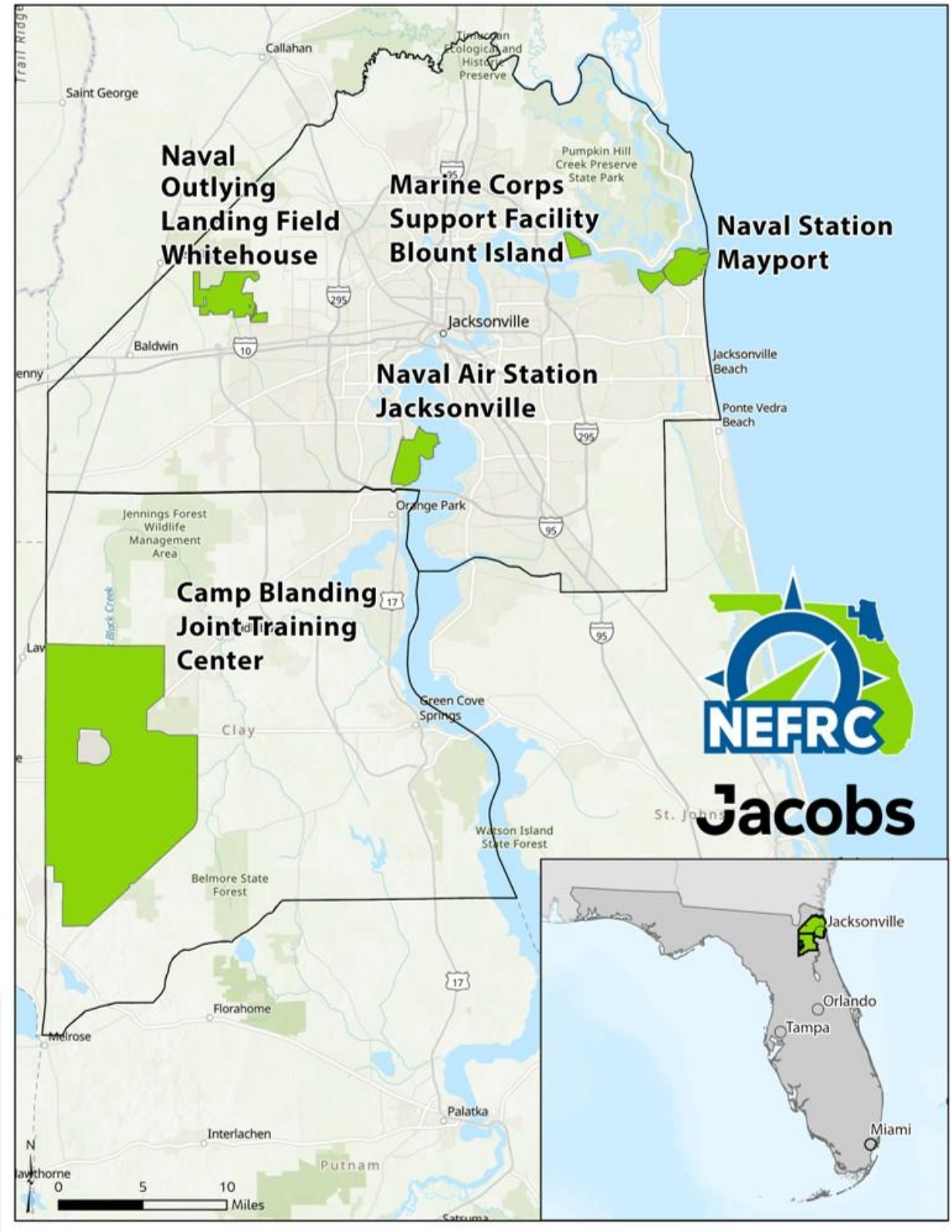
- **Shocks and Stresses** affecting the mission-critical asset
- **Project Objective**, which captures the adaptation goal for the following recommendations to support mission readiness through community resilience
- **Stakeholders and Current Efforts** highlighting successful foundational work upon which to build
- Recommended **Strategic Projects, Policies, and Partnerships**, including the owners and partners, vulnerability being addressed, co-benefits, foundational existing projects (as applicable), and timeline to comment implementation
- The **Metrics and Cost-Benefit Analysis** section, which illustrates how the recommendations were evaluated to determine appropriateness, viability, and achievement of project goals; this tool is available as new projects are identified by implementation partners

The final section, **Implementation Tools**, is provided as a resource to move from planning to action:

- **Financial Strategy Toolkit with Funding Opportunities**, which presents a matrix of opportunities and tools to finance and fund recommendations. Some recent grant opportunities are highlighted; however, given the changing conditions of federal sources and requirements, these should be viewed as initial suggestions for further review and applicability at the appropriate time.
- **References** are presented for user convenience.

Background and Content

Figure 1. Northeast Florida MIRR Study Area Map



In 2024, the Northeast Florida Regional Council (NEFRC) obtained a MIRR grant from the Department of Defense's Office of Local Defense Community Cooperation to identify and analyze the assets, hazards, and corresponding vulnerabilities and risks that affect the military installations in Duval and Clay counties. This study includes Camp Blanding Joint Training Center, Marine Corps Support Facility Blount Island, Naval Station (NS) Mayport, and Naval Air Station Jacksonville (Figure 1). The goal is to increase the resilience and readiness of these installations from the impacts of extreme weather events, infrastructure challenges, and other vulnerabilities, thereby promoting mission assurance. The adaptation projects are structured into comprehensive Summary Packages, with each focused on a specific mission-critical asset or system.

NS Mayport

NS Mayport is located on the eastern edge of Duval County at the mouth of the St. Johns River. The installation is north of Atlantic Beach, south of the St. Johns River, and east of the Village of Mayport. Because of its location, NS Mayport is unique in its operational composition, combining a busy seaport with an air facility. It can accommodate 34 ships while also operating an 8,000-foot-long runway suitable for any aircraft in the DoD inventory. The base also houses helicopter training sites and uses the surrounding marshlands as essential training environments. Another benefit to NS Mayport's location is the small tidal fluctuations that enable loading and unloading of ships throughout the year. Because of its location at the confluence of the St. Johns River and Atlantic Ocean, the installation is able to serve as a central hub of naval activity, with easy access to Central America, South America, and the Caribbean.

Mission

NS Mayport spans 3,409 acres and serves as a major surface and air warfare-focused installation. Its mission is to provide "The Finest Service to the Finest Fleet." NS Mayport supports the homeporting, readiness, and sustainment of Atlantic Fleet surface forces while also hosting the headquarters and operational activities of U.S. Naval Forces Southern Command/U.S. Fourth Fleet, which employs maritime forces in cooperative security operations to maintain access, enhance interoperability, build enduring partnerships, strengthen regional security, and promote peace, stability, and prosperity throughout the Caribbean and Central and South America. The Fourth Fleet's Area of Responsibility includes 31 countries, 16 dependencies, and areas of special sovereignty, a combined area equaling approximately one-sixth of the world's landmass.

In addition to providing a home for the Fourth Fleet, NS Mayport also supports aviation basing for rotary-wing and unmanned aircraft. The installation is home to the Helicopter Maritime Strike Wing, U.S. Atlantic Fleet (CHSMWL), multiple Helicopter Maritime Strike Squadrons, and the launch, recovery and maintenance location for Unmanned Patrol Squadron (VUP) 19, which uses MQ-4C Triton aircraft for intelligence, surveillance, and reconnaissance purposes. Overall, NS Mayport plays a critical role for fleet readiness and sustainment in the southern hemisphere.

