

Florida Freight Advisory Committee (FLFAC) Meeting October 2021

Inspiring Innovation

I. Call to Order

Holly: Looks like everyone is here, good afternoon and thank you for participating in our FLFAC meeting. This committee is one of the many steps FDOT has taken to ensure that our public and private stakeholders are at the table every step of the way as we plan the future of Florida's transportation industry, and we are excited that you have chosen to be a part of these efforts.

Looks like we're ready to get started, so I now call the Florida Freight Advisory Committee to order.

Roll Call:

John Abrams	Lauren Ferrell	Nick Primrose
Joe Arbona	Patrick Feeney (not here)	Mike Rubin (not here)
Aubrey Brown	Bruce Lyon	Tori Rumenik
Gene Conrad	Terri Malone	Andre Samuel (not here)
William Crowe	Robert Midgett	Greg Stuart
Jaha Cummings	Carol Obermeier (not here)	Alexander Trauger
Kevin Daugherty (not here)	Seckin Ozkul	Kevin Walford
Laura DiBella	Samuel Pearson	Barbara Wilson
John Dohm		Desiree Ann Wood

We have a quorum.

Holly: Before we move on to new business, let's take a moment to approve the meeting minutes from June. The meeting minutes for all meetings are posted on [FDOT.gov/FLFAC](https://www.fdot.gov/FLFAC). As a reminder, our last meeting was held virtually on June 2, 2021. We did introductions of our members, voted on our new chair and co-chair (John and Nick), then discussed some of FDOT's recent safety efforts. Meeting minutes are approved.

II. Welcome & Housekeeping

Holly: The theme of today's meeting is Inspiring Innovation, one of FDOT's vital few areas. We'll start with a quick overview of Connected and Automated Vehicle (CAV) technology in freight projects, we'll do an exercise to get your input on the changes to the Primary Highway Freight System (PHFS), we'll have a discussion on supply chain infrastructure led by our chair and co-chair, and lastly we'll hear an update on our optimization study.

Diana: A few housekeeping reminders: All committee members should be panelists at this point, but please try to keep your microphones muted when we are not in a discussion setting. If you do have questions or comments during a presentation, or if anyone who is not a committee member has input to provide, please use the question box or chat box, and we'll be monitoring that throughout the meeting. Only committee members will participate in the voting/live polling sections of this meeting. Remember, these webinar meetings are recorded, and the meeting materials will be posted to our FLFAC website.

III. Using Connected and Automated Vehicle (CAV) Technology in Freight Projects

Holly: Raj Ponnaluri is here today to give us an update from the leadership role at the CAV office within DOT.

Raj: Thank you everyone, I am going to present to you to the FDOT CAV, mainly in how it relates to freight. I will be touching on three key things:

- FRAME (Florida's Regional Advanced Mobility Elements)

- Freight Safety and Mobility CAV Applications

- Vehicle-to-Everything (V2X) data Exchange Platform (DEP)

FRAME - This Program started a few years ago with a ATCMTD grant application in Districts 2 and 5. Though we did not win the grant, FDOT decided to ensure that this project moves forward regardless. Engineers were brought in to make sure the project management and progress was done well from the start. Systems Management was completed, and this project has a portal connection that allows many of the freight information to be utilized. The success of this project led to I-4 Frame getting funded through the ATCMTD grant application later. I-4 Frame should be completed in 2022 and 2023. Now there is a focus on integrated corridor management (ICM) on three important corridors in the state: I-4, I-75, and US 41. These FRAME projects support 15+ CAV applications and freight signal priority is being explored on several projects (safety and mobility applications) and are usually applicable on arterials.

Freight Signal Priority is another technology that Florida is working to adopt. In this technology a computer will speak to the signals in an area and make sure that they are adjusted to allow smoother movement of freight vehicles.

