I-DRIVE DISTRICT
INTERNATIONAL DRIVE
ORLANDO, FLORIDA

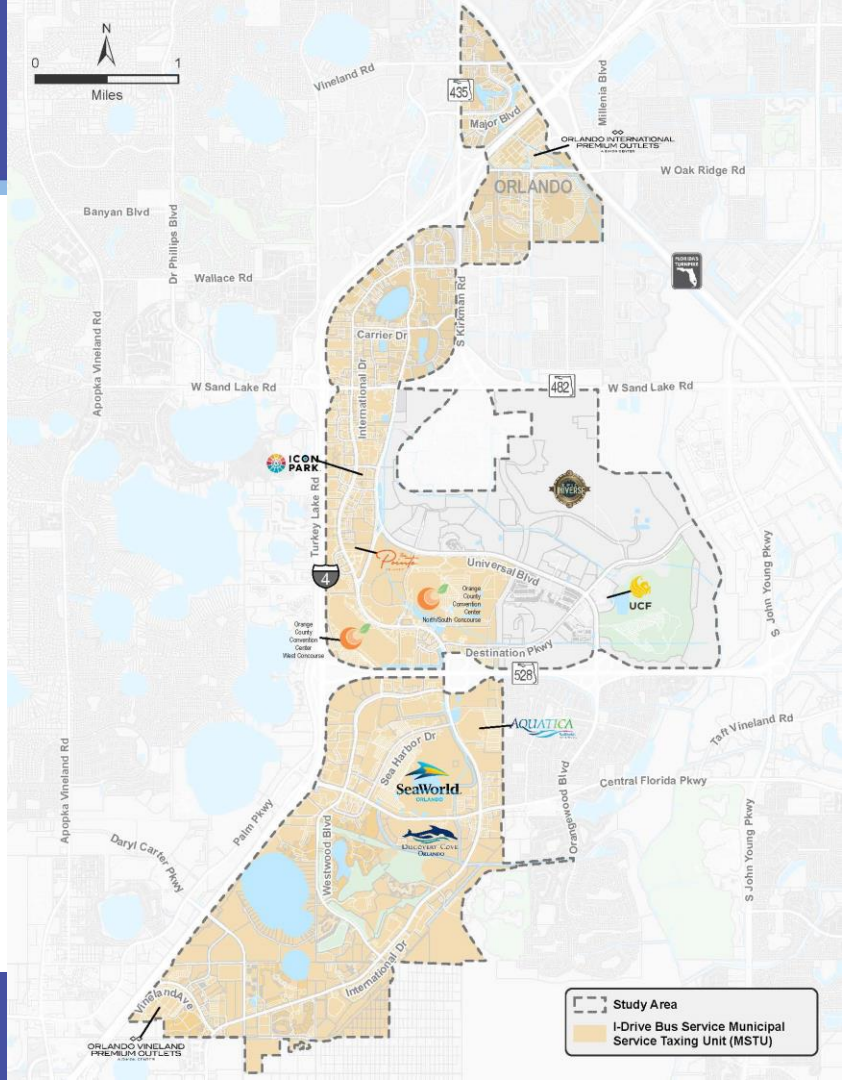
I-Drive District Transportation Strategic Plan

April 7, 2023

HDR

Purpose of the Plan

- Develop an integrated set of potential solutions that improve mobility to and within the District.
- Special focus on potential recommendations for Trolley Service and Electric Vehicle Transition



