



ENGINEERING THE **FIRST COAST**

Promoting Engineering to Future Generations

ENGINEERS WEEK
FEBRUARY 20-26

2022

TABLE OF CONTENTS

City of Jacksonville Proclamation 3
 Co-Chairperson’s Message — Danielle Blanchard, PE 4
 Co-Chairperson’s Message — Joe Champion, PE 5
 Supporting Societies 6
 Design Considerations for Resiliency in Automation 8
 2021 Florida Infrastructure Report Card 10
 Emerald Trail 13
 2022 E-Week Calendar 17
 2022 Chair of the Transportation Research Board (TRB) . . . 18
 Sponsors 20
 2022 E-Week Committee 19

ADVERTISEMENTS

ASHE 6
 FES. 7
 ASCE 7
 Haskell. 20
 ECS Florida, LLC 17
 Prosser, Inc. 11
 Civil Services Inc. and CSI Geo 15
 Eisman & Russo 9
 Half Associates, Inc. 9
 Matthews Design Group 8
 Meskel & Associates 2
 Chen Moore & Associates (FW&A). 2
 CHW Professional Consultants 9
 DRMP 18
 Environmental & Geotechnical Specialists, Inc. (EGS) 16
 Hanson Professional Services, Inc. 15
 LJA Engineering 16
 Miller Electric Company 16
 RS&H 9
 T2 Utility Engineers 18
 Terracon Consultants, Inc. 12
 VIA Consulting Services, Inc. 2



a **cma** company
www.chenmoore.com



VIA CS
 VIA CONSULTING SERVICES, INC.
 Your Full Service CEI Team!
 Construction Engineering and Inspection
 Certified DBE & JSEB
 www.via-cs.com (904) 783-9842




MAE
 Meskel & Associates Engineering
 Geotechnical ▽ Environmental ▽ Inspection ▽ Testing

Integrity • Safety • Responsiveness • Quality • Resourcefulness

Meskel and Associates Engineering is committed to providing innovative, cost effective geotechnical and environmental consulting services for our clients. Accuracy, competitive pricing and on-time reporting are our commitments to our clients on every assignment.
Call us today to help with your next project!
904-519-6990
 meskelengineering.com

CITY OF JACKSONVILLE PROCLAMATION



PROCLAMATION

ONE CITY. ONE JACKSONVILLE.

WHEREAS: Since 1951, February has been recognized by The National Society of Professional Engineers as National Engineers Week (EWeek). February was first chosen to recognize EWeek to be concurrent with George Washington’s birthday, in acknowledgement and recognition of the first president, the nation’s first noteworthy engineer, and surveyor; and

WHEREAS: EWeek is a formal coalition of more than 70 engineering, education, and cultural societies, and over 50 corporations and government agencies. Dedicated to raising public awareness of engineers’ beneficial contributions to quality of life, EWeek advances recognition and appreciation among parents, teachers, and students of the importance of a technical education and a high level of math, science, and technology literacy, and motivates and influences youth to pursue engineering careers in order to develop a more diverse and vigorous engineering workforce; and

WHEREAS: Engineering professions play a pivotal role in providing citizens with numerous everyday necessities, including the design and construction of computer systems, water systems, mechanical systems, electrical transmission and distribution systems, industrial facilities, and complex medical devices; and

WHEREAS: Through their hard work, engineers tackle the technological challenges of our times by analyzing and researching sustainable energy sources, studying new techniques to upgrade and enhance safety, and expanding the nation’s worldwide communication potential; and


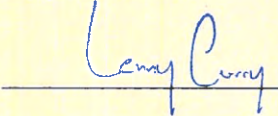
WHEREAS: Jacksonville continues to support and encourage engineers and relies heavily on their extensive knowledge and expertise to meet the needs of our future in Northeast Florida and throughout the world.

NOW, THEREFORE, I, LENNY CURRY, by virtue of the authority vested in me as mayor of Jacksonville, Florida, do hereby proclaim February 20-26, 2022 as

ENGINEER’S WEEK

in Jacksonville and encourage all citizens to acknowledge the extensive contributions engineers continue to make in our community.

IN WITNESS THEREOF, this 7th day of Dec. in the year Two Thousand

MAYOR

CITY OF JACKSONVILLE, FLORIDA



CO-CHAIRPERSON'S MESSAGE

Danielle Blanchard, PE | VIA Consulting Services, Inc.

On behalf of the Northeast Florida Engineers Week Committee, I want to begin by saying thank you to all of our company sponsors for their contributions this year. We have far exceeded the sponsorship totals from recent years, and we could not be more proud of our professional community. I sincerely hope you enjoy the programs that our committee has put together for you.

The past two years have been a challenge for our industry. Many of us are still facing those challenges, and yet I still experience tremendous progress in our engineering community. I personally get thrilled for the future when I think about the level of dedication I have seen this year, from our committee to our partnering societies to our company sponsors. It's clear to me that our industry is growing, and our goal as a committee is to continue to grow with you.

Engineers are sure to see some very busy years ahead with the influx of infrastructure funding and the continuous, widespread growth of Jacksonville. It has thus become increasingly important for us to connect with younger generations and promote engineering education and careers, which is one of the primary functions of E-Week. This year, I highly encourage every professional attending our events to engage with students, and share your passion for engineering!

Thank you again for your continued support, and I wish you all a safe and successful week.

Danielle Blanchard



CO-CHAIRPERSON'S MESSAGE

Joe Champion, PE | ECS Florida, LLC

Welcome to Engineers Week 2022. It's been a very busy year for all of us that are a part of the Engineering community. Maybe you count out-of-state license plates like me, but we all have seen a significant influx of people moving to Florida. I sure can't blame them as we are blessed to live in a great state of opportunity, weather, activities, and diversity. I work and serve an excellent company that has staff all throughout the country and I take every opportunity to talk about working another day of being covered in warm sunshine when others are talking about snow and ice.

