

Naval Air Station Jacksonville

Adaptation Package #1: Adaptation for Mobility Corridor Roosevelt Boulevard

This package includes three strategic projects that in combination improve transportation efficiency on this mission-critical corridor. It encompasses recommendations for physical infrastructure, smart technology, and transit network improvements that can be led by state, regional, and local agencies.



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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:

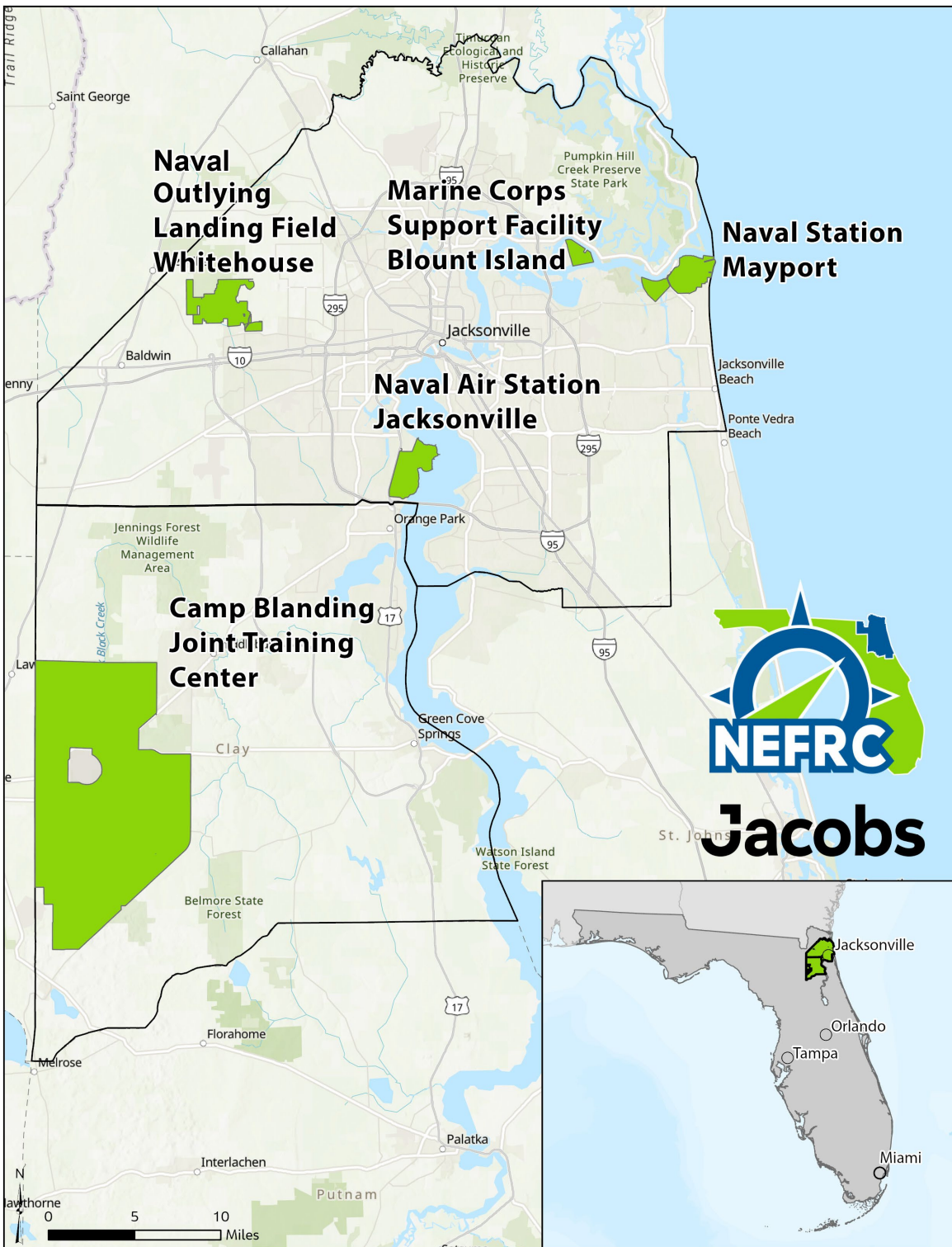
- **Shocks and Stresses** affecting the mission-critical asset
- **Project Objective**, which captures the adaptation goal for the following recommendations to support mission readiness through community resilience
- **Stakeholders and Current Efforts** highlighting successful foundational work upon 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 Context

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 (DoD) 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 Facility, Marine Corps Support Facility Blount Island, Naval Station Mayport, and Naval Air Station (NAS) 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.

NAS Jacksonville

Naval Air Station (NAS) Jacksonville covers more than 3,800 acres along the west bank of the St. Johns River in Jacksonville, Florida. It is located north of Interstate 295 (I-295) and the Buckman Bridge, east of the Ortega River and Roosevelt Boulevard, and south of downtown Jacksonville. The installation's large area provides space for military operations, training, and support activities and commands. The installation's area of responsibility also includes Naval Outlying Landing Field (NOLF) Whitehouse and the Pinecastle Range Complex (PRC), which consists of three constituent ranges in central Florida. The proximity of NAS Jacksonville to the NOLF and the PRC supports aviation training activities, while its proximity to Naval Station Mayport supports operational and training activities.

Mission

NAS Jacksonville's mission is to "provide the premier platform for generating and projecting naval power from the shore" (Commander, Navy Region Southeast, n.d.). As the largest installation in Navy Region Southeast, NAS Jacksonville is a key naval aviation hub that supports maritime patrol and reconnaissance, rotary-wing fleet support, naval aviation depot sustainment and fifth-generation capability, regional command and logistics, medical support, and aviation training, range, and airspace operations for aligned installations across the eastern United States (refer to Figure 1). These mission areas provide a basis for identifying the mission-essential functions affected by the loss of an asset or service, how quickly a disruption would affect military output, the level of service that must be maintained or restored, and whether a proposed mitigation reduces the resulting mission consequence.

The installation houses seven fixed-wing patrol (VP) squadrons consisting of P-8A Poseidon aircraft, multiple reserve-duty squadrons, and other entities, with more than 100 aircraft operating out of the installation. Patrol Squadron Thirty (VP-30) provides P-8A and MQ-4C Triton unmanned aircraft training. VP-30 is the Navy's largest aviation squadron and the only site that conducts maritime patrol fleet replacement training. Patrol and reconnaissance operations are supported by key tenants, including Patrol and Reconnaissance Wing 11. The installation also supports rotary-wing fleet operations and the broader aviation training, range, and airspace enterprise.

The Fleet Readiness Center Southeast (FRCSE) represents a major and growing national-level naval aviation sustainment mission at NAS Jacksonville. FRCSE employs approximately 5,000

civilian, military, and contract personnel and performs depot-level maintenance, repair, overhaul, modification, and technical support for aircraft, engines, and aeronautical components supporting Navy, Marine Corps, and joint aviation readiness. FRCSE is establishing significant F-35 aircraft and F135 engine maintenance capacity. Navy projections anticipate F135 production ramping through 2034 toward approximately 600 mini-modules and 120 power modules annually, representing roughly 600,000 maintenance labor hours per year at maximum production. Supporting investments include approximately 300,000 square feet of planned F135 maintenance capacity and expansion of engine-test capability. This growth increases the strategic importance of reliable electric power, transportation access, wastewater service, communications, workforce mobility, and other supporting infrastructure at NAS Jacksonville.

Logistical activities, led by NAVSUP Fleet Logistics Center Jacksonville and the Defense Logistics Agency, support Navy Region Southeast. Secondary missions include Naval Hospital Jacksonville, community and homeland defense, provision of emergency staging sites, and installation support for regional commands. Naval Hospital Jacksonville provides healthcare for military personnel and veterans throughout the region. Community and homeland defense activities are supported by U.S. Customs and Border Protection, which operates aircraft out of the installation. Both NAS Jacksonville's and NOLF Whitehouse's airfields are used as staging sites for the Federal Emergency Management Agency as part of disaster-response activities. Numerous tenants based out of the installation support regional activities, such as Naval Facilities Engineering Systems Command Southeast.

Installation Interconnections

The NAS Jacksonville linkage overlays, as shown on the webpage, illustrate the installation's role as one of Florida's most important naval aviation, command-support, and sustainment hubs. The maps show how NAS Jacksonville connects locally to Naval Station Mayport, regional Navy installations, training ranges, medical and logistics nodes, and nationally to Navy command, aviation, maintenance, communications, and supply enterprises. Together, the layers demonstrate that NAS Jacksonville is not an isolated air station, but a central operating platform that supports maritime patrol and reconnaissance, helicopter maritime strike forces, aviation maintenance, fleet logistics, medical readiness, communications, and installation support across the Southeast and beyond.

The broader strategic value of NAS Jacksonville is especially clear in its global linkages. Its maritime patrol and reconnaissance forces connect the installation to P-8A, MQ-4C, and allied training networks across U.S. and overseas operating locations; its rotary-wing squadrons support Atlantic Fleet ships and deployed naval operations; and Fleet Readiness Center Southeast provides aviation sustainment with reach across the Navy, Marine Corps, and joint force. When viewed as a combined overlay, the maps show NAS Jacksonville as a key node in national defense readiness, linking Florida's military infrastructure to fleet operations, international partnerships, homeland defense, and global maritime security.

Identification of Priority Assets for NAS Jacksonville

Priorities for the installation were based on the direct assets and local services required to support the missions. This includes the roadways required to access the installation, the lands around NAS Jacksonville and NOLF Whitehouse that protect the installations and their operations from encroachment hazards, and the utilities (electric power, water, and wastewater) that support installation operations. These assets were evaluated for exposure to shocks and stresses (Figure 2).