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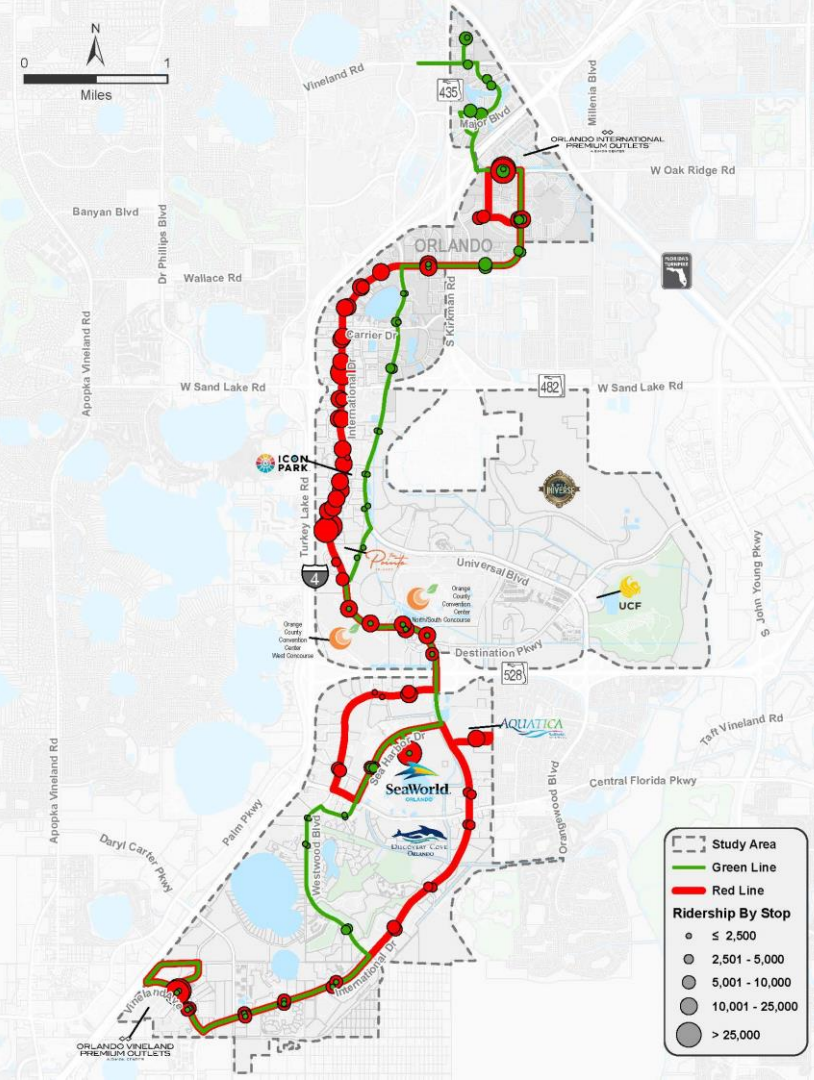
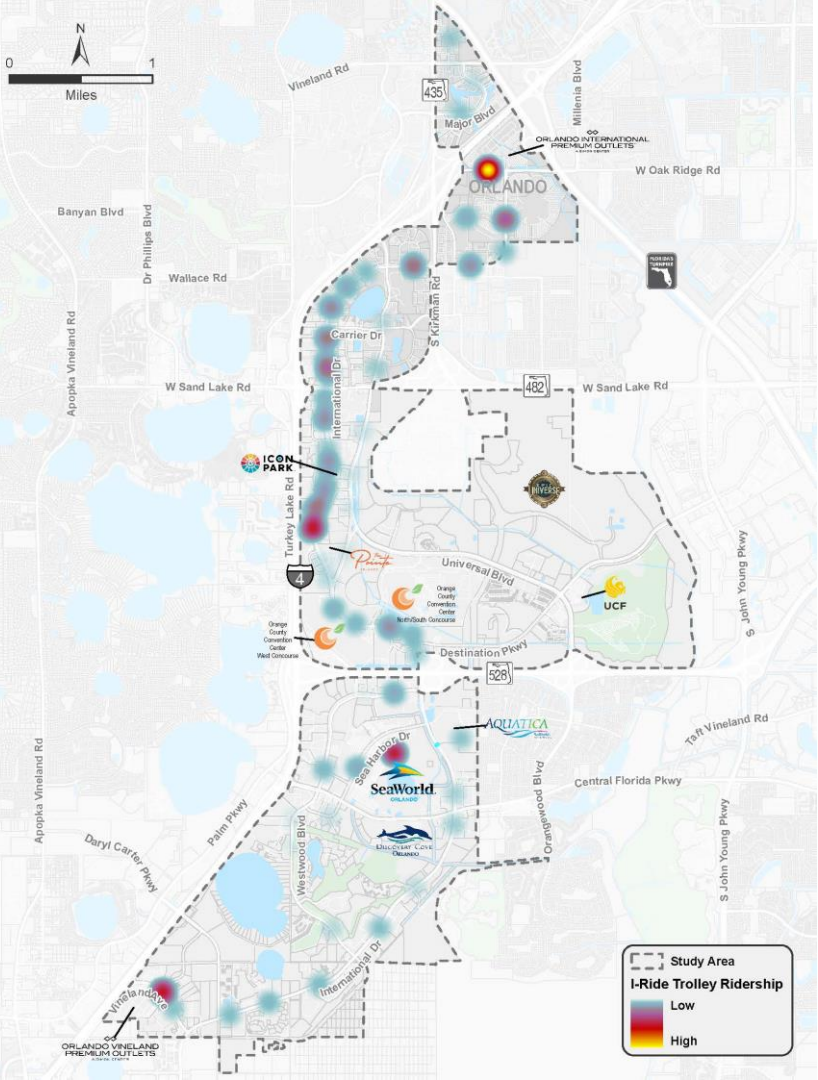
