



DART's Next Rodeo

Society of American Military
Engineers
22nd Annual Infrastructure Forum

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A yellow and white bus is driving on a city street. The bus has the number 41041 on its side. In the background, there are several tall, modern buildings with glass facades. The sky is blue with some clouds. A large, semi-transparent yellow box with a black border is overlaid on the image, containing the text "Problem Statement".

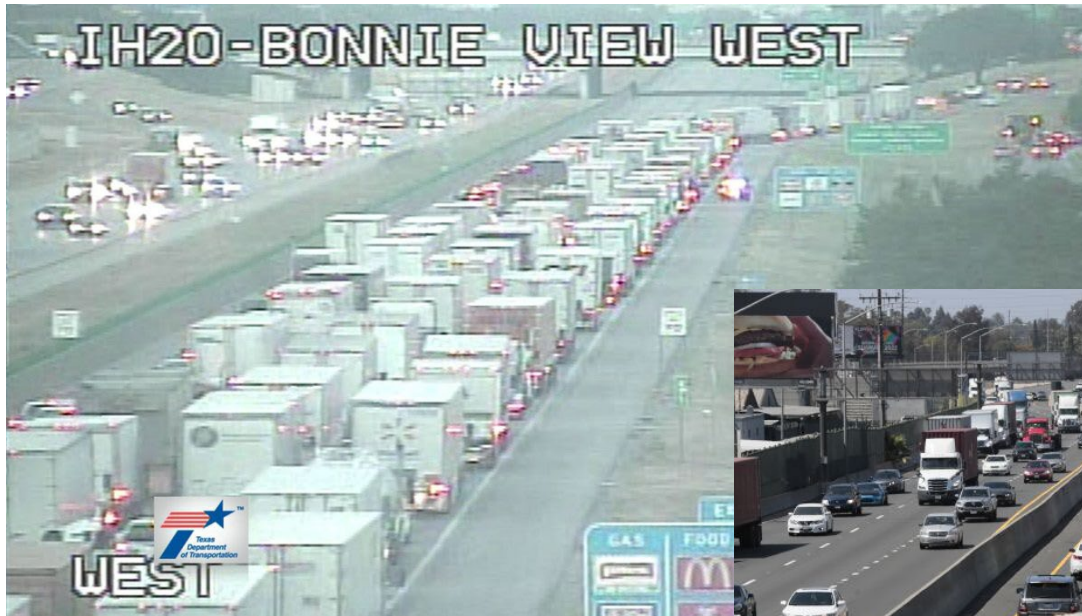
Problem Statement

Congestion, as we should know it

- Economic problem
- Space is the commodity
- Demand for space far outstrips supply
- Traffic delay severely limits regional productivity



Passenger/Goods Competition



D-FW Metroplex today



- 7.7 million people
- Rich culture
- Diverse economy
- Low density
- Decentralized commercial districts
- Significant local and regional goods movement
- Inefficient transportation infrastructure

D-FW Metroplex tomorrow...

- 4 million more people by 2045
- 3 million more jobs by 2045
- Corporate relocations to D-FW
- Development shifting away from historical hubs
- *Increasing demand on an oversubscribed system*



Change or status quo?

- Unmitigated transportation consumption ties directly to:
 - Poor air quality
 - Congestion and delay
 - Environmental harm
 - Economic disparities
- *Alter our approach to change the course of the future*



Different perspective and approach

- Leverage transit as part of broader transportation system
 - Focus on the bus network
- Adapt to customer needs
- Provide unparalleled transit performance
- Transform mobility in North Texas



A yellow and white bus with the number 41041 is parked on a city street. The bus has a large advertisement on its side featuring a woman's face and the text "ST. LOUIS 3-2-1". The background shows several tall, modern skyscrapers under a blue sky with some clouds. A semi-transparent blue rectangle with a yellow border is overlaid on the image, containing the text "Taking Care of Today's Riders".

Taking Care of Today's Riders

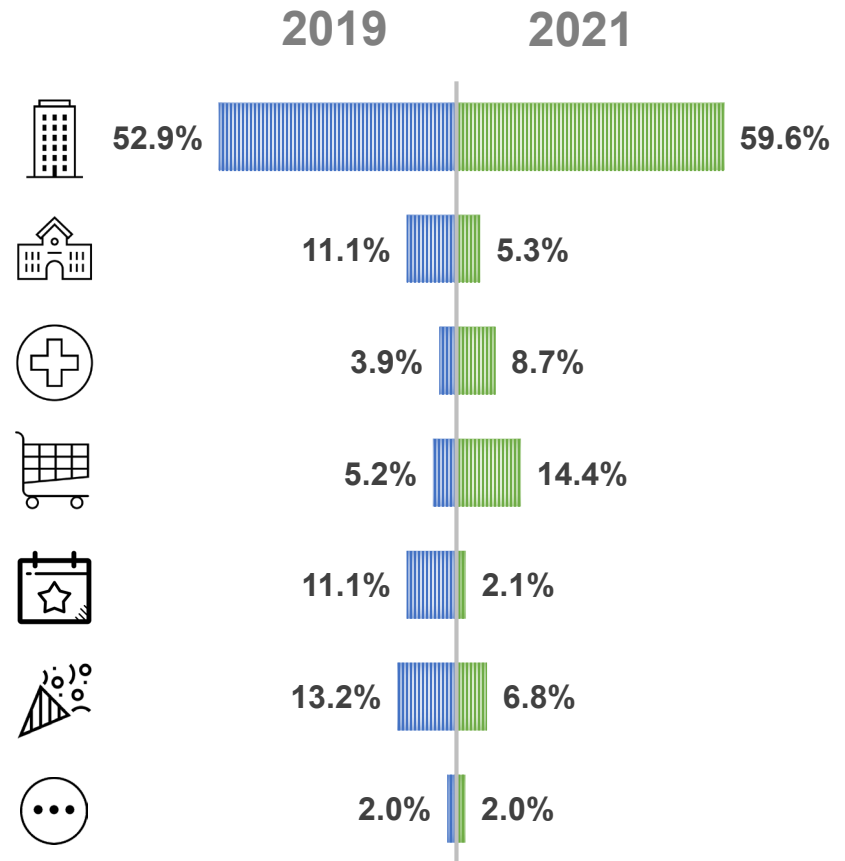
Customer retention, over acquisition

- Today's Riders
 - Essential workers
 - Have more choices than we think
- We must
 - Shift resources to address customer pain points
 - Deliver a product people are willing to buy



Trip Purpose

- Transit was more used for essential purposes in 2021, such as
 - Work
 - Shopping and errands
 - Medical service
- Transit was less used for non-essential purposes or purpose with alternative option to achieve in 2021, such as
 - Casual outing and entertainment
 - Special events
 - School or college