Primary Mission Critical asset types for conducting training and operations, and logistical and maintenance support

- Location-Specific Positioning
 - Conservation lands
 - Shorelines
 - Assets Providing Direct Support
 - Electric Production and Supply Facilities
 - Roads and Bridges
 - Railway systems
 - Cecil Airfield
 - Airspace
 - Natural gas supply systems
 - Regional fire stations

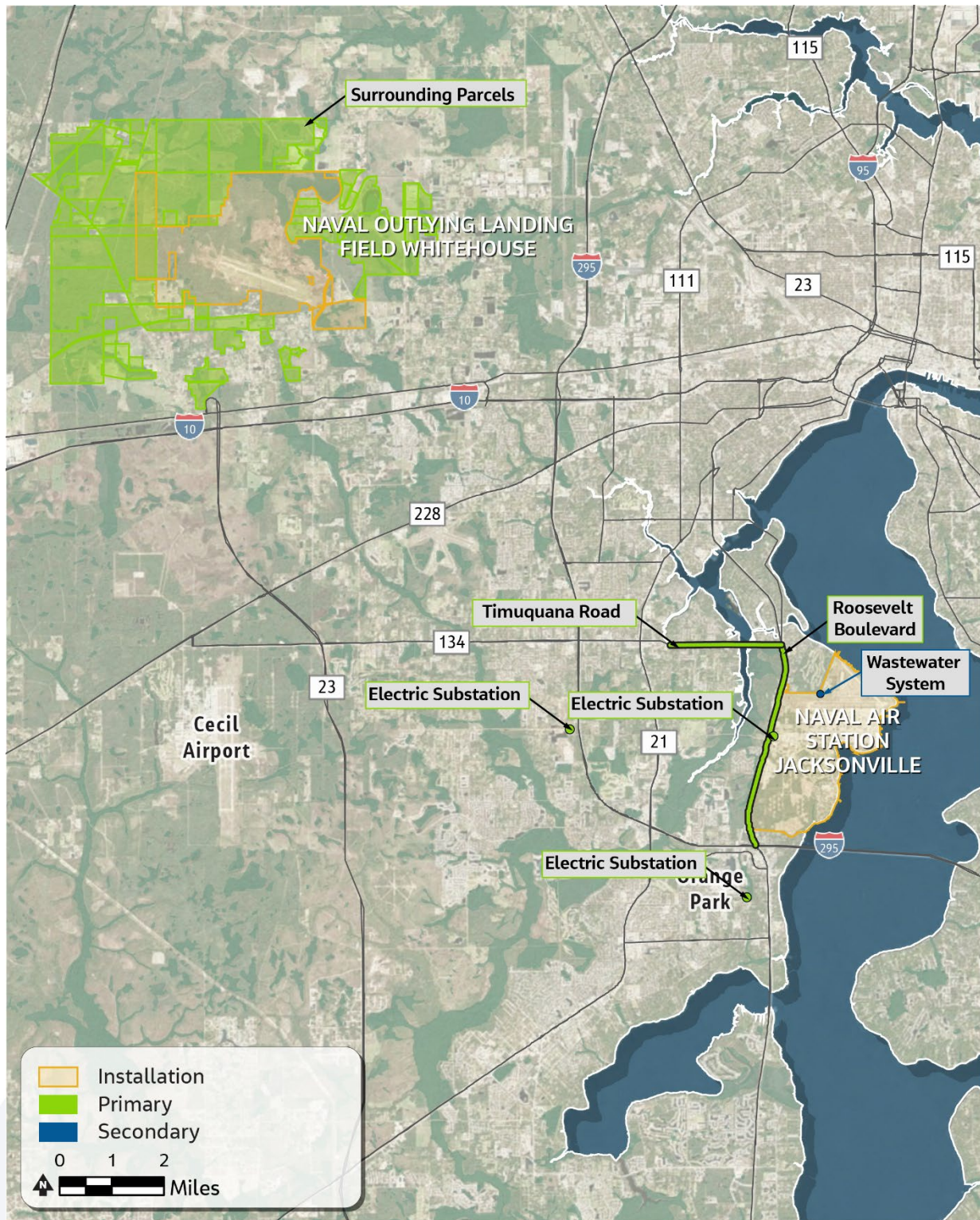
Secondary Mission Critical asset types for drone operations, Naval Hospital, support regional commands, community and homeland defense

- Assets Providing Direct Support
 - Water systems
 - Wastewater systems
 - Communications systems
 - Regional hospitals

Mission Supportive asset types for the livelihood and health of installation personnel, indirect support to primary and secondary missions

- Personnel Support
 - Affordable Housing
 - Childcare Facilities
- Assets Providing Indirect Support
 - Solid and Hazardous Waste Facilities
 - Stormwater systems

Figure 2. Primary and Secondary Mission Critical Assets for NAS Jacksonville



This package addresses the specific shocks and stresses of the mission critical asset Roosevelt Boulevard for NAS Jacksonville.

Current Conditions That Affect Roosevelt Boulevard

Roosevelt Boulevard (US 17) is a principal arterial corridor in Jacksonville that runs north-south from I-295 to I-10. Developed beginning in 1939 and opened by 1950, the roadway today functions as a six-lane corridor that links suburban Clay County communities such as Orange Park to urban Jacksonville neighborhoods including Ortega, Lake Shore, and Riverside. The boulevard parallels key rail infrastructure and provides frequent access to local commercial centers, schools, and residential areas, making it one of the principal commuting routes on the west side. Notably, it is also the western boundary of and only access roads for NAS Jacksonville; all three entrances (Yorktown Gate, Birmingham Gate, and Commercial Gate) are located here. Average daily traffic was recorded as ranging from 38,000 to 38,500 vehicles in 2025 (Florida Department of Transportation 2025).

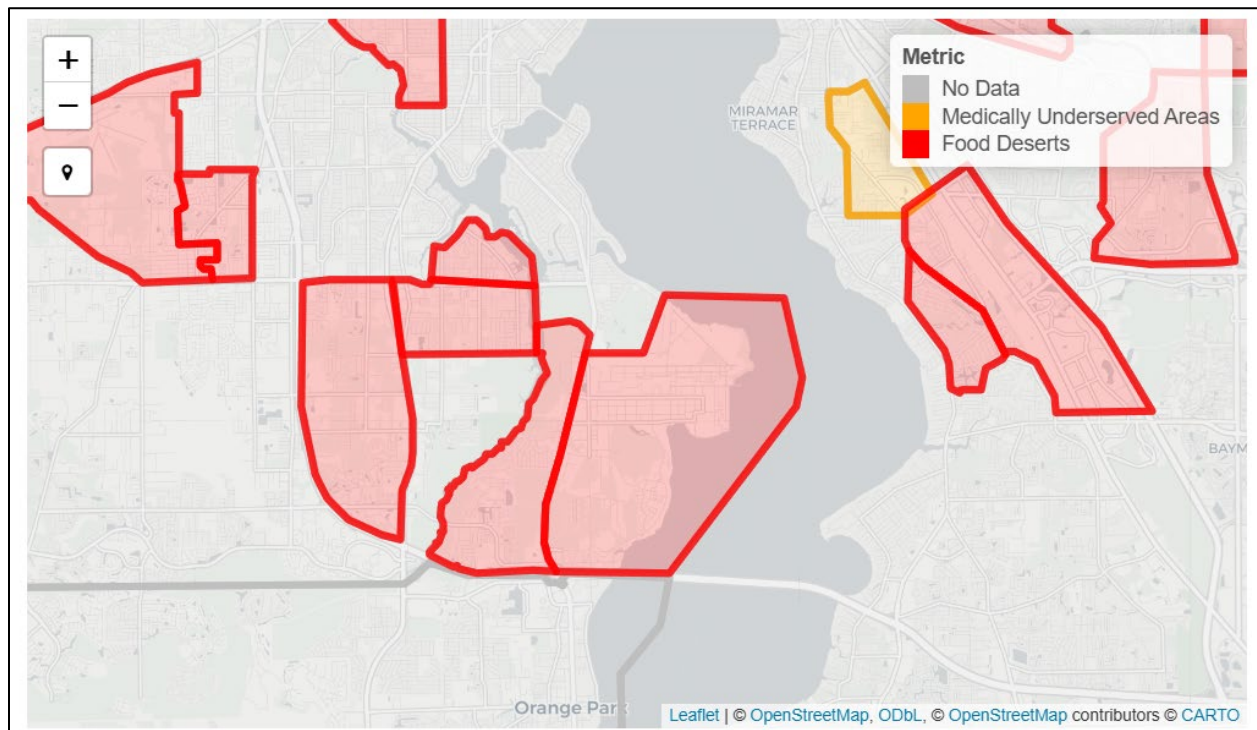
Roosevelt Boulevard plays a critical role in supporting both the surrounding civilian community and the operations of NAS Jacksonville. As the primary access route to the installation, the roadway accommodates daily flows of military personnel, civilian employees, contractors, and freight tied to base operations, directly supporting the installation. At the same time, the corridor underpins local economic activity by connecting neighborhoods to employment centers, retail districts, and the broader regional highway network, including I-295. Transportation congestion occurs on Roosevelt Boulevard, with increased congestion observed during major shift changes at the installation. Major events, such as airshow days, can result in traffic backing up as far north as downtown and southward across Buckman Bridge.

Roosevelt's dual function as a community main street and a military access corridor creates both opportunity and strain: high traffic volumes, safety concerns, and congestion reflect the intensity of its use, but also highlight its indispensable importance to Jacksonville's transportation system, military readiness, and overall quality of life. The corridor has been identified as a transportation spine within an area termed as a food desert (Figure 4), meaning that people in this area must travel long distances for access to reliable, healthy food. Improving transportation options improves access to healthy food.

