OIA Connector Alternatives Analysis Refresh

Briefing for
IDMTID Advisory Board

FPID Nos:

429215-1-12-01, 429215-1-12-02, 429215-1-12-03,
429215-1-12-04 and 429215-1-12-05

January 7, 2015

Presentation Outline

- Welcome
- Study History
- Purpose
- Study Process
- Selected Alternative
- Cost Estimates
- Transit Ridership
- Potential Funding Sources
- Next Steps

Study History

- **1996 Major Investment Study**
- **2005 Alternatives Analysis**
  - Recommended Light Rail (LRT)
  - Did not account for SunRail
  - Assumed LRT along I-4
- **Refresh AA Began in November 2012**
  - Study Completion March 2015

Project Purpose

- **Develop recommended transit alignments and technologies to be advanced within the study area**
  - I-Drive Resort Area to OIA / Medical City
- **Follow Federal study requirements to be eligible for future Federal funding**

Project Study Area

Study Process

- **Define transportation issues in the area**
- **Develop & Screen Initial Alternatives**
- **Evaluate Viable Alternatives**
- **Recommend an Alternative**
- **Refine the Recommended Alternative**
- **Develop Implementation & Finance Plans**

Project Outreach

Agency Kick-Off

January 31, 2013

Public Meetings:
Kick-Off – March 12, 2013
Initial Alts. – June 18, 2013
Final Alts. – February 20, 2014