Growth has been a significant theme for the past year which wouldn't be possible without you, and the engineering profession supporting community and economic growth. I'm sure it's been a crazy, but good, year whether you support the residential, transportation, water resources, safety, utility, educational, healthcare, commercial, industrial, manufacturing, or any of the booming markets.

I enjoy E-week because it brings our industry together and engages our future generation, hard-working professionals, educators and public officials. E-Week is a time to step back and spend a little time to appreciate our profession and colleagues that have a meaningful impact to our communities, society, companies, and organizations.

I am appreciative of the volunteer time and growth of the E-Week committee. Please take a moment to recognize them as they are also very busy with their jobs and E-Week is probably just one of several organizations they volunteer their time to help shine the spotlight on Engineers. Special thanks and appreciation to Danielle who was the true leader of our group and put together a great Engineers Week.

Joe Champion

SUPPORTING SOCIETIES

- American Concrete Institute (ACI)
- American Public Works Association (APWA)
- American Society of Civil Engineers (ASCE)
- American Society of Highway Engineers (ASHE)
- American Society of Mechanical Engineers (ASME)
- American Society of Plumbing Engineers (ASPE)
- American Water Works Association (AWWA)
- Design Build Institute of America (DBIA)
- Florida Association of County Engineers and Road Superintendents (FACERS)
- First Coast Manufacturers Association (FCMA)
- Florida Engineering Society (FES)
- Florida Structural Engineers Association (FSEA)
- Florida Transportation Builders Association (FTBA)
- Florida Society of Surveyors and Mappers (CROWN FSMS)
- Institute of Electrical and Electronics Engineers (IEEE)
- Institute of Transportation Engineers (ITE)
- North East Florida Builders Association (NEFBA)
- National Utility Contractors Association (NUCA)
- Society of Military Engineers (SAME)
- Society of Marketing Professionals (SMPS)
- Society of Women Engineers (SWE)
- UNF – The College of Computing, Engineering & Construction (CCEC)
- US Green Building Council, North Florida (USGBC NF)
- Women’s Transportation Seminar (WTS)



SUPPORTING SOCIETIES



Networking

As an FES member you are part of a community of over 3,300 engineers in Florida.

Community Outreach

FES gives you a great opportunity to give back or to "pay it forward" through great programs including K-12 programs, MATHCOUNTS, fundraisers to benefit Scholarship programs, and involvement with Student Chapters.

Leadership Opportunities

Become a student in our world renowned Florida Leadership Institute (FELI) or becoming involved in a FES Committee or become a Chapter Officer.

Continuing Education

FES offers a number of affordable programs and products that allow you to grow your technical expertise, improve your leadership skills, and help keep your career on track.

Career Resources

FES offers job listings, opportunities to market yourself, forward.



Jacksonville Branch

When you join ASCE, you become part of the largest professional civil engineering network in the world. As a part of our community, you have access to our industry's most comprehensive communication, networking, and learning resources.

Your local ASCE Jacksonville Branch offers:

- Monthly Joint-Society PDH Luncheons
- Social and networking events
- Community Outreach
- And Much More!

Join our mailing list for event info at JAXASCE.COM



DESIGN CONSIDERATIONS FOR RESILIENCY IN AUTOMATION

Chang Industrial

Chang Industrial designs factories and e-commerce facilities.

At Chang Industrial, we have challenged ourselves to be the **disruptive thinkers of our industry** and champions of advanced robotics. We seek to **transform business** by holding close to our values: diversity, generosity, and mentorship. Our company philosophy has always been founded on these values as we strive to create innovation with IIoT (Industrial Internet of Things), software, and autonomous technology. We have a clear millennial and gen-z bias in our approach.

One way Chang Industrial seeks to be disruptive thinkers in our industry is championing our **thought leadership**. We believe great thinking backed up by values leads to all our business success. Below we expound on the idea of resiliency in design for autonomous technologies. The four design considerations of resiliency that should be applied to scalable, autonomous technology are discussed in the remainder of this article.

The first thing a system designer should consider in creating resilient systems is to **eliminate closed architecture software**. The design

engineer should try to avoid vendor lock-in or creating black boxes within a system. They should also enable plug-in from third parties. This will help ensure that the systems and software are as flexible as possible and can be adapted over time.

The second thing to consider when analyzing the resiliency of a system is the amount of **computing capacity** that happens in the cloud vs. on premise. Every business should be using the power of the cloud in their computing capacity. The loss of internet or power could sever communications with the outside world rendering systems useless. Therefore, some amount of reserve capacity or artificial intelligence should always be located on premise so that an operation can stay up and running despite outside interruptions.

The third aspect of resiliency that should be addressed in design is **communication mediums**. There are many to choose from today, and we recommend making a diverse selection. Ethernet, ultra-wide band, 5G, DSRC, radio communications, Wi-Fi, LoRa, and 4G LTE, just to name a few. When designing the communications mediums some considerations should be bandwidth, data exchange, edge computing, and redundancy so that operations can survive in the event of a primary failure.



We Can Help You Build Your Vision From The Ground Up

From conception to completion, we can provide a total solution to meet your needs. From residential projects to large-scale commercial developments, MDG staff has the knowledge and skill to bring your project to life.



CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE
CONSTRUCTION INSPECTION • PLANNING



Offices in St. Augustine & Jacksonville | www.MDGinc.com | 904-826-1334

The final design consideration of any resilient, scalable, autonomous technology should be **power consumption**. We would first challenge that the power should be compatible with renewable resources such as solar or wind. Additionally, advanced power systems such as lithium-ion batteries should be considered.

