



Appendix

Greater Cleveland Regional Transit Authority

Strategic Plan

FRAMEWORK FOR THE FUTURE

October 2020



Appendix A

Background Planning Materials



National Scan of Peer Agencies and Best Practices

Transit agencies are facing similar issues when it comes to developing long-term plans that account for a quickly changing world. Some common trends emerged as the study team reviewed recent plans developed by leading and peer transit agencies around the country. While common topics such as ridership levels and efficiency of routes were mentioned frequently, many agencies specifically expressed the desire to enhance the passenger experience and incorporate emerging technologies to help with several functions of operations. Land use planning and development was also a common theme among

a number of cities in varying economic climates. The following list provides a cursory summary of other transit agency plans that informs the development of RTA's vision and goals update.

BALTIMORE, MD

The Maryland Transit Administration (MTA) is in the process of developing a new Regional Transit plan for central Maryland. While the specific goals of the plan are still under development, seven focus areas have been identified:

- **State of good repair** - identify the level of reinvestment needed to maintain the existing transit services.

- **Funding** - develop funding and financing strategies to support regional mobility services, based on best practices and regional analyses.
- **New mobility** - embrace changes in transport, technology, and mobility that are altering how we move about. Assess the new mobility options available in the region, including bikeshare, scootershare, carshare, rideshare, and microtransit, and identify opportunities and challenges associated with leveraging those services to meet regional mobility needs.
- **Customer experience** - improve the experience of using transit - from planning a trip to reaching a destination - through new technologies, improved amenities, and better customer service.
- **Service quality and integration** - evaluate existing transit services and determine potential improvements to make it easier to travel in the region.
- **Access** - work with local partners to ensure the areas served by transit are safe, comfortable, and convenient for people who use the region's transit options to live, work, and prosper.
- **Corridors of opportunity** - identify existing and potential corridors that could benefit from additional transit investment.²

CHICAGO, IL

Invest in Transit, the Regional Transit Strategic Plan for Chicago and Northeastern Illinois, identifies three main goals:

Deliver value on our investment

This goal focuses on the positive impacts of transit investment and the importance of increased funding.

Build on the strengths of our network

This goal focuses on the service improvements and infrastructure investments that the transit agencies would like to make in key transit markets throughout the region.

Stay competitive

This goal focuses on the vital role that transit plays as part of the region's mobility network and strategies for adapting to the evolving needs of riders.³

COLUMBUS, OH

The Central Ohio Transit Authority (COTA) published a 2016-2040 Long-Range Transit Plan that addressed three main goals aimed at guiding the agency toward a future where the needs of the central Ohio community are better served. The goals established by COTA were:

- **Ridership** - achieve ridership of 25 million passenger trips annually by 2025.
- **Expansion** - plan and invest in a multi-modal, high capacity, mass transit system connecting central Ohio residents to opportunity, economic prosperity, and to each other.
- **Perception** - be recognized in the communities, region, and nationally, as an essential partner in economic development and mobility solutions and as a leader in technological innovation and sustainability.⁴

COTA also recently undertook a transit system redesign that won praise and succeeded in increasing ridership. COTA's vision for the redesign was: "Improve the effectiveness and continued expansion of COTA's bus network, downtown operations, and technologies to meet the needs of growing and changing land uses in the central Ohio region".

DALLAS, TX

DART Vision Statement: "Your preferred choice of transportation for now and in the future."⁵

DART's Strategic Priorities

- Continually improve service and safety experiences and perceptions for customers and the public
- Optimize and preserve the existing transit system
- Optimize DART's influence in regional transportation planning
- Expand DART's transportation system to serve cities inside and outside the current service area
- Pursue excellence through employee engagement, development, and well-being
- Innovate to improve levels of service, business processes, and funding⁶

DENVER, CO

RTD Strategic Plan Strategies are:

- Deliver customer-oriented service
- Foster a safety culture
- Strengthen fiscal resiliency and explore financial innovation
- Improve customer access and support transit-oriented communities
- Optimize service delivery
- Use technology to operate efficiently and improve the customer experience
- Foster a dynamic and sustainable workforce

DETROIT, MI

The Regional Transit Authority of Southeast Michigan is currently working on an updated Master Plan. The draft version of Connect Southeast Michigan highlights the following goals:

- Improve frequency & reliability;
- Modernization & innovation;
- Local input on expanded services; and
- Seamless rider experience.⁷

HOUSTON, TX

The Metropolitan Transit Authority of Harris County (METRO) is in the process of developing a new plan for transit services in the Houston region. The main goals of this program, METRONext, are:

- **Improve mobility** - identify and develop transit improvements that increase speed and reliability.
- **Enhance connectivity** - connect riders to jobs, education, health care, and other destinations by having a transit system that connects people seamlessly from their starting and final destination using METRO's comprehensive infrastructure.
- **Support vibrant communities** - whether citizens are currently using public transportation or not, a seamless and diverse transit system enhances the overall quality of life by providing mobility options, spurring economic development, and improving the environment.
- **Ensure a return on investment** - the

implementation of smart and sustainable transit resources for the evolving region will preserve the desired way of life, ensuring the highest return in the future for today's investment.⁸

LAS VEGAS, NV

The Regional Transportation Commission of Southern Nevada (RTC) oversees transit and transportation planning operations for Southern Nevada. The RTC has these goals:

- Improve the efficiency and effectiveness of the transportation system and air quality by managing congestion;
- Enhance mobility by improving transportation choices and facilitating multi-modal connectivity;
- Increase safety for both motorized and non-motorized users;
- Maintain and improve transportation system infrastructure;
- Support regional planning efforts to improve economic vitality and education and invest in complete communities;
- Secure funding for expansion, operation, and maintenance of systems and routes; and
- Enhance public awareness and support of the regional transportation system.⁹

LOS ANGELES, CA

Goals from Metro Vision 2028 Strategic Plan are:

- Provide high quality mobility options that enable people to spend less time traveling
- Deliver outstanding trip experiences for all users of the transportation system
- Enhance communities and lives through mobility and access to opportunity
- Transform LA County through regional collaboration and national leadership
- Provide responsive, accountable and trustworthy governance within the Metro organization.¹⁰

MINNEAPOLIS, MN

The Transportation Policy Plan developed for the Minneapolis region aims to achieve the regional goals identified in the region's long term guide, Thrive MSP 2040. The six goals that are included in the vision of the transportation policy plan include:

- **Transportation system stewardship** - sustainable investments in the transportation system are protected by strategically preserving, maintaining, and operating system assets.
- **Safety and security** - the regional transportation system is safe and secure for all users.
- **Access to destinations** - a reliable, affordable, and efficient multimodal transportation system supports the prosperity of people and businesses by connecting them to destinations throughout the region and beyond.
- **Competitive economy** - the regional transportation system supports the economic competitiveness, vitality, and prosperity of the region and state.
- **Healthy and equitable communities** - the regional transportation system advances equity and contributes to communities' livability and sustainability while protecting the natural, cultural, and developed environments.
- **Leveraging transportation investments to guide land use** - the region leverages transportation investments to guide land use and development patterns that advance the regional vision of stewardship, prosperity, livability, equity, and sustainability.¹¹

SAN FRANCISCO, CA

The San Francisco Municipal Transportation Agency (SFMTA) goals include:

- Create a safer transportation experience for everyone
- Make transit and other sustainable modes of transportation the most attractive and preferred means of travel
- Improve the quality of life and environment in San Francisco and the region
- Create a workplace that delivers outstanding service¹²

ST. LOUIS, MO

Metro Transit and the East-West Gateway Council of Governments worked together with communities around St. Louis to produce the region's first LRTP, entitled Moving Transit Forward. Throughout the development of the plan, the main values of the community were identified:

- Provide transit access to as many people and places as possible.
- Strengthen transit's role as a vital regional asset.
- Increase mobility options to more of the transit-dependent.
- Provide the best service for as many people as possible.
- Prove cost-effective.
- Encourage economic development and job growth.
- Help reduce traffic congestion

Footnotes

² https://rtp.mta.maryland.gov/focus_areas.php

³ Invest in Transit, Regional Strategic Plan for Chicago and Northeastern Illinois, 2018

⁴ COTA Long Range Transit Plan, 2016

⁵ <https://www.dart.org/about/missionstatement.asp>

⁶ <https://www.dart.org/ShareRoot/debtdocuments/FY19BusinessPlan.pdf?nocache=1>

⁷ <http://www.rtamichigan.org/improving-regional-transit/>

⁸ <https://www.metronext.org/about/>

⁹ <https://www.rtcsv.com/about-the-rtc/vision-goals/>

¹⁰ Metro Vision 2028 Strategic Plan, 2018 (Authority, 2018)

¹¹ Thrive MSP Transportation Policy Plan, 2018

¹² <https://www.sfmta.com/sfmta-strategic-plan>

¹³ Moving Transit Forward, 2016

PREVIOUS RTA REPORTS AND STUDIES

Bus Stop Guidelines, 2018

The purpose of this document is to present RTA's guidelines for the placement and design of bus stops. These bus stop design guidelines provide an ideal framework for bus stops in order to establish a safe and comfortable transit service. RTA operates in multiple jurisdictions throughout Northeast Ohio on roads maintained by various agencies including the Ohio Department of Transportation, Cuyahoga County Department of Public Works, and 59 different municipalities. In an effort to communicate on behalf of customers, RTA published these bus stop design guidelines so that each jurisdiction can understand what is needed to best serve passengers and operators. It also provides general guidance on ideal conditions that will benefit both pedestrians and automobile operators to create a safe, shared space for all users of the public right-of-way. The document addresses bus stop design, location, stopping zones, curb configurations, shelters, construction projects, and related topics.

Healthline Economic Investment, 2018

The Healthline bus rapid transit (BRT) line along Euclid Avenue in Cleveland was constructed in 2008 for approximately \$200 million. The corridor connects Cleveland's largest economic and cultural hubs, Downtown and University Circle. This report assessed the amount and types of investments along the Healthline between 2008 and 2018. It found that the total investment of all projects was \$9.24 billion, including 23.5 million square feet of development, 8,000 dwelling units, and 2,600 hotel rooms. Downtown (Public Square to E. 17th St.) saw the most investment, followed by University Circle (Stokes Blvd. to Lakeview Rd.), Fairfax (E. 79th St. to Stokes Blvd.), Campus District (E. 17th St. to Innerbelt Hwy.), Midtown (Innerbelt Hwy. to E. 79th St.), and East Cleveland (Lakeview Rd. to Windermere). The largest single stakeholder was Cleveland Clinic, which invested almost \$2 billion since 2007. Other development was varied by type and size, including healthcare, cultural institutions, market-rate housing, accessible housing, senior housing, student housing, condominiums, and public infrastructure.

First Last Mile Strategic Plan - Cycle Transit Guidelines, 2017

The purpose of this document is to advance sustainable transportation through coordinating multimodal options and encouraging bicycle ridership to and from transit. The goals of the plan are: Expand the reach of transit through infrastructure and policy improvements; maximize multi-modal benefits & efficiencies; and build on existing regional sustainable policies and planning initiatives. It notes that 3% of RTA riders biked to transit in 2013, with a goal to increase to 10% by the year 2023. Recommendations include increasing wayfinding signage to connect people on bicycles to transit services, supporting new bike facilities, and partnering to increase bike-transit connections.

Priority Corridors Analysis, 2015

The purpose of this report was to examine the underlying conditions of RTA's priority corridors and assess trends as they relate to demand for transit service. The analysis reviewed population and employment; social-economic characteristics; future funded and unfunded development projects, and travel patterns. In addition to the existing Red, Green, Blue, Waterfront rail lines, and the HealthLine and Cleveland State BRT services, RTA has selected nine priority corridors that could potentially provide a higher quality of service with improved transit amenities. These corridors were considered priorities due to their location, ridership levels, and connectivity to other rapid and bus services. Many of these corridors are also located along the historic streetcar network, which provides right-of-way that is needed for many transit and pedestrian enhancements. The report concludes that St. Clair Avenue, Broadway Avenue, and Lorain Avenue are the top three corridors with the greatest potential to develop transit enhancements and improve adjacent neighborhoods.

W25 Transit Development Strategy, 2015

This planning study aimed to define a strategy that improves livability and commerce along the West 25th Street/Pearl Road corridor by connecting regional assets, serving major employers, and addressing the needs of residents, current and future. The West 25th Street/Pearl Road Corridor is described as the

region's most indispensable North/South connection. Four City neighborhoods (Ohio City, Tremont, Stockyards/Clark Fulton, and Old Brooklyn), and several civic organizations and residents participated. Through a community engagement process, the stakeholders concluded that a "BRT Lite" approach that features dedicated lanes for bus and bicycle traffic, consolidated stops with enhanced waiting environments, branded bus routes, and transit signal priority is recommended for the corridor from State Road to Detroit Avenue. The recommended approach was modeled after the Cleveland State Line improvements on Clifton Boulevard. The branded MetroHealth Line launched two years later in 2017 with new buses, shelters, and signage along the corridor.

E. 34th Street Campus/E. 79th Stations Transit Services Alternatives Analysis, 2015

This report addressed the future of stations in need of repair. The project recommendation for the E. 34th-Campus Station was to proceed with the design and construction of the station, which was completed in 2017. The project recommendation for the E. 79th Red Line Station is to proceed with the design of the station, to be constructed in 2020. The planning process noted that it identified a high level of community support for the stations, among members of the public, public officials, and station area institutions and organizations. The process elicited promises of a high level of future cooperation and collaboration among RTA and community institutions, to encourage development in station areas that is more intensive, dense, and oriented in a way that supports transit ridership. Opportunity Corridor could potentially drive such development near E. 79th Street stations.

ADDITIONAL PREVIOUS REPORTS AND STUDIES

Aim Forward 2040, 2017

The Northeast Ohio Areawide Coordinating Agency (NOACA) is the Metropolitan Planning Organization (MPO) serving the counties of and municipalities and townships within Cuyahoga, Geauga, Lake, Lorain and Medina. NOACA's Long-Range Transportation Plan for the region was approved in 2017. AIM Forward 2040 is the framework for directing investment for all forms of transportation in Northeast Ohio, including

motor vehicle, bridge, transit, bicycle, walking and the movement of freight. The plan offers a vision of the region's transportation system through the year 2040 and identifies \$15.8 billion in transportation investments that address accessibility, safety and mobility for people who live and work in Northeast Ohio. The plan identifies investments to address the needs of the region. It notes that almost 7 million trips are taken daily in the NOACA region; 82% of the region's population commutes to work alone; and 62% of the region's population is within a half-mile of a transit station. The plan discusses transit services provided by the Greater Cleveland Regional Transit Authority (RTA), Laketran (Lake County's regional public transportation authority), Lorain County Transit (LCT), Medina County Public Transit (MCPT), and Geauga County Transit. The plan notes that RTA is the largest transit system operating in the region and accounts for more than 94% percent of the region's operating and capital needs. The plan calls for enhancing and investing in transit across the region.

Age-Friendly Cleveland Action Plan, 2017

City of Cleveland Department of Aging and Age-Friendly Cleveland created this plan to enhance age friendliness and livability. The key impact areas are: outdoor spaces and buildings, transportation, housing, social participation, respect and social inclusion, civic participation and employment, communication and information, and community support and health services. The planning process included engagement of over 1,000 older adults. The plan notes that Cleveland is home to over 70,000 residents age 60 and older. Transportation topics include affordability, reliability and frequency, travel destinations, age-friendly vehicles, specialized services, priority seating, safety and comfort, transport stops and stations, information, community transport, taxis, roads, driving competence, and parking. The report states, "Impressions of the availability of public transportation were overwhelmingly positive by those who report regularly using Greater Cleveland Regional Transit Authority." The report recommends transit-oriented development for aging in place.

Regional Transit-Oriented Development Scorecard and Implementation Plan, 2016

This report highlights four ingredients to successful walkable development near transit: development that

is compact and dense relative to surrounding area; mix of land uses; safe, inviting, interconnected public realm; and a new approach to parking with fewer cars, shared facilities, and district design standards. This report assessed all rail stations on the Red Line; all stations on the Blue, Green, and Waterfront Lines, either individually or in clusters of closely spaced stations; HealthLine BRT service, in clusters of closely spaced stops; ten Priority Bus Corridors designated by RTA, including the Cleveland State Line BRT service; and a sampling of suburban town centers and bus transit centers. Considerations included place typology, connectivity, market strength, land availability, and government support.

NOACA Strategic Plan, 2015

This regional plan addresses the demographic and economic trends that will shape the region over the next 20 to 30 years. The plan defines the agency's vision and goals, and identifies strategies for how to allocate resources—money, staffing, and Board and stakeholder activities—in pursuit of the agency's goals. The document highlights several challenges related to growth, development and economic sustainability. For example, between 1970 and 2010, the population of NOACA's region shrank from 2.32 million to 2.07 million residents, a 10% reduction in population during a period when the Ohio and U.S. population grew. At the same time, the geographic expansion of the region continued outward. The plan outlines NOACA's vision and the following goals: Strengthen Regional Cohesion; Preserve Existing Infrastructure; Build a Sustainable Multimodal Transportation System; Support Economic Development; Enhance Quality of Life.

NOACA Transportation for Livable Community Initiative (TLCI) Reports

Irishtown Bend Vision Plan, 2018

The study focused on a hillside in Cleveland adjacent to the Cuyahoga River and bounded generally by W 25th Street, Detroit Avenue, Lorain Avenue, and the RTA Red Line. The site is at a critical juncture for the Cleveland region's bicycle trails, and has the potential to connect the Redline Greenway, Shoreway, and Lake Link Trails. In addition to bicycle infrastructure, the plan outlines the creation of a public park along the river, and a number of intersection improvements

adjacent to the site. A focus of the intersection improvements is the incorporation of a dedicated cycle track, buffer areas, queue boxes, cycle crossings, and mid-block cycle crossings.

Chagrin Valley Connections TLCI Study, 2018

For the Chagrin Valley Connectors Transportation for Livable Communities Initiative (TLCI) Study, the villages of Gates Mills, Hunting Valley, and Moreland Hills partnered together to explore potential on and off-road multi-modal connections between the Cleveland Metroparks North and South Chagrin Reservations. The goals of the study were to look at ways to connect one of the final missing pieces of Cleveland's Emerald Necklace, a series of parks and greenways encircling the city, as well as investigating potential multi-modal safety and experience improvements, and exploring additional connections in and out of the Chagrin River Valley to neighboring communities. At this time, final recommendations are limited to the installation of sharrow pavement treatments along Chagrin River Road, in tandem with additional bike signage to alert cyclists and motorists to the presence of a shared-use roadway.

Mayfield Road Multimodal Corridor Study, 2018

The Study Area runs the length of Mayfield Road within the cities of Cleveland Heights, South Euclid, Lyndhurst, and Mayfield Heights, beginning at 126th Street on the western edge and ending at SOM Center Road to the east. This portion of Mayfield Road within the Study Area is approximately 8 miles long. The plan addresses land use and transportation improvements throughout the corridor, addressing issues such as pedestrian connectivity, cycling routes, vehicular movement, transit service, street design, and the interaction between different modes. The study explores the transit service in the area and how bus stops and enclosures are incorporated into the streetscape and traffic designs.

Cleveland's Midway Cycle Track Plan, 2018

The purpose of the plan is to identify potential Midway Cycle Track corridors based on the design standards that were developed as part of the planning process for the project. The intent is to integrate Midway Cycle Track facilities into Cleveland's Bikeway Master Plan as an alternative type of bicycle

infrastructure that provides an interconnected system with a variety of bicycle facility types in conjunction with of the overall network.

Cleveland’s Multimodal Transportation facility, 2016

This planning effort included City of Cleveland, Cleveland City Planning Commission, NOACA, Greyhound, RTA, Amtrak, Bike Cleveland, and other stakeholders. The plan created schematic site and architectural renderings of a multimodal transit hub that would connect rail, bus, and other forms of ground transportation. The project construction estimate is approximately \$46.6 million.

East 79th Street Corridor Study, 2016

The Opportunity Corridor is a planned roadway to better connect Central Cleveland with the neighborhoods to the east. The planned alignment for the corridor runs between the RTA’s blue/green and the red line at East 79th Street. The intent of the plan is to provide a vision for public and private investment and to spur transit oriented development around the two existing RTA stations. The project study area is centered on the East 79th Street corridor and is defined by Woodland Avenue to the north and Garden Valley Road to the south, with a particular focus on the areas in close proximity to the transit stations. It is approximately .95 miles in length. The plan focuses on guiding the density, orientation, and function of development in key areas, and describes how parking and transportation investments should be oriented to support that development.

East 185th Street Corridor Plan, 2016

This corridor study focuses on land use, streetscape, and roadway improvements along the East 185th Street Corridor, a 1.43 mile road between Cleveland and Euclid, bounded by I-90 to the south and Lake Erie to the north. The plan recommends targeted development sites along the corridor, parking considerations for larger institutional users such as the Cleveland Clinic, and streetscape improvements along the length of the corridor.

Clark Avenue Corridor Plan, 2015

The study is intended to guide public and private investment along the Clark Avenue corridor, in the 2.5 mile segment stretching from W. 65th Street



to Quigley Avenue in Cleveland. The study covers various components of the corridor, including land use and development, pedestrian access, public transit, cycling, utilities, and streetscape. Additionally, a traffic analysis was completed for intersections along the corridor to better understand traffic and truck operations and inform concepts for lane configurations. The recommendations were based on a complete streets approach, and include concepts increasing pedestrian connectivity, bicycle infrastructure, and transit accessibility. Related to transit, public participants requested: direct service to downtown and bus access to Clark fields; wayfinding on Transit Waiting Environment (TWE) shelters recommended; consolidating TWE’s into locations on 41st, 31st, and Fulton for both eastbound and westbound routes.

Detroit Road Traffic, Parking analysis and Marion Ramp Feasibility Study, 2015

The project study area is within western Lakewood and eastern Rocky River in Cuyahoga County, Ohio. The limits extend along Lake Road from West Clifton Boulevard to Wagar Road and along Detroit Road between Wooster Road and Wagar Road for assessing traffic while the main study area for improvements to pedestrian, bicycle, and parking issues is focused along Detroit Road, between Lakeview Avenue and Old Detroit Road. There are traffic congestion and deficiencies in parking, pedestrian, and bicycle facilities within the residential and commercial district surrounding Detroit Road. The purpose of this study was to assess existing conditions and determine improvements that can be made to better facilitate vehicular, pedestrian, and bicycle movements/connections within the study area as well as identify opportunities for improved parking facilities. Additionally, the study assessed the feasibility of removing or repurposing the Marion Ramps from the study area and the resulting impacts of this change in traffic pattern within the study area, specifically along West Clifton Boulevard, Sloane Avenue, Linda Street, and nearby residential streets.

Lakefront Greenway and Downtown Connector Study, 2015

This study addressed the St Clair Superior District, Campus District, and Warehouse District. The study lays the groundwork for pedestrian and cycle paths to connect areas along Cleveland's lakefront from the Cuyahoga River to the west, to Martin Luther King Jr. Drive to the east. Additional connectivity from the lakefront greenway corridor to other districts and cycling infrastructure are outlined.

Moving Greater University Circle - Transportation and Mobility Plan, 2015

The plan outlines a series of strategies or interventions for addressing specific goals, such as prioritizing walking, providing accessible transit, and smart parking. Those strategies are then applied to specific places within University Circle with the intent of improving the intersection, roadway, or overall mobility of the place. Relating to transit, the plan offers strategies to expand the pedestrian and cycle network to transit stops, improve stop amenities, and provide bus bulbs in key areas. Four intersections were prioritized in the process for immediate

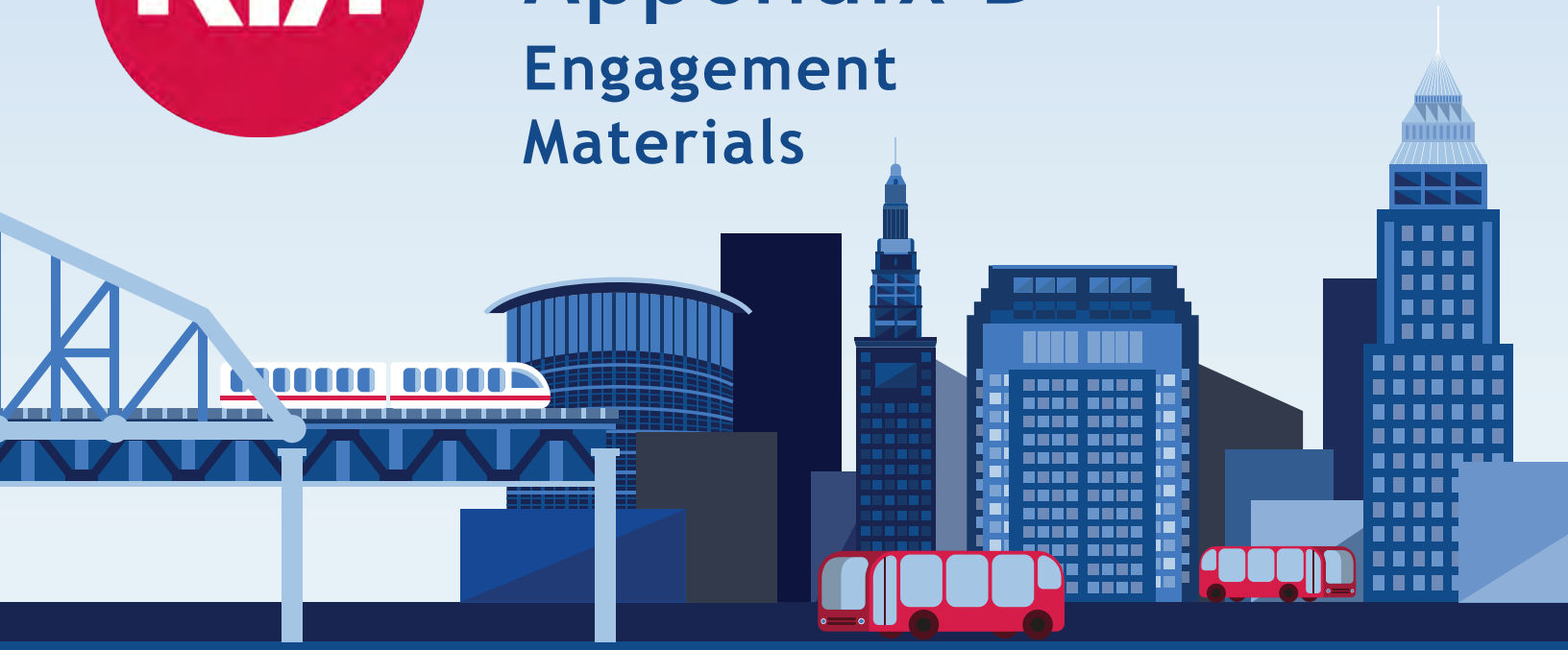


implementation to reduce conflicts between drivers, walkers, cyclists, and transit riders: Martin Luther King Jr. Drive at Carnegie Avenue; Euclid Avenue at Ford Drive/Mayfield Road; Euclid Avenue at E. 115th Street; and Euclid Heights Boulevard at Cedar Road.



Appendix B

Engagement Materials



2019 Public Meetings

Facility Name	Facility Address	Date	Time
Cleveland Public Library, Main Auditorium	525 Superior Ave., Cleveland, OH 44114	Monday, May 6	11:00 a.m.
Cleveland Public Library, Main Auditorium	525 Superior Ave., Cleveland, OH 44114	Monday, May 6	5:30 p.m.
Cedar Extension Hi-Rise (CMHA)	2320 E. 30th St., Cleveland, OH 44115	Tuesday, May 7	10:00 a.m.
Murtis Taylor Multi-Services Center	13422 Kinsman Rd., Cleveland, OH 44120	Tuesday, May 7	3:00 p.m., 5:30 p.m.
Gunning Rec Center	16700 Puritas Ave., Cleveland, OH 44135	Wednesday, May 8	4:00 p.m., 6:00 p.m.



2019 Public Meetings

Facility Name	Facility Address	Date	Time
Cleveland Public Library, Main Auditorium	525 Superior Ave., Cleveland, OH 44114	Monday, May 6	11:00 a.m.
Cleveland Public Library, Main Auditorium	525 Superior Ave., Cleveland, OH 44114	Monday, May 6	5:30 p.m.
Cedar Extension Hi-Rise (CMHA)	2320 E. 30th St., Cleveland, OH 44115	Tuesday, May 7	10:00 a.m.
Murtis Taylor Multi-Services Center	13422 Kinsman Rd., Cleveland, OH 44120	Tuesday, May 7	3:00 p.m., 5:30 p.m.
Gunning Rec Center	16700 Puritas Ave., Cleveland, OH 44135	Wednesday, May 8	4:00 p.m., 6:00 p.m.
Maple Heights Library	5225 Library Ln., Maple Hts., OH 44137	Thursday, May 9	5:30 p.m.
Lakeview Towers (CMHA)	2700 Washington Ave., Cleveland, OH 44113	Monday, May 13	10:00 a.m.
Collinwood Rec Center	16300 Lakeshore Blvd., Cleveland, OH 44110	Monday, May 13	5:30 p.m.
Cleveland Public Library, South Branch	3096 Scranton Rd., Cleveland, OH 44113	Tuesday, May 14	10:00 a.m.
Cleveland Heights Community Center	1 Monticello Blvd., Cleveland Hts., OH 44118	Tuesday, May 14	5:30 p.m.
La Sagrada Familia	7719 Detroit Ave., Cleveland, OH 44102	Weds., May 15	5:30 p.m.
Bellaire Gardens (CMHA)	12555 Bellaire Rd., Cleveland, OH 44135	Monday, May 20	10:00 a.m.
Parma Library	6996 Powers Blvd., Parma, OH 44129	Monday, May 20	5:30 p.m.
Rocky River Don Umerely Civic Center, Memorial Hall	21012 Hilliard Blvd., Rocky River, OH 44116	Weds., May 22	5:30 p.m.
Independence Library	6361 Selig Dr., Independence, OH 44131	Tuesday, May 28	5:30 p.m.
Cleveland Public Library, Main, Learning Commons	525 Superior Ave., Cleveland, OH 44114	Tuesday, Sept. 24	11:00 a.m.
Cleveland State University, BH134	2121 Euclid Ave., Cleveland, OH 44115	Tuesday, Sept. 24	5:30 p.m.

2019 Public Meetings

Facility Name	Facility Address	Date	Time
RTA Main Office Board Room	1240 W. 6th St., Cleveland, OH 44113	Weds., Sept. 25	10:00 a.m.
RTA Main Office Board Room	1240 W. 6th St., Cleveland, OH 44113	Weds., Sept. 25	3:00 p.m.
Independence Library	6361 Selig Dr., Independence, OH 44131	Thursday, Sept. 26	5:30 p.m.
Cedar Extension Hi-Rise (CMHA)	2320 E. 30th St., Cleveland, OH 44115	Monday, Sept. 30	10:00 a.m.
Parma Library	6996 Powers Blvd., Parma, OH 44129	Monday, Sept. 30	5:30 p.m.
Cuyahoga Community College- Eastern Campus	4250 Richmond Rd., Highland Hills, OH 44122	Tuesday, Oct. 1	11:30 a.m.
Cuyahoga Community College- Eastern Campus	4250 Richmond Rd., Highland Hills, OH 44122	Tuesday, Oct. 1	2:00 p.m.
Beachwood Library	25501 Shaker Blvd., Beachwood, OH 44122	Weds., Oct. 2	5:30 p.m.
Windermere Rapid Station	14232 Euclid Ave., East Cleveland, OH 44112	Thursday, Oct. 3	10:00 a.m.
Cuyahoga Community College- Western Campus	11000 W. Pleasant Valley Rd., Parma, OH 44130	Thursday, Oct. 3	3:00 p.m.
Cuyahoga Community College- Western Campus	11000 W. Pleasant Valley Rd., Parma, OH 44130	Thursday, Oct. 3	5:30 p.m.
Tower City Rapid Station	50 Public Square, Cleveland, OH 44113	Monday, Oct. 7	2:00 p.m.
Maple Heights Library	5225 Library Ln., Maple Hts., OH 44137	Monday, Oct. 7	6:00 p.m.
Collinwood Rec Center	16300 Lakeshore Blvd., Cleveland, OH 44110	Tuesday, Oct. 8	5:00 p.m.
Gunning Rec Center	16700 Puritas Ave., Cleveland, OH 44135	Weds., Oct. 9	5:30 p.m.
Michael J. Zone Rec Center	6301 Lorain Ave., Cleveland, OH 44102	Saturday, Oct. 12	10:30 a.m.
Southgate Transit Center	5491 Warrensville Center Rd., Maple Hts., OH 44137	Weds., Oct. 16	10:00 a.m.



2019 Public Meetings

Facility Name	Facility Address	Date	Time
Rocky River Don Umerely Civic Center, Memorial Hall	21012 Hilliard Blvd., Rocky River, OH 44116	Weds., Oct. 16	5:30 p.m.
Cleveland Heights Community Center	1 Monticello Blvd., Cleveland Hts., OH 44118	Monday, Oct. 21	5:30 p.m.
Cleveland Public Library- South Brooklyn Branch	4303 Pearl Rd., Cleveland, OH 44109	Tuesday, Oct. 22	5:00 p.m.
Lakewood Library- Madison Branch	13229 Madison Ave., Lakewood, OH 44107	Weds., Oct. 23	5:30 p.m.
Alpha Education Center	2820 E. 116th St., Cleveland, OH 44120	Thursday, Oct. 24	5:30 p.m.



Internal Stakeholder Group



Name	Title	Department	Division
Amy Snell	Planning Team Leader	Planning and Programming	Engineering and Project Management
Brian Temming	Quality Assurance Manager	Project Support	Engineering and Project Management
Heather Valentino	Program Manager	Project Support	Engineering and Project Management
Jim Rusnov	Real Estate Manager	Planning and Programming	Engineering and Project Management
Mandy Metcalf	Planning Team Leader	Planning and Programming	Engineering and Project Management
Maribeth Feke	Director	Planning and Programming	Engineering and Project Management
Eric Johnson	Government Relations	Executive	Executive
Jose Feliciano	External Affairs Manager	Executive	Executive
Floun'say Caver	Chief Operating Officer	Executive	Executive
Carolyn Young	Senior Budget Analyst	Office of Management and Budget	Finance and Administration
Eric Vulkmanic	Budget Analyst	Office of Management and Budget	Finance and Administration
Rajan Gautam	DGM	Executive	Finance and Administration
Chris Orlando	Manager	Infrastructure	Information Technology
Pete Anderson	CIO	Executive	Information Technology
Kim Gillan-Shafron	Marketing Manager	Marketing	Marketing
Bryan Moore	Acting District Director	Triskett	Operations
Dan Detrich	Manager	Fleet Management	Operations
Jacob Kabelen	Supervisor - Power and Way	Rail	Operations
John Palaghi	Acting Director	Service Management	Operations
Mike Lively	Manager	Intelligent Information Systems	Operations
Nick Biggar	District Director	Hayden	Operations
Vaneshia Houston	Transportation Asst Mngr	Paratransit	Operations
Theres Muti		FM	Operations
Sie'ra Williams			Operations
Dro Sohrabian	MDP	Rail	Operations



External Stakeholder Group



Entity	Department	Name
Cuyahoga County Planning Commission		Jim Sonnhalter
Cuyahoga County Planning Commission		Michael Mears
Northeast Ohio Areawide Coordinating Agency		Kelley Britt
Northeast Ohio Areawide Coordinating Agency		Kathy Sarli
Ohio Department of Transportation		Melinda Bartizal
Cuyahoga County Planning Commission	Public Works	Nichole English
City of Cleveland	Planning	Calley Mersmann
Cleveland Neighborhood Progress		Wayne Mortensen
Fund for the Economic Future	Mobility	Dominic Mathew
University Circle Inc.	Mobility	Annie Pease
Organization	Department	Name
Bike Cleveland	Executive Director	Jacob Van Sickle
Burton Bell Carr	Executive Director	Tim Tramble
City of Cleveland	City Planning Commission	Freddy Collier
City of Cleveland Office of Sustainability	Office of Sustainability	Matt Gray
City of East Cleveland	Community Development	Melran Leach
City of Lakewood	Director of Planning	Bryce Sylvester
City of Shaker Heights	Planning	Joyce Braverman
CMHA	Modernization and Development	Michael Shea
Cuyahoga Community College	Chief Innovation Officer	Gerard Hourigan
Cuyahoga County Board of Health	Safe Routes to School	Megan Conklin
Cuyahoga County Office of Sustainability	Office of Sustainability	Mike Foley
Detroit Shoreway	Assistant Director	Jenny Spencer
Downtown Cleveland Alliance	Business Development	Michael Deemer
First Suburbs	Director	Jenifer Kuzma
Greater Partnership Cleveland		Chris Urban
Hispanic Business Alliance	Executive Director	Jenice Contreras
Lakewood Alive	Executive Director	Ian Andrews
Metro West	Executive Director	Ricardo Leon
MetroHealth		Greg Zucca
Metroparks		Kelly Coffman
Ohio City Inc.	Executive Director	Tom McNair
Policy Matters		Amanda Woodrum
Urban Land Insitute	Executive Director	Adrian Burn
Fairfax Development Corporation	Assistant Director	Catrondra Noye



Greater Cleveland Regional Transit Authority Strategic Plan



FRAMEWORK FOR THE FUTURE

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BACKGROUND

The Greater Cleveland Regional Transit Authority (RTA) is partnering with the community to develop a new Strategic Plan that will shape the “Framework for the Future” and guide the agency to year 2030. RTA’s customer focus is demonstrated by continual infrastructure upgrades and several ongoing planning initiatives. However, several challenges create uncertainty on the path ahead: decreasing ridership in line with national trends; limited and reduced funding; aging infrastructure; and emerging technology and mobility disruptions.

✓

STRATEGIC PLAN OVERVIEW

The Strategic Plan will reflect RTA’s internal strategic vision, changing conditions, and community input. The Plan will include analyses of existing conditions, priority corridors, capital projects, infrastructure repair, transit technology, and new mobility. A transit needs assessment will highlight strengths, weaknesses, trends, opportunities, and other key issues. The planning team will also create prioritized strategies to achieve key recommended objectives. These will include considerations of equity, sustainability, funding scenarios, infrastructure needs, public-private partnerships, transit network, fare policies, and costs.

💬

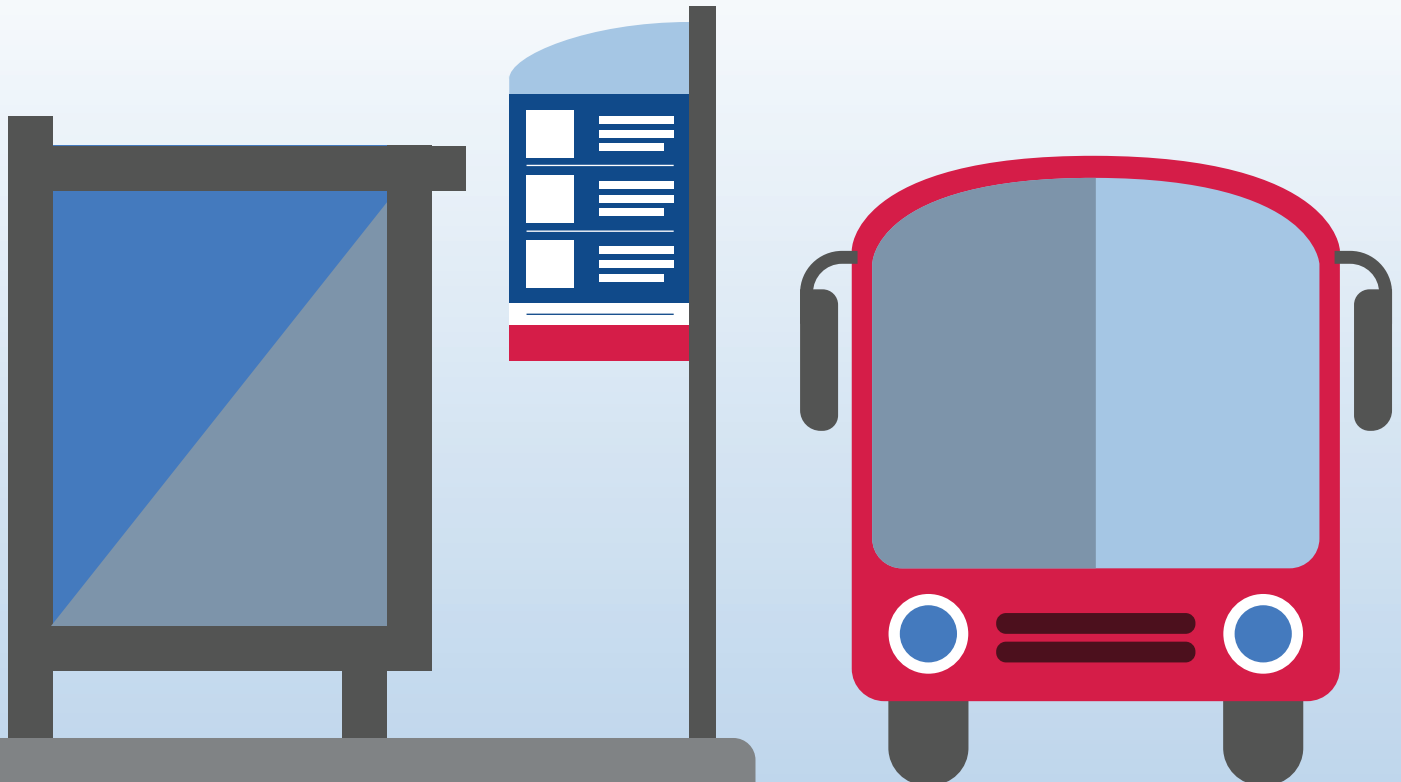
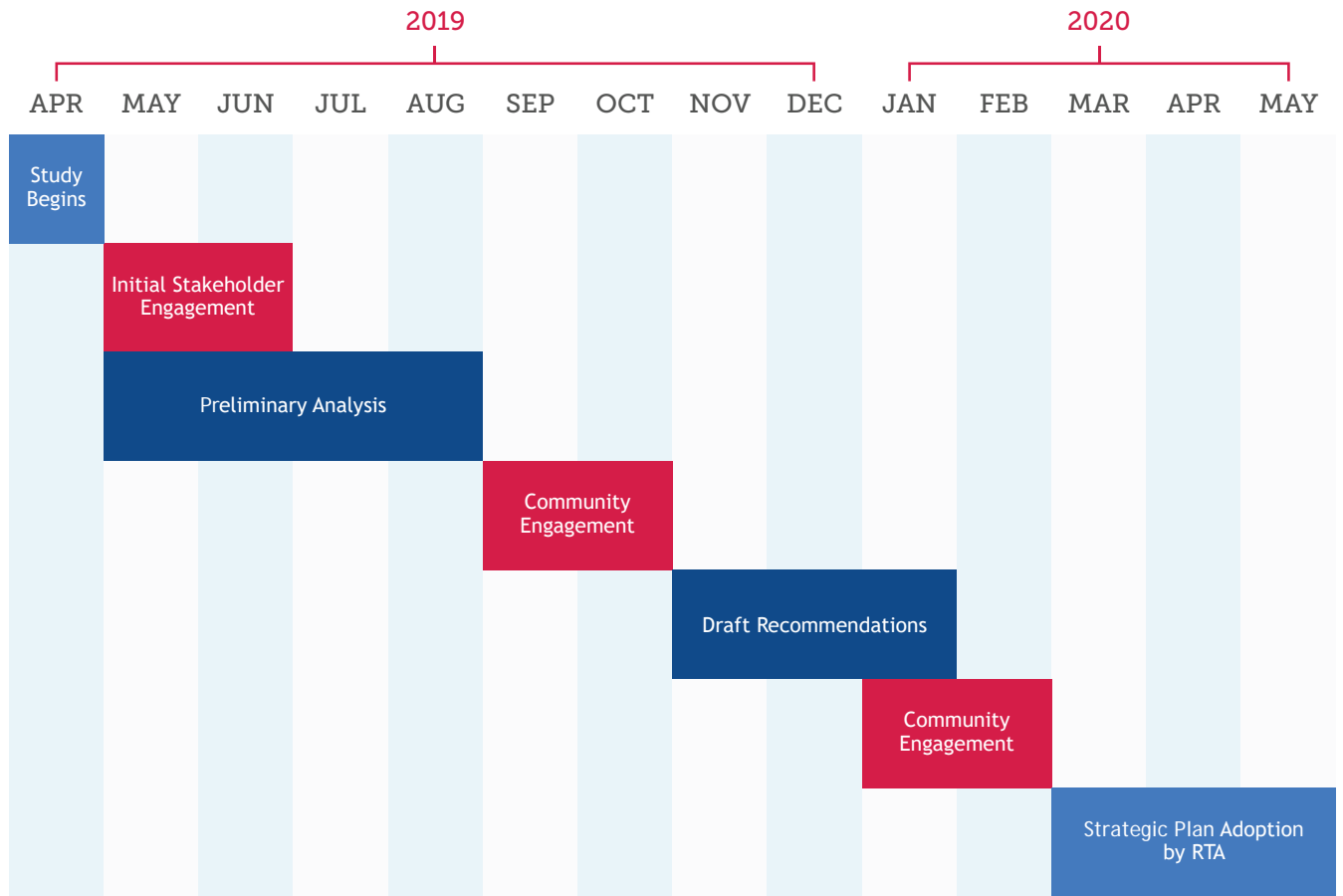
STAKEHOLDER ENGAGEMENT

While there are many technical aspects to this project, this effort relies on successful communication and collaboration among stakeholders to collectively identify the appropriate path forward. Stakeholder and public engagement includes multifaceted outreach and input among diverse constituencies at the beginning, middle, and end of the study.

A final Strategic Plan will outline RTA’s key strategies to the year 2030. The “Framework for the Future” will guide RTA’s community impact and innovative plan for the years ahead.