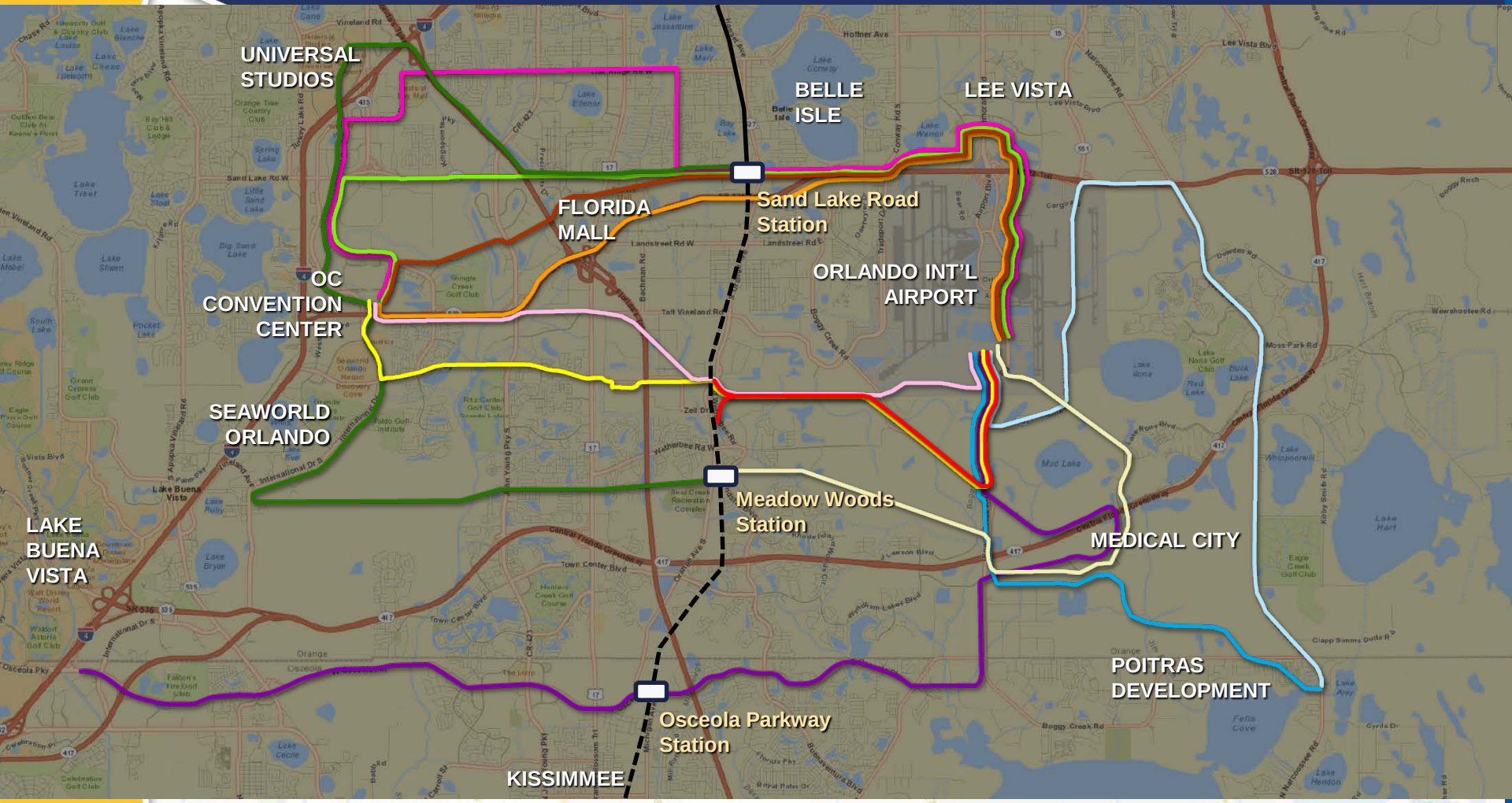
Project Advisory Group

Other Stakeholder Meetings

Newsletters

Website

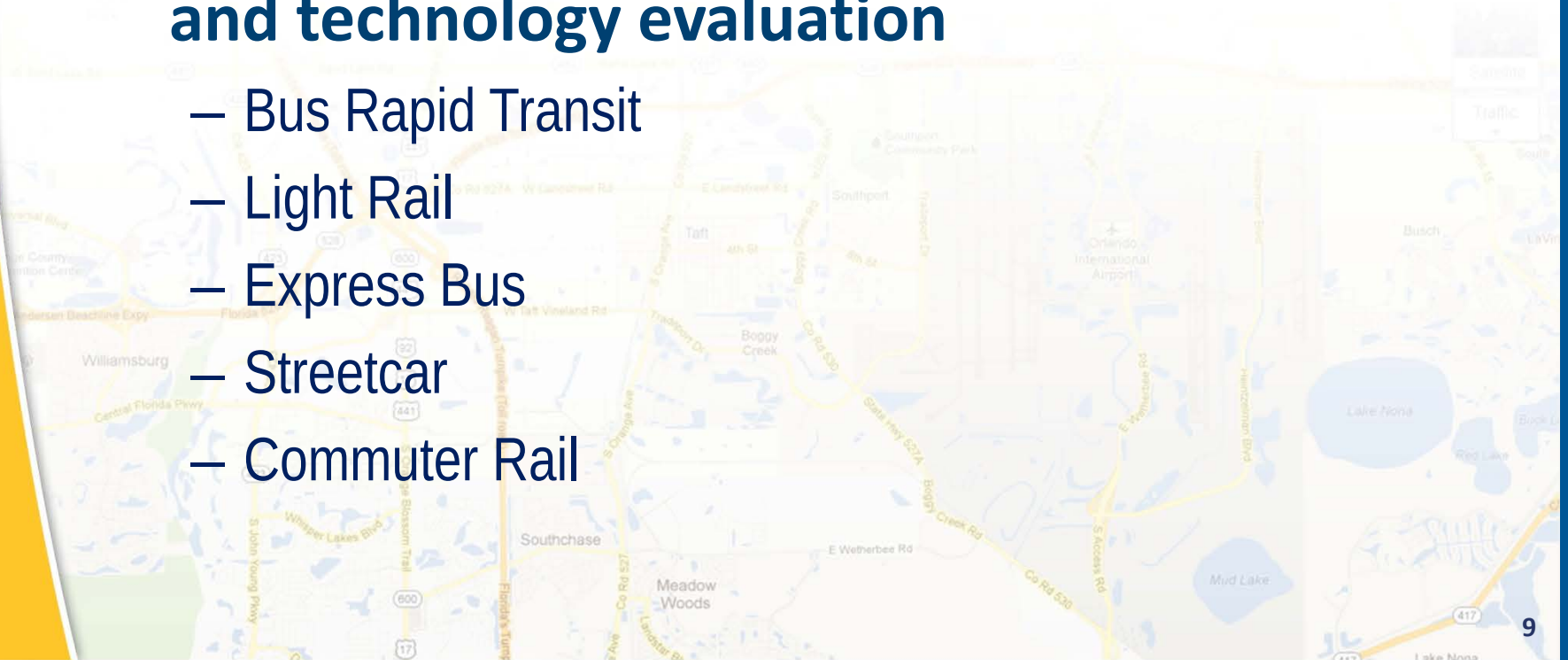
Initial Corridors



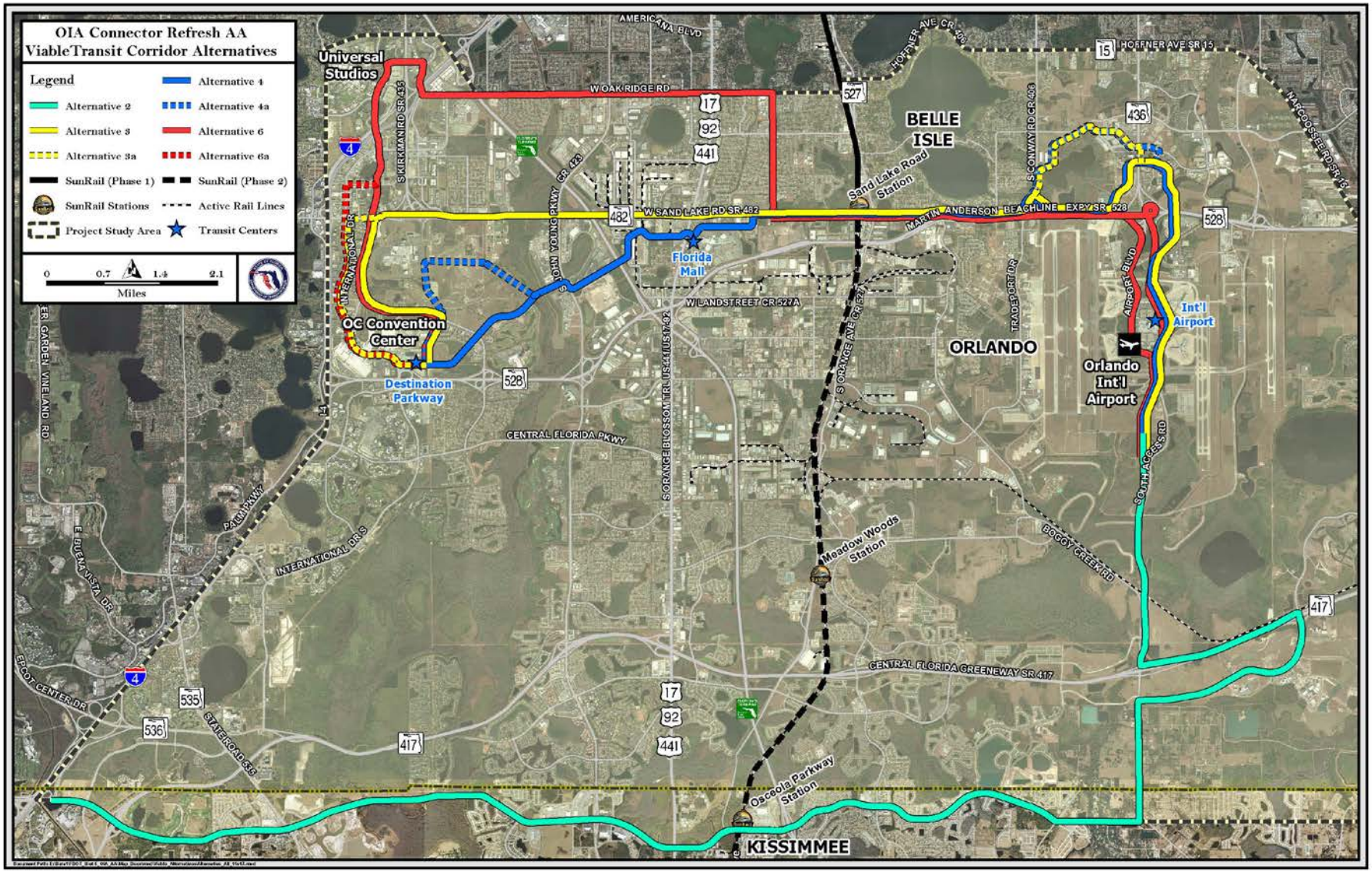
12 Initial Alternatives

Initial Recommendations

- **Advance SunRail connection to OIA as a separate study**
- **Advance four alignments for consideration and technology evaluation**
  - Bus Rapid Transit
  - Light Rail
  - Express Bus
  - Streetcar
  - Commuter Rail



