



Intermodal Center & Automated People Mover MTP Amendment Request

Technical Advisory Committee (TAC) Briefing | August 23, 2023

Agenda



Projects Overview

- **Projects History & Summary**

Intermodal Center

- **Current Project Status**
- **Facility Program Summary**
- **Rough Order of Magnitude Cost Estimate**
- **Funding Opportunities**

Automated People Mover

- **Current Project Status**
- **Facility Program Summary**
- **Rough Order of Magnitude Cost Estimate**
- **Funding Framework**

Open Discussion





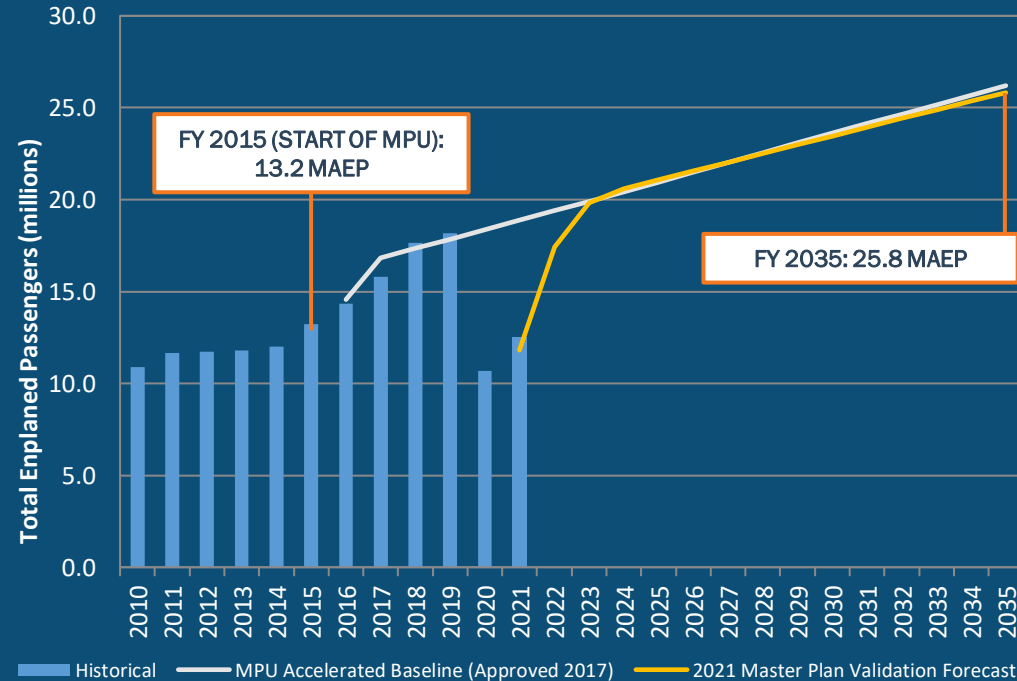
Master Plan Process and Approvals Summary

Key MPU Milestone Dates

- Board approval to submit MPU: November 5th, 2019
- FDOT approval: January 20th, 2021
- FAA approval: February 9th, 2021

MPU Validation Due to COVID-19 Pandemic

- Board approval to amend MPU contract due to the emergence of COVID-19: September 22nd, 2020
- BCAD authorizes additional MPU validation analysis: February 21st, 2021
 - Task 1 – Update Aviation Activity & Recovery Forecast
 - Task 2 – Reassess Capital Improvement Program Requirements and Project Timing
 - Task 3 - Complete Financial Feasibility Assessment
- Completed: February 2023



NOTES:

1/ Total passengers equals two times enplaned passengers.