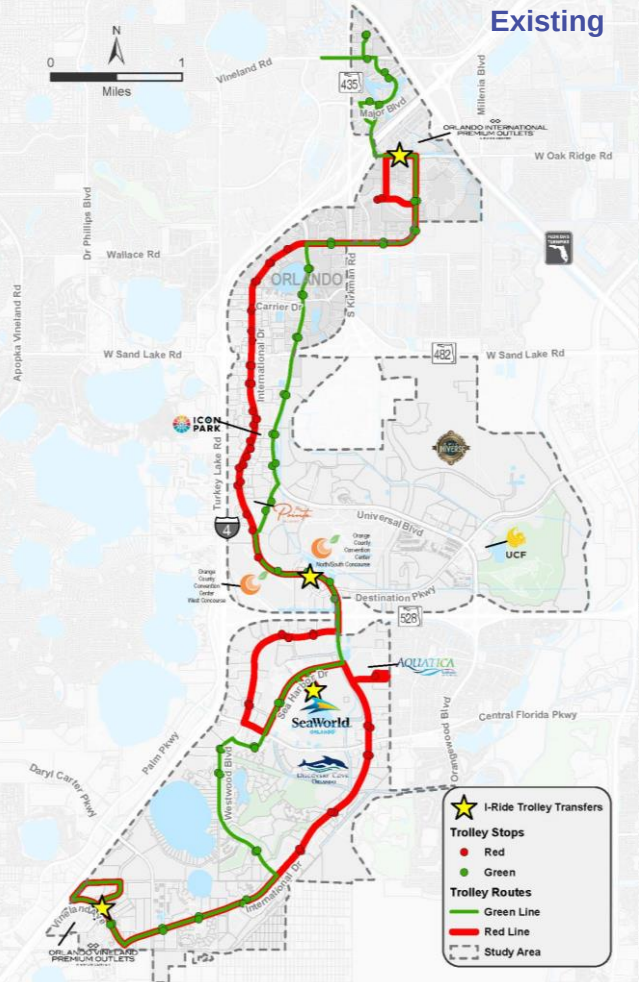
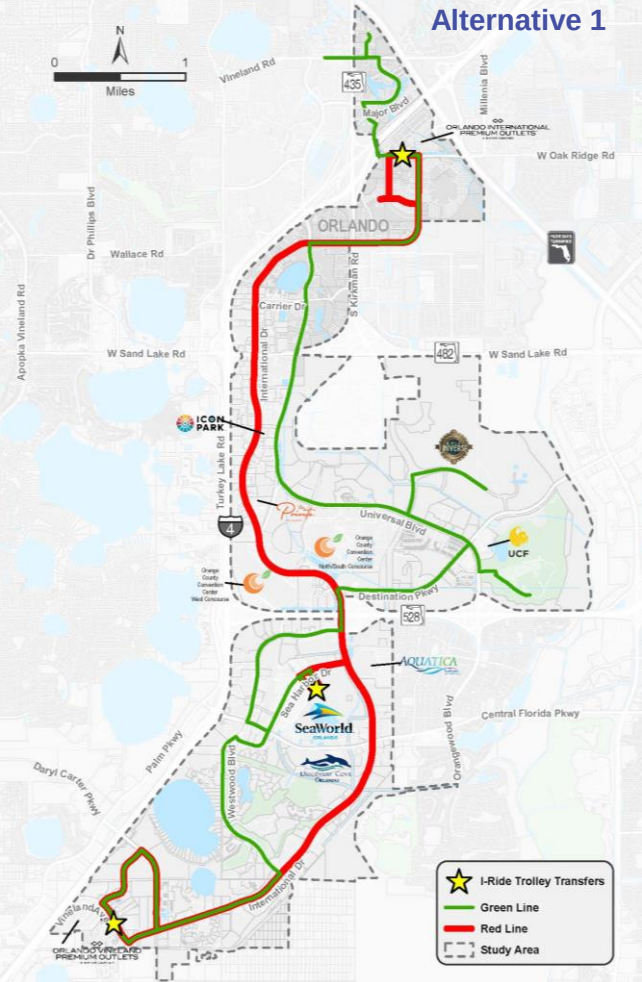
Existing I-Ride Trolley Ridership