Figure 3. Current Conditions at Roosevelt Boulevard



Figure 4. Food Desert Areas at Roosevelt Boulevard

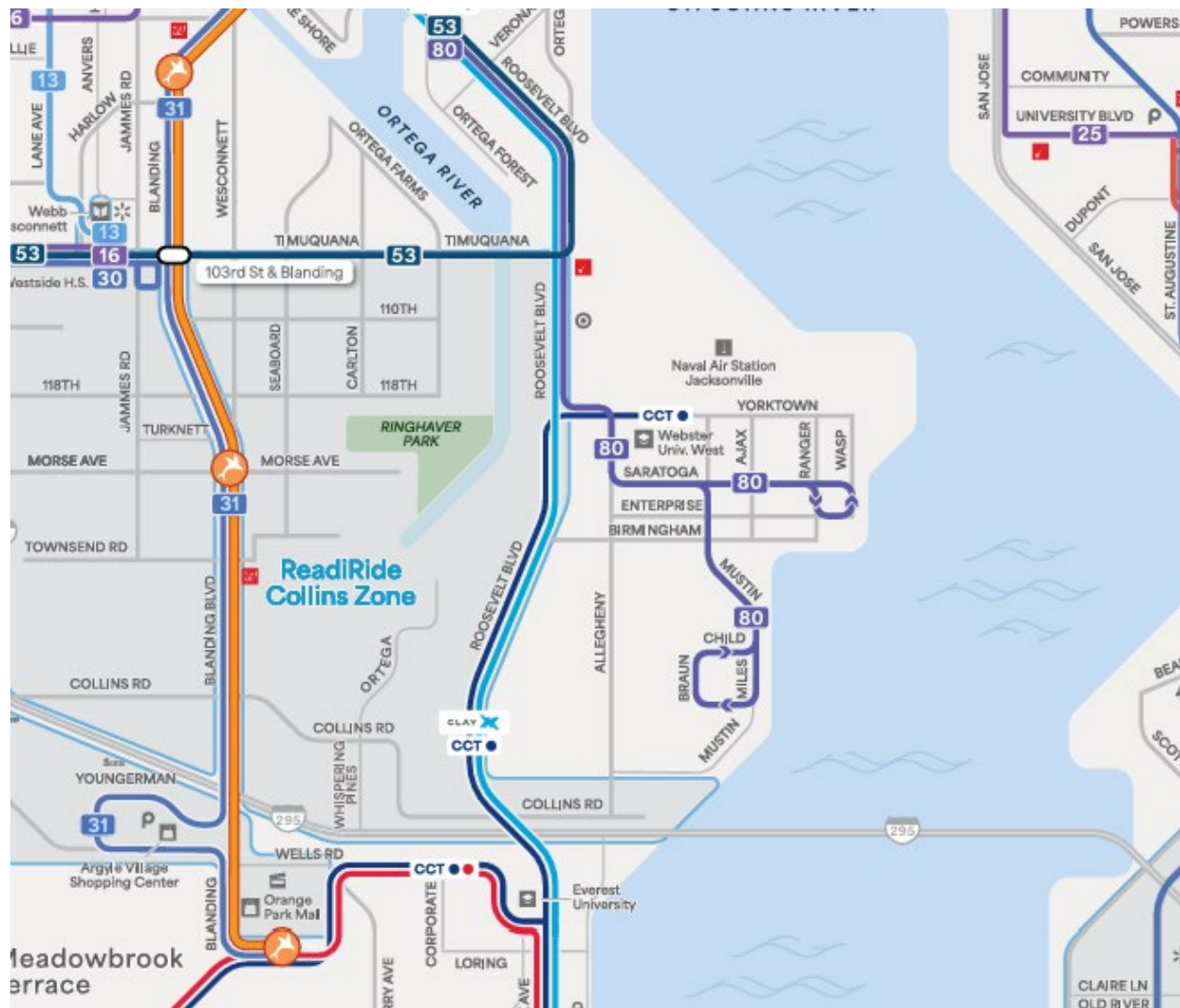


Source: North Florida Transportation Planning Organization (NFTPO), Annual Mobility Report 2025

Conditions for Alternative Transportation

The corridor is served by a limited set of alternative transportation options that function primarily as supplemental, rather than competitive, modes to single-occupancy vehicle travel. The only direct fixed-route transit serving the installation is the Jacksonville Transportation Authority (JTA) Route 80 NAS Shuttle, which provides a critical commuter connection between Downtown Jacksonville (Jacksonville Regional Transportation Center [JRTC]) and the base, with intermediate stops along Roosevelt Boulevard (Figure 5). However, service frequency and coverage are oriented toward peak commuting periods, resulting in limited flexibility for non-traditional work schedules common among military households.

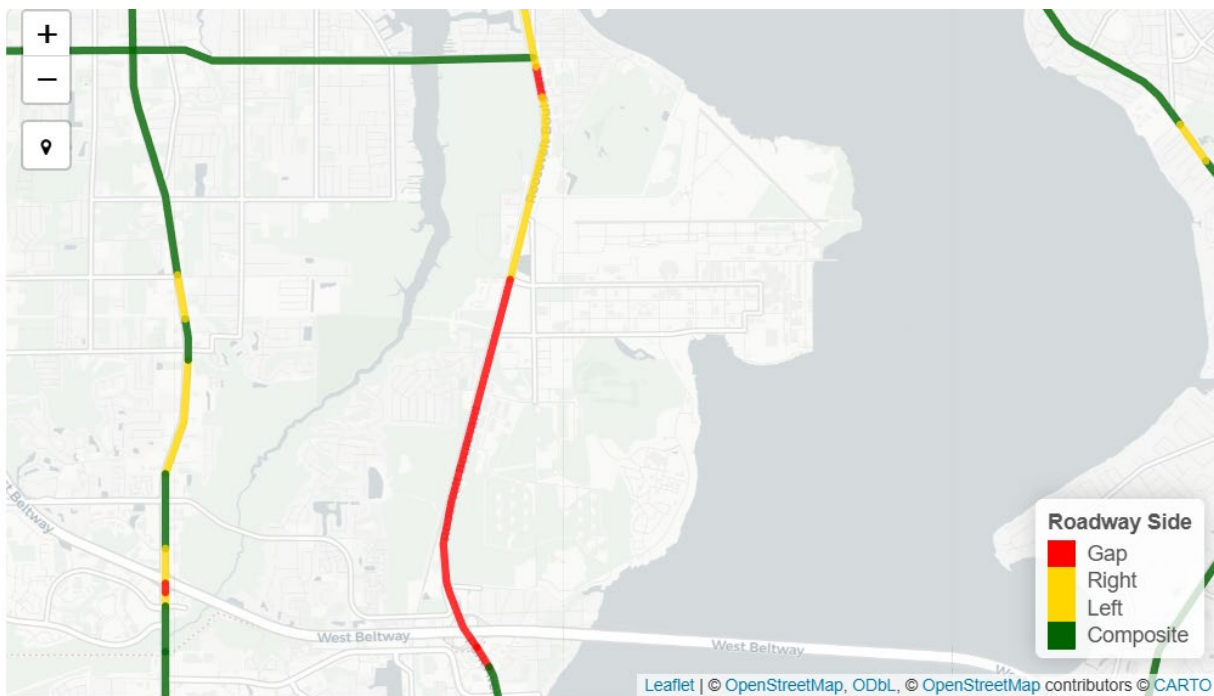
Figure 5. JTA Bus Transit Routes and RediRide Zones at Roosevelt Boulevard



Source: Jacksonville Transportation Authority (JTA), RediRide Service Areas Map, <https://www.jtafla.com/transit-services/readiride/>

Supporting this fixed-route backbone are on-demand mobility services, including microtransit (RediRide) and private rideshare, which provide first- and last-mile connectivity but lack the capacity and reliability to function as primary commute options.

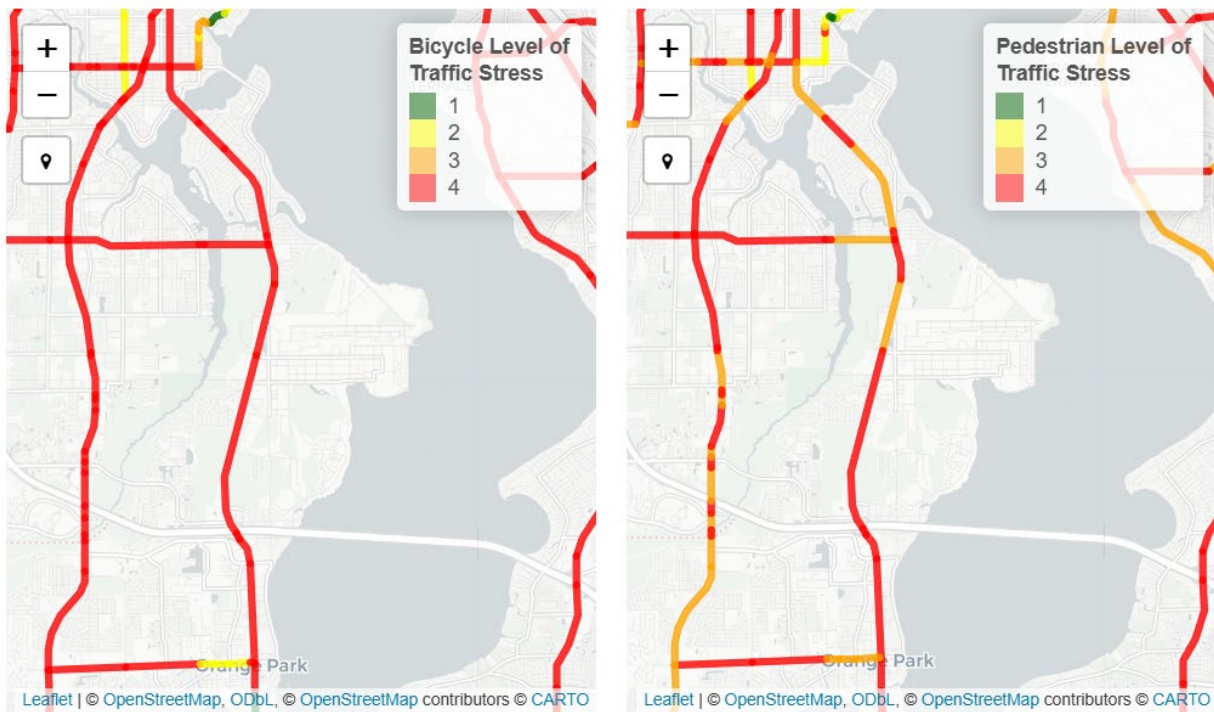
Bicycle and pedestrian infrastructure exist in fragmented segments, primarily near recreational assets such as Tillie K. Fowler Regional Park but does not form a continuous or protected network suitable for regular commuting to the base (Figure 5). Park-and-ride options and broader regional transit connections exist but require multi-step travel chains, reducing their competitiveness for daily use. As a result, the corridor operates with a “transit presence” rather than a fully integrated multimodal system, leaving most trips dependent on personal vehicles.

Figure 6. Gaps in Existing Sidewalks at Roosevelt Boulevard

Source: North Florida Transportation Planning Organization (NFTPO), Annual Mobility Report 2025

The most impactful mobility gaps along the Roosevelt Boulevard corridor are spatially concentrated in areas where transit access, housing distribution, and employment demand are misaligned. Notably, transit desert conditions emerge between Downtown and the Westside, where lower-density residential areas feeding into Roosevelt Boulevard lack frequent or direct transit connections, forcing reliance on automobiles to access the corridor. A second critical gap affects military spouse commute patterns in neighborhoods around Timuquana Road and surrounding Westside housing clusters, where indirect transit routing and limited schedule flexibility constrain access to both NAS Jacksonville and regional employment centers. In addition, the absence of continuous bicycle and pedestrian infrastructure along Roosevelt Boulevard creates a barrier to short-distance, non-motorized commuting, even where residential proximity would otherwise support it (Figure 6). These overlapping gaps result in constrained transportation choices for military families and civilian workers alike, reinforcing auto dependency and limiting resilience in the corridor's mobility system (Figure 7).

Figure 7. Bicycle and Pedestrian Levels of Traffic Stress at Roosevelt Boulevard
Source: FDOT (Year)



Source: North Florida Transportation Planning Organization (NFTPO), Annual Mobility Report 2025

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. 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).

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.

RRAP Goals and Objectives

Figure 8. Regional Resilience Action Plan Vision (NEFRC 2025)



Figure 9. 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 structure 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.