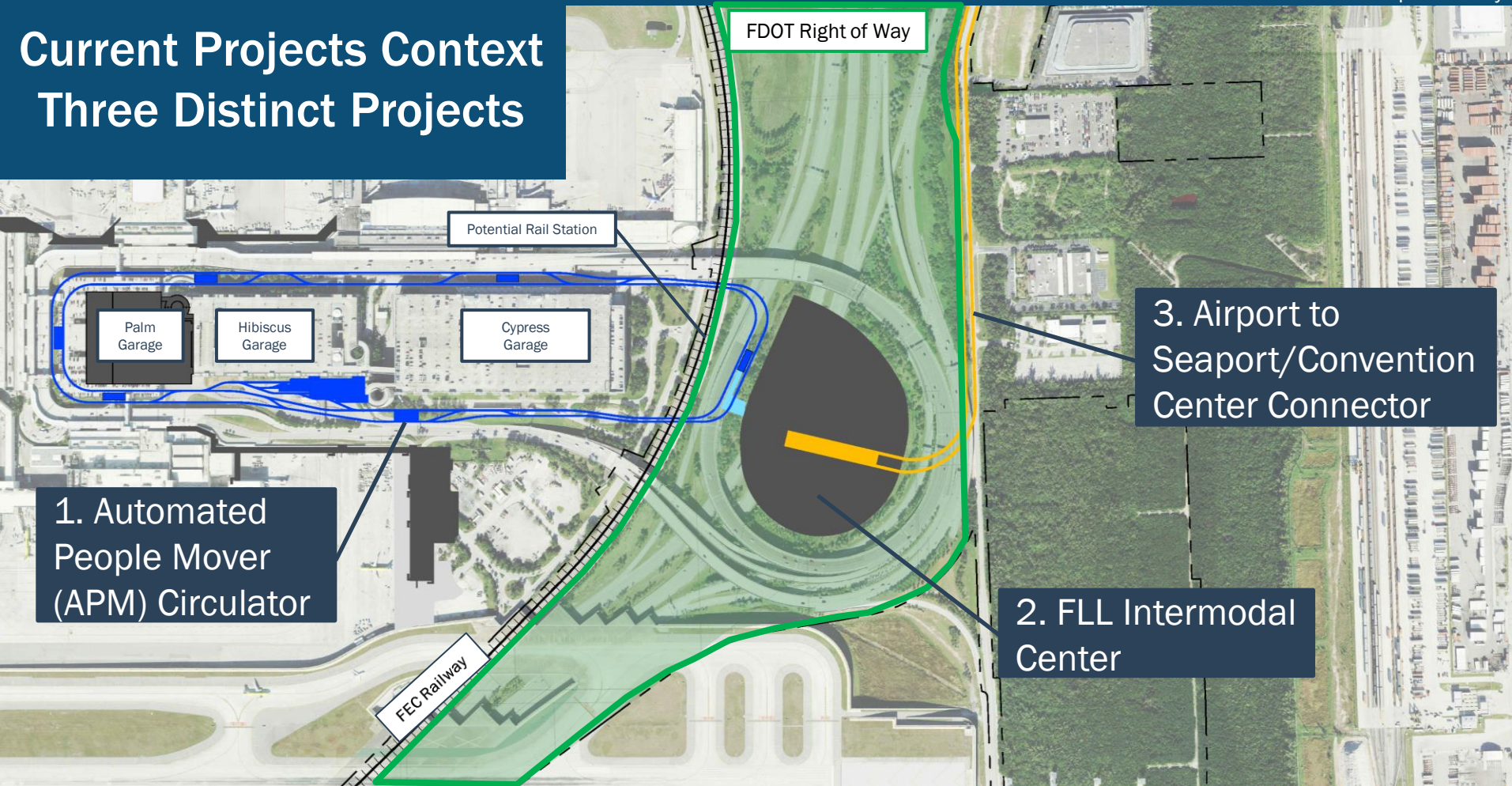
SOURCES: Broward County Aviation Department (Historical); US DOT T100; Innovata; Ricondo & Associates, Inc.