Viable Alternatives



Recommended Alternative

- **Bus Rapid Transit (BRT)**
  - **Express BRT** between OIA and OCCC along Sand Lake Rd.
  - **Local BRT** between SunRail and OCCC along Oak Ridge Rd./Universal Blvd.
  - High-Frequency Service (10-15 min.)

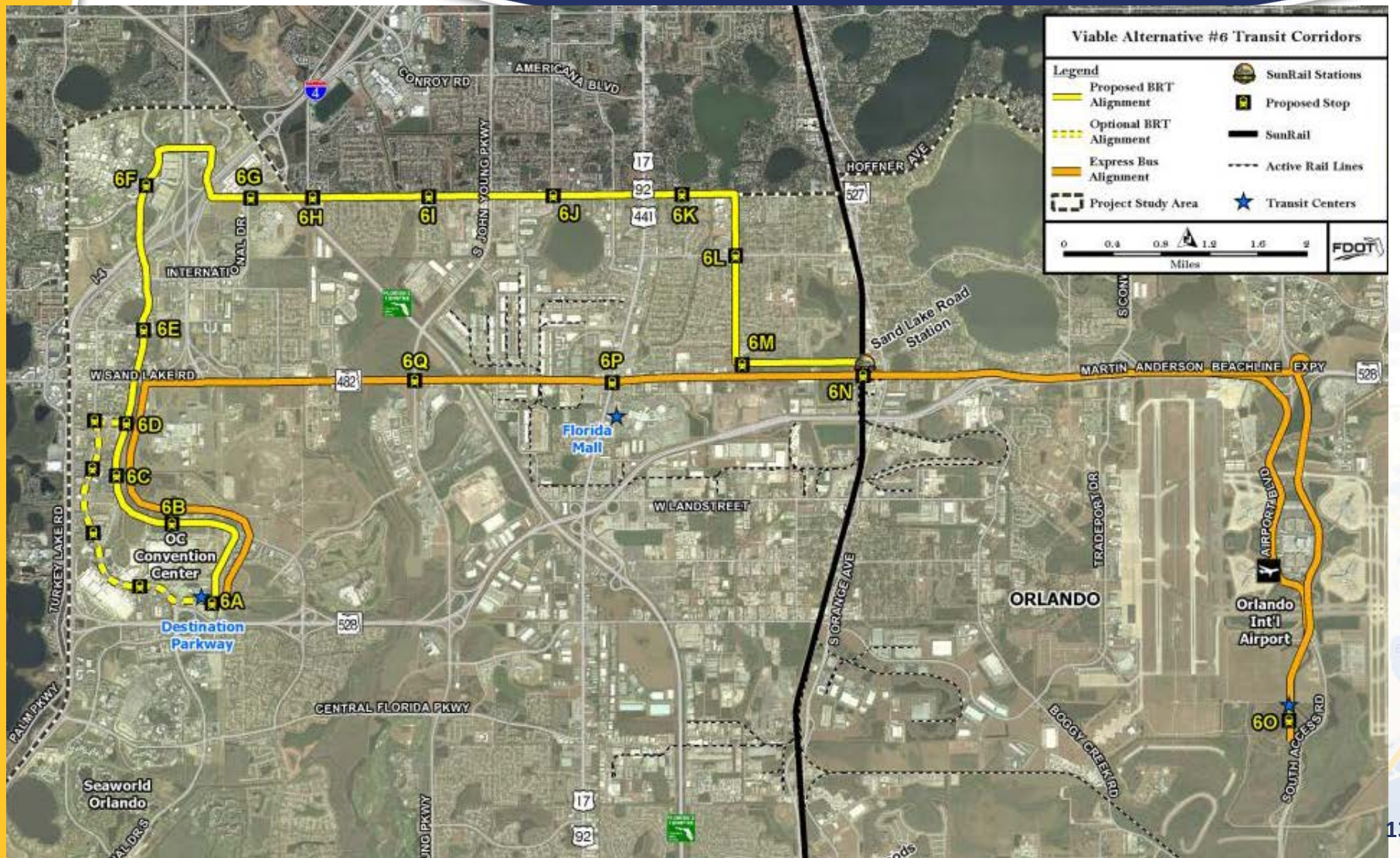
Bus Rapid Transit (BRT)

Overview

- High-quality, fixed-route, frequent bus service, operating on shared, semi-exclusive or exclusive lanes.
- Amenities typically include traffic signal priority/pre-emption, low-floor vehicles, level-platform boarding, and unique branding.
- Some examples include:
  - Orlando - Lymmo
  - Cleveland - HealthLine
  - Eugene - Emerald Express (EmX)
  - Kansas City - Metro Area Express (Max)
  - Los Angeles - Metro Orange Line
  - Tampa - MetroRapid