SCHEDULE



Agenda

Project: Strategic Plan Update

Subject: RTA and City of Cleveland Stakeholder Meeting

Date: Tuesday, May 21, 2019

Time: 2:00-3:30 pm EST

Location: Dept of Community Development, Room 320 – Administrative Services Conference Room

Attendees:

Name	Organization
Mandy Metcalf	GCRTA
Josh Sikich	HDR
Jason Sudy	HDR
Amy Snell	GCRTA
Maribeth Feke	GCRTA
Tania Menesse	City of Cleveland - Community Development
Freddy Collier	City of Cleveland - Planning
Adam Davenport	City of Cleveland - Planning
Sharonda Whatley	City of Cleveland - Planning
Nickol Calhoun	City of Cleveland - Planning
Anthony Santora	City of Cleveland - Planning
Robin Brown	City of Cleveland - Econ Dev
Matt Gray	City of Cleveland - Sustainability
Trudy Andrzejewski	City of Cleveland - Mayor's Office

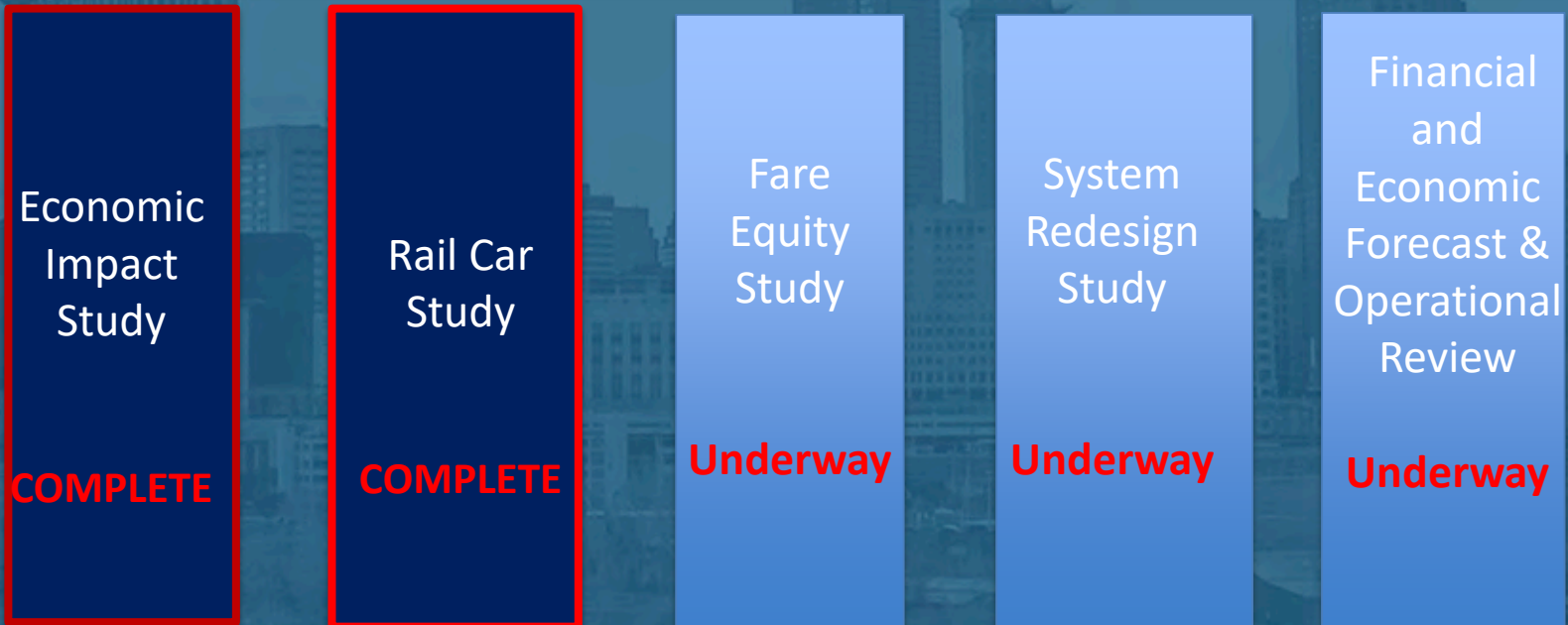
1. Introductions (5 min)
2. RTA Updates (10 min)
3. Strategic Plan Process (10 min)
4. Discussion (30 min)
 - a. Overall Vision
 - b. Planning
 - c. Economic Development
 - d. Sustainability
 - e. Related Transportation Issues
5. Other Items and/or Wrap Up (15 min)
 - a. Data and background information
 - b. Communication and outreach
6. Action Items (5 min)

RTA Strategic Plan Kick off

External Affairs & Advocacy Committee
June 4, 2019

RTA Strategy Development

Strategic Plan: Foundations for the Future





Strategic Plan

Greater Cleveland Regional Transit Authority



Strategic Plan

- February 2019: Board Approved Contract with HDR
- April 2019: Contract Executed
- June 2019: RTA Board Committee Presentation
- January 2020: Board Presentation
- April 2020: Board Adoption of Plan

Strategic Plan Process Overview

GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY

May 21, 2019



Project Goals

- Deliver a 10-year Strategic Plan
 - Create understanding and build consensus; pull “Pillar Studies” together into a cohesive plan

Strategic Plan: Foundations for the Future

Economic
Impact
Study

Fare Study

Rail Car
Study

Efficiency
Study &
Operational
Review

System
Redesign
Study





Update Vision & Goals

TASK 1

- Review RTA's completed and ongoing studies
- Combine with initial stakeholder input
- Create understanding and build consensus
- Encourage comments from stakeholders
- Revise and refine vision and goals

Assess Transit Needs

TASK 2

- Existing conditions
- Review priority corridors
- Evaluate capital projects
- State of Good Repair
- Transit technology
- New mobility, multi-mobility, first / last mile
- Preliminary findings of transit needs assessment



Identify Priority Strategies

TASK 3

- Actions, programs, and projects based on potential funding scenarios
- Equity
- Sustainability
- Draft 10-year Strategic Plan



Strategies will be prioritized across a variety of issues to highlight RTA priorities.



- Strategy outcomes tied to goal-related performance metrics
- Costs, funding mechanisms, benefits
- Key Considerations:
 - Achieving State of Good Repair
 - State-of-the-Art Infrastructure
 - Developing High Frequency Core Network and Priority Corridors
 - Address Fares and Fare Collection
 - Deliver Modest Service Expansion
 - Opportunities for Public-Private Partnerships
 - Definition of Recommended Improvements for Priority Corridors
 - Opportunity Routes Network
 - Influencing Development to Support Transit Ridership
 - Prioritization of Recommendations of Bus System Review

Stakeholder and Public Engagement

TASK 4

Proactive Meetings to Actively Engage Stakeholders



BOARD OF TRUSTEES



EXECUTIVE MANAGEMENT



INTERNAL STEERING COMMITTEE



EXTERNAL STAKEHOLDER ADVISORY COMMITTEE



COMMUNITY ADVISORY COMMITTEE, CLEVELANDERS FOR PUBLIC TRANSIT



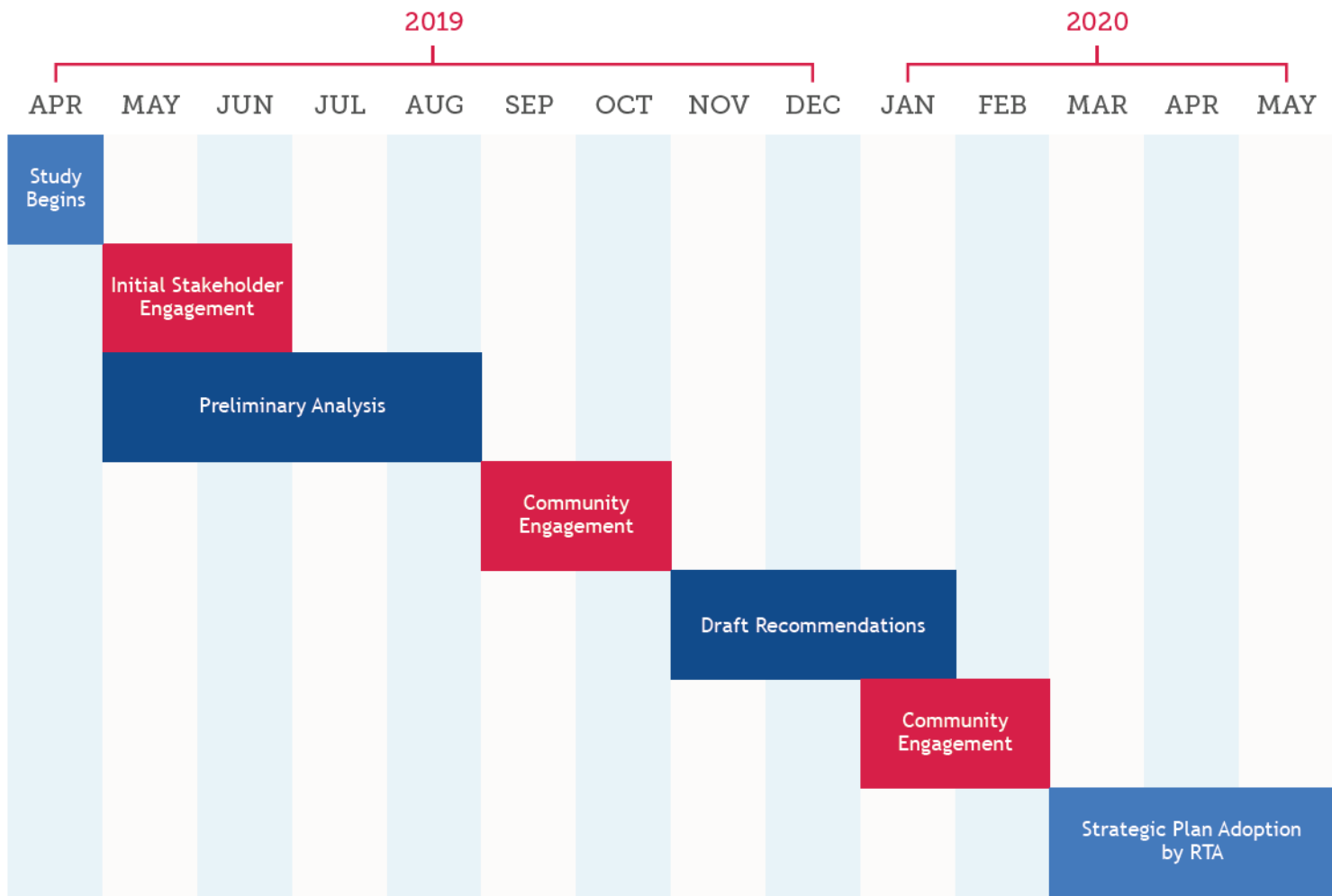
CITY OF CLEVELAND, NOACA, CUYAHOGA COUNTY, COMMUNITY LEADERS



Final Plan & Project Management

TASK 5 & TASK 6

- Compile key highlights and technical memos
- Deliver a final 10-year Strategic Plan
- Submit a project management plan showing proposed work plan and schedule
- Follow QA/QC process
- Monthly project meetings
- Status report and invoicing



Potential Key Themes

SHARED VISION

- Public Trust
- Collaboration

TRANSIT EVOLUTION

- Mobility Integration
- Future-proof

FUNDING

- Financial Stability
- Transportation as Economic Driver

VALUES

- Customer Service
- Environmental Sustainability
- Equity





What is your vision?



Meeting Agenda

Project: Greater Cleveland Regional Transit Authority - Strategic Plan Update

Subject: External Stakeholder Committee Meeting

Date: Tuesday, June 04, 2019

Time: 1:00 – 2:00 pm EST

Location: GCRTA - 1240 West 6th Street Cleveland, Ohio 44113

Attendees:

Name	Organization
Greg Bieler	Metro Health
Jim Sonnhalter	County Planning
Jerry Hourigan	Tri-C
Tom McNair	Ohio City Inc.
Calley Mersmann	City Planning Commission
Mackenzie Makepeace	ULI (RMS)
Tony Toth	ODOT – D12
Mandy Metcalf	GCRTA
Annie Pease	University Circle Inc.
Dominic Mathew	Fund for Our Economic Future
José Feliciano	GCRTA
Emily Thompson	Burton Bell Carr
Mike Foley	Cuyahoga County Office of Sustainability
Ursula McVey	Cuyahoga County
Wayne Mortensen	Cleveland Neighborhood Progress
Josh Sikich	HDR
Jason Sudy	HDR
Amy Snell	GCRTA
Maribeth Feke	GCRTA

	<i>Topic</i>	<i>Facilitator</i>
1	Introduction to Project and Purpose of Meeting	Maribeth Feke
2	Overview of Strategic Planning Process	Josh Sikich
3	Stakeholder Input and Feedback	Jason Sudy

Meeting Agenda

Project: GCRTA Strategic Plan Update

Subject: Internal Stakeholder Committee Meeting

Date: Wednesday, June 05, 2019

Time: 11:00– 12:00 EST

Location: GCRTA - 1240 West 6th Street Cleveland, Ohio 44113

Name	Organization
Brian Temming	GCRTA
Sieara Williams	GCRTA
Eric Vukmanic	GCRTA
Nick Biggar	GCRTA
Jacob Kabelan	GCRTA
Jarrett Davis	GCRTA
Dro Sohrabian	GCRTA
D’Von Qay	GCRTA
Mandy Metcalf	GCRTA
Eric Johnson	GCRTA
Josh Sikich	HDR
Jason Sudy	HDR
Amy Snell	GCRTA
Maribeth Feke	GCRTA

	<i>Topic</i>	<i>Facilitator</i>
1	Introduction to project and purpose of meeting	Maribeth Feke
2	Overview of Strategic Planning process	Josh Sikich
3	Discussion with internal stakeholders	Jason Sudy

Agenda

Project: Strategic Plan Update

Subject: RTA and NOACA Meeting

Date: Tuesday, June 04, 2019

Time: 4:00-5:00 pm EST

Location: NOACA - 1299 Superior Ave., Cleveland OH 44114

Attendees:

Name	Organization
Mandy Metcalf	GCRTA
Josh Sikich	HDR
Jason Sudy	HDR
Amy Snell	GCRTA
Maribeth Feke	GCRTA
Leila Bouabdellaoui	HDR
Kathy Sarli	NOACA
Kelley Britt	NOACA
Grace Galluci (by phone)	NOACA

1. Introductions (5 min)
2. RTA Updates (10 min)
3. Strategic Plan Process (10 min)
4. Coordination with NOACA Transit Needs Assessment (10 min)
5. Communication with NOACA councils and committees (10 min)
6. Data and background information (5 min)
7. Action Items (5 min)

Meeting Agenda

Project: GCRTA Strategic Plan Update

Subject: Internal Stakeholders – IT Update

Date: Wednesday, July 17, 2019

Time: 1:00– 2:00PM EDT

Location: GCRTA - 1240 West 6th Street Cleveland, Ohio 44113

Name	Organization
Pete Anderson	GCRTA
Wes Goodwin	GCRTA
Chris Orlando	GCRTA
Maribeth Feke	GCRTA
Amy Snell	GCRTA
Mandy Metcalf	GCRTA
Courtney	GCRTA
Ben Pierce	HDR
Jason Sudy	HDR

	<i>Topic</i>	<i>Facilitator</i>
1	Introduction to project and purpose of meeting	Maribeth Feke
2	Update on IT initiatives	Pete Anderson and Chris Orlando
3	Discussion with internal stakeholders	Jason Sudy

Meeting Agenda

Project: GCRTA Strategic Plan Update

Subject: Internal Stakeholders – LTK Fare Study Update

Date: Wednesday, July 17, 2019

Time: 3:00– 4:00PM EDT

Location: GCRTA - 1240 West 6th Street Cleveland, Ohio 44113

Name	Organization
Joel	GCRTA
Maribeth Feke	GCRTA
Amy Snell	GCRTA
Mandy Metcalf	GCRTA
Jose	GCRTA
Courtney	GCRTA
Rick Halvorsen (on phone)	LTK
Ben Pierce	HDR
Jason Sudy	HDR

	<i>Topic</i>	<i>Facilitator</i>
1	Introduction to project and purpose of meeting	Maribeth Feke
2	Update on LTK study	Joel and Rick
3	Discussion with internal stakeholders	Jason Sudy

Meeting Agenda

Project: GCRTA Strategic Plan Update

Subject: Internal Stakeholders – Radio System Update

Date: Wednesday, July 17, 2019

Time: 11:00AM-12:00PM EDT

Location: GCRTA - 1240 West 6th Street Cleveland, Ohio 44113

Name	Organization
Mike Lively	GCRTA
Mike Schipper	GCRTA
Maribeth Feke	GCRTA
Amy Snell	GCRTA
Mandy Metcalf	GCRTA
Courtney	GCRTA
Ben Pierce	HDR
Jason Sudy	HDR

	<i>Topic</i>	<i>Facilitator</i>
1	Introduction to project and purpose of meeting	Maribeth Feke
2	Update on Radio System initiatives	Mike Lively and Mike Schipper
3	Discussion with internal stakeholders	Jason Sudy

Meeting Agenda

Project: GCRTA Strategic Plan Update

Subject: Internal Stakeholders – Sustainability

Date: Wednesday, July 17, 2019

Time: 10:00AM-11:00AM EDT

Location: GCRTA - 1240 West 6th Street Cleveland, Ohio 44113

Name	Organization
Heather Valentine	GCRTA
Maribeth Feke	GCRTA
Amy Snell	GCRTA
Mandy Metcalf	GCRTA
Courtney	GCRTA
Ben Pierce	HDR
Jason Sudy	HDR

	<i>Topic</i>	<i>Facilitator</i>
1	Introduction to project and purpose of meeting	Maribeth Feke
2	Update on Sustainability Initiatives	Heather Valentino
3	Discussion with internal stakeholders	Jason Sudy

Meeting Agenda

Project: GCRTA Strategic Plan Update

Subject: Internal Stakeholders – Vehicle Technology

Date: Wednesday, July 17, 2019

Time: 9:00AM-10:00AM EDT

Location: GCRTA - 1240 West 6th Street Cleveland, Ohio 44113

Name	Organization
Dan Dietrich	GCRTA
Dan	GCRTA
Jeffrey Adams	GCRTA
Maribeth Feke	GCRTA
Amy Snell	GCRTA
Mandy Metcalf	GCRTA
Courtney	GCRTA
Ben Pierce	HDR
Jason Sudy	HDR

	<i>Topic</i>	<i>Facilitator</i>
1	Introduction to project and purpose of meeting	Maribeth Feke
2	Update on Vehicle Technology	Dan Dietrich
3	Discussion with internal stakeholders	Jason Sudy



RTA Strategic Plan Stakeholder Meeting



October 23, 2019 | 10:30 A.M. - 12:00 P.M.

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RTA Strategic Plan Stakeholders,

In June, RTA invited you to participate in the Strategic Planning process as a RTA Stakeholder and Advisor to our Study Team. The plan will set the course for RTA from 2020-2030 and will incorporate all of the other planning studies that are underway.

This is the second meeting of our group. At this meeting, a summary of the Strategic Planning Process results to date and a schedule for completion will be highlighted. RTA seeks your feedback on the strategic initiatives that will drive this plan.

As you know, participation is vital to the adoption of a successful transportation plan for RTA. Transportation is facing critical changes requiring new vision to create a transportation system that meets the changing needs of the public.

I hope you will join us at the RTA Main Office Boardroom located at 1240 W.Sixth Street for this important meeting.

Please RSVP your attendance to me prior to the meeting (mfeke@gcrta.org) and also feel free to contact me if you have any questions. I look forward to seeing you on October 23rd.

Maribeth Feke

Director of Programming and Planning



Agenda



Project: Strategic Plan: Framework for the Future

Subject: External Stakeholder Meeting

Date/Time: Oct. 23, 2019 10:30-12:00

Location: GCRTA 1240 W 6th Street, Cleveland, OH 44113

1. Introductions (10 min)
2. Overview (5 minutes)
3. Strategic Plan Process and Initial Input (15 min)
4. Planning Exercise and Discussion
 - a. Issues and Outcomes (20 min)
 - b. Prioritization (20 min)
5. Wrap-up and next steps (10 min)



Agenda



Project: Strategic Plan: Framework for the Future

Subject: Internal Stakeholder Meeting

Date/Time: Oct. 23, 2019 1:30-3:00

Location: GCRTA 1240 W 6th Street, Cleveland, OH 44113

1. Introductions (10 min)
2. Overview (5 minutes)
3. Strategic Plan Process and Initial Input (15 min)
4. Planning Exercise and Discussion
 - a. Issues and Outcomes (20 min)
 - b. Prioritization (20 min)
5. Wrap-up and next steps (10 min)



RTA Strategic Plan



PLEASE SPEND FIVE MINUTES TO TELL US
WHAT YOU THINK! REFRESHMENTS PROVIDED!

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The Greater Cleveland Regional Transit Authority (RTA) is developing a Strategic Plan to the year 2030. Through input from a variety of stakeholders, employees, and the public, this planning process will help guide RTA in navigating the upcoming decade.

Please stop by at these times to help shape the future of RTA!

Tuesday, January 28, 2020: CBM 11:30 am-1:30 pm

Tuesday, January 28, 2020: Rail 2:30-4:30 pm

Wednesday, January 29, 2020: Hayden 5:30-7:30 am

Wednesday, January 29, 2020: Triskett 2:00-4:00 pm

Wednesday, January 29, 2020: Paratransit 3:30-5:30 pm

Your participation is vital to the creation of a successful transportation plan for RTA. Transportation is facing critical changes requiring new vision to create a transportation system that meets the changing needs of the public.

Can't make it? No problem! A quick survey will be available for you to fill out at these locations until February 12, 2020.



Strategic Plan Your Ideas

The Greater Cleveland Regional Transit Authority (RTA) is developing a Strategic Plan to the year 2030. This planning process will help guide RTA in navigating the upcoming decade. Thank you for your feedback!

1. Ten potential goals for RTA are listed below. **PLEASE CHECK THE TOP THREE** that are most important:

- CUSTOMER EXPERIENCE:** Dependable, clean, fast, and seamless transportation.
- FINANCIAL STABILITY:** Responsible steward of public funds.
- STATE OF GOOD REPAIR:** Enhancement, preservation and maintenance of infrastructure and assets.
- TECHNOLOGICAL INNOVATION:** Integration of new technologies and evolving mobility options.
- ECONOMIC PROSPERITY:** Enabling economically sustainable land use and investment in strategic employment and population centers.
- ACCESS:** Increased access to jobs, education, and civic life.
- COLLABORATION:** Creative solutions to mobility challenges and opportunities for transit oriented development.
- EQUITY:** Provide equitable transit services that benefit disadvantaged individuals and communities.
- ENVIRONMENTAL SUSTAINABILITY:** Clean transportation and shifting travelers away from single occupancy vehicles.
- TRANSPARENCY:** Instill public confidence as an accountable, well-run institution.

2. What do you do for RTA? _____ 3. What district do you work at? _____

4. How many years have you worked at RTA? _____

5. What is your top recommendation(s) for improving the RTA *employee* experience?

6. What is your top recommendation(s) for improving the RTA *customer* experience?

Please use this page for any additional thoughts. Thank you for your time.

Thank you for your feedback!





Community Meetings: Strategic Plan

RTA is planning for the future and needs your help! We are creating a strategic plan for capital improvements and enhancing the customer experience through the year 2030. Your ideas will help shape RTA for years to come.



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Thursday, February 20, 2020

12:00 p.m. - 1:00 p.m.

RTA Main Office Building

Board Room

1240 W. 6th St., Cleveland, OH 44113

Monday, February 24, 2020

6:00 p.m. - 8:00 p.m.

Hofbrauhaus Cleveland

Festaal Room, 2nd Floor Hermit Club

1550 Chester Ave., Cleveland, OH 44114

Tuesday, February 25, 2020

12:30 p.m. - 2:30 p.m.

CornUcopia Place

7201 Kinsman Rd., Cleveland, OH 44104

Tuesday, February 25, 2020

5:00 p.m. - 7:00 p.m.

Collinwood Rec Center

Meeting Room

16300 Lakeshore Blvd., Cleveland, OH 44110

Wednesday, February 26, 2020

11:00 a.m. - 1:00 p.m.

Cleveland Public Library

Learning Commons (2nd Floor)

525 Superior Ave., Cleveland, OH 44114

Wednesday, February 26, 2020

5:30 p.m. - 7:30 p.m.

Parma Branch - Cuyahoga County Public Library

Conference Room A

6996 Powers Blvd., Parma, OH 44130

Monday, March 9, 2020

6:00 p.m. - 8:00 p.m.

Lakewood Woman's Club Pavilion

14532 Lake Ave., Lakewood, OH 44107

Tuesday, March 10, 2020

6:30 p.m. - 8:00 p.m.

Cleveland Hts. Community Center

Room 1A/1B

1 Monticello Blvd., Cleveland Hts., OH 44118

Wednesday, March 11, 2020

5:30 p.m. - 7:30 p.m.

Gemini Center - Fairview Park Recreation

Oak Room

21225 Lorain Rd., Fairview Park, OH 44126

Meetings are open houses that allow you to come when it fits your schedule. A presentation will also be given 15 minutes after the meeting start time and repeated one hour later. Enjoy light refreshments and children's activities!



Visit riderta.com/strategicplan for additional information and updates.

Strategic Plan Community Meetings

GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY

Spring 2020



Strategic Plan Project Goals

Deliver a 10-year Strategic Plan

- ✓ Create understanding and build consensus; pull “Pillar Studies” together into a cohesive plan

Strategic Plan: Framework for the Future

Economic
Impact
Study

Fare Study

Rail Car
Study

Efficiency
Study &
Operational
Review

System
Redesign
Study



Strategic Planning Process

- Update Vision & Goals
- Preliminary Findings: Assess Transit Needs
- Identify Priority Strategies
- Stakeholder and Public Engagement
- Spring 2019 to Spring 2020

riderta.com/strategicplan



Stakeholder and Public Engagement

Proactive Meetings to Actively Engage Stakeholders



BOARD OF TRUSTEES



EXECUTIVE MANAGEMENT



RTA INTERNAL STEERING COMMITTEE



EXTERNAL STAKEHOLDER ADVISORY COMMITTEE



COMMUNITY ADVISORY COMMITTEE



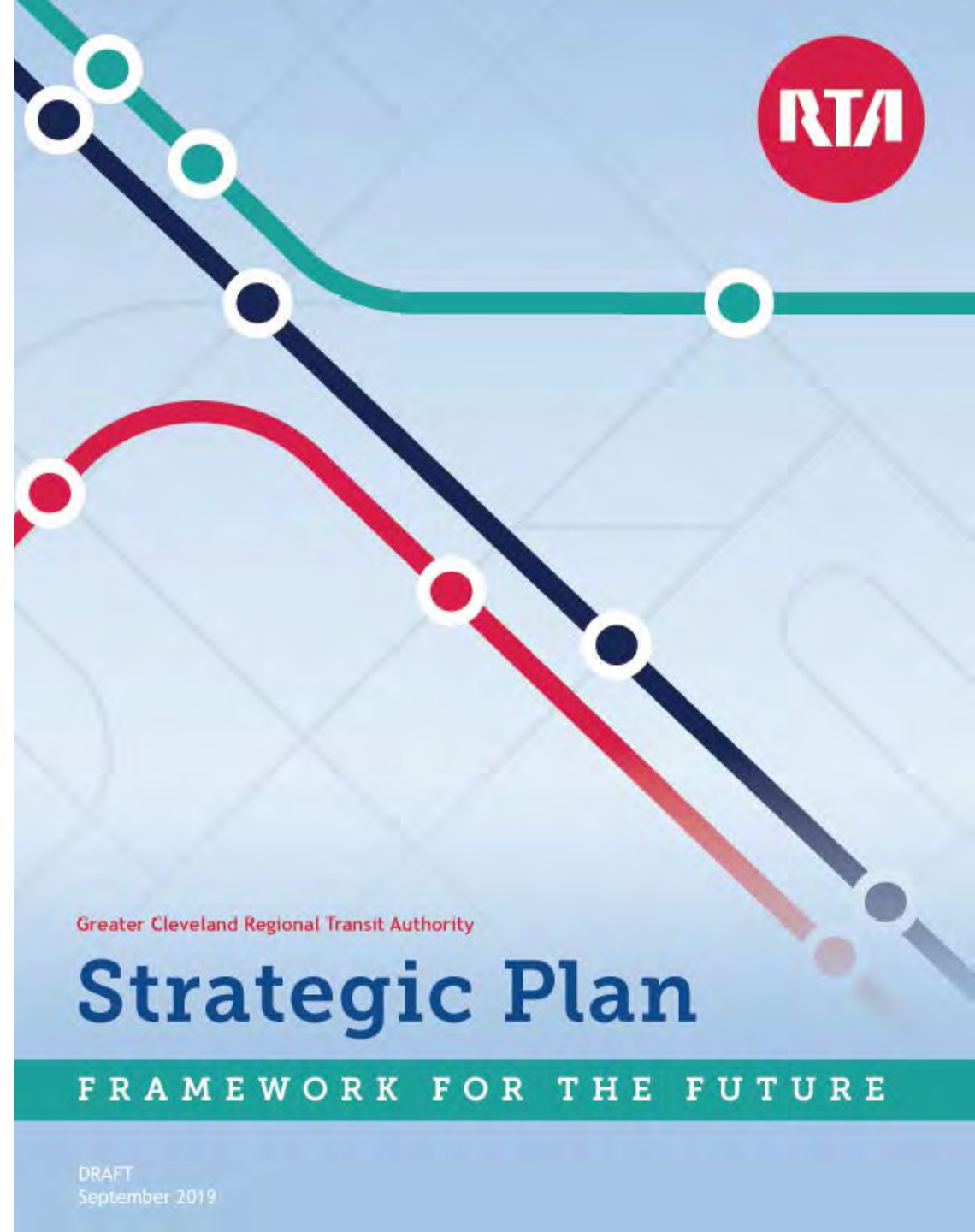
PUBLIC INPUT



Final Plan

- ✓ Compile key highlights and technical information
- ✓ Deliver 10-year capital planning and customer enhancement Strategic Plan

riderta.com/strategicplan



Preliminary Goals



Preliminary Goals

1

CUSTOMER EXPERIENCE

RTA will provide dependable, clean, fast, and seamless transportation that creates a positive experience for RTA customers.

2

FINANCIAL STABILITY

RTA will be a responsible steward of public funds by providing exceptional services cost-effectively.

3

STATE OF GOOD REPAIR

RTA will enhance, preserve and maintain its infrastructure and assets.

4

TECHNOLOGICAL INNOVATION

RTA will lead in its integration of new technologies and evolving mobility options to enhance the transportation experience for customers, RTA employees, businesses and visitors.

5

ECONOMIC PROSPERITY

RTA will be the transportation backbone that moves the economy forward and improves the quality of life of county residents by enabling economically sustainable regional land use and development and reinforcing investment in strategic employment and population centers.

Preliminary Goals

6

ACCESS

RTA will facilitate increased access to jobs, education, and civic life.

7

COLLABORATION

RTA will work with stakeholders to foster creative solutions to mobility challenges and drive opportunities for transit oriented development.

8

EQUITY

RTA will continue to provide equitable transit services that benefit disadvantaged individuals and communities.

9

ENVIRONMENTAL SUSTAINABILITY

RTA will reduce greenhouse gas emissions in the region by providing clean transportation and shifting travelers away from single occupancy vehicles.

10

TRANSPARENCY

RTA will instill public confidence as a well-run institution that is accountable to its customers, employees, and taxpayers.

Preliminary Findings



RTA Economic Impact

- ✓ Critical to the economic success of region and to the well being of people who live and work here
- ✓ RTA's impact on local employment totals \$485.8 million, measured in annual earnings brought home by those who depend on RTA transit services to get to work
- ✓ Impact on Cuyahoga County property values is \$2.2 billion
- ✓ Annual savings to passengers who choose to ride RTA rather than use their own transportation is \$51.8 million

Decreasing Ridership

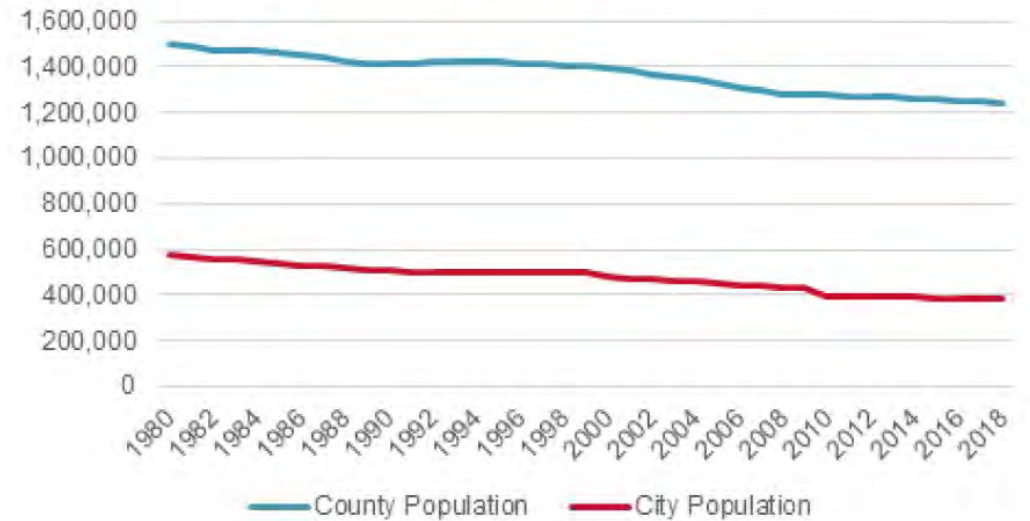
Fewer people are riding RTA than ever before



External Factors: Examples

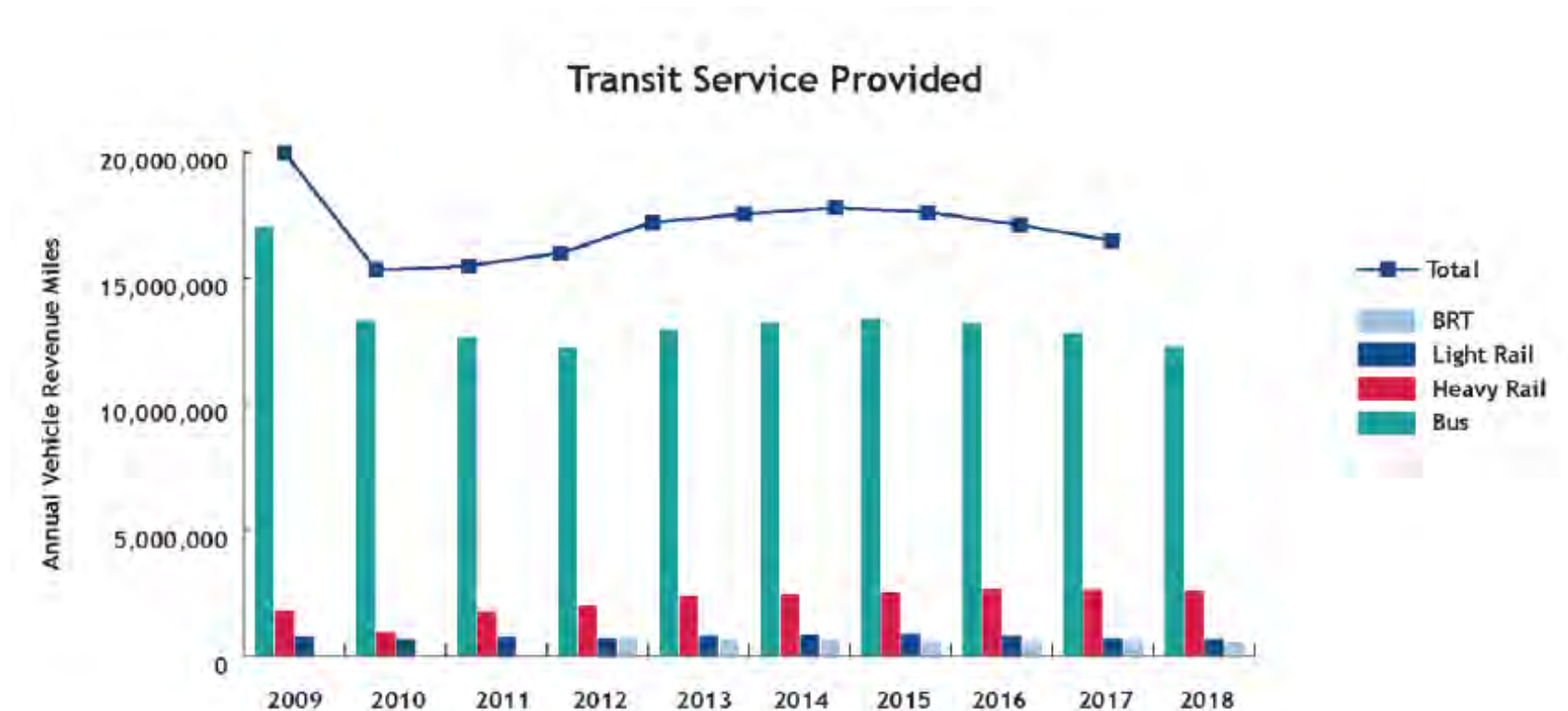
- Cuyahoga County lost tens of thousands of residents and jobs in the past decade
- Jobs locations shifting outward
- Aging population

Cuyahoga County and Cleveland Population

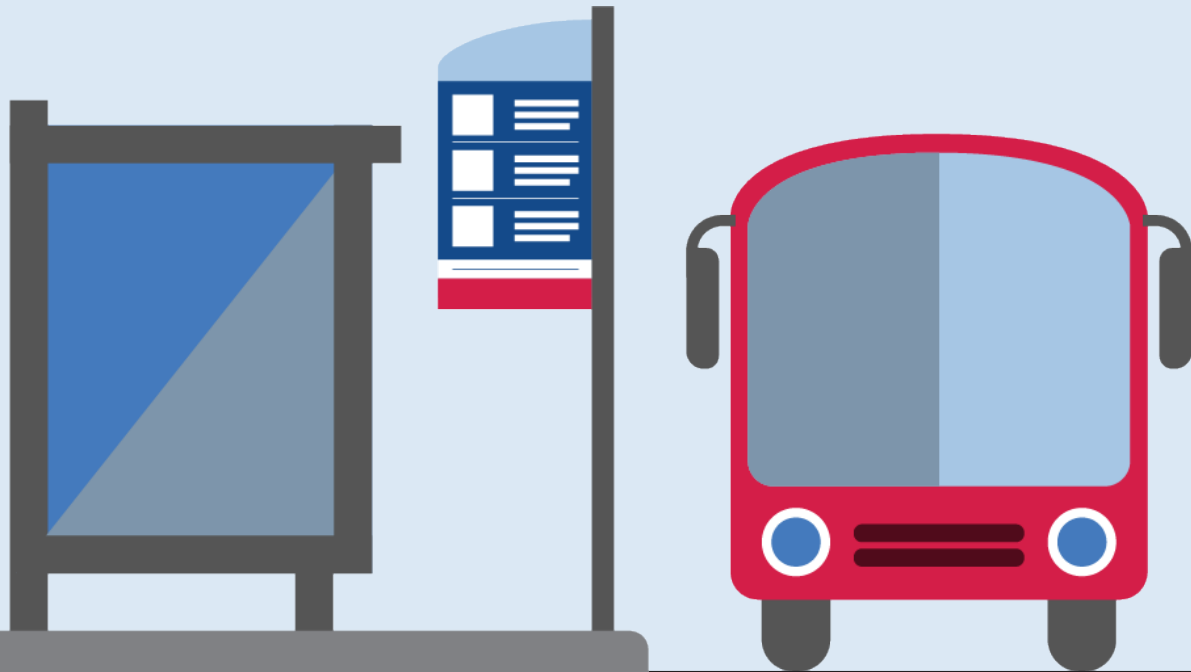


Internal Factors: Examples

- Level of transit service decreased
- Factors under control of RTA influence ridership, such as fares, customer communication, on-time performance

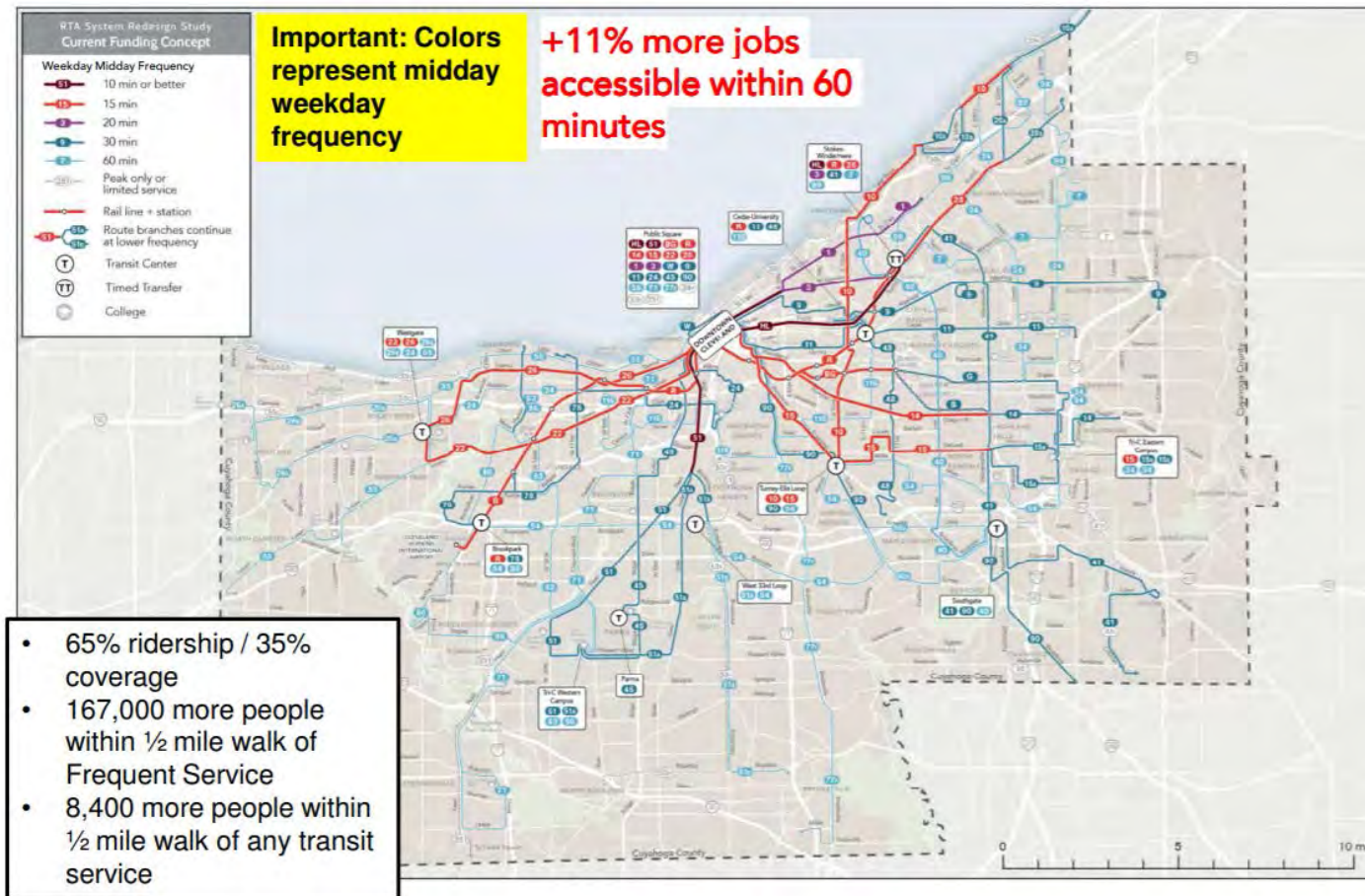


Potential Ideas for Improvements



Access: System Redesign

- As recommended in Dec. 2019, RTA should shift to the Current Funding Concept
- Expanded Funding Concept provides basis for future potential



Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X				X	X		X		



Collaboration: Corridor Improvements for Faster Buses

- New federal guidance recently approved for red pavement bus-only lanes
- Transit Signal Priority
- Queue jumps



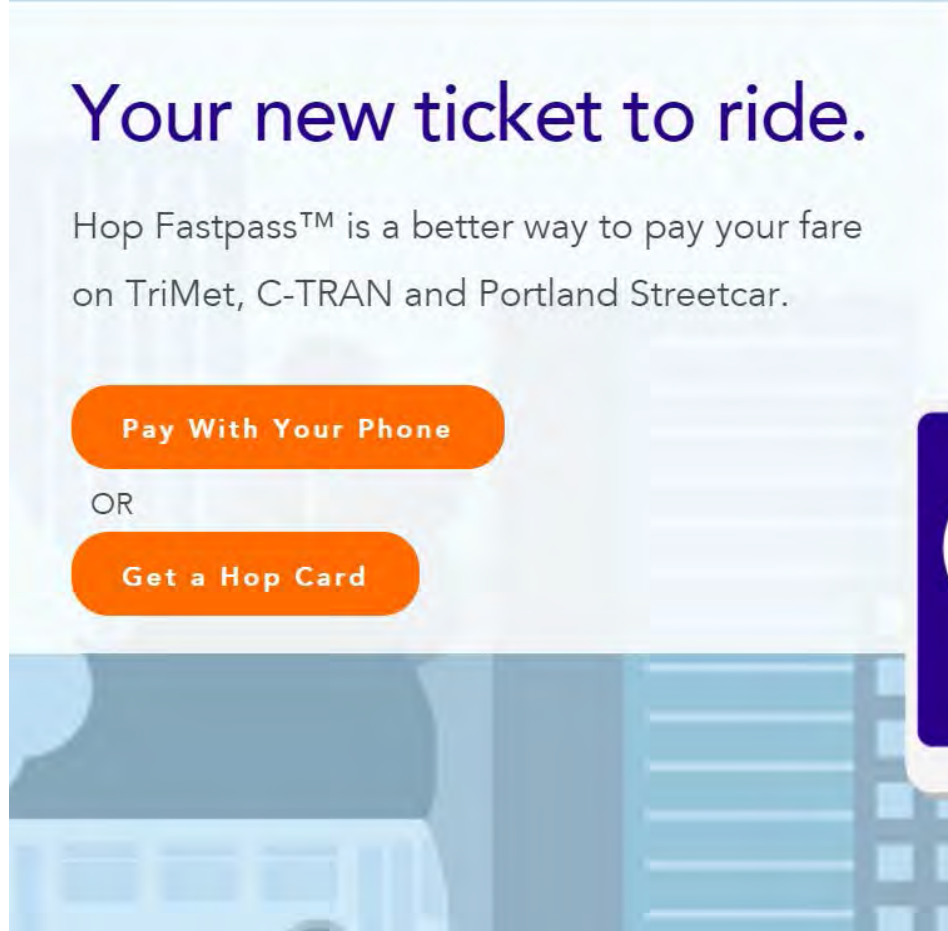
Source: streetsblog.org



Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X	X	X	X		X	X	X		

Customer Experience: Fare Payment Improvements

- Account based, contactless
- Stored Value
- Fare capping
- Open architecture
- Open payments
- Seamless to customer



Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X			X	X	X		X		

State of Good Repair: Rail car replacement

- Heavy-rail fleet replaced within 5 years
- Light-rail fleet replaced within 10 years



Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X	X	X	X	X					

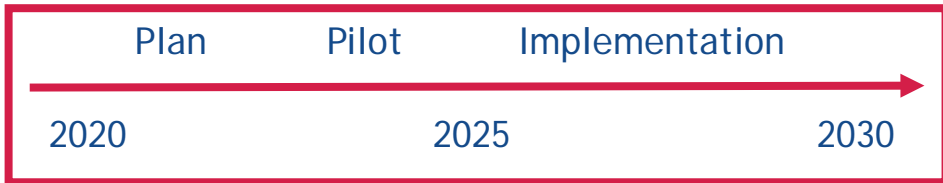


Environmental Sustainability: Electric Buses

- Quiet, comfortable
- Lower global warming emissions than diesel and compressed natural gas
- Zero tailpipe emissions for healthier neighborhoods



Source: proterra.com



Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X		X	X				X	X	



Equity: Vulnerable Populations

- Increase transit frequency and capacity for those who need it most
- Address needs of women and aging population
- Policy and safety improvements



Source: inquirer.com

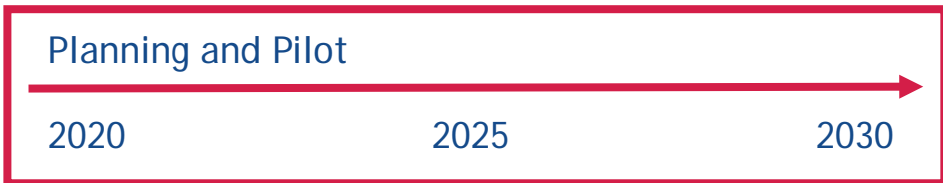


Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X				X	X	X	X		



Technology: Autonomous Shuttles

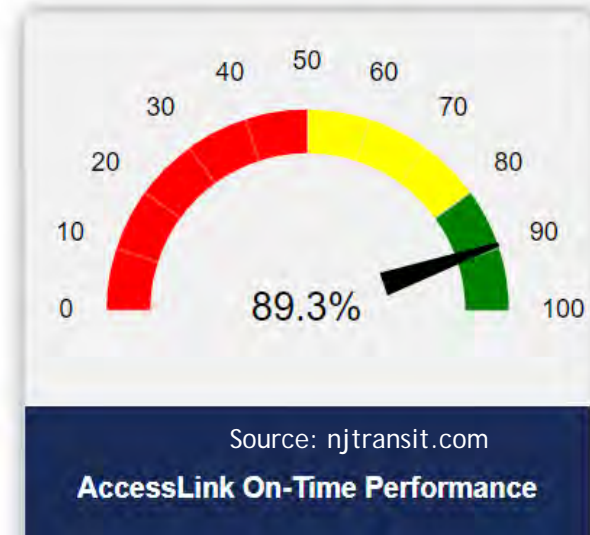
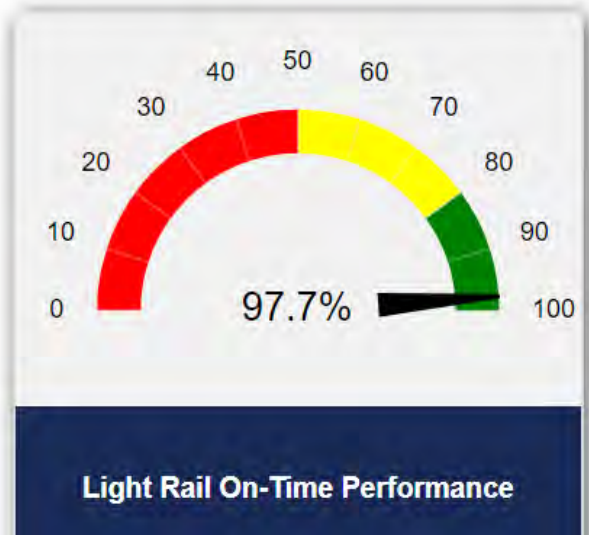
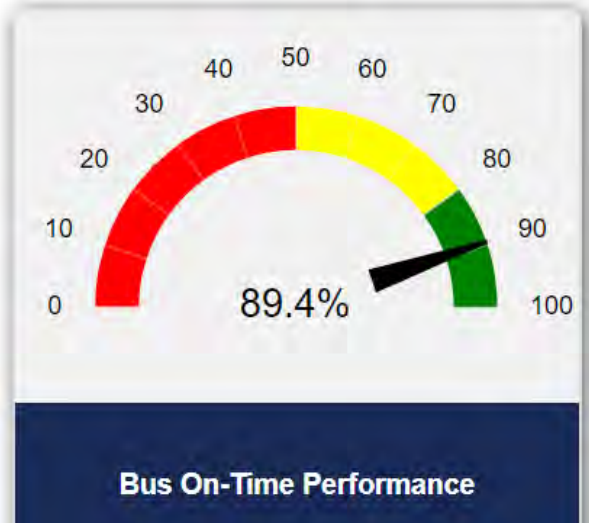
- First/last mile option
- Testing in Ohio, U.S., and worldwide
- Pilot program to understand opportunities and constraints
- New RTA radio system



Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X			X	X	X	X	X	X	

Transparency: Public Online Dashboard

- Improve transparency and accountability
- Display metrics that impact customer confidence
- Build public trust

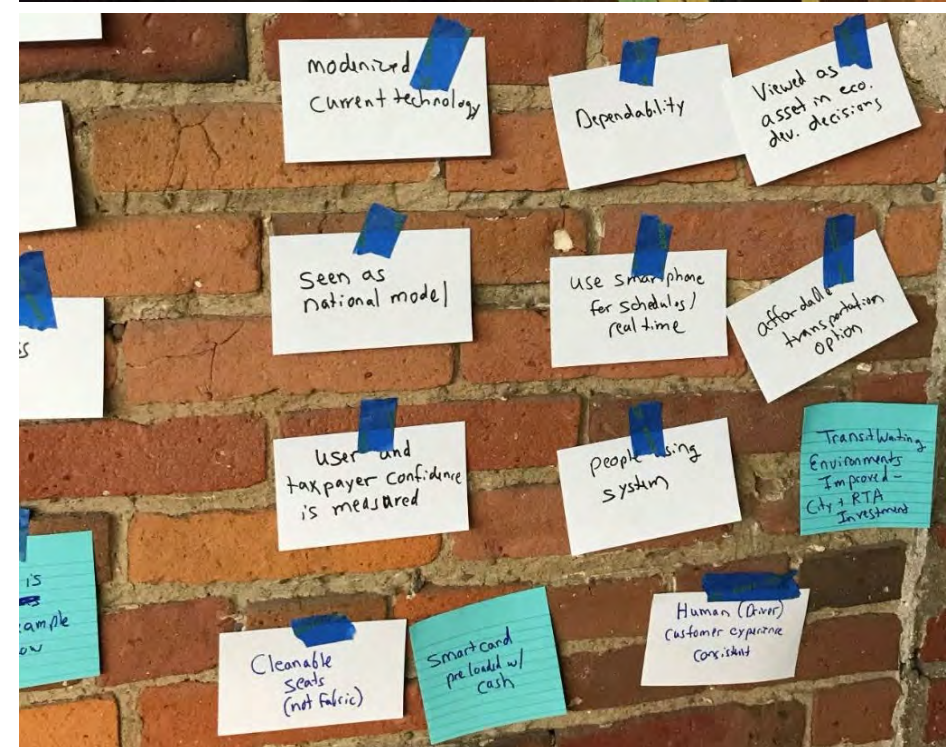


Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X			X						X



Your Ideas!

- Lighting near bus stops
- Better transfer connections
- Cleaner buses
- Reliable, on-time service
- More service to destinations that matter to you
- Better real-time arrival info
- Extend train lines to more places
- Quicker boarding to move transit faster
- And more. Help us plan the future!





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using your smart phone.

Strategic Plan

riderta.com/strategicplan



Meeting Agenda

Project: Greater Cleveland Regional Transit Authority - Strategic Plan Update

Subject: NOACA Stakeholder Meeting

Date: Monday, March 30, 2020

Time: 3:00 – 4:00 pm EST

Location: Remote Meeting using Webex

Attendees:

Name	Organization
Mandy Metcalf	GCRTA
Josh Sikich	HDR
Jason Sudy	HDR
Amy Snell	GCRTA
Maribeth Feke	GCRTA
Kelley Britt	NOACA
Peter Voorhees	AECOM
Scott Baker	AECOM
Stephanie Amoaning-Yankson	AECOM
Ken Sislak	AECOM
Tim Rosenberger	WSP

1. Introductions
2. GCRTA Strategic Plan presentation
3. NOACA Regional Plan presentation
4. Discussion



Project: Strategic Plan: Framework for the Future

Subject: Stakeholder Meeting

Date/Time: July 16, 2020 1:30-3:00 PM

Location: Webex Digital Meeting

- <https://meethdr.webex.com/meethdr/j.php?MTID=mb9feb0e2b1867bde9b87bf0681183509>
- If needed: Meeting number (access code): 146 120 3115; Meeting password: nAbXwimZ578

1. Introductions
2. Recap
 - a. Planning Process
 - b. Considerations of Recent Events
 - c. Preliminary Findings
3. Stakeholder & Public Engagement
 - a. Engagement Process
 - b. Strategy Identification & Prioritization
4. Recommendations
 - a. Geographic Focus
 - b. Key Initiatives
5. Discussion

RTA Strategic Plan: Framework for the Future

Customer Focused, Community Engaged

Attendees:

- Josh Sikich
- Mandy Metcalf
- Eric Vukmanic
- Greg Zucca
- Heather Valentino
- Jarrett Davis
- Monica Busam
- Dominic Matthew
- GCRTA Engineering
- Kristie Cox
- Krystal Sierra
- Maribeth Feke
- Mike Foley
- Mike Cermak
- Matthew Moss
- Flounsay Caver
- Matt Schmidt
- Dro Sohrabian
- Chris Urban
- Calley Mersmann
- Annie Pease
- Jim Sonnhalter
- Jason Sudy
- Ricardo Leon
- Joyce B.
- Planning Commission
- Ian Andrews
- Jose Feliciano
- Audrey Gerlach
- Eric Johnson
- Michael Mears
- Sara Meier
- Mel Leach
- Kelley Britt
- Marka Fields
- Mackenzie Makepeace
- John P



Agenda



Project: Strategic Plan: Framework for the Future

Subject: RTA and City of Cleveland Stakeholder Meeting

Date/Time: August 31, 2020 2:00-3:30 PM

Location: Digital Meeting

Attendees:

Tania Menesse	City of Cleveland - Community Development
Freddy Collier	City of Cleveland - Planning
Adam Davenport	City of Cleveland - Planning
Sharonda Whatley	City of Cleveland - Planning
Nickol Calhoun	City of Cleveland - Planning
Anthony Santora	City of Cleveland - Planning
Robin Brown	City of Cleveland - Economic Development
Matt Gray	City of Cleveland - Sustainability
Trudy Andrzejewski	City of Cleveland - Mayor's Office
Robert Kennedy	Director, Cleveland Airport System
David Ebersole	Director of Economic Development
Edward Rybka	Chief of Regional Development
Josh Sikich	HDR
Jason Sudy	HDR
Maribeth Feke	GCRTA
Amy Snell	GCRTA

1. Introductions
2. Recap
 - a. Planning Process
 - b. Considerations of Recent Events
 - c. Preliminary Findings
3. Stakeholder & Public Engagement
 - a. Engagement Process
 - b. Strategy Identification & Prioritization
4. City of Cleveland collaboration
5. Recommendations

- a. Geographic Focus
 - b. Key Initiatives
6. Discussion

RTA Strategic Plan: Framework for the Future
Customer Focused, Community Engaged

Strategic Plan

Presentation to GCRTA Board of Trustees

External & Stakeholder Relations & Advocacy Committee

GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY

October 6, 2020



Project Leaders Presenting Today



Josh Sikich, AICP
Project Manager



Jason Sudy
Engagement Lead



Strategic Plan Process

Deliver a 10-year Strategic Plan

- ✓ Create understanding and build consensus; pull “Pillar Studies” together into a cohesive plan

Strategic Plan: Framework for the Future

Economic
Impact
Study

Fare Equity
Analysis

Rail Car
Study

Efficiency
Study &
Operational
Review

System
Redesign
Study



Strategic Planning Process

- Update Vision & Goals
- Preliminary Findings: Assess Transit Needs
- Identify Priority Strategies
- Stakeholder and Public Engagement



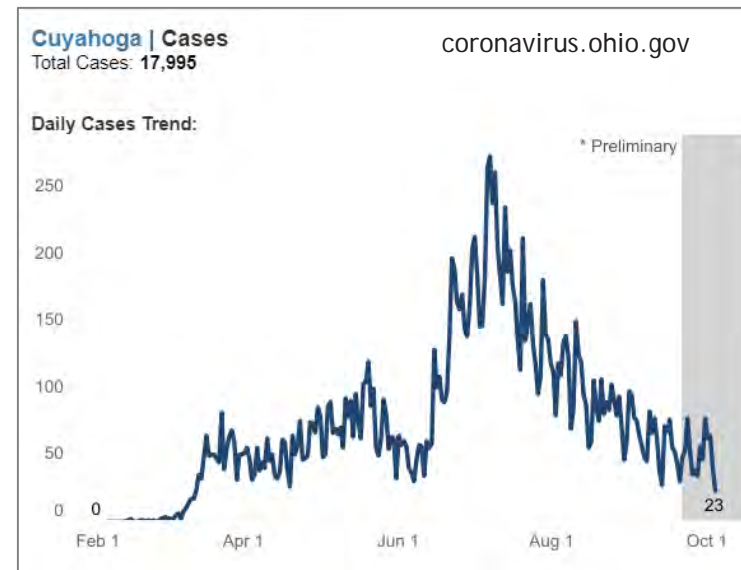
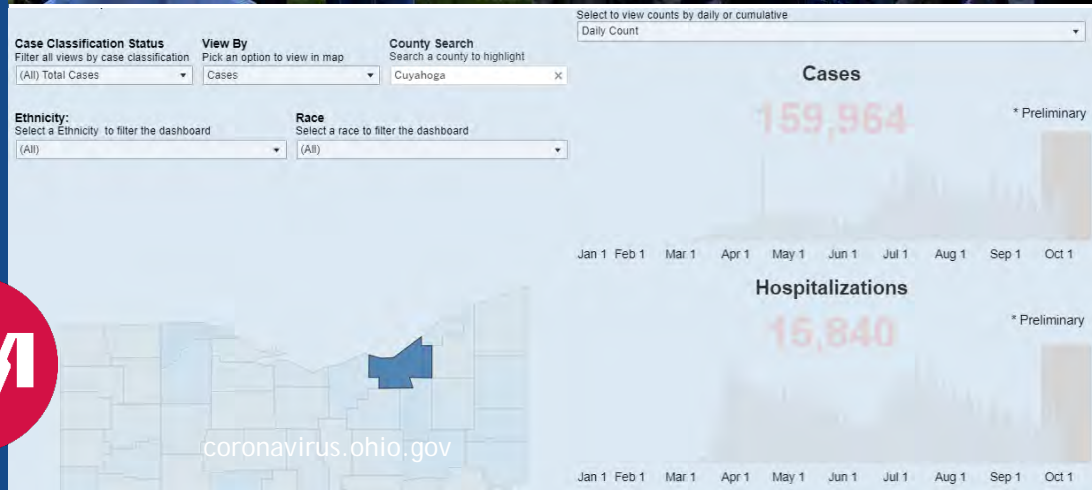
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Considerations of Recent Events

- COVID-19 Pandemic
- Economic Downturn
- Calls to Action for Social Justice



COVID-19

RTA actions are national best practices. Examples include:

- Enhanced cleaning and disinfecting of vehicles and facilities
- Barriers and separators for operators and staff
- Personal protective equipment
- Collaboration with Health departments and Centers for Disease Control

Recent American Public Transportation Association research:

- No direct correlation has been found between use of urban public transit and transmission of COVID-19
- Public transit ridership in multiple cities shows no correlation with the rise or fall of local COVID-19 cases
- Mask wearing has been shown to be effective at reducing person-to-person transmission

*Strategic Plan:
Framework for the Future*

*Customer Focused
Community Engaged*



Customer Focused & Community Engaged



CUSTOMER EXPERIENCE

RTA will provide dependable, clean, fast, and seamless transportation that creates a positive experience for RTA customers.

EQUITY

RTA will continue to provide equitable transit services that benefit disadvantaged individuals and communities.

ACCESS

RTA will facilitate increased access to jobs, education, and civic life.

STATE OF GOOD REPAIR

RTA will enhance, preserve and maintain its infrastructure and assets.

FINANCIAL STABILITY

RTA will be a responsible steward of public funds by providing exceptional services cost-effectively.

Customer Focused & Community Engaged



COLLABORATION

RTA will work with stakeholders to foster creative solutions to mobility challenges and drive opportunities for transit oriented development.

TECHNOLOGICAL INNOVATION

RTA will lead in its integration of new technologies and evolving mobility options to enhance the transportation experience for customers, RTA employees, businesses and visitors.

ECONOMIC PROSPERITY

RTA will be the transportation backbone that moves the economy forward and improves the quality of life of county residents by enabling economically sustainable regional land use and development and reinforcing investment in strategic employment and population centers.

TRANSPARENCY

RTA will instill public confidence as a well-run institution that is accountable to its customers, employees, and taxpayers.

ENVIRONMENTAL SUSTAINABILITY

RTA will reduce greenhouse gas emissions in the region by providing clean transportation and shifting travelers away from single occupancy vehicles.

Preliminary Findings



RTA Existing Conditions



RTA economic impact - \$485M on local employment & \$2.2 billion on Cuyahoga County property values



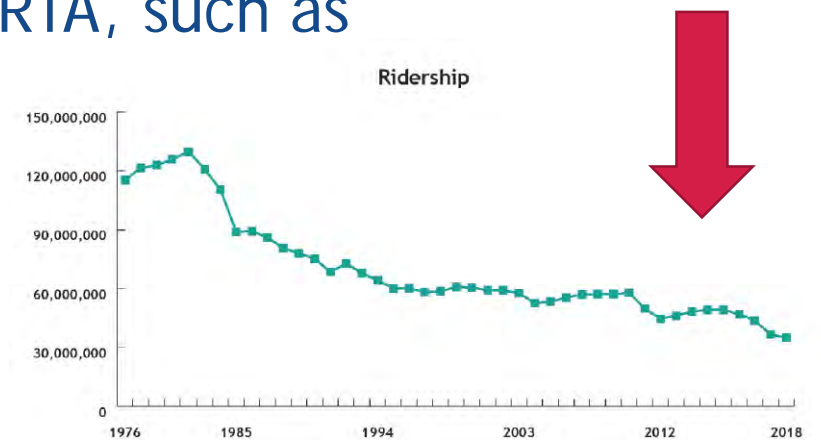
Decreasing ridership



External factors influence RTA such as population/job loss & shifting job locations outward



Internal factors are those under control of RTA, such as fares, customer communication, on-time performance



SWOT Analysis

Before COVID-19

STRENGTHS

- As a legacy transit system with robust history, local residents and businesses are aware of what RTA is. The brand recognition is high.
- Staff members have deep institutional knowledge.
- Rail lines and BRT services provide a backbone for additional system improvements.
- Past investments provide value to customers
- New leadership paves the way for innovative changes.

WEAKNESSES

- Passenger experience is degraded by unreliability and a poor image.
- Infrastructure needs are not being met as highlighted by the breakdown of the Red Line in summer 2019.
- Ridership has decreased for several years.
- Technology adoption is slow compared with peers.

SWOT Analysis

Before COVID-19

OPPORTUNITIES

- Job hubs drive transit ridership and the largest hub remains downtown where transit service is greatest.
- Partnership is increasing among public and private agencies on transportation issues.
- Disruptive technologies and business models can be harnessed to advance RTA goals.

THREATS

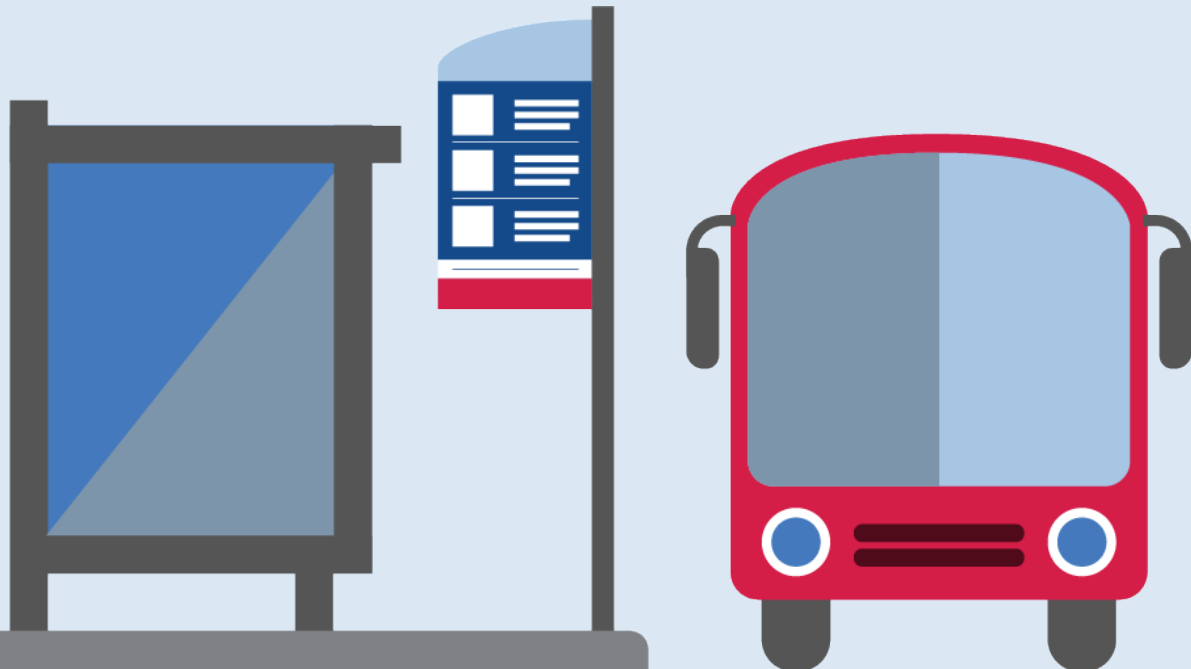
- The region is losing population and jobs.
- Competition for travel service in urban areas is increasing with new options providing door-to-door service for relatively cheap costs to customers.
- Job locations are spreading across Cuyahoga County and the region.

SWOT Analysis

After COVID-19 – Additional Issues

- *Uncertain travel demand for all modes*
- *Health concerns*
- *Work from home*
- *Economic decline*
- *Social issues can be catalyst for change*
- *Increased realization of importance of transit for essential services and workers*
- Temporary versus Long-Term Impacts
 - Thinking ten years ahead, virus will likely be overcome in time
 - However, past economic recessions have had long-term effects on Northeast Ohio
 - Transit remains backbone of economic opportunity for those who need it most

Stakeholder & Public Engagement



Engagement

- Three stakeholder input periods
 - *External Stakeholders*
 - *Internal Stakeholders*
- Pillar Study Engagement
 - *Three surveys, over 6,250 responses*
 - *Approximately 40 public meetings attended by over 300 people*
- Bus Operators, Vehicle Maintenance, and Other Staff
- Public Engagement - Meetings, Website, Surveys



WE WANT TO HEAR FROM YOU

Please fill out an online survey to help plan ideas for RTA's future.

COMMUNITY MEETINGS

RTA is planning for the future and needs your help! We are creating a strategic plan for capital improvements and enhancing the customer experience through the year 2030. Your ideas will help shape RTA for years to come.

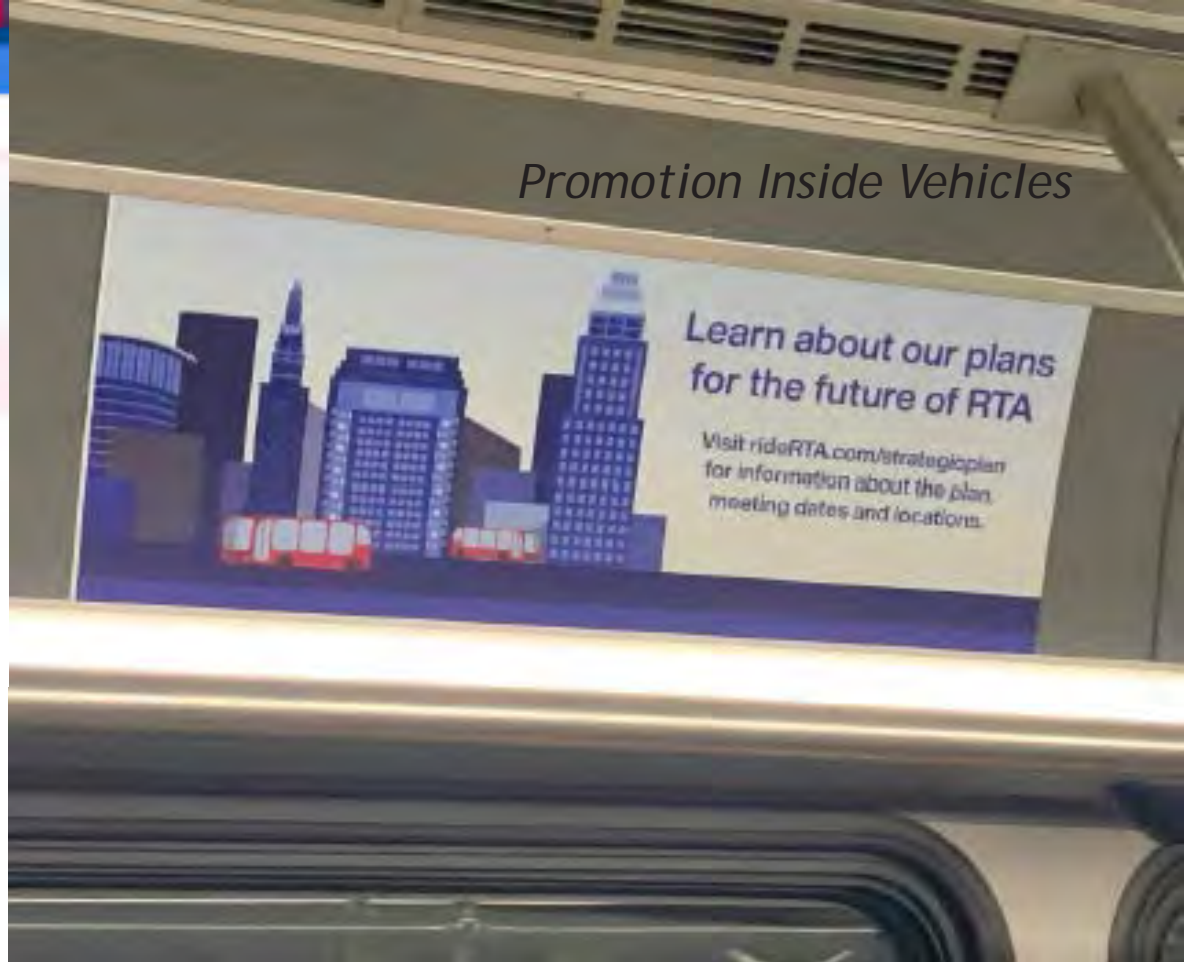
To view the presentation from the meeting, please [click here](#).

Thursday, February 20, 2020 -
 12:00pm to 1:00pm
 RTA Main Office

Monday, February 24, 2020 -
 6:00pm to 8:00pm
 Hofbrauhaus Cleveland

- **Nine Public Meetings:**
Feb. 20 - Mar. 11, 2020
- **Online & In-Person Engagement Yielded Thousands of Responses from Participants**

Promotion Inside Vehicles



ACTIVITIES



Top 3 Goals



Rank Strategies



Map Out Your Day



Big Idea



Arts & Crafts

Engagement - Top Strategies

FORTY-NINE STRATEGIES IDENTIFIED

TOP 3 STRATEGIES FOR ALL PUBLIC RESPONDENTS

- Increase frequency of bus service on existing key routes, while maintaining existing coverage
- Identify additional funding to meet existing and future transit needs
- Better link people to jobs



Engagement - Top Strategies

Top ten strategies were similar among online surveys and public meeting participants

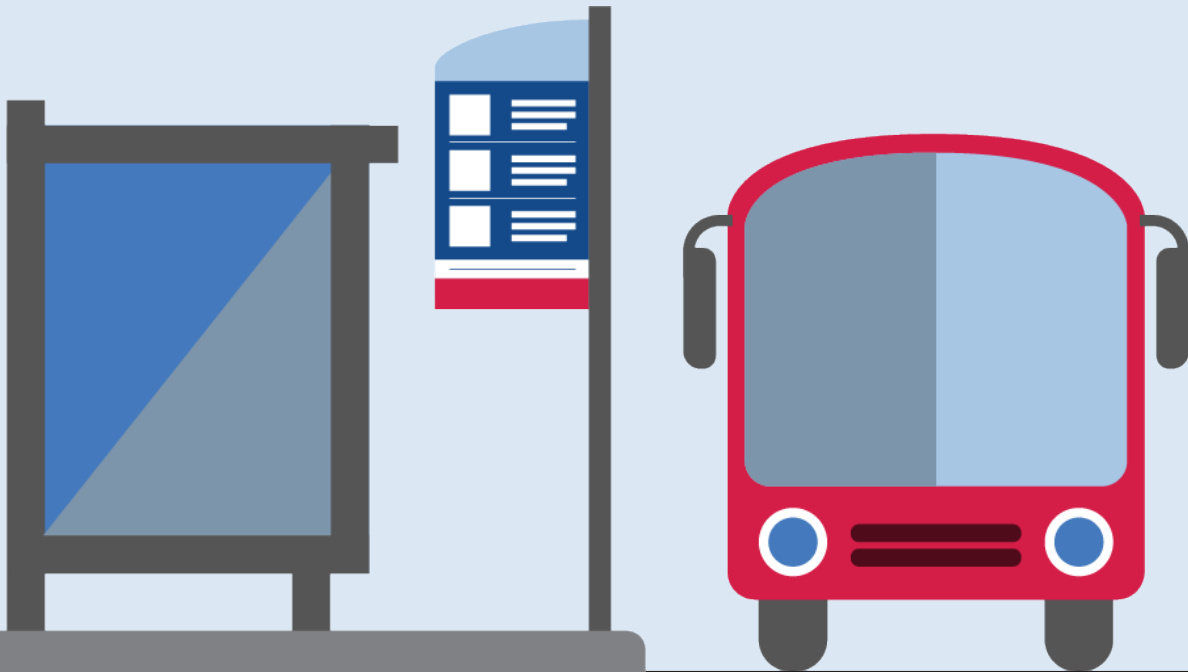
TOP 10 STRATEGIES FROM THE ONLINE SURVEY

1. Increase frequency of bus service on existing key routes, while maintaining existing coverage
2. Identify additional funding to meet existing and future transit needs
3. Better link people to jobs

TOP 10 STRATEGIES FROM THE PUBLIC MEETINGS

1. Identify additional funding to meet existing and future transit needs
2. Better link people to jobs
3. Increase frequency of bus service on existing key routes, while maintaining existing coverage

Recommendations: Geographic Focus



Priority Corridor Update

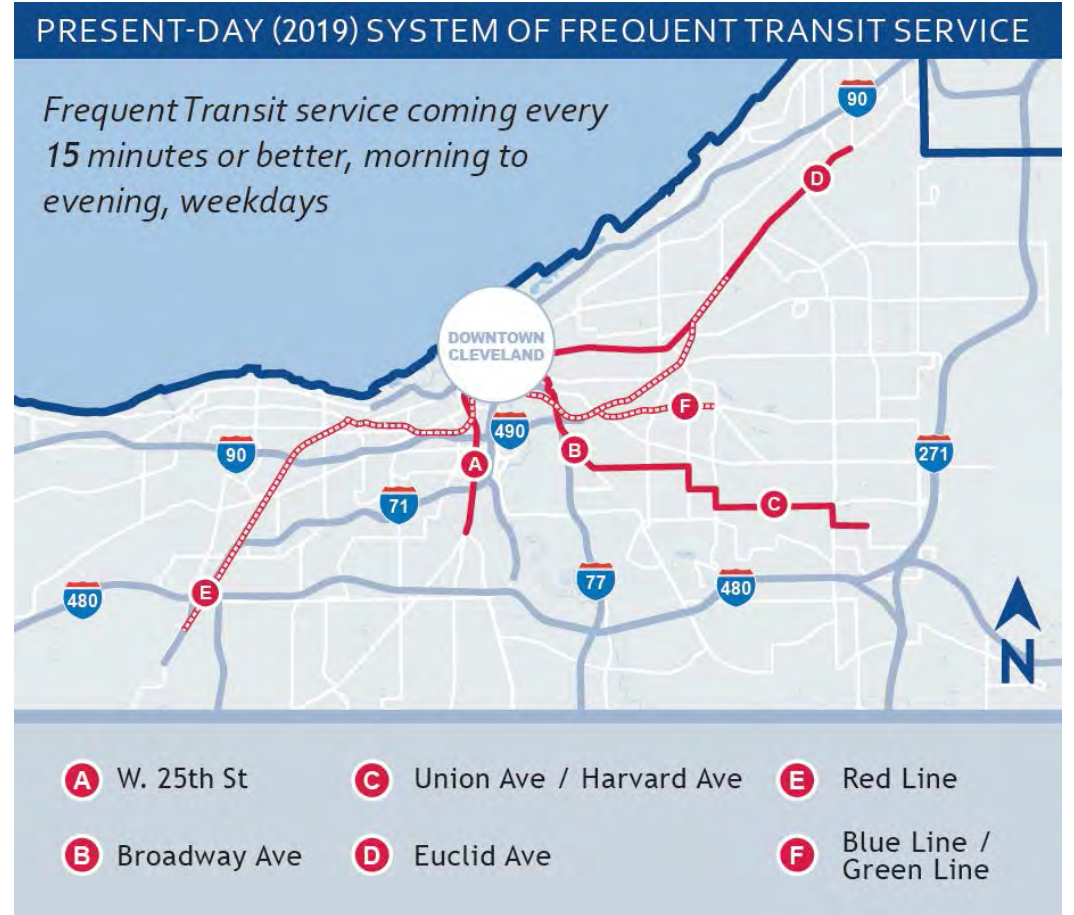
Update Priority Corridors from Previous Strategic Plan

- Previous RTA Strategic Plan identified several Priority Corridors that were recommended for investment
- Priority Corridors brought focus to locations where transit-oriented development could be emphasized in partnership with local stakeholders



Priority Corridor Update

- Need to increase cohesion between infrastructure development & service frequency



Priority Corridor Update

Network of urban corridors with frequent service

- Increase cohesion between infrastructure development & service frequency
- Emphasize connections among corridors to create network
- New corridors offer new opportunities
- Enhance consistency among pillar studies
- Several priority corridors remain unchanged



Priority Corridor Update

Network of urban corridors with frequent service

- Focus on transit need of populations with lower incomes, lower educational attainment, & higher unemployment
- Focus on places where transit works best and can help provide a leg up to those who need it most
- Multiple connections provide seamless transfers and shorter travel times
- Partnership for transit-oriented development

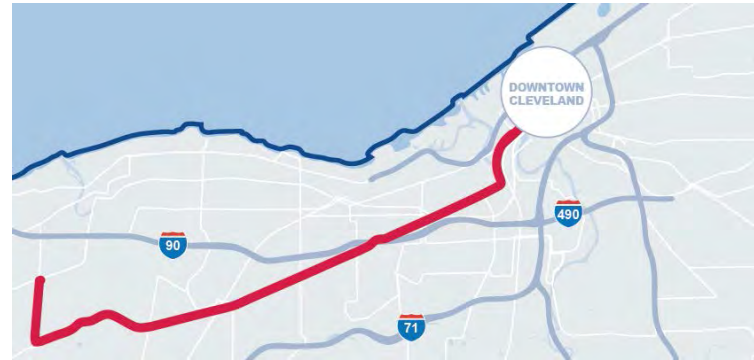


Priority Corridor Update

Data Driven to Deliver Equitable Service

Lorain Avenue Example

- Levels of income
- Educational attainment
- Unemployment rate



LAND USE	
Land Use	Percent Area
RESIDENTIAL	54%
RETAIL	16%
APARTMENT	7%
TRANSPORTATION	6%
PASSIVE GREEN SPACE	6%
Other (<5% Each)	12%

KEY CONNECTIONS	
Lorain Ave	High Frequency Intersection
Lorain Ave & W 25th St	W 25th St Priority Corridor And Red Line at W 25th - Ohio City
To Lorain Ave & W 65th St	Red Line at W 65th - Loraine
To Lorain Ave & W 117th St	W 117th St Priority Corridor
To Lorain Ave & W 140th St	Red Line at West Park
To Lorain Ave & W 210th St	N/A
To W 210th St & Centre Ridge Rd	Detroit Ave Priority Corridor

INCOME

\$37,211
Median Household Income

\$23,151
Per Capita Income

\$17,213
Median Net Worth

BUSINESS

1,227
Total Businesses

14,097
Total Employees

KEY FACTS

31,456
Population

37.2
Median Age

13,495
Households

7.6%
Unemployment Rate

EDUCATION

18%
No High School Diploma

24.37%
High School Diploma

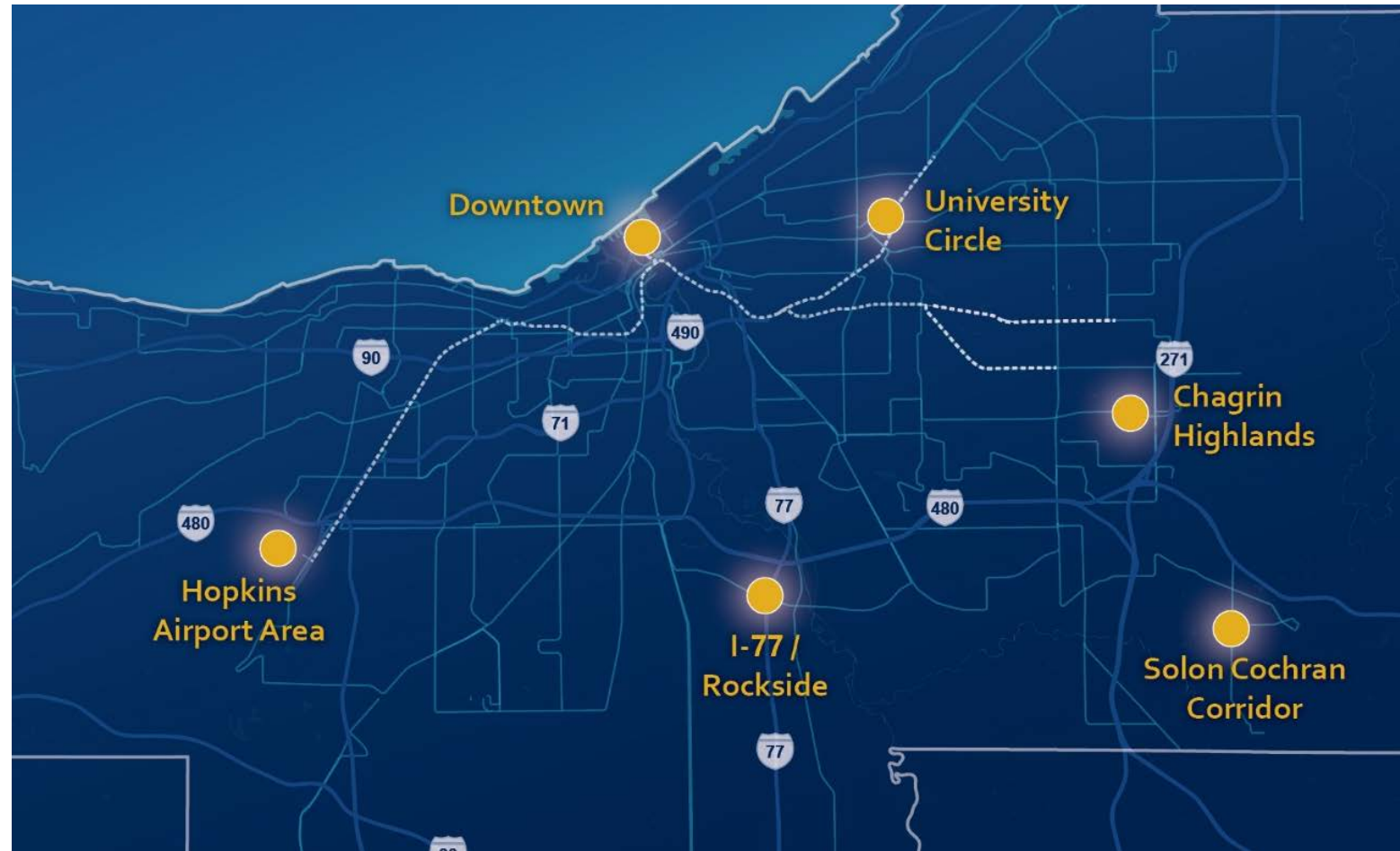
29%
Some College

23%
Bachelor's/Grad/Prof Degree

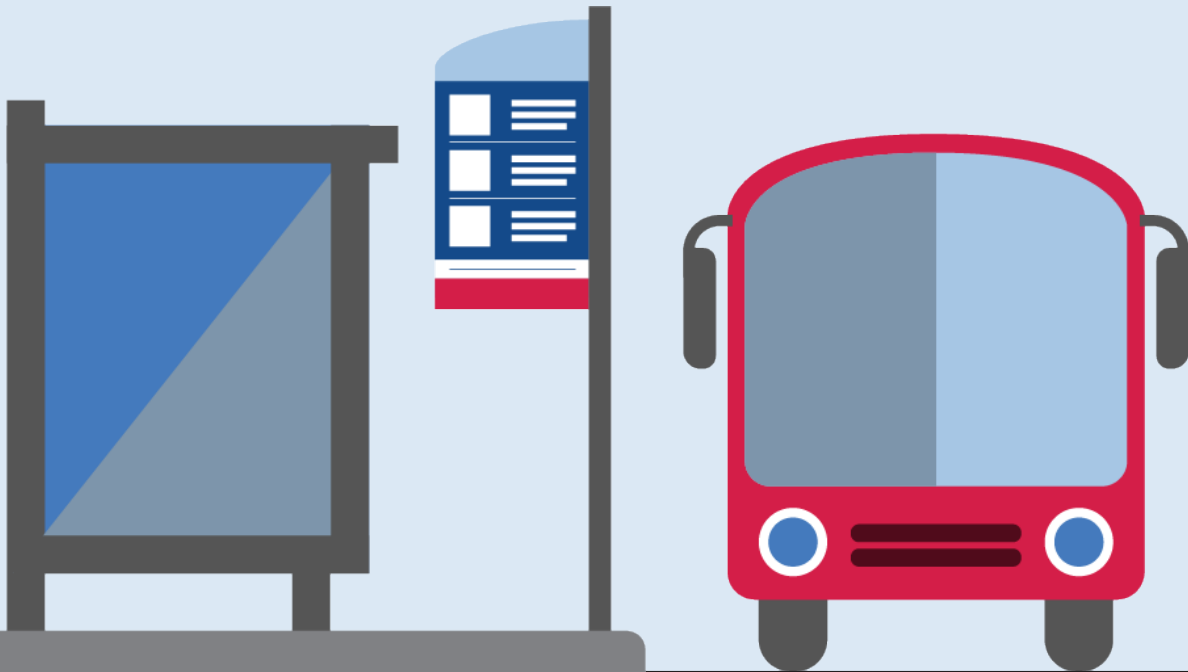


Outlying Job Hubs

- Focus on need of workers with lower incomes, lower educational attainment, & higher unemployment compared to County average
- Challenging transit environments require shared funding with job providers to be determined through collaboration
- Opportunities for pilot projects to improve equitable access
- Requires definition of success that measures job access and retention, not high ridership



Recommendations: Key Initiatives for the Future



Key Initiatives: Create Framework for the Future

- Highlight prioritized recommendations of study based upon data gathered from:
 - *10 Goals*
 - *Preliminary Findings Analysis*
 - *Identification of 49 Strategies*
 - *Pillar Studies*
 - *Stakeholder Input*
 - *Public Engagement*
- Provide a guide for enhancing the customer experience and pursuing capital improvements to create a framework for the future

Key Initiatives

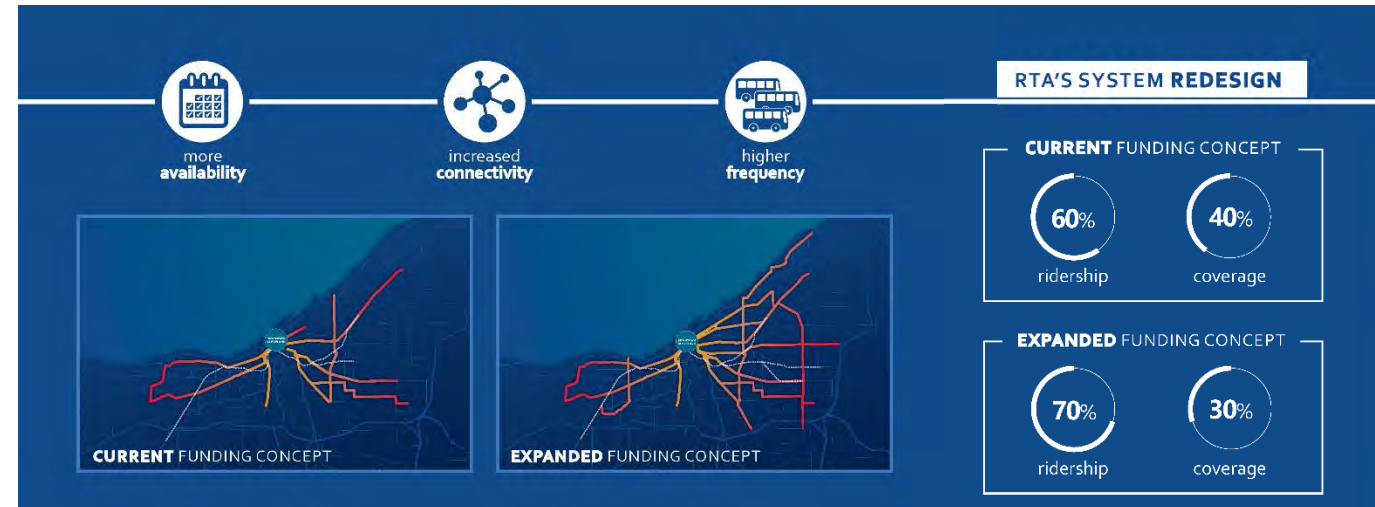
- ✓ Improve Where and When Buses Travel
- ✓ Improve How Streets Function
- ✓ Improve How Customers Pay
- ✓ Improve Passenger Safety and Comfort
- ✓ Engage with Emerging Technology, Data, and New Mobility
- ✓ Address Funding Challenges
- ✓ Partner to Support Vibrant Communities and Access to Job Centers

Improve Where and When Buses Travel

Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X				X	X		X		

- Implement System Redesign
- Shift to the Current Funding Concept
- Expanded Funding Concept provides basis for future potential

Pandemic Impact: Focus on urban corridors with frequent service improves safe & equitable access to opportunity



TIMEFRAME

Short (2020-2022)

- Make small improvements along the way prior to a large system change
- Implement early wins that improve service while minimizing negative impacts
- Implement Current Funding Concept

Medium (2023-2026)

- Monitor redesign over time - system changes will potentially take three years to mature and establish consistent passenger levels
- Implement Expanded Funding Concept with more frequent corridors and seven day a week consistency

Long (2027-2030)

- Refine routes and schedules to maintain ridership/coverage goals while meeting current needs and addressing feedback

RESPONSIBILITIES

Champion: RTA - Planning and Implementation

Infrastructure and community relations support:

- City of Cleveland
- NOACA
- Cuyahoga County
- ODOT
- Municipalities
- Private and nonprofit partners

OUTCOMES

Current Funding Concept

For the average resident in Cuyahoga County:

- Current Funding Concept will link people to 17% more jobs in under 45 minutes and 11% more jobs in under 60 minutes than the present-day network.