Program History & Summary

Current Projects Context

Three Distinct Projects



Potential Rail Station

FDOT Right of Way

Palm Garage

Hibiscus Garage

Cypress Garage

1. Automated People Mover (APM) Circulator

FEC Railway

2. FLL Intermodal Center

3. Airport to Seaport/Convention Center Connector



Intermodal Center (IMC)



IMC – Progression Towards Implementation



Validate IMC Functions and Requirements



Complete Environmental Documentation Requirements



Future Airport Parking Requirements



Ground Access/Egress Plan



Stormwater management considerations



Utilities requirements



Facility floor plan layout and flow diagrams



Roadway Simulation Modeling



Funding and Implementation Framework

* Memorandum of Understanding (MOU) between Broward County and the Florida Department of Transportation (FDOT) signed on January 11, 2022

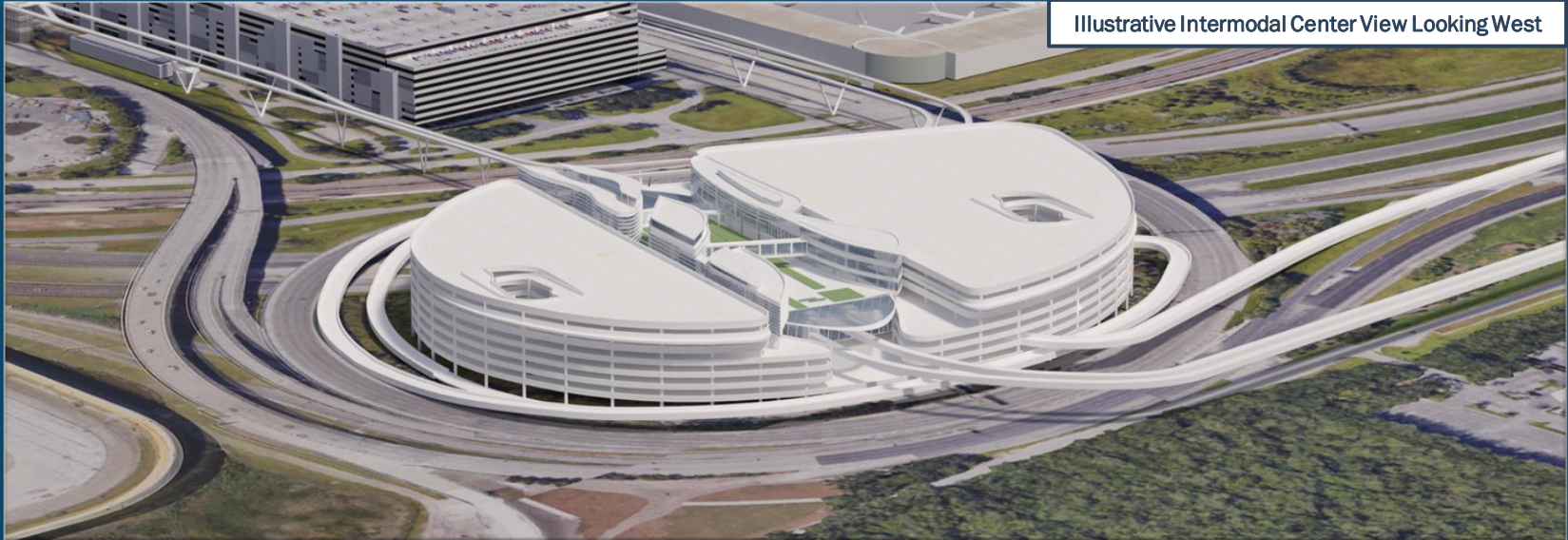


Facility Program Summary



Intermodal Center Uses/Functions

Illustrative Intermodal Center View Looking West



SOURCE: Illustrate My Design, inc, June 2019; Ricondo & Associates, Inc., June 2019.

