



1981

INDYGO

9026

IndyGo RAPID



YOU ARE BEAUTIFUL

Virginia Av

LA MARGARITA RESTAURANT

TALK

MUSIC FOOD

10-15

city square street festival
sept 21
11-6
make buy the

LET'S

OPEN

MEMBER

MEMBER

MEMBER

IndyGo Red Line

- Opened September 1, 2019
- Nation's first all-electric Bus Rapid Transit System
- 60 ft. battery electric articulated vehicles
- 13.1 mile corridor, densest in the city







Red Line Stats (part 1)

- ½ mile Station Spacing with no local service in corridor
- 10 minute headways weekday / 15 min weekend
- 50,000 people and 150,000 jobs within walking distance
- Strong mix of people of all ages, races, and incomes
- Total Cost \$96.3M

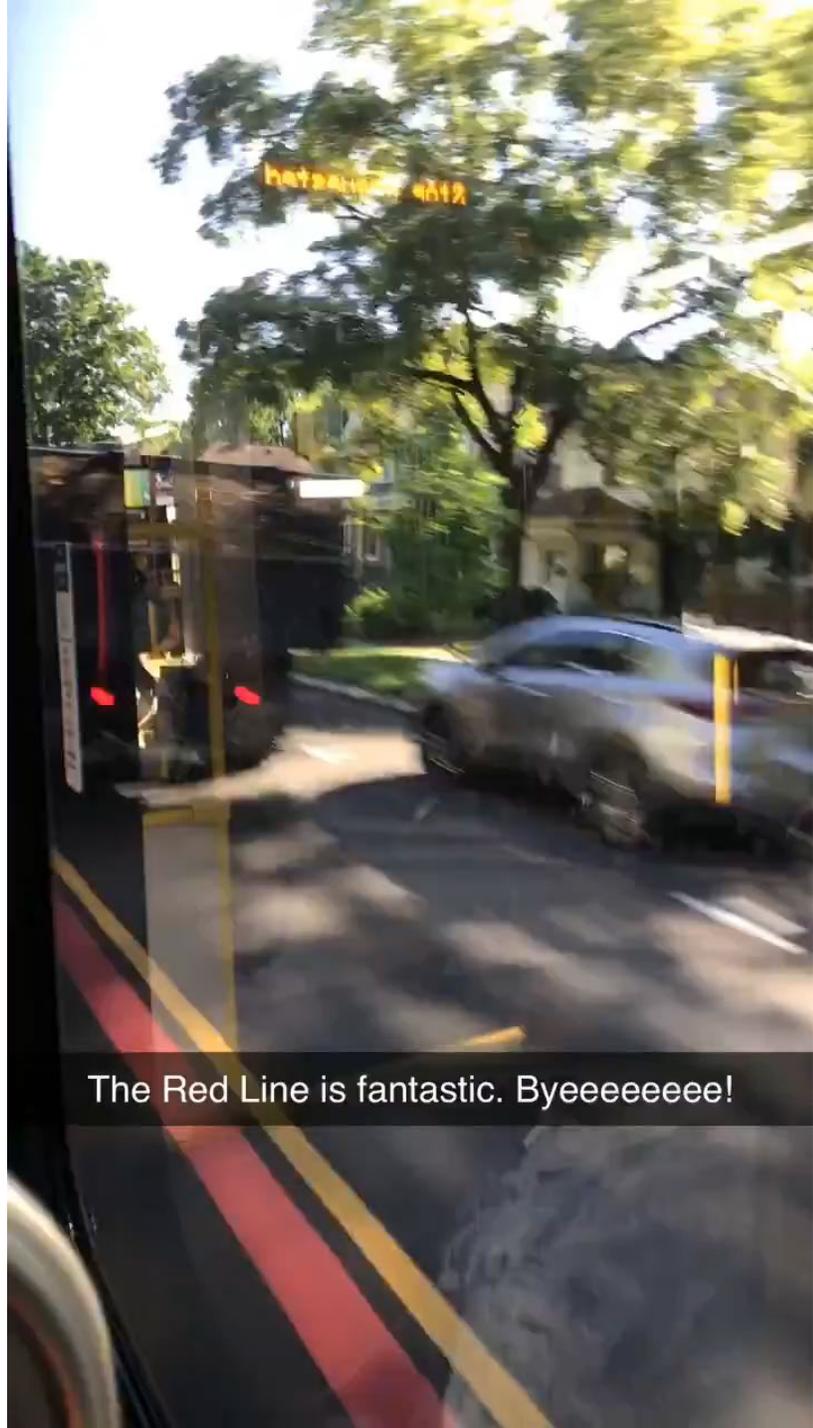




Red Line Stats (part 2)

- 65% dedicated lane – in areas of most congestion
- Full featured, including
 - Level Boarding
 - Off Board Fare Collection
 - Wifi
 - Security Cameras
 - Emergency Phones
 - Snow Melt System
- Just started design in 2015!





The Red Line is fantastic. Byeeeeeeee!



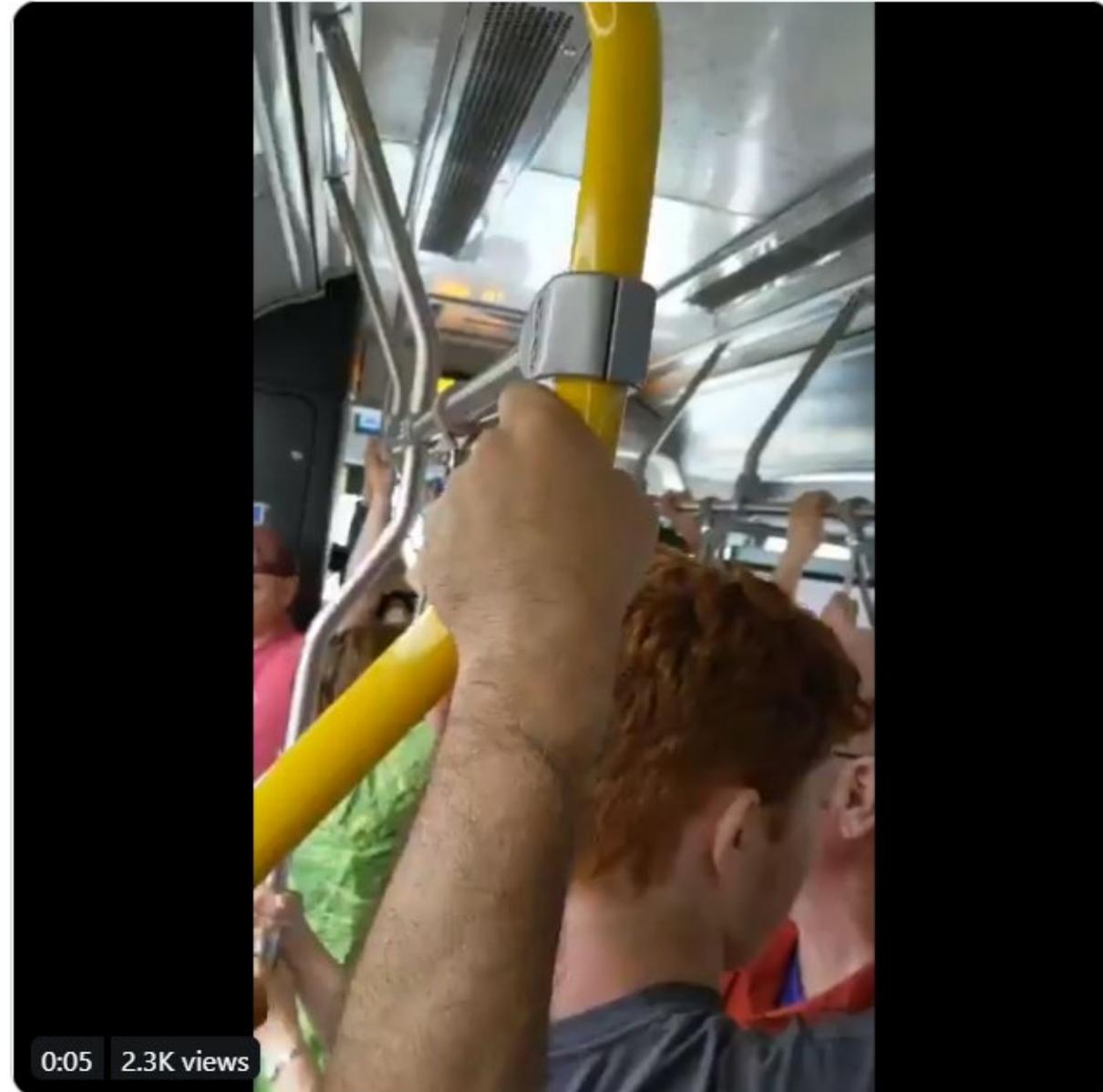
Our Strategy

- BRT to be our top-of-the-line service, had to minimize shortcuts
- Center stations and dedicated lanes = better service AND lower cost
- Use cost savings to invest in adjacent infrastructure to get wide buy-in
- Be innovative!