NS Mayport also has multiple secondary missions. It enables carrier and amphibious operations, enables joint/coalition operations and exercises, supports humanitarian and disaster response, and supports major tenant commands. The installation provides operational, logistical, and quality of life support to 82 tenant commands. NS Mayport serves as a critical hub for regional and international defense operations. As of March 2024, NS Mayport is home to 8,076 active-duty

and reserve full-time support personnel, along with 21,500 family members. The workforce also includes 826 civilian employees, 523 non-appropriated fund employees, 1,504 contract employees, and 19 Selected Reserve members.

Installation Interconnections

The Naval Station Mayport linkage overlays, as shown in the NEFL MIRR webpage, illustrate the installation's role as one of Florida's most important surface-fleet, rotary-wing, sustainment, and maritime operations hubs. The maps show how Mayport connects locally to NAS Jacksonville, Blount Island, the St. Johns River defense logistics network, while also linking nationally to Norfolk-based Navy fleet, surface-force, aviation, training, maintenance, and logistics commands. Together, the layers demonstrate that Mayport is not simply a ship homeport, but a combined operating platform that supports surface combatants, helicopter maritime strike forces, long-range maritime reconnaissance, Fourth Fleet operations, ship and aircraft sustainment, port operations, munitions, fuels, training, and operational support.

The broader strategic value of Naval Station Mayport is most strategically significant in its international and theater linkages. Its surface-force and HSM networks connect Mayport to Norfolk, Rota, Guantánamo Bay, and deployed U.S. Navy ships; its Fourth Fleet role links directly to SOUTHCOM, JIATF-South, CSL Comalapa, and maritime security cooperation across the Caribbean, Central America, and South America. Its sustainment and training layers connect broadly across the Navy systems commands and shore enterprise to include: NAVSEA, NAVAIR, FRCSE, AUTEC, Bahrain, Dahlgren, Pensacola, Orlando, NAVSUP, DLA, and Navy expeditionary support commands. When viewed as a combined overlay, NS Mayport is revealed as a critical Atlantic and SOUTHCOM-facing naval node that links Northeast Florida to fleet readiness, regional maritime security, deployed surface operations, and international partnership missions.

Identification of Priority Assets for NS Mayport

Priorities for the installation were based on the direct assets and local services required to support the missions. This includes the shorelines that protect the installation and its systems, the roadways required to access the base, the electrical systems that support all activities, the fueling facilities that support the fleet, and the natural systems that protect the installation from erosion and flooding. These assets were evaluated for exposure to shocks and stresses (Figure 2).

Primary Mission Critical asset types for ship homeporting and support, 4th Fleet Headquarters support, aviation basing and support, managing fuel depots, homeland defense, major ship repairs

- **Location-Specific Positioning**
  - St. John's River
  - Wetlands and Marshes
  - Shorelines
  - Fuel Depot
- **Assets Providing Direct Support**
  - Electric Production and Supply Facilities
  - Roads and Bridges
  - Communications Facilities (e.g., cell towers, fiberoptic lines)
  - Water utility supply facilities
  - Wastewater conveyance and treatment facilities
  - Safe Harbor Facilities (JAXPORT)
  - Offsite dry dock facilities (BAE)

Secondary Mission Critical asset types that offer the regional fueling depot

- **Assets Providing Direct Support**
  - Emergency Response Facilities
  - Shorelines (Atlantic Coast shorelines)
  - Fire Stations
  - Mission Supportive for the livelihood and health of installation personnel, indirect support to primary and secondary missions.
- **Personnel Support**
  - Affordable Housing
  - Childcare Facilities
  - Emergency Response Facilities (Hospitals)
- **Assets Providing Indirect Support**
  - Solid and Hazardous Waste Facilities

Figure 2. Primary and Secondary Mission Critical Assets for NS Mayport

This package addresses the specific shocks and stresses of the mission critical Mayport Road assets for NS Mayport.

Current Conditions that Affect Mayport Road Corridor

Mayport Road is a critical transportation asset that supports access, mobility, and operational continuity for Naval Station Mayport (Figure 3). As one of the primary entry corridors to the installation, it serves as a vital route for the movement of personnel, equipment, and mission-essential resources, directly supporting day-to-day operations and overall mission readiness. The roadway functions as a key link between the installation and the broader regional transportation network, connecting to Interstate 295 and other major corridors that facilitate regional and statewide access. Its role is particularly significant in supporting logistics, workforce commuting, and coordination with surrounding communities and mission partners, including the nearby Village of Mayport.

Given its importance, the reliability and resilience of Mayport Road are essential to maintaining uninterrupted access to the installation. Any disruptions—whether caused by flooding, storm events, or other hazards—can significantly impact operational efficiency, emergency response, and the installation's ability to carry out its mission. As such, Mayport Road represents a critical piece of infrastructure whose performance directly influences the overall readiness and resilience of Naval Station Mayport.

Land use in this area is dominated by military, maritime industrial, and port-support activities, with adjacent low-lying wetlands, marshes, and tidal creeks forming a defining feature of the landscape. These natural systems function as primary drainage and storage areas but also create significant constraints during storm events due to flat topography, minimal elevation change, and limited outfall capacity.

The dominant stressor affecting this segment is flooding driven by intense rainfall and the exceedance of wetland and drainage system capacity. During heavy precipitation, stormwater runoff from impervious surfaces and surrounding areas rapidly enters roadside ditches and adjacent wetlands systems. Once wetlands and soil become saturated, their ability to store additional water diminishes, resulting in ponding and overtopping along Mayport Road. Poor drainage gradients and high groundwater levels further slow water recession, causing standing water to persist longer than typical storm durations.

These conditions can significantly degrade roadway performance even during moderate rainfall events. Ponding reduces effective lane capacity, slows traffic, and increases safety risks such as hydroplaning and reduced visibility. During more severe or prolonged storms, sections of the roadway may become partially or fully impassable, directly affecting access to NS Mayport. Given the corridor's lack of redundancy, even short-term disruptions can impact personnel movement, emergency response, and operational continuity at the installation.

Additional contributing factors include aging or undersized drainage infrastructure and constrained conveyance pathways, which limit the system's ability to manage increasing rainfall intensities. While tidal influences can occasionally exacerbate drainage by slowing discharge, rainfall and wetland overcapacity remain the primary drivers of flooding in this segment.

Figure 3. Mayport Road Location Map

MIRR Adaptation Strategy Framework

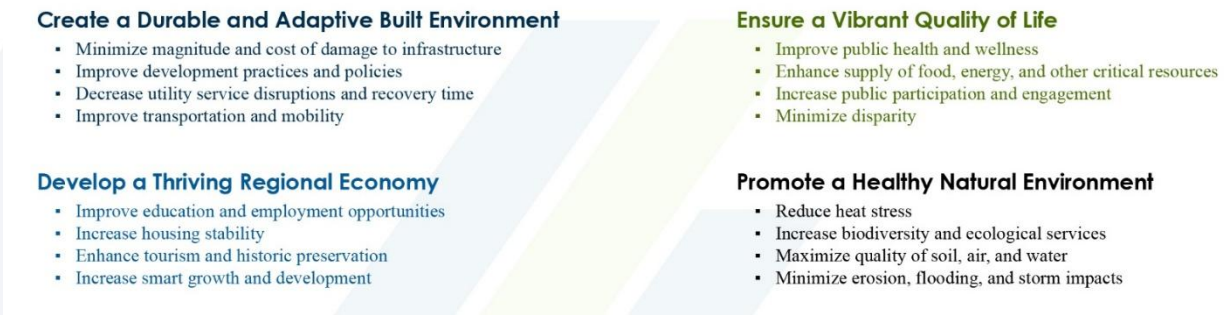
The NEFRC envisions a resilient, prosperous, and inclusive region where communities work collaboratively across jurisdictional boundaries to strengthen economic vitality, safeguard natural and built systems, and enhance quality of life for current and future generations (Figure 4). In 2022, the Council launched **Resilient First Coast** to collaboratively address climate-related challenges across its seven member counties—Baker, Clay, Duval, Flagler, Nassau, Putnam, and St. Johns. This regional effort received strong support to develop a plan focused on addressing climate impacts and related threats to the region. Guided by this vision, the Regional Resilience Action Plan (RRAP) was published in 2025, providing a unifying framework that translates shared regional goals into coordinated action (NEFRC 2025).