| Transit And Intermodal/Multimodal (1,343,200 s.f.) |
|---|
| Transit Passengers (Level 1) |
| Passenger Pick-up/Drop-off (Level 1) |
| Air/Cruise Passenger (Levels 3-5) |

| Revenue-Generating Opportunities (712,500 s.f.) |
|--|
| Concessions (Levels 3) |
| Potential Commercial Development (Level 8) |
| Potential Air Mobility / VTOL (Rooftop) |

| Parking (2,564,100 s.f.) |
|--|
| Parking (approx. 6,685 spaces) (Levels 2-7) |





Rough Order of Magnitude Cost Estimate



Rough Order of Magnitude IMC Cost Estimate

(in 2021 Dollars, Rounded)

| IMC ROM Costs | Construction Costs | Allowance(s) | Contingency 15% | Soft Costs 18% | Total Component Costs |
|---|----------------------|----------------------------|---------------------|----------------------|-----------------------|
| Planning, Programming, Environmental, and Procurement | - | - | - | - | \$19,733,000 |
| IMC Building Structure ROM | \$398,349,000 | \$15,250,000 ^{1/} | \$62,040,000 | \$85,615,000 | \$561,253,000 |
| Utilities ROM | \$11,000,000 | \$0 | \$1,650,000 | \$2,277,000 | \$14,927,000 |
| Roadways ROM | \$175,772,000 | \$0 | \$26,366,000 | \$36,385,000 | \$238,522,000 |
| TOTAL | \$585,121,000 | \$15,250,000 | \$90,056,000 | \$124,277,000 | \$834,435,000 |

Notes:

- 1 Allowances were developed for drainage/stormwater mitigation. Cost to be updated as mitigation strategy is further defined.
- 2 APM Station Costs are included under the FLL APM Project.
- 3 Office space is for shell construction only; build-out costs not included.
- 4 Seaport Connector guideway and station costs not included above. IMC structural hardening and requirements are included in IMC facility cost.
- 5 Costs are rounded to the nearest thousand. Unit pricing reflects a nearly 30% increase since beginning of 2021, specific for SE region Airports.

Source: Lea+Elliott, Inc., April 2022; Kimley-Horn and Associates, Inc., April 2022; Ricondo & Associates, Inc., April 2022



Funding Opportunities



Funding Opportunities

| Space Category | Funding Source | Eligible Funding Sources | | | | Surtax Eligible |
|--|----------------|----------------------------|-------------|-----------|-------|-------------------|
| | | Federal | | State | | |
| | | Grants | Loans | Grants | Loans | |
| Transit AND Intermodal/ Multi-Modal Uses (Includes public parking utilities, and drainage/stormwater mitigation) | - | BIL, RAISE, CRISI, MEGA | TIFIA, RRIF | SIS, TRIP | SIB | YES |
| Roadways (All access/egress roadways) | - | BIL, RAISE, CRISI, MEGA | TIFIA, RRIF | SIS, TRIP | SIB | YES |
| Parking (Public/Employee, includes TNC pick-up area) | GARBs | - | - | - | - | YES ^{1/} |
| Other Commercial or Revenue-Producing Spaces (support, office, leasable) | Third Party | - | - | - | - | NO |

Acronyms

RAISE – Rebuilding American Infrastructure with Sustainability and Equity

TIFIA – Transportation Infrastructure Finance and Innovation Act

SIS – Strategic Intermodal System

SIB – State Infrastructure Bank

MEGA – National Infrastructure Project Assistance Program

^{1/}Parking garages are SURTAX eligible for facilities serving public transportation projects provided the parking fees to not exceed costs associated with operating and maintaining the facility.