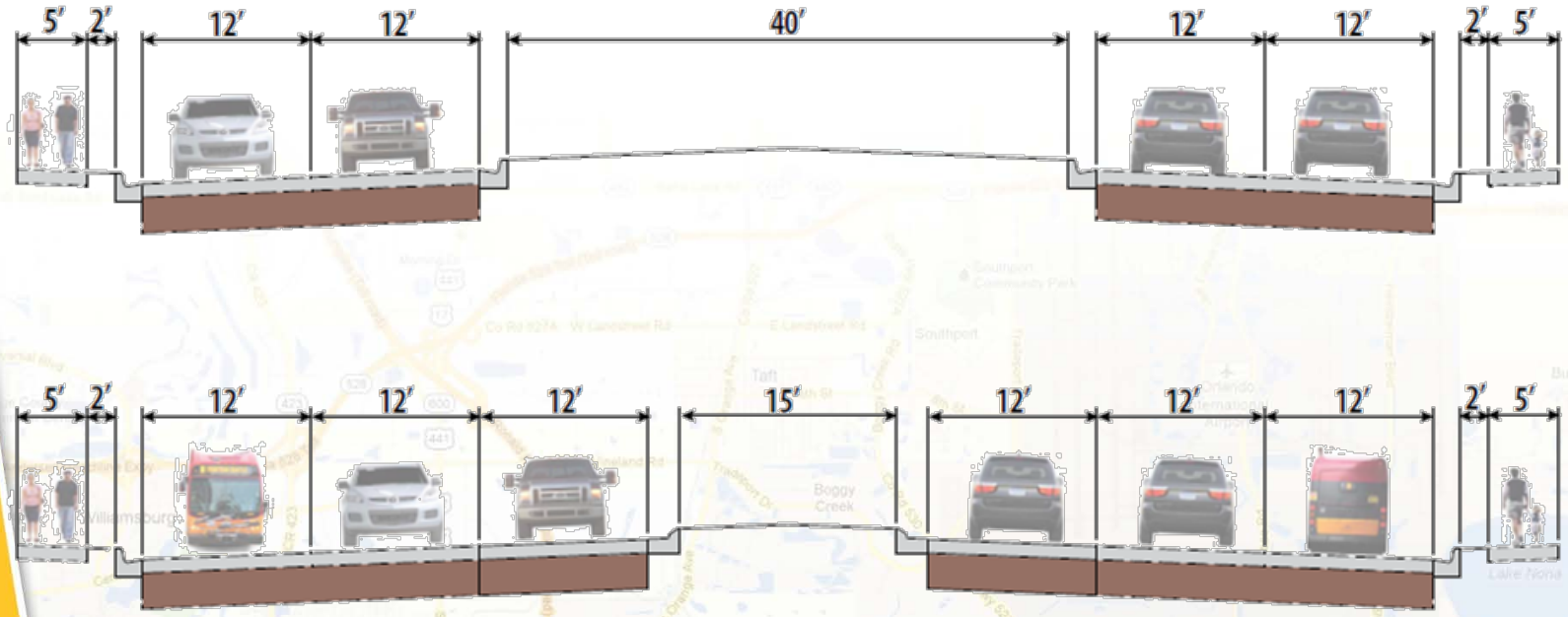
- **Cost/Mile:** $3 - $30 Million
- **Seated Capacity/Bus:** 40 - 65
- **Service Range:** 5-15 Miles
- **Average Speed:** 10-25 MPH
- **Station Spacing:** 1/2 – 1 Mile

Recommended Alternative



Universal Blvd. Typical Sections

Universal Boulevard



O&M Cost Estimates

Year	Opening	Future
Local BRT	$2.74	$3.96
Express BRT	$2.71	$3.78
Total	$5.45	$7.75

(1) Net O&M costs would be offset by passenger revenue, advertising revenue, state and federal operating assistance, other service reductions and private contributions

(2) Millions of 2012 dollars.

Capital Costs
(2013 $)

- **Includes Guideway Construction, Stations, Vehicles, Right-of-Way, Professional Services, and Contingency**

- **$197,841,000**

Transit Ridership

Year	Opening	Future
Work Trips	2,900	4,100
Non-Work Trips	2,200	4,100
Total Weekday	5,100	8,200
% Transit Dependent	27%	25%

Funding Sources

- **Federal**
- **State**
- **Local**
- **Passenger Revenue**
- **Advertising, Naming Rights**
- **Private**

Next Steps

- **Adoption of Recommended Alternative by MetroPlan Orlando**
- **Advance Project Development with FTA**
  - Environmental Assessment
  - 30% Design
  - Refine Costs
  - Local Financial Commitments
  - FTA Funding Agreement

Contact Information

- **Email: Libertad Acosta-Anderson, PE – FDOT Project Manager**
  - Libertad.Acosta-Anderson@dot.state.fl.us

- **Email or Call: Carnot Evans – HDR Project Manager**
  - Carnot.Evans@hdrinc.com
  - (407) 420-4209

- **Check out our Web Site!**
  - www.OIAConnector.com

Questions?


W Sand Lake Rd
Universal Blvd
Orange County Convention Center
Martin Andersen Beachline Expy
Florida 528 Toll
Aquatica SeaWorld's Water Park
Williamsburg
Central Florida Pkwy
Westwood Blvd
International Dr
Whisper Lakes Blvd
S John Young Pkwy
S Orange Blossom Trail
CR 423
Ronald Reagan Turnpike (Toll road)
Co Rd 527A
W Landstreet Rd
E Landstreet Rd
Taft
4th St
6th St
Southport
Tradeport Dr
S Orange Ave
Boggy Creek Rd
W Taft Vineland Rd
Boggy Creek
Co Rd 530
Orlando International Airport
E Wetherbee Rd
State Hwy 527A
Boggy Creek Rd
S Access Rd
Heintzelman Blvd
Lake Nona
Red Lake
Mud Lake
Southchase
Meadow Woods
Co Rd 527
1 mi

Federal Evaluation Factors

- **Mobility Improvements**
- **Economic Development**
- **Environmental Effects**
- **Cost Effectiveness**
- **Land Use**
- **Congestion Relief**
- **Community Acceptance**

Projected Capital Costs
(2013 $)