Figure 4. Regional Resilience Action Plan Vision (NEFRC 2025)

The RRAP establishes a durable foundation for implementing this vision—enabling member governments and partners to prioritize investments, leverage funding opportunities, and advance solutions that build long-term resilience to environmental, economic, and social challenges across Northeast Florida. As such, the MIRR adaptation projects are built upon this framework to ensure alignment and promote successful implementation of the recommended strategies (Figure 5).

RRAP Goals and Objectives

Figure 5. Regional Structure for Resilience as Framework for the MIRR



Connecting this Built Environment Asset to the Regional Economy, Natural Environment, and a Vibrant Quality of Life

This framework provides the organization for how assets were organized and evaluated. This resilience project is centered on assets in the Built Environment pillar, so the acknowledgments below indicate how it is connected to the Regional Economy, Natural Environment, and Quality of Life. to ensure that project development created balance by positively benefiting each to the extent achievable.

Figure 6. Connection of This Asset to the Community

Recommendations

Documenting Shocks and Stresses with a Vulnerability Assessment

Shocks and stresses to the mission-critical assets supporting NS Mayport include rainfall-induced flooding, coastal flooding due to SLR and storm surge, shoreline loss due to erosion, and school closures.

1. Flooding has been documented as occurring throughout the installation because of storm surge and SLR. It also threatens to permanently inundate other regional mission-critical systems, such as regional fuel depots, in the foreseeable future.
2. **Rainfall-induced flood events are also projected to affect supporting access roads, such as Mayport Road and Wonderwood Drive.**
3. Storm surge can inundate multiple regional facilities, such as electric substations. It can also cause significant shoreline erosion.
4. Shoreline erosion has occurred on the installation's own shores (such as north of the fuel farm) and affects supporting infrastructure, such as the State Road (SR) A1A. This erosion is exacerbated by major storm events.
5. The pending closure of the Anchor Academy would be a major shock, requiring students to find a new school and posing physical, emotional, and financial challenges to military families, potentially impacting readiness.

This project package addresses projected flood events at Mayport Road (item2).

Project Need: Improve Flood Risk Management Along Mayport Road Serving as the Main Installation Entrance

Figure 7. Risk to Mission Map

Vulnerabilities Creating Risk to Mission for this Asset

Mayport Road runs north–south along the southeastern boundary of NS Mayport and is owned by both the Florida Department of Transportation (FDOT) and the City of Atlantic Beach. The focus area extends from Wonderwood Drive to the installation gate.

A nearly half-mile segment between the installation gate and Wonderwood Drive has been identified as vulnerable to flooding, particularly during heavy rainfall events. It is in a low-lying area that is also generally exposed to coastal flooding, such as sea level rise and storm surge. However, this road segment elevation ranges between approximately 11 and 14 feet NAVD, and the flooding scenarios that were analyzed (the 2050 and 2080 intermediate low and intermediate SLR scenarios), indicate the segment will not face high levels of exposure to SLR until after the 2080s.

While SLR is not anticipated to directly impact the road itself until further in the future, it is anticipated to indirectly impact the road's ability to drain efficiently. The capacity of the wetlands and the gray drainage infrastructure to which the road drains is expected to be stressed by SLR well before 2080.

This roadway is considered a primary mission-critical asset, as it serves as the main entrance to the installation. As rainfall intensity and frequency continue to increase, the susceptibility of this segment to flooding poses a growing risk to reliable access. Given that it is the main entry point to the installation, the need for mitigation is considered a mid-term priority (Table 1).

Table 1. NS Mayport Mayport Road Asset Overview

Asset Name	Owner	Location	Mission Criticality	Relevant Shocks & Stresses	Level of Urgency
Mayport Road	FDOT/ Atlantic Beach	Wonderwood Drive to NS Mayport Gate	Primary	Rainfall Flooding	Medium

Stakeholders and Current Efforts Identified

A range of stakeholders are involved in planning and implementing improvements along Mayport Road, a critical corridor providing direct access to NS Mayport and surrounding coastal communities. Coordination among these entities ensures that infrastructure investments not only maintain roadway conditions but also enhance long-term resilience, safety, and access for both military operations and public use. Key stakeholders include:

- NS Mayport
- Florida Department of Transportation (FDOT)
- City of Jacksonville
- City of Atlantic Beach
- North Florida Transportation Planning Organization (TPO)

An ongoing FDOT-led project is advancing along Mayport Road between the NS Mayport gate and 7th Street in Atlantic Beach, focused on milling and resurfacing to restore roadway conditions and extend the service life of the corridor. Currently out for bid, this effort represents a near-term infrastructure investment aimed at rehabilitating existing pavement, improving ride

quality, and maintaining safe and reliable access. While primarily categorized as an infrastructure repair project, the improvements are expected to enhance overall corridor resilience by addressing surface degradation and supporting more effective stormwater runoff management

At a more regional level, the City of Jacksonville has adopted the *Vision Zero Action Plan* as its guiding transportation safety policy, incorporating Safe System Approach (SSA). . The SSA recognizes that human error is inevitable and focuses on designing transportation systems that reduce the likelihood of fatal and serious injury crashes through safer roadway design, improved operations, safer speeds, safer vehicles, and effective post-crash care. Transportation recommendations within the *Military Installation Resilience Review* (MIRR) should be implemented consistent with the City's Vision Zero principles and SSA, recognizing that roadway users are vulnerable to human error and that resilient transportation systems should support reducing fatal and serious injury crashes through safer infrastructure, safer operations, safer speeds, multimodal connectivity, and effective post-crash care. This approach aligns with the City of Jacksonville's adopted *Vision Zero Action Plan* while supporting military readiness, workforce mobility, and long-term transportation resilience.

Table 2 and Figure 8 gives details on projects and efforts that are currently ongoing or have been identified as a need within the region as it relates to mitigating vulnerabilities for Mayport Road supporting NS Mayport.

Table 2. Current Projects and Efforts Related to NS Mayport's Mayport Road

Project	Entity	Location	Purpose	Timeline
Mayport Road Milling and Resurfacing	FDOT	NS Mayport Gate to 7th Street	Infrastructure Repair	Out for Bid

Figure 8. Current Projects and Efforts

Review of Strategic Partnerships and Policies

Efforts to address rainfall flooding along Mayport Road are supported primarily through established communication channels within regional transportation planning frameworks. The U.S. Navy's representation on the North Florida Transportation Planning Organization (TPO) provides a formal mechanism for communicating installation access concerns, including roadway drainage limitations and recurring flooding impacts. Through the TPO, these issues can be incorporated into broader regional discussions, helping to align installation needs with ongoing transportation planning and programming.

In addition, NS Mayport maintains ongoing, largely informal communication with the Florida Department of Transportation (FDOT). While often tied to specific projects or corridor studies, these interactions provide a practical avenue for raising site-specific concerns related to rainfall flooding, including drainage performance and roadway reliability along Mayport Road. This project-level coordination complements the TPO's long-range planning function by enabling more immediate and targeted dialogue.

These communication pathways are generally effective in ensuring that flooding-related concerns are conveyed to decision-makers responsible for roadway improvements. The TPO offers a durable, institutional platform for sustained engagement, while FDOT coordination supports more responsive, issue-specific communication.

Looking ahead, continued engagement through these established channels is expected to remain effective as rainfall intensity and flooding risks increase. While informal communications may fluctuate with staff changes, the TPO provides continuity for elevating concerns over time. Overall, existing communication-based partnerships offer an efficient and sufficient framework for advancing awareness and consideration of rainfall flooding vulnerabilities along Mayport Road without requiring additional coordination structures.