Jess Pellman @jesspellman · Sep 1

In Indy. Not Chicago. Not DC. Not NYC. Indy. ❤️ ❤️ 🚌 🚌 ❤️ ❤️
[@IndyGoBus](#) [@Transit4Indy](#) [#redline](#) [#loveindy](#)

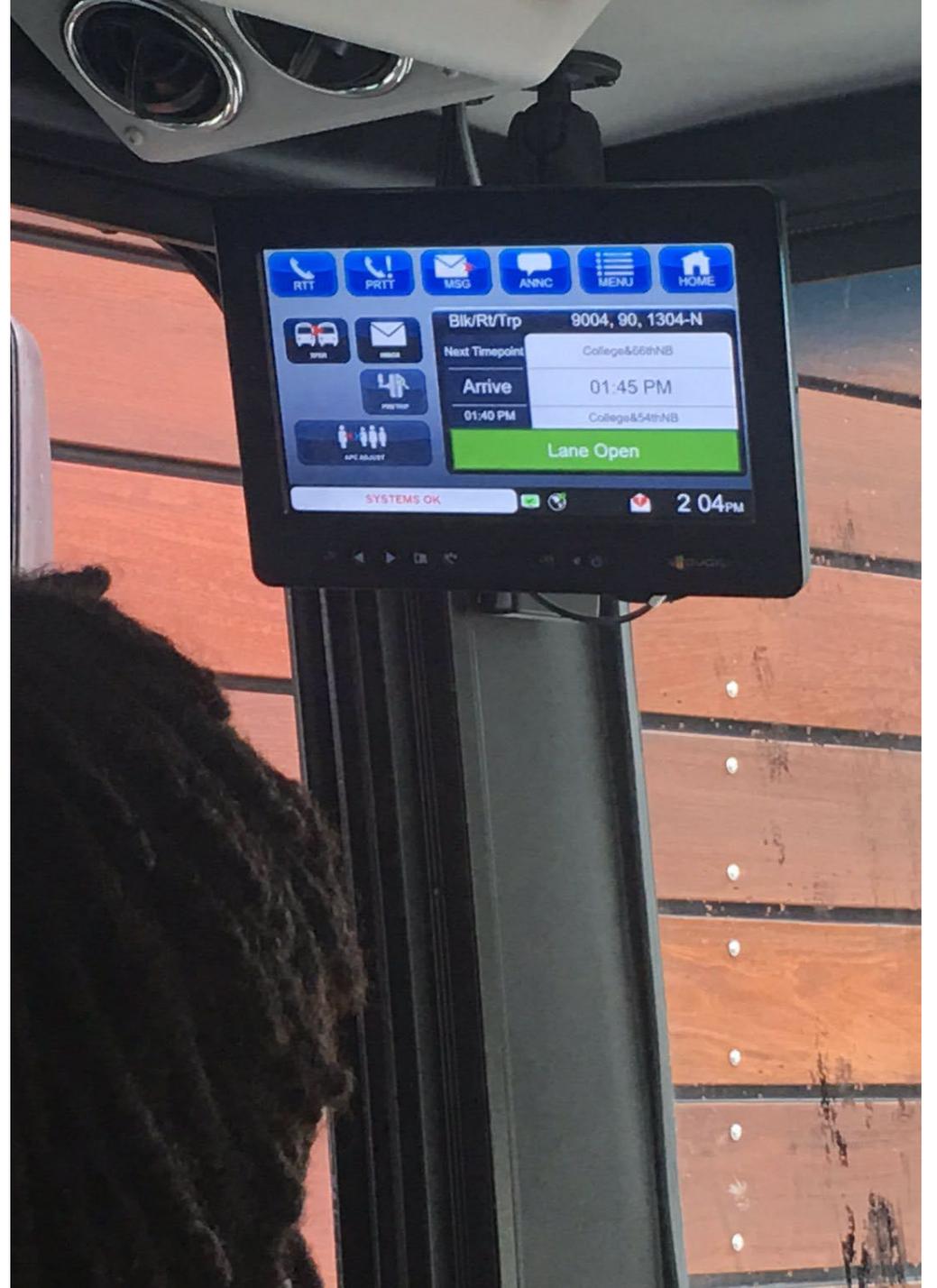




Diagonal Beam Station



Contra-Flow Lane



Bi-Directional Lane



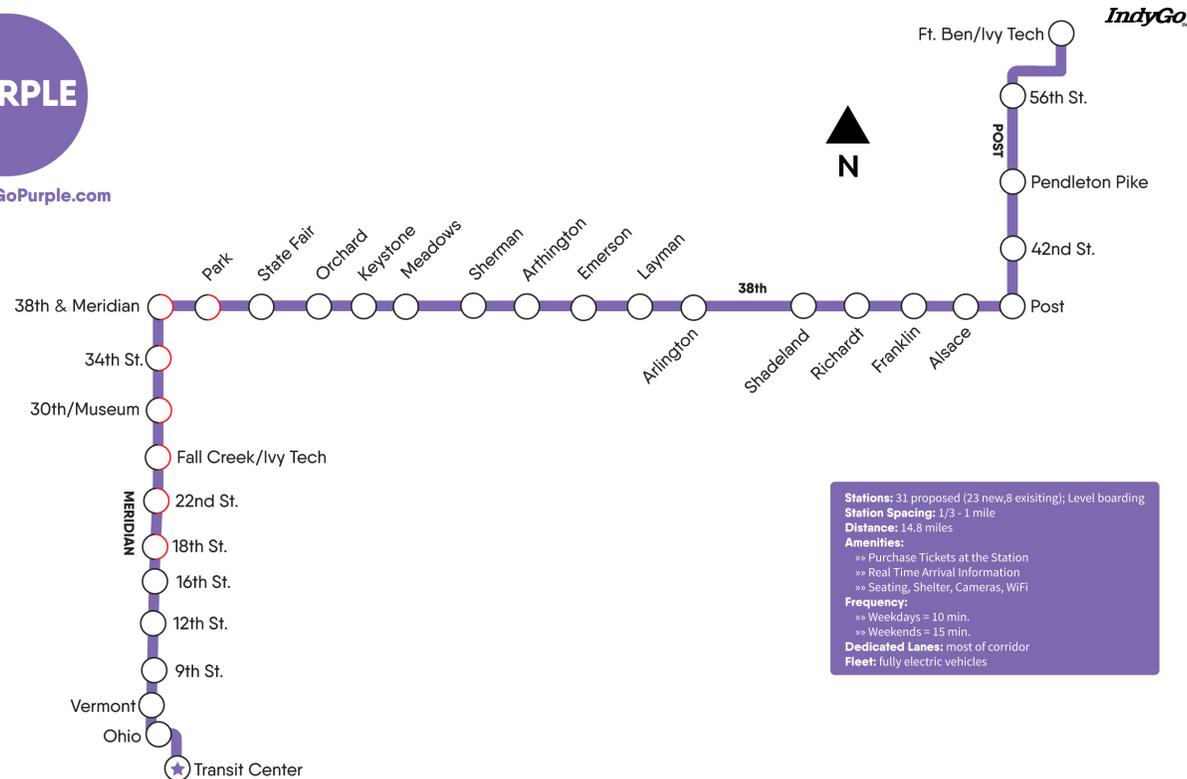
Lessons Learned

- If you build high-quality BRT, people will use it (even in a “car” city)
- The system is only as strong as the weakest link = limit compromises in the most critical locations
- Don’t bid the project until federal funding in place
- Multiple contractors are fine, but minimize the number of points of coordination
- 10-minute headway management is hard, especially with inconsistent docking speeds
- Once the line is open, operator training gets a lot harder

Purple Line



www.IndyGoPurple.com



14.8 mile corridor

High Concentration Low-income and zero-car HH

Interlines with the Red Line

Bid 2020 / Open 2023

90% Dedicated Lanes

\$155M Project Budget

PROPOSED LEFT-TURN ACCESS WITH BRT



Blue Line



24 mile corridor

East/West Spine from Cumberland to Indianapolis Airport

Bid 2022 / Open 2025

>80% Dedicated Lanes

\$220M Project Budget

Thanks!

Justin Stuehrenberg
VP of Planning & Capital Projects
IndyGo

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GRTC PULSE

Opened June 24, 2018



September 13, 2019

APA Transportation Planning Division
Webinar

Overview by:



Carrie Rose Pace
Director of Communications
Greater Richmond Transit Company



GRTC PULSE | PROJECT DESCRIPTION

GRTC Pulse is a modern, high quality, high capacity bus rapid transit system connecting riders to destinations in the City of Richmond and Henrico County.

- Frequency: 10 minutes weekdays (6 AM – 7 PM), 15 minutes off-peak, 30 minutes late-night
- Off-board fare collection
- Modern bus rapid transit vehicles
- 14 station locations: 5 median, 9 curbside
- 3.2 miles of dedicated bus-only lanes
- Transit-signal priority along 7.6-mile route



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GRTC PULSE | PROJECT COST

GRTC Pulse final design and construction work occurred 2016-2018, with funding from local, state and federal sources:

- TIGER (FTA/USDOT): \$24,900,000
- City of Richmond: \$7,600,000
- Henrico County: \$400,000
- DRPT/VDOT (Commonwealth of Virginia): \$32,016,000
- **Total Contributions: \$64,916,000**



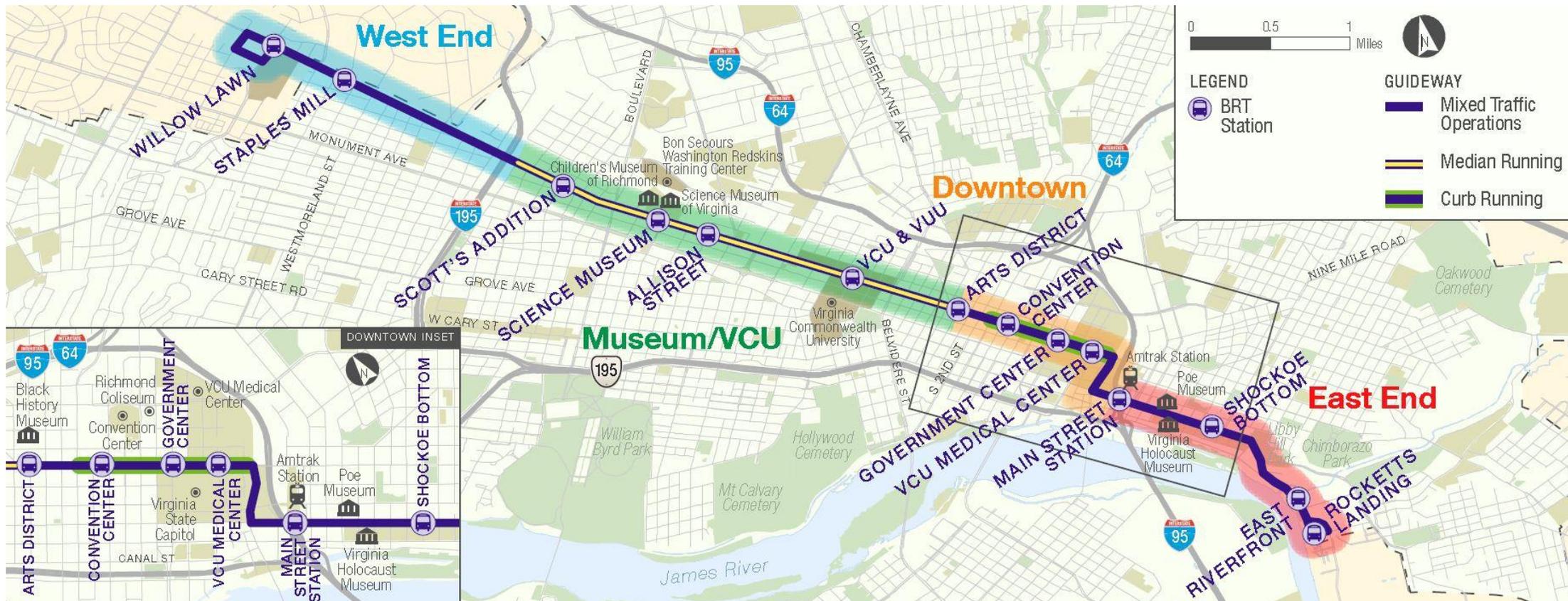
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GRTC PULSE | ROUTE