This slide is a V2X exchange platform. This is a new topic that FDOT has been pioneering. As FDOT started applying projects, a question came up. “How much data is actually useful to the users”

There is something called “on-board units and roadside units”. These speak to each other from the vehicle to the roadside. These will begin to push travel messages to the vehicles and the live boards saying that there is a slow-down, or some sort of information that will allow smoother operation.

The main issue is that many of these onboard units are very expensive. With the number of vehicles out there, the state could never afford to provide one for each vehicle. Enter V2X.

This will bring in data from all of the differing sources possible. During this collection, it can also make analytical recommendations. These recommendations can then be disseminated to third party users. This can be incorporated into the advanced dashboards of current vehicles. These data packages can then be used to inform all drivers of these vehicles without the need for an on-board unit.

With that, Holly, back to you.

Holly: We have discussed with the committee before the FRAME projects. Years ago we had a problem of not enough data. Now there is almost too much data and trying to find which one is worth purchasing and how it can be disseminated. It is great that Raj is working towards a way to utilize this information.

Desiree: Besides FSP, how does this affect truck parking?

Raj: The FDOT is a leader in the nation for truck parking technologies. We already have a lot of tracking information for how many and where truck parking is available, the next step is to utilize that information to inform the drivers ahead of time in push notifications. We are also preparing by having the CAV integration infrastructure ready. There is a case that can be made that we are aware of the issues, and are moving towards solutions of freight in CAV and data.

John Dohm: You said this was a data issue. Are we going to try and encourage vehicle manufacturers to establish and develop a standardized format of the technology needed within the vehicle?

Raj: The issue is that there is no current established standardized data technology. We hope that if we can standardize the data we are providing, then we can ask them “What is it that you want?” to the third party, and we may be able to standardize data sets in a way that can encourage the industry to utilize this information and drive standardization on their end.

Holly: Thank you Raj for joining! Let’s move on to the next section.

IV. Changes to the PHFS

Holly: You may remember the FAST Act and the fact that it designated the Primary Highway Freight System (PHFS). This is the core highway system on the freight side of things. The mileage here is limited but Diana will provide some more necessary detail on how to shape these designations.

Diana: Everyone here is likely familiar with the NHFN. The NHFN (National Highway Freight Network) designations provide eligibility for highway projects for the freight formula program and INFRA grant program. The network was created to strategically direct Federal resources and policies toward improved performance of the most important freight routes. The NHFN consists of the following components: the PHFS (the Primary Highway Freight System); Critical Rural Freight Corridors (CRFCs); Critical Urban Freight Corridors (CUFCs); and the portions of the Interstate System that are not part of the PHFS.

Congress established the PHFS as a network of highways intended to reflect the most critical highway portions of the U.S. freight transportation system, determined by measurable and objective national data. The FAST Act provided for an update to the PHFS every 5 years, and so this year the FHWA is re-designating the PHFS to meet the statutory requirements of the authorizing law.

FHWA is seeking input from states and state freight advisory committees to help with where to put the additional mileage for this update. Each re-designation may increase the mileage on the PHFS by not more than 3 percent of the total mileage of the system. The network consists of 41,518 centerline miles, including 37,436 centerline miles of Interstate and 4,082 centerline miles of non-Interstate roads.

The re-designation initiated through this RFI may add up to 1,246 miles of additional mileage to the current PHFS. That would be 960 miles after including centerline miles that have been added to the network for accuracy.

We are going to get some input from you today, which is just an interim step in our process to making a recommendation to FHWA, which is just an interim step in their process to deciding where this mileage ultimately ends up around the country.

In FHWA's request for information, they provided 3 options for allocating the new mileage.

- (1) Provide an equal allocation of these 960 miles to each State (~18 miles of potential new PHFS for each State, the District of Columbia, and Puerto Rico)
- (2) Accommodate States that have greater restrictions on the use of Interstate Highway System routes. There are 18 States (including FL) with PHFS mileage greater than or equal to 2% of the total PHFS mileage. These States may not obligate funds for projects on the non-PHFS interstate highways. This option would result in ~53 miles of new PHFS for these States.
- (3) Add the PHFS to any routes newly flagged as Interstate Highway System (since it was built in 2015 from 2011 data). However, there are only 1,246 miles available, and 1,500 miles of new Interstate have been designated between 2011 and 2018.