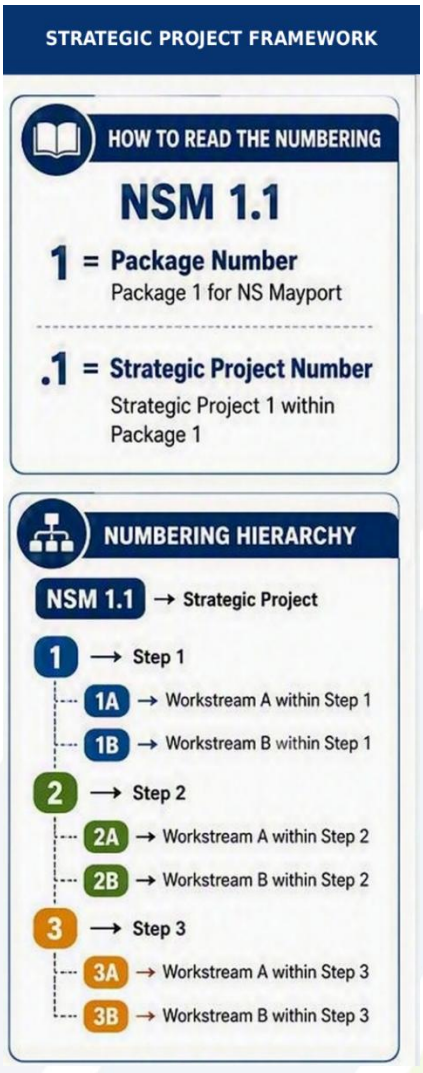
Adaptable Built Infrastructure Projects

Figure 9. Adaptation Strategies Map

Strategies included in the adaptation plan have been organized by short, mid, and long-term timeframes for implementation. The strategy numbers in the maps correspond to the details provided in their respective sections, which outline a comprehensive approach to strengthening energy resilience and support long-term mission continuity. These strategies focus on enhancing existing system performance, reducing vulnerabilities, and advancing modern, flexible infrastructure solutions that can adapt to future demands and environmental conditions. Order-of-magnitude cost estimates will be provided in 2026 dollars to the extent possible, with up to 50% contingency unless otherwise noted.

Potential Project Leads and Partners are mentioned by organization in the following narratives. The intent is to identify the correct stakeholders that have agency, authority, and interest in the work that is being proposed. Being listed as a lead or partner provides the opportunity to collaborate, advise, and be involved in the adaptation efforts, but does not mandate participation. Funding and financing of projects are not indicated as the responsibility of the project lead or partners, and the monetary tools for obtaining such are in the Implementation section of this package.

Figure 10. Strategic Project Framework



The strategic projects are organized by installation, package, project, step, and actions. The 2-3 letter code indicates the installation. The first number indicates which package this project is in. The second number indicates the project number in the package.

Within each project, the timeline of activities is indicated through the steps (Step 1, Short-term, etc.), and the order of activities is narrated in the sub-steps (1A, 1B, etc.). Through this organization, each strategic project illustrates its project number, timeline, and actions in the narrative.

Strategic Project NSM 5.1: Gray Stormwater Infrastructure Upgrades for Mayport Road

This project establishes a comprehensive, mission-focused program to modernize and enhance the gray stormwater infrastructure serving NS Mayport. Focused on the vulnerable half-mile segment between Wonderwood Drive and the primary installation gate, this effort integrates advanced hydraulic modeling, targeted capacity upgrades, and resilient materials to ensure reliable access under increasingly intense rainfall conditions.

The project builds upon and advances various actions in the City of Jacksonville's citywide resilience and climate adaptation strategy that provides a 50-year, data-driven framework for resilience planning, infrastructure investment, emergency preparedness, land use decision-making, and community adaptation: Resilient Jacksonville.

Infrastructure adaptation, flood risk reduction, and protection of critical transportation corridors are featured in this strategy, and this project aims to elevate those initiatives. Specifically, this effort aligns with and can expand upon existing roadway drainage improvements, capital stormwater upgrades, and resilience-focused infrastructure investments in coastal and low-lying areas. By leveraging the City's prior vulnerability assessments and planned drainage improvements in the Mayport area, this project provides a deeper, site-specific implementation focused on mission-critical access to NS Mayport.

In addition, while initially focused on a defined high-risk segment, this project is structured to scale outward and integrate with broader **FDOT corridor-level resilience initiatives and City of Jacksonville watershed and drainage programs**. The modeling framework, design standards, and improvement strategies developed here can be expanded along the full length of Mayport Road and into adjacent roadway networks, creating a replicable template for coordinated State–City infrastructure upgrades across coastal Duval County.

Potential Project Leads and Partners

- Florida Department of Transportation (FDOT)
- North Florida Transportation Planning Organization (NFTPO)
- NS Mayport
- City of Jacksonville Transportation Planning Division and Resilience Office
- St. Johns River Water Management Distrcit (SJRWMD)
- Local utilities and infrastructure operators

Current Stakeholder Projects

- N/A

Estimated Cost

$11,000,000

Step 1: System Assessment and Modeling (Short-term)

1A. Roadway Drainage System Modeling and Performance Assessment

- FDOT can collaborate with City of Jacksonville on their compound flood model to evaluate how the existing stormwater system performs under increasing rainfall intensity. This modeling effort can identify bottlenecks, undersized infrastructure, and ponding areas along the critical segment between Wonderwood Drive and the installation gate.
- Scenario-based simulations can evaluate performance under current and future climate conditions, ensuring that improvements are aligned with long-term resilience goals (COLLABORATE Action 40.2 Use the best available science and data to inform decisions) identified in the Resilient Jacksonville Plan. This modeling effort can build directly on City of Jacksonville flood risk mapping and vulnerability analyses, refining them to corridor-level precision for targeted implementation. The modeling framework can also be designed for scalability, allowing FDOT and partners to expand analysis to adjacent corridors, parallel routes, and connecting intersections, supporting a unified drainage strategy across the broader Mayport area.
- Given the impacts of SLR and storm surge on the green infrastructure currently providing drainage benefits (wetlands, marshes, swales, and open parklands), the scenarios should consider the feasibility of upgrading the gray infrastructure to accommodate most of the future anticipated demand.

1B. High-Resolution Terrain Mapping and Surface Flow Analysis

- Using LiDAR and high-resolution terrain mapping, partners can identify low-lying areas, inefficient grading, and drainage constraints contributing to roadway flooding. This effort complements existing City datasets and enhances resolution for engineering design, supporting more precise interventions along Mayport Road.
- The resulting terrain and flow datasets can be incorporated into Citywide and District-level GIS platforms, enabling integration with broader FDOT and Jacksonville stormwater planning, asset management, and capital programming efforts.

Step 2: Prioritization of Drainage Improvements (Short-term)

2A. Identification of Targeted Drainage Interventions

- Model outputs can guide targeted improvements such as upsizing inlets, correcting cross-slopes, improving gutter flow, and eliminating localized ponding areas. These improvements directly support Resilient Jacksonville objectives to reduce repetitive flooding (PRESERVE Action 12 - Preserve ecologically important areas with the capacity to manage water and mitigate extreme heat; ACCOMMODATE Action 25 - Repurpose vacant land for uses that best support resilience goals; RELOCATE Action 29 - Streamline voluntary residential buyout and relocation programs for high-risk areas) and improve performance of aging drainage infrastructure (TRANSFORM Action 9 - Develop a green infrastructure program across Jacksonville based on the best available stormwater science and data; ACCOMMODATE Action 21 - Expand retrofit programs for residential and commercial buildings to improve building energy performance, storm fortification, cooling, and stormwater detention).

- The identified improvements can be packaged into scalable project bundles, allowing expansion beyond the initial segment into additional high-risk areas along Mayport Road and nearby state and local roadways.