RRIF – Railroad Rehabilitation and Improvement Financing

CRISI – Consolidated Rail Infrastructure and Safety Improvements

GARBs – General Airport Revenue Bonds

TRIP – Transportation Regional Incentive Grant Program



Automated People Mover



APM – Progression Towards Implementation



Final PDD Completed
(December 2022)



Ridership Analysis



Complete Facility Interfacing with Existing Terminals and Parking Garages



Future Provision for Rail Connectivity (Brightline and BCR)



Ground Level Interfacing for Construction



APM System Technology Assessment



Utilities requirements



APM Station Program and Associated Floorplans



Preliminary Structural Analysis and Requirements



Funding and Implementation Framework

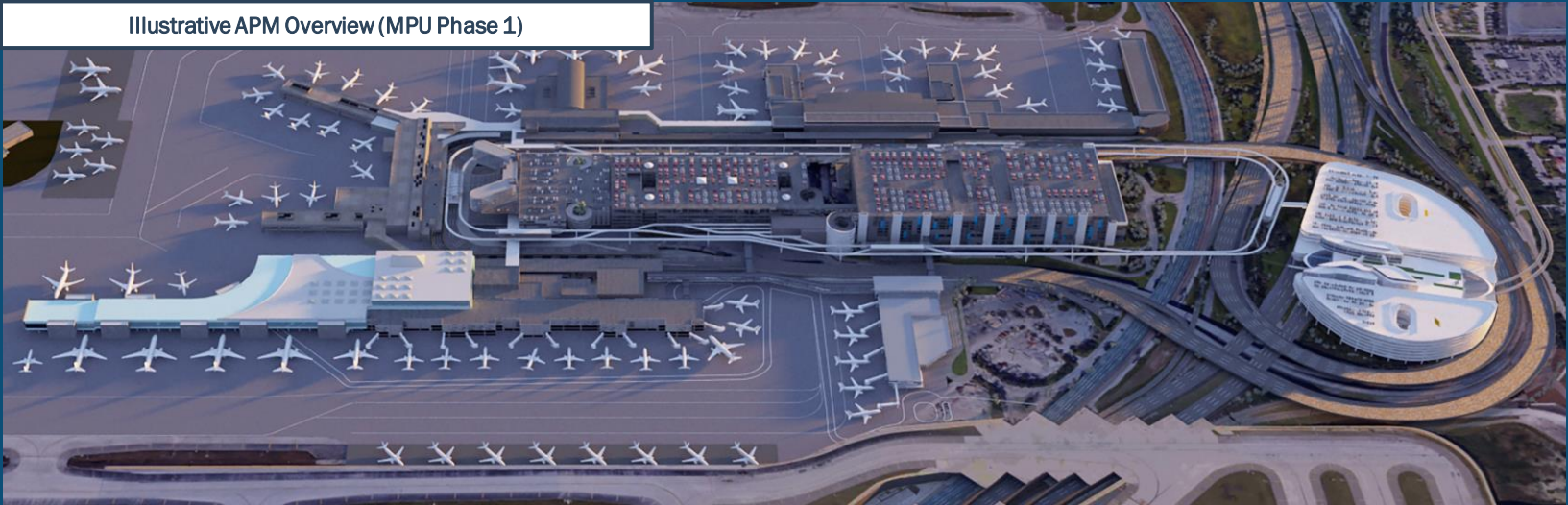


The background image shows an airport terminal with a white bus parked at a platform. Several people are standing near the bus. Overhead signs indicate directions to 'TERMINAL 4 INTERMODAL CENTER' and 'TERMINAL 1-3 RIVER CREST'. The image is overlaid with a blue tint and a diagonal line pattern.

Facility Program Summary

Automated People Mover Program Overview

Illustrative APM Overview (MPU Phase 1)



SOURCE: Illustrate My Design, Inc, June 2019; Ricondo & Associates, Inc., June 2019.