Expanded Funding Concept

For the average resident in Cuyahoga County:

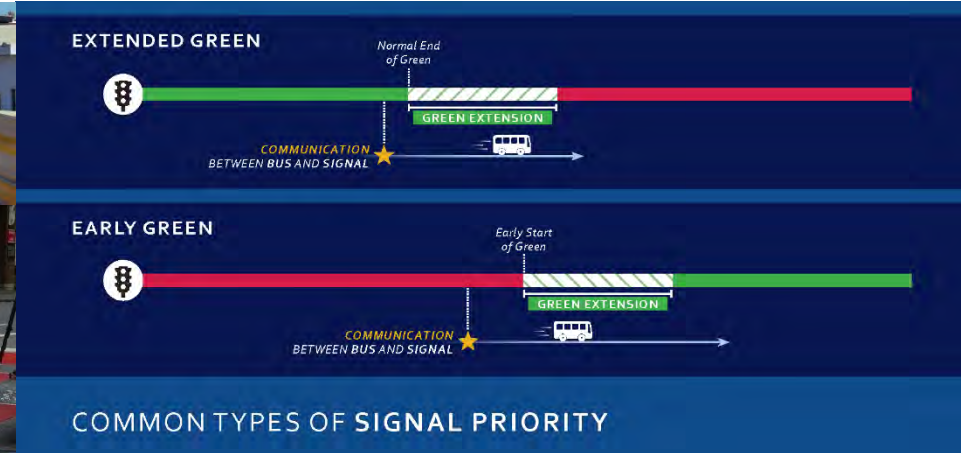
- Expanded Funding Concept will link people to 42% more jobs in under 45 minutes and 38% more jobs within 60 minutes compared to the present-day network.



Improve How Streets Function

Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X	X	X	X		X	X	X		

- Prioritize Transit in Street Design
- Allocate appropriate space for buses to travel
- Work with cities to enhance signal systems
- Priority Corridors
- Increase fast and reliable service



Pandemic Impact:
 Opportunities to rethink street operations & transit access are prevalent, as made clear during shutdown



<p>TIMEFRAME</p> <p>Short (2020-2022)</p> <ul style="list-style-type: none"> • Implement and promote early spot improvements that improve service while minimizing negative impacts • Plan four corridors and ten intersections for infrastructure enhancements <p>Medium (2023-2026)</p> <ul style="list-style-type: none"> • Implement four transit corridor enhancement projects • Monitor before and after impacts and obtain ongoing community feedback • Plan four corridors and ten intersections for infrastructure enhancements <p>Long (2027-2030)</p> <ul style="list-style-type: none"> • Implement four more transit corridor enhancement projects • Monitor before and after impacts and obtain ongoing community feedback • Plan four corridors and ten intersections for infrastructure enhancements • Emphasize ongoing corridor planning in conjunction with emergence of driverless vehicles and associated impacts 	<p>RESPONSIBILITIES</p> <p>Planning Champion: RTA</p> <p>Implementation Champion: City of Cleveland</p> <p>Supporting partners:</p> <ul style="list-style-type: none"> • NOACA • Cuyahoga County • ODOT • Municipalities • Private and nonprofit partners • Neighborhood groups 	<p>OUTCOMES</p> <p>Outcomes include:</p> <p>Travel times will be reduced on Priority Corridors. Customer satisfaction will increase, reliability will increase, and agency operating expenses will decrease. Shorter travel times will allow RTA to run the same bus frequency with fewer vehicles. Improving travel time reliability allows RTA to reduce extra time in the schedule, further improving speed, and improving the customer experience.</p>
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Improve How Customers Pay

Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X		X	X	X	X		X		

- Implement recommendations from Fare Equity Analysis pillar study
- Change RTA fare collection to improve customer experience and better reflect best practices
- Seamless, equitable

Pandemic Impact: Current policies & technology unfortunately have largest negative impact on people with low incomes



TIMEFRAME

Short (2020-2022)

- Improve communications about fare products and how to buy them
- Make 5-Trip Farecards available at more locations, and revise 5-Trip farecards to be fewer trips at the same price per trip
- Adjust Paratransit fares and passes
- Planning, policy development, and procurement for new fare collection system
- Reduce All-Day passes to equal 2 ride fare cost

Medium (2023-2026)

- Launch new fare collection system that is cloud-based and contactless with open architecture, regional multimodal accounts, stored value, fare capping, and open payments
- Launch coordinated mobility app
- Launch public education campaign to create a seamless transition and promote benefits

Long (2027-2030)

- Launch mobility as a service that is nimble and flexible to new modes and business models as autonomous vehicle fleets begin to go into service
- Maintain transit's role as backbone of Priority Corridors in midst of increasing transportation change



RESPONSIBILITIES

Champion: RTA

Supporting partners:

- NOACA
- Private mobility providers



OUTCOMES

Outcomes include:

Short term improvements can improve equity and communications to address findings in Fare Analysis pillar study. A new fare collection system will provide a seamless customer experience that is cloud-based and contactless with open architecture, regional multimodal accounts, stored value, fare capping, and open payments. RTA will be positioned for a changing mobility landscape with an innovative, modern fare system.



Improve Passenger Safety and Comfort

Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X		X	X		X		X	X	

- Purchase new rail cars
- Improve transit stops
- Continue to upgrade bus fleet
- Experiment with Zero Emission Vehicles
- Enhance safe and comfortable riding experience



Pandemic Impact:
Increase sanitation & social distancing.



TIMEFRAME	RESPONSIBILITIES	OUTCOMES
<p>Short (2020-2022)</p> <ul style="list-style-type: none"> • Continue and enhance cleaning procedures to address COVID-19 • Continue to provide service with a focus on essential workers getting to jobs at locations such as medical facilities and grocery stores • Provide service with a focus on equity - the Priority Corridors of frequent service include neighborhoods with high levels of poverty, joblessness, and vulnerable health populations • Begin procuring new heavy rail vehicles • Evaluate and improve stop amenities on Priority Corridors during implementation of Current Funding Concept • Pilot ten zero emissions vehicles with support from federal grants and with feedback on passenger comfort <p>Medium (2023-2026)</p> <ul style="list-style-type: none"> • Discontinue the practice of purchasing diesel vehicles • Integrate zero emissions vehicles into bus fleet procurement strategy • Begin procuring light rail vehicles • Delivery of heavy rail vehicles and placement into revenue service • Evaluate and improve stop amenities on Priority Corridors during implementation of Expanded Funding Concept <p>Long (2027-2030)</p> <ul style="list-style-type: none"> • Delivery of light rail vehicles and placement into revenue service • Move from CNG to zero emission vehicles 	<p>Champion: RTA</p> <p>Supporting partners:</p> <ul style="list-style-type: none"> • City of Cleveland • NOACA • Cuyahoga County • Power utilities • Municipalities • Private and nonprofit partners • Neighborhood groups 	<p>Outcomes include:</p> <ul style="list-style-type: none"> • Increased passenger comfort to resume or continue riding during and after COVID-19 pandemic • New rail car fleet • Upgraded bus fleet • Transition away from purchasing diesel buses • Transition to zero emission vehicle purchases • Enhanced customer experience as a result of transit stop improvements

Engage with Emerging Technology, Data, and New Mobility

Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X			X	X	X	X	X	X	X

- Refocus using technology as way to improve the customer experience & equity
- Experiment with connected vehicles
- Improve infrastructure
- Enhance real-time info
- Invest in data security & sharing
- Pilot mobility management

Pandemic Impact: Tech is helping transit agencies navigate new challenges



TIMEFRAME

Short (2020-2022)

- Implement sharing of open information pertinent to customers on public-facing online dashboard
- Establish policies with regional partners for data management and common standards for mobility providers on public right-of-way
- Conduct a six-month pilot of an autonomous microshuttle and obtain ongoing community feedback

Medium (2023-2026)

- Incorporate dedicated power and dedicated communications into new infrastructure projects in association with partners
- Integrate mobility-as-a-service in order to deliver optimal travel solution to customers among all available modes
- Collaborate with employees on workforce development and training for new technologies
- Vision Zero Implementation

Long (2027-2030)

- Refine policies and practices as driverless technology advances, such as minimizing zero occupancy vehicles on transit corridors
- Continue to lead and leverage technological innovation in service of community goals



RESPONSIBILITIES

Champion: RTA

Supporting partners:

- NOACA
- City of Cleveland
- Cuyahoga County
- Utility providers
- Municipalities
- Private and nonprofit partners
- Neighborhood groups



OUTCOMES

Outcomes include:

- Transit remains the backbone of transportation as new modes, technologies, providers, and business models continue to integrate into the transportation system
- Seamless customer experience
- Coordinated system of standards, infrastructure, and data that creates efficient public systems and supports an inviting private sector business environment
- Emerging technologies that aim to improve air quality, lower mobility costs, and reduce travel times
- Equitable distribution of technological benefits
- Workforce development that prioritizes expertise of existing RTA employees and expands knowledge in new technologies

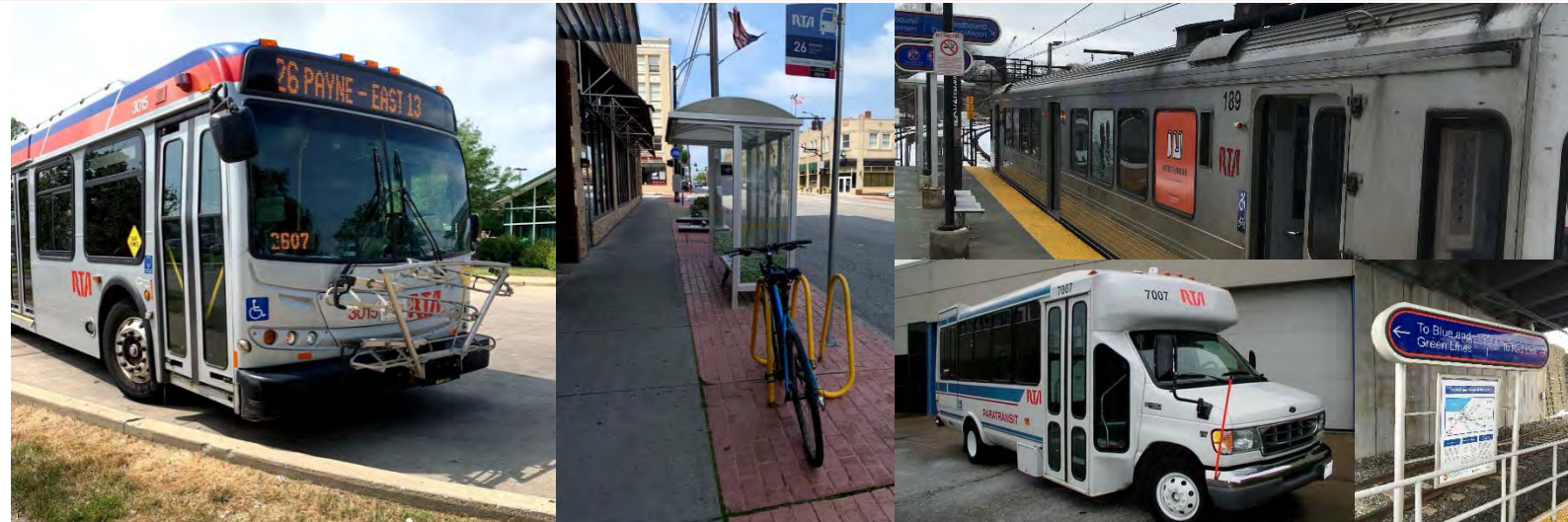


Address Funding Challenges

Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X	X	X				X	X	X	X

- Top issue during public input for the Strategic Plan concerned the necessity for additional funding to meet existing and future transit needs
- Backlog of state of good repair needs
- Multiple options requiring difficult decisions balancing raising new funds, SOGR, & growth projects

Pandemic Impact: Transit funding nationwide is existential issue being prioritized by collective advocacy for continued federal support



TIMEFRAME

Short (2020-2022)

- Evaluate internal agency costs
- Continue to apply aggressively for federal grant funds
- Continue to advocate for funding needs and solutions among local, statewide, and federal partners
- Decide if a tax levy will assist with funding challenges

Medium (2023-2026)

- Implement Expanded Funding Concept with more frequent corridors and seven day a week consistency
- Delivery of heavy rail vehicles and placement into revenue service
- Implementation of regional transit improvements in collaboration with community feedback

Long (2027-2030)

- Delivery of light rail vehicles and placement into revenue service
- Continued implementation of regional transit improvements in collaboration with community feedback
- Continued evaluation of transportation funding as emerging technological changes alter traditional funding mechanisms

RESPONSIBILITIES

Champion: RTA

Supporting partners:

- FTA
- State of Ohio
- NOACA
- City of Cleveland
- Cuyahoga County
- Municipalities
- Chambers of commerce and associated business groups
- Private and nonprofit partners

OUTCOMES

Outcomes include:

- RTA's capital and operating needs are met through the year 2030
- Bus service can be appropriately deployed to serve the region's needs through implementation of the System Redesign's Expanded Funding Concept with more frequent corridors and seven day a week consistency
- Rail vehicles and Infrastructure needs can be met to deliver consistent, fast, and safe service
- Increased attraction and retention of workers in regional job centers
- Transit remains the backbone of transportation that delivers access to opportunity for individuals and the region



Partner to Support Vibrant Communities and Access to Job Centers

Customer Experience	Financial Stability	State of Good Repair	Technological Innovation	Economic Prosperity	Access	Collaboration	Equity	Environmental Sustainability	Transparency
X			X	X	X	X	X		



Pandemic Impact: Shared funding with employers is essential to keeping the economy moving

Priority Corridors

- *Downtown*
- *University Circle*

Outlying Hubs

- *Solon Corridor*
- *Chagrin Highlands*
- *I-77-Rockside*
- *Hopkins Airport Area*

TIMEFRAME

Short (2020-2022)

- Establish stakeholder group around Solon job center to assess needs and feasibility of solutions
- Conduct pilot program centered around Solon job center
- Evaluate before-and-after metrics of employee attraction and retention as well as community perception
- Assess needs and establish stakeholder group around Chagrin Highlands job center

Medium (2023-2026)

- Conduct pilot program centered around Chagrin Highlands job center and other regional job centers as needed
- Conduct feasible studies of transit service for other regional job centers
- Evaluate before-and-after metrics of employee attraction and retention as well as community perception
- If successful, launch regional long-term microtransit program

Long (2027-2030)

- Evaluate ongoing success and community perception
- Transition to widespread autonomous microtransit solutions as technology advances

RESPONSIBILITIES

Champions:

- RTA
- Business leaders representing job hubs

Supporting partners:

- Chambers of Commerce
- Workforce development partners
- NOACA
- Cuyahoga County
- Human resources departments
- Municipalities

OUTCOMES

Outcomes include:

- Reduction of social inequities
- Reduced travel time for workers
- Increased attraction and retention of workers in regional job centers
- Increased economic output for northeast Ohio



Key Initiatives Recap

- ✓ Improve Where and When Buses Travel
- ✓ Improve How Streets Function
- ✓ Improve How Customers Pay
- ✓ Improve Passenger Safety and Comfort
- ✓ Engage with Emerging Technology, Data, and New Mobility
- ✓ Address Funding Challenges
- ✓ Partner to Support Vibrant Communities and Access to Job Centers

*Strategic Plan:
Framework for the Future*

*Customer Focused
Community Engaged*





Staff Recommendation

External & Stakeholders Relations & Advocacy
Committee Approves the Framework for the
Future, GCRTA Strategic Plan 2020-2030 for
Action to the GCRTA Board of Trustees





Appendix C

Previous Priority Corridors



This section presents information on the populations, ridership, on-time performance, roadway widths, existing and proposed bike facilities, land use, and Place Typology of each of GCRTA's 9 Priority Corridors.

The 2016 NOACA Regional TOD Scorecard and Implementation Plan identified Place Typology categories for segments of some of the current GCRTA Priority Corridors. The categories were defined by the following:

- **Metropolitan Core:** highest density of development and most diverse mix of uses
- **Town Center:** center of a municipality; mixed-use developments
- **Neighborhood Center:** core of a residential area; some commercial use
- **Main Street:** linear corridor of mixed uses; similar to neighborhood center but elongated

- **Neighborhood Residential:** primarily single- or multi-family housing
 - **Industrial/Transitional:** extensive area of existing or former industrial use
 - **Special Destination:** a single or predominant use
- The segments that were not previously defined to a Place Typology category were assigned using the logic introduced in the report.

BROADWAY AVENUE

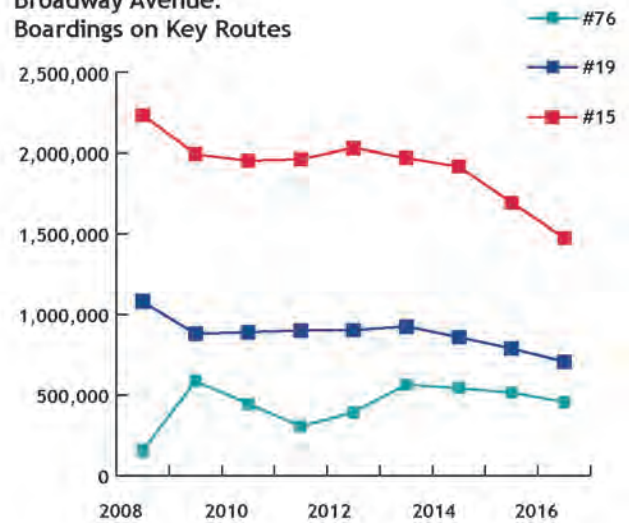


Broadway Avenue is an urban corridor that extends between E. 9th Street near downtown and areas to the southeast. Buses travel along the corridor on **#15** between E. 30th Street near Cuyahoga Community College in the Campus District and Union Avenue near the Slavic Village neighborhood, a length of approximately two miles. Buses travel 7 days a week and 24 hours a day on the corridor on **#19** between downtown and Miles Avenue near the South Broadway and Union-Miles Park neighborhoods, a length of approximately 4 miles. Bus route **#76** travels a similar length on Broadway. Additional bus routes operate along limited sections of Broadway.

The boarding statistics and average on-time performance rate are shown to the right.

The majority of the roadway is four lanes, with two lanes in each direction. Land use is predominately developed with 1-3 story buildings, limited curb cuts, and varied options for temporary on-street parking. Broadway Avenue is State Route (SR) 43 and SR 14 along the Priority Corridor area, and is a vital transportation connection between downtown and the southeast.

Broadway Avenue: Boardings on Key Routes

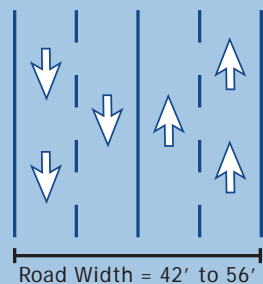


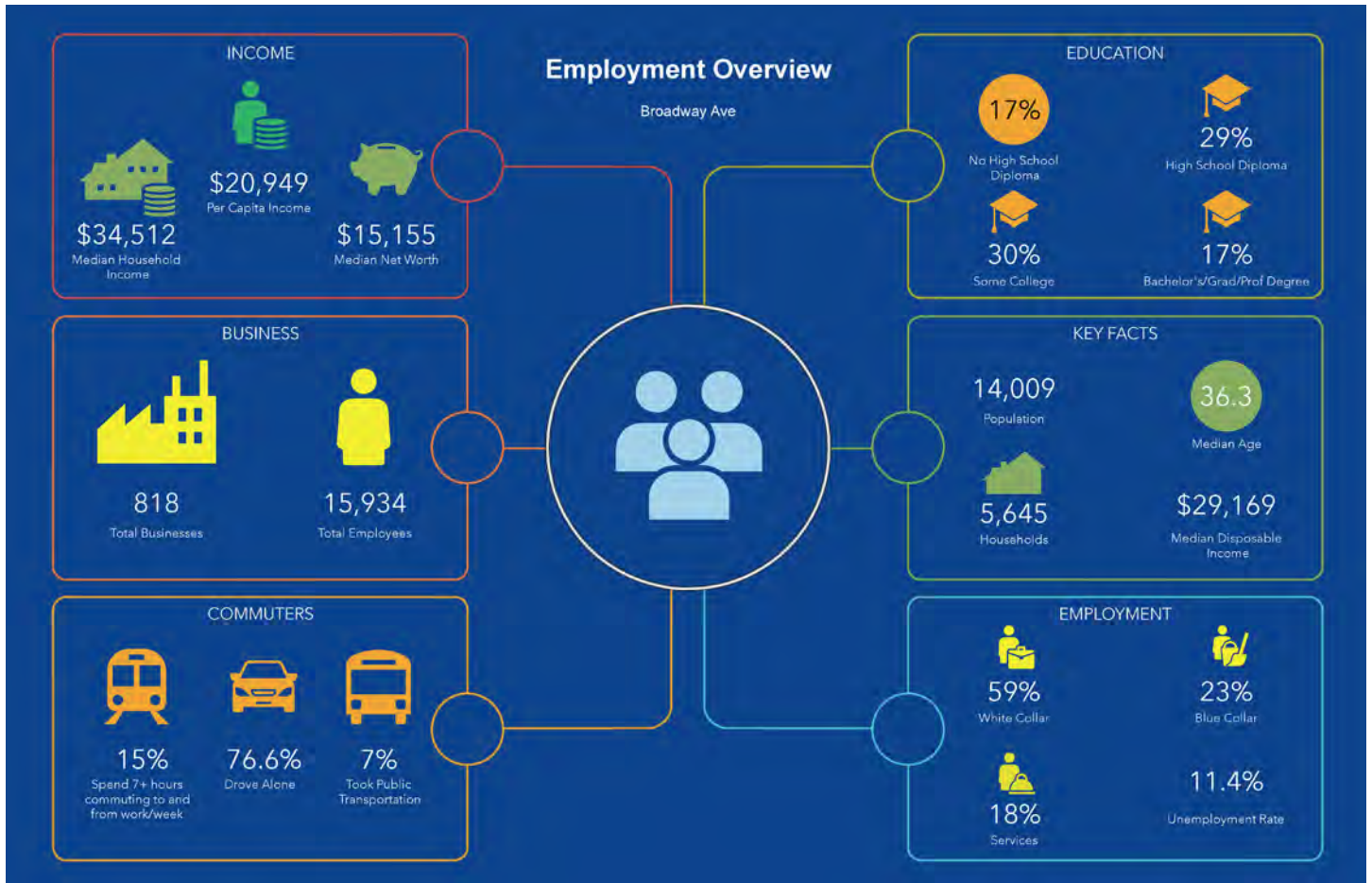
ON-TIME PERFORMANCE AVERAGE

% on time

76.74%

4 Lanes





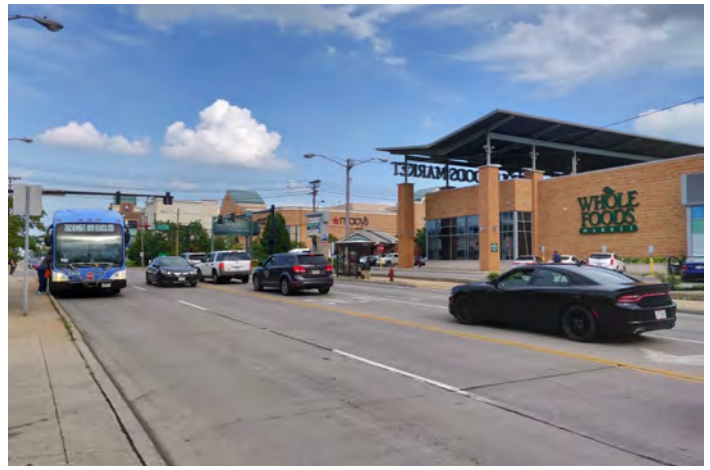
LAND USE	PERCENT AREA
Residential	38%
Industry	15%
Transportation	14%
Retail	11%
Other (<5% Each)	22%



The map to the left displays the Broadway Ave corridor’s roadway width, quantity of through lanes, and existing and proposed bike facilities. In addition, the cross streets associated with changes in Typology are labeled to correspond with the table below.

CROSS STREETS	TYOLOGY
Progressive Field to Broadway Ave & McBride Ave	Industrial/Transitional
to Broadway Ave & Fleet Ave/Osage Ave	Neighborhood Center
To Broadway Ave & Miles Ave	Industrial/Transitional
to Turney Rd & Sladden Ave/Grand Division Ave	Neighborhood Residential
to Turney Rd & Dorothy Ave	Main Street
to Turney Rd & McCracken Road	Town Center
to Turney Rd & Granger Ave	Neighborhood Residential

CEDAR ROAD

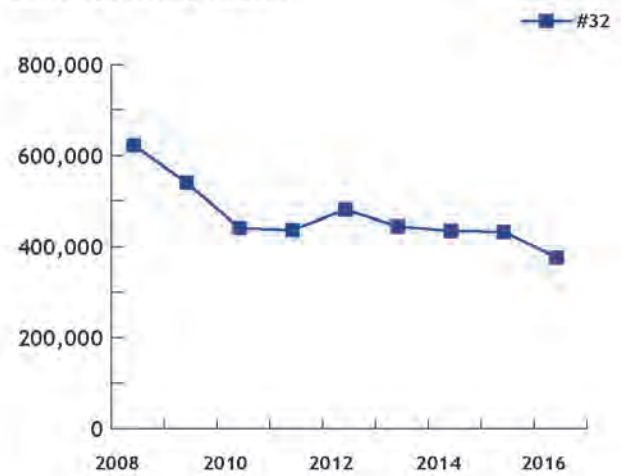


Cedar Road Priority Corridor is an urban roadway that extends east-west between University Circle and the I-271 Outerbelt. Bus route #32 connects the Cleveland Clinic on Euclid Avenue to the Cedar-University Rapid station, then travels to points east including Cleveland Heights, University Heights, South Euclid and Beachwood, a length of approximately 7 miles. Route #32 travels 7 days a week from early morning to late night.

The boarding statistics and average on-time performance rate are shown to the right.

The roadway is predominantly 4-5 lanes, with two lanes in each direction, and a center turn lane in spot locations. The corridor is developed with stretches of urban single family homes with driveways fronting onto Cedar Road. At key select intersections, the roadway widens to six lanes and adjacent development get much larger, with big box stores and regional destinations.

Cedar Road: Boardings on Key Routes

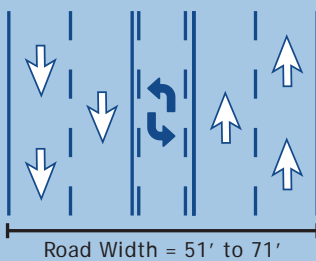


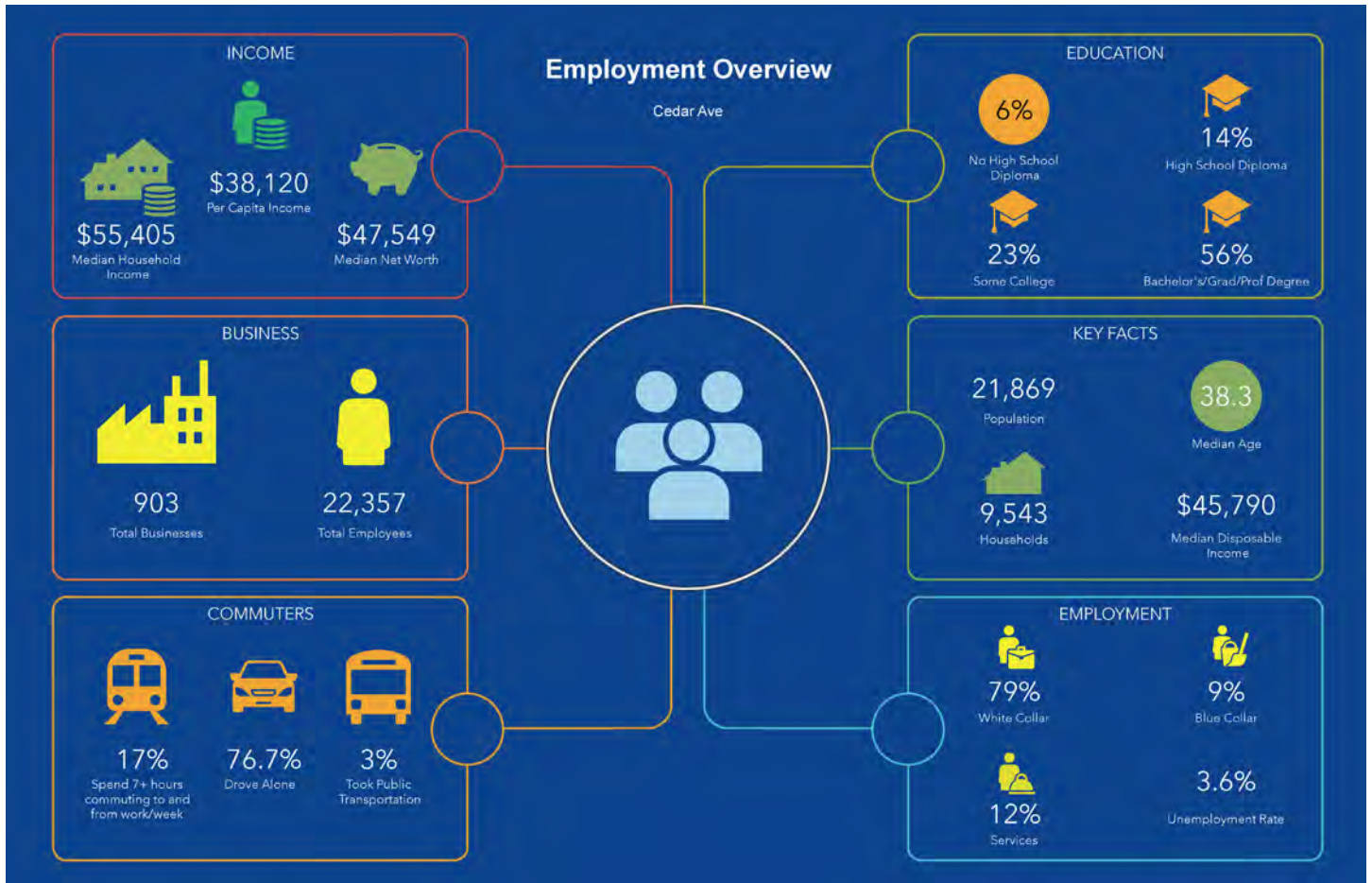
ON-TIME PERFORMANCE AVERAGE

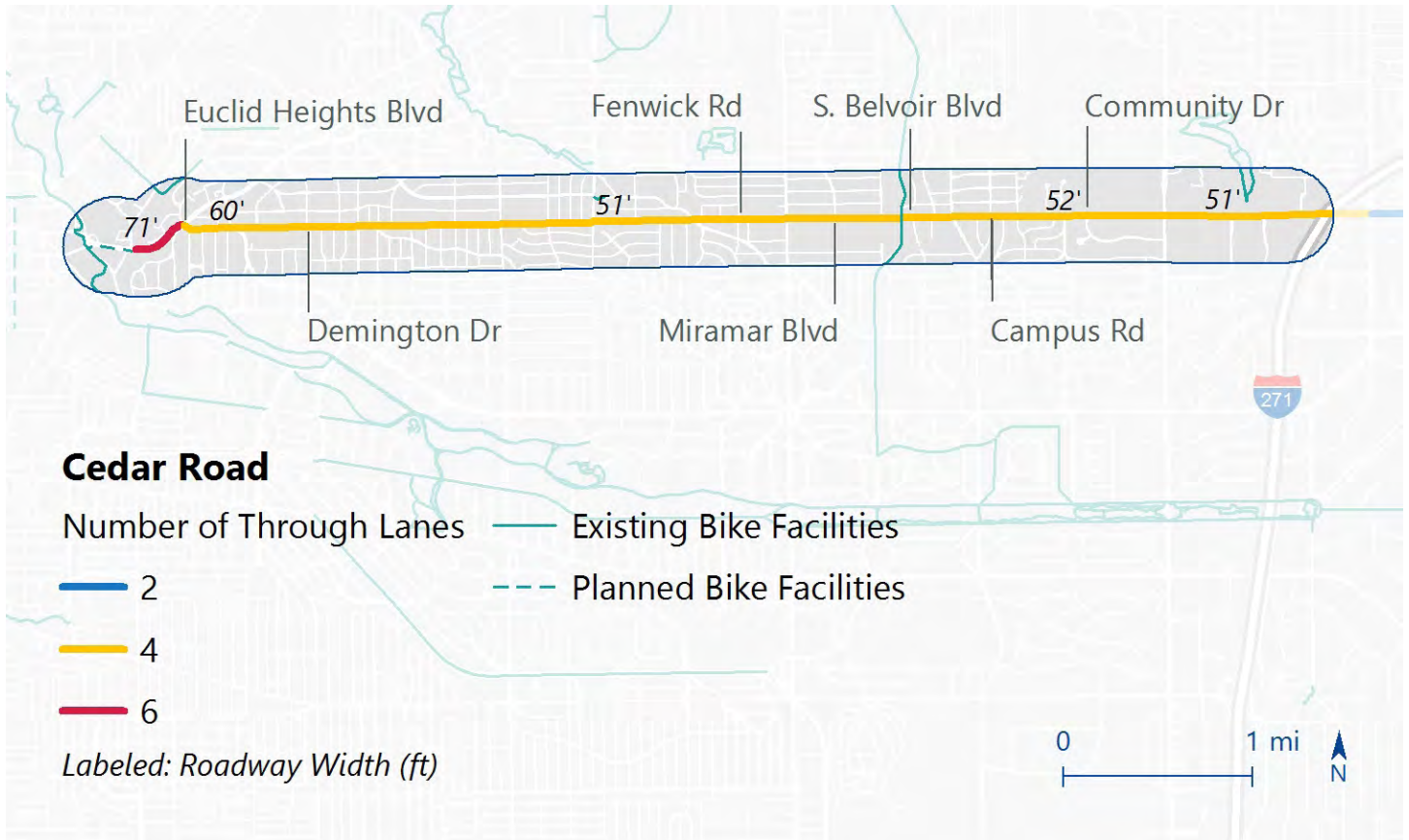
% on time

87.53%

4-5 Lanes & Center Lane







The map above displays the Cedar Ave corridor’s roadway width, quantity of through lanes, and existing and proposed bike facilities. In addition, the cross streets associated with changes in Typology are labeled to correspond with the table to the right.

LAND USE	PERCENT AREA
Residential	61%
Retail	14%
Apartment	10%
Passive Green Space	5%
Other (<5% Each)	11%

CROSS STREETS	TYOLOGY
Start to Cedar Rd & Euclid Heights Blvd	Metropolitan Core
to Cedar Rd & Demington Dr	Neighborhood Center
to Cedar Rd & Fenwick Rd	Neighborhood Residential
to Cedar Rd & Miramar Blvd	Town Center
to Cedar Rd & S Belvoir Rd	Neighborhood Residential
to Cedar Rd & Campus Rd	Neighborhood Center
to Cedar Rd & Community Dr	Neighborhood Residential
to End of Corridor	Town Center

DETROIT AVENUE

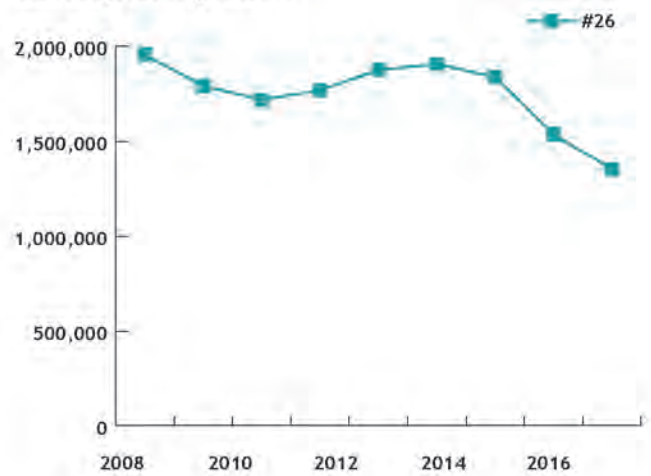


Detroit Avenue is an urban corridor that extends between downtown and Wooster Road, a length of approximately 7.5 miles. Bus route #26 travels 7 days a week and 24 hours a day on Detroit Avenue through Cleveland’s West Side to Lakewood and Rocky River.

The boarding statistics and average on-time performance rate are shown to the right.

The majority of the roadway has one through lane in each direction, with the addition of a center turn lane and on-street parking mixed along the corridor. Outside of downtown, land use is consistently developed with 1-3 story commercial and mixed use buildings.

**Detroit Avenue:
Boardings on Key Routes**

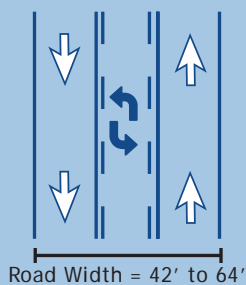


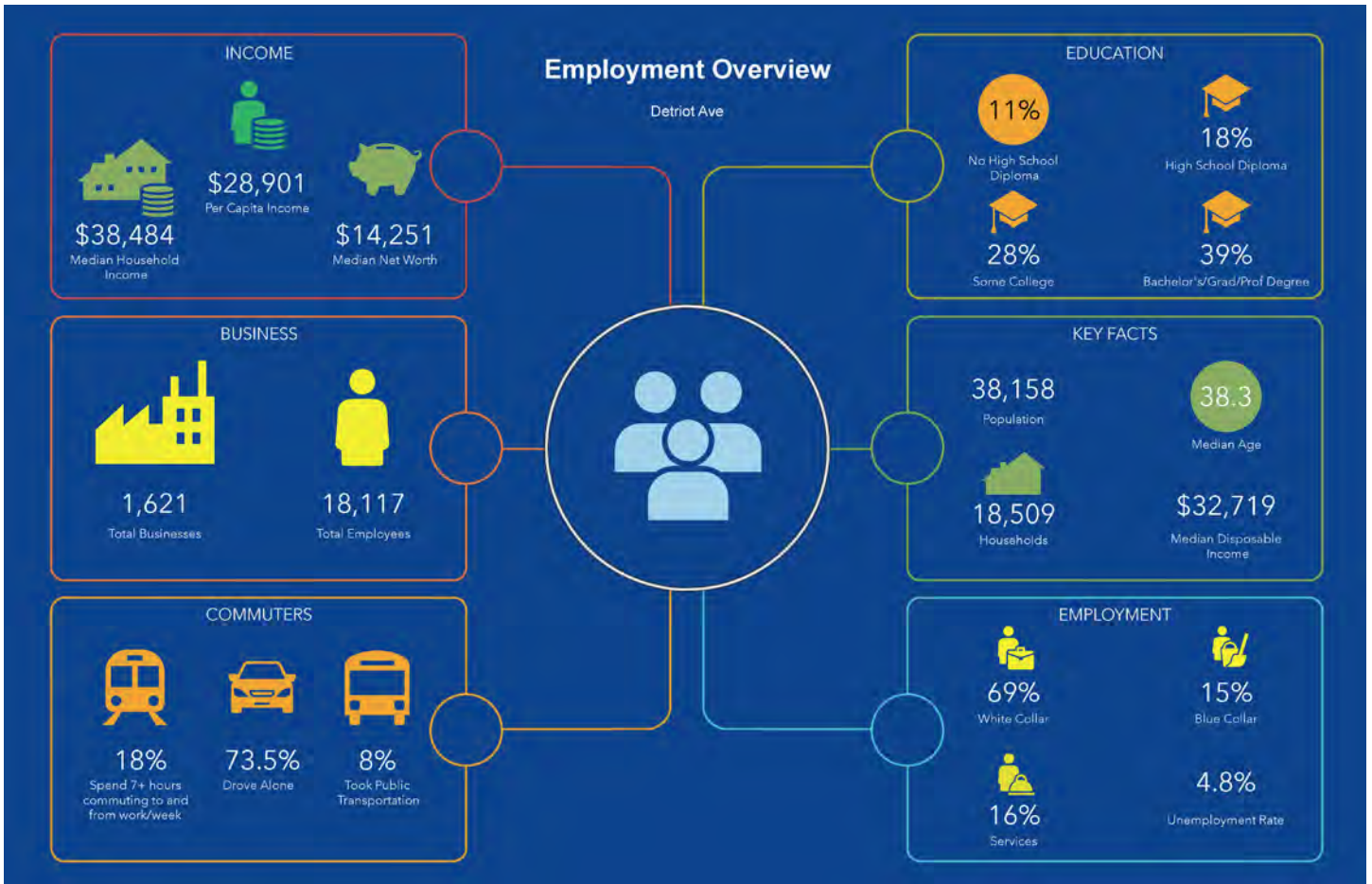
ON-TIME PERFORMANCE AVERAGE

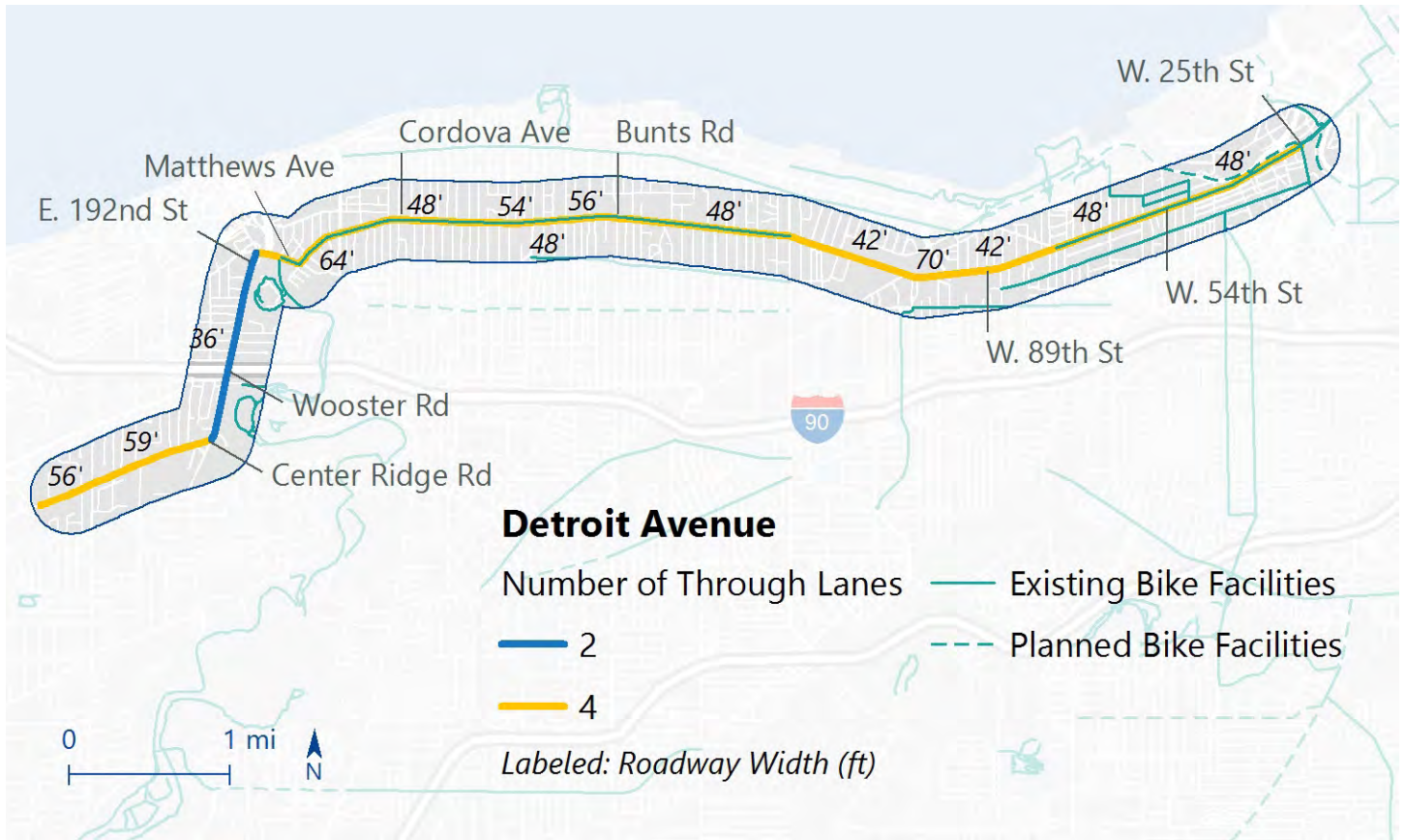
% on time

70.17%

2 Lanes & Center Lane







The map above displays the Detroit Ave corridor's roadway width, quantity of through lanes, and existing and proposed bike facilities. In addition, the cross streets associated with changes in Typology are labeled to correspond with the table to the right.