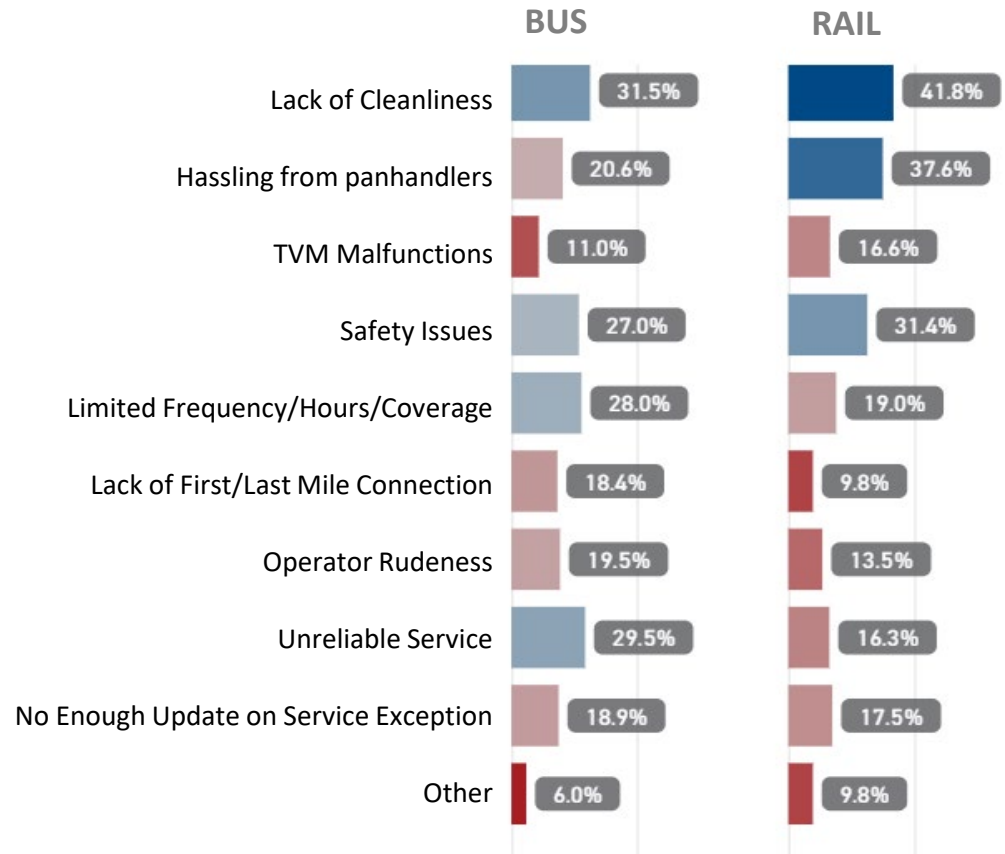
Bus Rider Demographics

- 21% Hispanic/LatinX
- 55% African American
- 75% have no access to a car
- 66% low income (<\$35,000/year)
- 64% ride more than 5 times/week
- 43% pay with cash



Top Issues DART Needs to Resolve

- Bus Top 3 Issues
 - Lack of Cleanliness
 - Unreliable Service
 - Limited Service Frequency, Hours, Coverage
- Rail Top 3 Issues
 - Lack of Cleanliness
 - Hassling from Panhandlers
 - Safety Issues



Operationalizing customer needs

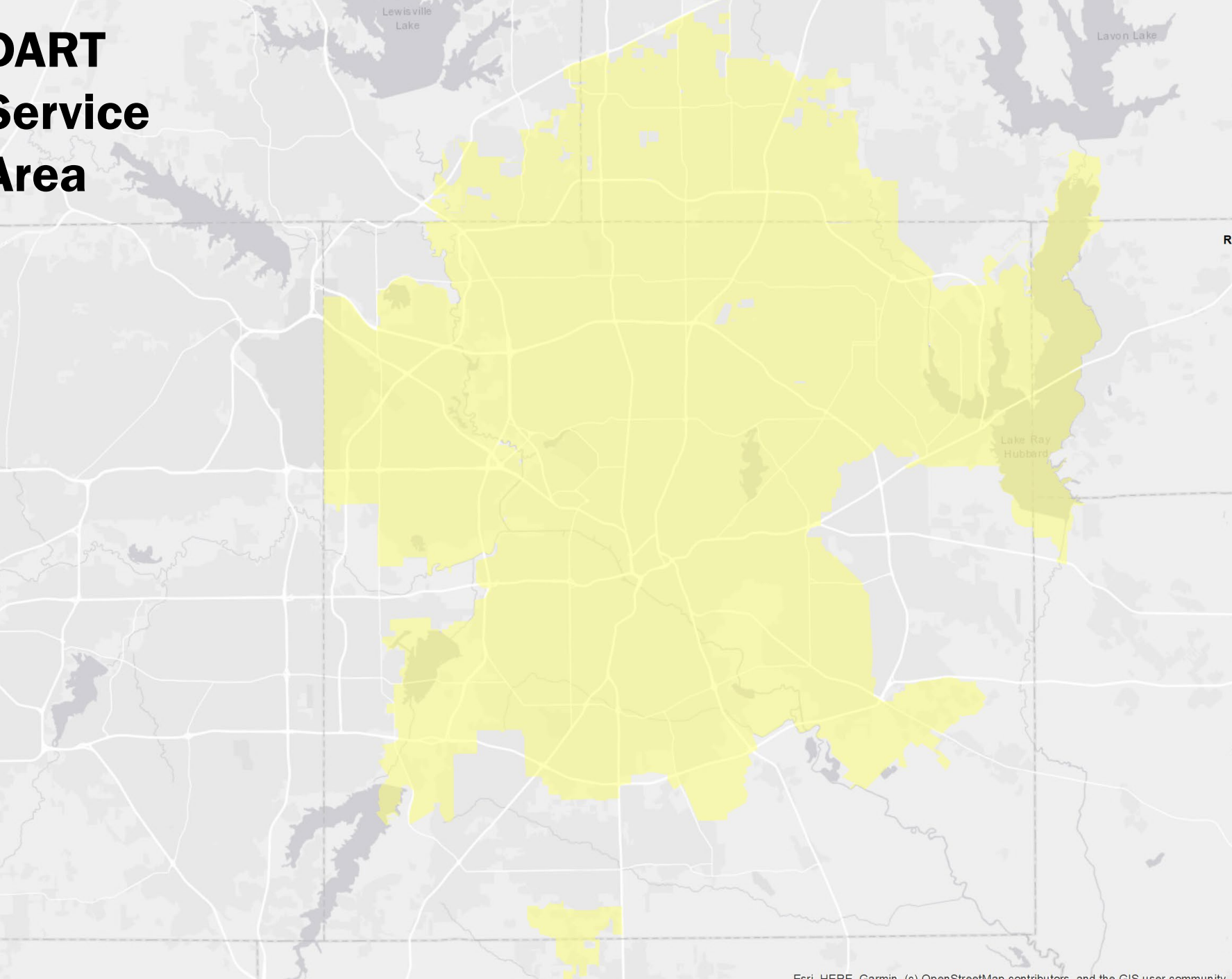
- Coverage (availability/access)
- Convenience (frequency)
- Confidence (speed/reliability)
- Quality (comfort/customer experience)
- Collaboration (partnerships)