Connectivity

- Interfaces with Terminals 1-4, future Terminal 5, Palm / Hibiscus Garages, Rental Car Center / Cypress Garage and the future Intermodal Center
- Potential connectivity to Rail

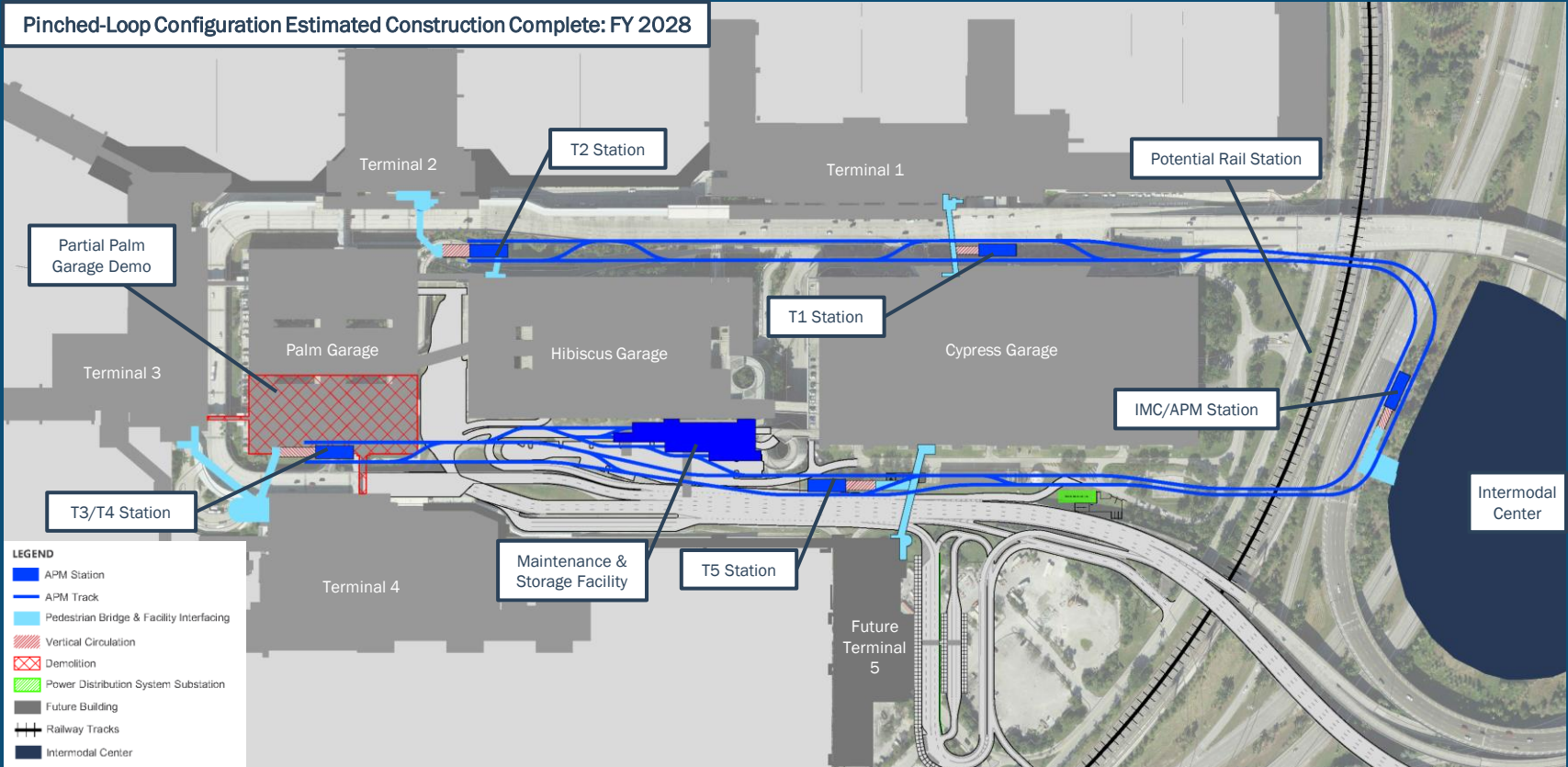
Infrastructure

- Six APM stations (Approximately 4,200 s.f. each)
- 16,000 linear feet of dual guideway
- On-Airport maintenance & storage facility
- Power distribution substations