Figure 10. Connection of This Asset to the Community



Environment

Natural Environment

Roosevelt Boulevard (U.S. 17) along NAS Jacksonville is closely linked to the St. Johns River and adjacent wetlands, with roadway runoff, flooding, and storm surge directly affecting nearby ecosystems. Its design and drainage also influence how well the corridor manages extreme rainfall and coastal flooding.



Quality of Life

Quality of Life

The corridor is a critical daily route for residents, base personnel, and commuters, shaping travel time, safety, and access to jobs and services. Its reliability during storms and evacuations directly affects community safety and mobility.



Economic

Regional Economy

Roosevelt Boulevard connects NAS Jacksonville to Jacksonville's broader transportation network, supporting workforce movement, military operations, and goods flow. Disruptions can impact productivity, while reliable access supports economic stability and growth. Ecologically intact and undeveloped lands generate **economic value through ecosystem services**, particularly flood mitigation and water filtration that reduce the need for costly engineered infrastructure such as stormwater facilities and flood control features. By naturally managing runoff and protecting water quality feeding into Doctors Lake, Ortega River, and Black Creek, these lands lower public costs associated with flood damage, water treatment, and infrastructure repairs.



Infrastructure

Adaptive Built Environment

As a key access and evacuation route, the corridor supports climate adaptation by enabling emergency response and continuity of operations. Improvements like elevation, better drainage, and heat-resilient materials help reduce vulnerabilities to flooding, storms, and rising temperatures. These lands are important for climate resilience because they act as **natural stormwater storage and floodplain systems**, reducing runoff and downstream flooding as precipitation intensity increases. Their forests and wetlands **store water, stabilize soils, reduce heat, and sequester carbon**, while prescribed fire management reduces wildfire risk in a rapidly developing wildland-urban interface. This allows surrounding communities to rely less on engineered systems and better withstand **flooding, extreme heat, and wildfire threats**.



Recommendations



Documenting Shocks and Stresses with a Vulnerability Assessment

Shocks and stresses to the mission-critical assets supporting NAS Jacksonville include rainfall-induced flooding, coastal flooding from sea level rise (SLR), transportation congestion, lack of redundancy in transportation and utility system connection points, regulatory pressures, encroachment potential from development pressure, and light pollution in areas where dark skies are necessary.

1. Encroachment risks stem from development interest within the accidental potential zones of NAS Jacksonville and around NOLF Whitehouse.
2. Rainfall-induced flooding and SLR can impact travel on Timuquana Road.
3. **Transportation congestion (traffic) is a significant issue on Roosevelt Boulevard, the Buckman Bridge, and the I-295 Interchange, causing major traffic and delays getting on and off-base. Roosevelt Boulevard is the primary access road for the installation.**
4. Installation electric and wastewater systems lack redundancy and are aging past their useable lifespan.
5. Despite existing regulations, light pollution threatens nighttime training operations at NOLF Whitehouse that require dark skies. Encroachment from development pressures and wildfire risk are high in the surrounding undeveloped lands.

This project package addresses transportation congestion on Roosevelt Boulevard (item 3) to improve mobility in and out of the installation and neighboring communities.

Project Need: Reduce Congestion to Improve Base Access

Figure 11. Risk to Mission Map



Vulnerabilities Creating Risk to Mission for this Asset

Roosevelt Boulevard is the primary access road for NAS Jacksonville (Figure 11). Owned and maintained by the Florida Department of Transportation (FDOT), it serves as a critical connector between I-295 and Timuquana Road, with Blanding Boulevard as the nearest parallel arterial. It is supporting daily operations, personnel movement, and emergency response. The corridor also plays a vital role for the surrounding community, serving as the primary north–south arterial for the Ortega area, providing access to the hospital at NAS Jacksonville and connecting major regional highways including I-295 and I-10.

The nearly 10-mile-long segment between Timuquana Road and I-295 has been identified within the vulnerability assessment as highly vulnerable to congestion and lacks redundant access points for the installation. With increasing travel demand between the Ortega Forest neighborhood and I-295, driven by both military mission needs and projected population growth, and with Roosevelt Boulevard serving as the sole connection between these areas, the need for congestion relief and improved mobility along the corridor is considered immediate (Table 1).

Table 1. NAS Jacksonville Electrical Substation Asset Summary

Asset Name	Owner	Location	Mission Criticality	Relevant Shocks & Stresses	Level of Urgency
Roosevelt Boulevard	FDOT	Timuquana Road to I-295	Primary	Congestion, Lack of Redundant Access Points	High

Stakeholders and Current Efforts Identified

Several stakeholders are involved in evaluating and advancing improvements along the Roosevelt Boulevard corridor adjacent to NAS Jacksonville. Given the corridor's importance as a mission-critical access route and major regional arterial, coordination among these entities is essential to address congestion, improve resilience, and plan for future capacity needs. Current efforts are primarily focused on data collection and system monitoring, with opportunities for expanded collaboration to support long-term investment and infrastructure upgrades.

Key stakeholders include:

- NAS Jacksonville (NASJAX)
- FDOT
- North Florida Transportation Planning Organization (TPO)
- City of Jacksonville

While several transportation improvements are underway in the broader region, including upgrades to I-295 and I-10, there are currently no major funded construction projects specifically addressing the Roosevelt Boulevard corridor between Timuquana Road and I-295. However, the City of Jacksonville has adopted the *Vision Zero Action Plan* as its guiding transportation safety policy, incorporating Safe System principles. 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 MIRR should be

implemented consistent with the City's Vision Zero principles and the Safe System Approach, 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.

Also, FDOT is conducting a traffic study with trip count data collection and analysis along state highways, including US-17, to monitor congestion, travel demand, and operational performance within this segment. The absence of a dedicated corridor study or programmed capacity project highlights the need for targeted planning and investment to address congestion, resilience, and lack of redundancy along this mission-critical route.

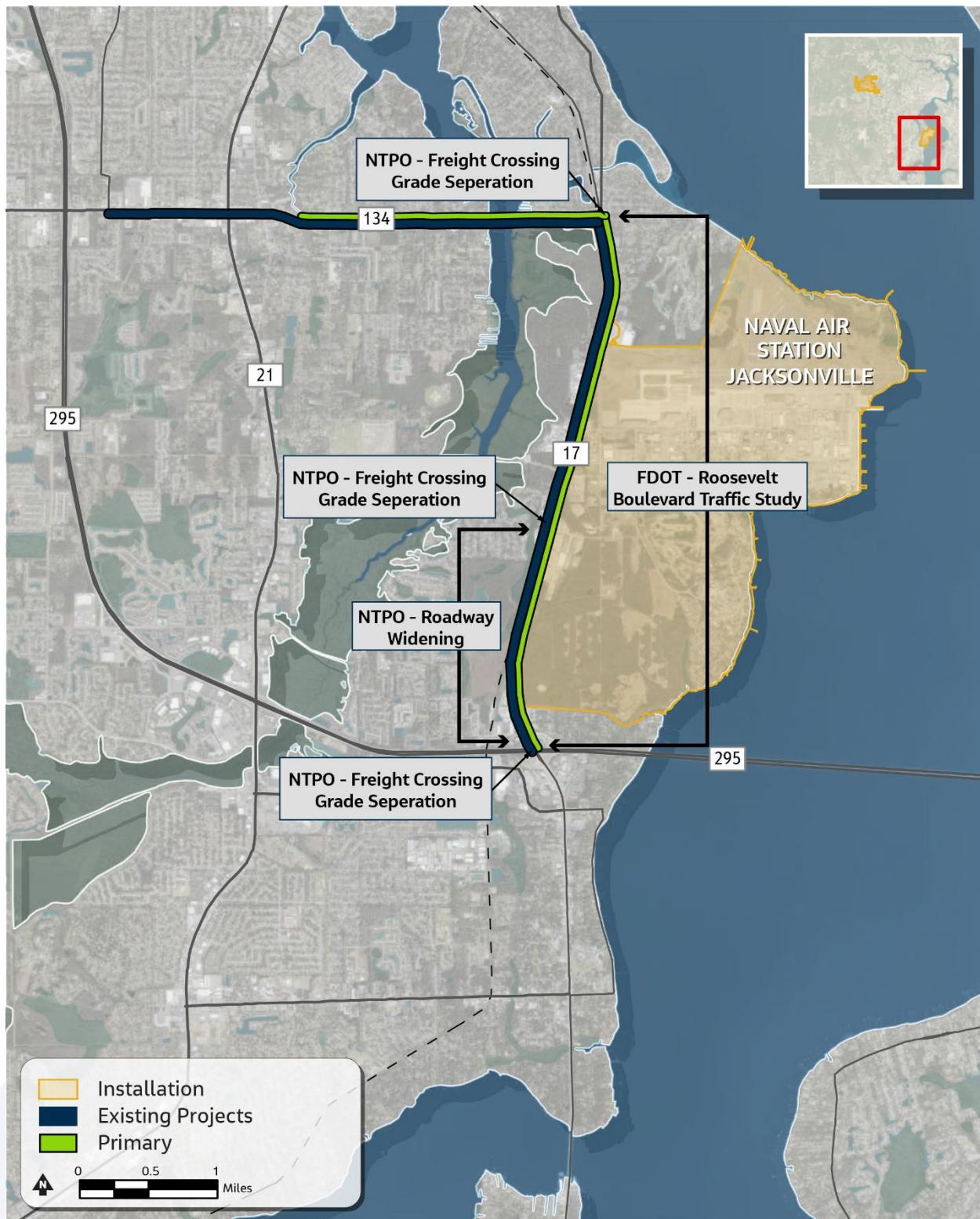
Table 2 and Figure 12 give details on projects and efforts that are currently ongoing or have been identified as a need within the region as it relates to improving base access and reducing congestion along Roosevelt Blvd.

Table 2. Current Projects and Efforts Related to Roosevelt Blvd

Project	Entity	Location	Purpose	Timeline
Roosevelt Boulevard Traffic Study	FDOT	Roosevelt Boulevard	Traffic Operability	Ongoing
City of Jacksonville's Vision Zero Action Plan	City of Jacksonville Transportation Planning Division	City-wide/ Countywide	Guide transportation safety policy, specifically following the Safe System Approach (SSA)	Plan adopted, safety policies ongoing integration into transportation projects (current and future)
Roadway Widening	North Florida TPO – Duval	Collins Road to NAS Birmingham Gate	Add lanes and add multiuse trail	Unfunded Project
Southwest Commuter Rail	North Florida TPO – Duval/Clay	Downtown Jacksonville to Palatka	Transit Improvement	Unfunded Project
Freight Improvements	North Florida TPO - Duval	Timuquana Road, Avent Drive, Wells Road	Freight Improvement	Unfunded Project
Roosevelt Trail (Clay County)	North Florida TPO – Clay	Doctors Lake Drive to Duval County Line	Rail to Trail, improve trail system	Unfunded Project
Roosevelt Rail Trail	North Florida TPO – Duval	Clay County Line to Forest Street	Add multiuse trail	Unfunded Project
Interchange Improvement	North Florida TPO – Duval	I-295	Major interchange improvements	Under Construction
Widen Buckman Bridge	North Florida TPO – Duval	San Jose Boulevard to Blanding Boulevard	Improve traffic operability	Planned/Unfunded Project

Current Efforts Map

Figure 12. Current Efforts Map



Review of Current Strategic Partnerships and Policies

Ongoing coordination among NAS Jacksonville, the City of Jacksonville, FDOT, and the North Florida Transportation Planning Organization (TPO) is central to supporting the long-term viability of the Roosevelt Boulevard corridor. These partnerships emphasize proactive communication, formal and informal coordination mechanisms, and integration of military needs into civilian planning processes.