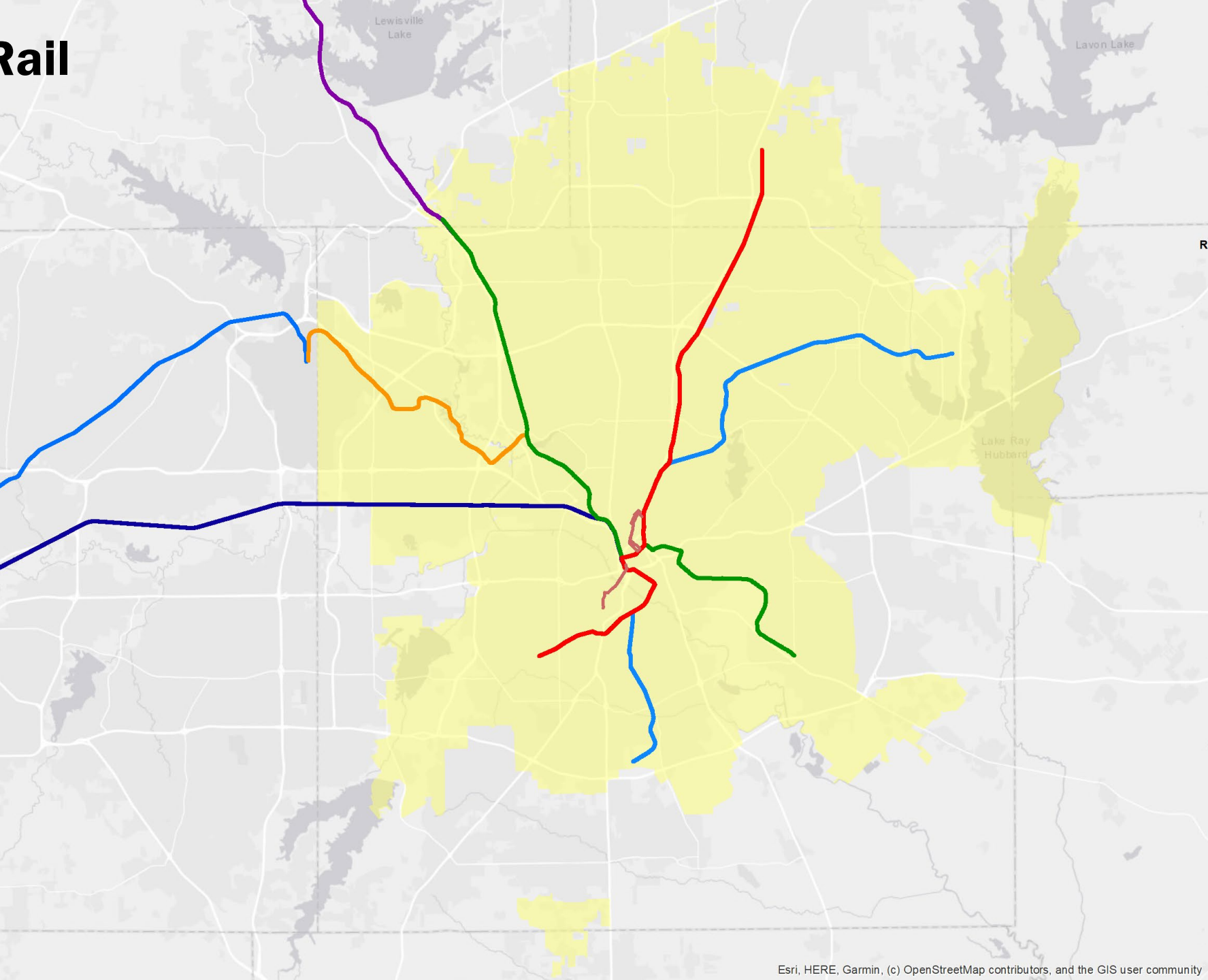


Coverage

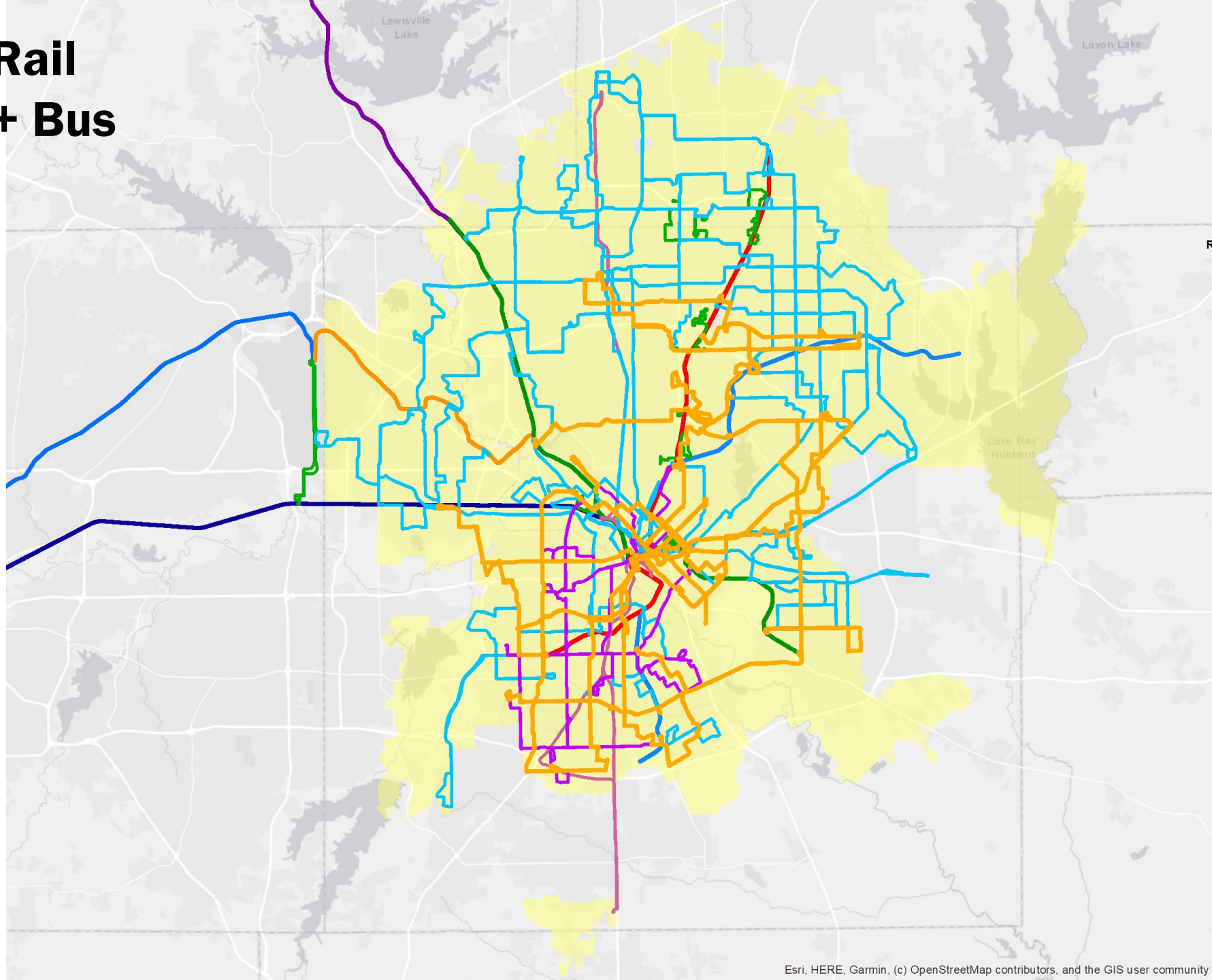
DART Service Area



Rail



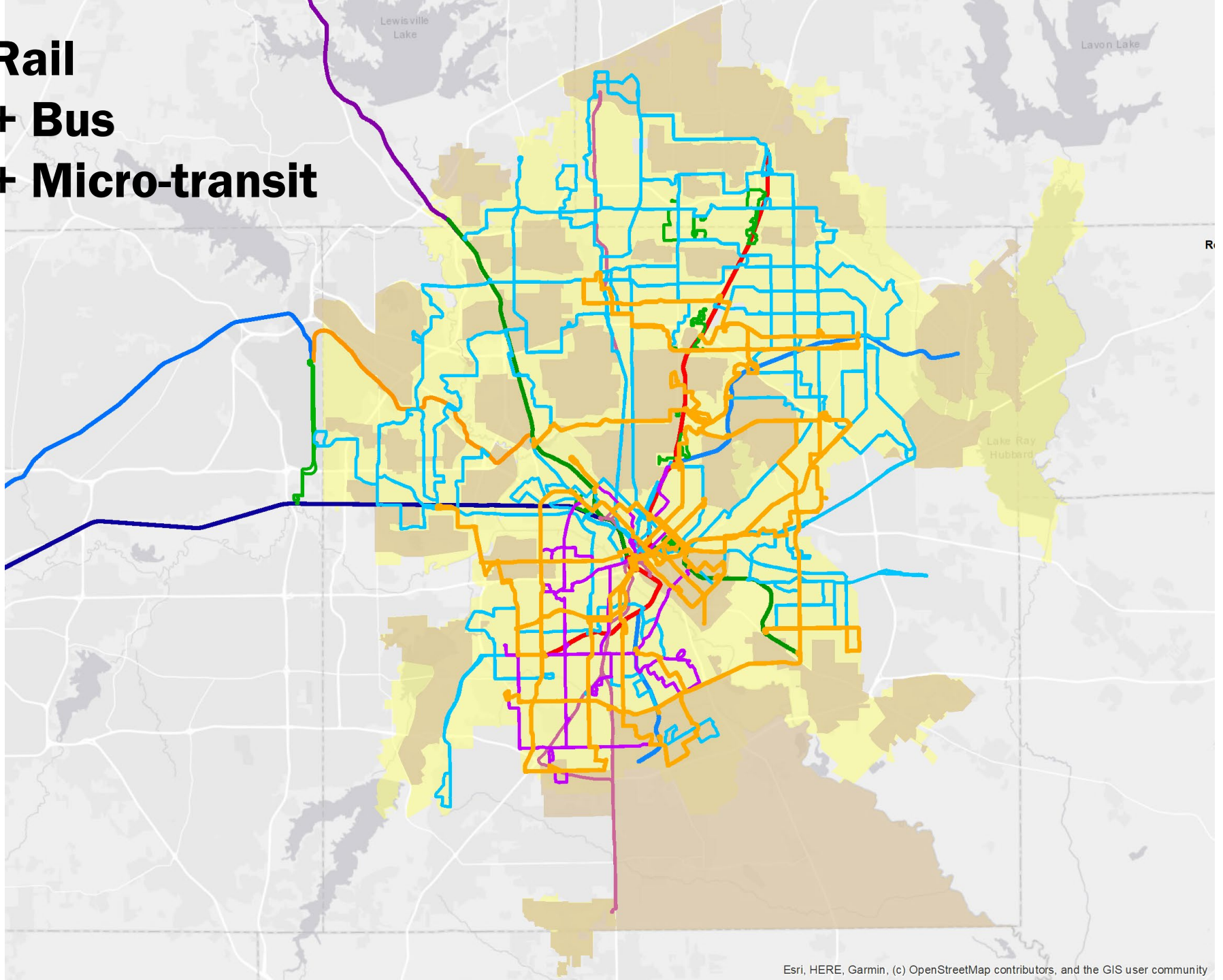
Rail + Bus



Rail

+ Bus

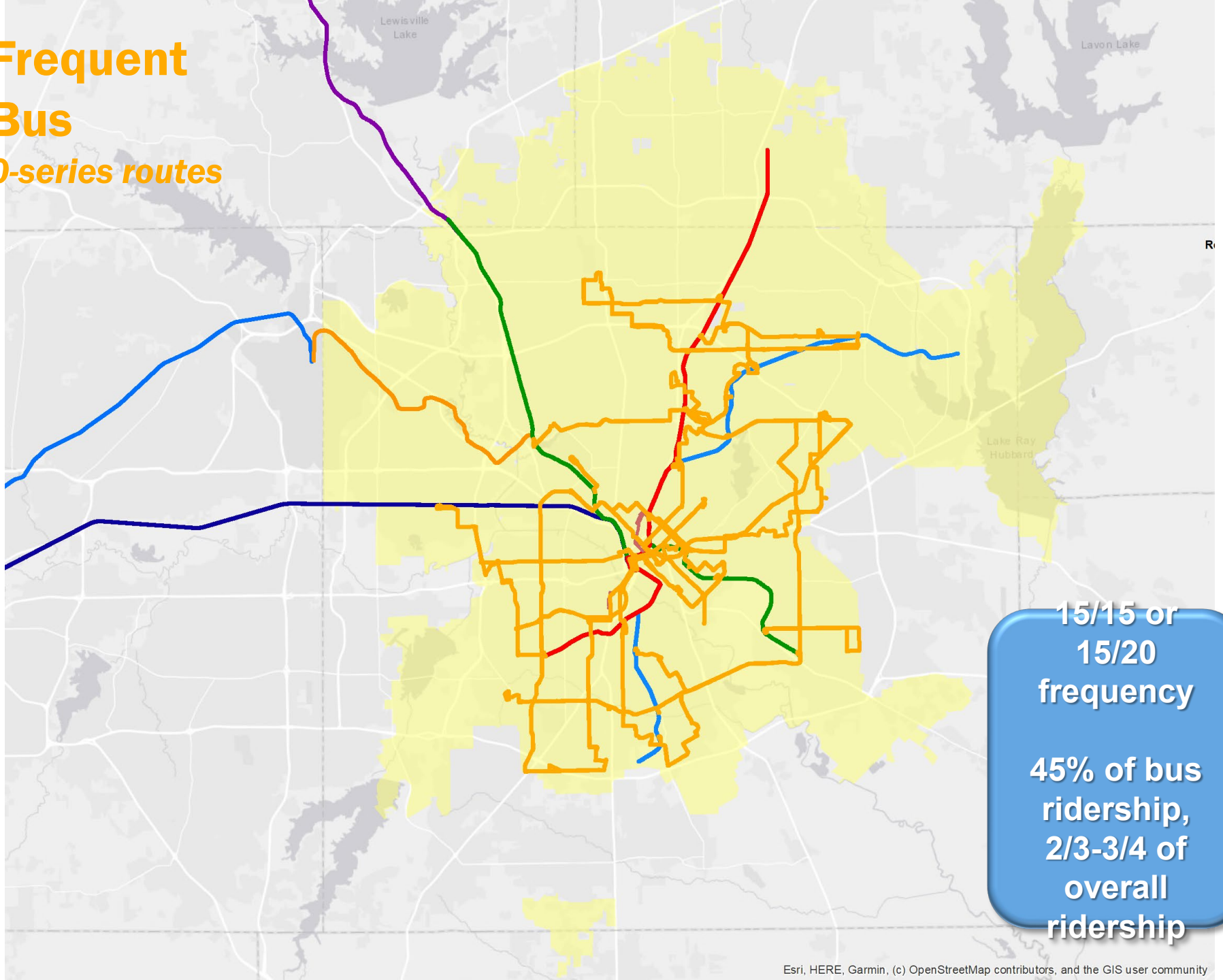
+ Micro-transit





Convenience

Frequent Bus 0-series routes

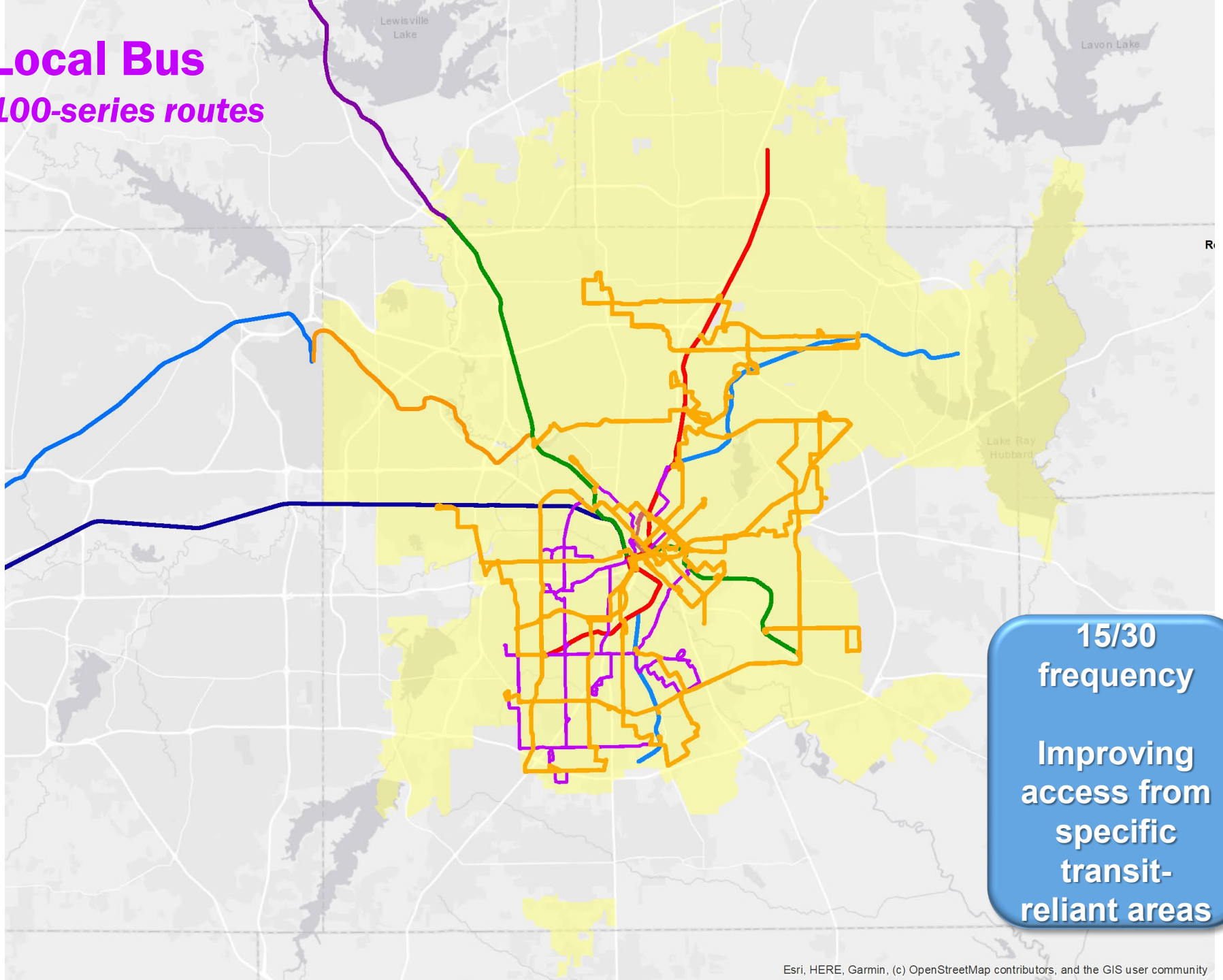


15/15 or
15/20
frequency

45% of bus
ridership,
2/3-3/4 of
overall
ridership

Local Bus

100-series routes

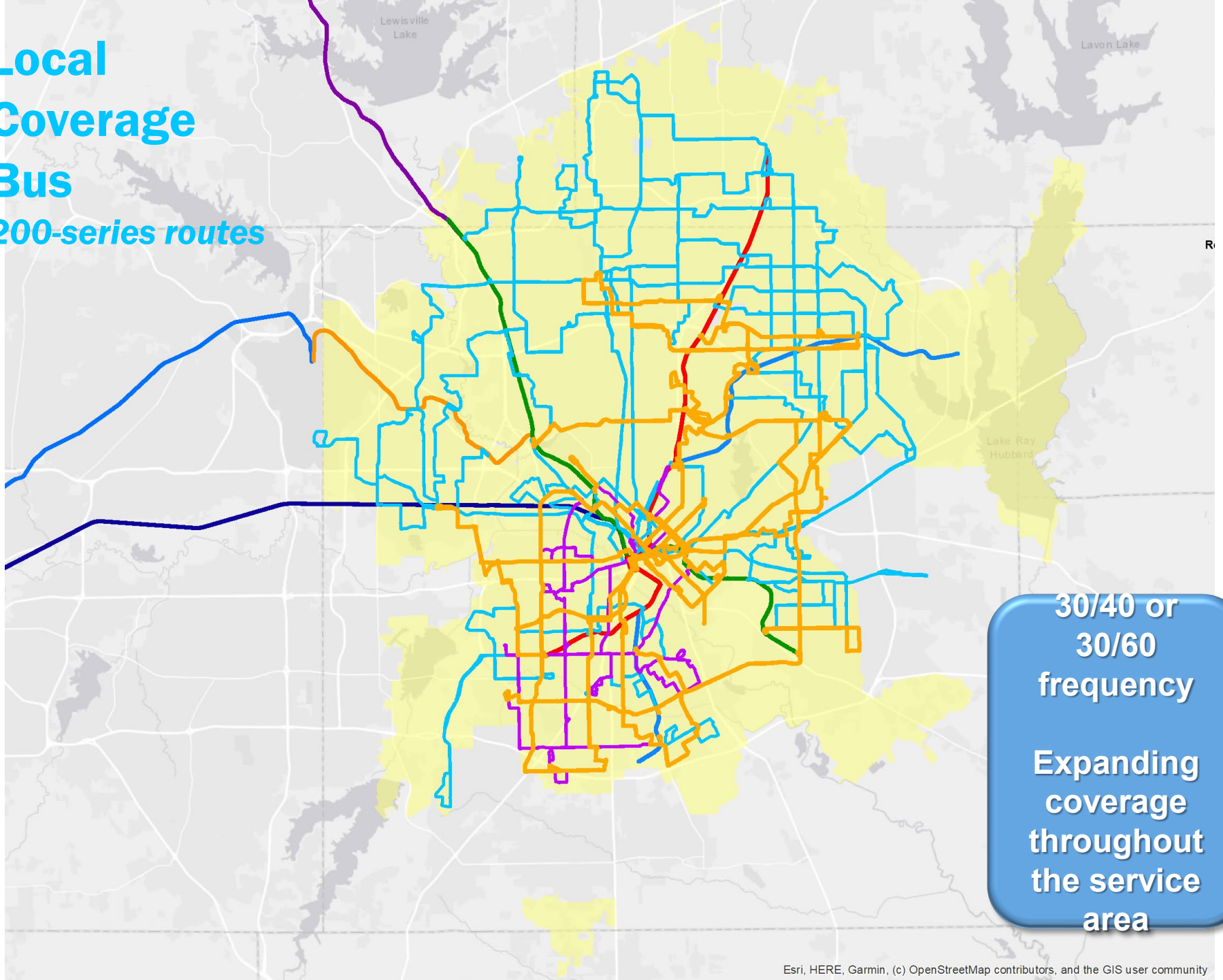