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GRTC PULSE



7,000 RIDERS EVERY WEEKDAY
40,000 – 43,000 RIDERS WEEKLY

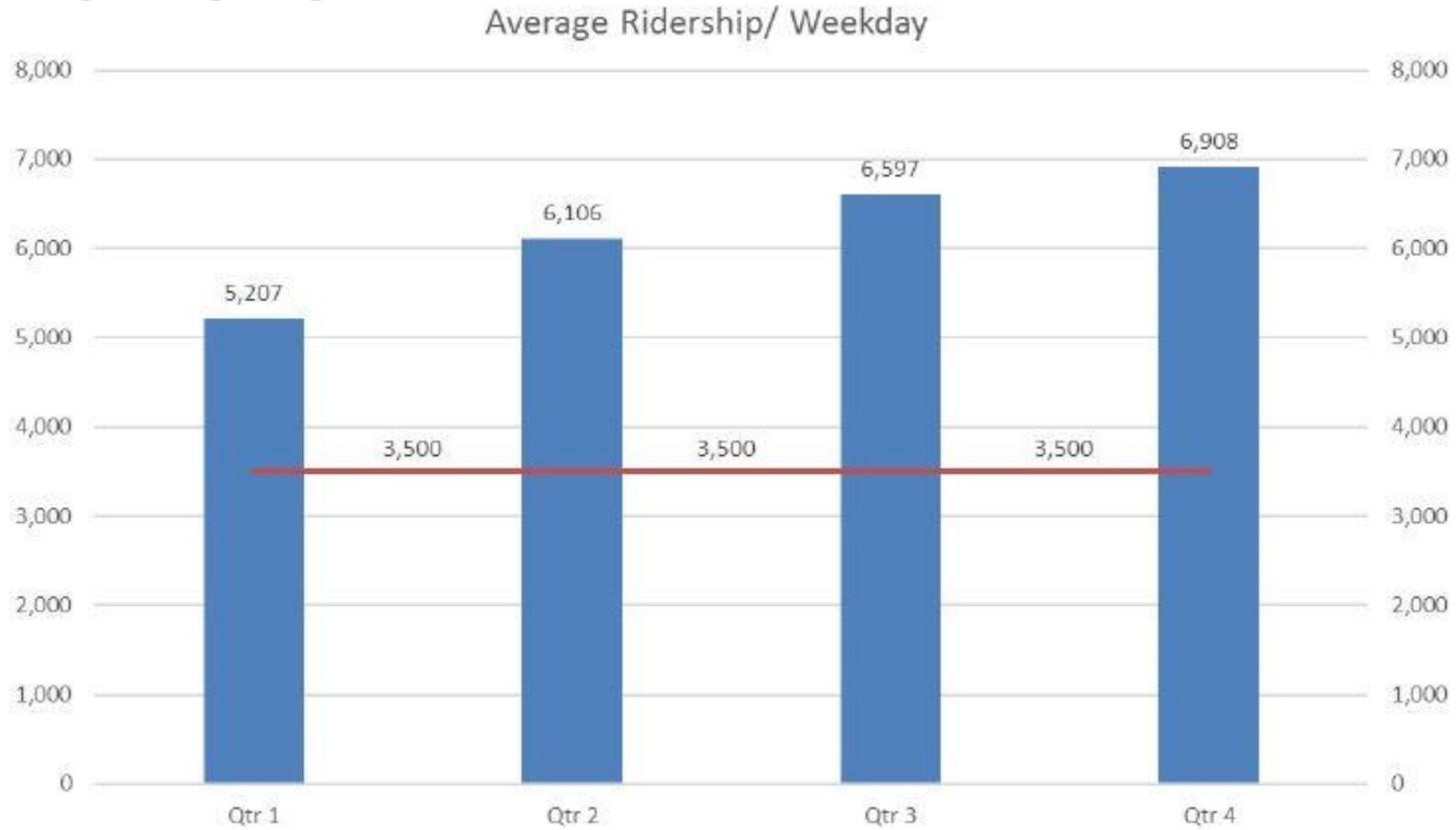
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GRTC PULSE



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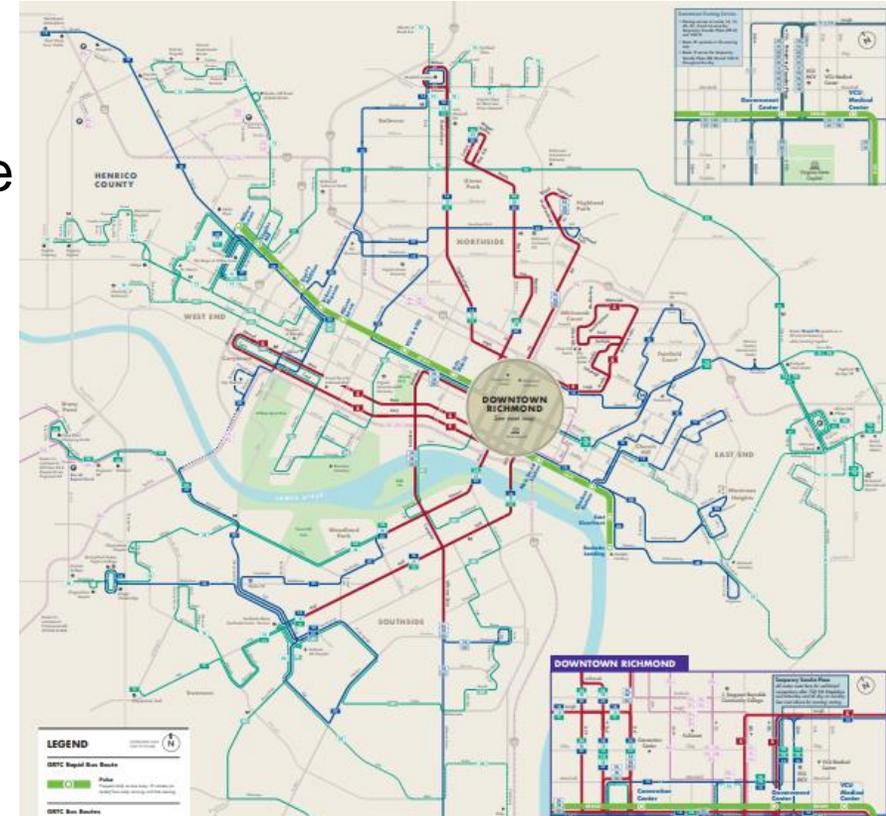


GRTC NETWORK REDESIGN: RIDERSHIP UP 18%

Between June and September 2018, GRTC updated all local routes with improved service schedules, new service hours and new destinations.

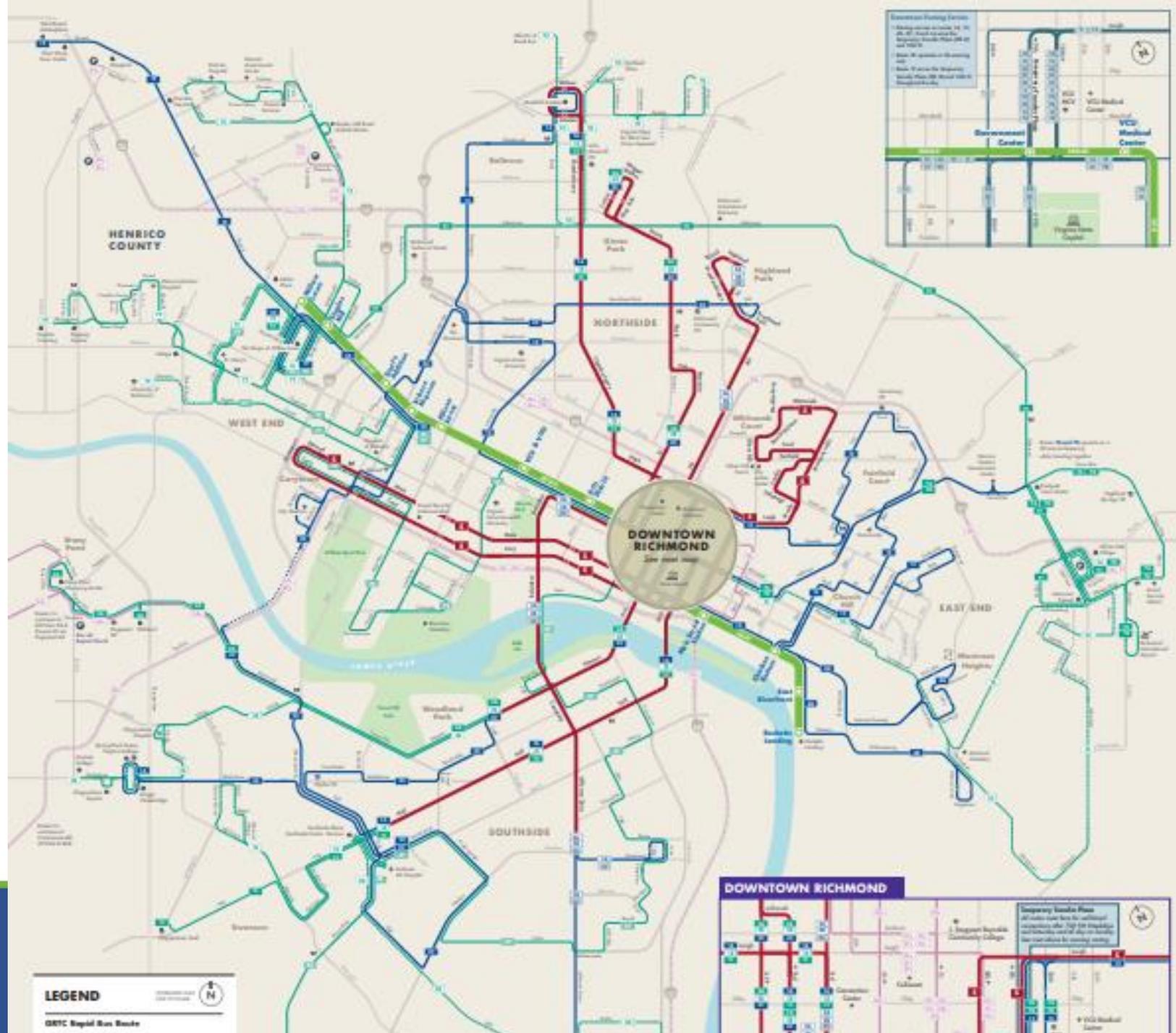
- Old network: 0 miles frequent 15-minute service
- New network: 43 miles frequent 15-minute (or better) service

Route	Mileage
Pulse	7.6
1A/B/C Overlap	9.1222735
2A/B/C Overlap	6.470125
3A/B/C Overlap	7.8078485
4A	2.759365
4B	2.72285
5	6.227041



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GRTC PULSE | MEDIAN EXAMPLE



Photo Credit:
Kimley-Horn

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GRTC PULSE | PEDESTRIAN CROSSINGS

Push-button ADA crossings at stations, median gaps, and signalized intersections.