Task 5 of the NEFL MIRR highlights the importance of mutual support and shared responsibility between military installations and surrounding jurisdictions. Along the Roosevelt Boulevard corridor, this is reflected in continued collaboration on transportation planning, land use decisions, and infrastructure investments that directly affect installation access and mission readiness. Regular engagement ensures that military operational requirements including peak shift changes, gate operations, and surge conditions, are understood and incorporated into regional decision-making.

Transportation and Resilience-Focused Initiatives

Emerging from MIRR priorities is a strong emphasis on transportation system resilience, redundancy, and reliability, all of which are directly applicable to Roosevelt Boulevard. Ongoing and planned efforts along the corridor reflect this focus:

- **Operational and Capacity Enhancements:** FDOT and local partners continue to advance intersection improvements, signal optimization, and corridor-level upgrades aimed at improving throughput and reducing delay, particularly during peak periods associated with base activity.
- **Data Sharing and Performance Monitoring:** In alignment with MIRR principles, partner agencies are increasingly utilizing shared data and performance metrics to monitor congestion patterns, travel times, and reliability along US 17, supporting more informed and responsive decision-making.
- **Emergency Preparedness and Evacuation Coordination:** Roosevelt Boulevard is recognized as a critical route for emergency response and evacuation. MIRR-informed coordination supports maintaining corridor functionality during extreme weather events and other disruptions, including joint planning for traffic management and incident response.
- **Redundancy and Alternative Access Planning:** Recognizing the vulnerability of relying on a single primary access route, regional partners are evaluating opportunities to enhance network redundancy and improve secondary access routes to NAS Jacksonville, consistent with MIRR resilience goals.

Policy Alignment and Land Use Compatibility

The City of Jacksonville's Vision Zero Action Plan is built on the Safe System Approach, a framework promoted by the U.S. Department of Transportation. The plan focuses on key actions that include identifying and prioritizing the high injury network, safe roads, safe speeds, safe road users, data-driven decision-making, and partnerships and coordination. The strategic projects in this package align with the Safe System Approach, and the Vision Zero Action Plan, for continued planning, coordination, and expanded funding strategies.

Along the Roosevelt Boulevard corridor, local government policies support the importance of compatible land use and infrastructure protection by guiding development patterns that minimize congestion impacts and preserve transportation function near base access points.

Access management strategies, corridor preservation efforts, and zoning considerations contribute to reducing operational conflicts and maintaining efficient movement along US 17. These policies are reinforced through ongoing coordination with NAS Jacksonville to ensure that future growth does not compromise access reliability or introduce avoidable bottlenecks.

Sustained Mutual Support and Future Direction

Continued progress along Roosevelt Boulevard will depend on sustained interagency collaboration and alignment of funding, planning, and policy decisions. Key focus areas include:

- Prioritizing transportation investments that directly support military access and regional mobility
- Expanding intelligent transportation systems and real-time traffic management capabilities
- Strengthening institutional coordination for both daily operations and emergency scenarios
- Incorporating resilience considerations into all phases of corridor planning and design

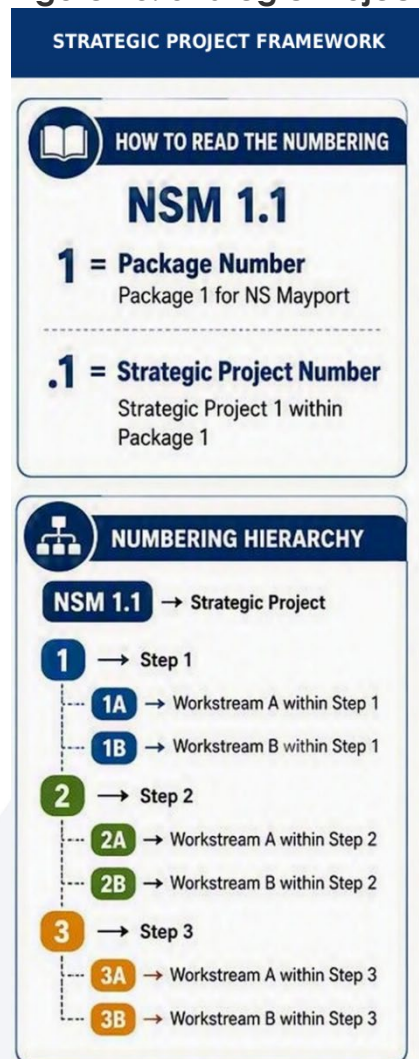
Through these efforts, Roosevelt Boulevard will continue to function as a dependable and resilient access corridor that supports the operational readiness of NAS Jacksonville while meeting the broader mobility needs of the surrounding community.

Adaptable Built Infrastructure Projects

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 13. Strategic Project Framework



The strategic projects are organized by installation, package, project, step, and actions. The two to three 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 NSJ 1.1. Alternative Transportation, Land Use, and Heat-Resilient Corridor Development

Because of the existing transit network with relatively low ridership, the Roosevelt Boulevard corridor at NAS Jacksonville should be advanced through a tiered, demand-responsive phasing strategy that incrementally builds transit ridership and multimodal access while addressing immediate safety and mobility gaps. This approach minimizes risk, aligns investment with demonstrated demand, and allows the corridor to evolve toward higher-capacity transit only if warranted over time. Transportation improvements should emphasize continuous multimodal network development by connecting individual corridor improvements into an integrated regional system serving military installations, surrounding neighborhoods, transit facilities, employment centers, parks, schools, and regional trail systems. Future multimodal transportation improvements should consider nationally recognized guidance, including the *Don't Give Up at the Intersection* principles developed by the National Association of City Transportation Officials (NACTO), the 2024 *Guide for the Development of Bicycle Facilities* published by the American Association of State Highway and Transportation Officials (AASHTO), the Manual on Uniform Traffic Control Devices (MUTCD), and other applicable federal and state design guidance, as appropriate. Connected multimodal networks improve transportation resilience by expanding routing options during emergencies while encouraging walking, bicycling, transit use, and other transportation alternatives. Shared-use paths, transit, bicycle facilities, and pedestrian improvements can provide supplemental workforce-mobility resilience for personnel able to use those modes, reduce routine demand on the principal vehicular corridor, and improve workforce access. They do not replace vehicular access required for emergency response, industrial logistics, commercial deliveries, many duty recalls, or other mission-essential movements.

Extreme heat conditions in Northeast Florida present a growing constraint on the usability and effectiveness of transportation infrastructure, as high temperatures, solar exposure, and heat-retaining surfaces discourage walking, biking, and transit use, particularly for military families, shift workers, and transit-dependent populations. To ensure long-term performance, the Alternative Transportation Corridor strategy should integrate land use, zoning, and climate-responsive design into a single phased framework, embedding heat mitigation and user comfort into every stage of implementation.

In coordination with City of Jacksonville's Vision Zero Action Plan, the Roosevelt Boulevard corridor should evolve through a phased, climate-responsive approach that builds on each stage of investment, beginning with near-term improvements that prioritize immediate usability under extreme heat while establishing foundational multimodal infrastructure alongside zoning reforms. This evolution should continue the documentation of High Injury Network (HIN) corridors, crash history, Safe System principles, and other adopted transportation safety priorities to maximize public safety benefits while supporting military installation access and regional mobility. As these foundations generate increased usage, the mid-term phase expands into a more integrated multimodal system. In the long term, if demand supports it and compatibility reviews confirm that proposed changes will not adversely affect installation access or operations, the corridor can transition toward a more climate-resilient, transit-supportive environment centered on high-capacity bus rapid transit (BRT). Stations can function as climate-responsive mobility hubs with advanced cooling strategies, while a continuous canopy and greenway network supports comfortable multimodal travel throughout the corridor. Higher-density development within installation gate influence areas should be evaluated for traffic-generation, access-control,

force-protection, pedestrian-conflict, emergency-response, and mission-access consequences before additional density is encouraged (Figure 14).

Context

Alternative Transportation

- The corridor already has strong overall travel demand, particularly tied to NAS Jacksonville.
- Transit demand is currently underdeveloped, requiring staged investment.
- Extreme heat is a critical barrier to multimodal mobility, particularly for transit users and pedestrians.
- Existing sidewalk gaps, fragmented bicycle facilities (connectivity), and wide multilane intersections create barriers to safe and comfortable bicycle and pedestrian access despite strong nonmotorized travel demand associated with NAS Jacksonville.
- Complete streets improvements are immediately justified, while BRT should be incrementally introduced and performance tested.

Zoning and Design Standards

- Area consists of predominantly low- to moderate-density suburban development with dispersed residential patterns across the Westside.
- Transit viability depends on concentrated activity, not just total population.
- Roosevelt Boulevard functions largely as a linear commercial strip corridor with frequent driveways and access points and small, disconnected parcels.
- The corridor frequently lacks sidewalk continuity and safe internal connections between adjacent uses.
- There are large surface parking lots on frontage.

Proximity

Military and civilian workers live throughout southwest Jacksonville, many within practical bicycling distance of NAS Jacksonville if safe, continuous, and comfortable multimodal connections are provided.