There are also many new low voltage, low power consuming ways that power is distributed such as power over ethernet or 12- and 24-volt DC power distribution systems. These systems are not only effective and environmentally friendly but can lead to increased safety with no risk of severe electrical shock.

A resilient design is one that is focused on the end user, the long-term durability of the system, and the cost of operating. Resiliency is one of the most important design considerations for any system.

For more thought leadership, visit changindustrial.com and to stay up to date with all of our latest content, follow us on [Twitter](https://twitter.com) and [LinkedIn](https://www.linkedin.com).



ENGINEERS • ARCHITECTS • SCIENTISTS • PLANNERS • SURVEYORS • CEI



JACKSONVILLE | TAMPA | TALLAHASSEE | TAVARES
MIRAMAR BEACH | PANAMA CITY BEACH | CHIPLEY



Join Our Team!

RS&H

You need bold ideas
That's why our integrated teams show up as dedicated, caring partners.

rsandh.com

JACKSONVILLE | GAINESVILLE | OCALA
planning.design.surveying.engineering.construction.
www.chw-inc.com

EISMAN & RUSSO
CONSULTING ENGINEERS

Transportation Planning & Engineering
Communication and Innovation.

Construction Management & CEI
Best Practices. Oversight. Processes. Protection.

Disaster Management & Recovery
Responsive. Prepared.

E&R
Est. 1985

ENR TOP 100
Top 100 Construction Management
Engineering News-Record
2015 - 2021: Seven Years Running

Eisman & Russo
CONSULTING ENGINEERS
Serving the Southeast since 1985.

Where Commitment and Action Meet.

Florida: Jacksonville | Clermont | Coral Springs | Crestview
Green Cove Springs | Lake Wales | Leesburg | Miami | Orlando
Panama City | St. Augustine | Weston | Winter Haven Corporate: 6455 Powers Avenue, Jacksonville, FL 32217
p: 904.733.1478 f: 904.636.8828

www.eismanandrusso.com

2021 FLORIDA INFRASTRUCTURE REPORT CARD

Portions of article reprinted from the October 27, 2021 Florida's Infrastructure Report Card Update Release transcript prepared by ASCE National.

The Florida Section is the local chapter of ASCE National, which is the oldest and largest civil engineering society in the nation, originating in 1852 and serving more than 150,000 members. Our section was founded in 1929 and has more than 7,000 members from all disciplines and sectors of civil engineering. Our section consists of 13 branches, 18 technical institute chapters and technical groups, and 11 student chapters.

The 2021 Report Card for Florida's Infrastructure covers 14 categories. These categories include aviation, bridges, coastal areas, dams, drinking water infrastructure, energy, levees, ports, roads, schools, solid waste, stormwater, transit, and wastewater infrastructure. Each category was assessed by a team of civil engineers who assigned the grades according to the following eight criteria: capacity, condition, funding, future need, operation and maintenance, public safety, resilience, and innovation. Using a simple A to F school report format, the 2021 Report Card provides a comprehensive assessment of current infrastructure conditions and needs.

The cumulative grade for the 2021 Report Card for Florida's Infrastructure is a "C". A "C" means our infrastructure is in fair to good condition. The 2016 Report Card for Florida's Infrastructure also featured a cumulative grade of "C". While some chapters and sectors have surely improved since 2016, the addition of three new chapters, two of which being among our lowest-graded chapters, prevented the overall GPA from improving. Florida agencies and businesses have a lot to be proud of from this report with some of the strongest performing infrastructure networks in the country. However, it is important that no infrastructure sector is left behind in state and community dialogues so that the cumulative grade can reflect the state's many successes.

Our teams found in most cases, our government officials are doing exemplary work with the resources allotted to them. The full financial effects of the COVID-19 pandemic are not fully understood at this point, although we have been seeing some of the trickle-down effects in recent data. All sectors of infrastructure have been impacted by the pandemic, some more than others, and each has had a different response to the issue.

Florida's agencies have done a tremendous job maintaining some of the best bridge and road conditions in the nation, while also hosting thriving aviation and ports sectors, which all play a key role in supporting our world-renowned tourism industry and movement of goods throughout the region. Florida leadership continues to increase the state's transportation budget – including recent investments in the transit network – allowing for these sectors to flourish despite seeing heavy use and dealing with everlasting climate threats.

Roads received a strong grade of "C+" in the report. Only 31% of Florida's major roadways are in poor condition, compared to 42% nationally. Florida DOT's effective use of asset management and prioritization of maintaining existing assets before implementing capacity expansion projects helps the state's roadway network remain as one of the best in the nation despite the stresses of a surging population and severe weather on the network. Our motor fuels tax is indexed to adjust with inflation, ensuring that its effectiveness in funding road and bridge maintenance and expansion remains strong year-by-year. In addition, state appropriations are increased regularly – jumping from \$9.7 billion dollars in 2019 to \$10.3 billion in 2021. Within the 2017 to 2021 work program is \$2.8 billion dollars being invested in highway construction, which includes 210 new lane miles and \$1 billion dollars towards resurfacing nearly 2,700 lane miles. Even though Florida's population is growing, the state agency is making some progress on reducing congestion. Specifically, between 2017 and 2019, the travel time reliability for personal vehicle miles, like those for commuting to and from work and dropping kids off at school, has improved by 1.5% as mobility projects are being implemented across the state. Florida has a long-established and highly effective approach to preservation and maintenance of its pavement assets, utilizing asset management practices to maintain the existing infrastructure before implementing capacity projects – which is partly to thank for these good conditions. However, among these great metrics is a sobering one: Florida's roadway fatality rate is higher than the national average. The state will need to continue working on methods of roadway safety to lower the amount of fatalities on our roads.