LAND USE	PERCENT AREA
Residential	47%
Retail	15%
Apartment	10%
Passive Green Space	5%
Other (<5% Each)	23%

CROSS STREETS	TYOLOGY
From W 25th to W 54th	Main Street
to W 89th	Neighborhood Residential
to Bunts Rd	Neighborhood Center
to Cordova Rd	Town Center
to Matthews Ave	Main Street
to Wooster & W 192nd St	Industrial/Transition
to Wooster & Center Ridge Rd	Neighborhood Residential
To End of corridor	Main Street

E. 105/TURNEY AVENUE

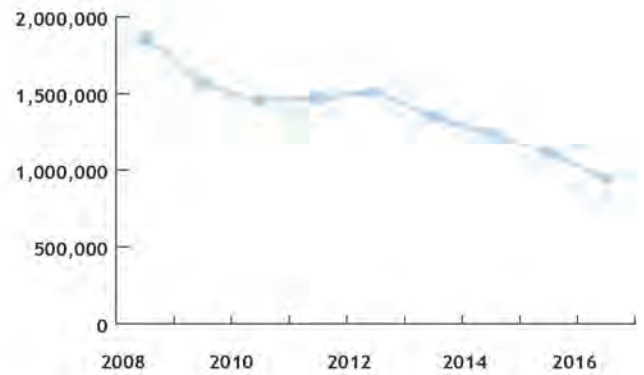


E. 105th Street is a north-south corridor on the east side of Cleveland. Bus route #10 operates 24 hours a day and 7 days per week and connects to University Circle and the E. 105th-Quincy Rapid station before traveling to points to the south. The route turns onto E 93rd St and ends at Turney Loop.

The boarding statistics and average on-time performance rate are shown to the right.

The roadway varies between two lanes and four lanes, and in some locations expands to include five lanes with a center turn lane. On-street parking varies across the corridor. Development ranges from 1-3 story residential and commercial buildings for long stretches to large institutional land uses in University Circle.

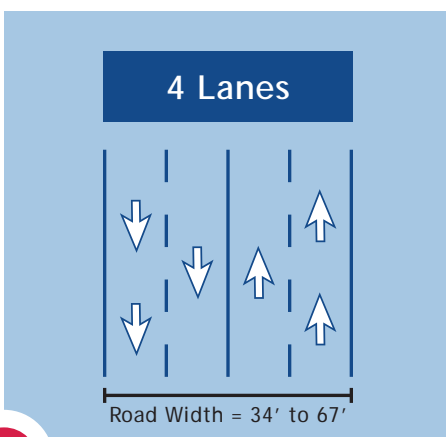
E. 105th Street/Turney: Boardings on #10

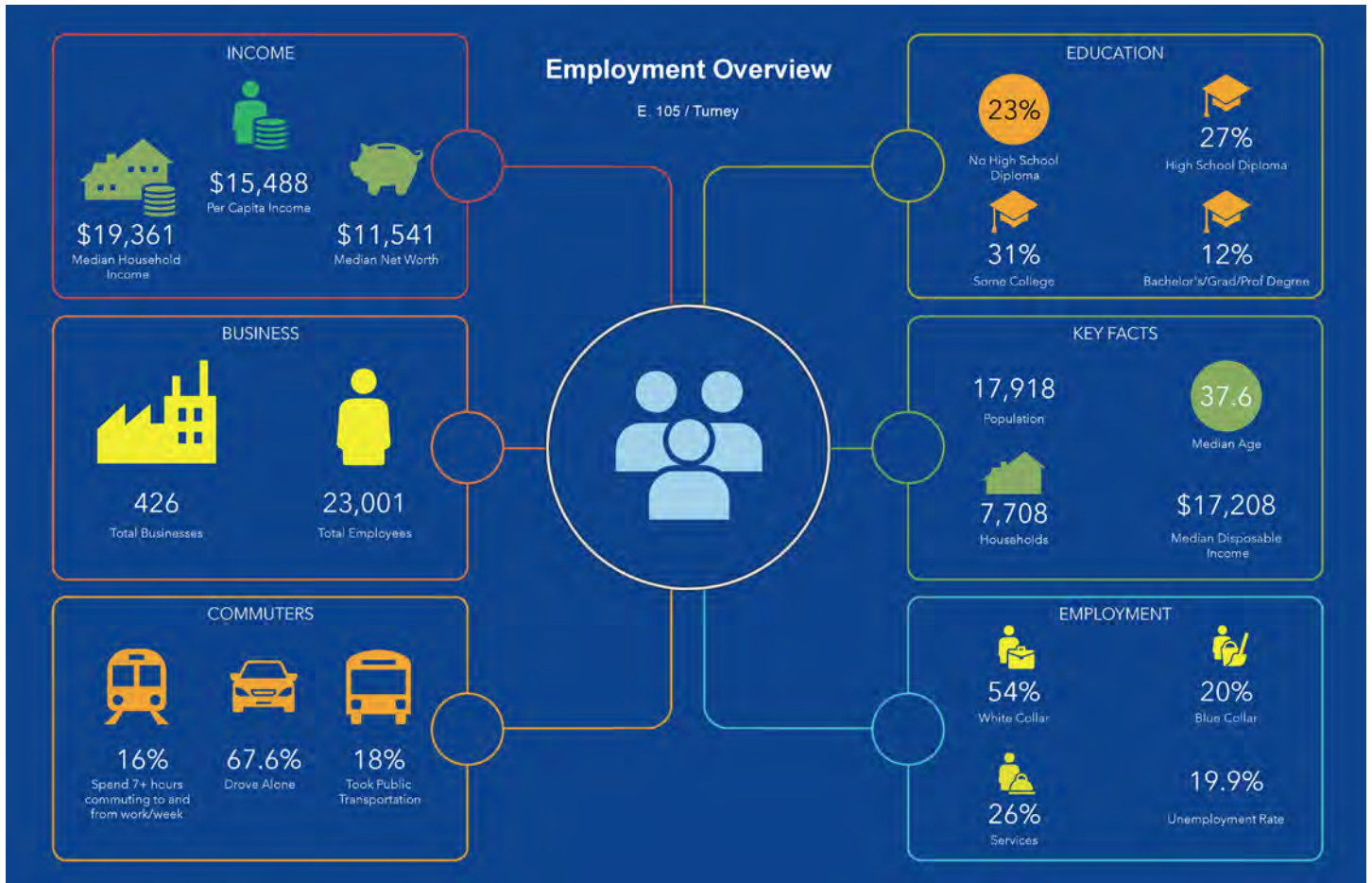


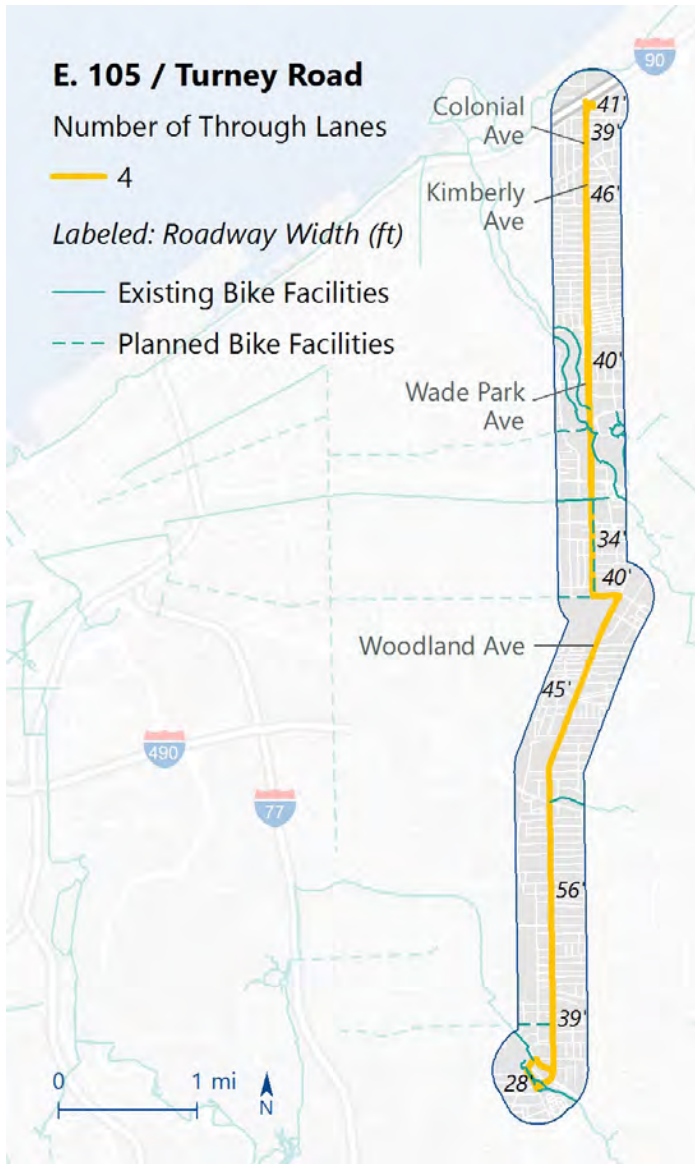
ON-TIME PERFORMANCE AVERAGE

% on time

78.79%







The map above displays the E 105/Turney corridor’s roadway width, quantity of through lanes, and existing and proposed bike facilities. In addition, the cross streets associated with changes in Typology are labeled to correspond with the table to the right.

LAND USE	PERCENT AREA
Residential	43%
Retail	9%
Industry	8%
Transportation	7%
Active Green Space	7%
Apartment	7%
Light Industry	5%
Office	5%
Other (<5% Each)	9%

CROSS STREETS	TYOLOGY
From W 25th to W 54th	Main Street
to W 89th	Neighborhood Residential
to Bunts Rd	Neighborhood Center
to Cordova Rd	Town Center
to Matthews Ave	Main Street
to Wooster & W 192nd St	Industrial/Transition
to Wooster & Center Ridge Rd	Neighborhood Residential
To End of corridor	Main Street

KINSMAN ROAD

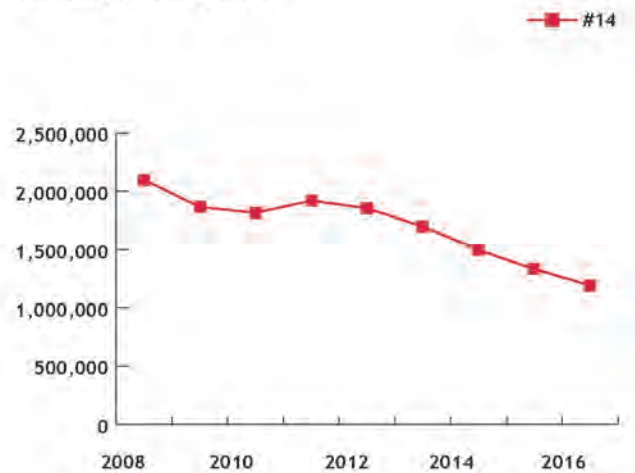


Kinsman Road is an urban corridor that travels southeast of downtown between Woodland Avenue/E. 55th Street and Lee Road, a length of approximately 5 miles. Buses on route #14 travel 7 days a week and 24 hours a day from downtown along Community College Avenue, Woodland Avenue, Kinsman Road, and Chagrin Boulevard to the Van Aken and Warrensville Rapid Station in Shaker Heights.

The boarding statistics and average on-time performance rate are shown to the right.

The roadway is predominantly four lanes, with two lanes in each direction. A center turn lane and on-street parking are located in spot locations along the corridor. Land use is developed with mostly 1-2 story urban commercial buildings, with some locations that have larger suburban style retail and parking lots.

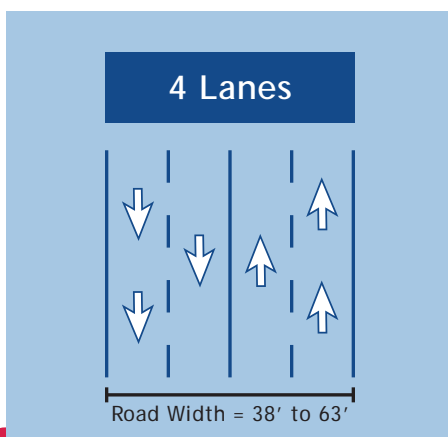
Kinsman Road: Boardings on Key Route

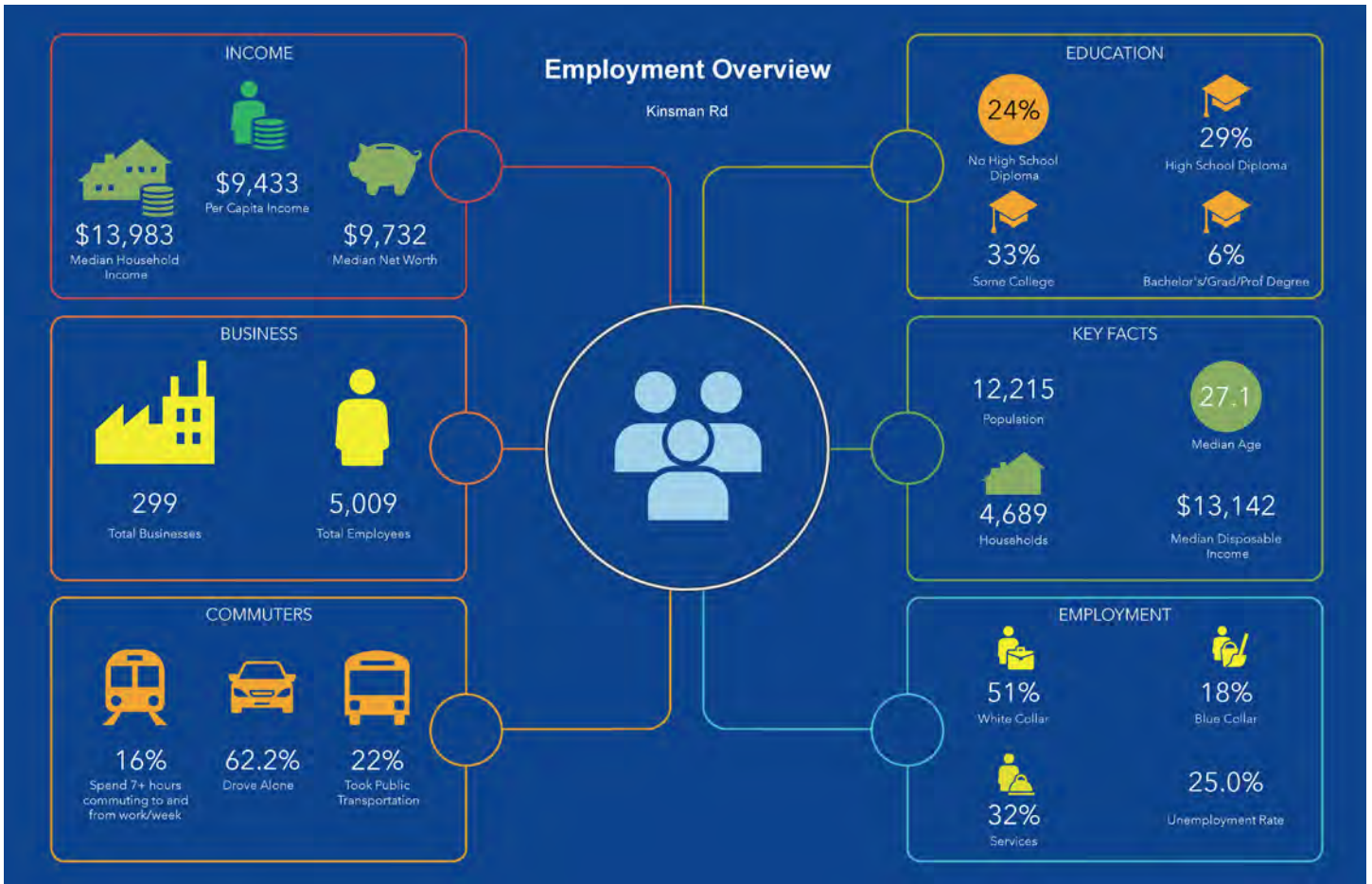


ON-TIME PERFORMANCE AVERAGE

% on time

80.61%







Kinsman Road

Number of Through Lanes

- 2
- 4 *Labeled: Roadway Width (ft)*
- 6
- Existing Bike Facilities
- - - Planned Bike Facilities

LAND USE	PERCENT AREA
Residential	28%
Transportation	12%
Light Industry	11%
Apartment	11%
Industry	10%
Retail	8%
Active Green Space	7%
Other (<5% Each)	14%

The map above displays the Kinsman Rd corridor’s roadway width, quantity of through lanes, and existing and proposed bike facilities. In addition, the cross streets associated with changes in Typology are labeled to correspond with the table below.

CROSS STREETS	TYOLOGY
Start to E. 30th St/ Woodland Ave	Metropolitan Core
to E 62nd St	Industrial/Transitional
to MLK Dr	Neighborhood Residential
to E 126th St	Main Street
to end	Neighborhood Center

LORAIN AVENUE

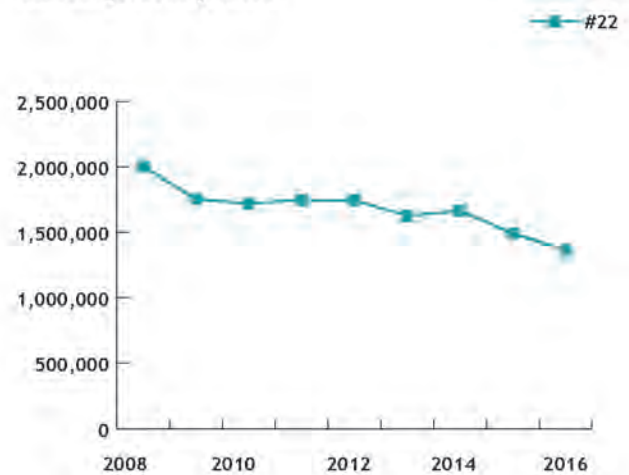


Lorain Avenue is an urban corridor that travels southwest of downtown. From W. 25th Street to Rocky River Drive (SR 237), the corridor is approximately 6.5 miles. Bus route #22 travels 7 days a week and 24 hours a day from downtown to West 25th Street through Ohio City and west on Lorain Avenue to the West Park Rapid Station.

The boarding statistics and average on-time performance rate are shown to the right.

The roadway is predominantly 4-5 lanes with one-story commercial and retail buildings. Near Ohio City the roadway has one lane in each direction with on-street parking and pedestrian-oriented destinations. The center of the corridor includes a length of protected bicycle lanes.

Lorain Avenue: Boardings on Key Route

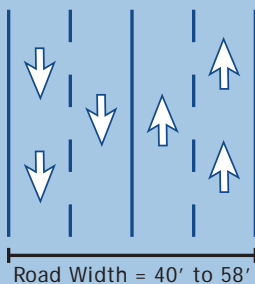


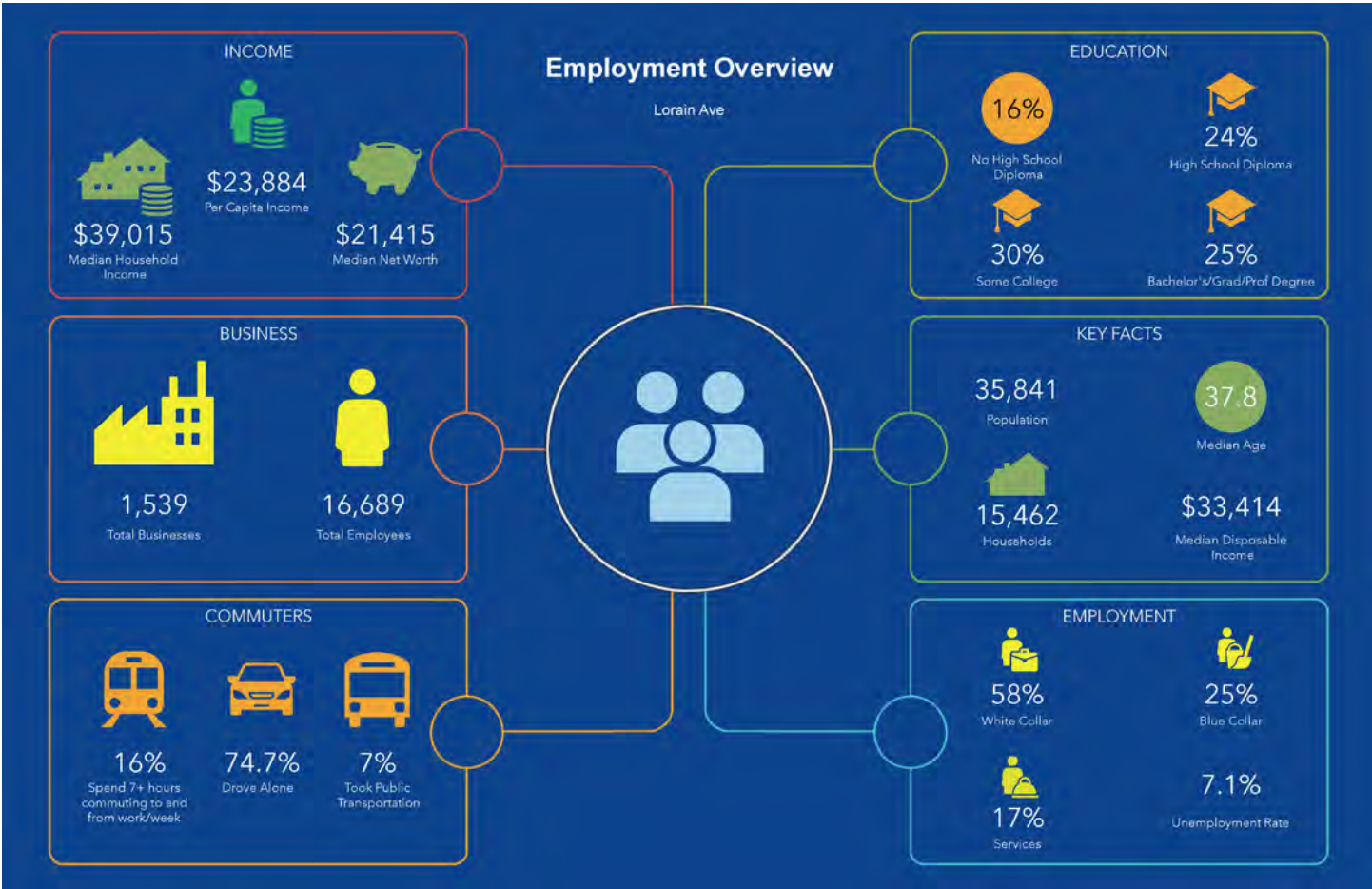
ON-TIME PERFORMANCE AVERAGE

% on time

75.72%

4-5 Lanes







The map To the left displays the Lorain Ave corridor’s roadway width, quantity of through lanes, and existing and proposed bike facilities. In addition, the cross streets associated with changes in Typology are labeled to correspond with the table below.

CROSS STREETS	TYOLOGY
Start to Fulton St	Neighborhood Center
to 50th St	Main Street
to W 73rd St	Neighborhood Center
to W 105th St	Main Street
to W 120th St	Neighborhood Center
to W 134th St	Main Street
to W 148th St	Neighborhood Center
to W 165th St	Main Street
to W 176th	Neighborhood Center
to Story Road	Special Destination
to W 210th St	Neighborhood Residential
to end	Town Center

LAND USE	PERCENT AREA
Residential	54%
Retail	16%
Apartment	7%
Transportation	6%
Passive Green Space	6%
Other (<5% Each)	12%



ST. CLAIR AVENUE

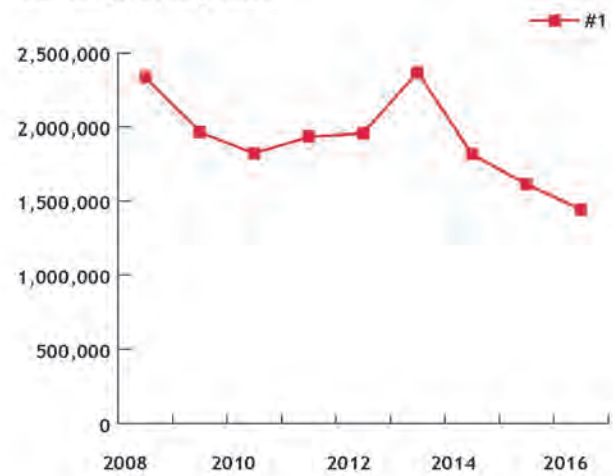


St. Clair Avenue is a corridor that extends from Public Square in downtown Cleveland to the northeast to City of Euclid. Bus route #1 travels 24 hours a day and 7 days a week between downtown and E. 152nd Street, and travels early morning to late night to the Euclid Park-N-Ride. A length of approximately 11 miles, this is a key corridor on Cleveland's East Side.

The boarding statistics and average on-time performance rate are shown to the right.

Near downtown the roadway is predominantly four lanes with on-street parking and dense development. Towards the east, the roadway varies with 3-5 lanes depending on whether on-street parking is utilized. West of 152nd Street, the corridor is developed with a mix of urban commercial and retail buildings surrounded by dense neighborhoods. East of 152nd Street, the corridor is four lanes and the surrounding character changes to industrial uses to the south and I-90 to the north.

St. Clair Avenue:
Boardings on Key Route

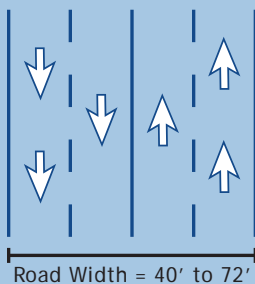


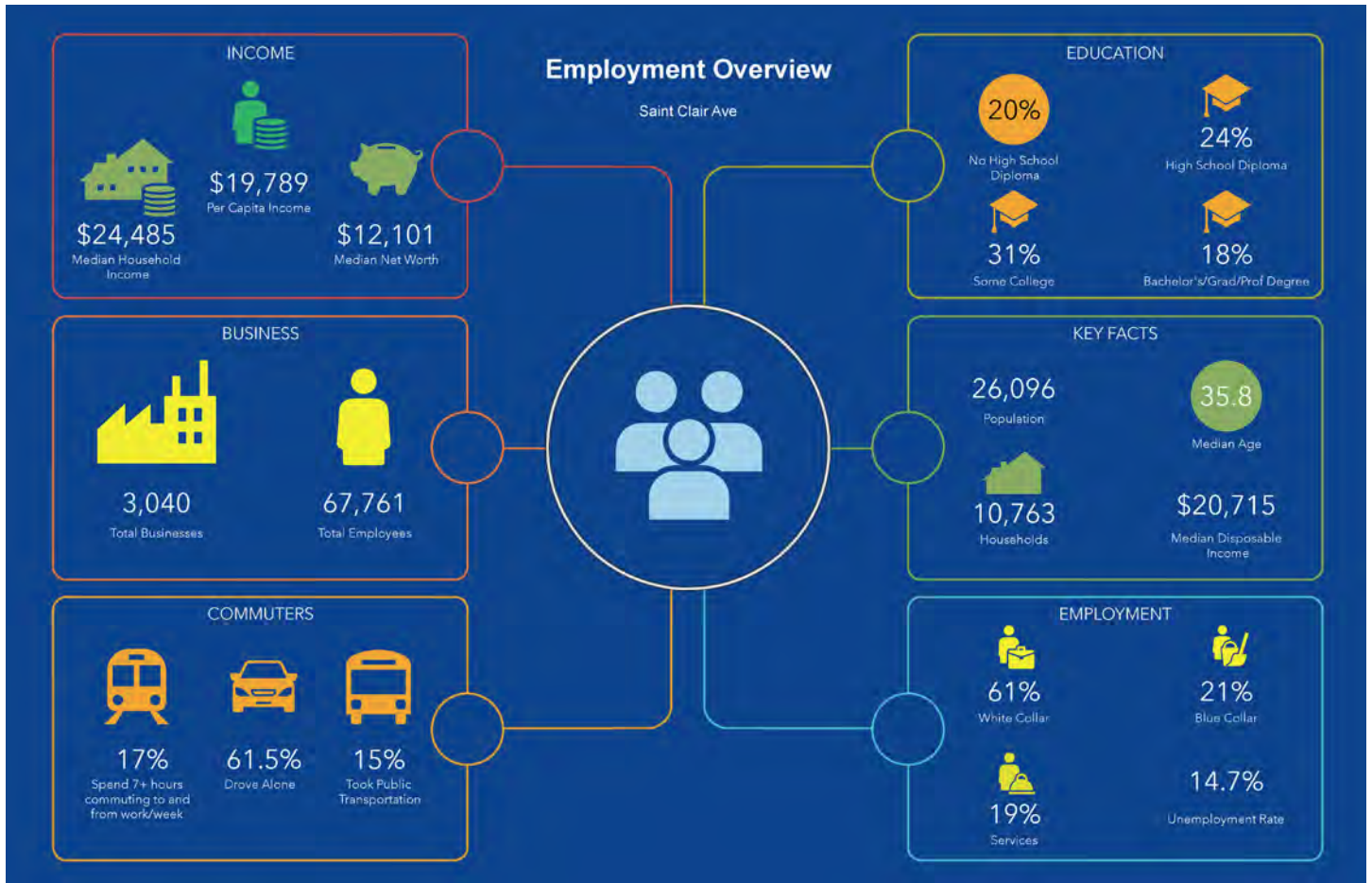
ON-TIME PERFORMANCE AVERAGE

% on time 86.42%

% missing 34.37%

4 Lanes





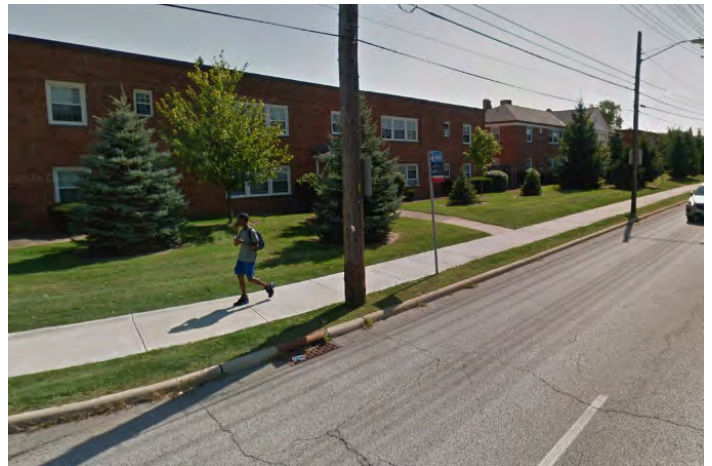
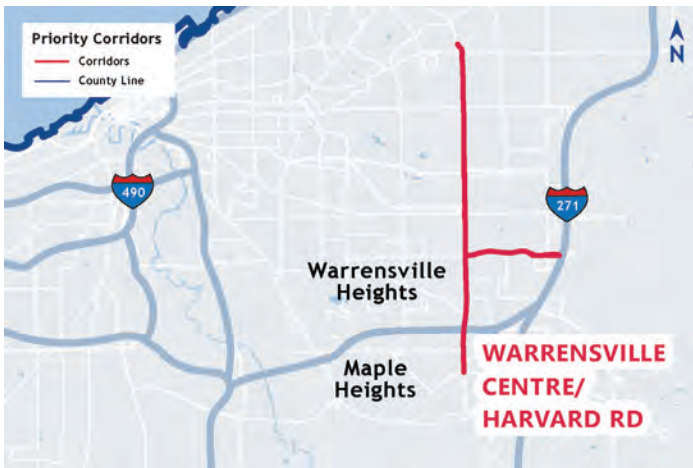


The map above displays the St. Clair Ave corridor’s roadway width, quantity of through lanes, and existing and proposed bike facilities. In addition, the cross streets associated with changes in Typology are labeled to correspond with the table to the right.

LAND USE	PERCENT AREA
Residential	32%
Industry	22%
Retail	12%
Transportation	8%
Light Industry	7%
Other (<5% Each)	19%
Active Green Space	7%
Other (<5% Each)	14%

CROSS STREETS	TYOLOGY
From Ontario St.	
to E 13th St	Metropolitan Core
to E 55th St	Industrial/Transitional
to E 100th St	Main Street
to E 107th St	Neighborhood Center
to E 147th St	Main Street
to E 154th St	Neighborhood Center
to London Rd	Main Street
to Euclid Park-and-Ride	Industrial/Transitional

WARRENVILLE CENTRE ROAD/HARVARD ROAD

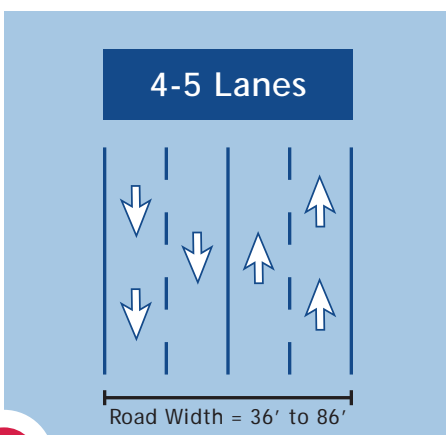


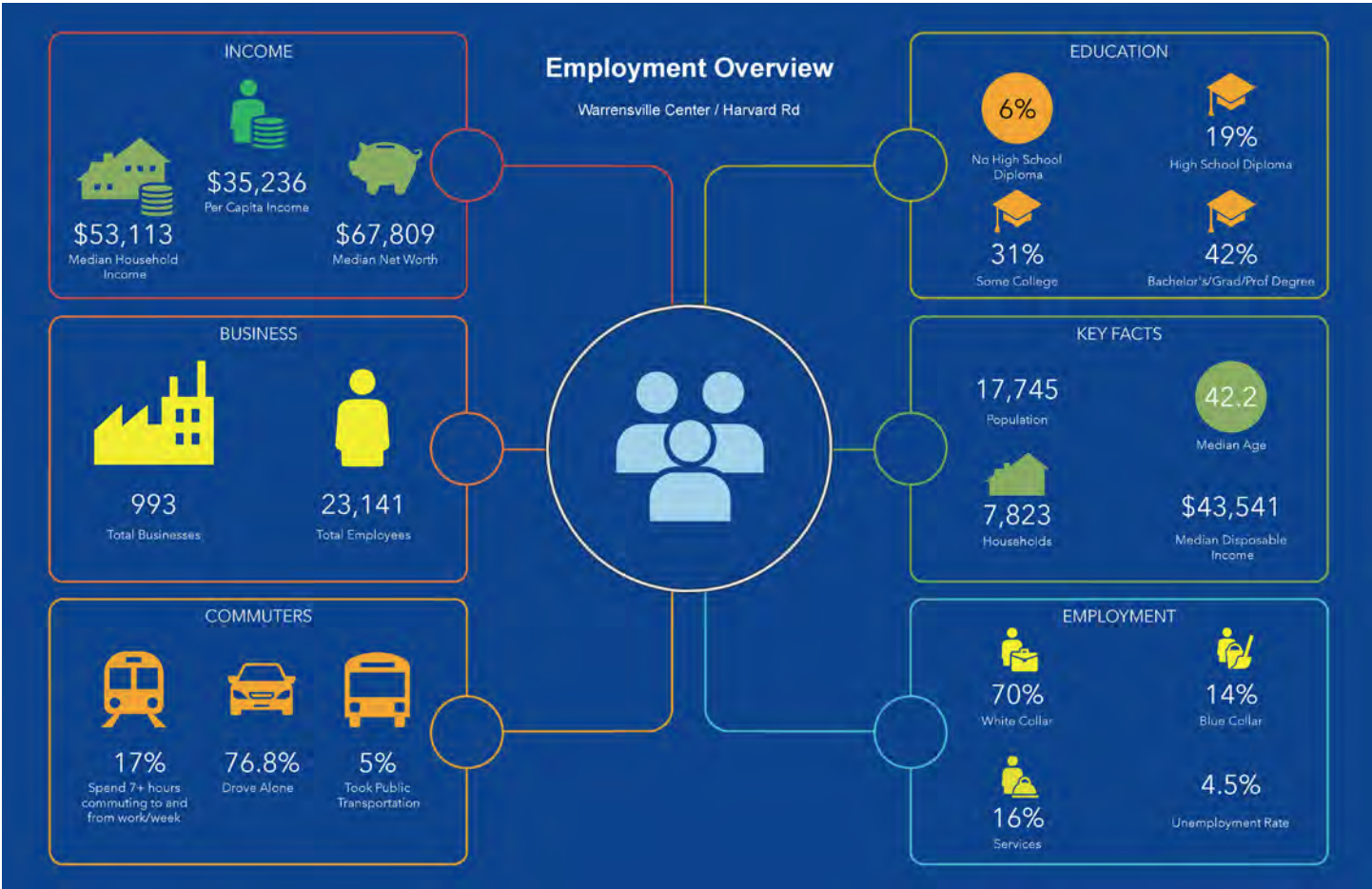
Warrensville Centre Road is a north-south corridor that extends approximately 8 miles to connect the suburbs of East Cleveland, Cleveland Heights, South Euclid, University Heights, Shaker Heights, Warrensville Heights, North Randall, and Maple Heights. Route #41 operates 24 hours a day and 7 days a week between Louis Stokes - Windermere Rapid Station and Southgate Transit Center. Limited #41F express service extends to Solon Industrial Park and Glenwillow.

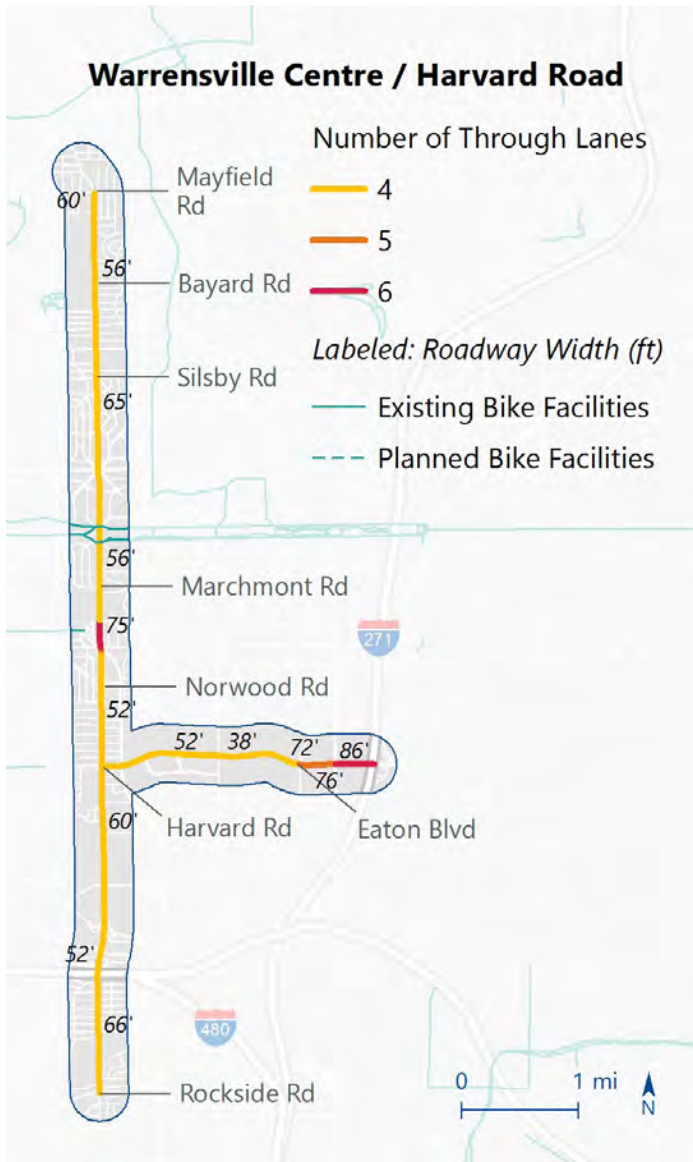
The boarding statistics are shown to the right.

The roadway is predominantly 4-5 lanes with no on-street parking. The corridor includes abundant stretches of single family residential homes with driveways fronting onto Warrensville Centre Road. At intersections such as Cedar Road, the character changes to include big box retail and grocery stores.

Warrensville Centre Road/Harvard Road #41-41F: Boardings on Key Route







The map above displays the Warrensville Center/ Harvard Rd corridor's roadway width, quantity of through lanes, and existing and proposed bike facilities. In addition, the cross streets associated with changes in Typology are labeled to correspond with the table to the right.

LAND USE	PERCENT AREA
----------	--------------

Residential	40%
Office	15%
Retail	13%
Active Green Space	9%
Other (<5% Each)	24%

CROSS STREETS	TYOLOGY
---------------	---------

Warrensville Center & Mayfield Rd to Warrensville Center & Bayard Rd	Main Street
to Warrensville Center & Silsby Rd	Town Center
to Warrensville Center & Marchmont Rd	Neighborhood Residential
to Warrensville Center & Norwood Rd	Town Center
to Warrensville Center & Rockside Rd	Main Street
Harvard Rd & Warrensville Center to Eaton Blvd	Industrial/Transitional
to 271	Main Street
To End of corridor	Main Street

W. 25TH STREET/PEARL ROAD/STATE ROAD

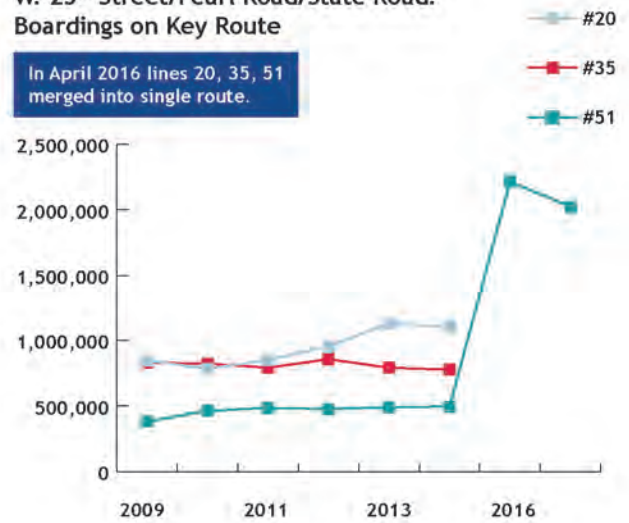


The MetroHealth Line is a consolidated, branded group of routes that are 51-A-B-C. The W. 25th Street, Pearl Road, and State Road corridors were noted in the previous RTA Strategic Plan as Priority Corridors. Twenty new buses, 37 refinished shelters, and over 400 customized signs along the route connect five MetroHealth locations.

The boarding statistics and average on-time performance rate are shown to the right.