2B. Prioritization Framework for Capital Investments

- Projects can be prioritized based on reduction in flood depth, duration, and impacts to mission-critical access. This prioritization can align with the City's capital improvement planning and resilience investment strategies, ensuring consistency across agencies and funding programs. The prioritization framework can also be integrated into FDOT District work programs and the City's stormwater capital pipeline, supporting phased expansion and coordinated investment across jurisdictional boundaries.

Step 3: Infrastructure Modernization and Resilient Design (Mid-term)

3A. Upsizing and Modernization of Storm Drains, Culverts, and Inlets

- Storm drains, culverts, and inlets can be upsized to handle increased runoff and rainfall intensity, reducing ponding and overtopping along the corridor. Hydrologic and hydraulic modeling tools can ensure infrastructure is sized appropriately for current and projected conditions.
- Design standards that are enhanced through this effort can be applied across FDOT facilities and City-owned roadways, supporting consistent resilience upgrades regionally.

3B. Redundant Drainage Pathways and Flow Efficiency Enhancements

- Additional drainage pathways can be incorporated to provide redundancy and prevent localized system failures. Improvements to roadway cross-slopes, curbs, and conveyance features can enhance flow efficiency and reduce standing water. Routine debris management practices can be formalized to maintain system performance.
- These strategies can be replicated along parallel evacuation routes and connecting roadways, strengthening network-wide resilience.

3C. Flood-Resistant Pavement Installation

- Flood-resilient pavement materials can be deployed to resist water damage, erosion, and repeated inundation. Improved roadway grading and cross-slopes can accelerate runoff and minimize ponding.
- Where appropriate, permeable or enhanced shoulder treatments can support infiltration and reduce runoff volumes. Material standards and construction practices can inform broader FDOT and City specifications for use in other flood-prone corridors.

3D. Integrated Infrastructure Performance Management

- Connected infrastructure platforms can track system performance and maintenance history, aligning with City-led asset management initiatives under the Resilient Jacksonville framework. This enables long-term lifecycle management and supports adaptive infrastructure planning. Data generated through this corridor can feed into regional performance dashboards, supporting FDOT District-level and Citywide resilience reporting and decision-making.

Step 4: Corridor Expansion and Regional Integration (Long-term)

4A. Expansion Along Mayport Road and Adjacent Networks

- Following implementation in the priority segment, the project can be expanded along the full Mayport Road corridor, including segments north and south of the installation gate. This expansion can address additional low-lying areas, intersections, and drainage crossings that contribute to systemwide flooding risks.

4B. Integration with Citywide Stormwater and Resilience Programs

- The project can be incorporated into broader City initiatives under the Resilient Jacksonville Plan (TRANSFORM Action 5 - Update public works design standards to account for climate change impacts and support resilient infrastructure development; TRANSFORM Action 9 - Develop a green infrastructure program across Jacksonville based on the best available stormwater science and data; ACCOMMODATE Action 21 - Expand retrofit programs for residential and commercial buildings to improve building energy performance, storm fortification, cooling, and stormwater detention; ACCOMMODATE Action 26 - Retrofit parking lots and impervious surfaces to reduce urban heat and increase stormwater infiltration and storage), including drainage basin studies, capital stormwater projects, and flood mitigation programs. Coordination with watershed-level efforts ensures that localized improvements along Mayport Road reduce downstream impacts and contribute to systemwide performance.

4C. Alignment with FDOT District and Statewide Resilience Initiatives

- The methodologies and design approaches developed through this project can inform FDOT resilience planning across District 2 and other coastal corridors. Lessons learned can be used to standardize practices for flood-prone roadway segments statewide, particularly those serving critical infrastructure and evacuation routes.

4D. Scalable, Replicable Model for Coastal Transportation Resilience

- This project can serve as a pilot for integrating modeling, infrastructure upgrades, and resilience planning into a unified implementation strategy. The approach can be replicated in other vulnerable corridors across Jacksonville and Northeast Florida, creating a coordinated and scalable framework for adapting transportation infrastructure to changing climate conditions.

Outcome

This project delivers a targeted, engineering-driven upgrade to the stormwater system serving Mayport Road, directly reducing flood risk and ensuring reliable access to NS Mayport. By building upon the City of Jacksonville's **Resilient Jacksonville** and aligning with FDOT's broader resilience initiatives, it transforms a localized improvement effort into a scalable, regionally integrated strategy, strengthening infrastructure performance, enhancing coordination across agencies, and supporting long-term coastal resilience and mission continuity.

Strategic Project NSM 5.2: Smart Stormwater Monitoring and Emergency Operations for Mayport Road Access Corridor

This complementary project establishes an advanced smart monitoring and emergency management system for Mayport Road, enabling real-time flood detection, proactive maintenance, and coordinated emergency response. Focused on maintaining safe and reliable access to NS Mayport during storm events, this effort integrates sensor technologies, adaptive operations, and interagency coordination.

This initiative builds upon the Resilient Jacksonville Plan's emphasis on smart city technologies, data-driven resilience, and emergency preparedness, extending those concepts into a mission-critical transportation corridor. It supports the City's goals of improving situational awareness, enhancing operational coordination, and reducing disruption from flooding events.

Table 3. Cross References of Resilient Jacksonville that Emphasize Smart City Technologies

Page	Section/Headers	Smart City Technology Elements
57	**A Collaborative Process Grounded in Sound Science**	Establishes that resilience decisions should be driven by data, analytics, scientific modeling, and decision-support frameworks.
58-59	**Risks & Vulnerabilities**, **Place-Based Strategies**, **Alternatives Analysis**	Spatial data analysis, mapping, quantitative modeling, scenario analysis, and data-informed decision making.
98-99	**Action 11: Ensure Water and Energy Utilities Can Meet the Growing Demands of the Future**	JEA's use of **smart meters** and **Geographic Information Systems (GIS)** for automated troubleshooting and utility management.
114-116	**Action 18: Improve Digital Security of Critical Assets and Infrastructure from Cyberattacks**	Cybersecurity platform, sensors, AI, machine learning, infrastructure monitoring.
120-121	**Action 19: Strengthen Emergency Response and Evacuation Plans**	Data-driven evacuation planning and **automated flood alert signage**.
174-177	**Action 37: Expand Digital and Financial Infrastructure Necessary for Full Economic Participation**	Broadband deployment and digital equity infrastructure.
182-185	**Action 40: Establish an Office of Resilience**	Centralized data governance, analytics, climate datasets, predictive modeling.
185	**Sub-Action 40.2: Use the Best Available Science and Data to Inform Decisions**	Commits to maintaining citywide datasets and developing advanced flood modeling.

Importantly, the Mayport Road deployment can function as a **pilot corridor**, demonstrating how real-time monitoring, integrated operations, and coordinated emergency response can improve reliability of critical infrastructure. The data architecture, communication protocols, and operational workflows developed here can be scaled across FDOT facilities and City-managed roadways, supporting expansion into a broader intelligent transportation and stormwater management network. This creates a replicable, regionally integrated model for leveraging smart technologies to enhance resilience across Jacksonville's transportation system and beyond.