Bridges received a "B" with nearly 65% of Florida bridges being in Good condition compared to the national value of 45%. Meanwhile, only about 3% of Florida's bridges are in Poor condition compared to more than 7% nationally. Governor DeSantis' increased transportation budget also benefits bridge repairs. The state consistently integrates new bridge and pavement materials which require less frequent maintenance and renovation, such as High-Performance Concrete and Carbon Fiber Reinforced Polymers. Despite these positive conditions and innovative practices, from 2017 to 2020 the percentage of Florida's bridges in Good condition decreased. The same trend is seen across the United States, but Florida's change over time occurred more quickly. In addition, Florida has reported a slight uptick in bridges considered in Poor condition, from 1.9% in 2016 to 3.2% in 2020. The state will need to monitor this trend and work to reverse the slippage in conditions.

Florida's **airports** received a "C+" support more than 170 million annual passengers, more than 43,000 jobs and \$175 billion in economic activity, all sharp rises over the course of a decade.

DISCOVER
YOUR
FUTURE
WITH US.

PROSSER
Creative Visionaries. Engineering Minds™

904.739.3655 | prosserinc.com
13901 Sutton Park Drive South, Suite 200 | Jacksonville, FL 32224

Florida's airports are a critical component to the state's diverse economy driven by tourism, agriculture, aerospace, and manufacturing. International air cargo is a multi-billion-dollar industry with Florida serving as Latin America's largest gateway into the U.S. In 2014, 2.7 million tons of domestic and international air cargo passed through Florida's airports, and by 2035, that value is projected to increase to 4.1 million tons, putting strain on the industry. Florida's airports do face capacity constraints, but the sector is aggressively pursuing solutions, adding gates and modernizations at each of the four major airports in the state.

Transit received a "C". Florida's transit systems provide millions of people with automobile, bus, paratransit, rail, and ferry services. Florida's local funds and multi-regional expansions have tracked with the changing operational needs while state and federal funds have increased to fill some gaps and contribute to capital investments. Florida's transit system benefits from adaptive planning, such as first and last mile options, to counteract challenges like population growth, impacts from climate change, and increased dependence on digital systems.

Ports received high marks with a "B" grade. Florida's 15 seaports generate nearly 900,000 jobs and \$117.6 billion in economic value. Over the last five years, Florida's seaports have invested significantly in capacity and operational improvements to accommodate larger Post-Panamax vessels, improve cargo and intermodal transfer efficiency, and enhance the cruise experience for millions of passengers. During the period from 2011 to 2018, the State of Florida invested more than \$1.2 billion in improvements across its 15 seaports, helping ensure the ports

are ready for the future. Each of Florida's ports has important projects in the works. Deepening the channels and harbors is critical for remaining competitive and handling the trend of larger vessels in the world shipping fleet that require 47- to 50-foot shipping channels. This allows our ports to remain competitive in the global marketplace.

Energy received a "C+". Utilities have been investing in resiliency and in 2019, Florida was among the five areas in the nation with the shortest annual outage duration totaling less than 90 minutes. For a state as heavily impacted by storms as we are, that is an incredible accomplishment. To be more resilient, utilities are burying thousands of miles of distribution lines. Florida Power & Light Company plans to bury between 2% to 3% of its distribution lines each year and invest \$1 billion dollars annually into storm hardening for the next 10 years. Utilities are required to submit 10-year transmission and distribution storm protection plans, which are reviewed every three years – this makes sure Florida's grid is constantly being evaluated for the best ways to overcome storms. The state is also a nationwide leader in solar energy generation, and over the next decade, the state's natural gas portfolio is projected to decline by 6% while renewables are expected to increase by 10%.

Solid Waste had the highest grade in the report with a "B+". Increased populations of both permanent residents and 120 million annual tourists are contributing to the amount of Municipal Solid Waste generated skyrocketing to nearly triple the national average. Yet Florida's recycling rate is far beyond the national average, as the state recycled 42% of its solid waste compared

to the national average of 24%. What's most impressive is that Florida has the second largest waste-to-energy conversion rate in the country. The state generated about 5 million megawatt hours of energy from biomass sources.

Drinking water received a 'C' in the report, as systems have managed to sustain adequate capacity despite an influx of water demand. Florida is a national leader in the reuse of reclaimed water, with reclaimed water projects making up 35% of all water supply projects. A significant number of utilities own infrastructure that is older than 40 years, with some utilities owning treatment facilities that are 50 years old. Some utilities use asset management techniques to best address aging pipelines, but this is not a statewide trend. More widespread adoption of asset management could save utilities time and money when making replacements, while also better serving customers.

Wastewater earned a "C" in the report, as the state is a national leader in reclaimed wastewater and climate adaptation frameworks. All of Florida's domestic wastewater systems have a combined treatment capacity of 2.7 billion gallons per day, though only about 1.5 billion gallons is used, leaving adequate capacity to accommodate some future population growth. While the design capacity for the largest wastewater treatment plants and conveyance networks are currently sufficient, smaller systems are increasingly overwhelmed by the frequent and extreme weather events which cause public health issues like sanitary sewer overflows. Since 2015, the number of sanitary sewer overflows Floridians experience has been rising. In late 2021, Governor DeSantis awarded an additional 103 wastewater and springs projects totaling \$481 million.

Stormwater received a "C-", largely due to only 35% of localities having a stormwater program to fund and maintain the infrastructure. Florida's stormwater management infrastructure plays a significant role in sustaining suitable conditions for tourists and residents alike through flood protection and water quality improvements. The current investment needs are significant, estimated at \$1.7 billion dollars from 2019 – 2023, or about \$14 million per stormwater entity by 2023. Fortunately, Governor DeSantis signed into law Senate Bill 1954 in May 2021, which designates \$500 million to support the implementation of resilient stormwater projects.