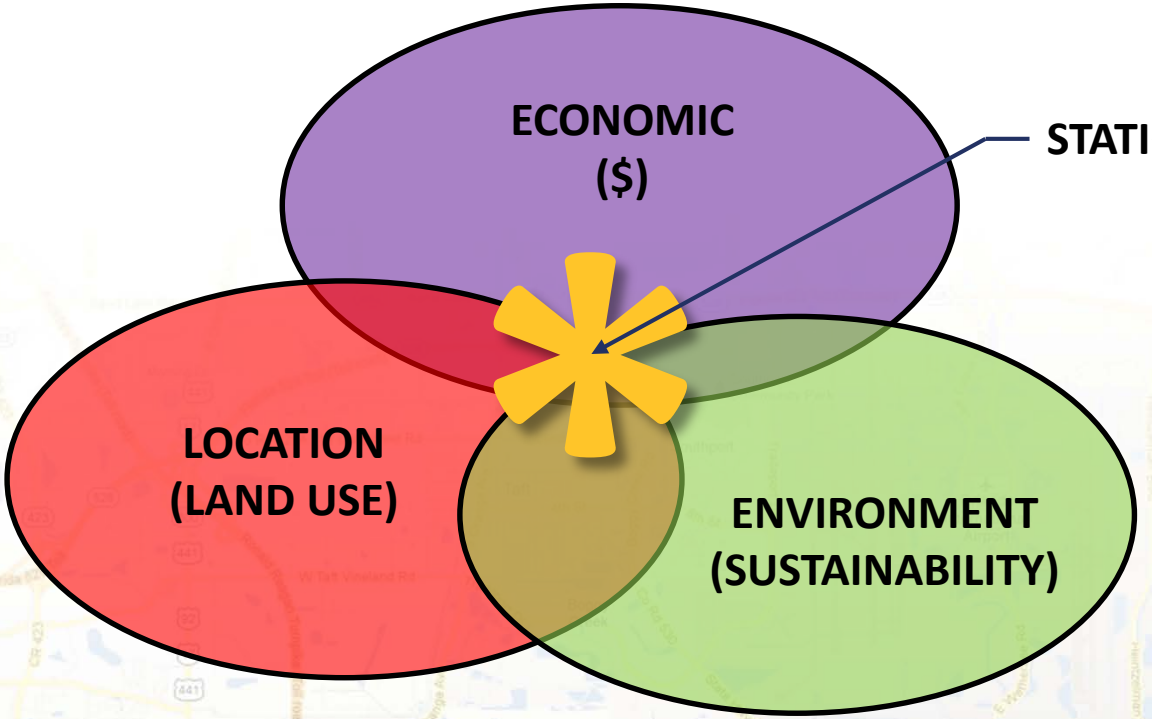
Cost Category	Alt. 6 (Selected)
10.0 Guideway	$32,427,000
20.0 Stations	$6,600,000
30.0 Support Facilities	$0
40.0 Site Work	$43,119,000
50.0 Systems	$12,697,000
60.0 R/W	$5,669,000
70.0 Vehicles	$23,100,000
80.0 Professional Services	$41,256,000
90.0 Contingency	$32,973,000
TOTAL	$197,841,000

Station Locations

&

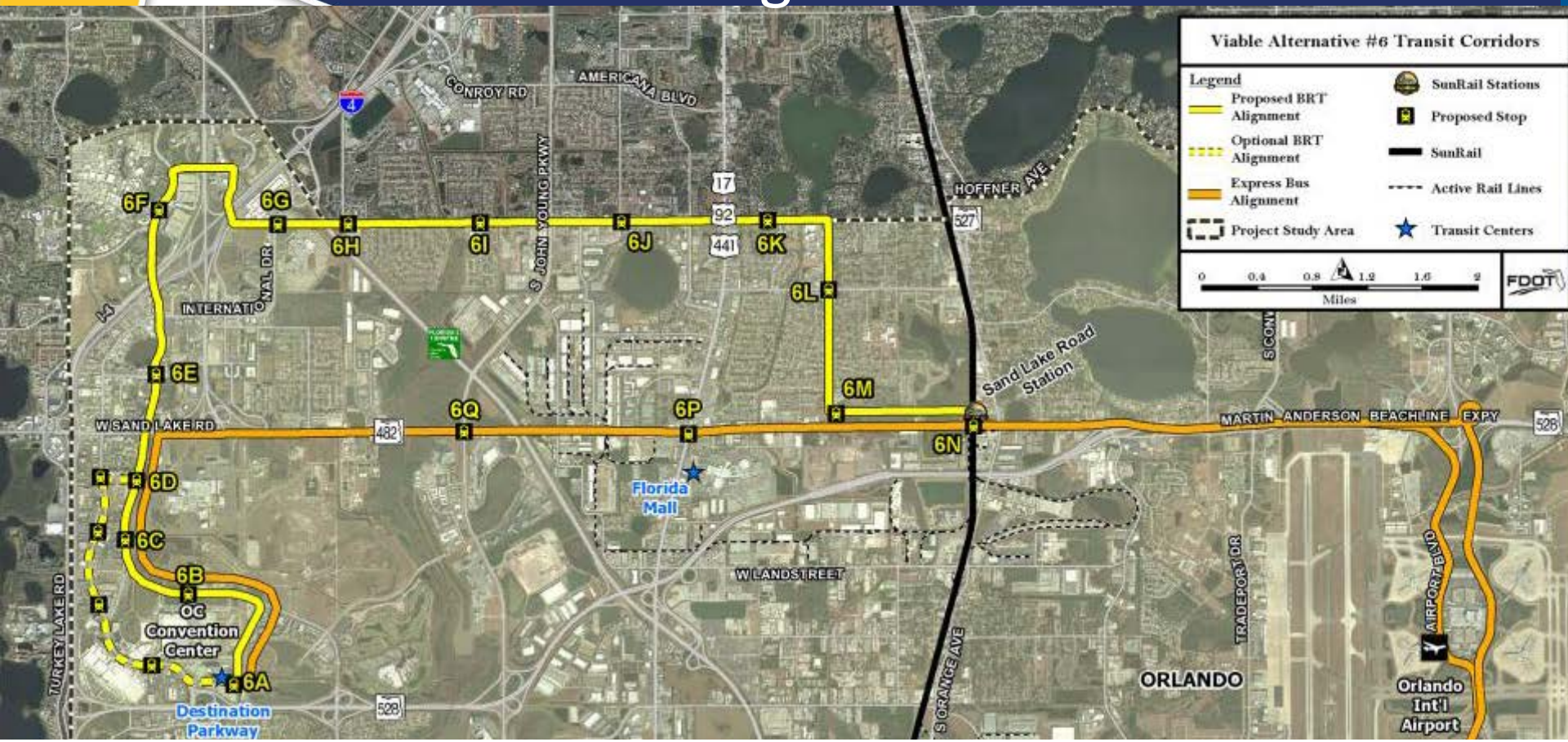
Typologies

Station Locations



3 main factors contribute to identifying station location

Station Locations
"Alignment"