Please enter your vote in the chat box for which of these three options we should go with for identifying these segments.

****Option 2 has the most votes, option 3 has the second most****

Now that we have an option, we'd like to take a closer look at ten segments that are the highest value for designation according to our analysis. We used Freight Analysis Framework (FAF) and Highway Performance Monitoring System (HPMS) data to generate tonnage of freight moved by highway and Average Annual Daily Truck Traffic (AADTT) on principal arterials. We also looked at network gaps, key facilities, and significant bottlenecks. These are the 10 segments we came up with, what route they are on, and the estimated length of the segment. They vary in length just based on how the factors lined up – sometimes to connect to a facility the segment needed to be longer, or sometimes a bottleneck or high tonnage area was short, etc.

As we are walking through these segments, please jot down how you feel about each segment. We will then have a live polling exercise where you will have a hypothetical \$100 to invest in the segments based on how valuable you think they are to the network.

Poll Results:

Jacksonville is the winner with 28% followed by the Tampa Segment at 17% and Maitland at 12% Ft. Lauderdale at 12% Hialeah Segment at 11%

William Crowe: We have a segment in another part of the state that is not captured in this PHFS, is there any way that can also be included in?

Holly: Yes, this would be a good example of how we utilize the CUFC and CRFC as an ad-hoc method to designate routes for funding as projects arise. We will let you know when that process begins, and we can start that process there.

Jaha Cummings: How does Southwest Florida play into this consideration? We expect that southwest Florida will eventually take up some of the weight that Southeast Florida is carrying due to overages of them not being able to handle the increasing flows.

Holly: Yes, this is our next step is to define areas that we need to prepare for the future.

Alexander Trauger: Wouldn't it be more beneficial to remove and change the sections from a contiguous format to something more specifically allocated to core facilities that are utilized? Though it may not look as clean, it would be a useful way to get funding where it is needed.

Holly: Yes, this is also in the works, but it is good to hear this is something that our industry partners are also considering. To that end, please work with us on this exercise to help identify other areas that should be considered.

Desiree Ann Wood: It seems to me that we should be working backwards from something like the ports or other large investments, areas where bottlenecks were reduced such as that. By utilizing the investments to extend the original large investments we can hopefully reduce future bottlenecks from forming between the two investments that have been made.

Holly: Let's discuss some of these dots.

Laura DiBella: From an economic development perspective, this dot (on I-10 near Jacksonville) this is a huge development area. The north south and east west connection is only becoming more and more integral to the state's infrastructure, and this is a key area where rail also comes through.

Nick Primrose: I'd like to echo what Laura has said, there is already a large amount of development in that area, and it is only growing faster and faster. Even the DEM was discussing building a large warehouse in that area to be able to action across the state the need for goods in support of a response to the emergency.

Holly: This is exactly what we are looking for, information that needs to be said that may not get caught in the data analysis, especially regarding future development.

William Crowe: Space Coast Florida is currently growing with the largest satellite manufacturing firm on the east coast currently be developed.

Audrey Brown: With the current strain on moving goods into the country, we believe there is a great opportunity for Northern Florida to have some investment into multi-modal freight to

ensure we are taking more vehicular traffic off the road. We can't forget that there is so much rail connectivity in northern Florida and we should take that network into account when deciding which roadways to invest in.

Kevin Walford: Route 60 has a 27-mile section that is only a two lane checkpoint for freight and vehicles, this is one of the few significant routes in the state that are still at two lanes and absolutely needs more investment to ensure that this can be grown into a full highway.