Coastal Areas received a "C-". Florida's economy is heavily dependent upon tourism from its natural coastal environment. Aside from their significant economic impacts, beaches reduce storm damage to coastal infrastructure and communities. While local municipalities are making strides in coastal restoration, natural erosion and coastal development threaten Florida's coasts. Approximately 62% of Florida's 825 miles of sandy shoreline shows signs of erosion with 50% identified as critically eroded. Federal disaster funding has reduced the funding gap, but significant work remains.

Dams received the lowest grade in the report with a "D-". Florida has nearly 1,000 dams, 98 of which are High Hazard Potential, meaning if the dam failed loss of life or significant economic damage would occur. Only 41% of Florida's dams have an Emergency Action Plan on record, compared with 81% nationally.



Terracon
Explore with us

8001 Baymeadows Way, Suite 1
Jacksonville, FL 32256
P (904) 900-6494

Terracon.com

- Environmental
- Facilities
- Geotechnical
- Materials

Emergency Action Plans have been known to save lives during failures or collapses – the lack of an EAP can be a fatal oversight.

Florida's **levees**, which received a "D+" protect nearly \$100 billion dollars in property values, more than 1.6 million people, and 481,000 structures. Despite their crucial role to Floridians, only 40% of Florida's levees have been assessed for risk. At the time of this report, 60 of the state's levee systems have inspection ratings, with 70% of those inspections indicating an unacceptable rating.

Schools received a "D+" in the report. A February 2019 report of Orange County Schools, one of the fastest growing districts in the state, showed 51% of elementary schools, 62% of middle schools, and 60% of high school were over capacity. Existing funding for schools and portable classrooms is not sufficient for increasing capacity constraints.

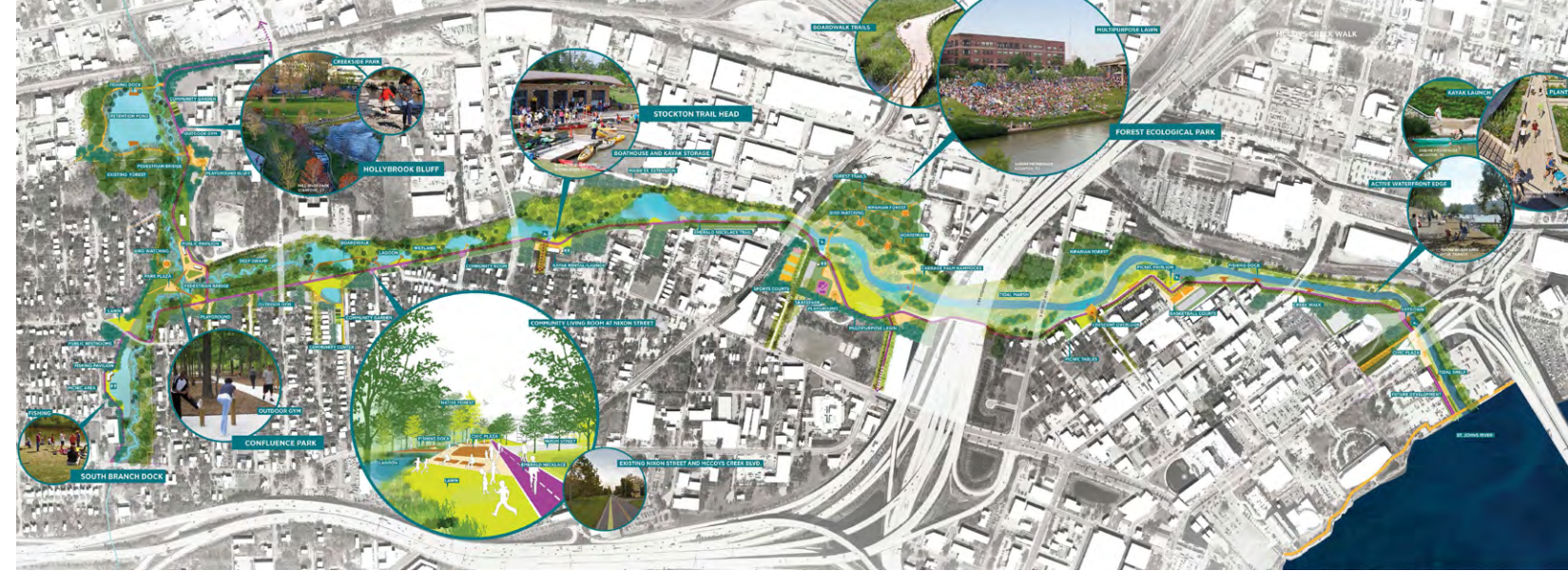
RECOMMENDATIONS TO RAISE THE GRADES

First, Florida must continue its leadership and investment in critical transportation and freight sectors to strengthen the economy and public safety.

Second, we must improve routine data collection and assessment in Schools, Dams, and Levees sectors to expand the public and lawmakers' access to information to inform safety and funding decisions.

And third, engineers must expand the application of new approaches, materials, and technologies across Florida's infrastructure sectors to improve its ability to withstand or quickly recover from natural or man-made hazards.