**15/30
frequency**

**Improving
access from
specific
transit-
reliant areas**

Local Coverage Bus

200-series routes



30/40 or
30/60
frequency

Expanding
coverage
throughout
the service
area

DARTzoom New Bus Network

22 core frequent bus routes with rail-like frequencies, operating 4:00 am-1:00 am

All local routes operate minimum 5:00 am-Midnight, 7 days per week

Most routes have more frequent midday and evening service for off-peak work, school, medical, and shopping trips

GoLink Microtransit Service

- On-demand, curb-to-curb shared-ride service
- Operates in 30 zones
- Average wait time of 14 minutes or less
- Ridership similar to previous fixed route





Confidence and Quality

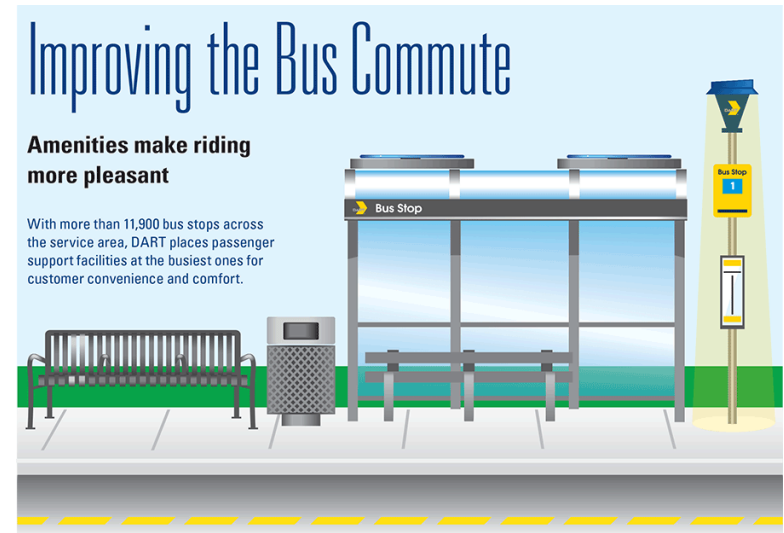
Bus Rapid Transit (BRT)

- High ridership, frequent bus routes could be upgraded to BRT
 - Dedicated bus lanes or queue jumps
 - Transit signal priority
 - Defined passenger amenities
- Grant opportunities available