Diana: Thank you for participating and we will be letting FHWA know these ideas and suggestions that we received from this team.

V. Designing Flexibility for Evolving Technology into Infrastructure

Holly: Moving on to John Dohm to help us understand some of these future changes we are preparing for.

John Dohm: We need to make sure we think of technologies and realize how quickly things are changing, and how difficult it is to tell the future of the industry.

If we look at what computer chips are capable of there has been a consistent doubling of capacity (Moore's Law) that has allowed the evolution of technology and people.

This means that we can now collaborate and plan in a more collaborative fashion that will allow our plans to change over time into something we may have never envisioned.

Barriers to Innovation: Proof of Concept. Demand can be a huge driver to innovation, but until there is that demand it can be a barrier. Demonstration of public demand and track record is problematic for innovations. One way to prove a concept is to do it virtually. Something that we could not do until after 2002, and really not until now, is using digital twins. A digital twin is a virtual representation of a physical asset.

One of the largest issues in affecting demand and freight being able to deliver on that demand is the lack of land where needed and the prohibitive pricing of that land. Innovation to be able to gather some of this land would be the acquisition and development of publicly owned land. Example: At \$1 - 3 million per acre, land is too expensive for truck parking, container and chassis storage, and transfer of low-margin product. This is interfering with Florida's global position as a gateway.

By demonstrating an economic impact by studying something such as where CDL licenses are distributed, it could be possible to identify where the best places are to find this land. If there is no public land available, leases can be considered.

The next challenge would be gaining approval and funding. This can be difficult to the way that some of the government systems work. Issues with lobbyists and other special interests can lead to conflicts when designing and creating innovation.

Further challenges are changes in the supply chain; we see the currently a backlog in ports across all of the ports in the nation. We can utilize this once in a lifetime opportunity to begin bringing ships into Florida to utilize the infrastructure that has been established here to its fullest potential.

Discussion:

Aubrey Brown: Something we may want to take advantage of is the backhaul rates in Florida, we are working to build the shipping relation between Tampa and Mexico. If we can find a way to get goods into Tampa, we can fill some of these containers to move north. 90% of the containers we are moving are empty.

Nick Primrose: Florida ports are open, what we have is a problem with Georgia. It only has one port, so all the funding moves into Savannah. Georgia has essentially incentivized logistics centers to build near Savannah allowing them to concentrate their infrastructure and wealth. Savannah is holding other ports hostage, saying that if they ship things anywhere else, they won't be allowed to utilize their container storage. All the ports in Florida have capacity for further shipping, but it will require Florida making up that difference and challenge Savannah's directive. We are working every day to get more business to ship into Northeast Florida. As some of you may know, the first time CDL licensing rules are changing significantly and will likely further exacerbate the problems that we are already facing.

Desiree Ann Wood: Truck parking is an eligible activity for funding along the NHFP. But there are also significant funding opportunities in SIS funding for truck parking and further investments. When it comes to the backlog, I saw this happening before. This is a replay of what happened in Southern California where property values grew so quickly that there was no land available for the port areas to invest as needed. Something like the wicked hyper system can create a hyperloop system that will allow goods to be moved without the need for affecting the roads outside the port. We also must consider that the driver shortage isn't just a shortage on drivers, but it is also a shortage on decision making by drivers. Many drivers are paid by the mile, and ports are some of the slowest miles that can be travelled. Finally, one of the worst issues that drivers are facing is that they are not allowed to use the facilities at the port or the warehouse they are stopping at. Old facilities near ports need to be re-purposed to give these drivers somewhere to go and shut off while waiting for the loads to be ready to move. Drivers have the same needs everyone else has.

Holly: Thank you for these ideas that are solutions and can help us drive some of the change.

John Dohm: We need to better learn what the government can do and be able to find a way to do things that involve the needed parties to improve the environment around us.

Jaha Cummings: A lot of the issues we are dealing with are due to the government. Think about zoning; things like being able to utilize shopping malls would only require a quick meeting to have the area re-zoned.