Please take a few minutes to read the full report at: <https://infrastructurereportcard.org/state-item/florida/>



THE VISION: MCCOYS CREEK RESTORATION & RECREATION PLAN

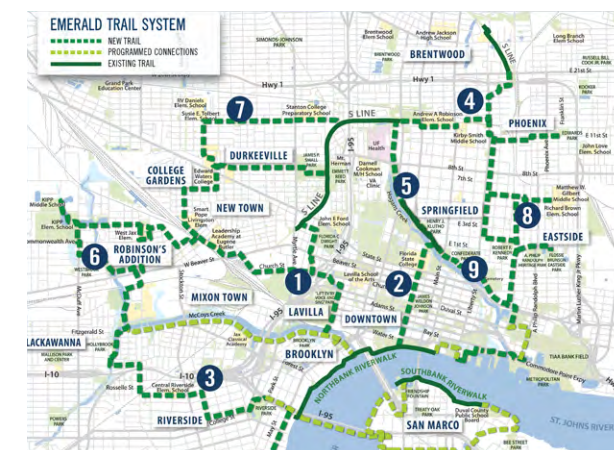
JACKSONVILLE'S EMERALD TRAIL



In the early 20th century, famed architect Henry Klutho envisioned an "emerald necklace" of parks, trails and creeks encircling downtown Jacksonville. To realize this 100-year-long vision, the City of Jacksonville established a Groundwork Trust in 2014 in partnership with the US National Park Service, the US Environmental Protection Agency and [Groundwork USA](#).



One of only 21 trusts across the country and the only trust in Florida, [Groundwork Jacksonville, Inc.](#), is the nonprofit partner specifically created to restore the city's urban creeks and clean, redevelop and convert contaminated land into parks, playgrounds, trails, and other public greenspace.



Groundwork Jacksonville developed the Emerald Trail Master Plan in collaboration with the PATH Foundation—the organization responsible for building more than 280 miles of trails in Georgia—and KAIZEN Collaborative, one of the

Southeast's leading trail planning and design firms. The master plan was adopted by Jacksonville City Council in 2019.

For the public-private partnership, Groundwork is responsible for the trail and creek design including raising private dollars for a portion of the design cost. In addition, Groundwork manages community outreach to ensure all stakeholders, especially residents from neighborhoods along the proposed trail, are involved and can provide ideas and input throughout the iterative design process. Groundwork's goal is to deliver a world-class experience that reflects and celebrates the history and culture of each the unique neighborhoods.

When complete this signature outdoor destination will encompass 30 miles of contiguous trails, greenways and parks that encircle the urban core and connect 14 historic urban neighborhoods to downtown, Hogans Creek, McCoy's Creek and the St. Johns River.

The Emerald Trail will link to 16 schools, two colleges and 21 parks among other destinations like restaurants, retail and businesses, with 13 additional schools and 17 parks located within three blocks of the trail.

Like other successful urban trail projects in Atlanta, New York, Miami, Indianapolis and Greenville, S.C., the Emerald Trail is more than a place for recreation. It will deliver significant benefits including economic development, neighborhood revitalization, health and wellness, social connections, environmental resiliency, tourism and community pride.





Lee Street Pond



Park at Convention Center



S-Line at Railyard District



Hogan at Ashley Street

ABOUT THE EMERALD TRAIL MASTER PLAN

Within the overall Master Plan, the trail system is dissected into two implementation tiers. Tier 1 reflects Klutho's original vision for the "emerald necklace," with linkages to the existing S-Line Rail Trail. Tier 2 expands the trail to provide additional connections to several historic neighborhoods and Edwards Waters College. The goal is to have a trail segment within acquisition, design, permitting, and construction at all times until completion, which is anticipated to be 2029.

Tier 1 includes 6.8 miles of new trail:

- Segment 1 - Model Project: South end of S-Line on State Street to the intersection of Park Street and Stonewall Street
- Segment 2 - Hogan Street Connector: Hogans Creek at 1st Street to the Northbank Riverwalk at the Landing
- Segment 3 - Southwest Neighborhood Connector: Artist Walk under I-95 to the south end of the McCoys Creek Greenway on Edison Avenue
- Segment 4 - S-Line Connector: Boulevard Street to East 21st Street
- Segment 5 - Hogans Creek Greenway: S-line near 12th Street to Hogans Creek Greenway at North Laura Street

Tier 2 includes 14.1 miles of new trail:

- Segment 6 - Westside Connector: McCoys Creek Boulevard at Leland Street to Florida C. Dwight Memorial Playground
- Segment 7 - Northwest Connector: McQuade Street north of the active S-Line to Moncrief Road
- Segment 8 - Eastside Connector: North Liberty Street just south of East 13th Street to Hogans Creek Greenway south of the Arlington Expressway
- Segment 9 - Hogans Creek to Riverwalk: Hogans Creek Greenway at Laura Street to Northbank Riverwalk at Newnan Street

LAVILLA LINK

The first phase of the Emerald Trail is the 1.3-mile LaVilla Link connecting the Brooklyn neighborhood to the existing S-Line Rail Link through the historic LaVilla neighborhood. Construction of LaVilla Link began in September 2021 and is expected to be complete fall 2022. The estimated construction cost is \$8.9 million.

A 14-foot-wide concrete pedestrian/bicycle trail is designed for both active and passive recreation with abundant shade trees and native plantings. It features several signature points of interest like the Park Street Bridge and the Lee Street Pond, where users may pause and reflect. In addition, the Trail will honor the LaVilla neighborhood through wayfinding, storyboards and public art installations while connecting to the historic landmarks, Lift Ev'ry Voice and Sing Park and Florida C. Dwight Memorial Playground (Park).



McCoys Creek Phase I — Wood/SCAPE

HOGAN STREET LINK

Design of the Hogan Street segment of the Emerald Trail has begun and is expected to be completed spring of 2022. This .9-mile trail links the St. Johns River to FSCJ and Springfield through the urban core. Construction will begin Fall 2022. The project is projected to cost \$7 million.