Rider Experience

- Enhanced first/last mile access in collaboration with cities and NCTCOG
- Expanding funding for bus stop amenities for local and Core Frequent bus routes
- Technology improvements that provide more accurate and timely passenger information
- Improving system safety and security



UTA Community Design Build Lab



Collaborative effort during Fall 2022 semester to design shelter of the future



Collaboration

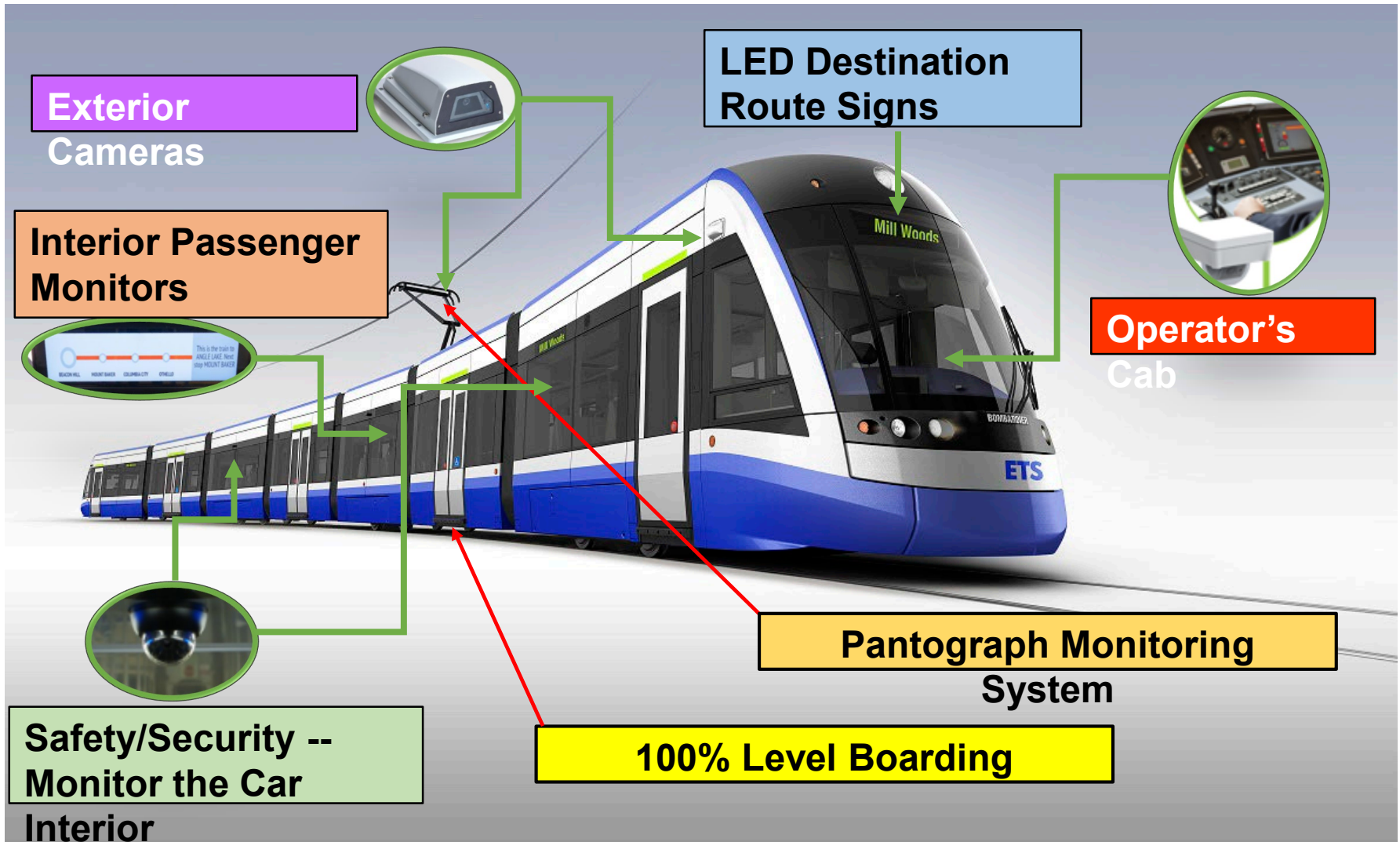
Partnerships for the Future

- Collaborate with
 - Local and regional partners
 - Community and advocacy organizations
 - State and federal partners
- Leverage all funding to do more
- Address customer feedback
- We are better together!



Upcoming Major Capital Investments

New LRV Features & Technology



Customer Engagement for new LRVs



**Help design new
light rail train cars**



You are invited to participate in a virtual focus group to give feedback and provide input to help design new light rail train cars.

LRV focus group feedback

Experience riding DART

Accessible

Pleasant Noisy
On-time Crowded
Better than driving Unclean

Interior Design Features

- Family oriented seating
- 1:1 or 2:1 seat configuration
- Multidirectional Seating
- LED lighting
- Warm and vibrant colors



Exterior Design Features

- Keep DART colors
 - Lighter colors
- Door illumination
 - Door sensors
- Cardinal direction
 - Modernize
- Aerodynamic
- Level boarding

Interior Seating

Preference for vinyl seating

Digital signage

Variety of handholds

High floor

Increase storage for mobile equipment

Modern design

Safety

Better lighting

Real-time camera monitoring

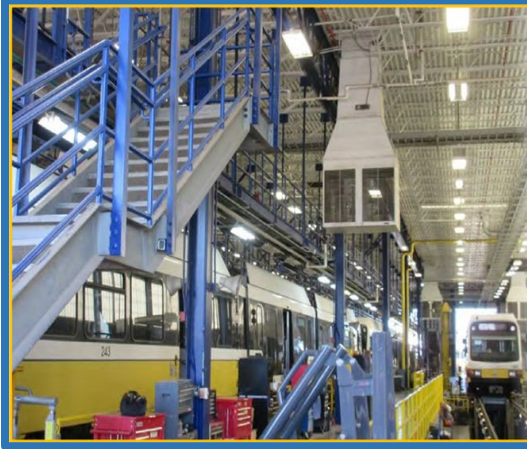
Fare enforcement

Police presence

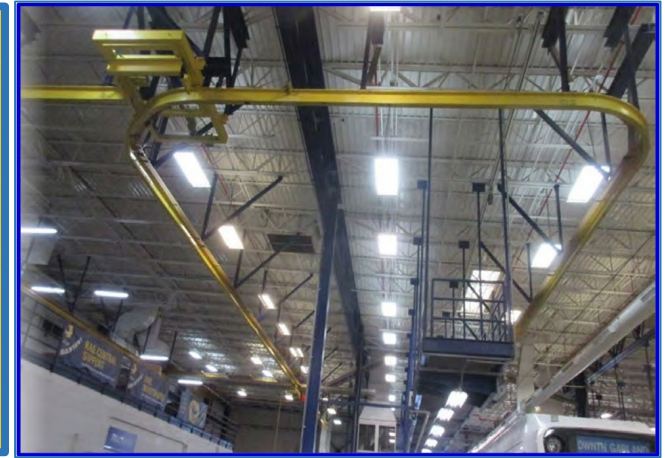
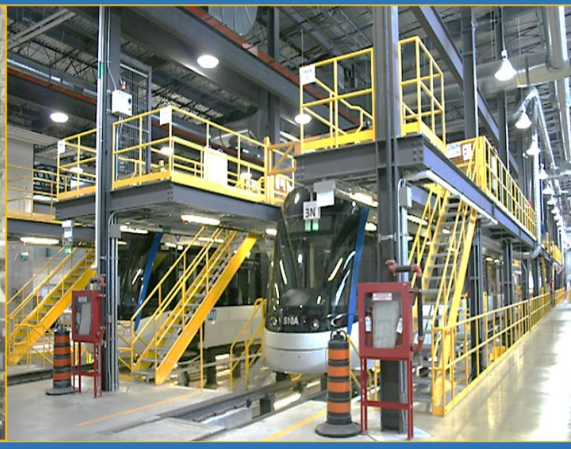
Increase emergency buttons