Automated People Mover – Pinched-Loop Configuration

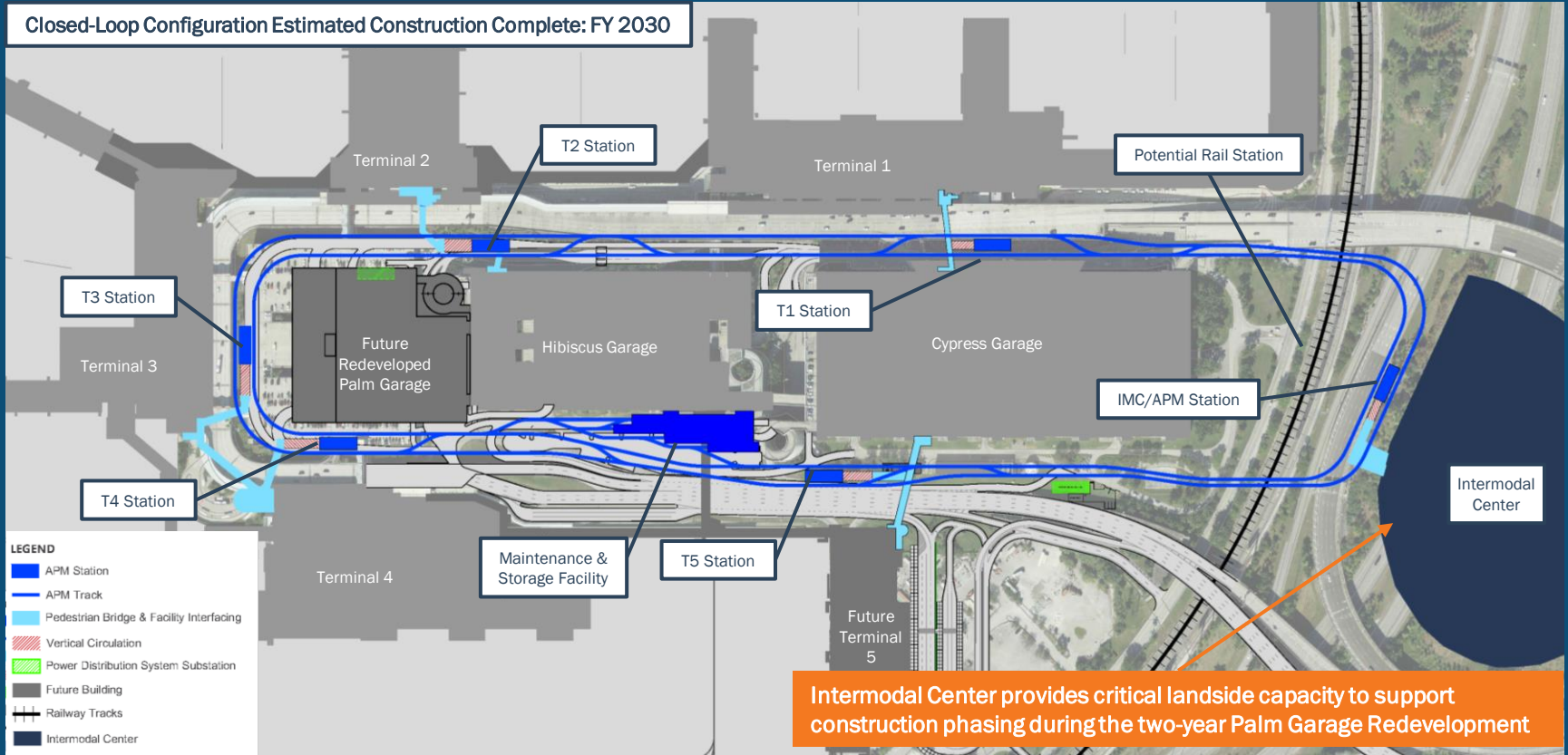
Pinched-Loop Configuration Estimated Construction Complete: FY 2028