Table 4. Cross References of Resilient Jacksonville that Align with Situational Awareness, Operational Coordination, and Flood Disruption Reduction

Page	Section/Headers	Smart City Technology Elements
35	**Compound Flooding**	The City commits to developing predictive models for compound flooding to better understand simultaneous coastal, riverine, and stormwater flood events.
40-42	**Flood Exposure** and **Flood Risk & Vulnerability**	Uses flood risk mapping and vulnerability analysis to support operational planning and investment prioritization.
57-59	**A Collaborative Process Grounded in Sound Science** and **Risks & Vulnerabilities**	Establishes data sharing, spatial analysis, and cross-sector planning processes.
94-95	**Action 9: Develop a Green Stormwater Infrastructure Program Across Jacksonville Based on the Best Available Science and Data**	Calls for new flood-risk datasets and compound flood analyses to guide interventions.
98-99	**Action 11: Ensure Water and Energy Utilities Can Meet the Growing Demands of the Future**	Smart-meter, GIS, outage management, and utility resilience capabilities.
118	**Action 19: Strengthen Emergency Response and Evacuation Plans**	Emergency planning, vulnerability analysis, flood-response improvements, and automated flood warning systems.
120-123	**Action 20: Strengthen Jacksonville's Lifelines and Supply Chains**	Coordination of critical systems to maintain operations during flooding events.
182-185	**Action 40: Establish an Office of Resilience**	Centralized resilience coordination, data management, and flood analytics.
186-188	**Action 42: Coordinate Resilience Actions and Policies Across Agencies and Relevant Independent Authorities**	Formal interagency coordination framework.

Potential Project Leads and Partners

- Florida Department of Transportation (FDOT)
- NS Mayport
- City of Jacksonville
- Local emergency management agencies
- North Florida Transportation Planning Organization (NFTPO)

Current Stakeholder Projects

- N/A

Estimated Cost

- $12,000,000

Step 1: Deployment of Smart Monitoring Systems (Short-term)

1A. Real-Time Rainfall and Water-Level Monitoring

- FDOT can collaborate with City of Jacksonville on their compound flood model and install IoT-enabled rainfall and water-level sensors along Mayport Road to continuously monitor storm conditions and detect flooding as it develops. Sensors can be strategically deployed at key risk points, including low-lying roadway segments prone to ponding, upstream and downstream ends of culverts, major storm drain inlets, ditch crossings, and locations where past flooding has disrupted access such as near the NS Mayport gate and intersections approaching Wonderwood Drive.
- Additional sensors can be placed in adjacent drainage channels and outfalls to capture system capacity and backwater effects during high-intensity storms or tidal influence. This distributed network provides comprehensive coverage of both surface conditions and subsurface conveyance performance, creating a real-time, corridor-wide picture of how rainfall and runoff are impacting the roadway. While sensors monitoring information remain outside the fenceline, coordinate with NS Mayport for sending the information available for their use.

1B. Flood Detection and Early Warning Capabilities

- Building on the deployed sensor network, smart monitoring systems can be configured to trigger automated alerts when rainfall intensity or water levels exceed predefined operational thresholds. These alerts can be distributed through multiple coordinated channels to ensure timely and actionable communication. For transportation operators and emergency managers, alerts can feed directly into traffic management centers and emergency operations centers via integrated dashboards and SCADA-based systems.
- For field personnel, notifications can be pushed through mobile applications, SMS/text alerts, or radio dispatch systems to support rapid response. For the traveling public, alerts can be integrated with dynamic message signs (DMS), Florida 511 traveler information systems, and navigation platforms to provide real-time warnings, detours, or closure information. Coordination with NS Mayport can ensure that installation gate operators and command staff receive direct notifications through secure communication channels, enabling proactive access control and operational decision-making.
- This multi-layered alert distribution approach directly advances Resilient Jacksonville priorities (PREPARE Action 19 Strengthen emergency response and evacuation plans) around early warning systems and ensures that critical stakeholders receive the right information at the right time to maintain safety and continuity.

Step 2: Integration with Operations and Maintenance (Short-term)

2A. Proactive Maintenance and System Optimization

- Sensor data can be used to identify recurring flooding hotspots, drainage inefficiencies, and early signs of blockage or system failure. By analyzing trends over time, maintenance crews can proactively address issues such as debris accumulation, clogged inlets, and underperforming infrastructure before they escalate into significant disruptions. This data-driven approach shifts operations from reactive to preventative, improving overall system reliability and reducing maintenance costs.

2B. Data Integration and Decision Support Platforms

- The monitoring system can be integrated into centralized data platforms that aggregate environmental, infrastructure, and operational information. These platforms can provide decision-makers with real-time dashboards, predictive insights, and actionable intelligence during storm events. By aligning with Jacksonville's broader resilience data initiatives, this integration supports coordinated decision-making across agencies and ensures that all stakeholders are operating from a shared, up-to-date understanding of conditions.

Step 3: Emergency Operations, Adaptive Response, and System Expansion (Mid- to Long-term)

3A. Adaptive Traffic and Access Management

- Real-time monitoring data can be directly integrated with traffic management systems to support dynamic operational responses during storm events. This includes deploying automated warnings, activating variable message signs, implementing temporary lane closures, and guiding vehicles away from flooded areas. These adaptive strategies enhance roadway safety while maintaining as much access as possible to NS Mayport under adverse conditions. Over time, these capabilities can be standardized and integrated into FDOT District traffic operations and the City of Jacksonville's transportation management systems, allowing similar high-risk corridors to benefit from real-time adaptive control.

3B. Emergency Access and Continuity Planning

- Recognizing that extreme rainfall events may exceed infrastructure capacity, partners can develop coordinated emergency access and continuity plans for Mayport Road. These plans can define roles, responsibilities, and response protocols for each agency, including traffic control strategies, communication procedures, and contingency routing. Coordination with NS Mayport ensures that installation access is prioritized and maintained to the greatest extent possible during flooding events. As a pilot, these protocols can be refined on the Mayport Road segment and then expanded into standardized playbooks that can be applied across other critical access routes, evacuation corridors, and state roadways throughout Jacksonville and FDOT District 2.

3C. Pre-Staged Rapid Response Operations

- To further minimize disruptions, FDOT and partner agencies can pre-stage equipment, materials, and contracted services in advance of storm events. This enables rapid deployment of crews to clear debris, restore drainage system function, and repair roadway impacts immediately following flooding. By reducing response times, this approach helps maintain continuity of operations at the installation gate and along the broader corridor. Lessons learned from staging, contracting, and deployment can inform scalable response frameworks that FDOT and partners can implement across other flood-prone transportation assets.

3D. Continuous Monitoring, Data Integration, and System Optimization

- The continuous collection and integration of monitoring data will allow agencies to refine maintenance practices, improve operational decision-making, and identify long-term trends in system performance.

Alignment and Support of the Regional Resilience Action Plan

Figure 9. Alignment with the RRAP

This project advances RRAP Action 8 by improving the reliability of Mayport Road, is a primary access corridor supporting NS Mayport's mission-critical operations. The project identifies flooding from intense rainfall, wetland overcapacity, poor drainage gradients, and constrained conveyance pathways as key stressors that degrade roadway performance and threaten installation access. The proposed hydraulic modeling, high-resolution terrain mapping, targeted drainage upgrades, upsized storm drains and culverts, and flood-resistant pavement implement Subaction 8.2 on supporting improvements to existing regionally significant transportation assets, which directs that infrastructure be designed for future conditions rather than today's needs and that local governments incorporate flood zone and precipitation data into transportation improvement projects. Because the corridor lacks redundancy and serves as the main gate approach, these measures also support Subaction 8.1 on ensuring safe and sufficient access and evacuation routes. Upsizing and modernization of storm drains, culverts, and inlets, together with redundant drainage pathways and improved conveyance efficiency, implement Subaction 14.6 on encouraging advances in stormwater management to reduce flooding and improve water quality, while permeable and enhanced shoulder treatments supporting infiltration advance Subaction 22.4 on green streets, which the RRAP describes as incorporating cool or permeable pavements and bioretention within public rights-of-way. Flood-resistant pavement and roadway grading implement Subaction 16.1 on protecting critical assets where relocation is impractical.