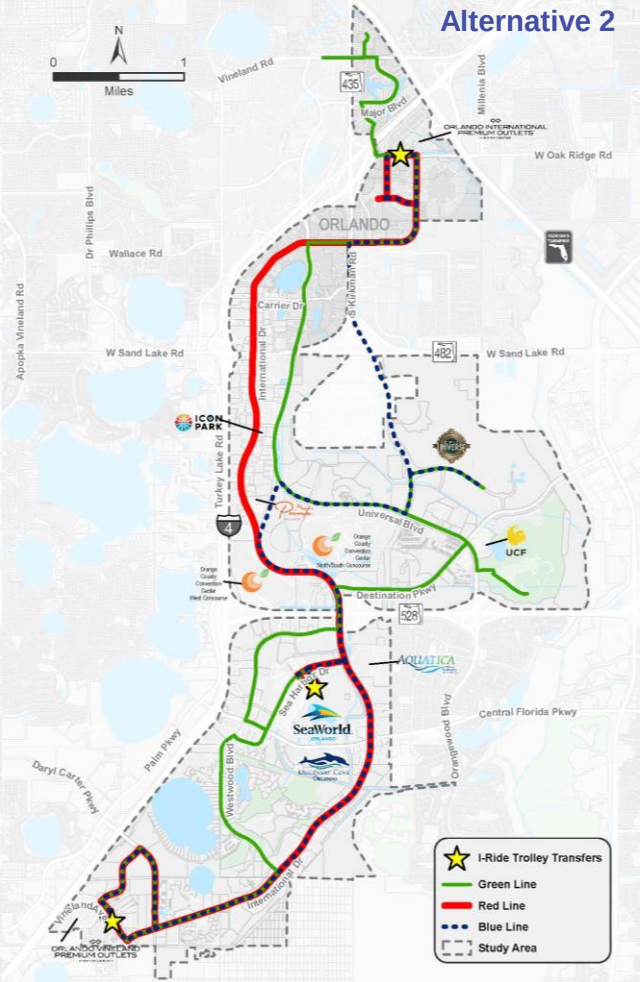




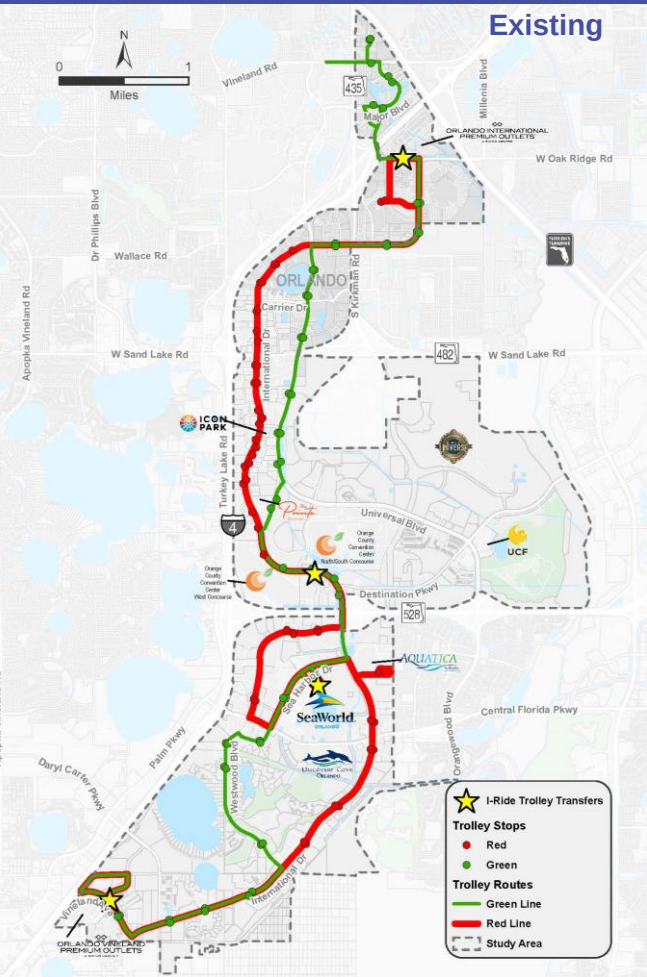
Improvement Alternatives – Phase 1

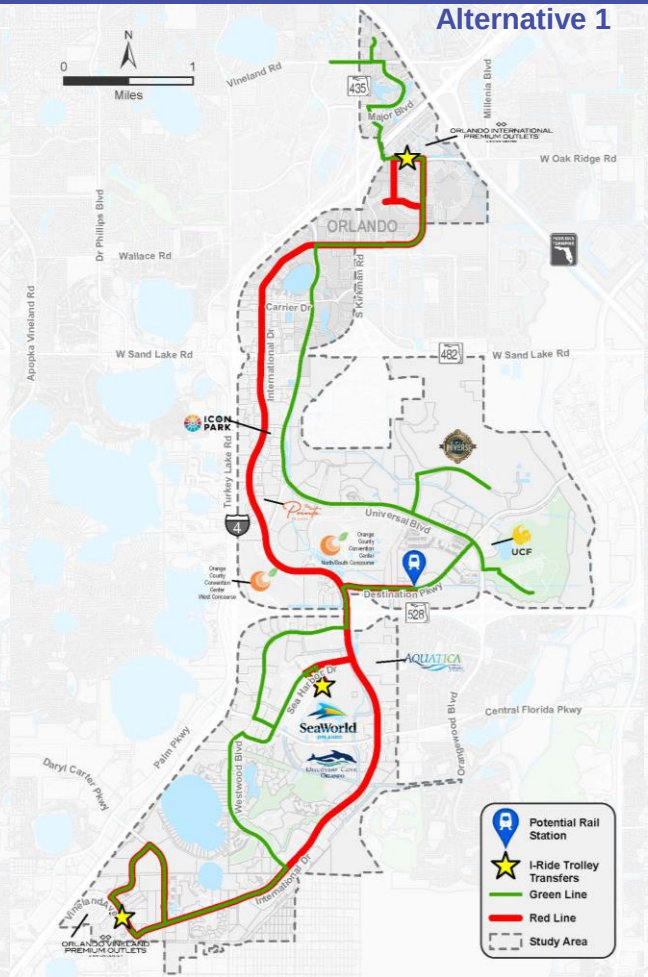


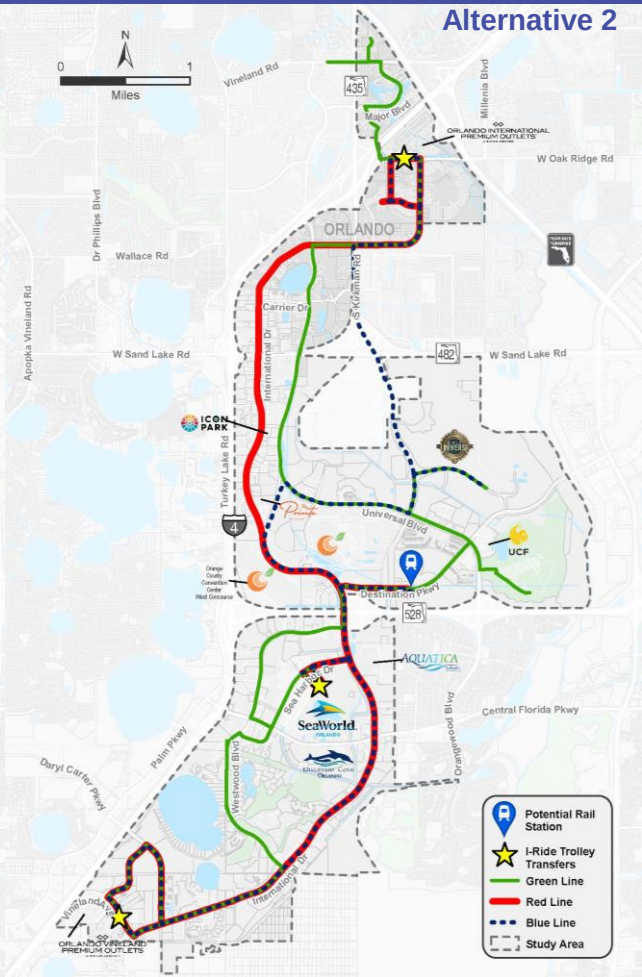




Improvement Alternatives – Phase 2







I-Ride Trolley Service Ph. 1 Alternative Comparison

Frequency (minutes)

Route	Existing	Alt 1	Alt 2
Red	20	10	15
Green	30	30	30
Blue	-	-	30

Typ. Travel Time Outlet to Outlet (minutes)

Route	Existing	Alt 1	Alt 2
Red	109	94	94
Green	94	125	125
Blue	-	-	88

Number of Vehicles

Route	Existing	Alt 1	Alt 2
Red	10	18	12
Green	6	8	8