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GRTC PULSE | TRANSIT SIGNAL PRIORITY

TSP: Bus talks to traffic signal network, which keeps bus on time or permits an early jump through an intersection when entering/exiting Bus Only Lane.



Pulse average speed: 12-13mph (faster than the scheduled 11mph)

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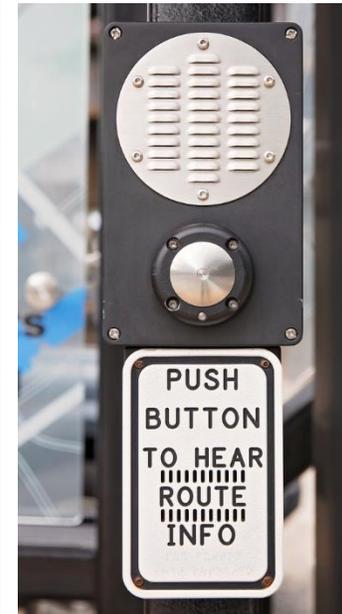


GRTC PULSE | REAL-TIME ARRIVAL

Station totems: 5-minute count-down



Overhead display and audio announcements



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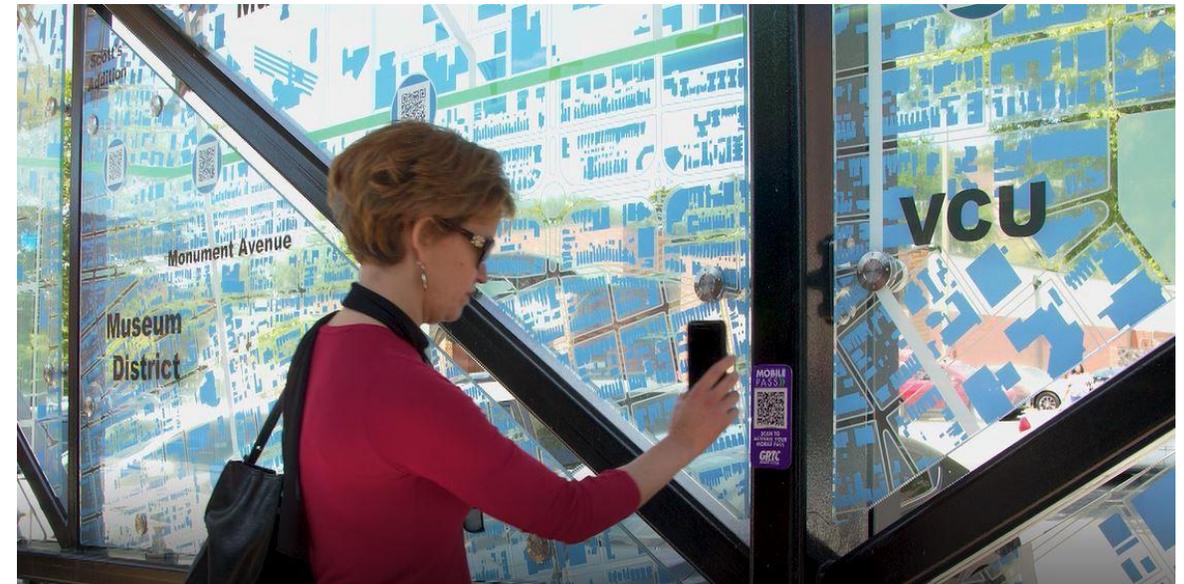


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GRTC PULSE | PAYMENT

Off-board fare collection at Ticket Vending Machines and by Mobile Pass scan.



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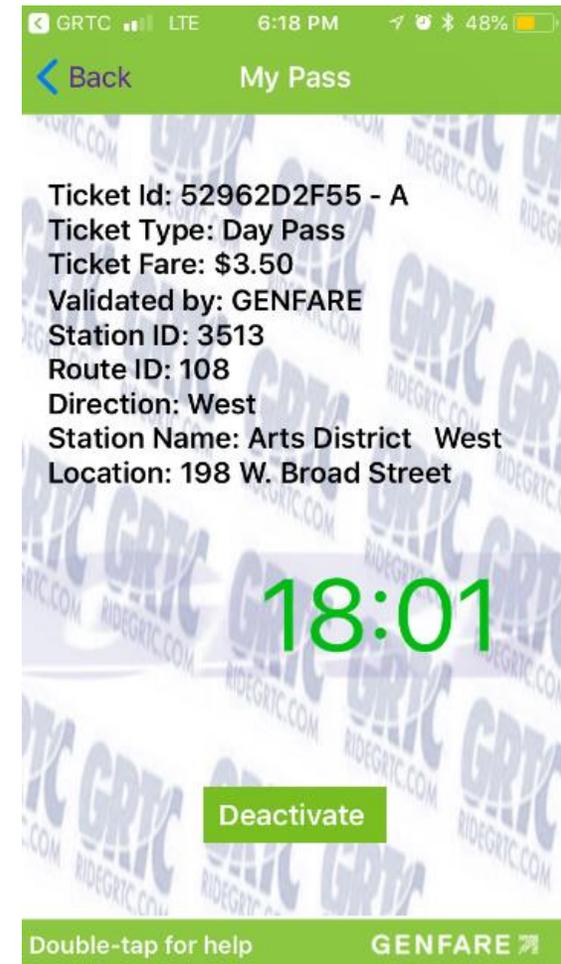
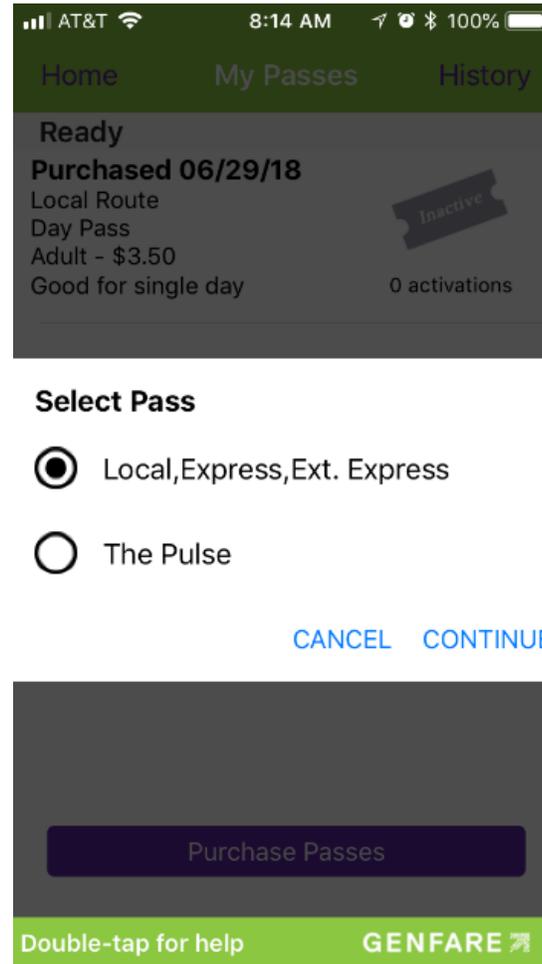
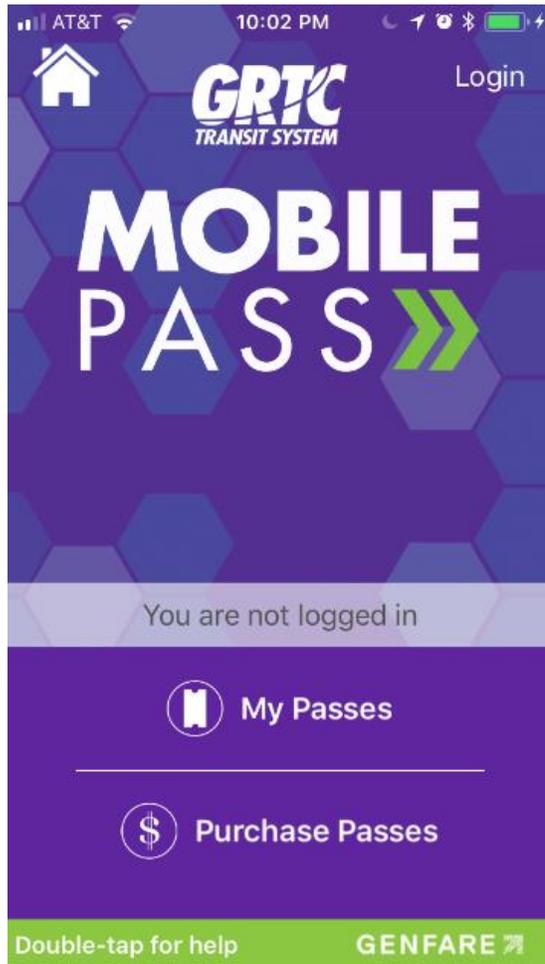
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MOBILE PASS

Apple & Android Devices

- Major Credit/Debit Cards Accepted



GRTC PULSE | FARE ENFORCEMENT

On-board Fare Enforcement Inspectors:

- Visual and hand-held scanner validation



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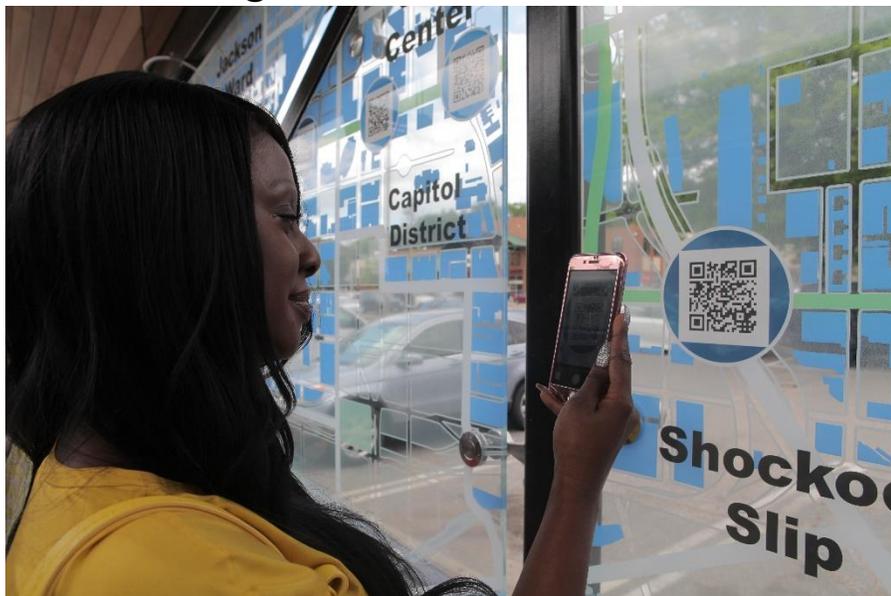


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GRTC PULSE | OTHER STATION FEATURES

- Interactive map (scan the QR codes)
- Emergency Call Box
- Security cameras
- Adaptive lights
- Seating and lean-rails



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GRTC PULSE | BICYCLE CONNECTIVITY

- Bike racks at front
- Bike parking at stations
- Bike ramp to street level



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For more information contact:

Carrie Rose Pace

Director of Communications

GRTC

804-474-9354

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ORANGE LINE TRANSIT NEIGHBORHOOD PLAN

SEPTEMBER 13, 2019



ORANGE LINE TRANSIT NEIGHBORHOOD PLAN

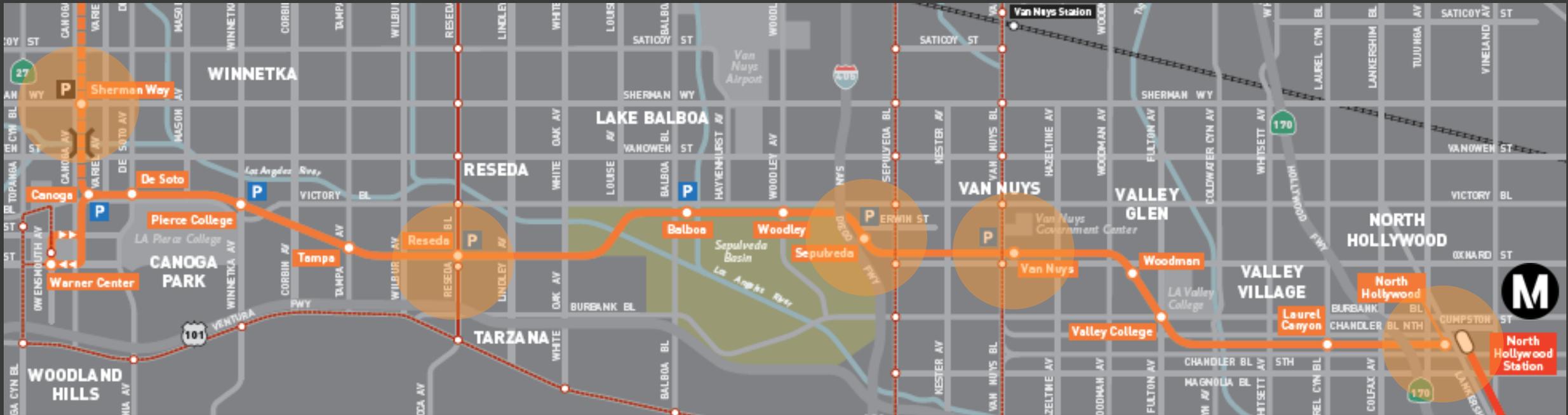


1. Introduction to the Orange Line
2. Local Context: Transit Network and State Mandates
3. Transit Neighborhood Plan: Vision for 2040
4. Land Use and Zoning Tools



METRO ORANGE LINE

- Built on former Southern Pacific Railroad right-of-way
- Opened 2005 (North Hollywood to Warner Center, 18 miles)
- Four-mile northern extension to Chatsworth opened 2012
- Inspired by BRT systems in Curitiba, Brazil and other cities
- Funded by Proposition A and Proposition C sales taxes



THE ORANGE LINE TODAY

- Approximately 22,000 weekday riders
- Features: Dedicated right-of-way, All-door boarding, Fare pre-payment
- Orange Line bicycle/pedestrian path runs adjacent to route
- Headways range from 5-20 minutes

FUTURE PLANS

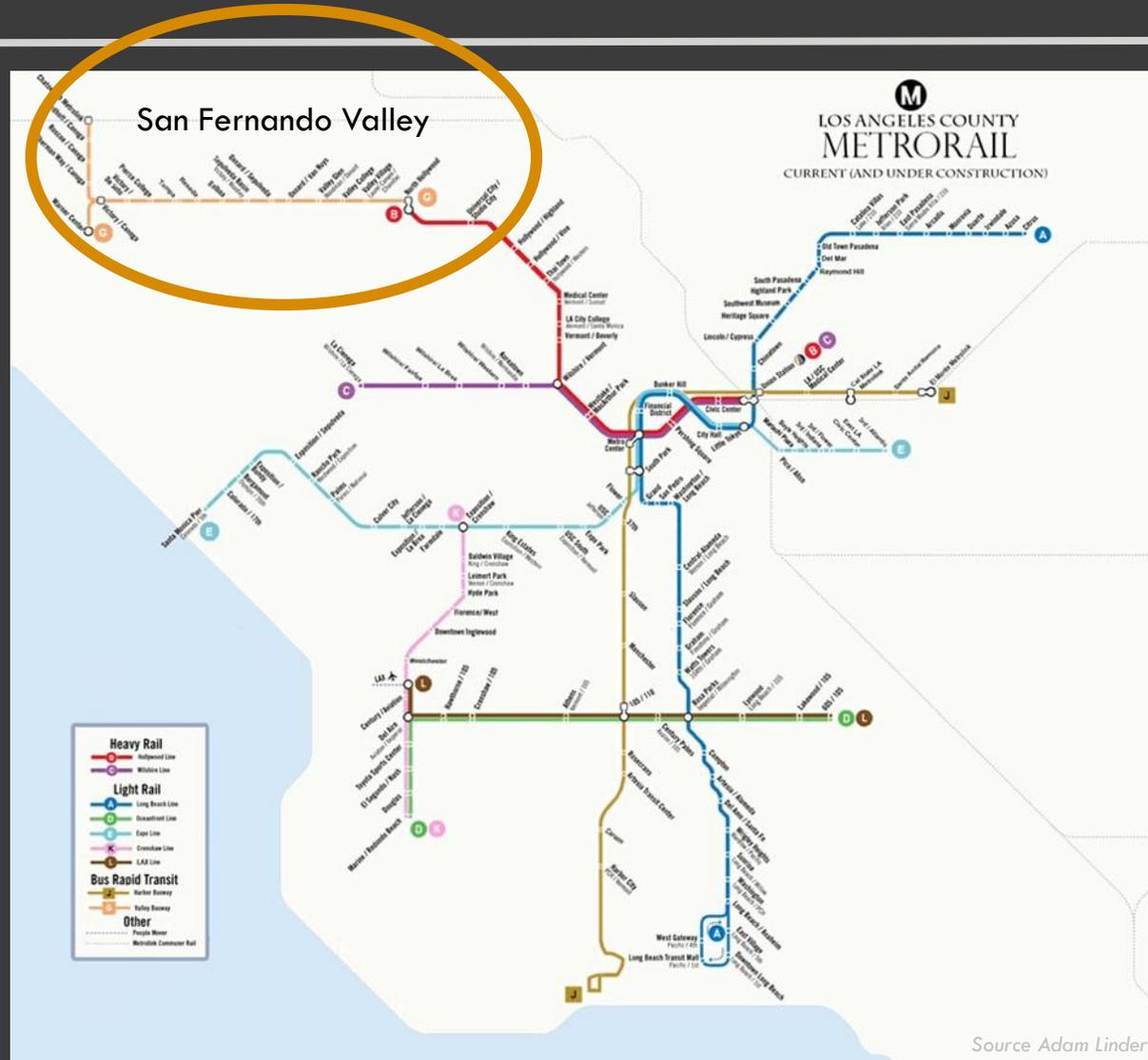
- BRT Improvements: Crossing gates, limited grade separations, signal priority (by 2025)
- Conversion to light rail by 2051



1. Four Quadrant Gate System with Flashing lights and Bells
2. Raised Median
3. Pedestrian/Bicyclist Crosswalk Gates
4. Bike/Ped Path

ORANGE LINE TRANSIT NEIGHBORHOOD PLAN

Today's Transit Network



ORANGE LINE TRANSIT NEIGHBORHOOD PLAN

Growing Transit Network



Possible 2050 rail network built using funds from Measure M sales tax (2016)

Source Adam Linder

ORANGE LINE TRANSIT NEIGHBORHOOD PLAN

Growing Transit Network



Rendering of median-running BRT in LA



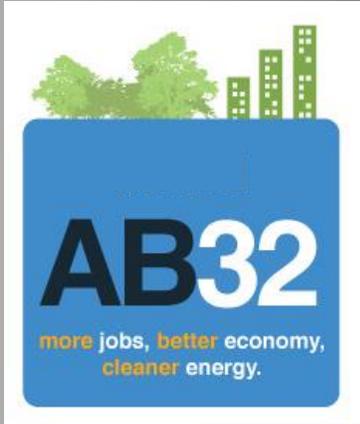
Rendering of proposed Van Nuys Blvd. light rail