The project also supports RRAP Actions 13 and 23 through resilience planning and emergency preparedness measures. Multiagency collaboration among FDOT, NS Mayport, the City of Jacksonville, Atlantic Beach, Duval County, the North Florida TPO, and SJRWMD implements Subaction 13.1 on advancing public-private partnerships to leverage expertise and funding and Subaction 13.3 on intergovernmental partnerships with state and federal agencies, including the

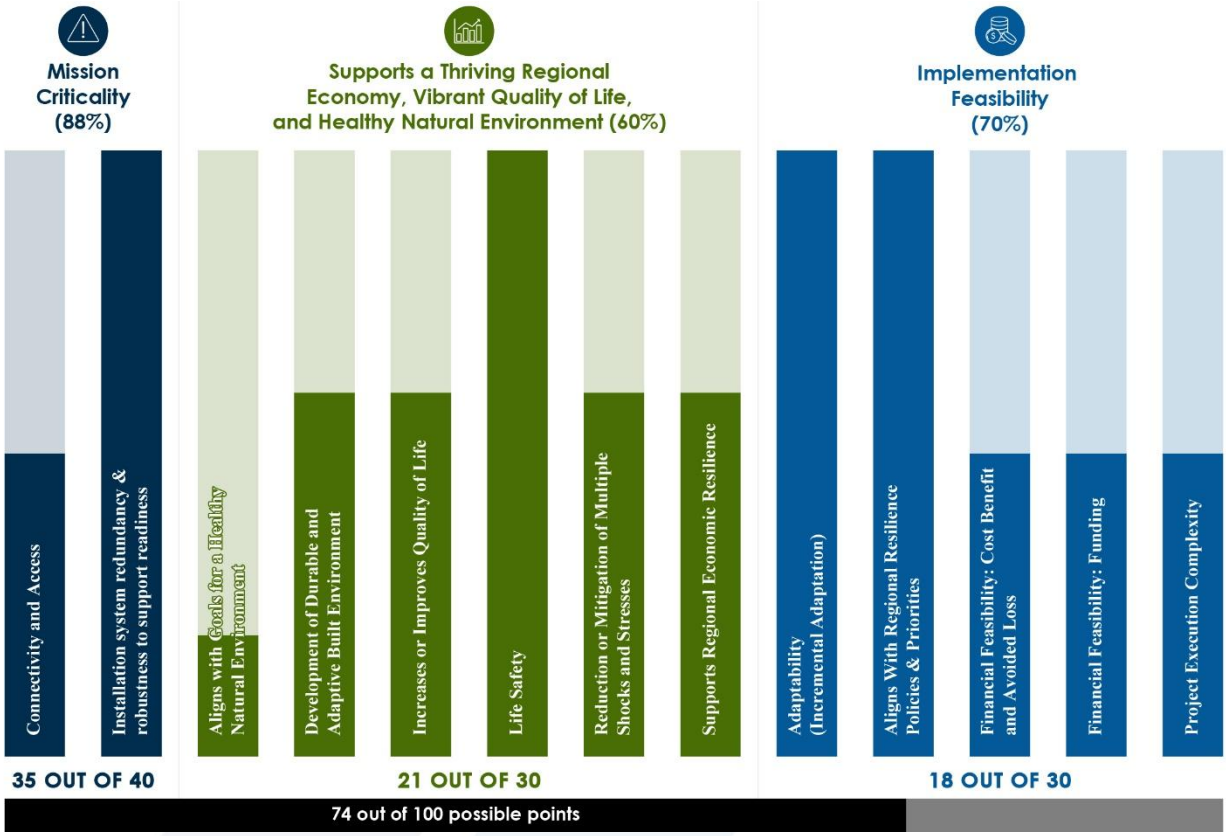
military, to increase regional readiness (the subaction under which the RRAP explicitly recognizes the Council's MIRR process). Smart stormwater monitoring, IoT-enabled sensors, automated flood detection, and multi-channel early warning through traffic management centers, dynamic message signs, Florida 511, and direct notification to installation gate operators implement Subaction 23.1 on compiling, updating, and distributing locally relevant information about weather hazards in accessible formats and expand on the JaxReady model the RRAP identifies for regional replication. Coordinated emergency access and continuity planning, pre-staged rapid-response operations, and defined interagency response protocols implement Subaction 23.4 on assisting emergency management offices with the improvement and distribution of guidance and Subaction 23.3 on facilitating peer learning among emergency managers across the region.

The project's structure as a scalable pilot extends its regional value. The modeling framework, design standards, and improvement strategies developed for the half-mile segment between Wonderwood Drive and the installation gate are explicitly built to expand along the full Mayport Road corridor and into adjacent networks and to inform FDOT District 2 and statewide practice for flood-prone roadway segments. This replicable-model approach is what the Collaborative disseminates under Subaction 14.5 on educating the public sector and development community about resilient building practices and ensuring best practices are publicly available and easily accessible. Integration with the City of Jacksonville's Resilient Jacksonville Plan, its drainage basin studies, and its compound flood modeling contributes to Subaction 32.1, under which the Collaborative hosts and maintains Northeast Florida's Vulnerability Assessment Portal and builds toward analyzing vulnerability assessments at regional scale. Reduced untreated runoff and relieved pressure on adjacent wetlands and tidal creeks support Subaction 5.1 on conserving estuarine wetlands and Subaction 1.1 on practices that improve water quality, and the project's prioritization framework and cost documentation position it for the funding opportunities the Collaborative tracks under Action 34.

Metrics Score

The NS Mayport Mobility Corridor Mayport Road project was evaluated against a robust series of metrics to determine the appropriateness, viability, and achievement of goals. The metric categories are given a percentage weight to indicate the comparative importance for the MIRR, with Mission Criticality being the highest. High and mid-range scores across all metric categories indicate that implementing the strategies and policy recommendations within this project will promote mission assurance for the installation.

Figure 11. Metrics Scorecard Results



Cost Benefit Analysis

Benefit-cost analysis (BCA) determines the cost-effectiveness of adaptation projects. This effectiveness is calculated using the equation

$\frac{B}{C}$ = Value

Where B is the benefit, or avoided costs, of the project and C is the cost to implement the project. A benefit-cost value greater than 1 indicates that a project is cost-effective (i.e., the benefits of the project outweigh the costs incurred in implementing it), whereas a BC value less than 1 indicates the project may not be cost effective (i.e., the costs exceed the benefits).

Adaptation project costs were costed to include project construction and design costs, where feasible. Project benefits were costed to include direct (construction or repair costs) and indirect (social, economic, and environmental) costs whenever feasible.

Data sources for benefit values include the Federal Emergency Management Agency, the National Institute of Standards and Technology, the National Interagency Fire Center, and others.

In many cases, associated financial savings data (such as improved installation operations, improved quality of life for installation personnel, or asset-specific O&M costs) was unknown; in these cases, the benefit is described. Hence, BCA values may not reflect the total possible benefit of the proposed adaptation project.

Total Project Package Snapshot

Figure 11. Total Project Package Snapshot

Implementation Tools

Financial Strategy Toolkit

More information on financial strategy building can be found in Technical Memo 10: Implementation Strategy and Investment Pathways.

Many of the tools required to fund, finance, and coordinate resilience implementation are already available under current Florida law or institutional precedent. The challenge, then, is aligning, adapting, and scaling existing tools to support coordinated regional resilience investment strategies. Thus, this section provides an initial inventory of funding, financing, and institutional tools that can be used to support the implementation of the MIRR project portfolio and the broader resilience system envisioned above.

Position Flood-Reduction Structures for Resilient Florida and FEMA Mitigation Funding

Flood mitigation projects involving hard and grey infrastructure including tidal gates and hybrid armoring qualify for a different set of programs than green and habitat-oriented work. To keep these projects eligible for grant funding, the region should incorporate them into relevant planning documents including regional and municipal hazard mitigation and climate adaptation plans before funding rounds open. Strategies may include:

- Positioning coastal flood-reduction projects for FL DEP's Resilient Florida Grants, which fund vulnerability analysis, planning, and implementation for flooding and sea level rise and are open to counties, municipalities, and regional resilience entities.
- Ensuring qualifying projects are written into the applicable local hazard mitigation strategies/plans now, since FEMA/FDEM's Hazard Mitigation Grant Program requires a presidential disaster declaration and inclusion in an adopted mitigation plan, and eligibility cannot be assembled after the fact.
- Screening structures and NFIP-insured assets for FEMA/FDEM Flood Mitigation Assistance, which supports elevation, acquisition, relocation, and localized flood-reduction projects.