Blue	-	-	6
Total	16	26	26

Existing Daily Ridership

Route	Riders
Red	1,241
Green	316

System Fleet Electrification Vehicle Examples

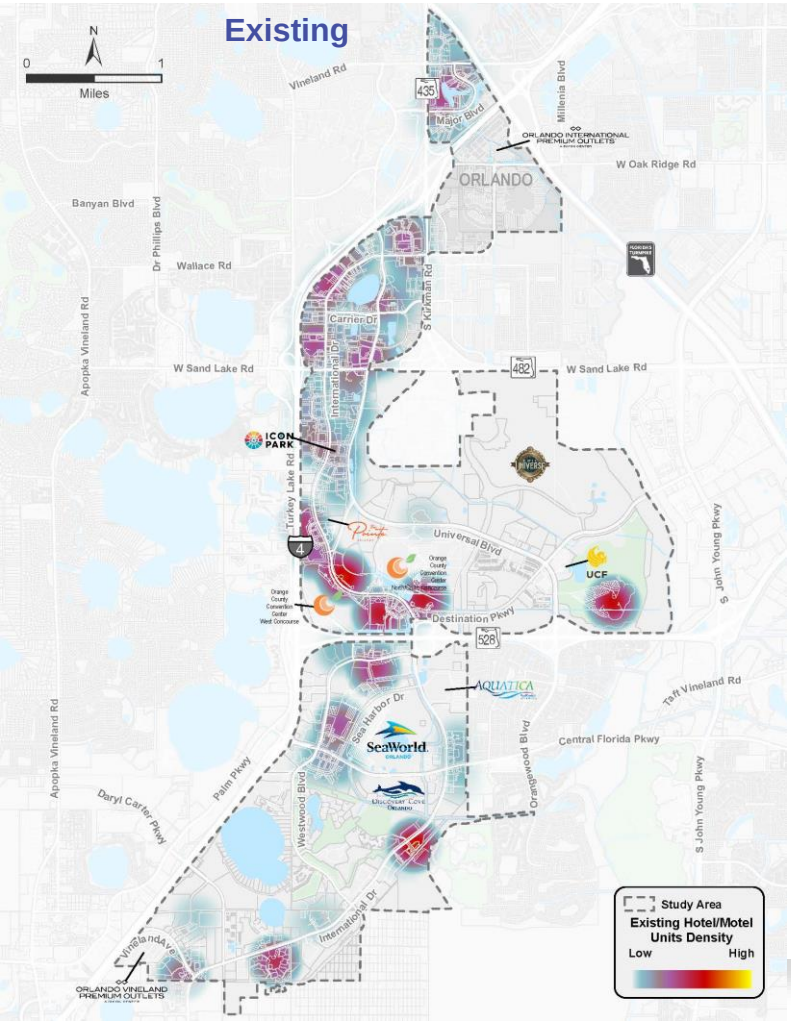
Vehicle	Size(s) available	Battery Pack (kWh)	Est. Range	Speed of Charge	Budgetary Cost (excluding charger)	Lead Time	Type
Hometown Trolley Villager	24.5 to 30ft	226	150-170mi	2-8 hours	$450,000	11 months	
Hometown Trolley Streetcar (2025)	30, 35, 40 ft estimated	320	140-200mi	2-8 hours	$850,000	Not available	
Gillig	35ft and 40ft	490, 588, or 686	150-200mi	1.5-4.5 hours	$900,000	Not available	