W. 25th Street/Pearl Road/State Road: Boardings on Key Route

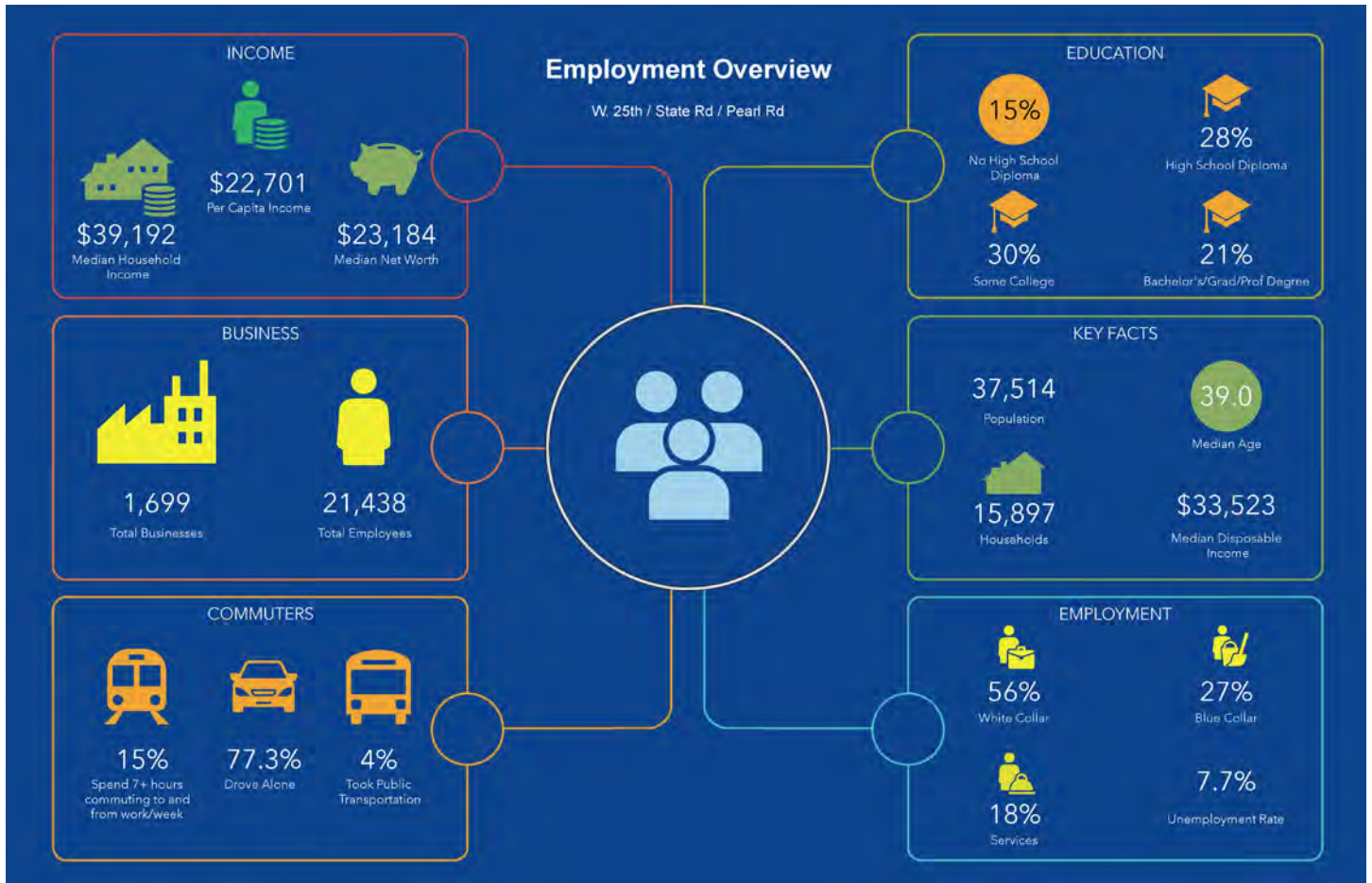
In April 2016 lines 20, 35, 51 merged into single route.



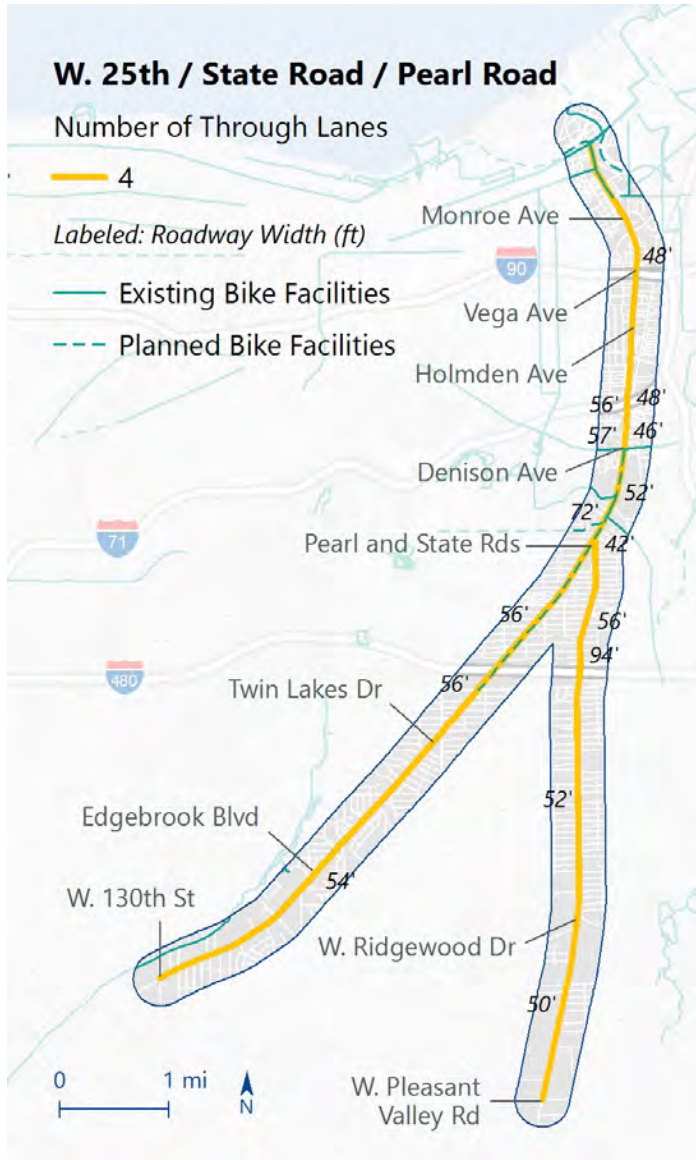
ON-TIME PERFORMANCE AVERAGE

% on time

76.45%



The map below displays the W 25th/State Rd/Pearl Rd corridor's roadway width, quantity of through lanes, and existing and proposed bike facilities. In addition, the cross streets associated with changes in Typology are labeled to correspond with the table to the right.



LAND USE	PERCENT AREA
----------	--------------

Residential	54%
Retail	14%
Transportation	5%
Other (<5% Each)	27%

CROSS STREETS	TYOLOGY
---------------	---------

W 25th	
to Monroe Ave	Neighborhood Center
to Vega Ave	Industrial/Transitional
to 25th & Holmden Ave	Main Street
to 25th & Daisy Ave	Special Destination
to Pearl & Denison Ave	Main Street
to Pearl & State	Special Destination
to State & W Ridgewood Dr	Main Street
to State & W Pleasant Valley Rd	Neighborhood Residential
Pearl and State	
to Pearl & Trin Lakes Dr	Main Street
to Pearl & Edgebrook Blvd	Neighborhood Residential
to End of Pearl (W 130th St)	Main Street



Appendix D

Rail Car Pillar Study



Rail Car Evaluation Project Review



Dave Diaz
Vice President

April 16, 2019

Project Scope

- LTK was contracted to conduct a rail car evaluation for RTA. The tasks included:
 - Estimate remaining life of each fleet
 - Upgrade/replace recommendations for both fleets
 - Upgrade plan to maintain existing fleets for 10 years



Existing HRV Fleet

- Manufactured by Tokyu Car Corporation
- 60 cars were delivered, 40 remain
- Began service in 1984 (35 years ago)
- 30 year design life



Existing LRV Fleet

- Manufactured by Breda
- 48 cars were delivered, 34 remain
- Began service in 1981 (38 years ago)
- 30 year design life
- Midlife structural overhaul completed in 2007



Phase 1: HRV Inspections

- Generally, in poor condition
- Over the last decade:
 - Work orders have increased by 22%
 - Cost of Maintenance increased by 148%
- Heavy corrosion of the primary structure was identified on all cars inspected
 - Loss of section of up to 50% was found
- Procurement and maintenance of parts has become an issue
 - Brake actuators (7 months between work orders)
 - Propulsion system (2.5 months between work orders)
 - Cab signal equipment (2.5 months between work orders)
- **LTK estimate: remaining useful life 5 years or less**



Corrosion Section Loss

Phase 1: LRV Inspections

- Generally, in fair condition
- Over the last decade:
 - Cost of Maintenance increased by 90%
- Cab equipment is worn to the point that it is unreadable
- Articulated structures have developed corrosion and cracks
- Procurement and maintenance of parts has become an issue
 - Cab signal equipment (3.5 months between work orders)
 - Track brakes (18 months between work orders)
 - Propulsion system (2 months between work orders)
- Overhaul was effective in mitigating corrosion
- **LTK estimate: remaining useful life 10 years or less**



Corrosion Hole/Crack in Articulated Structure



Master Controller Worn vs. New

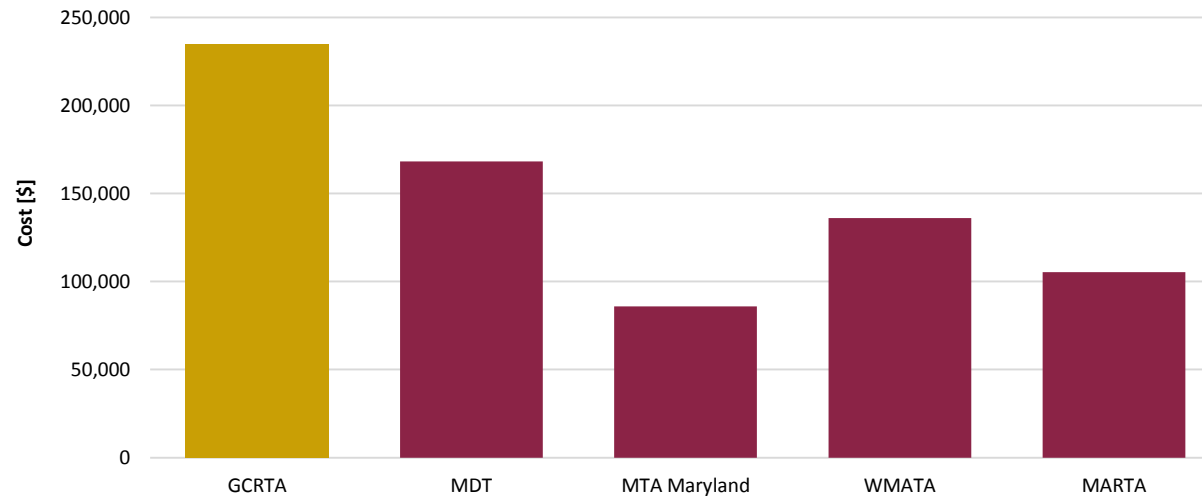


Overhaul Repairs

Phase 1: HRV Peer Review

- LTK utilized the published FTA's data to compare RTA's rail service with peer agencies
 - RTA spends more to maintain each car than any of their peers
 - The four other agencies shown have all initiated new car orders

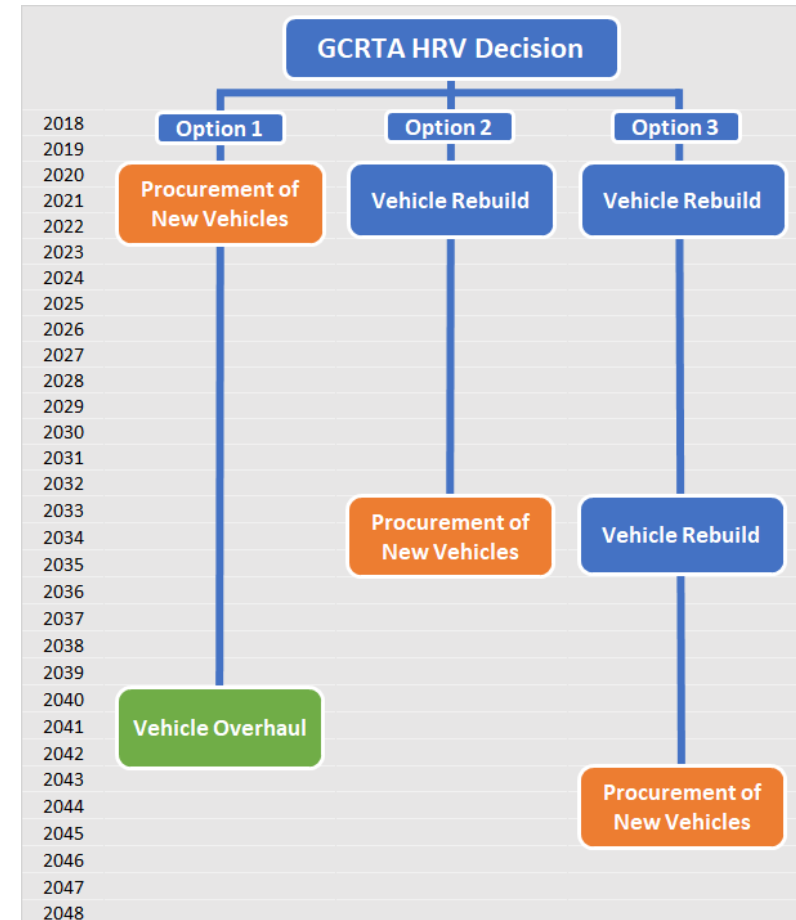
HRV ANNUAL MAINTENANCE COST PER ACTIVE VEHICLE VS PEER FLEETS



HRV Cost Estimates

- Option 1: new car delivery at the end of estimated life (5 years)
 - Begin procurement next year
 - Overhaul vehicles in 2040 at midlife (15 years)
 - Total 30-year lifecycle cost \$398 M
- Option 2: overhaul vehicles at end of estimated life
 - New car procurement at the end of extended estimated life (2033)
 - Total 30-year lifecycle cost \$410 M
- Option 3: overhaul the vehicles twice
 - New car procurement at the end of extended estimated life (2042)
 - Total 30-year lifecycle cost \$475 M

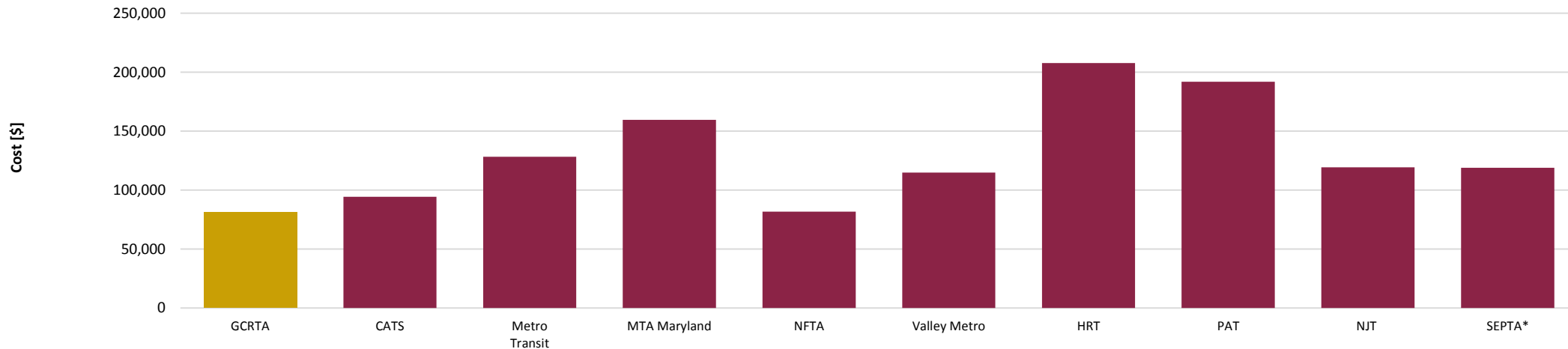
Note: 2018 dollars



Phase 1: LRV Peer Review

- RTA's fleet is the second oldest major LRV fleet in the country
 - SEPTA operates the oldest fleet, and has begun new car planning process
- RTA's annual maintenance costs are 18% lower than peer average
 - RTA is in the top 10 amongst peer agencies for maintenance costs

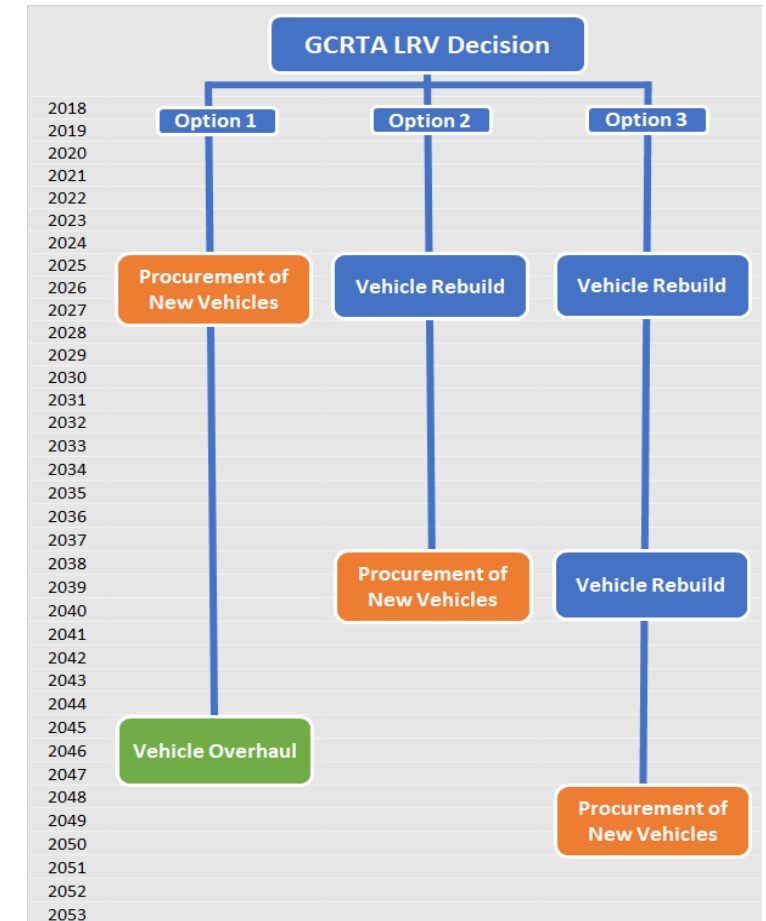
LRV ANNUAL MAINTENANCE COST PER ACTIVE VEHICLE VS PEER FLEETS, FROM NTD 2016 DATA



LRV Cost Estimates

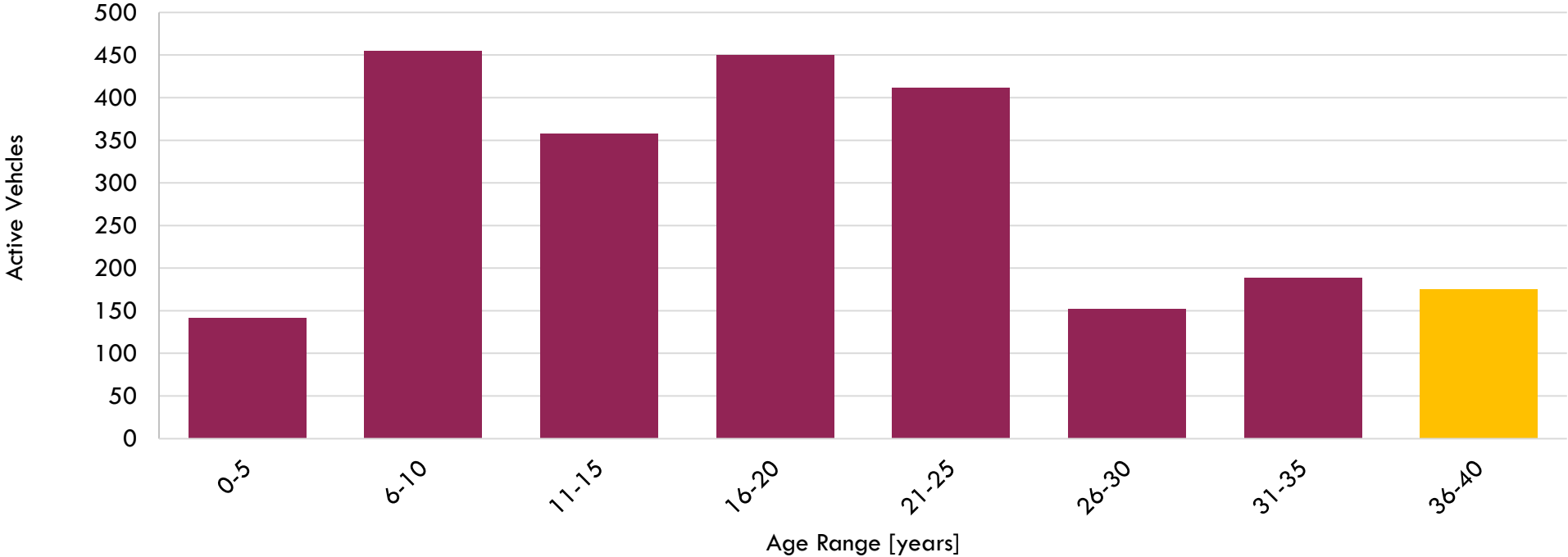
- Option 1: new car delivery at the end of estimated life (10 years)
 - Begin procurement in 2025
 - Overhaul vehicles in 2045 at midlife (15 years)
 - Total 30-year lifecycle cost \$317 M
- Option 2: overhaul vehicles at end of estimated life
 - New car procurement at the end of extended estimated life (2038)
 - Total 30-year lifecycle cost \$339 M
- Option 3: overhaul the vehicles twice
 - New car procurement at the end of extended estimated life (2048)
 - Total 30-year lifecycle cost \$413 M

Note: 2018 dollars



Phase 1: LRV Peer Review

RTA LRV FLEET AGE VS. PEER AGENCIES



Risk Associated with Aging Fleets

- In-service failures increase
- Customer service degrades
- Service reliability and on-time performance suffers
- Parts obsolescence increases
- Maintenance costs and frequency increases
- Gap widens between current standards and as-built standards



Recommendations

- Based on the results of the vehicle inspections and life cycle cost analysis, LTK recommends the following
 - Do not invest major capital into the existing fleets
 - Begin the procurement process for new HRV's in the near future
 - Begin the process of procuring new LRV's in the next 5 years
 - Hire Firm to assist with new HRV procurement including specification, procurement, quality assurance and facility upgrades.
- LTK recommends the procurement of two different fleets (HRV and LRV) rather than a single, common car to serve both high and low platforms.
 - A single, common car fleet would require significant infrastructure work at rail stations
 - A single, common car fleet eliminates the ability to phase in vehicle purchase and delivery



Appendix E

Fare Equity Analysis Pillar Study



GCRTA Fare Analysis

Final Report Summary of Project and Final Recommendations

December 3, 2019

Presentation to the
External and Stakeholder Relations & Advocacy Committee
GCRTA Board of Trustees

PURPOSE AND GOALS OF STUDY



One of five studies that supports the Strategic Plan

Enable GCRTA to better understand its ridership, and the relationships between changes in fares, fare structure, fare collection, ridership and revenue

Based on research, suggest changes to GCRTA fares and fare collection to better support GCRTA's goals and strategic vision, as well as reflect best practices in the US

Based on research, provide GCRTA with improved tools to analyze impacts of fare changes and meet FTA requirements

RESEARCH EFFORTS



- Onboard Rider Survey
 - Improve GCRTA's understanding of how riders used transit
 - Obtain statistical information to meet Federal Transit Administration requirements, including Title VI anti-discrimination analyses
 - 3,719 surveys collected Nov. 9 – Dec. 3, 2018, all day, weekdays and weekends.
- Public Outreach with Opinion Survey and Online Survey
 - Questions rephrased & additional questions on policies and effectiveness
 - 546 surveys collected – Spring 2019
 - 1,066 surveys collected – Fall 2019
- Peer Review
 - Major Ohio Agencies
 - Similar size, operations and climate

FARE POLICY GOALS



- Related to value provided to customer
- Related to cost of providing the service
- Related to whether riders provide tax support to RTA
- Related to whether riders pay a fair share of costs (farebox recovery)
- Related to riders' ability to pay
- Promote seamless intermodal travel
- Promote prepayment of fares
- Simple to communicate to riders and operators
- Promotes fare payment and easy to enforce
- Easy to cooperate with third parties
- Maximizes ridership
- Maximizes revenue

KEY ISSUES IDENTIFIED



- Cleveland's transit network design requires about half of all riders to transfer, but some riders, especially low-income and minorities, pay excessively for transferring
- Over half of trips are taken by riders who are best served by a monthly or weekly pass, but about half of these, especially low-income and minorities, are paying more than they could because they do not purchase a pass or purchase a weekly instead of a monthly pass
- The Park & Ride surcharges adds complexity to fares without raising significant revenue
- Most transit agencies charge the maximum allowable for Paratransit (twice the base fare) and do not provide passes
- Aging fare equipment will be increasingly expensive to maintain and does not meet the needs of GCRTA's future

ADDITIONAL RESEARCH EFFORT



- Public Outreach with Opinion Survey and Online Survey
 - Additional questions on policies and effectiveness
 - 1,066 surveys collected – Fall 2019
- Analysis of Impacts of Possible Changes

Household Income			
	Onboard Survey	Public Outreach	
		Actual	Weighted
Less than \$25,000	47.4%	22.6%	47.4%
\$25,000 - \$29,999	13.7%	10.0%	13.7%
\$30,000 – \$34,999	10.9%	5.6%	10.9%
\$35,000 - \$49,999	11.2%	10.3%	11.2%
\$50,000 - \$74,999	8.2%	17.7%	8.2%
\$75,000+	8.6%	33.8%	8.6%

Race / Ethnicity			
	Onboard Survey	Public Outreach	
		Actual	Weighted
American Indian or Alaska Native	2.0%	0.7%	2.0%
Asian or Asian American	2.2%	3.4%	2.2%
Black or African American	59.3%	20.8%	59.5%
Hispanic or Latino	4.3%	3.6%	4.3%
Multiracial or another race	3.0%	3.1%	3.0%
Native Hawaiian or other Pacific Islander	0.3%	0.2%	0.3%
White or Caucasian	21.6%	66.7%	21.5%
Other	7.2%	1.4%	7.1%

ADDITIONAL RESEARCH RESULTS (WEIGHTED)



Riders Who Stated Why They Don't Use A Monthly Pass

Don't Use Transit Enough	36%
Can't Afford It	31%
Can't Predict Transit Use	26%
Don't Know Where to Get It	5%
Hard to Get It	3%

Riders Who Stated Why They Don't Use A 7-Day Pass

Can't Predict Transit Use	31%
Don't Use Transit Enough	26%
I Use a Monthly Pass	25%
Can't Afford It	5%
Don't Know Where to Get It	3%
Hard to Get It	0%

Riders Who Stated Why They Don't Use A 5-Trip Card

Another Product is Better For Me	55%
Didn't Know It Included Free Transfers	14%
Can't Afford It	14%
Hard to Get It	6%
Don't Know Where to Get It	5%

ADDITIONAL RESEARCH RESULTS (WEIGHTED)



Riders Were Asked: Which of These Should GCRTA Implement?				
	All Riders		Income < \$25,000	
	Should Implement	Most Important	Should Implement	Most Important
Reduce the cost of the All Day Pass.	44%	26%	52%	35%
Offer reduced price transfers with cash payments.	34%	10%	37%	15%
Make Monthly and 7-Day Passes available at more locations.	33%	10%	32%	9%
Improve our communications about our fare products and how to buy them.	32%	13%	31%	9%
Implement Smartcards that store Passes and/or trips with free transfers.	32%	12%	28%	7%
Make 5-Trip Farecards available at more locations.	28%	11%	22%	13%

RECOMMENDATIONS



- **Immediate Low Cost Changes:**
 - Improve communications about fare products and how to buy them
 - Make 5-Trip Farecards available at more locations
 - Revise 5-Trip Farecards to be fewer trips at the same price per trip
- **Important Changes with Greater Financial Impact:**
 - Reduce the cost of Adult & Senior/Disabled Day Passes to two boardings (\$5 & \$2.50)
 - Approximate Revenue Loss: -\$1,300,000; Approximate Ridership Gain: 270,000
 - Raise Park & Ride Surcharge
 - Adjust Paratransit Fares, especially passes, to reflect higher cost of providing service

RECOMMENDATIONS

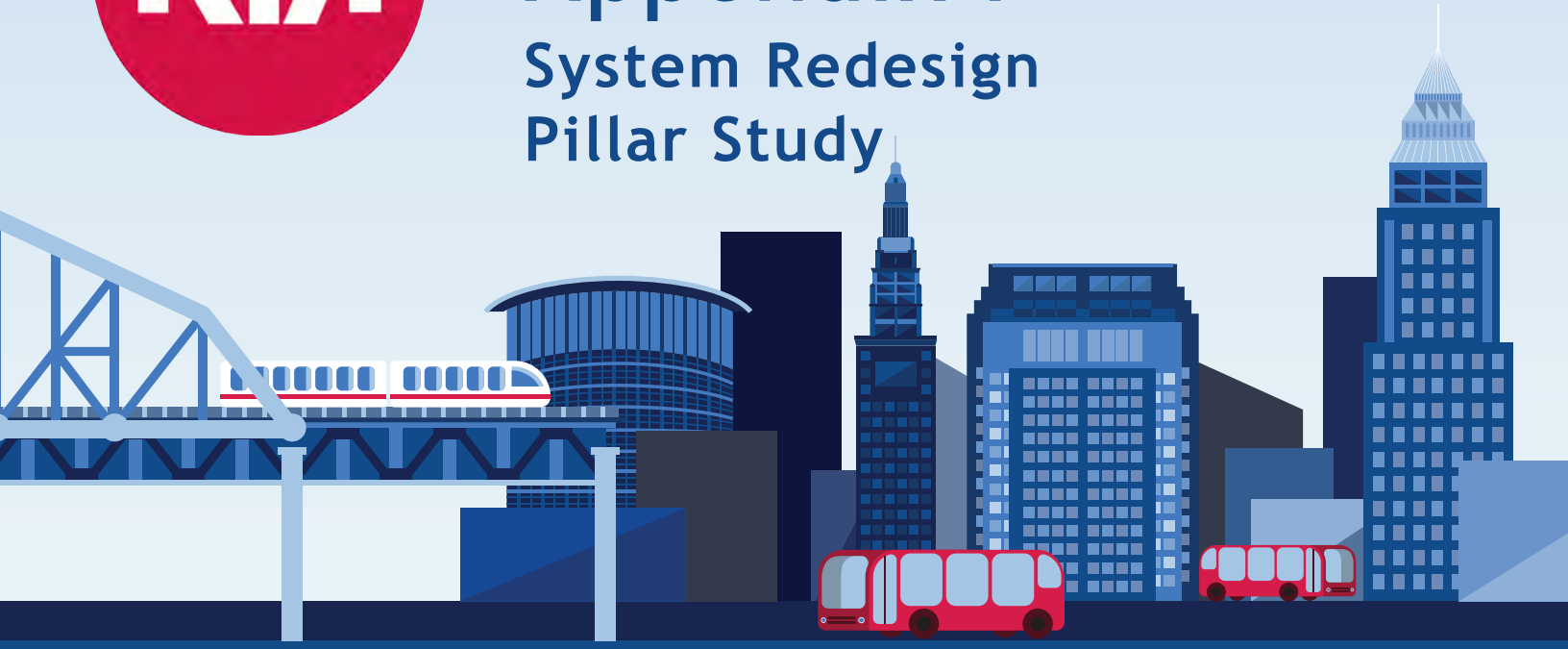


- Long-term Improvements with a new fare collection system
 - Implement reduced price transfers with smartcard stored value
 - Regional Multi-modal Accounts
 - Fare Capping / Best Fare
 - Cloud-Based with Open Architecture



Appendix F

System Redesign Pillar Study





DRAFT

RTA System Redesign Study
Final Presentation

JARRETT
WALKER
+ ASSOCIATES

Let's think about transit

What is the System Redesign Study?

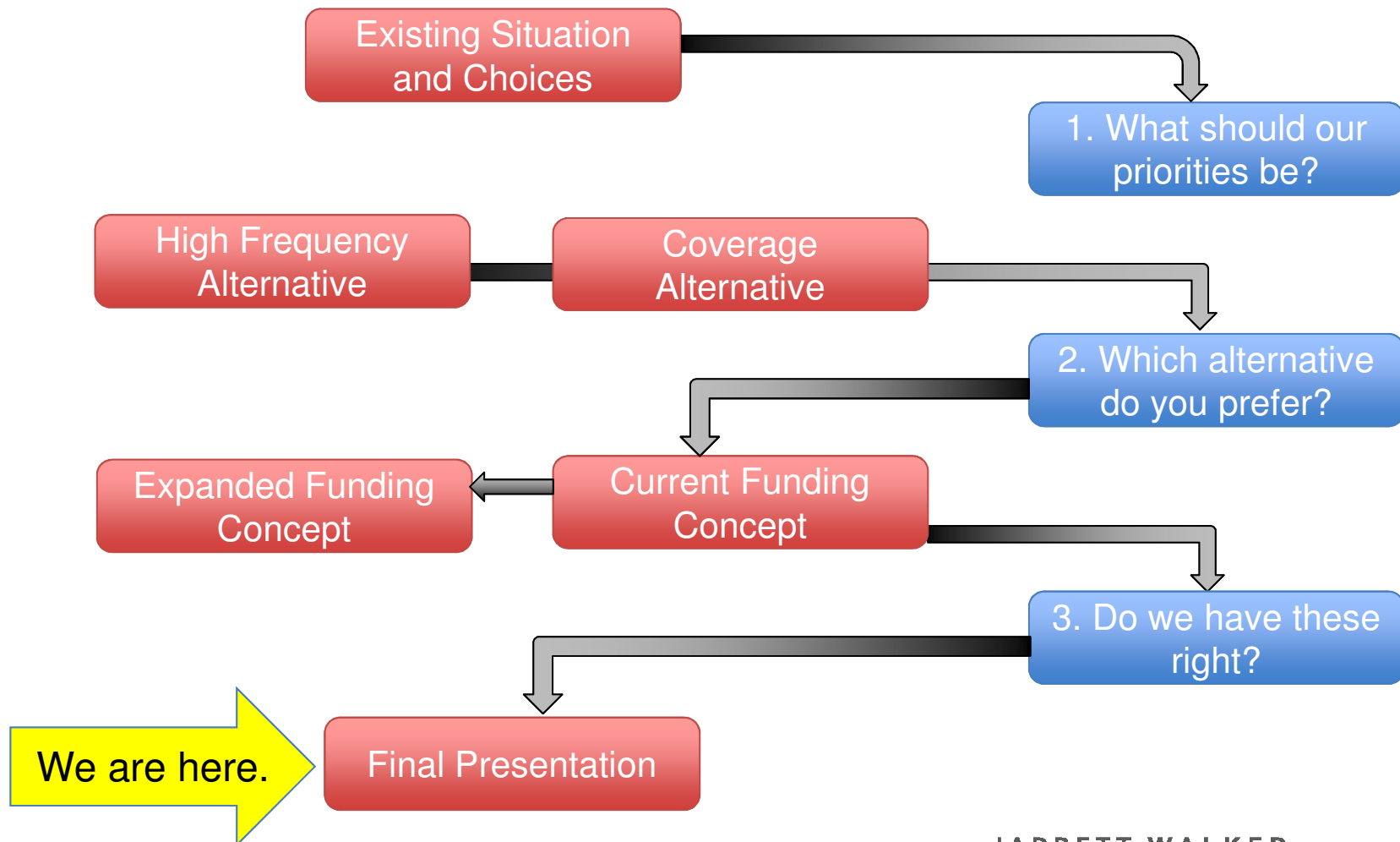
- Is the design of the bus network right?
- Does it reflect today's values and priorities?
- If not, how should it be revised?

- This process was designed to learn about the public's priorities for future service planning.

Study Process

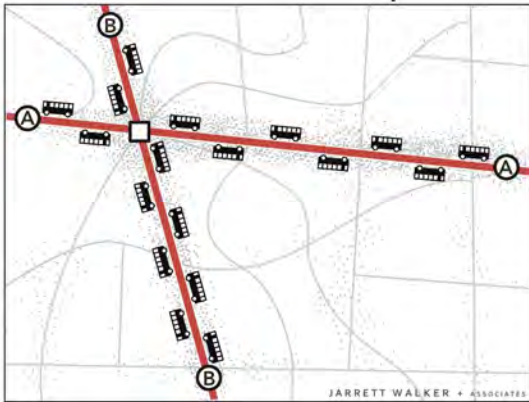
Technical and Design Work

Questions to the Public



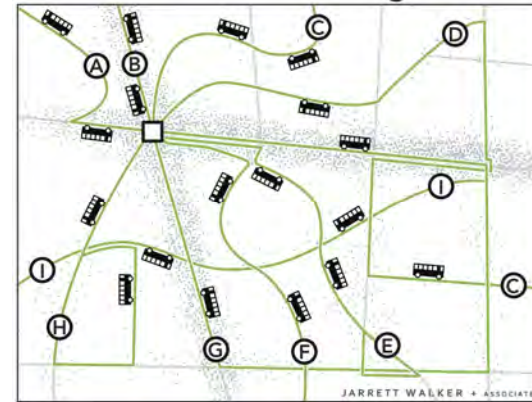
Review of Key Choices

The Ridership / Coverage Tradeoff



Ridership Goal

- “Think like a business.”
- Focus where ridership potential is highest.
- Support dense and walkable development.
- Maximum competition with cars
- Maximum reduction of vehicle miles traveled



Coverage Goal

- “Think like a public service.”
- “Access for all”.
- Service for people who are located in hard-to-serve places and can’t drive or don’t have access to a car.

Survey 1

Technical and Design Work

Questions to the Public

Existing Situation and Choices

1. What should our priorities be?

High Frequency Alternative

Coverage Alternative

2. Which alternative do you prefer?

Expanded Funding Concept

Current Funding Concept

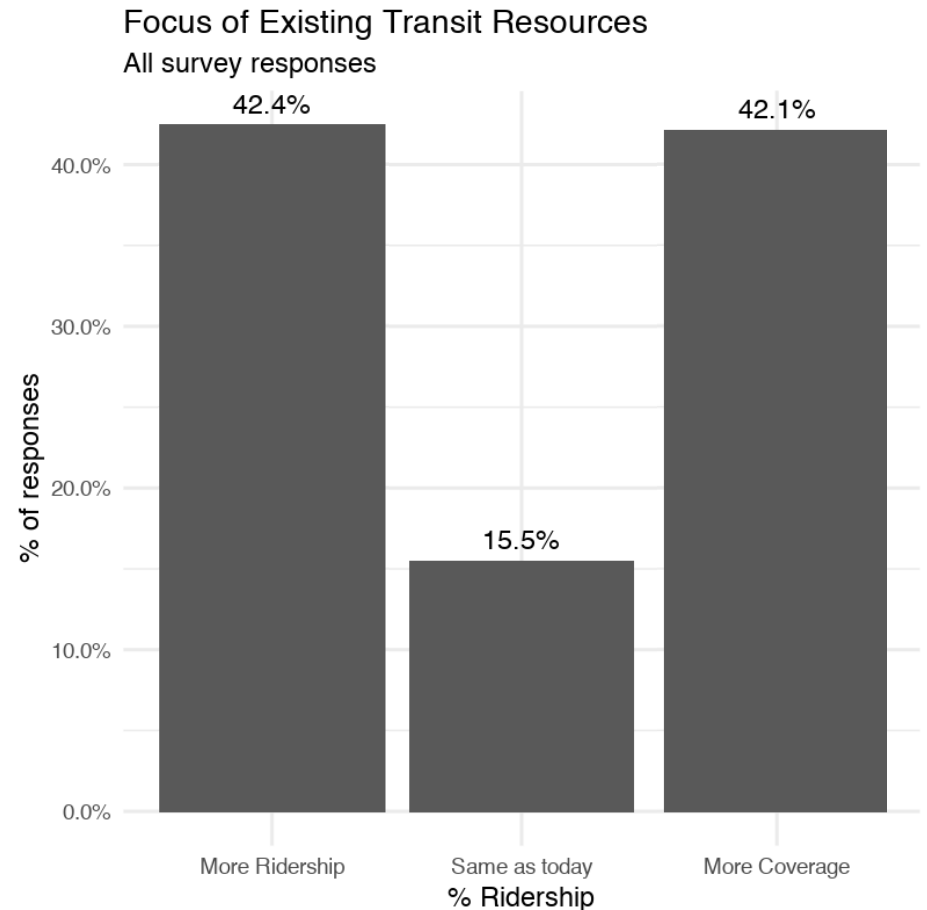
3. Do we have these right?

We are here.

Final Presentation

Survey 1

- Asked respondents to say whether they would rather have RTA focus on the ridership or coverage goal.
- Responses were almost evenly split.



Network Alternatives



We drew two alternative networks to show exactly what it would look like if we:





- Made ridership a higher priority at the expense of coverage (the High Frequency Alternative)

OR

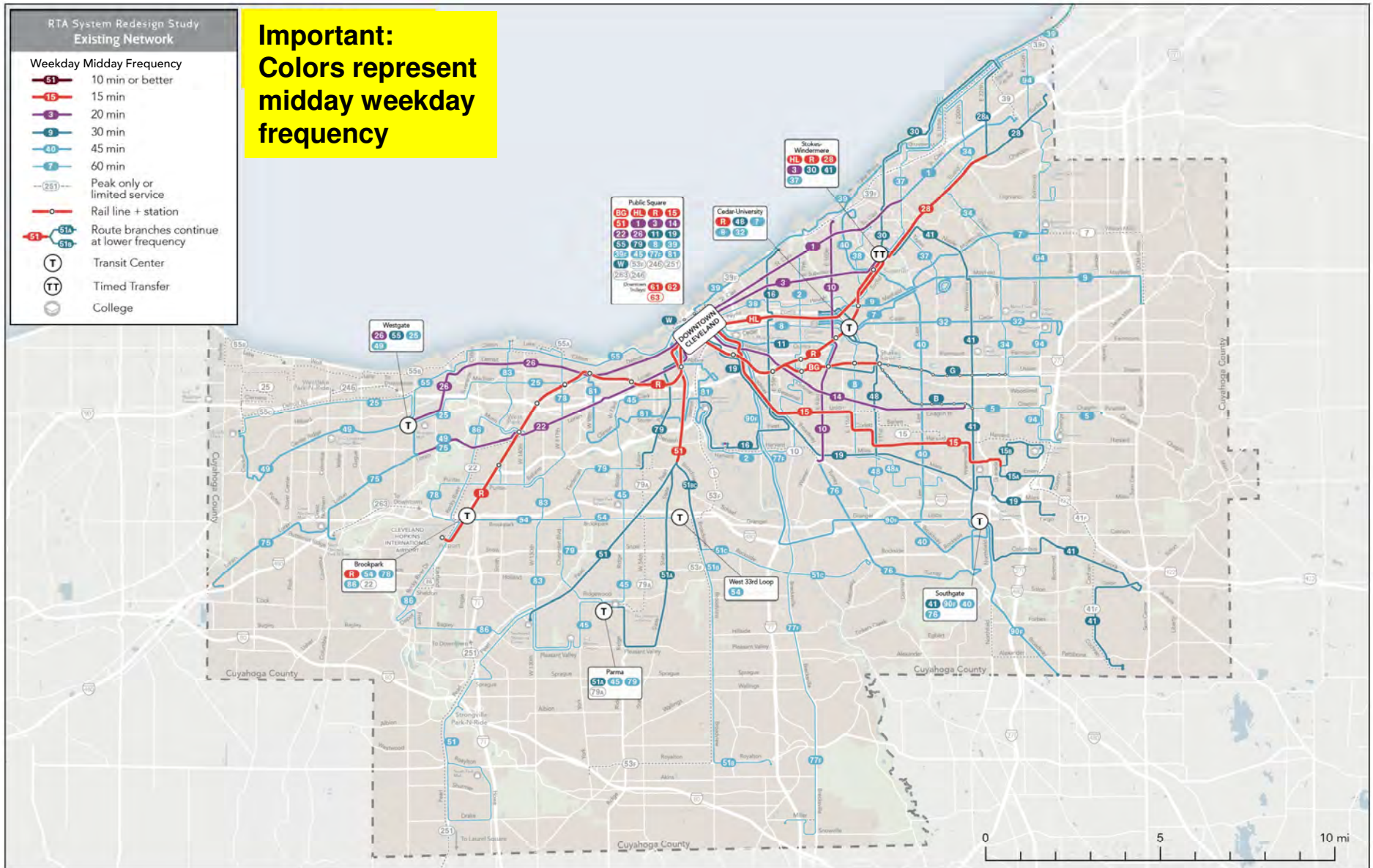
- Maintained all current coverage (the Coverage Alternative)

Reading our maps

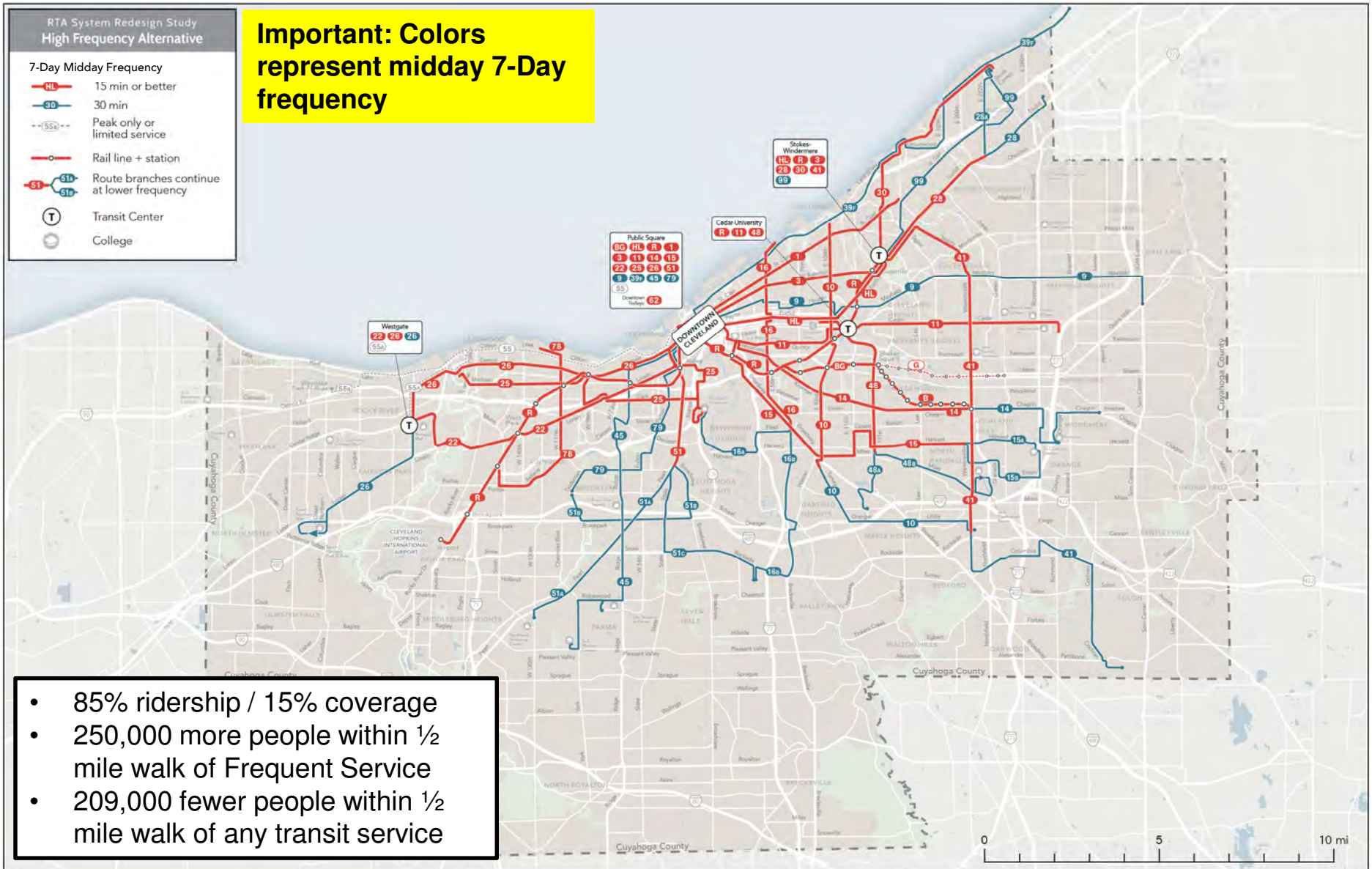
Colors represent midday frequency.