Keep Say Something app

Projected LRV Facilities upgrades



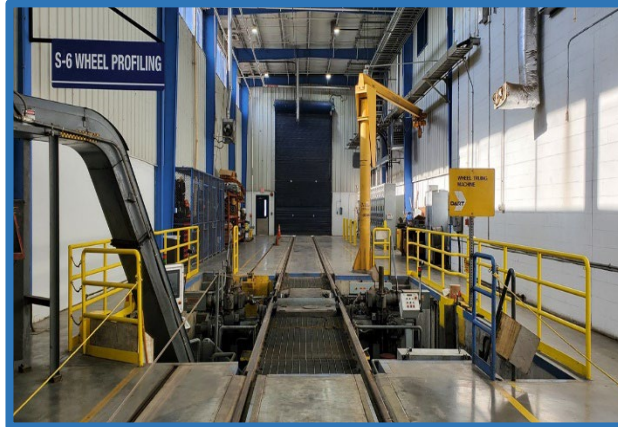
**Convert Suspended Platforms
to Floor Mounted Platforms**



**Facility
Cranes**



**Increased Roof-
Top Access**



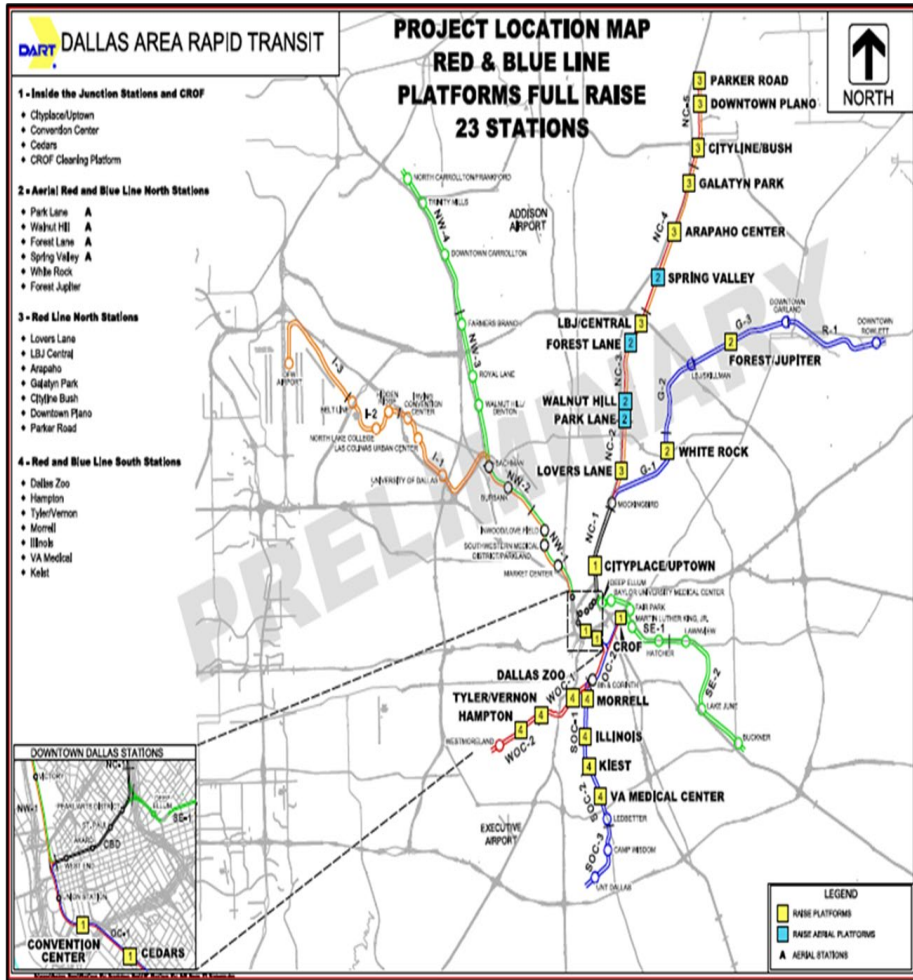
**Wheel Truing
Machine Upgrade**



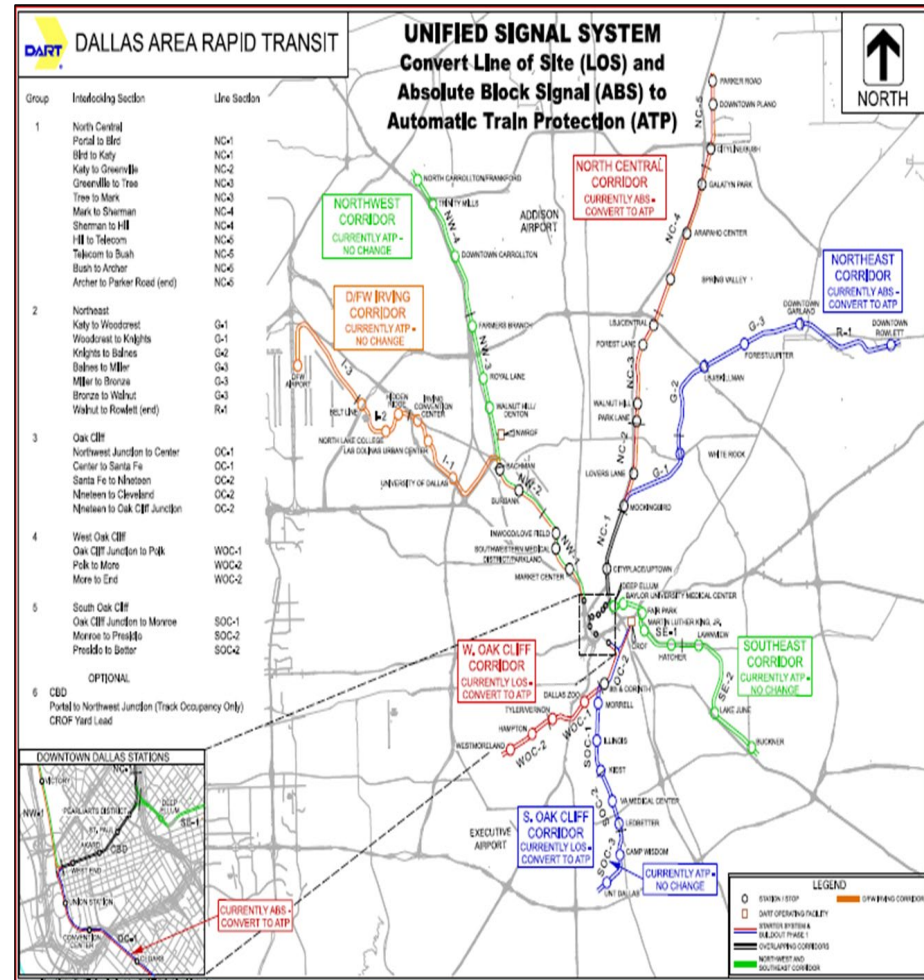
**Upgraded Fall
Protection for
Increased Roof
Access Work**

Platforms Raise & Onited Signal Systems

Red & Blue Line Platforms Raise



Unified Signal Systems (Trip Stop System (TSS) -to- Automatic Train Protection (ATP))