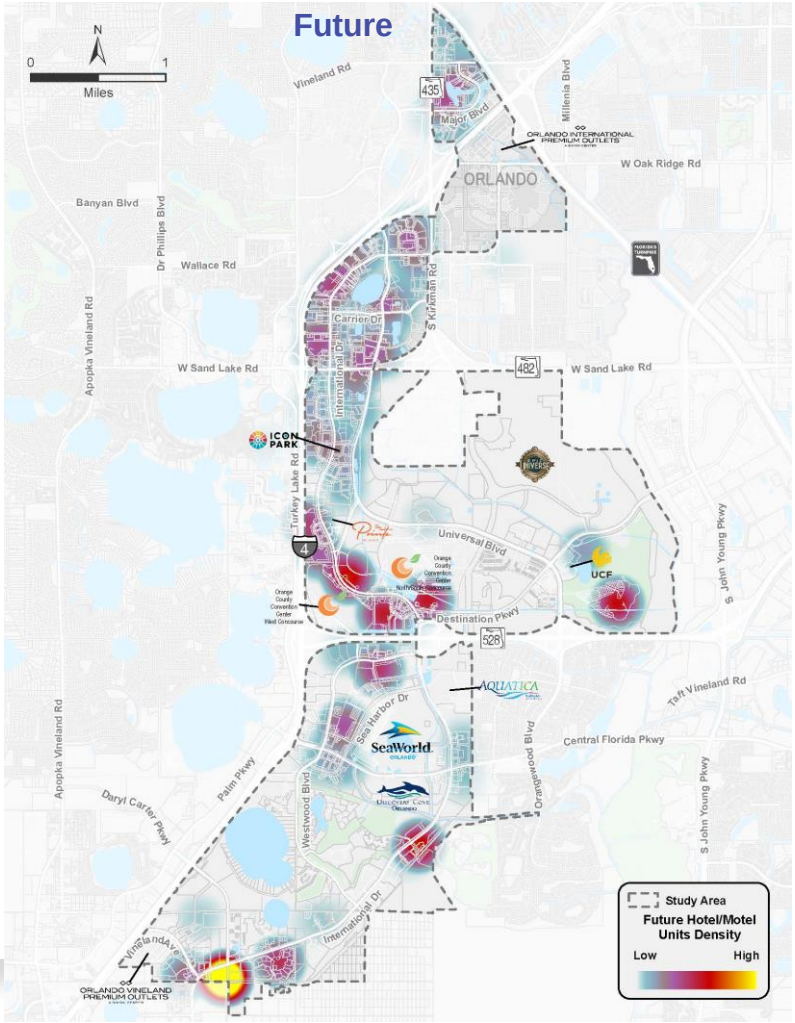
System Fleet Electrification Charging Scenarios

Charging Scenario	Pros	Cons
Depot-only charging with 320kW BEBs 	• Lowest cost option • Lower construction costs for depot chargers compared to on-route • Uses vehicle that meets the I-Drive aesthetic and size preferences	• Additional analysis needed to confirm feasibility • Most operational risk • Lowest state of charge (SOC) at end of day
Depot-only charging with 440kW BEBs 	• Lower construction costs for depot chargers • High confidence that vehicles will have adequate range for useful life	• Most expensive vehicle • Vehicle has fewer trolley aesthetic features
On-route + depot charging 	• Uses vehicle that meets the I-Drive aesthetic and size preferences • Reduce energy needed and construction at Mears Facility	• Higher construction costs for on-route chargers • Likely need inductive charger, which is more expensive • Most infrastructure required: depot and on-route chargers