The station locations were classified into 4 places based on the Economic, Land Use and Environmental Characteristics:

- ***Destinations***
- ***Districts***
- ***Neighborhoods***
- ***Corridors***

Station Locations
"Destinations"

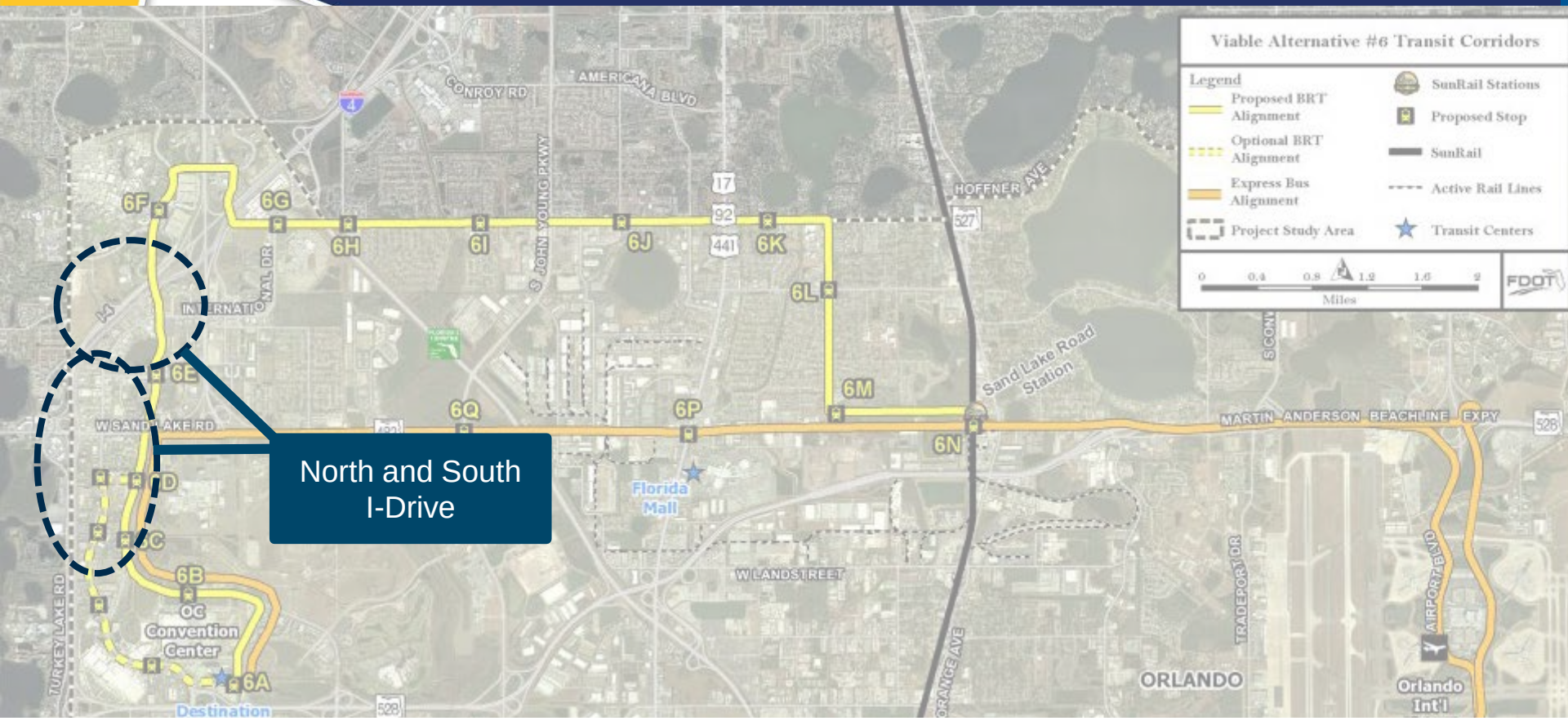
Destination (Focused on specific building or facility; can be served by single station)

Study Area Examples: Orange County Convention Center, SunRail Sand Lake Road Station, OIA Terminals, Universal Studios

"Places to Serve"

- Destination
- Corridor
- District
- Neighborhood

Station Locations
"Districts"



District (Area of multiple activity centers; served with multiple stations focused on cross-street access to wider area)

Study Area Examples: I-Drive, The Loop, Lee Vista

"Places to Serve"

- Destination
- Corridor
- District
- Neighborhood

Station Locations
"Corridors"

Corridor (Linear concentration of multi/mixed-uses; served with multiple stations at even spacing to maximize coverage)

Study Area Examples: Oak Ridge Road corridor, Sand Lake Road corridor

"Places to Serve"

- Destination
- Corridor
- District
- Neighborhood

Station Locations
"Neighborhoods"