Current Stakeholder Projects

- North Florida TPO 2050 LRTP #619 (Planned, Unfunded)
- ***Transit Improvement of Southwest Commuter Rail from Downtown Jacksonville to Palatka***
- North Florida TPO 2050 LRTP #268 (Planned, Unfunded)
- ***Roadway Widening to add lanes and multiuse trail from Collins Road to NAS Birmingham Gate***
- ***Roosevelt Boulevard (US 17)***

Potential Project Leads and Partners

- Jacksonville Transportation Authority (JTA)
- NAS Jacksonville (NASJAX)
- City of Jacksonville Transportation Planning Division
- North Florida Transportation Planning Organization (NFTPO)

Estimated Cost:

\$164,000,000

Step 1: Improved Safety, Access, and Transit Reliability Planning and Service Strategies (Short-term)

1A. Build the Complete Streets Foundation

- Develop a Roosevelt Corridor Streetscape Plan, with zoning recommendations and Complete Streets components. This should include identifying and filling the gaps in protected or buffered bicycle lanes and multimodal connection points, a street tree planting program to provide full-coverage shade at maturity to the sidewalks and trails, vehicular and pedestrian lighting, and prioritized locations for pedestrian crossings. Zoning of the streetscape can suggest reduced setbacks and required shading for surface parking lots. It should include the Southwest Commuter Rail improvement project for coordination.
- Corridor planning should also identify priority intersections for multimodal safety improvements. Potential improvements may include protected intersection elements, Leading Pedestrian Intervals (LPIs), bicycle signal phases, pedestrian refuge islands, setback crossings, hardened centerlines, reduced effective curb radii, high-visibility crosswalks, and other context-sensitive treatments that improve safety and comfort for all roadway users while maintaining efficient military access and corridor operations.
- **Build on:** Fund and extend LRTP project #268 to Timuquana Boulevard, to add sidewalks and connections to multimodal trails along Roosevelt Boulevard.

1B. Pursue Defense Community Infrastructure Program (DCIP) Funding for Regional Shared-Use Path Connectivity

- Coordinate with NAS Jacksonville, the City of Jacksonville, FDOT, the North Florida TPO, JTA, and other regional partners to pursue Defense Community Infrastructure Program (DCIP) funding for planning, design, and construction of a regional shared-use path connecting surrounding residential neighborhoods, employment centers, transit facilities, and NAS Jacksonville.
- The project should create a continuous, low-stress multimodal corridor that improves workforce mobility, closes existing sidewalk and trail gaps, enhances crossings of Roosevelt Boulevard and other major roadways, expands transportation choices for military personnel and civilian employees, and reduces routine dependence on single-occupancy vehicles. These improvements can provide supplemental workforce-mobility resilience for personnel able to use these modes but do not replace vehicular access required for emergency response, industrial logistics, commercial deliveries, duty recalls, or other mission-essential movements.

- The project should also evaluate opportunities to connect with existing and planned bicycle facilities, transit services, and future multimodal improvements to maximize military-community connectivity and long-term transportation resilience.

1B. Execute Transit Service Enhancements and First/Last-Mile Solutions

- Upgrade Route 80 (NAS Shuttle) and Clay Express Select by increasing peak frequency and service span (early/late shifts).
- Evaluate opportunities to improve first- and last-mile connectivity through enhanced pedestrian facilities, bicycle connections, micromobility accommodations, and coordinated multimodal access between transit stops, surrounding neighborhoods, and NAS Jacksonville.
- Expand ReditRide zones north of existing boundary along Timuquana corridor.
- Designate rideshare pickup/drop-off areas at NAS Jacksonville gates.

Step 2: Improved Corridor Performance, Mode Shift, and Climate-Adaptive Integration Strategies (Mid-term)

2A. Build Enhanced Transit Infrastructure

- Install branded bus stops with shelters and real-time arrival information at in both directions at Eldridge Avenue, Collins Road, Avent Drive, Ortega Hills Drive, Birmingham Road Gate, upgrade at Yorktown Road/NAS Jacksonville Gate, Allegheny Road, and upgrades at 6372, 6017, and 5647 Roosevelt (a total of 20 stops, 10 on each side).
- Add striping and lane markers to designate transit priority during peak demand. Include queue jump lanes for buses at Collins and Timuquana intersections, and HOV and bus-only lanes.
- **Build on:** Fund and implement LRTP project #619 for Commuter Rail from Downtown Jacksonville to Palatka. Include stops on this corridor at key nodes.

2B. Complete Streets Infrastructure Expansion

- Expand or upgrade protected bike lanes in high-demand segments based on monitoring data.
- Upgrade multi-use trail connections at Tillie K. Fowler Park, surrounding neighborhoods, and install the utility ROW trail connector.
- Install large-canopy trees in medians per the Roosevelt Corridor Streetscape Plan.
- Expand green infrastructure and implement street tree planting and bioswales per the Roosevelt Corridor Streetscape Plan.
- Evaluate transit-supportive zoning and mixed-use nodes at appropriate locations, including the Timuquana area. Higher-density development within NAS Jacksonville gate influence areas should undergo compatibility review for traffic-generation, access-control, force-protection, pedestrian-conflict, emergency-response, and mission-access consequences before additional density is encouraged.
- Evaluate opportunities to provide appropriate end-of-trip facilities supporting bicycle commuting, including secure bicycle parking where warranted (using COJ-approved bicycle rack styles), convenient building access, and other accommodations compatible with installation operations, anticipated commuter demand, and security requirements.

- Develop a coordinated multimodal wayfinding program connecting surrounding neighborhoods, transit facilities, regional bicycle routes, shared-use paths, and NAS Jacksonville access points to improve navigation, strengthen network continuity, and encourage multimodal travel.

Step 3: Build High-Capacity Transit Readiness Strategies (Long-term)

3A. Network Integration

- In coordination with regional transportation partners, develop a Transit Network Plan to strengthen corridor connections to the Downtown JRTC transit hub and other transit corridors in the region. Connections should integrate Park-n-Ride locations to create full origin-to-destination (O-D) routing from critical areas of housing, commercial, and military locations. Potential integration with future autonomous or regional transit systems like Brightline and Amtrak should be considered.

3B. Implement full BRT (If Demand Thresholds Met)

- If sustained ridership growth is demonstrated, corridor densities increase, and transit travel times become competitive with auto travel, move forward with full BRT and integrate it with the Southwest Commuter Rail. Activate the greenways with coordinated wayfinding and branding to fully establish the placemaking vision of the Roosevelt Corridor Streetscape Plan. Bus stops and transit stations should be upgraded into cooling stations.

Suggested Technologies for Further Research and Use on this Corridor

- Advanced Traveler Information Systems: Provides real-time route and mode recommendations based on O-D-informed transit options, shifting travelers away from congested segments.
- Mobility-as-a-Service Platforms: Integrates transit, shuttles, and parking into a single platform to operationalize O-D findings and reduce reliance on single-occupancy vehicles.

Key Outcomes

- Expand transportation system redundancy by developing independent bicycle and pedestrian corridors that provide reliable alternatives to Roosevelt Boulevard during emergencies, roadway closures, or significant congestion while supporting military readiness, workforce mobility, and continuity of operations.

Figure 1. Strategic Project NSJ 1.1. Alternative Transportation, Land Use, and Heat-Resilient Corridor Development



Strategic Project NSJ 1.2. Improve Current Vehicular Infrastructure

This project builds on and enhances existing FDOT and North Florida TPO Long Range Transportation Plan priorities for the Roosevelt Boulevard corridor, which is already identified as a Strategic Intermodal System facility and a key regional mobility corridor. The strategies below are designed to complement programmed intersection improvements, safety projects, operational upgrades, access management, and demand-management components that are typically not fully realized within baseline LRTP projects. A primary objective is to maintain predictable access for Navy-designated essential personnel, the industrial workforce, emergency responders, logistics providers, contractors, and mission-support movements during routine peaks, mission-growth conditions, and regional disruptions.

The Roosevelt Boulevard corridor experiences congestion primarily driven by intersection operations rather than a lack of through-lane capacity, with delay concentrated at major nodes such as Timuquana Road, Collins Road, and NAS Jacksonville access points. Signal optimization has the potential to reduce these delays by approximately 10% to 30% without requiring roadway widening, making it a high-impact, cost-effective strategy. In addition, the corridor is characterized by elevated crash exposure because of frequent turning movements and closely spaced access points, which create numerous conflict zones along the roadway. These challenges are further compounded by NAS Jacksonville gate operations, which generate periodic surges in traffic and result in queue spillback onto Roosevelt Boulevard, disrupting flow and increasing safety risks (Figure 15).

The documented growth of the Fleet Readiness Center Southeast mission further strengthens the need for reliable corridor access. A corridor disruption could delay or prevent the movement of critical operational, industrial, contractor, logistics, and emergency-response personnel, reducing aviation sortie and training capacity or depot-production output. A prolonged disruption could also affect the broader national aviation sustainment enterprise, including growing fifth-generation aircraft and engine maintenance workloads.

Current Stakeholder Projects

- North Florida TPO 2050 LRTP
- **#713 and #720 (Planned, Unfunded)**
- *Freight Improvement*
- *Avent Drive and Timuquana Avenue (SR 134)*

Potential Project Leads and Partners

- North Florida Transportation Planning Organization (NFTPO)
- Florida Department of Transportation (FDOT)

Estimated Cost:

\$29,000,000

Step 1: Intersection & Signal Optimization Short-term Strategies (Short-term)

1A. Improve Timuquana Road & Avent Drive Intersections

- Implement funding and execute North Florida TPO LRTP projects #713 and #720 at the Timuquana Road and Avent Drive intersections to improve freight movement and reduce congestion at this critical access point to NAS Jacksonville. Add dedicated and protected left-turn signal phases to increase traffic throughput and reduce queueing during peak periods tied to base shift changes.
- Reduce crash risk by restricting or consolidating mid-block left turns near the intersection approaches to reduce conflict points and improve signal progression along Roosevelt Boulevard. Install high-visibility signal heads, reflective backplates, and upgraded lighting at the intersection to enhance driver awareness during nighttime conditions.

1B. Improve Collins Road Intersection

- Expand capacity at the Collins Road and Roosevelt Boulevard intersection by installing continuous dedicated right- and left-turn lanes where current gaps exist. Restrict left-turn movements at adjacent commercial driveways and consolidate access points near the intersection to reduce interference with through traffic. Coordinate signal timing with nearby access points and minor intersections along Roosevelt Boulevard to improve progression and minimize stop-and-go conditions that contribute to congestion and crashes.

1C. Corridor-Wide Signal Coordination

- Establish coordinated signal timing along Roosevelt Boulevard between Timuquana Road and the NAS Jacksonville gate approaches to create a continuous “green wave” that supports directional peak travel. Prioritize inbound traffic toward the base during morning peak periods and outbound traffic during evening peak periods to reflect NAS-related demand patterns. Calibrate the signal system to account for recurring congestion fluctuations and improve travel time reliability while reducing unnecessary stops along the corridor.
- Transportation demand forecasting should explicitly incorporate programmed NAS Jacksonville mission growth, including the FRCSE F-35 and F-135 workload ramp through approximately 2034. Rather than assuming historical traffic patterns remain constant, scenario analysis should test alternative FRCSE workforce and shift configurations, contractor presence, and logistics demand. Public Navy workload projections of approximately 600,000 annual F-135 maintenance labor hours provide a quantifiable mission-growth signal for corridor planning.