Aubrey: There is so much fallow land that we can utilize across all the industries. We are looking to utilize more of it, but it is a slow process, and we will see how it goes.

Robert Midgett: One of the largest issues that we have is the government, we can ask that we figure out how the government can help us, but at the end of the day, why can't they remove some of these time frames that causes the government to slow us down.

Nick Primrose: Florida ports are governed by Florida's procurement laws. This does not allow us to just go ahead and call up a company and get work moving, things must be bid out. This is one example of how we can't move quickly due to small laws such as this. Things that could be easily exempt to allow for movement of investments.

Laura DiBella: We established a trucking training facility to help create more facilities to train and get the industry up to speed with the need for drivers.

Nick Primrose: Governor announced some money to allow for diesel technician training, all of the Northeast ports and industry discussed about how many graduates they are getting each year. This year was 220 graduates with a 100 percent placement rate, because this program works well. It might be time to ask the government to promote more diesel technician and CDL licensure at all state schools. The schooling costs \$2100, and at the age we are looking for drivers, that could be a lot. It may be a great idea to have a funding source for scholarships. This would require a residency requirement for a certain time period so that Florida is receiving the most benefits of this program.

Desiree Ann Wood: There is an issue where drivers from South Florida may not be hired due to the differences geographically across the country. Therefore, it is important that we make sure these schooling programs provide some assurances to companies hiring them that they are taught well enough that they are not a risk during their first two years of driving. Many CDL drivers can get into accidents within the first 6 months to two years leading to increase costs in the insurance of a young driver.

Nick Primrose: Can we make sure this discussion is brought up again at the next meeting? This is something that is very important, and we need to make sure we can solidify something around it.

Holly: Of course, it looks like we need to move forward due to time.

VI. Using Optimization to Enhance Freight Efficiency

Holly: Lastly on our agenda, here is the Quetica team and their optimization project to help show us how this effort is going to help us define the areas most needed for investment by the state.

Mark Berndt: We are establishing a model of north Florida that will give us a virtual representation of the freight system in the region. This will let us define new nodes of where investments can be made to ensure optimization of those funds. The objectives of this project are to: reduce business transportation costs, diversify freight infrastructure, reduce truck congestion, address industry workforce challenges and driver shortages (national/state). Optimization can also address economic development, reliability, and speed to market.

A key point of what the data collection was looking for was the pricing parameters of the industry. This was determined through donated and purchased data.

Project Scope – Model for northern Florida. 34 counties in D2 and D3.

- Discovery completed.
 - o Some data was donated, and other private data sources was purchased.
- Up next are:
 - o Model Design
 - o Implementation

We are just moving into the what-if scenario runs and analysis of the model. Let's examine these models and show what the results might look like.

Panama City Transload Scenario -

- Objective
 - Quantify market opportunities to convert truck to transload (carload) services for dry bulk/dimensional shipments
- Study scope
 - Counties within 50 miles of the analysis county centroid
- Selected commodities most likely to use the transload services
 - 10% market conversion rate

Transload/Carload Assumptions -

- Focused on converting long-haul truck shipments (>250 miles)
 - Focused on lanes delivering significant savings: Door-to-door cost savings > \$5/ton
 - Average weight assumptions: Truckload - 42,000 lbs.; Carload - 175,000 lbs.
 - Transload cost assumption - \$8/ton
 - Commodities included for transload/carload service analysis
 - All results are annualized totals based on FAF-5 and 2019 cost data
- Origin-Destination pairs:
 - FL-FL was much larger than the others.
 - FL-GA
 - GA-FL
 - CA-FL
 - About 4,000 railcars can move freight that is currently being moved by trucks
 - Assumes 10% of the market is converted to rail via transload

Converted Truck Mileage Reduction: 72,214,679 miles

Aubrey Brown: 9% of all the goods moved are moved by rail, does this get considered? (It does)

John Dohm: This does require a larger look across the network, the effects can tie together in so many ways. This is a chicken and the egg butterfly effect.