Points of interest along The Emerald Trail Hogan Street Link include:

- Riverfront Plaza
- VyStar Breezeway
- Murals under the Skyway
- St. James Building (City Hall)
- Sweet Pete's Candy Shop in the historic Seminole building
- Museum of Contemporary Art
- Federal Courthouse at Hogan and Duval streets
- Swain Church on Laura Street
- Public Library with its large owl sculpture at Laura and Monroe streets
- FSCJ Downtown Campus

MCCOYS CREEK RESTORATION

The City of Jacksonville has committed \$105.4 million to remedy McCoys Creek flooding, create neighborhood-friendly spaces, improve recreational opportunity, and protect the environment. While keeping citizens safe



Forsyth to Adams Street

from flooded roads and polluted flood waters is the highest priority, the City's plan also includes returning McCoys Creek to the beautiful neighborhood amenity it once was. The McCoys Creek restoration plan includes:

- Trees and native plants
- Landscaping, lighting and benches
- Picturesque green spaces
- Neighborhood sidewalks and trails
- Underground litter collection
- Connections to the Emerald Trail
- Open views and access to McCoys Creek
- Future planned amenities



Phase 1 construction is underway, and a large section of McCoys Creek Boulevard has been removed. Cul-de-sacs with new trees, landscaping, lighting and sidewalks are being constructed at the end of Sunshine, Leland, Crystal, Smith and Broward streets and will be complete later this year.

The Emerald Trail will run adjacent to the restored creek and will include a comprehensive recreation plan that includes parks, fishing piers, fish and wildlife habitats, a kayak launch and both active and passive green space.

Design continues on Phase 2 of McCoys Creek, from Myrtle Ave. east to the St. Johns River, as plans for One Riverside are finalized. In addition, design of the branches at the western-most end of McCoys Creek, is complete and the project will go out for bid very soon.



HOGANS CREEK RESTORATION

Hogans Creek begins just north of the S-Line Rail Trail, flows under the UF Health Campus, heads south through historic Springfield and outflows at the St. Johns River.

Like McCoys Creek, Hogans Creek suffers from years of pollution and floods often. Hogans Creek is especially challenging because of the extensive development that has encroached on its natural flood plain. Within Klutho Park, the once scenic promenade and “grand canal” built by Henry Klutho and engineer Charles Imeson in 1929 is failing.

Preliminary Hogans Creek design is underway, and Groundwork is actively engaging stakeholders to gather input that will be incorporated into the design. The Trail Master Plan includes improving the crossing conditions and enhance the greenway to match the established design standard for the entire Emerald Trail system. The restoration goal is to reduce flooding, improve water quality and provide access and recreational opportunities along the creek.

HOW THE EMERALD TRAIL MASTER PLAN WAS DEVELOPED

Over a six-month period, the PATH/KAIZEN team reviewed numerous research and planning documents developed over the years by the City and other organizations, per-



EGS

Environmental and Geotechnical Specialists

Engineers and Scientists

formed extensive field research to determine potential routes that will connect active destinations and vetted their findings with Groundwork Jacksonville and key constituents.

Each month the design team met with a Steering Committee convened by Groundwork Jacksonville. In addition, Groundwork met monthly with a Neighborhood Working Group comprised of community members who live and/or own businesses along the proposed trail.

To help prioritize trail segments for implementation the Steering Committee first considered extending existing trail segments, like the S-Line, to provide greater trail use and connectivity. The group also took into consideration input from the Neighborhood Working Group and others in the community to determine the most desired trail connections.

The iterative planning process incorporated feedback from the Neighborhood Working Group and other constituents at each stage of development. The draft plan was presented to a standing-room-only group of more than 300 community members in July 2018, who provided additional feedback and input.

The \$88,200 plan cost was privately underwritten by a \$50,000 donation from JTC Running (JTC) as well as through grants from Local Initiatives Support Corporation (LISC) and the Giving Forward Community Endowment Fund at The Community Foundation for Northeast Florida.



2022 E-WEEK CALENDAR OF EVENTS

- FEBRUARY 18** 2022 NEFL E-WEEK KICKOFF SCHOLARSHIP LUNCHEON | UNF UNIVERSITY CENTER | 11am - 2pm
 We welcome engineers across Northeast Florida to celebrate our profession and present annual awards and scholarships.
- FEBRUARY 23** HAPPY HOUR SOCIAL HOSTED BY JEST | LEMONSTREET BREWING COMPANY | 5:30pm - 9pm
 Network with fellow professionals and students in a casual setting.
- FEBRUARY 25** MATHCOUNTS | UNF UNIVERSITY CENTER/VIRTUAL | TBD
 MATHCOUNTS of Northeast Florida hosts the chapter-level competition for all middle schools within Baker, Bradford, Clay, Columbia, Duval, Nassau, St. Johns, and Union counties.
- FEBRUARY 25** CAREER DAY HOSTED BY SAME | JACKSONVILLE PUBLIC LIBRARY | 8am - 2:30pm
 Each year SAME (Society of American Military Engineers) sponsors an Engineering Career Day event. 25 teams from local high schools and middle schools are anticipated to attend.
- FEBRUARY 26** AWARDS BANQUET | SAN JOSE GOLF & COUNTRY CLUB | 5:30pm - 9pm
 Recognize outstanding companies, projects and individuals and enjoy happy hour, the keynote speaker, music and casino!



ENGINEERING CONSULTING SERVICES

Engineering Consulting Services (ECS) is a leader in geotechnical, environmental, construction materials and facilities engineering. Our expertise, solution-oriented focus, client responsiveness and commitment to employee and job safety have built our reputation in the industry as the firm to call when exceptional service matters most.



GEOTECHNICAL



CONSTRUCTION MATERIALS



ENVIRONMENTAL



FACILITIES

ECS FLORIDA, LLC | 904.880.0960 | ECSLIMITED.COM

2022 CHAIR OF THE TRANSPORTATION RESEARCH BOARD (TRB)

David C. Cawton II



Jacksonville Transportation Authority (JTA) Chief Executive Officer Nathaniel P. Ford, Sr. was named 2022 Chair of the Transportation Research Board (TRB) Executive Committee, part of the National Academies of Sciences, Engineering and Medicine. Ford's term began during the 101st TRB Annual Meeting Jan 12.