Step 2: Access Management for Reduced Friction Strategies (Mid-term)

2A. Timuquana Road to Collins Road Segment (High Conflict Commercial Zone)

- Consolidate closely spaced commercial driveways along the segment between Timuquana Road and Collins Road into shared access points to reduce the number of conflict locations. Install raised medians along Roosevelt Boulevard to restrict mid-block left turns and redirect turning movements to signalized intersections. Improve internal circulation between adjacent

parcels to reduce reliance on direct access to Roosevelt Boulevard and support smoother through traffic flow.

2B. NAS Gate Influence Zones (High-Constraint Safety Area)

- Channelize traffic movements within NAS gate influence areas using curb separators, striping, and delineators to reduce erratic vehicle behavior. Separate base-entry traffic from local access traffic where feasible by assigning dedicated lanes or routing patterns that minimize interaction between different vehicle movements. Establish designated routes for authorized vehicles and deliveries to reduce disruption to commuter traffic during peak access periods.
- Improvements should prioritize predictable access for Navy-designated essential personnel, industrial workers, emergency responders, logistics providers, contractors, and mission-support movements during routine peaks, mission-growth conditions, and regional disruptions.

2C. Corridor-Wide Access Management Policy Integration

- Adopt zoning and land development regulations that encourage shared access agreements, cross-access easements, and interconnected internal circulation networks for properties along Roosevelt Boulevard, particularly within commercial corridors. Promote multimodal connectivity by providing safe pedestrian and bicycle connections between adjacent developments, transit stops, and the public sidewalk network. Enforce minimum driveway spacing and access management standards consistent with FDOT requirements to reduce conflict points, improve safety, and preserve corridor capacity.
- Require new development and redevelopment to align access points with existing or planned signalized intersections whenever feasible and discourage direct access to Roosevelt Boulevard where alternative access is available through shared driveways, frontage roads, or local street connections. Coordinate with FDOT during the development review process to maintain corridor mobility, safety, and long-term operational efficiency while supporting all transportation modes.

Key Outcomes

- Maintain predictable vehicular access for Navy-designated essential personnel, the FRCSE industrial workforce, emergency responders, logistics providers, contractors, and mission-support movements during routine and disrupted conditions.
- Reduce the potential for corridor congestion, incidents, or access disruptions to affect aviation operations, training capacity, depot-production output, and national-level fifth-generation aircraft sustainment.

Figure 15. Strategic Project NSJ 1.2. Improve Current Vehicular Infrastructure



Strategic Project NSJ 1.3. Modernize Operational Technologies for Demand and Emergency Responsiveness to Create a Safe, Smart Corridor

The Roosevelt Boulevard corridor currently operates as a high-volume arterial with largely reactive traffic management, where congestion is driven by peak-period surges tied to NAS gate access, adjacent commercial activity, and regional commuting, and where existing Intelligent Transportation System (ITS) is limited to coordinated signals, basic detection, and localized operational improvements. To address this, the corridor should evolve through a phased transition toward a fully integrated smart system, beginning with foundational upgrades such as adaptive signal control, enhanced detection, and NAS gate coordination to improve real-time responsiveness and reliability. As these systems mature, mid-term strategies expand into integrated corridor management, cross-jurisdictional signal coordination, real-time traveler information, and demand management tools that proactively balance traffic across the network, creating a fully coordinated smart corridor that supports multimodal operations, improves transportation system reliability, reduces crash frequency and severity, strengthens emergency response capabilities, and enables future mobility innovations without requiring major roadway expansion. Adaptive traffic-management systems should be capable of responding to changing installation demand patterns, including future FRCSE industrial shift structures, without requiring publication or external dissemination of detailed Navy personnel schedules or gate operating procedures.

In the long term, the corridor can advance into a predictive, data-driven environment through artificial intelligence (AI)-enabled traffic management, connected vehicle technologies, and dynamic system optimization, ultimately creating a fully coordinated smart corridor that supports multimodal operations, reduces congestion and crashes, and enables future mobility innovations without requiring major roadway expansion (Figure 16). Transportation technology investments should support not only congestion management and operational efficiency, but also post-crash care by improving incident detection, emergency vehicle routing, signal preemption/prioritization, interoperable communications, and coordinated emergency response. These technologies can improve survivability, reduce secondary crashes, and strengthen transportation system resilience during both routine incidents and large-scale emergencies.

Current Stakeholder Projects

- Roosevelt Boulevard Traffic Study

Potential Project Leads and Partners

- Florida Department of Transportation (FDOT)
- Jacksonville Transportation Authority (JTA)
- NAS Jacksonville (NASJAX)
- City of Jacksonville Transportation Planning Division
- Orange Park
- North Florida Transportation Planning Organization (NFTPO)

Estimated Cost:

\$33,900,000

Step 1: Improved Safety, Access, and Traffic Operations Reliability Strategies (Short-Term)

1A. Deploy Adaptive and AI-Enhanced Signal Control and Queue Safety

- Adaptive Signal Control Technology should be implemented between Timuquana Road, Collins Road, and the NAS Jacksonville gate approaches to dynamically adjust signal timing based on real-time traffic conditions. This system should be enhanced with AI-driven predictive traffic management that anticipates demand spikes associated with NAS shift changes and adjusts signal timing accordingly to reduce recurring congestion.
- Real-time signal optimization through integration with Advanced Traffic Management Systems (ATMS) should be used to minimize stop-and-go conditions that contribute to rear-end crashes, especially during peak inbound and outbound periods. Queue detection systems should be installed upstream of NAS gate entrances and at key intersections to monitor queue lengths and provide real-time warnings to drivers while triggering responsive signal adjustments to prevent spillback into through lanes.

1B. Establish Foundational Smart Corridor ITS with Emergency Response Prioritization

- A foundational smart corridor ITS network should be deployed, including traffic cameras, detection sensors, and automated incident detection systems focused on high-incident locations such as the Timuquana Road and Collins Road intersections and near NAS Jacksonville gate access points. Dynamic message signs should be installed along the corridor to provide real-time hazard alerts, congestion warnings, and incident information to drivers approaching the corridor.
- Incident management should be enhanced through coordinated quick-clear protocols among FDOT, local law enforcement, and Jacksonville Fire and Rescue to reduce crash-related clearance times and minimize corridor disruptions. Emergency vehicle signal preemption should be implemented at key intersections to improve access to NAS Jacksonville and regional medical facilities. Coordination with emergency responders should also establish designated priority routes and staging areas to improve response efficiency during routine incidents and major events. Corridor improvements should further support rapid emergency access through signal preemption, intelligent routing, adaptive traffic management, and designated emergency response routes while maintaining efficient traffic operations during emergencies.

1C. Introduce Dynamic Traffic Management Tools

- Dynamic lane control should be piloted along constrained segments of Roosevelt Boulevard, particularly near NAS gate approaches and major intersections, to allow for flexible lane use during peak periods and reduce bottlenecks without physical widening. At the same time, the corridor should be prepared for future vehicle-to-infrastructure applications by upgrading signal controllers and communications systems, enabling future integration of real-time vehicle communication technologies that can enhance safety and traffic flow.

Step 2: Improve Corridor Performance, Mode Shift, and Safety Integration (Mid-Term)

2A. Implement Integrated Corridor Management with Safety Integration

- An Integrated Corridor Management system should be implemented to coordinate traffic signals, transit operations, and incident response across the full Roosevelt Boulevard corridor, with a focus on the segment between Timuquana Road and NAS Jacksonville. This centralized system should use real-time traffic, transit, and incident data to proactively adjust operations and reduce conditions that lead to crashes, such as sudden stop-and-go traffic and queue spillback. Integration with transit operations should ensure that signal adjustments account for bus movements without compromising overall corridor safety.
- Integrated corridor management should also support multimodal transportation by incorporating pedestrian and bicycle detection, multimodal signal timing considerations where appropriate, and operational strategies that improve coordination between transit, pedestrians, bicyclists, emergency responders, freight movement, and general traffic.

2B. Coordinate Signal Systems Across Jurisdictions

- Signal timing along Roosevelt Boulevard should be coordinated with parallel routes and connecting corridors in Orange Park to improve regional traffic distribution and reduce pressure on the Roosevelt corridor.
- Use the ATMS to enable cross-jurisdictional coordination, ensuring consistent signal progression across municipal boundaries.
- Implement the V2I capabilities to support speed harmonization and smoother progression through signalized intersections, reducing abrupt braking and associated crash risks.

2C. Strengthen Emergency Response, Incident Management, and Post-Crash Care

- Incident detection systems should be fully integrated with local emergency dispatch systems to enable faster identification and response to crashes and roadway incidents along Roosevelt Boulevard. Coordinated response protocols among FDOT, law enforcement, and emergency services should be refined to reduce incident clearance times, particularly during peak periods when delays have the greatest impact. Real-time traveler information systems, including dynamic message signs and mobile applications, should be used to provide rerouting guidance during incidents, helping to redistribute traffic and maintain corridor reliability.
- Emergency response strategies should also support post-crash care by minimizing the time between crash occurrence, incident detection, emergency notification, responder arrival, and access to appropriate medical care. Technologies that improve automated incident detection, emergency vehicle routing, interoperable communications, signal preemption, and responder coordination can improve survivability while reducing secondary crashes and maintaining corridor reliability during both routine incidents and large-scale emergencies.

Step 3: Build Advanced Smart Corridor and High-Capacity Safety Systems (Long-Term)

3A. Deploy AI-Based Predictive Safety and Traffic Management

- Advanced AI-based traffic management systems should be deployed to analyze historical and real-time data to predict high-risk conditions along Roosevelt Boulevard, particularly at recurring bottlenecks such as Timuquana Road, Collins Road, and NAS Jacksonville gate approaches. These systems should dynamically adjust signal timing, traffic routing, and speed management strategies to prevent congestion and reduce crash risk before conditions deteriorate. At the same time, a full connected vehicle ecosystem should be implemented, enabling vehicle-to-infrastructure and vehicle-to-vehicle communication to provide drivers with real-time hazard warnings and speed advisories that enhance safety and improve corridor flow.
- Future connected vehicle technologies should evaluate opportunities to support automated crash notification, enhanced incident detection, responder coordination, and other emerging applications that improve post-crash response, reduce emergency response times, and strengthen overall transportation system resilience.

3B. Expand Dynamic Lane and Demand Management

- Dynamic lane control should be expanded across longer segments of Roosevelt Boulevard, allowing lane assignments to adjust in real time based on directional demand patterns associated with NAS operations and regional commuting flows. Real-time routing strategies should be implemented to actively manage congestion by directing drivers to alternative routes when conditions warrant, reducing pressure on critical segments of the corridor.