Transportation & Mobility

Align Military Access Routes with the FDOT Work Program and TPO Priorities (Near-term)

Since most of the roadway projects sit on FDOT-owned facilities, the highest-leverage near term action is not a new grant but placement in the pipelines that already fund state roads. Steps include:

- Working with FDOT and the North Florida TPO to align MIRR roadway projects with the FDOT Work Program and the TPO's long-range plan and priority lists, so that resilience upgrades fit into existing corridor and access investments rather than competing as standalone initiatives.
- Using MIRR vulnerability data to inform project scoping, site selection, and the case for prioritization within those programs.

- Embedding resilience and critical-access criteria (flood exposure, installation access, redundancy) into local and regional transportation planning frameworks.

Leverage Defense-Specific Transportation Funding (Near-term)

The installation-access purpose of these routes makes them eligible for funding that general roadway projects cannot reach. The FHWA Defense Access Road (DAR) program provides a mechanism for the Department of Defense to fund public highway improvements necessitated by defense activities, which is a direct fit for access routes such as Mayport Road and the Blount Island corridors. Near-term steps include engaging the installations and DoD early to document the defense necessity that DAR requires, and identifying which access-route projects are strongest candidates. The Defense Community Infrastructure Program (DCIP), discussed under Resilient Utilities, can also fund qualifying off-base transportation projects that support an installation.

Bundle Roadway and Freight-Rail Projects for Federal Discretionary Funding (Near-term)

Federal discretionary programs increasingly favor bundled, regionally coordinated applications, and the region can begin organizing project scopes now even where construction is years out. Near-term steps include:

- Developing a bundled project list focused on installation access routes, freight corridors, and flood-prone transportation nodes.
- Positioning candidate projects for US DOT's BUILD/RAISE and INFRA programs (the latter awarded through the Multimodal Project Discretionary Grant NOFO), which fund road elevation, bridges, freight rail, and multimodal work.
- Coordinating across FDOT, the TPO, CSX, and JAXPORT to align scopes, permitting, and timelines so joint applications and cost-share agreements are ready when rounds open.

Notes: The current federal surface transportation authorization (IIJA) expires September 30, 2026, and future BUILD/RAISE and INFRA rounds depend on reauthorization.

Explore Value Capture and Partnerships in Freight and Growth Corridors (Near-term)

Corridors serving the port and freight network are likely to see rising land values and continued private investment, which creates room for value capture and private participation over a longer horizon. In the near term, the region can conduct a scan of where tax increment financing, mobility fees, or special assessments may be viable, and begin early conversations with private beneficiaries such as JAXPORT tenants, logistics firms, and CSX about co-investment in shared freight-corridor resilience. Full deployment of these tools requires multi-year planning and, in some cases, legislative action, so this is scoping-and-feasibility work now that informs the longer-term strategies.

Transportation & Mobility Longer-term Implementation

As noted earlier, transportation and mobility projects should be carried forward through integration into agency and asset owner investment processes. The key implementation challenge is that mission-related transportation vulnerabilities do not automatically align with established investment priorities. They consequently need to be framed and pursued in ways aligning with those regional priorities.

For roadway and access projects, this may translate into identifying the specific consequences of disruption to mission readiness and positioning projects for the next decision point where they may be advanced. For projects that are already connected to FDOT and the TPO, these should be positioned with the documentation needed for project prioritization and funding consideration.

Freight, port, rail, and aviation needs require similar translation, but through different delivery systems. Port and freight-related priorities may, for example, be framed around topics of regional importance such as shoreline exposure or operational resilience, where those issues intersect with JAXPORT infrastructure planning. Rail-related priorities require early coordination and planning with CSX, with public investment opportunities framed around public benefits while accounting for CSX ownership, operations, and long-term capital planning.

Over time, the strongest adaptation project candidates will be those with a clearly documented readiness consequence, an identified owner or sponsor, established plans, and sufficient scoping to compete for design, capital, or discretionary transportation funding.

Funding Opportunities

Table A-2. Transportation Funding Options

Agency/Org	Program	Description	Available Funding	General Eligibility	Example Eligible Projects	Timeline
US DOT	Better Utilizing Investments to Leverage Development (BUILD) Grant Program (formerly RAISE)	Provides discretionary funding for transportation projects that promote safety, environmental sustainability, quality of life, and economic competitiveness.	~$1.5 billion available for FY2026. (transportation.gov/BUILD grants)	State and local governments, MPOs, transit agencies, port authorities	Complete streets, road elevation, bridges, rail planning, multimodal mobility hubs	FY2026 NOFO published Dec 15, 2025; applications due Feb 24, 2026 (letters of support through Mar 13, 2026). Note: IIJA authorization expires Sept 30, 2026 — future rounds depend on reauthorization. (transportation.gov)
US DOT	INFRA Grant Program	Funds large-scale infrastructure projects that improve the movement of freight and people across the country.	~$1.6 billion/year	States, MPOs, local governments, tribal governments	Highway modernization, road widening, interchanges, freight rail	Awarded through the combined Multimodal Project Discretionary Grant (MPDG) NOFO (INFRA/Mega/Rural); FY2026 round active. IIJA expires Sept 30, 2026. (transportation.gov/grants/mpdg-program)
US DOT	Safe Streets and Roads for All (SS4A) Grant Program	Supports regional, local, and tribal initiatives to prevent roadway deaths and serious injuries through comprehensive safety planning and implementation.	~$993.5 million for FY2026 (~$687.8M Implementation, ~$305.7M Planning & Demonstration). (transportation.gov/grants/SS4A)	Local, regional, tribal governments	Road safety audits, protected bike lanes, speed management systems, crosswalk improvements	FY2026 NOFO closed May 26, 2026. Likely the final SS4A round — IIJA expires Sept 30, 2026. (transportation.gov; visionzeronetwork.org)
FDOT	Transportation Alternatives (TA) Set-Aside Program	Provides funding for smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, and safe routes to school programs.	Approximately $5.1 million annually.	Local governments, regional transportation authorities, transit agencies, natural resource or public land agencies, school districts, and tribal governments.	Construction of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation.	Annual competitive application process; specific deadlines vary by FDOT district.
FDOT	Transportation Regional Incentive Program (TRIP)	Encourages regional planning by providing state funds to improve regionally significant transportation facilities in regional transportation areas.	State funds cover up to 50% of the non-federal share of project costs.	Projects must be identified in the capital improvements element of a local government comprehensive plan and be consistent with the MPO's Long-Range Transportation Plan.	Improvements to regionally significant roadways, public transportation facilities, and intermodal facilities.	Application cycles and deadlines are managed by FDOT districts
FTA	Urbanized Area Formula Grants	Provides formula funding to support public transportation in urbanized areas (pop. > 50,000), including capital, planning, and limited operating expenses.	Over $6.5 billion annually (nationally). Federal funding not to exceed 80% of total project costs.	Public transit agencies, states, and designated recipients in urbanized areas.	Bus and rail capital investments, mobility hubs, transit planning, fare collection systems.	Funding apportioned based on legislative formulas; funds are apportioned annually.
FTA	Pilot Program for Transit-Oriented Development (TOD) Planning	Supports planning efforts near transit corridors to foster compact, mixed-use development and maximize transit access.	~$29 million in FY26	Transit project sponsors with eligible capital projects	Planning for mobility hubs, affordable housing near transit, station area design.	Annual discretionary grant; FY26 NOFO issued on 5/11/26. Applications are due by 7/10/2026.

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