Holly: We are making sure that once we get these models finalized, they will be validated by the FDOT staff and our partners to make sure that if we are going to pursue some of these potential projects that it is worthy of partnership.

VII. Public Comments

None

VIII. Member Comments

Holly: If there is anything you'd like to add now or anything you'd like for future discussion, now is the time.

John Abrams: I just want to add to the issue regarding parking. Adding spots is a great thing to see here, Love's will be adding 40,00 spots over the next few years and it is critical that this work together. Loves would like to see parking reservation to be a part of the discussion as well.

Joe Arbona: I just want to reiterate how important it is that we also serve the needs of the more rural areas of the state.

Aubrey Brown: CSX is driven to help Florida, and we want to invest in equipment. Any industry that would like to work with us can call me, and we will work to develop multimodal solutions to ensure that Florida can compete with those other areas that have singular port investment.

Gene Conrad: We are growing quickly, and I wanted to let everyone know that this growth benefits the entire state.

Jaha Cummings: I just want to reiterate that we need to keep up with the Port of Savannah. We are a team here.

Laura DiBella: I want to key in on the cohesiveness that is needed by the industry to make sure that Florida can stay at the top. We need to make sure that ports are not an afterthought when discussing moving investments into the state. If we can educate our partners about Florida's ability to help the economy, then we can be more competitive.

John Dohm: We could compete. Florida has the culture and the infrastructure to compete here. 250 miles in Georgia is driving through the woods, but here everywhere you go it's a new world. Thank you all for the comments.

Lauren Farrell: It is fascinating being a part of this committee. We always think the next five years will be a large difference, so we need to consider and make sure we are prepared for these futures. Consider the development of the satellite manufacturing. This will redefine the region, and further development beyond that will ensure that the infrastructure required to head to space is there and ready.

Terri Malone: No comments.

Robert Midgett: The most important thing to freight movement is speed to market. If we can focus on that, we will be more capable of meeting our customers' needs. Who could have imagined that there would be multiple private space agencies by now, imagine where we could go?

Sam Pearson: No comments

Nick Primrose: Thank you for the discussion and for letting us think outside the box, and for helping us remain the supply chain leader in the nation.

Tori Rumenik: We also provided comments to the USDOT regarding PHFS and other requests. They are starting to get questions regarding the supply chain and if they will be able to move anything. I agree that Yeehaw junction could really use some improvements.

Greg Stuart: Last week I was discussing with a committee and the FAA regarding Drones and other such technologies. Is there any committee hear in the state that can go over some of the newer technologies such as that? If we can have some discussions from other states that are trying to innovate in this sector it would be nice to see how Florida can integrate itself into it.

Kevin Walford: Great discussion and am happy to be a part of it. Yeehaw really is scary.

Barbara Wilson: I am excited to be a part of inspiring innovation. It is great to see that we are looking towards the future for problems rather than attacking them as they arrive. I do think this is a great group of people, and it is important that we can break into subgroups and reach out to each other and define some of the problems in a smaller group to find solutions

Desiree Ann Wood: This was a great meeting. We have a competitive advantage in Florida, and there is so much space for being able to do some big things. It is nice to hear so much discussion regarding truck parking. This shouldn't be a revenue generating center based on the space itself. Revenue generation can be done through the utilization of services as opposed to the space itself. We should hopefully be able to.

Diana: There is a final comment in the chat bow - is there an opportunity for the public to see Desiree's presentation?

Desiree: Once it is completed, for sure.

Holly: Next meeting is tentatively scheduled for January. The theme will be Enhancing Mobility.

The following meeting after that will be in spring/summer some time and the theme will be TBD.

IX. Adjourn

Holly: Thank you for your input on the USDOT questions! Motion to adjourn – Adjourned and thank you.