Automated People Mover – Closed-Loop Configuration

Closed-Loop Configuration Estimated Construction Complete: FY 2030



LEGEND

- APM Station
- APM Track
- Pedestrian Bridge & Facility Interfacing
- Vertical Circulation
- Power Distribution System Substation
- Future Building
- Railway Tracks
- Intermodal Center

Intermodal Center provides critical landside capacity to support construction phasing during the two-year Palm Garage Redevelopment



A blue-tinted photograph of an airport terminal. In the center, a white bus is parked at a platform. Several people are standing around the bus, some appearing to board or disembark. Above the bus, there are directional signs hanging from the ceiling. One sign on the left points left and says "TERMINAL 4 INTERMODAL CENTER". Another sign on the right points right and says "TERMINAL 1-3 RIVER CROSSING". The background shows the terminal's structure and a glimpse of the tarmac.

Rough Order of Magnitude Cost Estimate



Rough Order of Magnitude APM Cost Estimate

| ITEM DESCRIPTIONS | ROM UNESCALATED (2022 Dollars) | ROM ESCALATED (2026 Dollars) |
|--|-----------------------------------|---------------------------------|
| Planning and Programming ^{1/} | | \$5,775,000 |
| APM Pinched-Loop Configuration | | |
| Operating Systems | \$184,900,000 | \$225,400,000 |
| Infrastructure ^{2/} | \$430,550,000 | \$514,180,000 |
| APM Closed-Loop Configuration | | |
| Operating Systems | \$55,400,000 | \$67,300,000 |
| Infrastructure | \$34,780,000 | \$42,320,000 |
| Total | \$705,630,000 | \$854,975,000 |

Notes:

- 1 Planning and Programming costs include project definition and design criteria package development.
- 2 APM infrastructure includes site civil and utility costs as well as an allowance for utility and code compliance work that may be required due to facility interfacing with existing terminals and parking garages.
- 3 The demolition of the southern portion of Palm Garage is not included in the cost above and may be included within the APM budget as an enabling project at BCAD's discretion. An additional \$16.4 million dollars for Phase 1 (Kimley-Horn, Advanced Planning for Palm Garage Demolition, April 2023).

Source: Lea & Elliott, Inc., June 2022; Ricondo & Associates, Inc., June 2022

A blue-tinted photograph of an airport terminal. In the center, a white bus is stopped at a platform. Several people are standing around the bus, some with luggage. Above the bus, there are directional signs. One sign points left and says "TERMINAL 4 INTERMODAL CENTER". Another sign points right and says "TERMINAL 1-3 RIVER CREST". The background shows the terminal building and a clear sky.

Funding Framework



Funding Framework

FUNDING ALLOCATION TO DATE

- Funding participation has been limited to FDOT to date (50% of the sponsor's matching share)
- BCAD Cash expended approximately \$1M for planning and programming
- Two grants under FDOT aviation work program totaling \$64M (total includes 50% BCAD match) have been executed to date
- Current FDOT funding allocation is \$135M for APM project (does not include local match)

ADDITIONAL FUNDING OPPORTUNITIES

- FDOT Grants
- Airport Improvement Program (AIP) Grants
- Bi-partisan Infrastructure Law (BIL)
 - Airport Infrastructure Grant (AIG)
 - Airport Terminal Program (ATP)
- Broward County SURTAX
- Bonds

A blue-tinted photograph of an airport terminal. In the foreground, a white bus is parked at a curb. Several people are standing around the bus, some appearing to board or disembark. In the background, there are signs for "TERMINAL 4 INTERMODAL CENTER" and "TERMINAL 1-3 RIVER CHANGING". The overall scene is a busy airport environment.

Thank You!