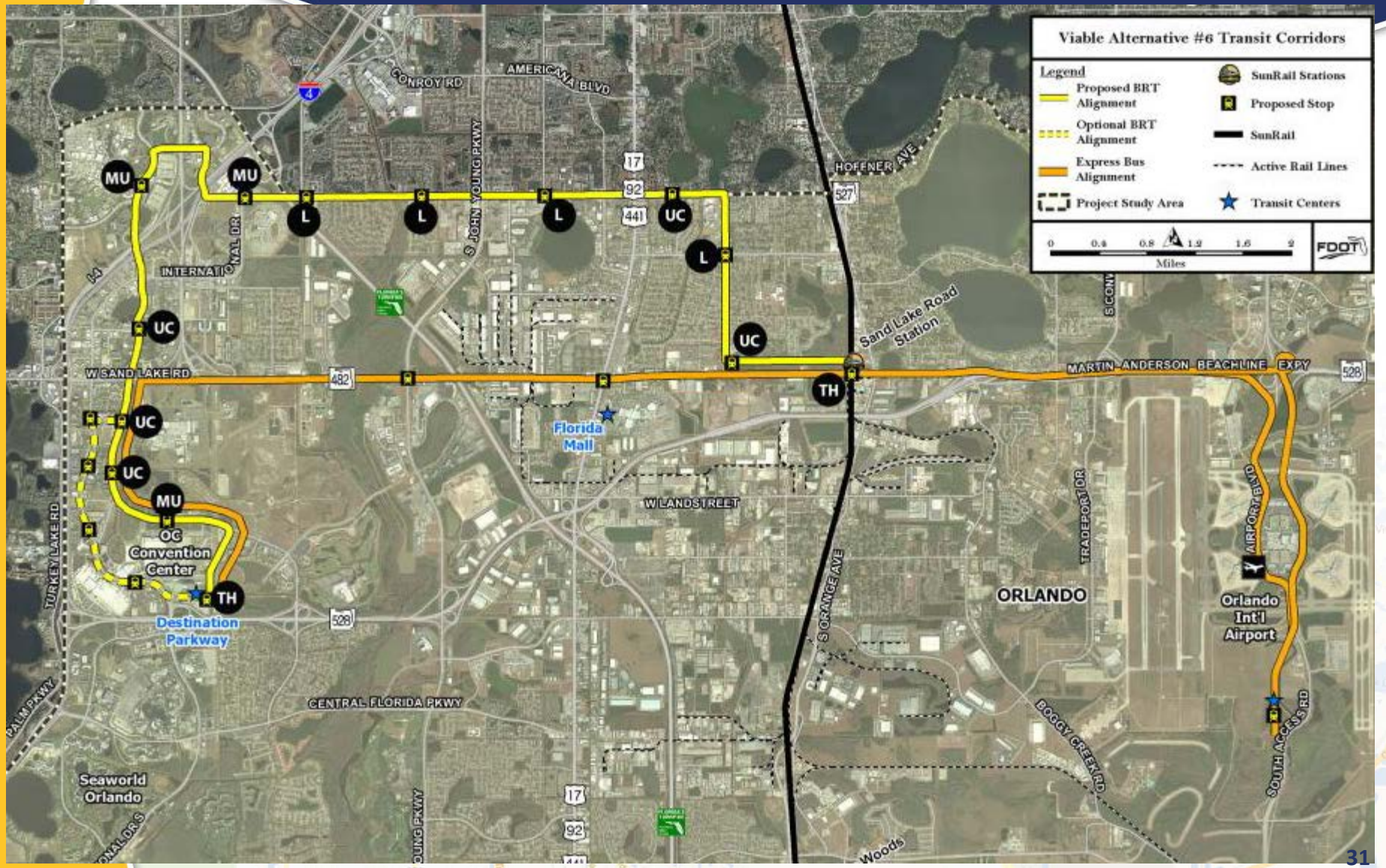
Neighborhood (Mainly residential area which may include a central location of higher intensity and/or mix of uses served by single station)

Study Area Examples: Tangelo Park, Buenaventura Lakes, Sky Lake

"Places to Serve"

- Destination
- Corridor
- District
- Neighborhood

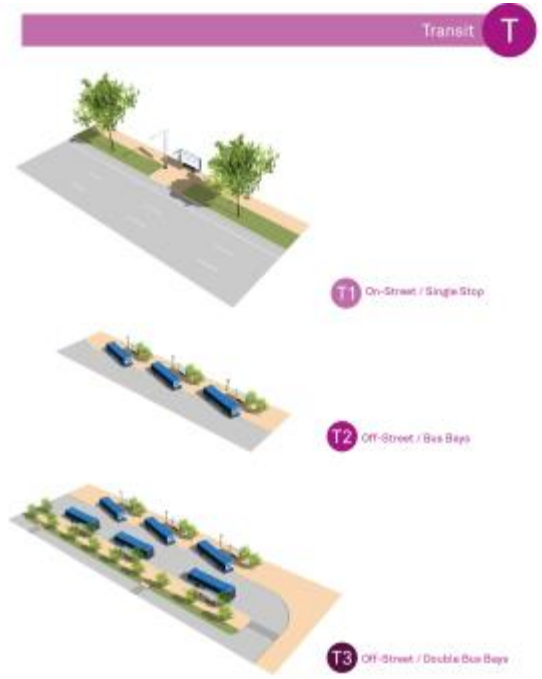
Station Typologies



Station Typologies
"Kit of Parts"

Each Typology has several components of various size and scale to them.