ORANGE LINE TRANSIT NEIGHBORHOOD PLAN

State & Regional Policy Mandates



State

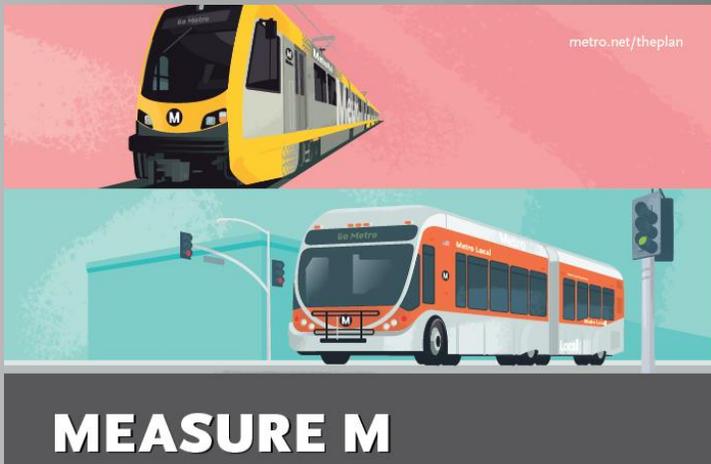


CA Sustainable Communities and Climate Protection Act, 2008

SB375



Regional



2016
2040
RTP
SCS



ORANGE LINE TRANSIT NEIGHBORHOOD PLAN

Overview: Transit Neighborhood Plans Program



Origins

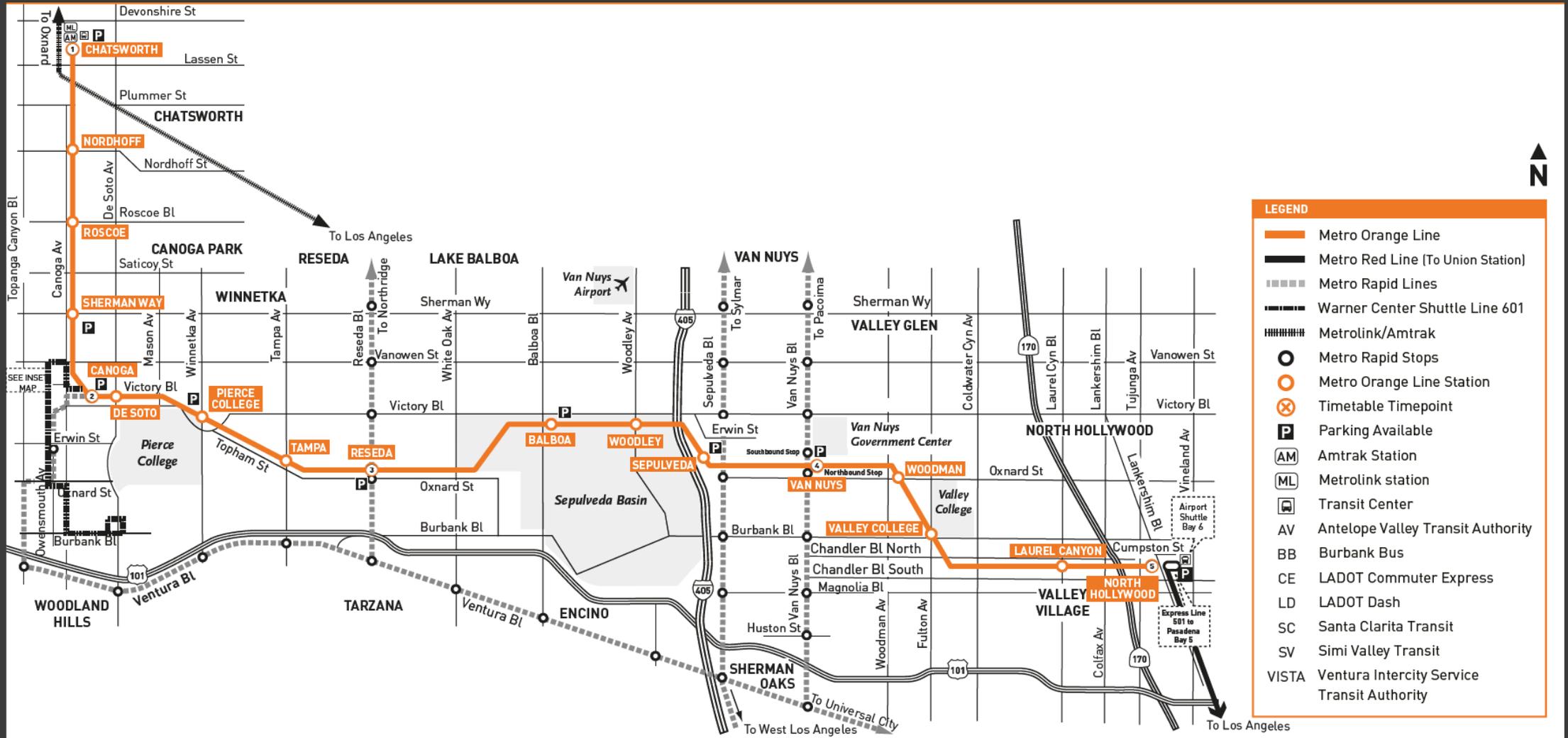
- Funded by a grant from Metro secured in 2014
- TNP programs also exist for Expo and Purple Lines

Goals

- Create opportunities for more jobs & housing of all types near transit
- Foster a vibrant mix of uses within each station area
- Increase access to a variety of mobility options for all
- Improve quality of public spaces for residents, employees & visitors



ORANGE LINE TRANSIT NEIGHBORHOOD PLAN



ORANGE LINE TRANSIT NEIGHBORHOOD PLAN



North Hollywood Station

Source: Dan Reed



Orange Line Bike Path

Source: Dan Reed

ORANGE LINE TRANSIT NEIGHBORHOOD PLAN



Sherman Way Station, West Valley

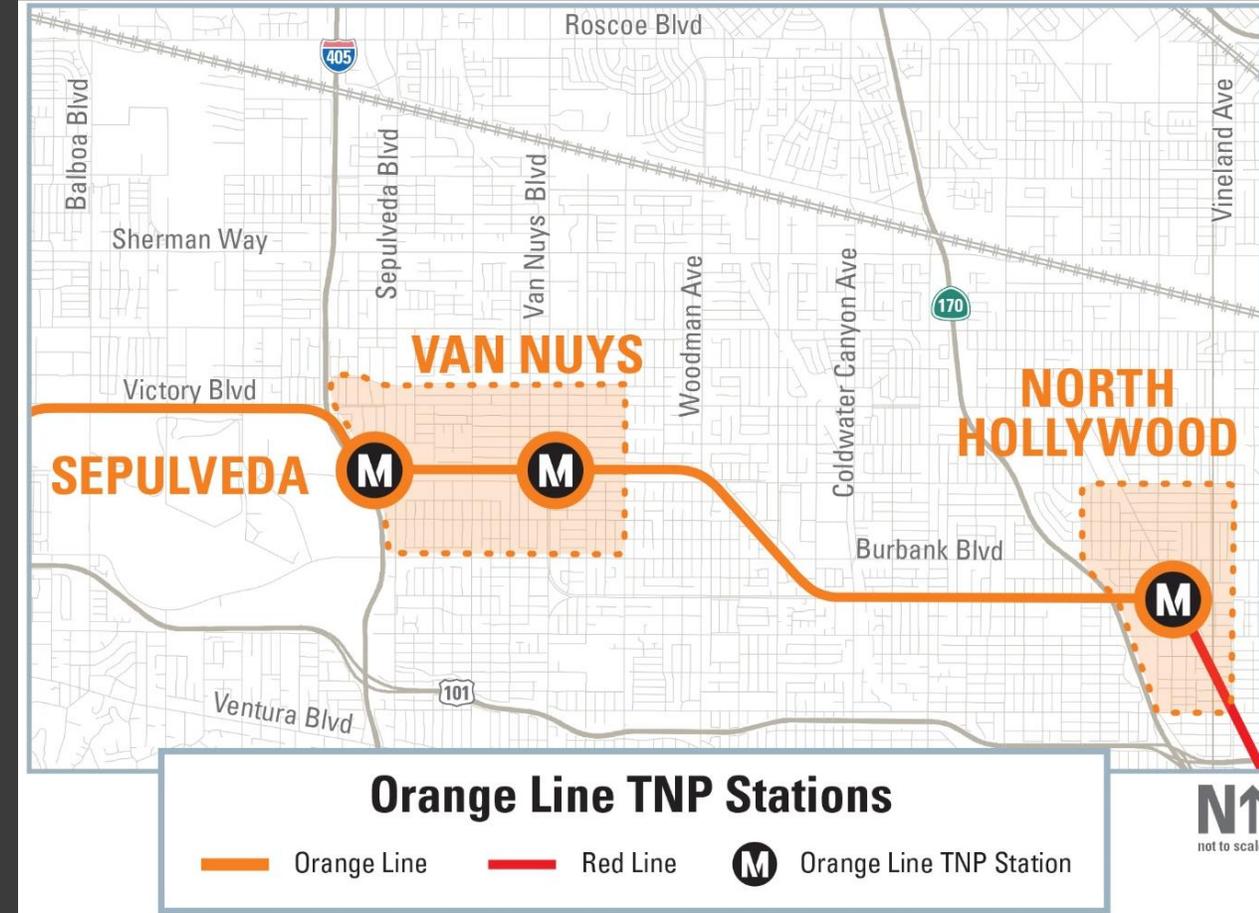
Eastbound Orange Line bus



ORANGE LINE TRANSIT NEIGHBORHOOD PLAN



- New zoning for three transit neighborhoods along the Orange Line
- Guide for future development through 2040
- No development projects are proposed – this long-range planning effort will develop regulations for any new development
- Take advantage of growing transit network & zoning-code rewrite to create regulations that are flexible, sustainable, and well suited to the Valley's unique geography