Key Outcomes

Future implementation should consider performance measures related to corridor reliability, emergency response times, annual crash frequency and severity, incident clearance duration, multimodal travel reliability, and transportation system resilience to support adaptive management and continuous improvement.

Figure 16. Strategic Project NSJ 1.3. Modernize Operational Technologies for Demand and Emergency Responsiveness to Create a Safe, Smart Corridor



Alignment and Support of the Regional Resilience Action Plan

Figure 17. Alignment with the RRAP

SCALE	ACTION	DESCRIPTION
	8	Support regional transportation networks
	14	Encourage smart growth and building practices
	19	Promote diverse transportation options and support safe multimodal transportation
	22	Promote deployment of green infrastructure and nature-based solutions
	23	Recommend innovative emergency preparedness practices and processes
	26	Promote public health and quality of life
	29	Evaluate major changes in heat patterns and monitor contributing factors
	33	Evaluate distribution of resources to ensure vulnerable communities are served, including an assessment of food security



Facilitate



Guide



Analyze

This project advances RRAP Actions 8, 14, 19, 22, 23, 26, and 29 by addressing the sole access corridor to NAS Jacksonville, where all three gates open onto a six-lane arterial carrying approximately 38,000 vehicles daily and experiencing acute congestion at base shift changes. Strategic Projects NSJ 1.2 and NSJ 1.3 advance intersection and signal optimization, access management, adaptive signal control, queue detection upstream of gate entrances, and emergency vehicle preemption. These implement Action 8 (Support Regional Transportation Networks), specifically, Subaction 8.1 on ensuring safe and sufficient evacuation routes and Subaction 8.2 on improvements to regionally significant transportation assets designed for future conditions, which directs the Collaborative to ensure local governments have and use sea level rise, flood zone, and extreme heat projection data in transportation improvement projects. Emergency vehicle preemption, quick-clear protocols, dynamic message signs, and coordinated incident response additionally support Subaction 23.1 on compiling and distributing locally relevant hazard information across the region.

Strategic Project NSJ 1.1 delivers this package's strongest multimodal alignment. The Roosevelt Corridor Streetscape Plan with form-based code, protected and buffered bicycle lanes, continuous sidewalk connections, pedestrian and vehicular lighting, and prioritized crossings implements Action 19 (Promote Diverse Transportation Options and Support Safe Multimodal Transportation) across Subaction 19.1 on drafting complete streets ordinances for local governments, Subaction 19.2 on promoting and distributing safe bike lane design standards, and Subaction 19.3 on fostering safe and walkable streetscapes, the subaction in which the RRAP cites Jacksonville's ranking as the 15th most dangerous city for pedestrians and calls for continuous sidewalks and multi-use paths connecting neighborhoods with public transit through first and last mile improvements.

The long-term progression toward bus rapid transit, integration with the Southwest Commuter Rail, and consideration of connections to Brightline and Amtrak implements Subaction 8.3 on encouraging investment in regionally significant transit, which names both high-speed rail and expanded Amtrak service as regional priorities the Collaborative will promote. Transit-oriented-development-supportive zoning with mixed-use nodes at Timuquana Road and the NAS access areas advances Subaction 14.2 on promoting infill and increased density in strategic areas.

This package is one of only two in the MIRR portfolio with substantive extreme heat content, and the only one connecting mobility to food access. The street tree planting program providing full-coverage shade at maturity, large-canopy median plantings, required shading for surface parking lots, transit stops upgraded into cooling stations, and the continuous canopy and greenway network implement Action 29 (Evaluate Major Changes in Heat Patterns and Monitor Contributing Factors), specifically, Subaction 29.2 on tracking regional tree canopy, which the RRAP identifies as a critical metric of community heat resilience, and Subaction 29.3 on tracking impervious surface cover, noting that surface types contribute unevenly to the urban heat-island effect.

Bioswales, street tree wells, and green infrastructure integrated into the streetscape plan implement Subaction 22.4 on supporting the creation of green streets, which the RRAP describes as incorporating tree wells, curb extensions, bioswales, and cool or permeable pavements within public rights-of-way and directs the Collaborative to coordinate with FDOT on concurrent green street standards.

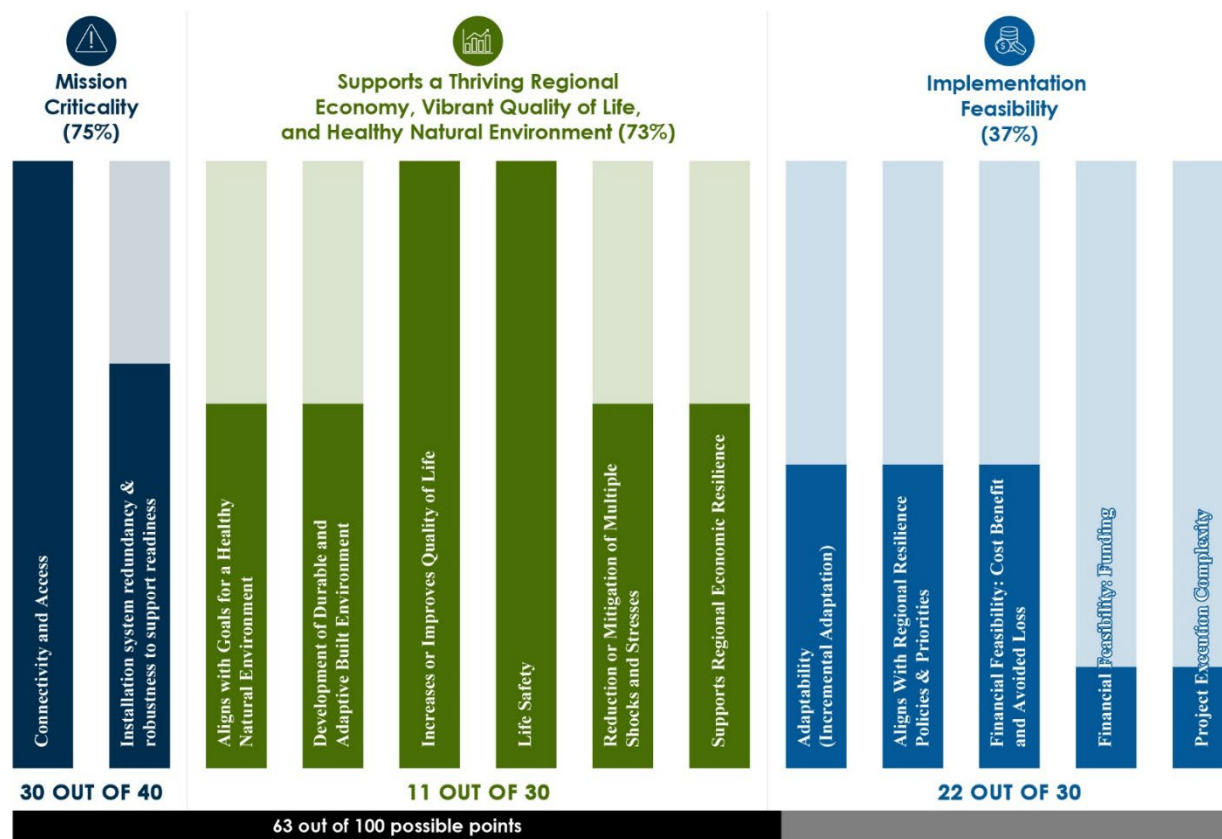
The corridor's identification as a transportation spine within a food desert connects directly to Subaction 26.4, under which the Collaborative encourages local governments to provide free transportation to grocery stores, citing the Jacksonville Transportation Authority by name, and supports Action 33 on evaluating distribution of resources to ensure vulnerable communities are served, including an assessment of food security.

Expanded multi-use trail connections at Tillie K. Fowler Regional Park and the utility right-of-way trail connector further support Subaction 26.2 on fostering physical health through public facilities and multi-use trails, which the RRAP illustrates with the Emerald Trail.

Metrics Score

The NAS Jacksonville Roosevelt Boulevard Mobility Corridor project was evaluated against a robust series of metrics to determine the appropriateness, viability, and achievement of goals (Figure 18). 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 18. Metrics Scorecard Results



Cost-Benefit Analysis

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

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

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).

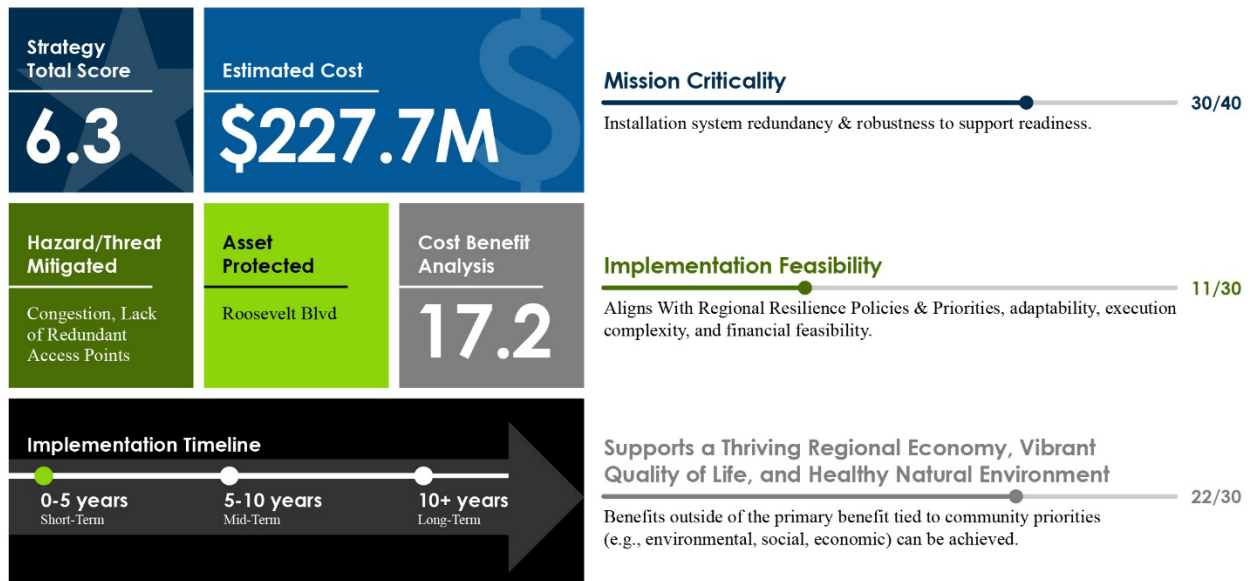
Adaptation project costs were costed to include project construction and design costs, where feasible. Project benefits were costed to include direct (construction or repair costs) and indirect (social, economic, and environmental) costs whenever feasible.

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 19. 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.

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.

Note: 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 3. 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/BUILDgrants)	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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