Bus Manufacturers



Proterra ZX5



New Flyer Xcelsior Charge NG



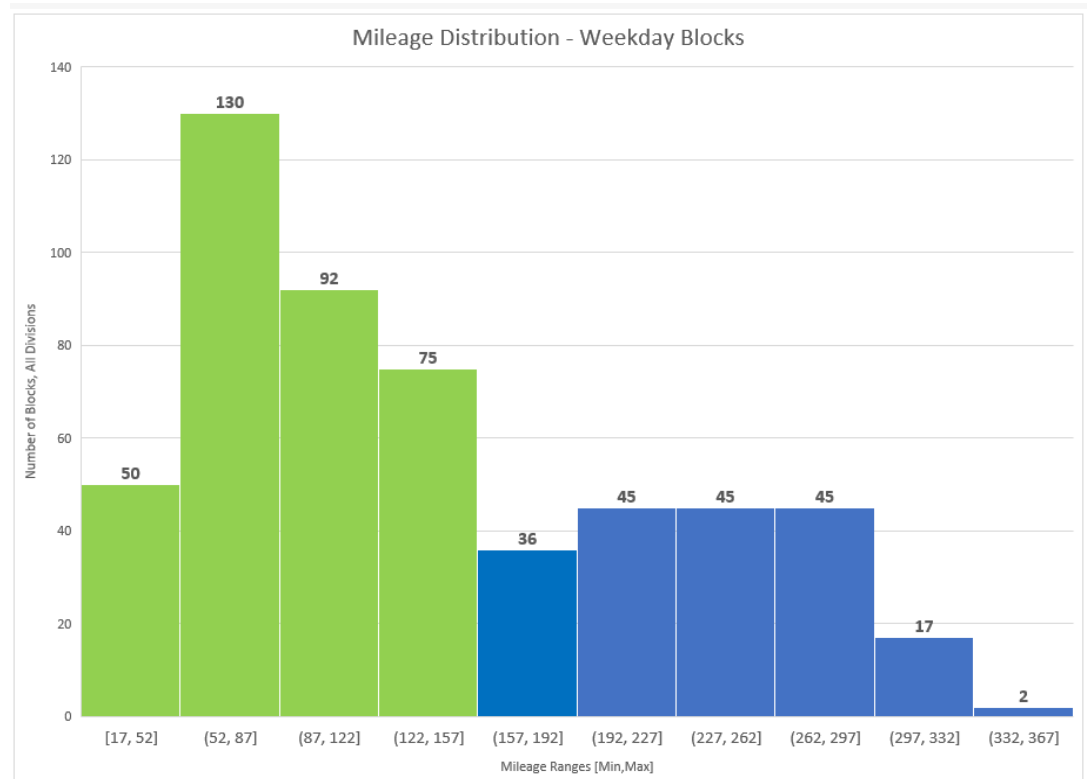
Gillig Battery Electric Zero Emissions



BYD K8M - 35' TRANSIT BUS

Route Profiles – Weekday (single charge)

- Typical weekday data, all divisions, all blocks
- Electric buses with a usable 70% charge range can cover 76% of all weekday blocks
- Green = candidate blocks within a 157 mile range.



Notes: A cluster of BLOCKS makes up a ROUTE. For example, Blocks 2801, 2804, and 2851 all run on Route 28. Normally one bus runs one block.

- Weekdays are typically served by 484 blocks total, distributed among all divisions.
- Numbers in [braces] represent the weekday mileage ranges covered in this histogram.

Chargers and Dispensers

Combination Charger/Dispenser
(Central Support [1] and SOC [2])



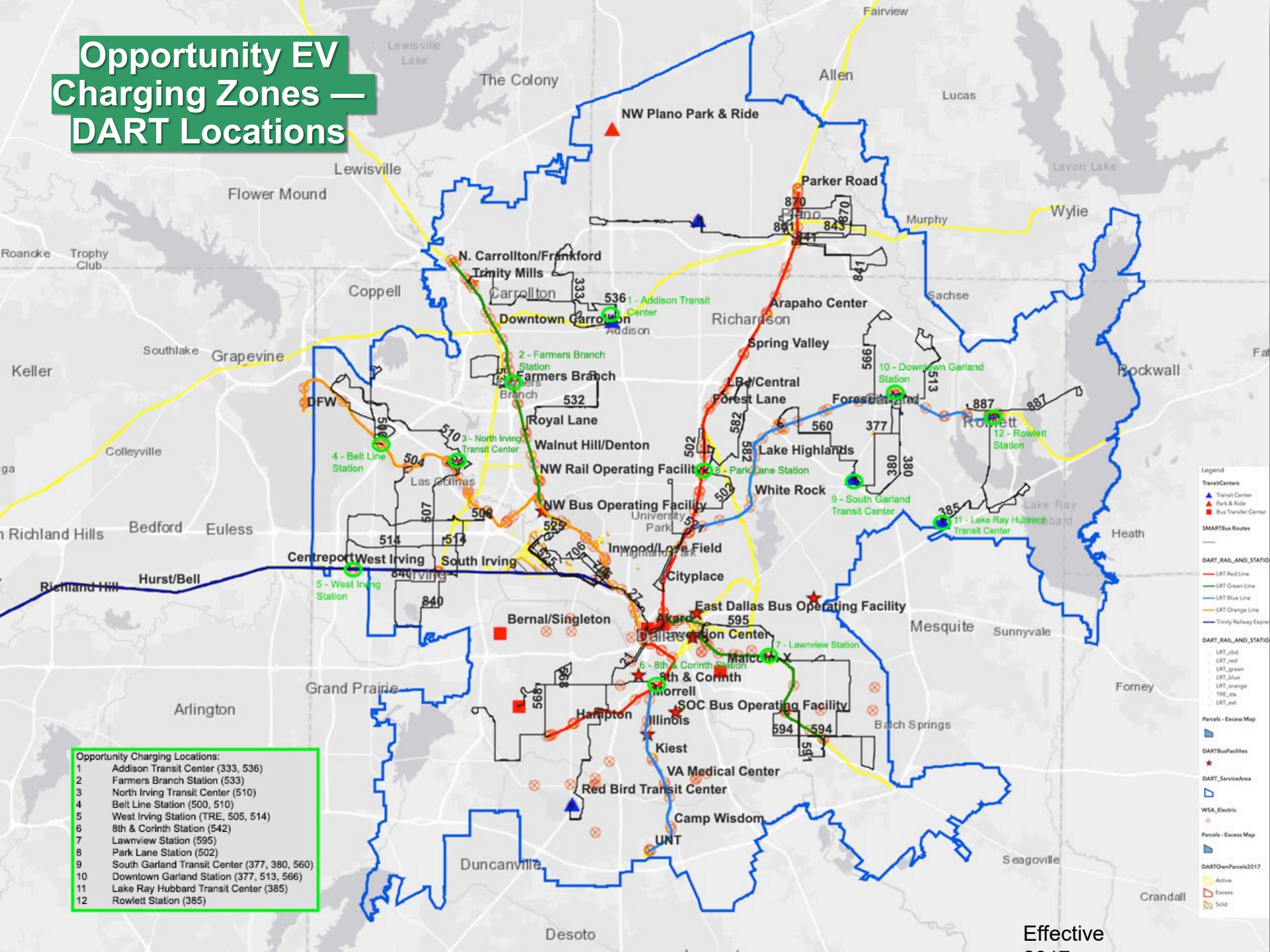
Charger

Dispenser

Northwest



Opportunity EV Charging Zones — DART Locations



Effective 2017



A New Era for DART

Appetite for Change

- Generational leadership change
- Regional collaboration
- Technological advances
- Financial stability
- Alignment of purpose



Challenges

- Urgency
- Skepticism
- Fear of change
- Inertia
- Status quo



Growing into a world-class system



- Start with the problem we are trying to solve
- Leverage all modes to highest and best use
- Redefine value and use of space
- Transit as part of a holistic solution
- Provide travel capacity and connectivity

This moment matters...

- Leverage all modes to increase system capacity
- Cultivate a lifelong relationship with riders through high quality experiences
- Move more people and goods in less space
- Ensure a better future for DFW Metroplex!



A blue and yellow DART tram is shown on a city street. The tram has "LED BETTER" on its front display and the number "171" on its side. A yellow rectangular overlay is positioned in the center of the image, containing the text "Work for DART!!" in a bold, dark blue font. The background features modern buildings, including one with a large "1505" sign, and a street sign that reads "Akard St. 300 ft".

Work for DART!!