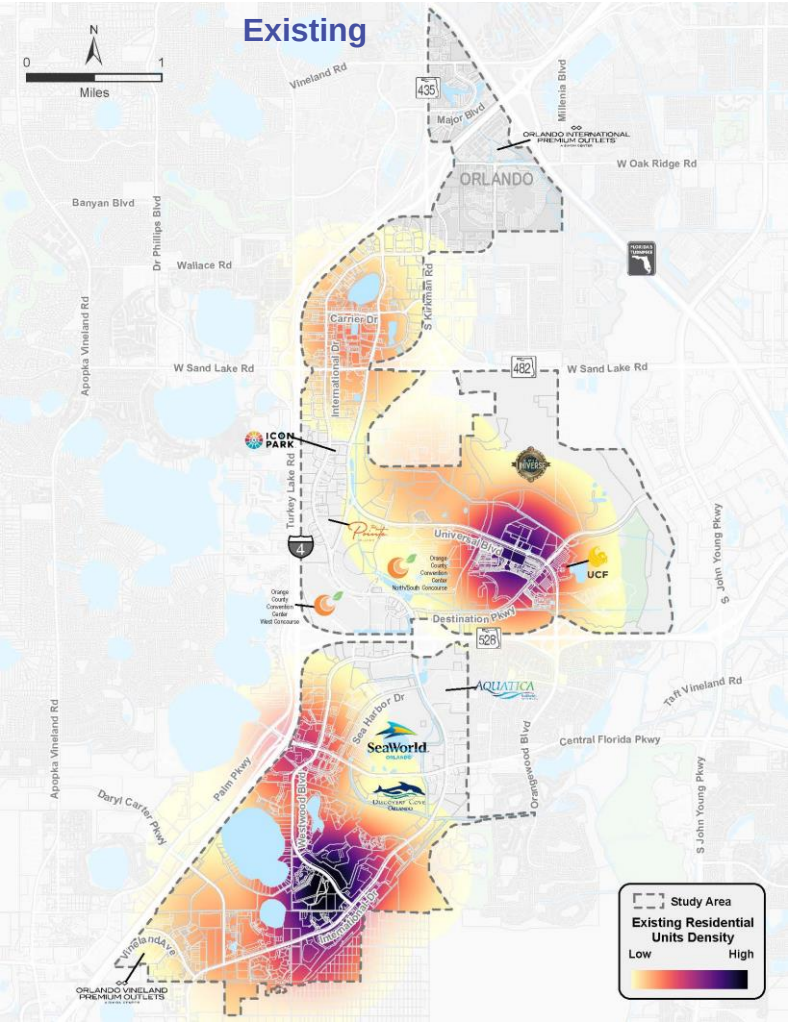
Analysis Background

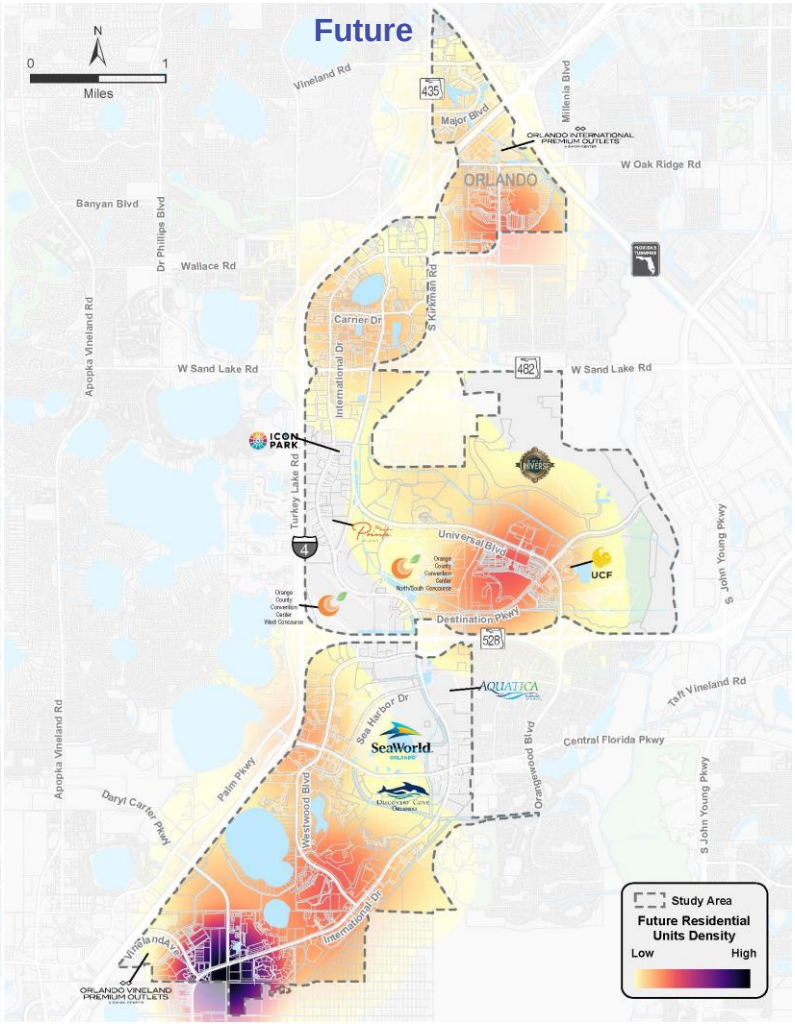
Hotel/ Motel Unit Density





Residential Unit Density





Existing and Planned Transit Infrastructure

Business Access & Transit (BAT) Lanes

Existing
- **I-Drive**
  Oak Ridge Road to Universal Boulevard

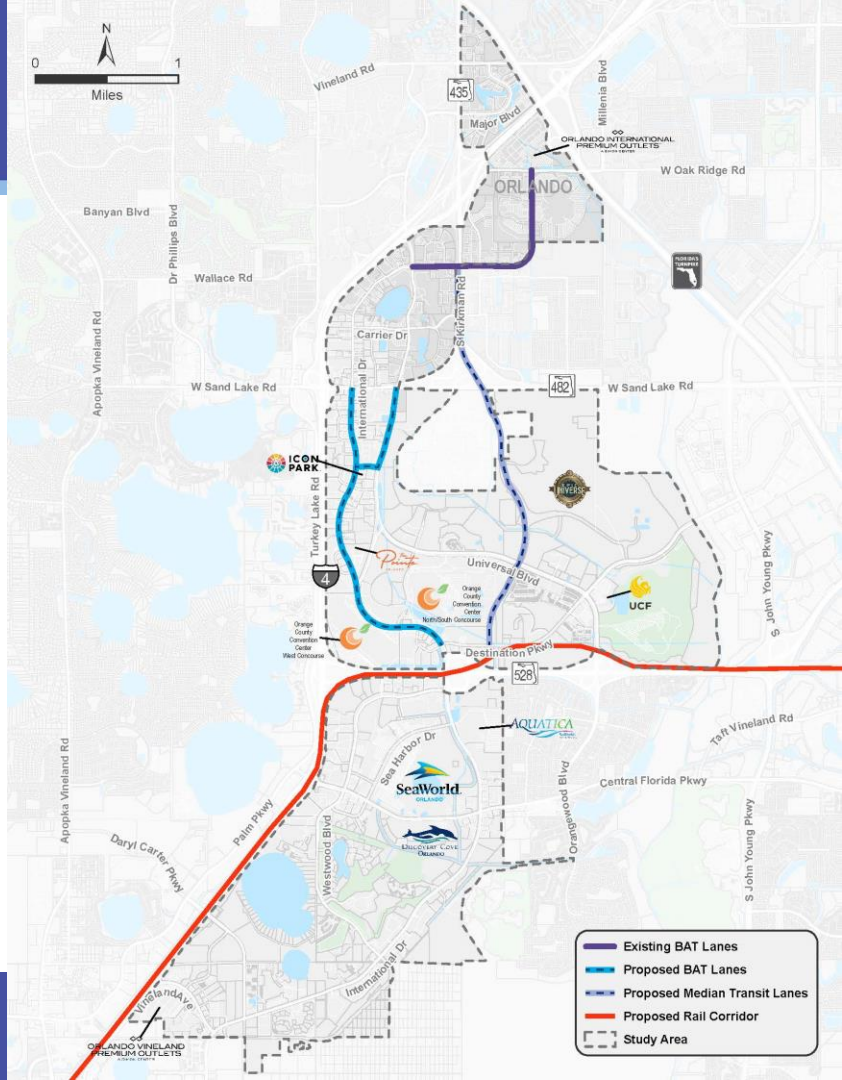
Planned
- **I-Drive**
  Destination Parkway to Sand Lake Road
- **Universal Boulevard**
  Via Mercado and Sand Lake Road