Shawn Wilson, secretary of the Louisiana Department of Transportation and Development, will serve as Vice Chair. Marcia McNutt, president of the National Academies of Science and chair of the National Research Council (NRC), appointed Ford to the position.

"I am honored to lead the TRB Executive Committee during this transformative time, as we collectively implement historic funding from Congress and as we push forward policies to improve public transportation, aviation, freight, ports and logistic industries across the nation," said Ford.

"This is also an opportunity for Jacksonville to shine as a national leader in logistics, transportation and innovation, and to showcase our strengths and boundless opportunities for growth," he added.

"All of us at TRB are looking forward to Nat Ford becoming Chair of the TRB Executive Committee," said Neil Peterson, TRB Executive Director. "His thoughtful leadership style and extensive transportation executive experience makes him the right person to lead the Executive Committee at this pivotal time as TRB addresses a number of major critical transportation-related issues."

TRB is a program unit of the National Academies of Sciences, Engineering and Medicine — private, nonprofit institutions that provide independent, objective analysis and advice to solve complex problems and inform public policy decisions related to science, technology and medicine. The National Academies operate under an 1863 congressional charter to the National Academy of Sciences, signed by President Lincoln.

The TRB Executive Committee comprises approximately 25 members, who provide balanced representation of transportation modes, academic disciplines, public and private sectors, levels of government, geographical regions and other relevant factors. The committee also provides strategic direction and oversight for all of TRB's programs and activities. This oversight is to ensure that programs and activities are constructive to both the transportation system and the nation. Committee members are appointed to a three year term, and can be reappointed for one additional term. Membership comprises high-ranking officials, esteemed academic professionals, and executives from all modes of transportation and logistics industries.

Ford has served as JTA CEO since December 2012. He is also the past chair of the American Public Transportation Association (APTA).

During his time in Jacksonville, the JTA has received numerous awards for innovation and operational excellence. APTA named Ford as its Outstanding Public Transportation Manager in 2020, the same year the JTA won the APTA Innovation Award for its innovative response to the COVID-19 pandemic. The Eno Center for Transportation named Ford its Thought Leader for 2019. President Barack Obama named Ford a White House Champion of Change in 2015. Under his leadership, the JTA received the APTA Outstanding Public Transportation System Achievement Award in 2016.

Professional Surveying & Mapping, SUE, and Utility Coordination Services
Quality Information & Insight for your Project
T2ue.com /// 386-269-3469

DISCOVER THE DRMP DIFFERENCE

www.DRMP.com

DRMP
JOIN OUR TEAM

SPECIAL THANKS TO OUR SPONSORS:

DIAMOND	GOLD	SILVER
PLATINUM	 	
BRONZE	SUPPORTING SPONSOR	

2022 E-WEEK COMMITTEE MEMBERS:

<p>CO-CHAIRPERSON Danielle Blanchard, PE VIA Consulting Services, Inc.</p> <p>CO-CHAIRPERSON Joe Champion, PE ECS Florida, LLC</p> <p>TREASURER Tina Meskel, PE Meskel & Associates Engineering</p> <p>ANNUAL AWARDS Will Vaughn, PE, SI ECS Florida, LLC Joe Champion, PE ECS Florida, LLC</p> <p>ASCE KICK-OFF LUNCHEON Samantha Hanke Mott MacDonald</p> <p>MATHCOUNTS Chase Wilkinson ETM Leila Ibrahimovic RS&H Gabriel Pastrana, PE Pastrana Engineering & Environment, LLC</p>	<p>SCHOLARSHIPS Cheryl Freeman, PE 321 Strategies, LLC</p> <p>WEBSITE Leslie Lawson ECS Florida, LLC Danielle Blanchard, PE VIA Consulting Services, Inc.</p> <p>NEWSLETTER Katie Ball, PE Environmental and Geotechnical Specialists, Inc. Leslie Lawson ECS Florida, LLC</p> <p>AWARDS BANQUET Robert Jackson, PE Haskell Nicole Bohaczyk, PE US Army Corps of Engineers Samantha Hanke Mott MacDonald</p>	<p>HAPPY HOUR Katie Ball, PE Environmental and Geotechnical Specialists, Inc. Nicole Bohaczyk, PE US Army Corps of Engineers</p> <p>SPONSORSHIPS Corey Chascin, PE VIA Consulting Services, Inc. Nancy Debs, PE Five Points Design Group, Inc. Danielle Blanchard, PE VIA Consulting Services, Inc. Joe Champion, PE ECS Florida, LLC Gene Howerton, PE Arcadis Glen Lusink, PSM DRMP, Inc. Brian McKee, PE Hanson Professional Services Matt McLeer, PE Haskell Tricia Milliken DRMP, Inc.</p>
---	--	---



**NORWEGIAN CRUISE LINE
CRUISE TERMINAL B "THE PEARL"**

A \$230M project totaling 546,757 square feet
Delivered by a NV2A-Haskell JV using CAD and BIM
digital models that stretched the limits of Autodesk
and other engineering technologies
ENR Southeast 2021 Best Project Award Winner

Excellence.

1,850+ architects, engineers, constructors and administrative professionals.
20 offices across the US, Latin America and Asia. Over \$1B annually in commercial
and industrial markets for both private and public sector clients.

Design is our passion. Excellence is our mission.

www.haskell.com

Florida ♦ California ♦ Colorado ♦ Georgia ♦ Minnesota ♦ Missouri ♦ North Carolina ♦ Oklahoma ♦ Texas ♦ Utah ♦ Wisconsin
Mexico ♦ China ♦ Malaysia ♦ Philippines ♦ Singapore