ORANGE LINE TRANSIT NEIGHBORHOOD PLAN

Vision for 2040: Van Nuys and Sepulveda Stations



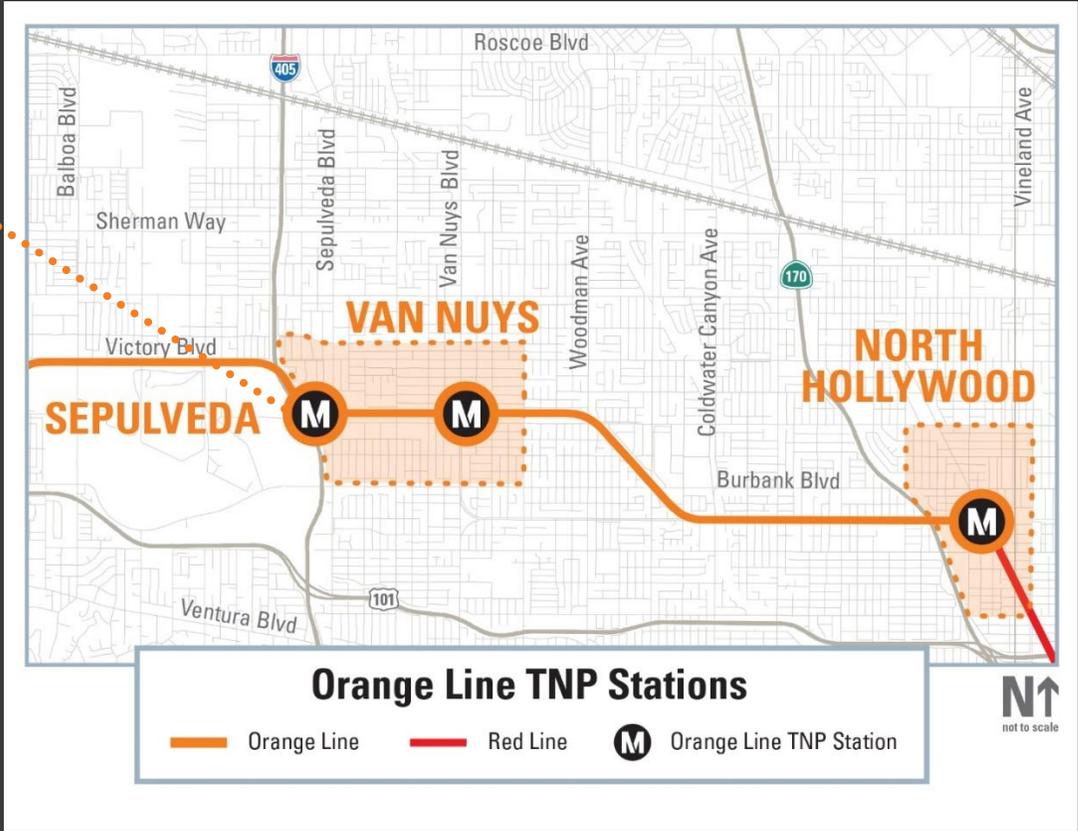
Enhance the vibrancy of the Civic Center & Van Nuys corridor with day & evening activity; protect existing employment uses in the industrial corridor & accommodate new production & service types; encourage mixed-use development to activate the Sepulveda station area; and promote a variety of housing types.

Van Nuys & Sepulveda Station Area

Vision:
Regional Gateway – Civic Center & Jobs Hub



Area: 4.5 square miles
Population (2018): 62,000

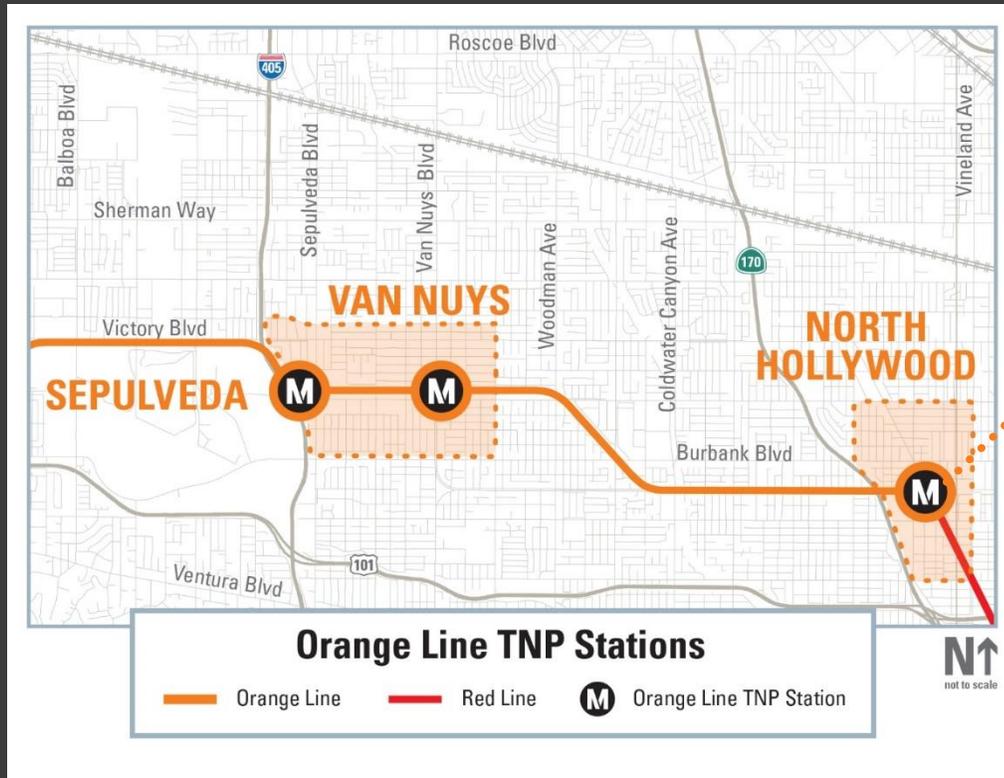


ORANGE LINE TRANSIT NEIGHBORHOOD PLAN

Vision for 2040: North Hollywood Station



Area: 2.85 square miles
Population (2018): 43,000



North Hollywood
Station Area

VISION:
Creative Industry &
Performing Arts Hub

Reinforce NoHo's character as a regional arts destination and creative jobs hub, with theaters, restaurants, office space and varied housing types; encourage public amenities including pedestrian-friendly streetscapes, a mix of retail and services, and open space.

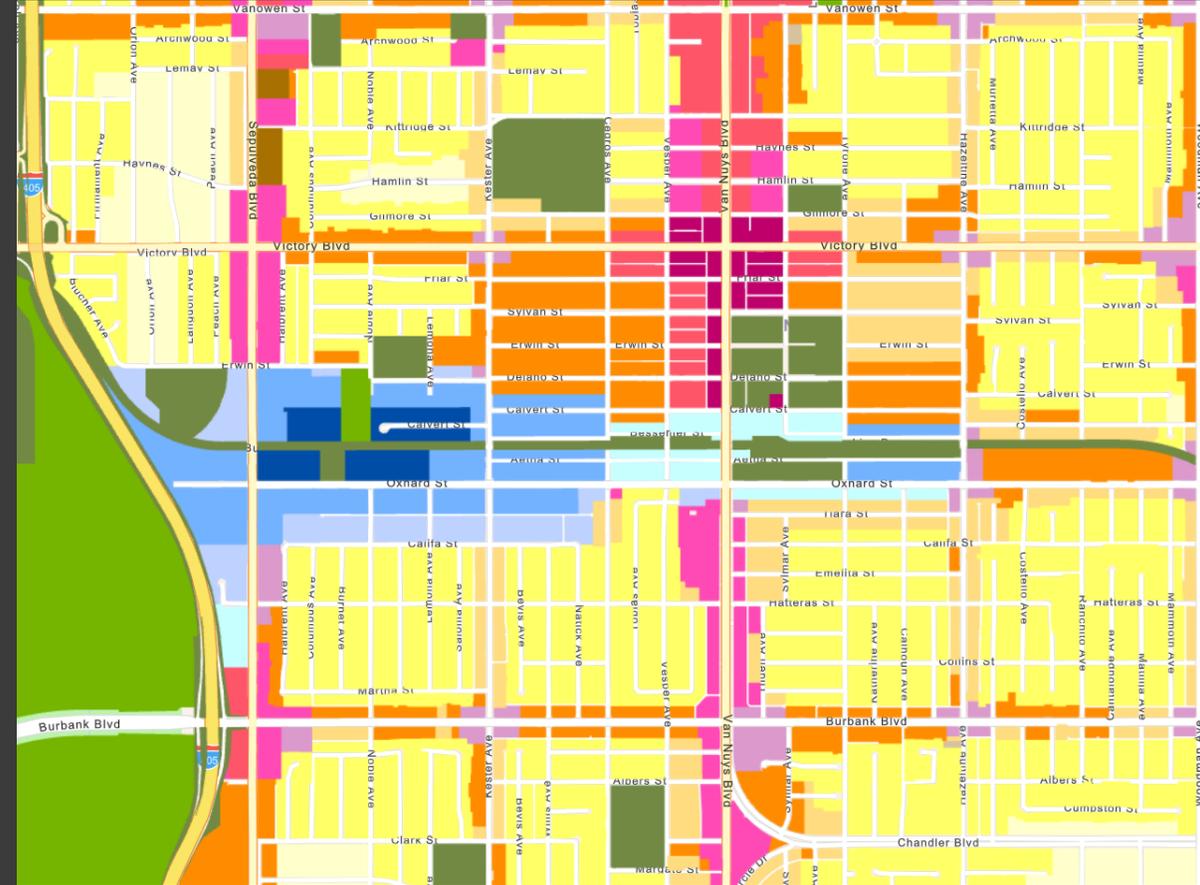


ORANGE LINE TRANSIT NEIGHBORHOOD PLAN

Land Use and Zoning Tools: Incentive System



- Generous system of bonus development rights will incentivize public benefits
 - Ex. Affordable housing, community centers
- System will comply with State Density Bonus and local Transit-Oriented Communities programs
- Overall Goal: Maximize production of new affordable housing while encouraging preservation of existing rent-stabilized units