Exclusive Transit Lanes

Under Construction
- **Kirkman Road extension**
- **Tradeshow Boulevard**

Sunshine Corridor

Planned
- **SunRail**
- **Brightline**



Orange County's Planned I-Drive Bus Rapid Transit

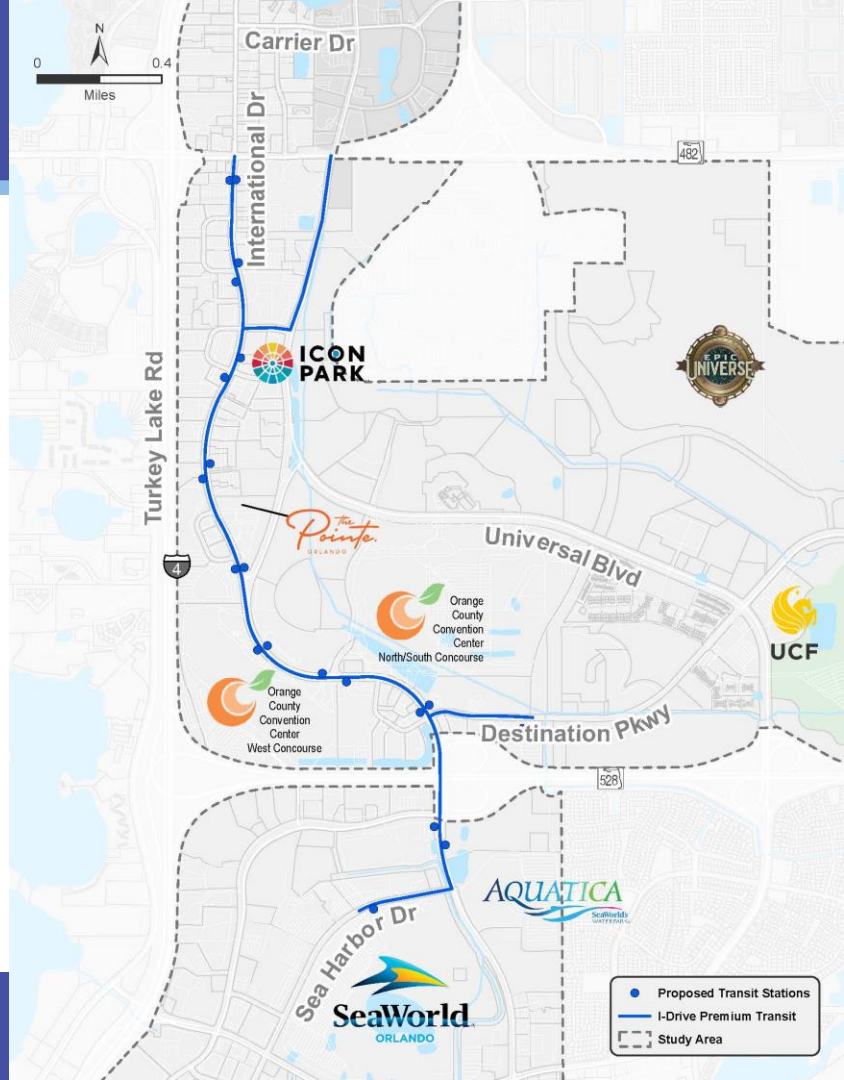
Sand Lake Road to Sea World

Runs on I-Drive Transit Lanes with LYNX and I-Ride Trolley

Runs every 10 minutes

11 stations at key destinations

6am to 1am
7 days / week



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Future Analysis and Decisions

- Route changes and service levels
- Modifications to fare structure
- Additional technology
- Integration with other transit services
  - Brightline and SunRail
  - Orange County BRT
  - LYNX
- OCCC autonomous shuttle
- Micromobility and Pedicab
- Consideration of partnerships with TNCs (Uber & Lyft)
- Approach to balancing pedestrian and bicycle space
- EV approach