	10 min or better
	15 min
	20 min
	30 min
	45 min
	60 min
	Peak only or limited service

Existing Network

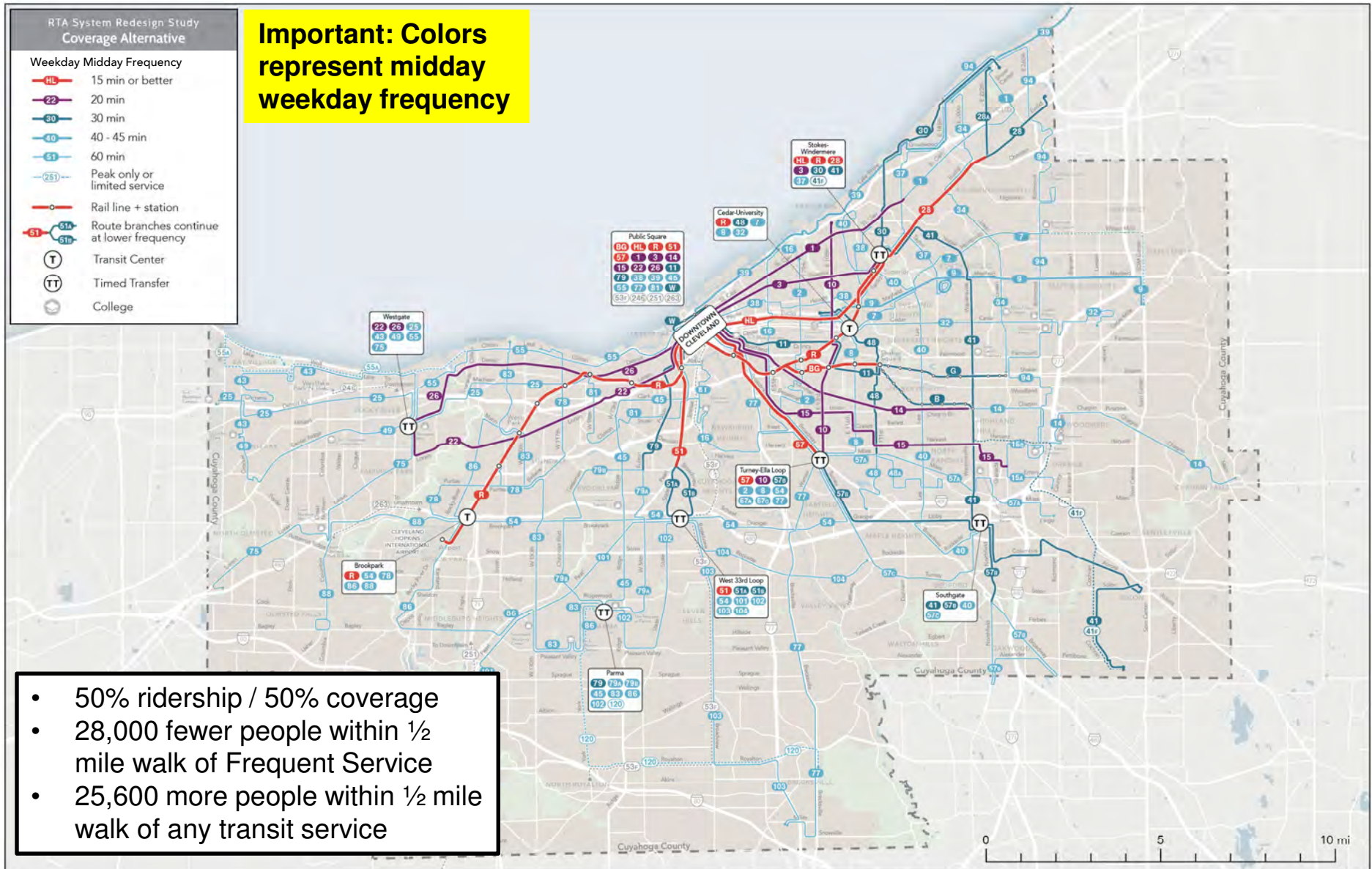


High Frequency (High Ridership) Alternative

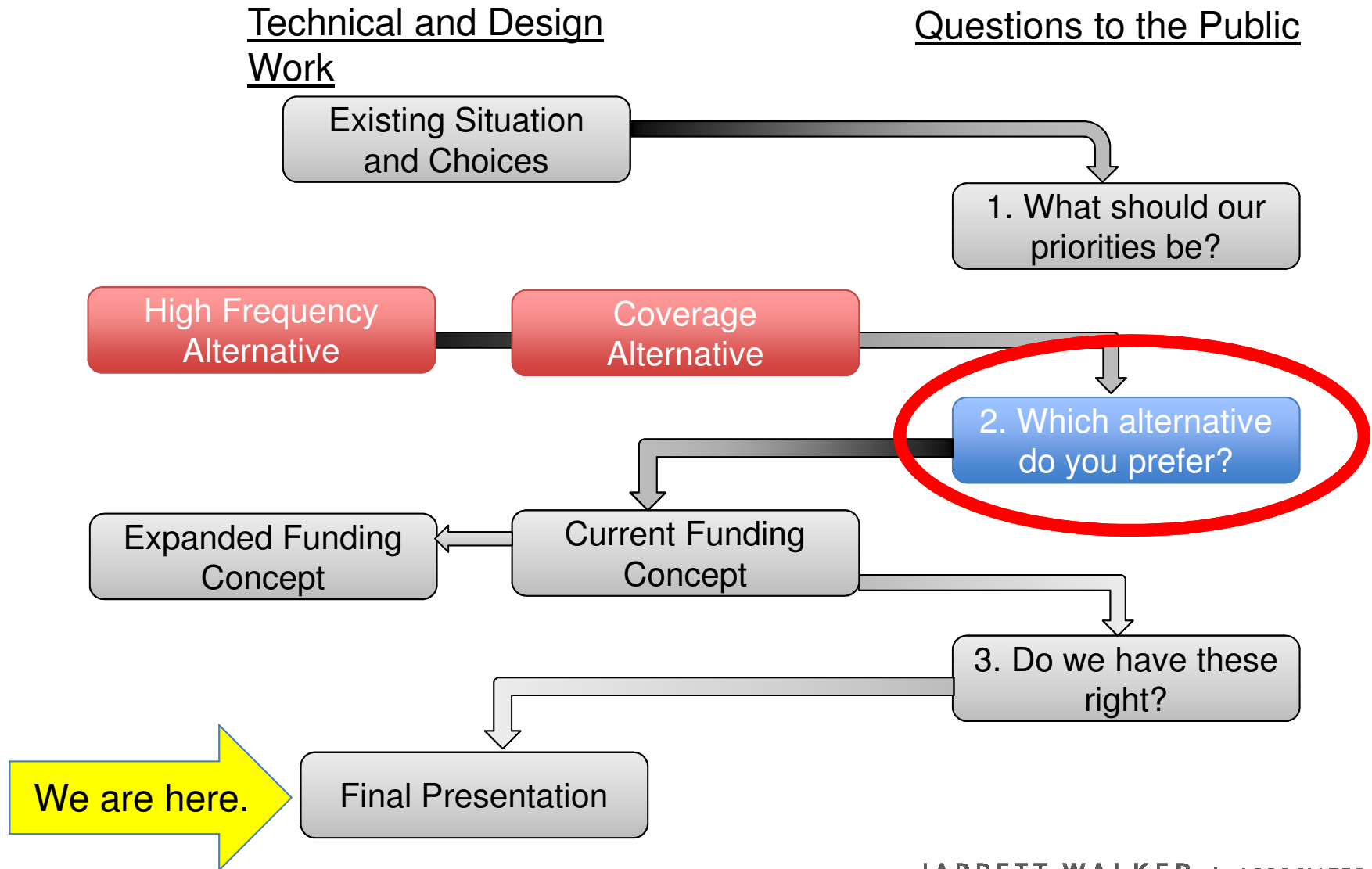


- 85% ridership / 15% coverage
- 250,000 more people within 1/2 mile walk of Frequent Service
- 209,000 fewer people within 1/2 mile walk of any transit service

Coverage Alternative

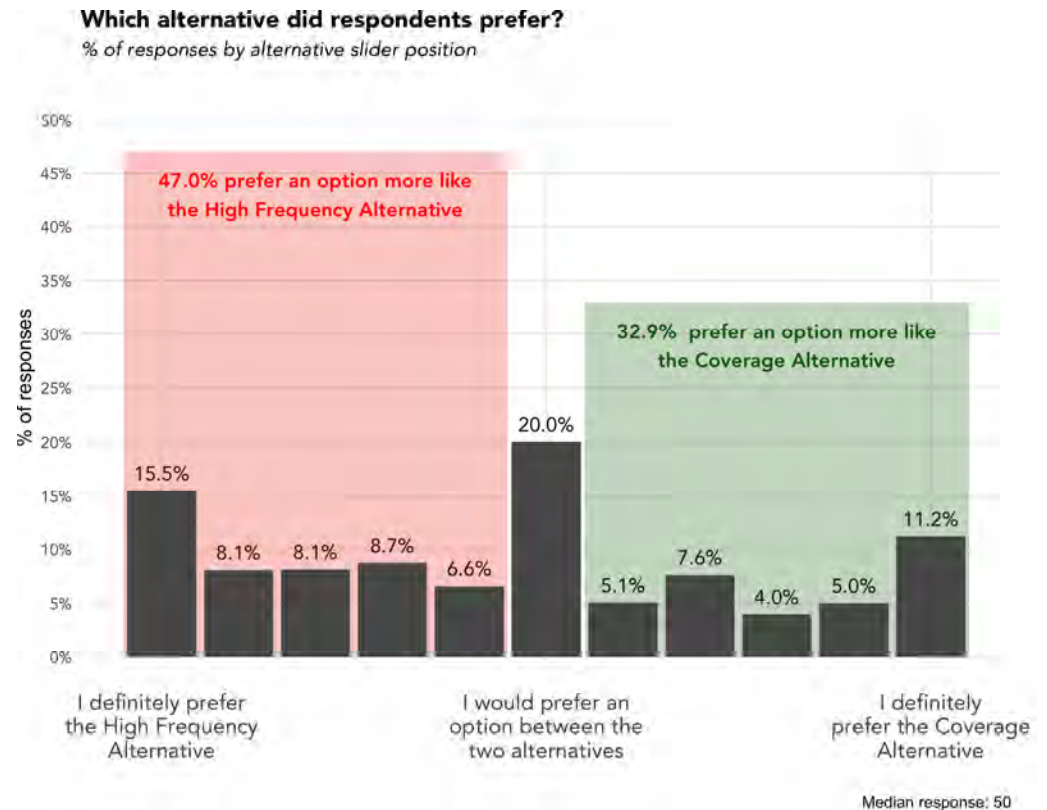


Survey 2



Survey 2

- Fewer than 1/3 prefer an option more like the Coverage Alternative.
- Almost half like the High Frequency (Ridership) Alternative.



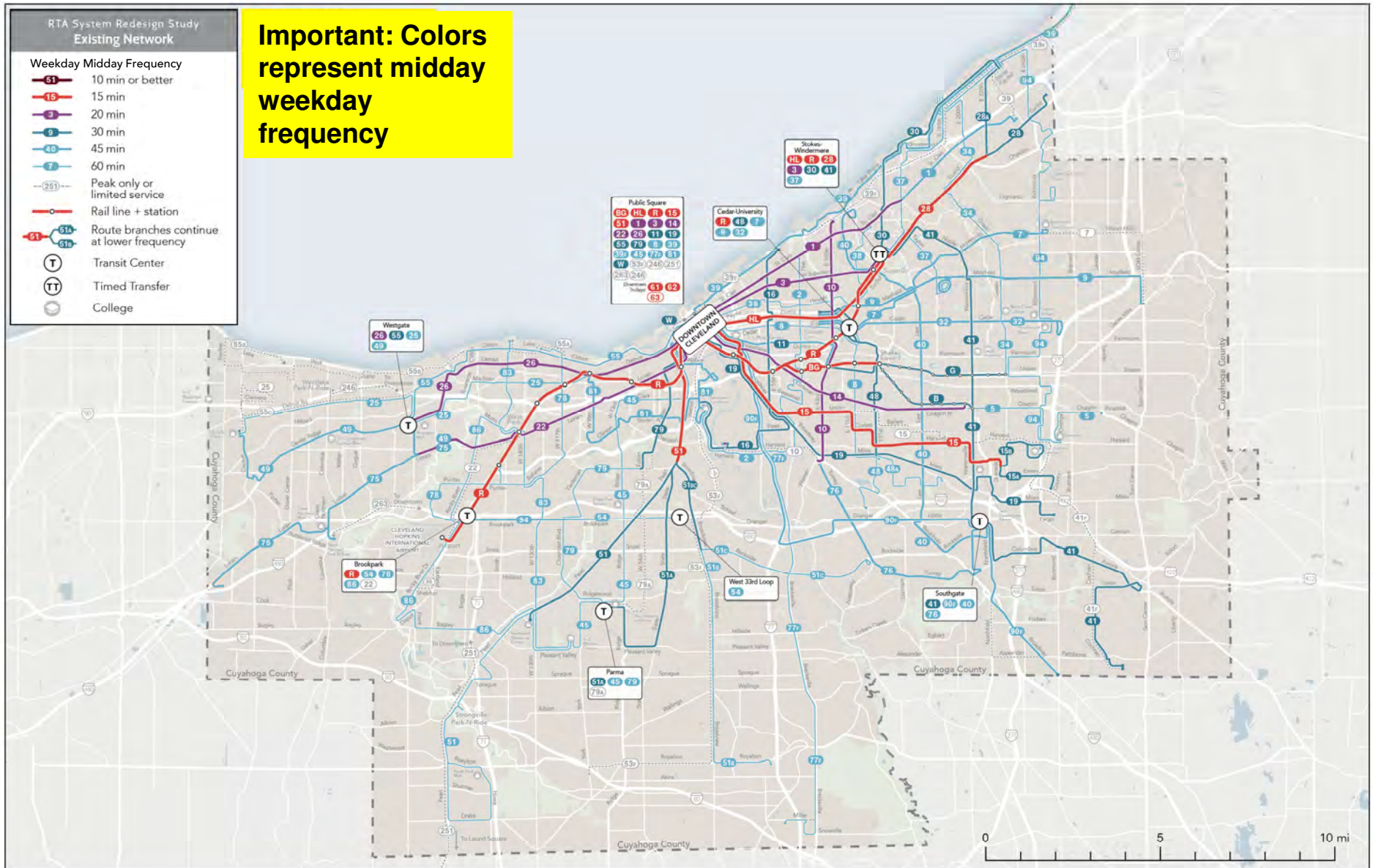
Financial Network Concepts

Financial Concepts

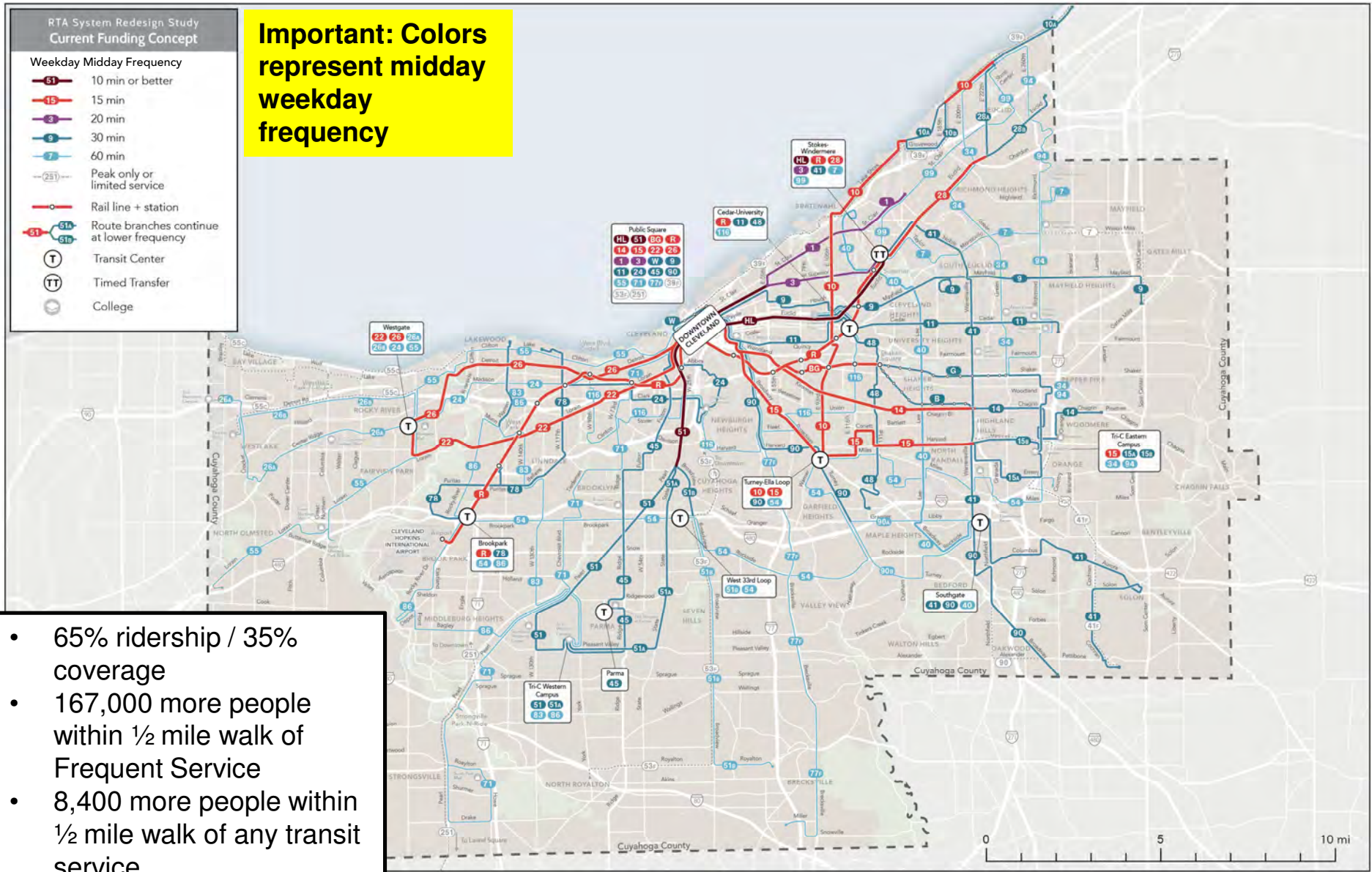
Based on survey results:

- Greater focus on ridership
- No reduction of coverage area
- **Current Funding Concept** – no change in resource level
- **Expanded Funding Concept** – Enough new resources to supply 25% more bus service (vehicle hours) (+30m)

Existing Network



Current Funding Concept



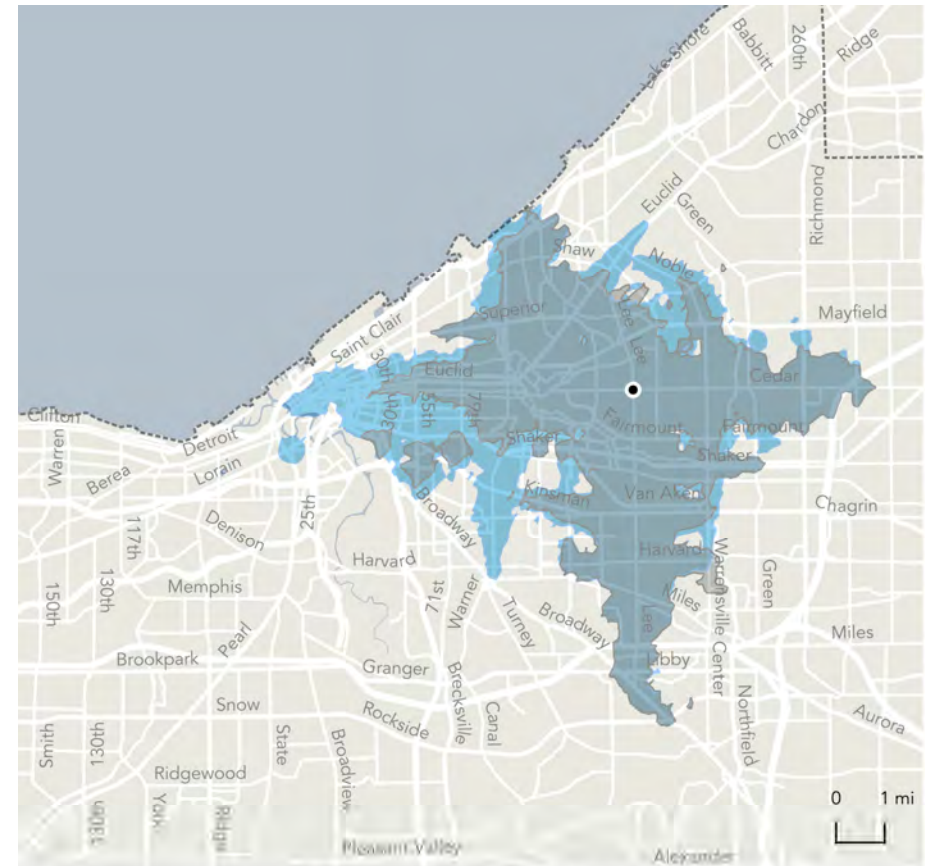
Measuring Usefulness

In an hour, where could I go with the Current Funding Concept?

The blue area is newly reachable.



... From Cedar & Lee



How many jobs or residents are reachable from this location with the Current Funding Concept, compared to the Existing Network?

Jobs	Residents
+79,200 (+78%)	+58,900 (+33%)

Measuring Usefulness

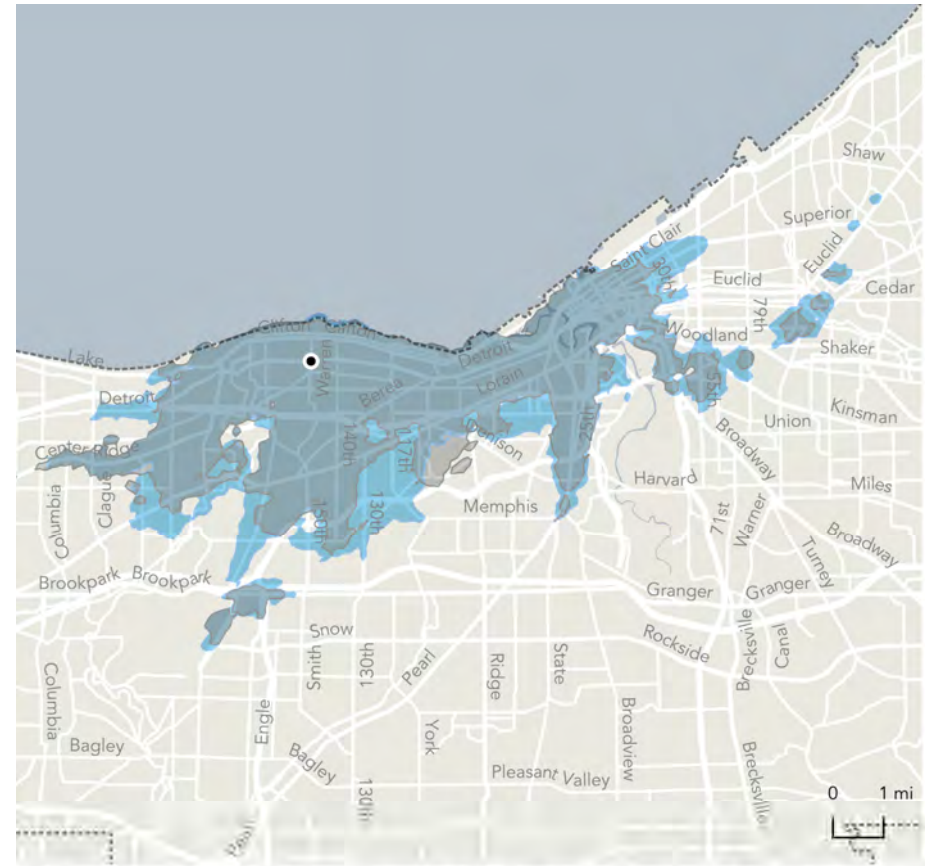
In an hour, where could I go with the Current Funding Concept?

More places to go = more jobs I could hold, places I could shop, services I could access.

The blue area is newly reachable.



... from Detroit & Warren?



How many jobs or residents are reachable from this location with the Current Funding Concept, compared to the Existing Network?

Jobs	Residents
+25,400 (+17%)	+40,900 (+24%)

Access to Jobs:

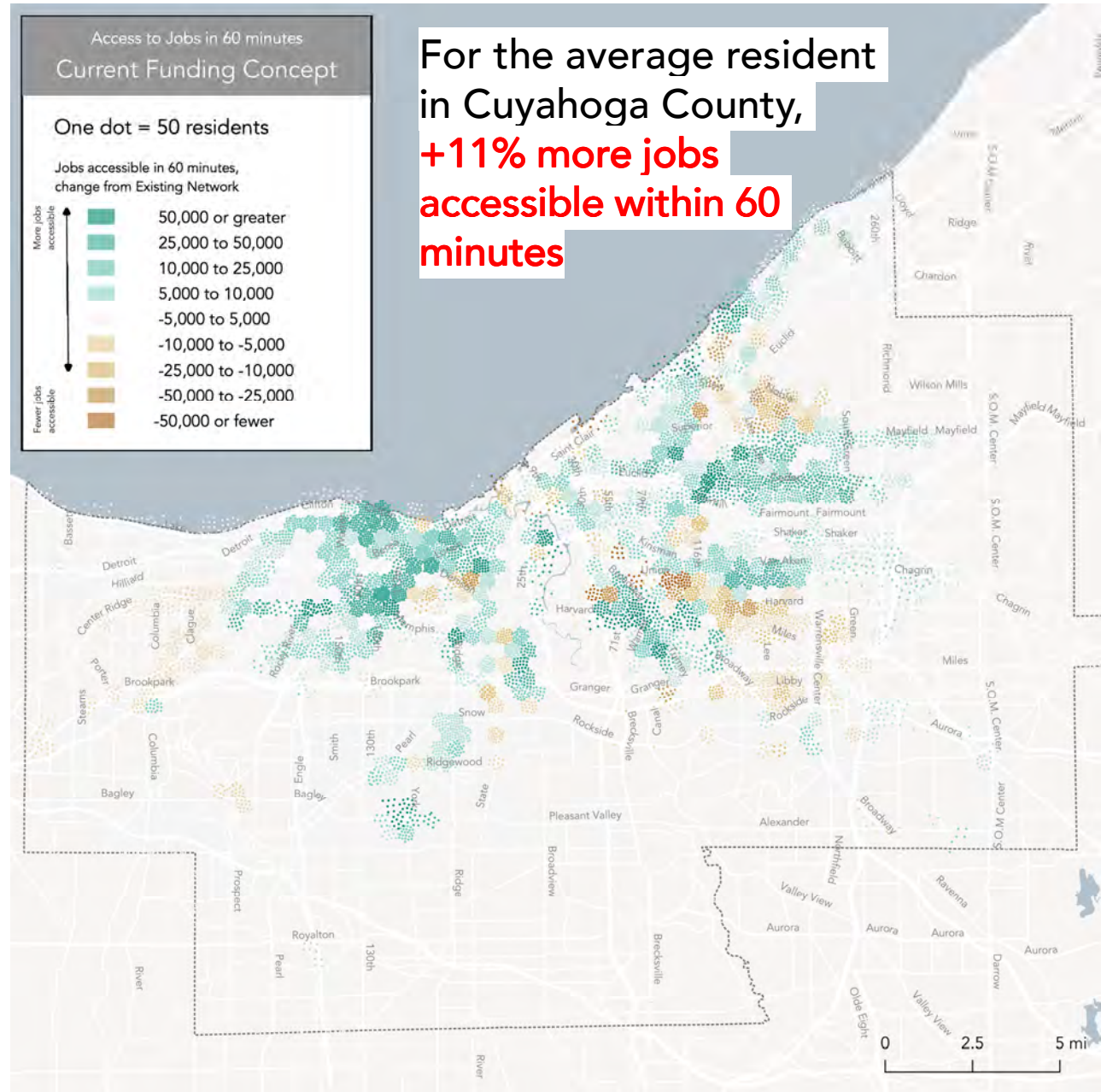
Current Funding Concept

Measuring usefulness across the entire county.

Green = more jobs accessible

Brown = fewer jobs accessible

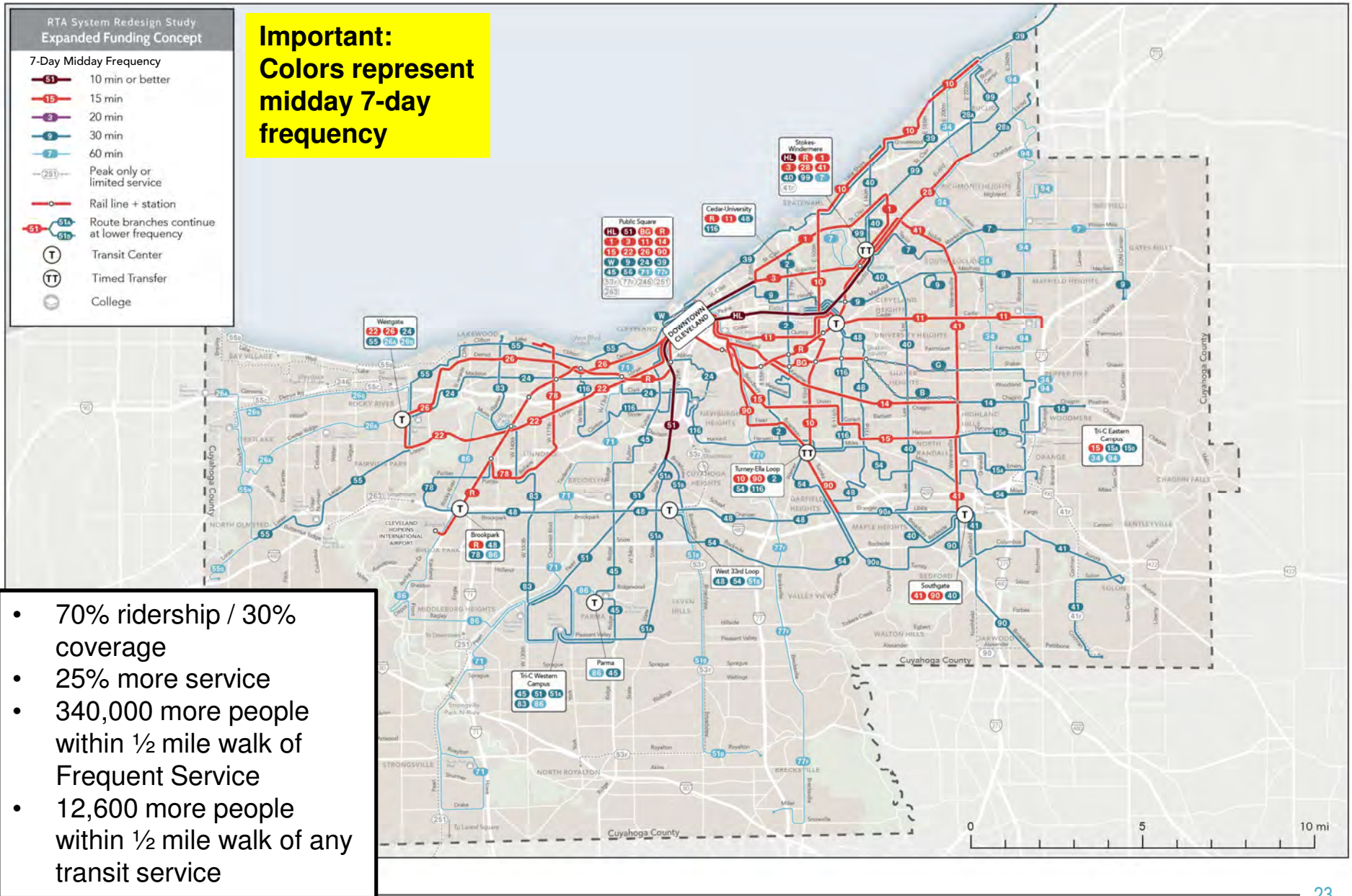
Each dot = 50 people



Current Funding Concept

- Expanded frequent network.
 - Detroit, E 105th/Lakeshore
- Access to 11% more jobs in 60 min.
- More one-seat rides
 - between low-income neighborhoods and entry-level jobs.
 - to and from downtown
 - to and from University Circle jobs
- Downtown circulation to be provided more by frequently operating regular routes. Trolleys that duplicate regular routes are removed.
- All bus park-n-rides continue to be served with downtown service, but not always via freeway.

Expanded Funding Concept



Access to Jobs

Measuring usefulness across the entire county.

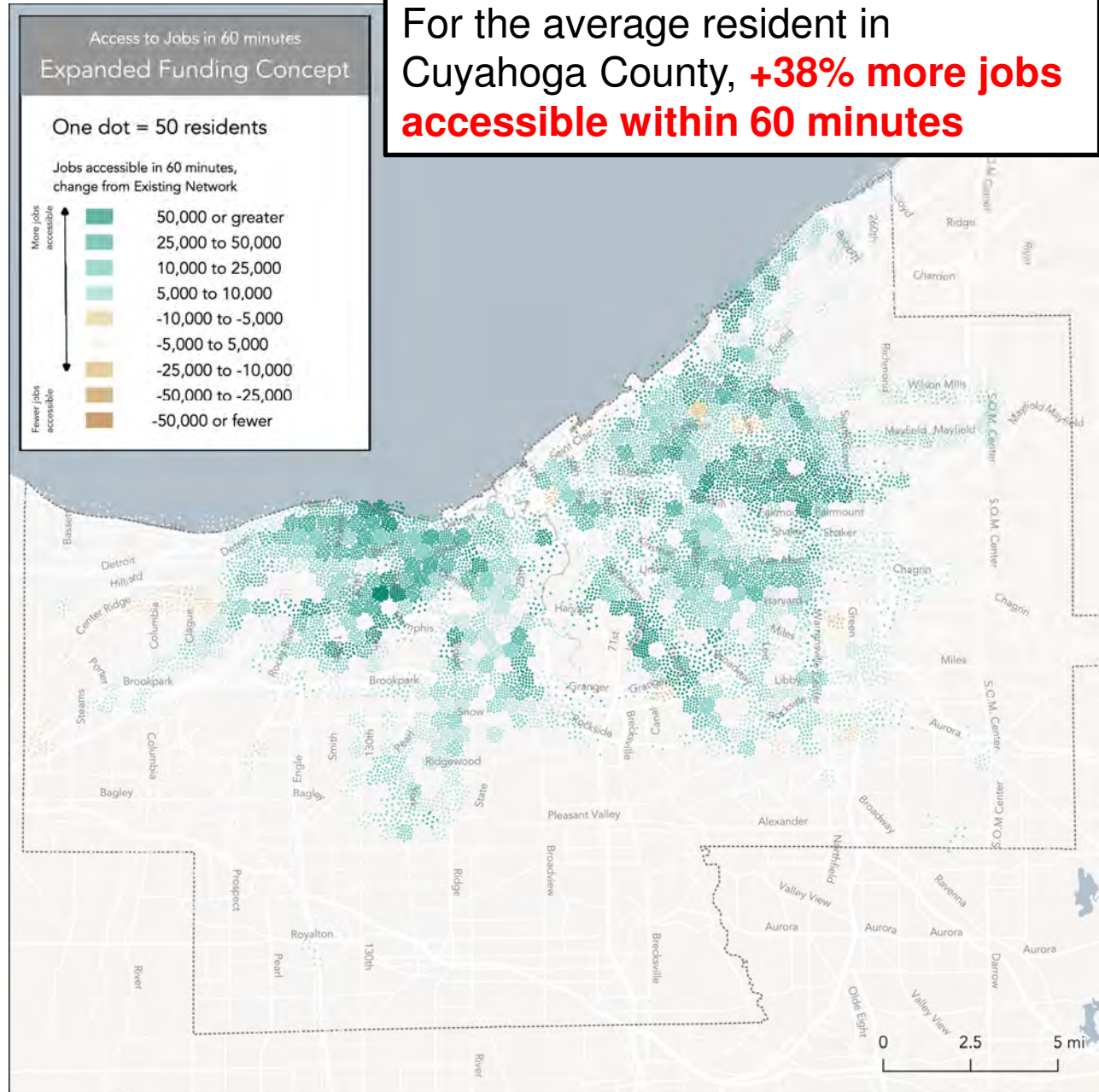
Green = more jobs accessible

Brown = fewer jobs accessible

Each dot = 50 people

Almost all areas gain access to more jobs than today.

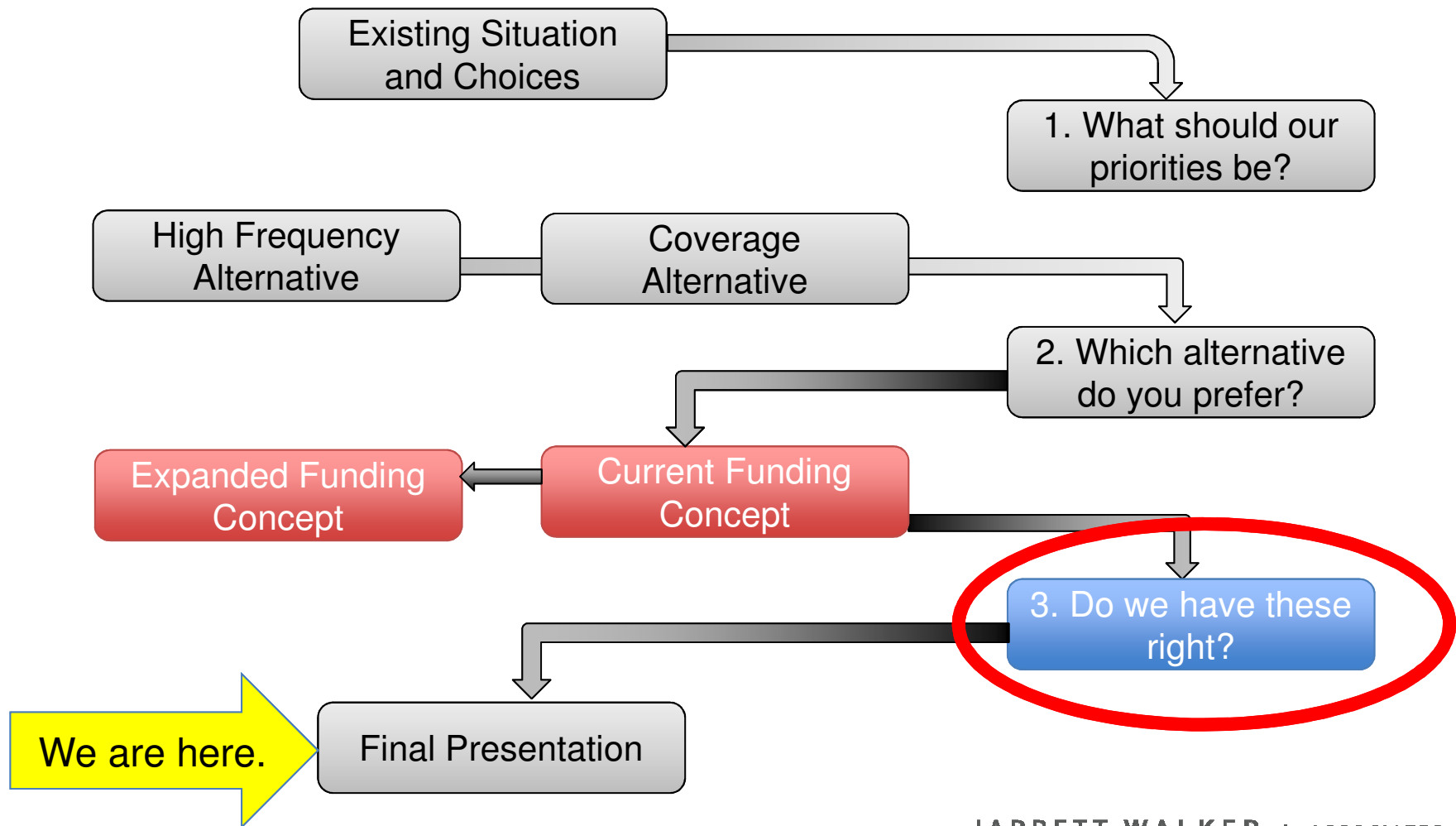
For the average resident in Cuyahoga County, **+38% more jobs accessible within 60 minutes**



Survey 3

Technical and Design Work

Questions to the Public

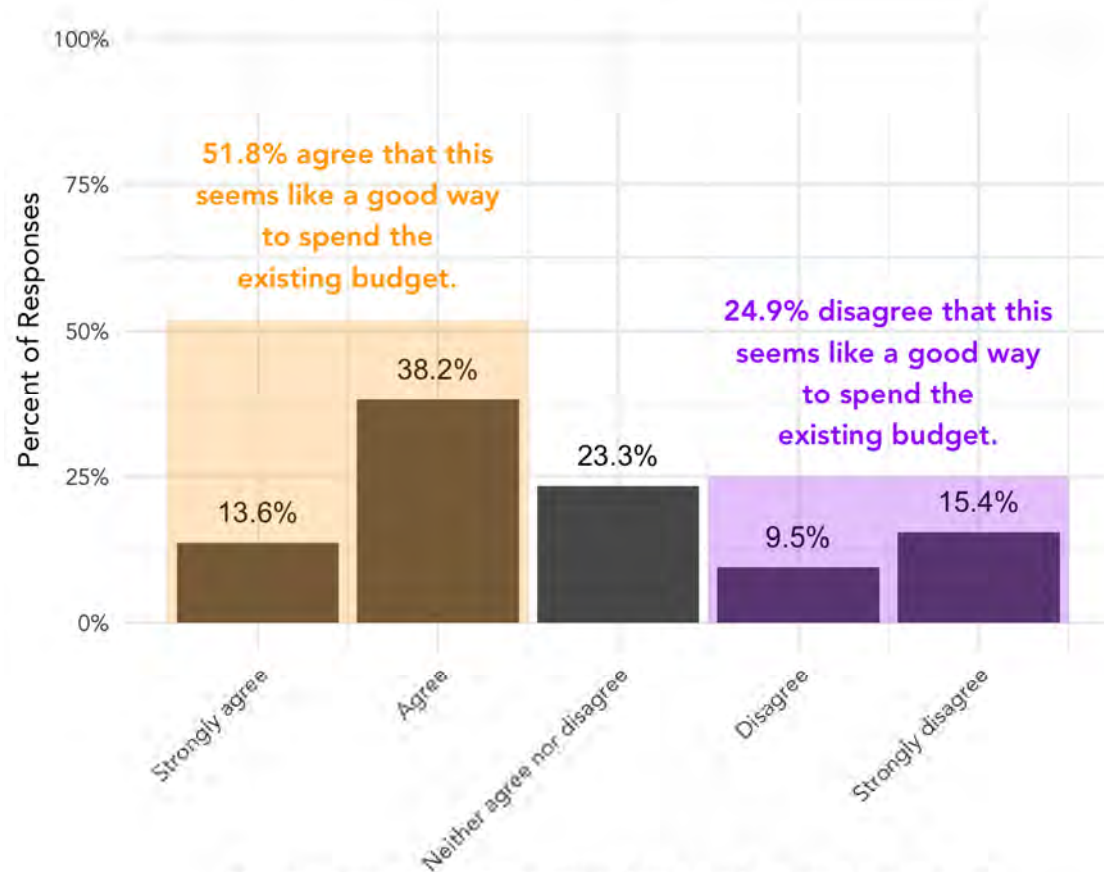


Survey 3

- Key questions:
 - Do you agree that the Current Funding Concept looks like a good way to spend the existing budget?
 - Do you agree that the Expanded Funding Concept looks like a good way to expand service?
 - In the Expanded Funding Concept, do you think we have the balance of weekday and weekend service right?

Current Funding Concept

Do you agree that the Current Funding Concept looks like a good way to spend the existing budget?



Do you agree that the Current Funding Concept looks like a good way to spend the existing budget?

By 2-1 margin respondents said the the Current Funding Concept “looked like a good way to spend the existing budget.”