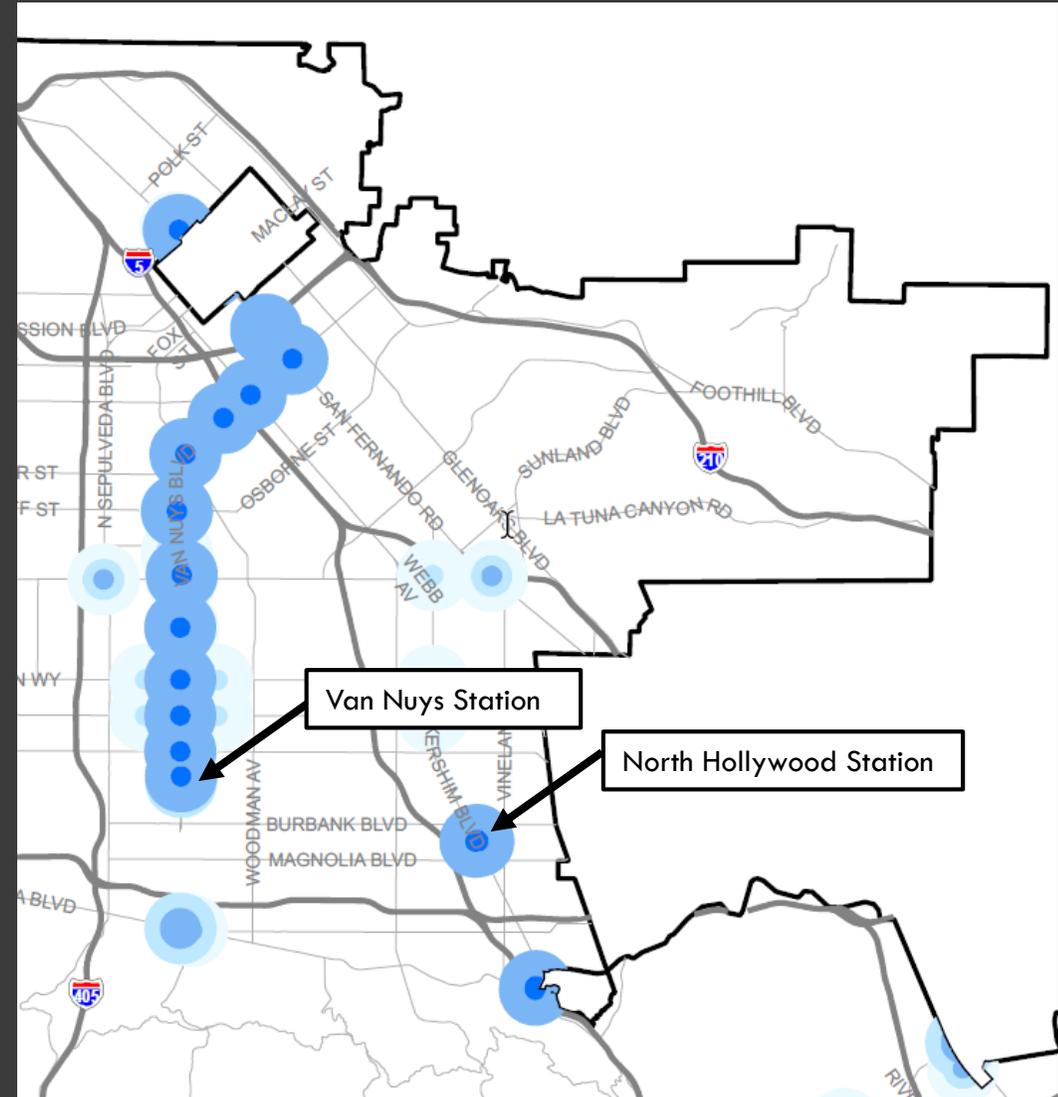
Current Land Use Regulations, Van Nuys/Sepulveda Station Area

ORANGE LINE TRANSIT NEIGHBORHOOD PLAN

Land Use and Zoning Tools: Measure JJJ + TOC



- Initiative passed by LA City voters in 2016
- Developers get up to 80% density bonus and 55% FAR increase, depending on number of affordable units provided and proximity to major transit stops
- In 2019 Q1, TOC program accounted for 54% of all units and 75% of all Affordable units proposed in City of LA

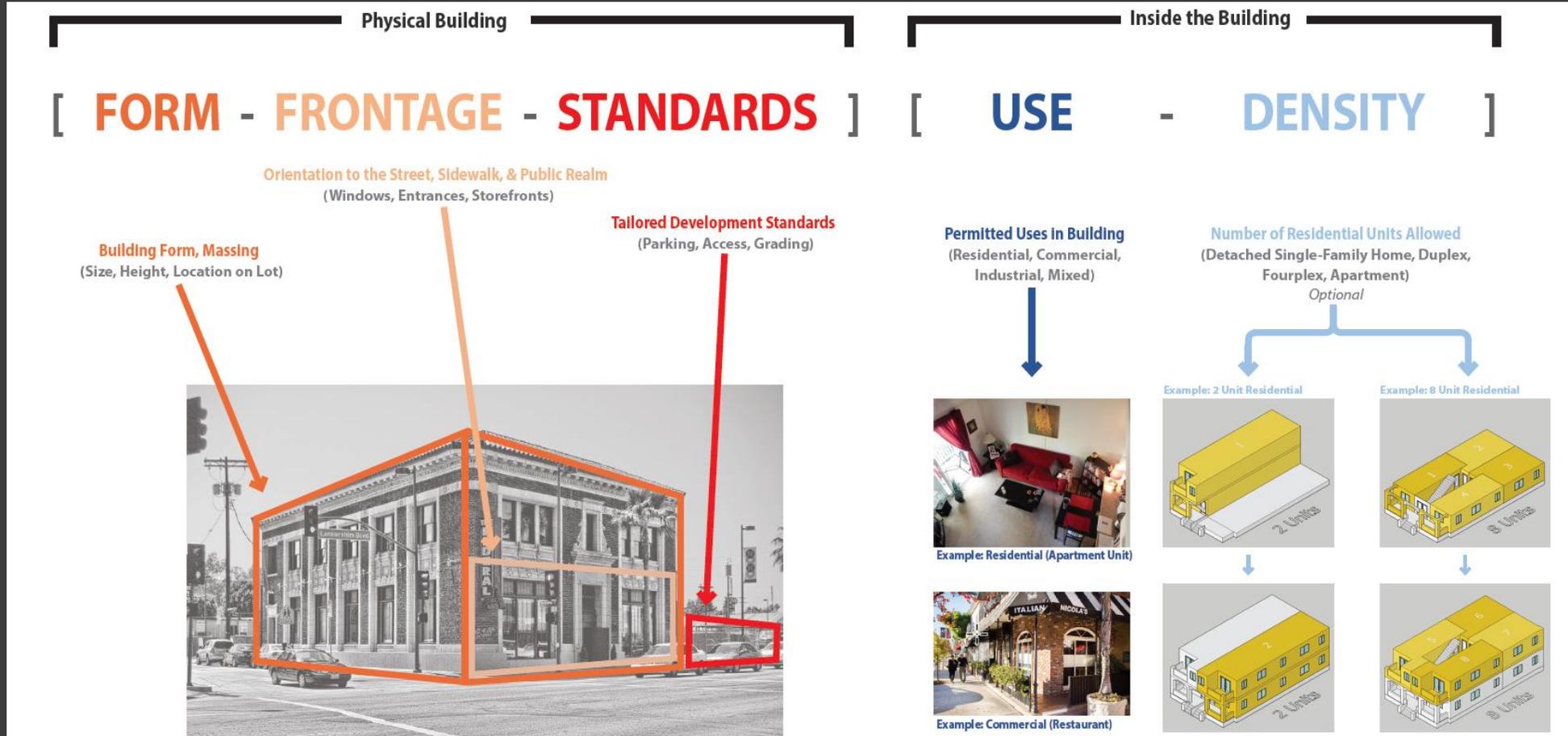


ORANGE LINE TRANSIT NEIGHBORHOOD PLAN

Land Use and Zoning Tools: Re:Code LA



- Comprehensive rewrite of LA City zoning code for first time since 1946
- Goal: A simpler, more flexible and efficient zoning code
- Current zoning designations combine form and use, new code will create separate modules



ORANGE LINE TRANSIT NEIGHBORHOOD PLAN

Land Use and Zoning Tools: First Mile/Last Mile



- Metro grant requires TNP team to study pedestrian, bike, and bus links to new transit
- LADCP will collaborate with LADOT, Bureau of Street Services, and City Council to implement improved streetscapes
- Previous FM/LM plans have also included street trees, wayfinding, and lighting improvements



ORANGE LINE TRANSIT NEIGHBORHOOD PLAN

Next Steps



- Determine details of Public Benefits Incentive System
- Work with new zoning code to determine Form, Frontage, and Use regulations
- Continue writing Draft Environmental Impact Report
- Community and constituent outreach to present Proposed Plan



ORANGE LINE TRANSIT NEIGHBORHOOD PLANS

Next Steps: Stay Connected



David Olivo

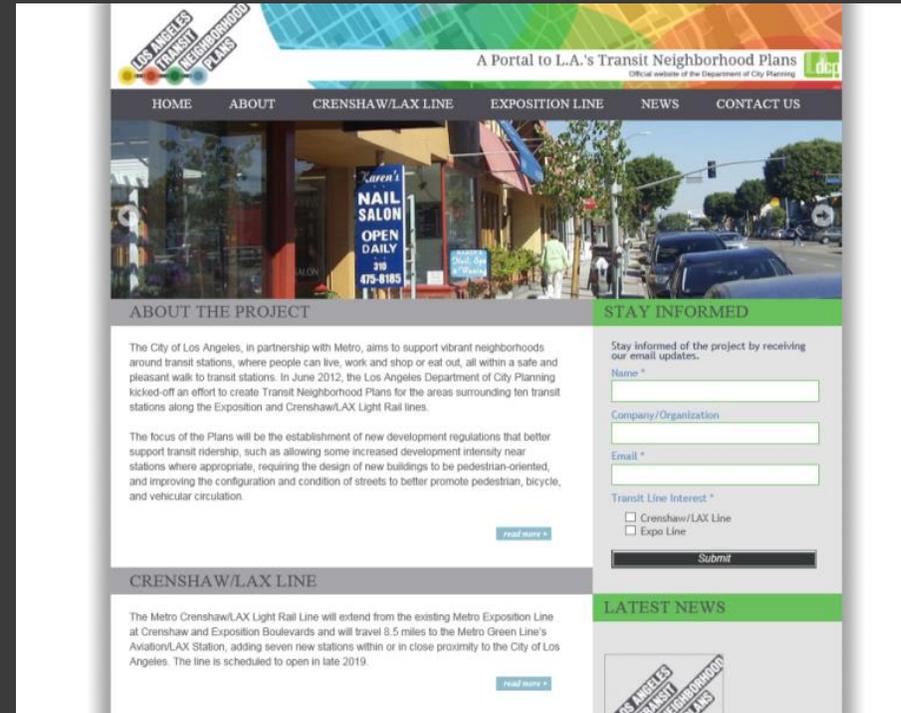
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QUESTION AND ANSWER SESSION

Bus Rapid Transit: Insight on Project Development and Implementation

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