

Houston METRO University District Project: Supporting Diversity, Equity, and Inclusion with Automated Vehicles

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Houston METRO Introduction

Local Bus Service



METRO Rapid (BRT)



METRO Star Van Pool



METRO HOV/HOT Lanes



Park n Ride



Community Connector



METROLift Paratransit



METRO Rail (Light Rail)



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Houston, Texas

Today

- 4th Largest city in United States
- Largest city in State of Texas
- One of the most diverse cities in U.S.
- 5M people in City of Houston
- 3M Jobs
- Home of the Largest Medical Center in the World

The Future (2040)

- 50% population increase in METRO service area
- 10M People
- 4.5M Jobs
- Texas Medical Center adding 2 new campuses



Houston METRO University District Project Automated Mobility District



1 Mile
Closed Loop



1.3 Mile/
Mixed Traffic
Connect to
Light Rail Line



Light Rail
Line to
Transit
Center

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University District Project Phase I



Type of vehicle: Electric automated shuttle

- Passenger capacity per vehicle:
12 passengers: 6 seated / 6 standing
- Operated on campus at Texas
Southern University
- 7,000 successful trips
- High customer satisfaction
- Houston METRO awarded federal
grant to implement Phase II
connecting to Light Rail and
University of Houston

Challenges:

- Not federally
compliant
- Vehicle Capacity
- Accessibility
- Vehicle
Availability

METRO Houston

Shuttle of the Future Project

Federal Transit Administration

AIM Grant



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Houston Shuttle of the Future



ACCELERATING INNOVATIVE MOBILITY (AIM) DEMONSTRATION PROGRAM: HOUSTON METRO SHUTTLE OF THE FUTURE

- Houston METRO received a Federal Transit Administration Accelerating Innovative Mobility (AIM) Grant to develop Phase II of the University District Project
- Once completed the prototype vehicle will be compliant with Buy America, Americans with Disabilities Act (ADA) and all requirements of the National Highway Traffic Safety Administration (NHTSA)
- It will operate in mixed traffic for first/last mile use between two universities and a historically underserved community in Houston, TX
- Mid-Size Level 4 Autonomous Zero Emission Shuttle Bus

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Proposed Service Area Third Ward, Houston, Texas

- Third Ward is an area of Houston, Texas, United States, that evolved from one of the six historic wards
- Today it is a predominately African American community but with increasing gentrification
- Median Income is \$20,000 less than city average with high unemployment
- 82% of Third Ward residents are in an USDA defined food desert
- 73% of Third Ward residents are renters
- 81% of residents are people of color
- 30% are transit dependent vs. 8% of Houston
- Source: Third Ward Community Data Metrics

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Proposed Service Area



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- 16 Seat Capacity
- Room for 2 wheel chairs
- Electric Shuttle
- ADA Compliant
- Buy America Compliant
- FMVSS Compliant

PHOENIX MOTORCARS EZ-ZEUS E-450



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Current Status

December 2022 –
July 2023: AV
Vehicle Integration

July 2023: Testing
Scheduled

August/Sept 2023
Service begins

Operations

Service will be free

Transit services will
be integrated into
vehicle

Hours of operation
still being
determined

Challenges

AV Vehicle Market

Vehicle Charging

Scaling to
deployment



Kimberly Williams, JD

Chief Innovation Officer at
Metropolitan Transit Authority...



Let's Keep in Touch

- For more information:
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- Want more information on the University District Project?
Visit www.ridemetro.org and search for projects

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