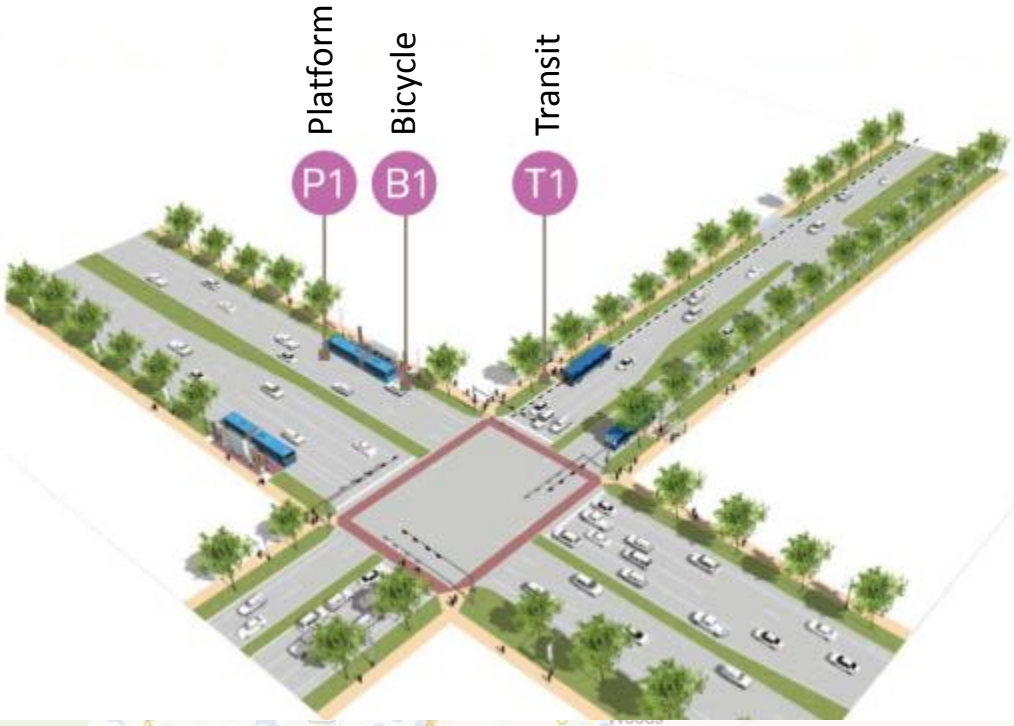
	L	UC	MA	TH
Walk	●	●	●	○
Bike	●	◒	◒	●
Parking	○	◒	○	●
Shelter / Platform	●	●	●	●
Off-Site Taxi	◒	◒	○	○
On-Site Taxi	○	○	○	●
Off-Site Bus / Transit	◒	◒	○	○
On-Site Bus / Transit	○	○	○	●
Small Footprint	●	●	●	○
Large Footprint	○	○	○	●



Station Typologies
"Local Stations"

L

Transit Hub stations serve as the interface of multiple transit modes and corridors. They provide frequent service and connections to other modes of transit. These types of stations may have large footprints and contain a significant level of parking and have a large number of bus and taxi transfers occurring in a centralized location.



Design considerations that should be accommodated based on the physical characteristics of each site:

- Lighting
- Intersection Improvements
- Landscape Enhancements
- Seating
- Pedestrian and Bicycle connections
- Signage
- Open Space

Station Typologies
"Urban Center"

UC

Urban Center stations are closely-spaced stations to serve a Corridor or District . These stations have small footprints and give priority to walk-up access and have limited amounts of parking. They may be linked with district-wide transit circulators, but bus and taxi transfers occur on-street rather than in off-street locations.

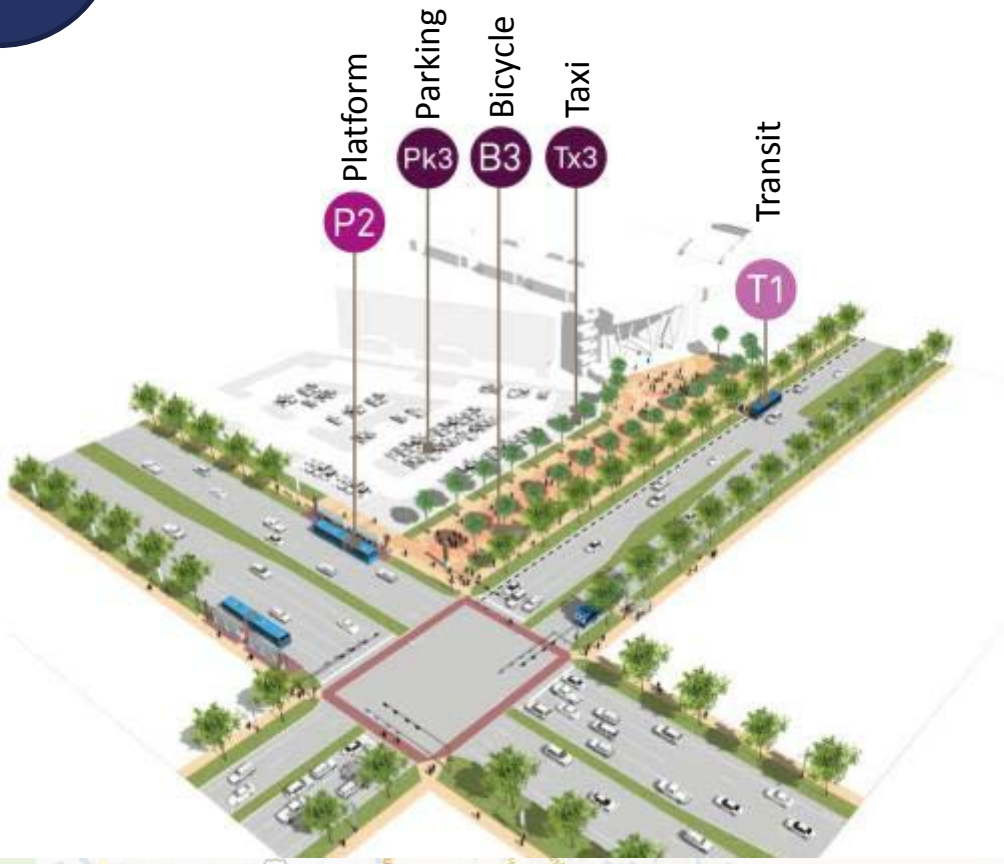
Design considerations that should be accommodated based on the physical characteristics of each site:

- Lighting
- Intersection Improvements
- Landscape Enhancements
- Seating
- Pedestrian and Bicycle connections
- Signage
- Open Space

Station Typologies
"Major Urban Center"

MU

Major urban center stations serve regional Destinations through primarily pedestrian connections. Their footprints are limited as they provide no parking or transfers to bus or other transit modes.



Design considerations that should be accommodated based on the physical characteristics of each site:

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- Intersection Improvements
- Landscape Enhancements
- Seating
- Pedestrian and Bicycle connections
- Signage
- Open Space

Station Typologies
"Transit Hub"

TH

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Design considerations that should be accommodated based on the physical characteristics of each site:

- Lighting
- Intersection Improvements
- Landscape Enhancements
- Seating
- Pedestrian and Bicycle connections
- Signage
- Open Space