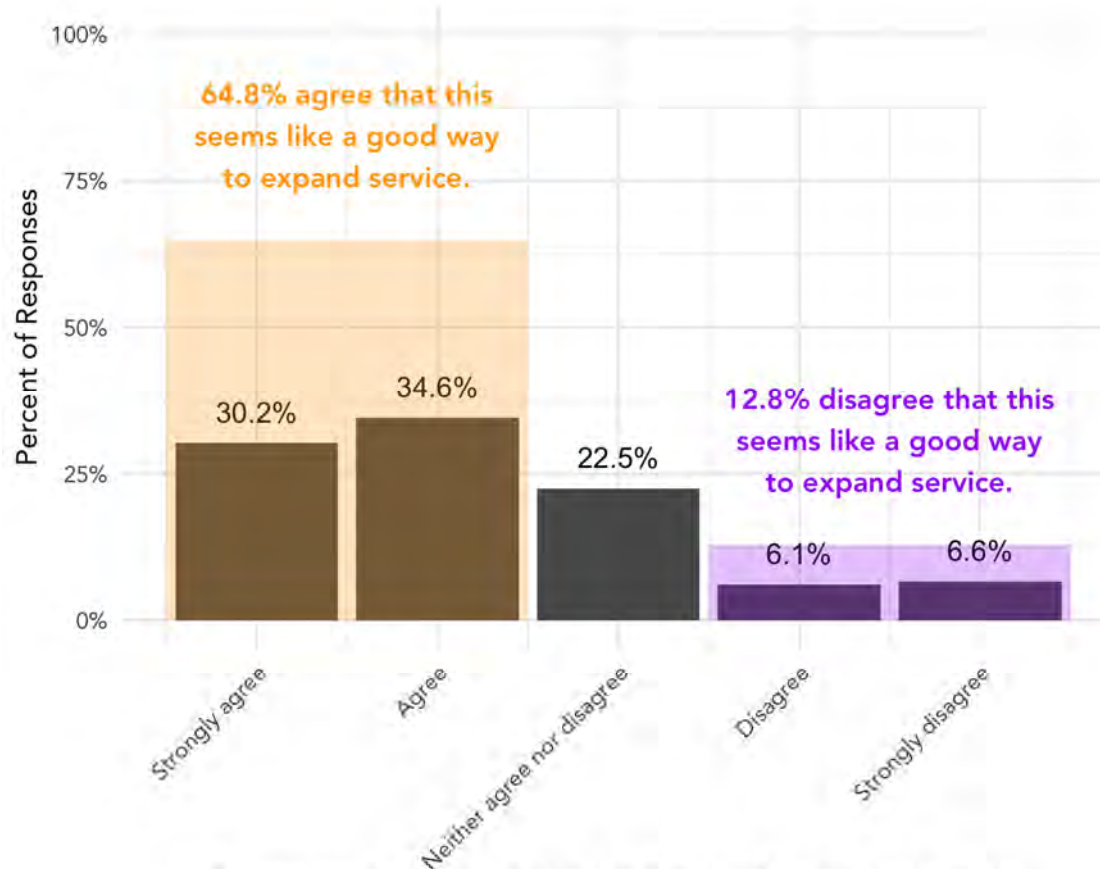
Half of the negative response was about one small issue: Park and Ride Express.

This will still be controversial

- All “current funding” service changes are controversial.
- The more they achieve, the more controversial they are.
- However, we have done three rounds of outreach, with many opportunities to participate. We have heard the community’s values and the plan reflects them.
- More hearings would be conducted before implementation.

Expanded Funding Concept

Do you agree that the Expanded Funding Concept looks like a good way to expand service?



Do you agree that the Expanded Funding Concept looks like a good way to expand service?

By a 5-1 margin respondents agreed that the Expanded Concept looked like a good way to expand service.

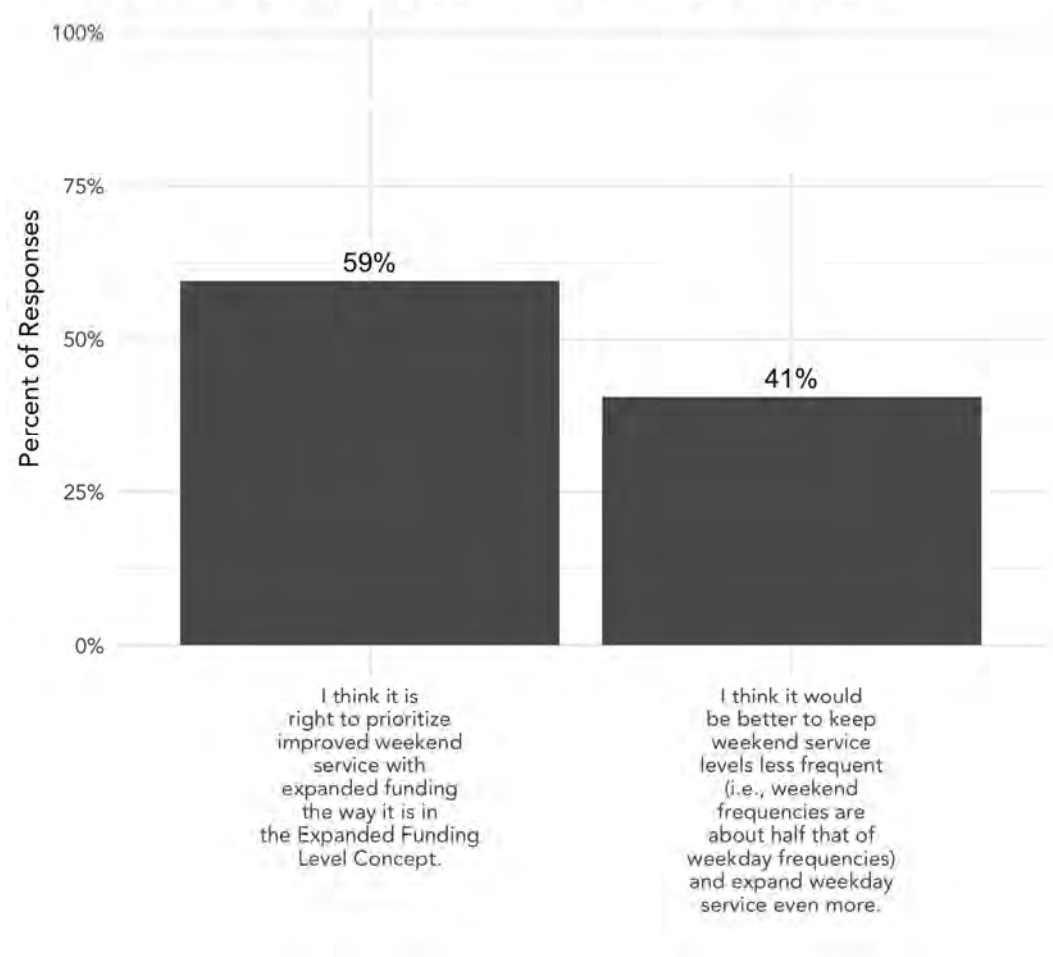
Weekday vs. Weekend Service

The Expanded Funding Concept expanded weekend service.

(There are no funds to do this in the Current Funding Concept)

A majority (59%) said this seemed right.

Do you think we have the balance of weekday and weekend service right (in the Expanded Funding Concept)?

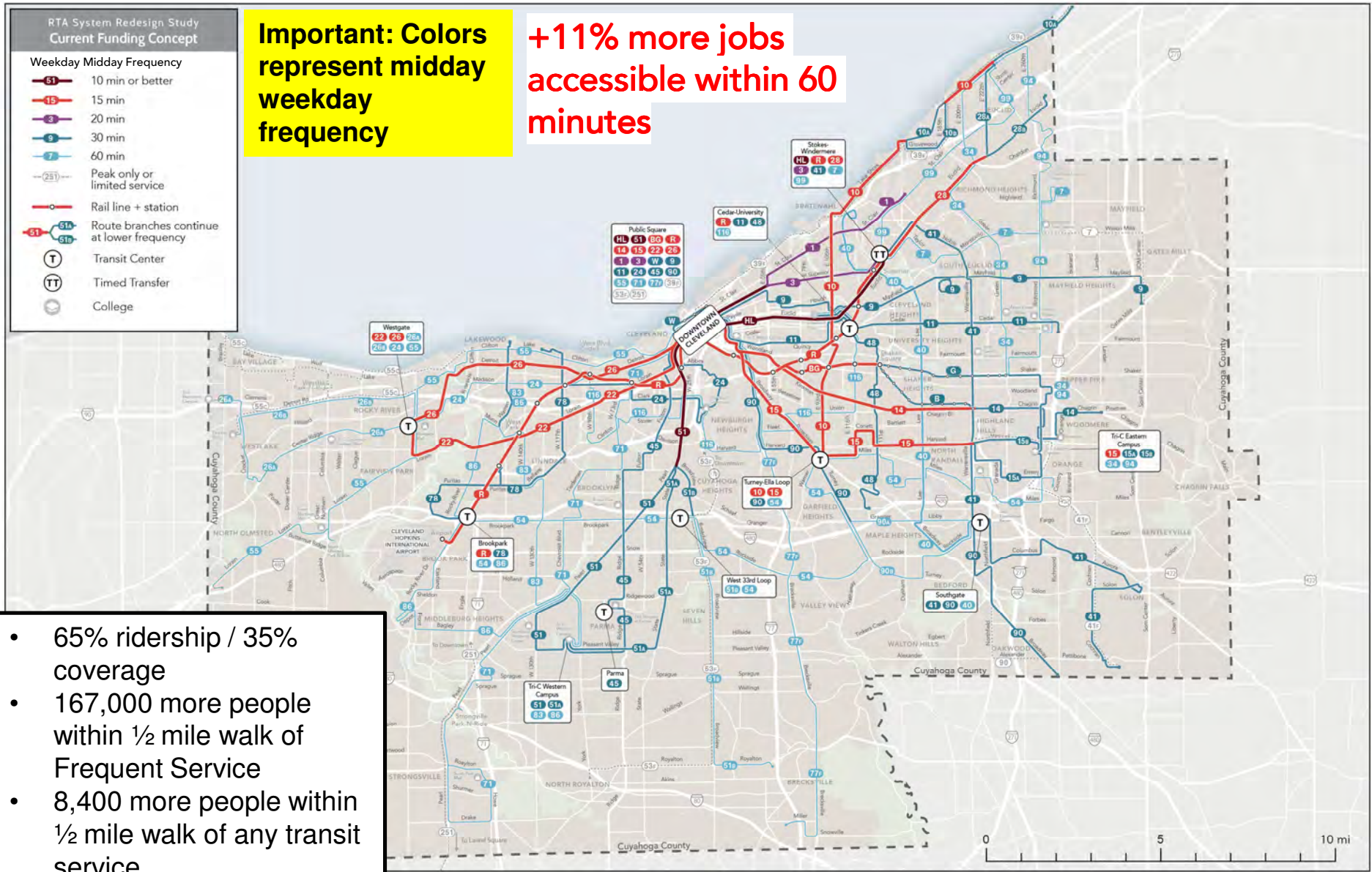


Summary

Summary

- No new resources are now available for service expansion.
- **Conclusion:** To reflect the values and priorities that the public have expressed within current funding availability, RTA should shift to the Current Funding Concept.
- Expanded Funding Concept, and its benefits, could be a basis for later conversation about new resources.

Current Funding Concept



Current Funding Concept

- Expanded frequent network.
 - Detroit, Lorain, Kinsman, E 105th/Lakeshore
- Access to 11% more jobs in 60 min.
- More one-seat rides
 - between low-income neighborhoods and entry-level jobs.
 - to and from downtown
 - to and from University Circle jobs
- Downtown circulation to be provided more by frequently operating regular routes. Trolleys that duplicate regular routes are removed.
- All bus park-n-rides continue to be served with downtown service, but not always via freeway.



Appendix G

Efficiency & Operational Review Pillar Study





FINANCIAL ANALYSIS AND ECONOMIC FORECAST FOR THE GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY

FINAL REPORT

GREATER CLEVELAND PARTNERSHIP

DATE: OCTOBER 2019

WSP
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WASHINGTON, DC 20003
PHONE: +1 202-783-0241
WSP.COM

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EXECUTIVE SUMMARY

SCOPE OF WORK

WSP was tasked by the Greater Cleveland Partnership (GCP) to conduct a Financial Analysis and Economic Forecast for the Greater Cleveland Regional Transit Authority (RTA). This work is just one component of the several studies RTA has underway to build a new vision for the system. The WSP study is complementary to those efforts.¹ To guide and support the study, GCP created a RTA Task Force comprised of business leaders interested in the topic and with expertise in RTA’s core functions (i.e. – operations, logistics, finance, etc.). The study aims to answer six broad research questions:

- 1 How does RTA compare to its peers?
- 2 What are the economic and market risks RTA faces?
- 3 What are the financial issues RTA faces?
- 4 What potential efficiencies could increase financial performance, and what strategies could maximize revenue?
- 5 What are current Key Performance Indicators and what processes and/or other indicators can be implemented?
- 6 What are current and potential future local funding mechanisms for transit?





This executive summary presents the key findings for each of these questions, the main recommendations, additional context regarding transit ridership trends, and next steps.

KEY FINDINGS

The table below presents the study’s key findings on each research question and a rating of RTA’s relative performance.

Research Question	Key Findings	Rating
Benchmarking	On par with peers, except for administrative and paratransit costs; rail service volume is high compared to ridership.	●
Economic and Market Risks	Future of rapid transit in Cuyahoga County is tied to regional planning and economic development	●
Financial Issues		
Operations	Operational budget appears to be balanced based on RTA’s assumptions	●
Capital	Significant funding gaps for railcar and rail infrastructure replacement.	○
Cost Efficiencies and Revenue Opportunities	Up to \$21 million in savings and \$8 million in additional revenues can be achieved by implementing recommendations	●
Key Performance Indicators	Strong KPI system, but need to improve public transparency and internal communication	●

¹ RTA is currently conducting four complementary “pillar studies:” a Fare Study, an Economic Impact Study, a Service Redesign Study and a Rail Car Study.

Revenue Options to Bridge Funding Gaps	RTA is authorized to levy sales-and-use and property taxes at the county level; both have a large base and could bridge capital funding gaps	
LEGEND:	 High/Excellent	 Medium
	 Low/Poor	

CONCLUSIONS AND RECOMMENDATIONS

The following recommendations emerged from the study:

- 1 Benchmarking:** RTA’s operational performance offers a mixed picture, with high-performing services (Bus Rapid Transit: the HealthLine) countered by services that are not in line with peers with respect to costs (local bus) or ridership (rail services). Additionally, administrative costs at the agency level appear to be higher than most peers. From a governance standpoint, RTA’s Board would benefit from limiting the number of terms and eliminating the stipend for Board members.
- 2 Economic and Market Risks:** RTA is facing risks related to its funding (reliance on federal grants and local sales and use tax), its operations (declining ridership), its assets (underfunded rail infrastructure and need for costly rail vehicle replacement) and broad regional trends (dispersion of jobs and population centers). Opportunities to mitigate these risks, based on stakeholder input, include new CEO leadership who could foster positive change within the agency; the local bus redesign study that could improve operational efficiencies, especially if done collectively with transportation network companies (i.e. -Uber, Lyft); and, while less certain, the recent population growth in downtown Cleveland that could be create more interest in using transit.
- 3 Financial Issues:** RTA’s financial outlook shows limited deficits in the operating budget. However, projected costs of replacing new rail vehicles (\$240 million, per RTA) and meeting other unfunded maintenance needs, primarily related to the rail system, far exceed available capital revenues.
- 4 Cost Efficiencies and Revenue Enhancement Strategies:** Cost reduction strategies, relying on privatization and internal reorganization, could lead to potential savings of \$21 million per year, while additional revenues could amount to \$8 million through ridership recovery with local bus system redesign and reinvestment in the rail system. To support its rail infrastructure, the region should consider as a priority long-term coordination of RTA’s service development and capital investments with governmental, business, and non-profit entities to direct economic development toward rail station areas, which are currently underutilized.
- 5 Key Performance Indicators:** RTA has successfully developed advanced performance reporting systems. To enhance its performance-based management, reputation and transparency, RTA should share its goals and results both internally with all its employees and externally with its riders and the public.
- 6 Revenue Sources and Options to Bridge Funding Gaps:** Among various local revenue sources used to fund transit across the U.S., RTA has the ability to levy sales-and-use and property taxes at the county level. Based on RTA’s assessment of its capital needs, substantial funding increases are needed to recapitalize its rail infrastructure and replace its trainsets. What is uncertain is if that increased funding to cover the capital shortfall will yield a high return-on-investment in terms of increased ridership.

ADDITIONAL CONTEXT: RIDERSHIP TRENDS

RTA’s ridership declined 31% between 2007 and 2017, which continues a long-term pattern of decline. The agency’s ridership has fallen by more than 75% since its peak in 1980, in parallel with the decrease in the number and density of residents and jobs in Downtown Cleveland and along RTA’s rapid transit corridors. Many local factors contributed to RTA’s ridership decline: population loss and outmigration,

changing development and employment patterns, and the aging of the region's population. Key factors contributing to a decline in transit ridership nationwide include higher automobile ownership, low fuel prices, and increased competition in the urban transportation market (such as Uber and Lyft). The dispersion of jobs and residents, including transit-dependent populations, throughout Greater Cleveland have made it increasingly challenging for RTA to serve the region efficiently. At the same time, the city of Cleveland is among the American cities with the lowest car ownership: in 2016, 23.6% of households in Cleveland did not own a car, leading to a significant population depending on transit to access jobs increasingly located in the outer reaches of the county.

NEXT STEPS

RTA and the Greater Cleveland region are at a crossroads. Based on this report, the business community will be able to weigh the trade-offs among the available options for transit operations. Without additional funding, RTA's rail service risks being gradually curtailed as key infrastructure becomes unsafe for operation, eventually limiting its services to Bus Rapid Transit (BRT), local bus services, and paratransit service for people with disabilities. With additional funding and coordination across sectors (government, business, non-profit), the region could reorient economic development toward areas served by the region's rail infrastructure asset.

Many metropolitan areas in the United States are currently investing billions of dollars to develop rail transit systems similar to the network that already exists in Cleveland. For significantly less investment, RTA could bring their rail infrastructure to a high performing standard. RTA's HealthLine BRT provides a local example of the ability of a transit system to generate economic benefits and to attract and shape transit-oriented development. Scaling this type of development strategy across the rail infrastructure is needed to maximize the investment. Greater Cleveland needs an aligned economic development strategy to enhance the use of RTA's rapid transit system. Regional support for additional transit funding should be coupled with other reforms and investment along the rapid transit corridors.

1 PURPOSE

WSP was tasked by the Greater Cleveland Partnership (GCP) to conduct a Financial Analysis and Economic Forecast for the Greater Cleveland Regional Transit Authority (RTA). To guide and support the study, GCP created an RTA Task Force consisting of business members interested in the topic, who provided guidance throughout the study development. The study aimed to answer six broad research questions:

- 1 How does RTA compare to its peers?
- 2 What are the economic and market risks RTA faces?
- 3 What are the financial issues RTA faces?
- 4 What potential efficiencies could increase financial performance, and what strategies could maximize revenue?
- 5 What are current Key Performance Indicators and what processes and/or other indicators can be implemented?
- 6 What are current and potential future local funding mechanisms for transit?

2 BACKGROUND

A strong transit system depends on connecting high population-and-employment-density corridors, where many residents and workers are located within a short walk of a transit stop, feeding a thriving, high-density downtown employment district, ideally with hundreds of thousands of jobs located within just a few square miles of the region's main transit hub. Both Downtown Cleveland and the key transportation corridors that RTA serves have experienced a decline in the number and density of residents and jobs since 1980, making it increasingly challenging for RTA to serve the region efficiently.

POPULATION, JOBS AND RIDERSHIP TRENDS

Between 1980 and 2017, Cuyahoga County's population fell from 1.49 to 1.26 million, a loss of 13%. Many residents left the region while others moved to surrounding counties, most of which have added population since 1980. The City of Cleveland has suffered even greater population loss, falling from 574,000 residents in 1980 to an estimated 386,000 in 2017, a loss of 33%. A loss of population density accompanied the population loss. Population density in Cuyahoga County fell from more than 5.1 persons per acre in 1980 to 4.8 in 2000 and 4.3 in 2017. The loss was even greater within the City of Cleveland, where density fell from 11.5 residents per acre in 1980 to 9.6 in 2000, with further decline to 7.8 in 2010.

RTA's ridership declined 31% between 2007 and 2017, part of a long term-decline that has seen the agency's ridership fall by more than 75% since it reached its peak in 1980. There are many factors contributing to RTA's ridership decline, including local factors such as population loss and outmigration, changing development and employment patterns, the aging of the region's population, as well as nationwide factors such as higher automobile ownership, low fuel prices, and increasing competition brought by Transportation Network Companies like Uber and Lyft.

At the same time, Cleveland is among the American cities with the lowest car ownership: in 2016, 23.6% of households in the city did not own a car², which is similar to Baltimore, Detroit, Pittsburgh or Chicago. This is not a result of high residential density and access to transit, rather, it is due to factors such as Cleveland's higher poverty rate and lower median age compared to the rest of Cuyahoga County. Car-free households in Cleveland generally appear not financially able to own a car, which causes them to become transit-dependent, even if driving might be their preferred mobility option and would enhance their access to jobs.

Regional population trends suggest that factors other than population underpin RTA's loss of ridership. While RTA ridership in the last decade fell concurrently with population decline in Cleveland and Cuyahoga County, RTA ridership fell at a significantly higher rate. RTA ridership shrank by nearly a third, as city and county population fell by 2% and 4%, respectively. This is shown in **Figure 2**, which illustrates the changes in population density from 1990 to 2017, using a combination of decennial Census and 5-Year American Community Survey (ACS) data. While population started declining in 1970s, it was the decade between 2000-2010 that showed the most noticeable, significant loss of population. This loss continued at a slower rate between 2010 and 2017.

Population loss has been greatest within the City of Cleveland's east side, where RTA has its greatest concentration of high-capacity transit lines, including the eastern half of the Red Line rail rapid transit line and the inner portions of the Blue and Green Lines light rail service and the HealthLine BRT. Since 2010, a handful of areas have begun to regain population, predominantly Cleveland's near west side, but these are exceptions to a long-term and on-going pattern of declining population and development density within the county.

Changing job locations and employment patterns in key industries, and more recently—the nature of work itself, are another major factor contributing to ridership decline. RTA's system was designed to accommodate commuters traveling between suburbs and city neighborhoods and the region's central employment hub, downtown Cleveland. However, downtown Cleveland employment has declined by more than half since 1980. This loss of downtown jobs is due to many factors, including the region's loss of corporate headquarters offices, decline of downtown retail, relocation of jobs to suburban locations, reduced workforces in industries like banking and financial services, increasing regional employment in health care and other non-downtown oriented industries, and construction of the baseball stadium and arena in the Gateway District project in the 1980s and 90s, which occupies roughly one-third of the downtown Cleveland footprint.

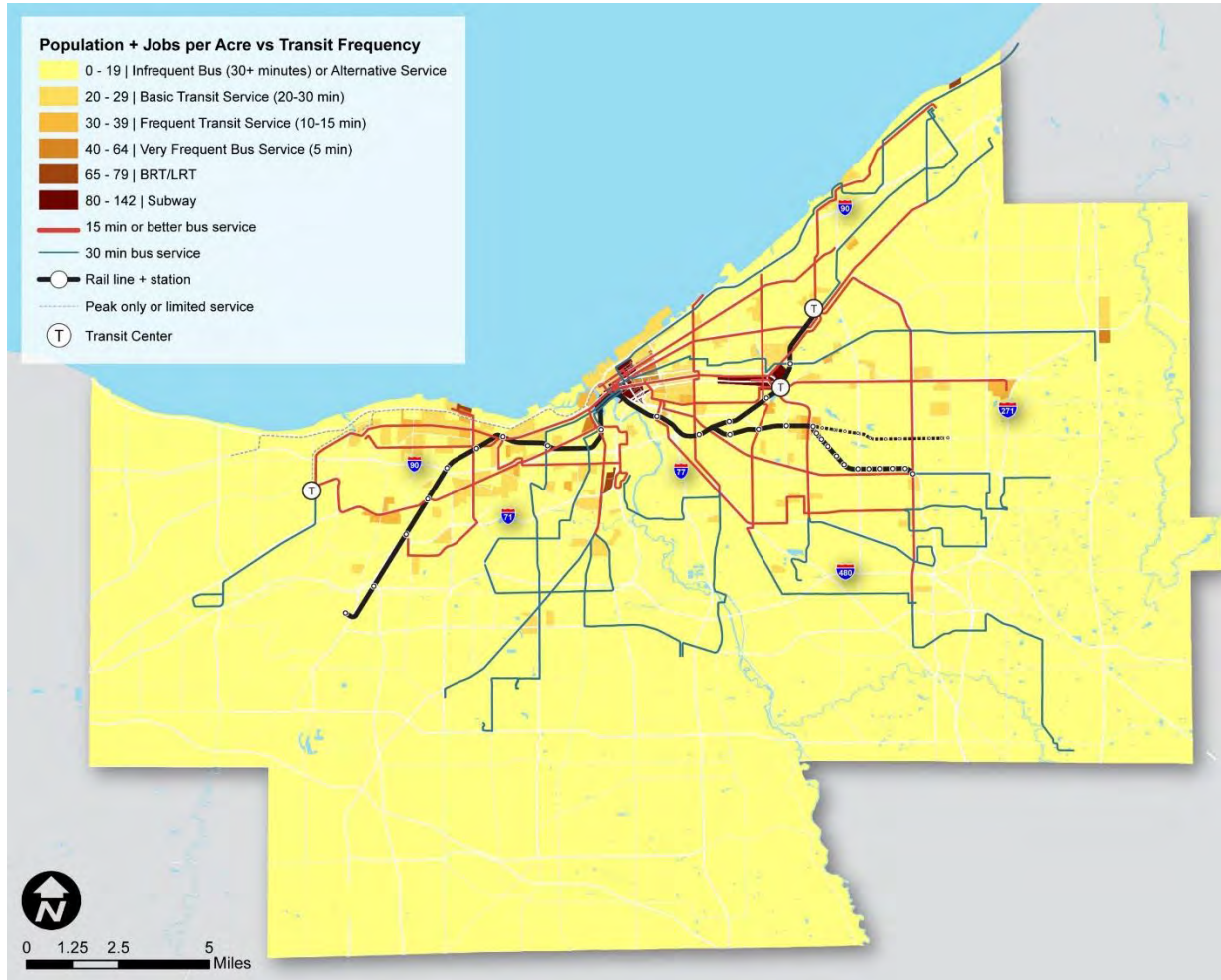
Recently, downtown Cleveland has shifted from the role of central business or employment district to a central entertainment district with restaurants replacing storefronts and office space repurposed or replaced by hotels and residences. Downtown lost nearly 17% employment between 2002 and 2015. Currently downtown employment consists of fewer than 90,000 workers³. Meanwhile, the number of downtown residents has more than doubled, from fewer than 7,300 in 1990 to more than 15,000 today. The recent repurposing to residential use of much of the Terminal Tower, Cleveland's iconic downtown building at the heart of the city, symbolizes this functional shift. The residential growth in downtown Cleveland makes it more attractive and vibrant, but downtown residents tend to live within walking distance of their workplaces, they can afford cars to travel to workplaces outside the downtown area, and transit service may not adequately serve their suburban employment destinations, thus contributing little

² Source: Census Bureau's American Community Survey (ACS) one-year estimates

³ Source: LEHD 2002-2015

to transit ridership. **Figure 2-1** illustrates how limited high population and job density areas that support transit are in Cuyahoga County.

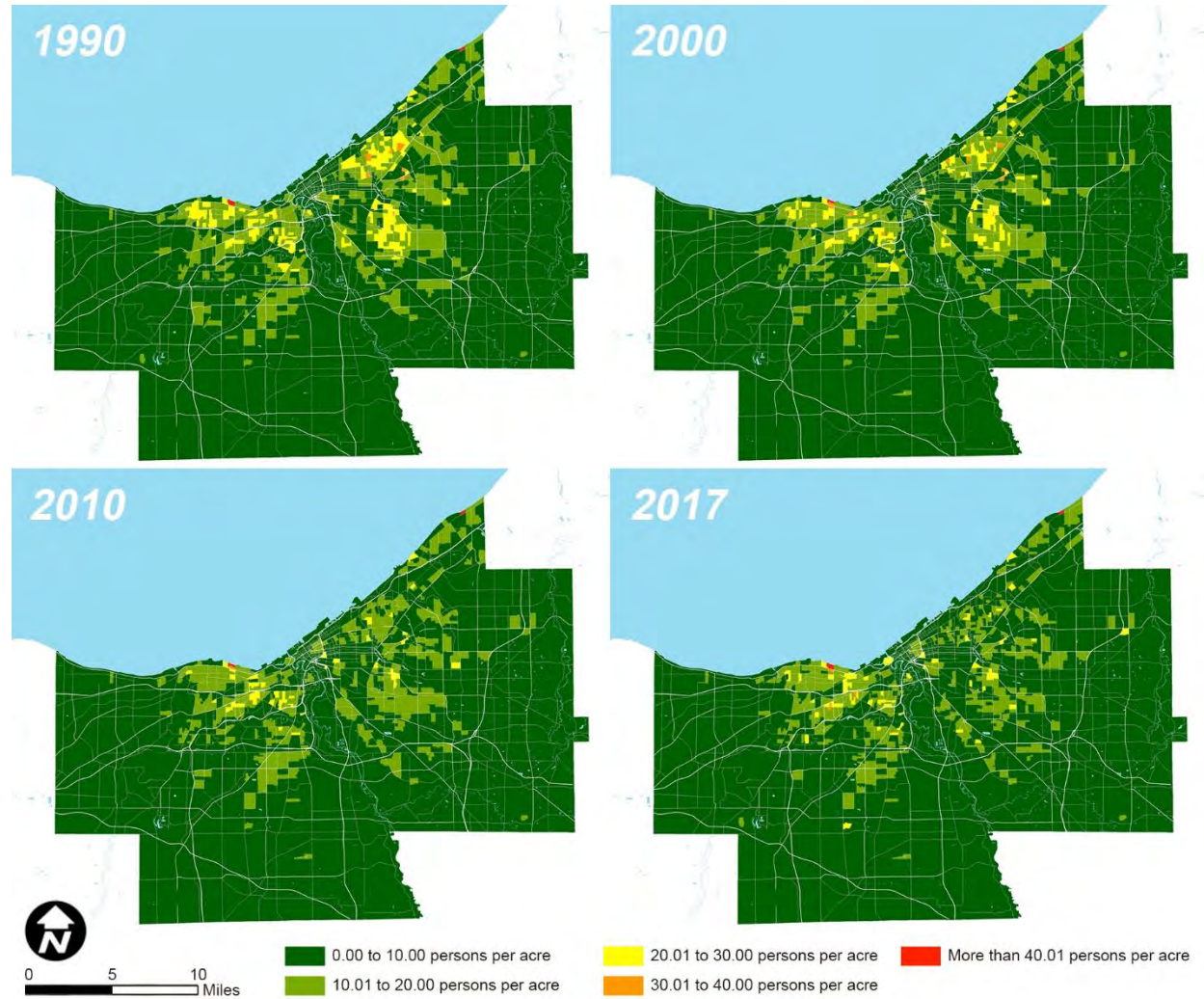
Figure 2-1: Population and Jobs Density by Census Block group with RTA System Redesign - High Frequency Network Concept



Source: 2015 ACS, 2015 Longitudinal Employer-Household Dynamics (LEHD)

Figure 2-2 shows Cleveland area locations that have gained and lost the largest number of employees between 2002 and 2015. As the series of maps shows, Downtown Cleveland has seen the greatest loss of jobs in the region, while most of the growth occurred in low-density, outer suburbs, locations that are virtually impossible for public transit to serve efficiently.

Figure 2-2: Population Density by 1990, 2000, 2010, and 2017 in Cuyahoga County

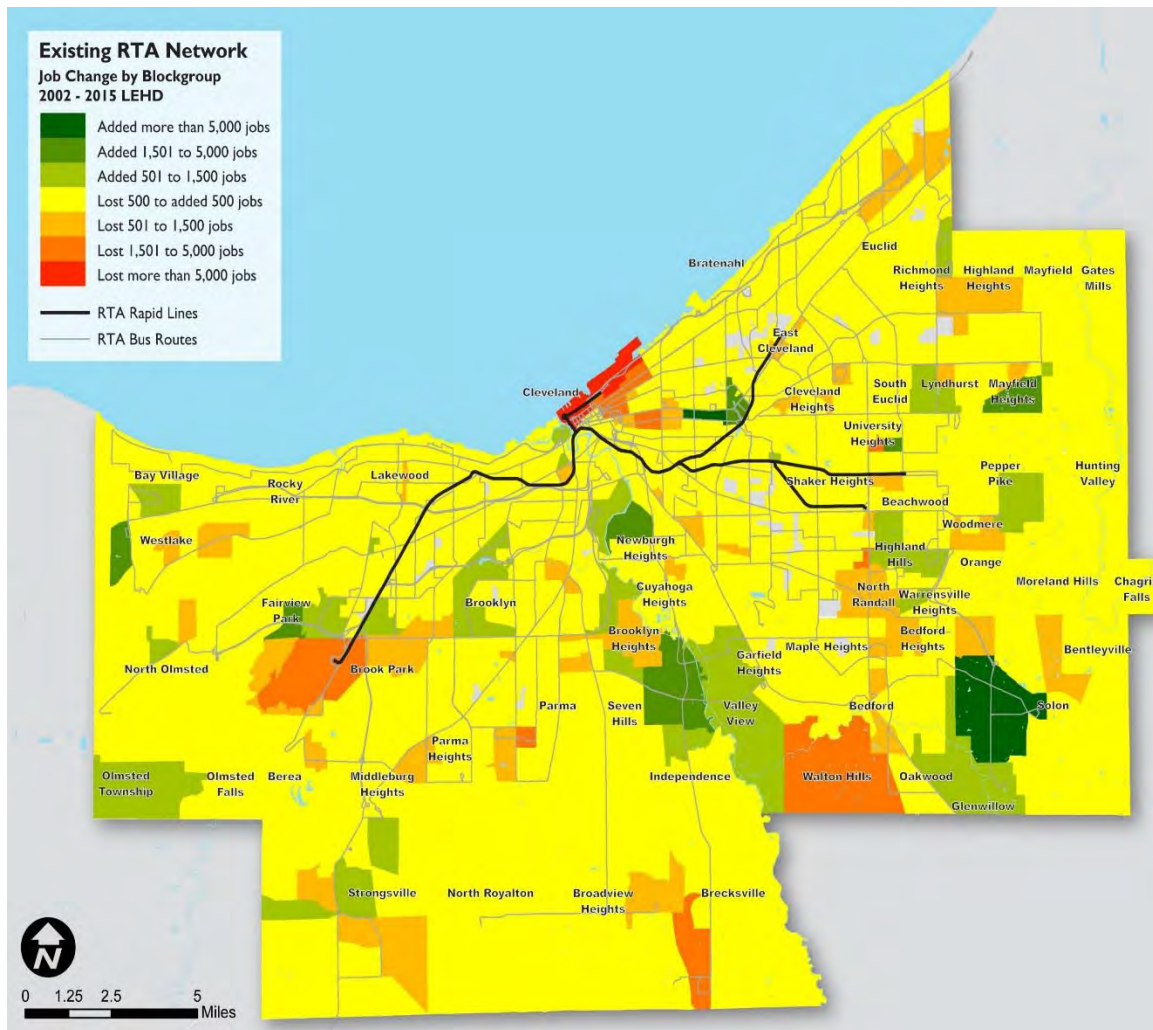


Source: 1990, 2000, 2010 Census, 2017 ACS

Note: Standardized to 2010 Census Block Groups by IPUMS NHGIS, University of Minnesota

While other factors influence demand for transit service, the combined population and employment density is a strong indicator of the level of transit service that an area can support. **Figure 2-3**, shows the combined population and employment density in 2015, color coded by the minimum combined population and employment density required to support various levels of transit service, from infrequent local bus service/alternative service to high-capacity rail and Bus Rapid Transit services.⁴ Aside from the two highest density locations – downtown Cleveland and greater University Circle area, most block groups in the county lack the combined population and employment density to support more than infrequent local bus service (where buses operate on headways, or intervals between buses, of 30 minutes or more) or alternative transit services like subsidized taxi or TNC service. Density is notably low around most of RTA’s rapid transit stations and high-frequency bus corridors, except for parts of the HealthLine corridor and the rapid stations in University Circle.

Figure 2-3: Job Change by Census Block group with Existing RTA Network



Source: 2002-2015 LEHD

⁴ “Transit Supportive Guidelines,” Ontario Ministry of Transportation, retrieved on August 2019.

<http://www.mto.gov.on.ca/english/transit/pdfs/transit-supportive-guidelines.pdf>

Note: While developed to provide guidance for Canadian cities, the guidelines are applicable to US cities and often are used in analyzing US transit markets.

3 PEER BENCHMARKING

3.1 OVERVIEW

The purpose of the peer benchmarking analysis is to evaluate RTA's performance-based financial operating and service characteristics. RTA's capital program is reviewed in sections 5 and 8 of this report.

The peer benchmarking analysis was developed based on the National Transit Database (NTD), the best data publicly available for all transit agencies. The Federal Transit Administration (FTA) mandates that transit agencies receiving federal funds must report certain information to the NTD in accordance with uniform reporting standards. Despite FTA's guidance and oversight, it is impossible to guarantee that all agencies have the same interpretation of FTA's reporting standards. The peer analysis conducted for this study assumes that minor discrepancies in reporting methodology across different peers will be normalized by focusing on comparison between RTA and the peer average. Additionally, the analysis focuses on fiscal year (FY) 2017 reporting due to the two-year lag in NTD reporting.

Governance data were reviewed using reference documents for RTA and its peers because this information is not covered in the NTD.

3.2 PEER SELECTION

RTA has a unique mix of transit modes (i.e., local bus, light-rail, heavy rail and Bus Rapid Transit) compared to other agencies of its size. The peer analysis benchmarked RTA against different groups of similarly-sized agencies for each transit mode to ensure appropriate comparison within each mode. The peer selection process for the benchmarking element of the study is based on the following methodology:

The WSP Team assembled an initial list of more than twenty peer agencies based on previous studies conducted by GCP (such as the GCP Tax Study) and consultation with RTA. The initial list was vetted by the WSP Team using NTD data and knowledge of the industry, and finalized based on input from the GCP Task Force.

RTA transit service includes local bus, BRT, heavy rail, light rail and paratransit service. RTA's mix of modes is unique for an agency of its size, therefore a true peer agency with similar characteristics and the same variety of modes does not exist. As such, the WSP Team identified a core group of comparable peer agencies based on local bus service, some of which also offer light rail service of a similar scope to RTA. To support a robust analysis across all of RTA's transit service modes, additional peer agencies were added to bolster the benchmarking analysis of the non-local bus modes: BRT, heavy rail, and light rail.

The criteria used to evaluate peers were based on type of transit service offered and regional characteristics.

Type of Service Offered: The modes operated by the agency; the overall size of operations (based on ridership and operating expenses); the size of specific transit mode services (local bus, BRT, light rail, heavy rail).

Regional Characteristics: Economic, demographic, geographic, and climate trends.

The list of peer agencies and service types are listed in **Table 3-1**. The local bus and paratransit peers were used for the governance benchmarking.

Table 3-1: Peer Agencies by Mode

Local Bus & Paratransit	Light Rail	Heavy Rail	Bus Rapid Transit
St. Louis Metro	St. Louis Metro	Baltimore Maryland Transit Administration (MTA)	Kansas City Kansas City Area Transportation Authority (KCATA)
Buffalo Niagara Frontier Transportation Authority (NFTA)	Buffalo Niagara Frontier Transportation Authority (NFTA)	Philadelphia-New Jersey Port Authority Transit Corporation Speedline (PATCO)	Hartford CTtransit
Pittsburgh Port Authority of Allegheny County	Pittsburgh Port Authority of Allegheny County		Grand Rapids Interurban Transit Partnership (The Rapid)
Columbus Central Ohio Transit Authority (COTA)	Hampton Roads Hampton Roads Transit (HRT)		
Detroit Detroit Department of Transportation (DDOT)	Baltimore Maryland Transit Administration (MTA)		
Milwaukee Milwaukee County Transit System (MCTS)			
Cincinnati Southwest Ohio Regional Transit Authority (SORTA)			

Source: WSP Analysis

3.3 PERFORMANCE RESULTS

The key findings, results and trends of the peer benchmarking analysis are summarized below. The first section reviews agency-wide performance, followed by performance at the mode level. The full benchmarking analysis began with a diagnostic of an extensive list of standard metrics. The diagnostic analysis illuminated areas of interest for further investigation. Additional detailed analysis was performed as needed.

Agency-wide performance results focus on operating cost drivers. Performance by mode is summarized using the following five metrics:

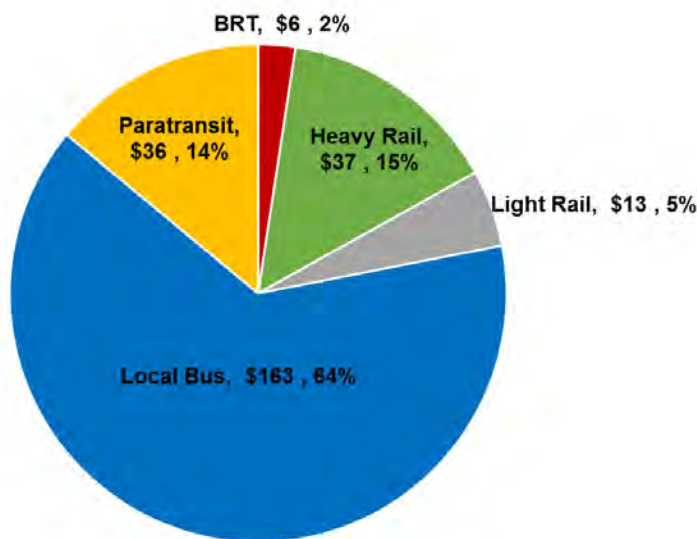
- 1 **Farebox Recovery:** Percentage of total operating and maintenance (O&M) costs covered by farebox revenues
- 2 **Total Operating & Maintenance (O&M) Cost per Service Hour:** Total cost to deliver an hour of service
- 3 **Service per Rider:** Service hours offered per 10,000 riders; this is a measure of whether service hours offered appropriately meet ridership demand
- 4 **Wage Rate:** Total labor costs (salaries and wages) per labor hour
- 5 **Fringe Rate:** Total fringe benefit costs per labor hour (e.g., healthcare)

3.3.1 AGENCY-WIDE ANALYSIS

TOTAL OPERATING AND MAINTENANCE COSTS

RTA operates five different services: local bus, BRT, heavy rail, light rail, and paratransit with local bus representing the largest portion of RTA's operations. In FY 2017, local bus service comprised 64% of total O&M spending. **Figure 3-1** provides a summary of RTA's total O&M spending by mode.

Figure 3-1: Operations and Maintenance (O&M) cost breakdown by mode (Millions of Dollars, FY 2017)

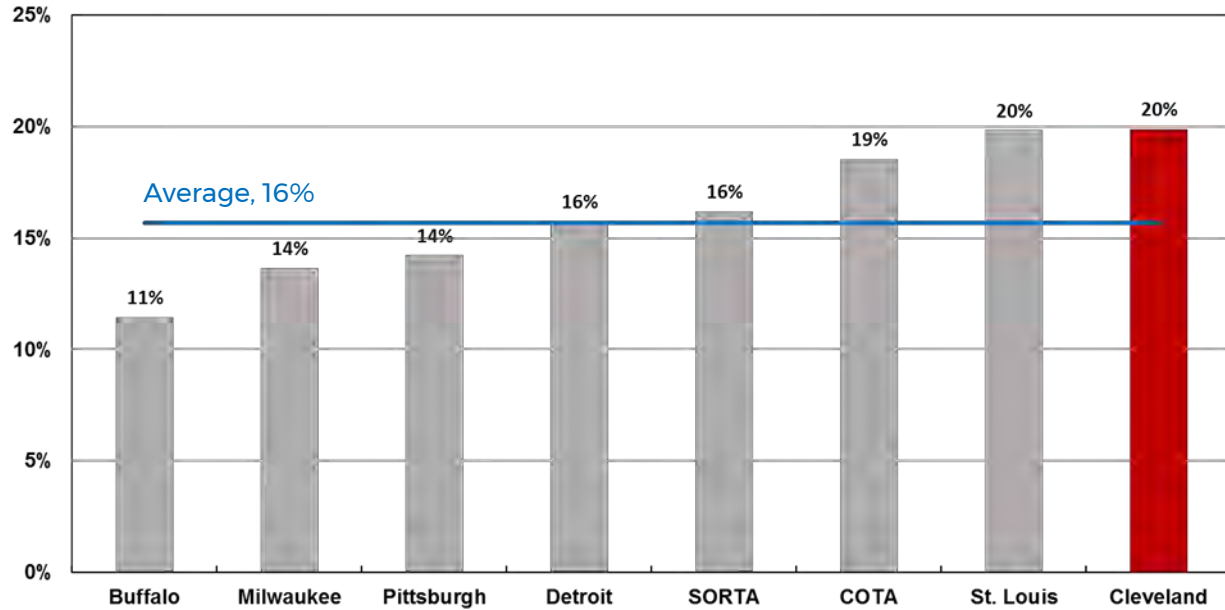


Source: NTD.

ADMINISTRATIVE COSTS

Figure 3-2 demonstrates that RTA's agency-wide administrative costs in FY 2017 are high relative to peers. RTA's administrative costs constitute 20% of total O&M costs while the peer average was 16%. Further analysis shows the number of labor hours and employees classified⁵ as administrative were also high for RTA relative to peers, while the average wage rates were in line with peers. These results indicate that RTA's administrative employees are compensated appropriately but are over-utilized.

Figure 3-2: Agency-wide administrative costs as a percentage of total O&M costs, FY 2017



Source: NTD.

⁵ Note that RTA's rules for classifying operating staff as administrative staff may differ from peers.

3.3.2 LOCAL BUS

Figure 3-3 provides a summary of RTA's local bus service performance compared to peers based on the five key performance metrics described above. Colorful bubbles represent RTA performance, while grey bubbles represent peer performance. The color code for RTA's performance is as follows:

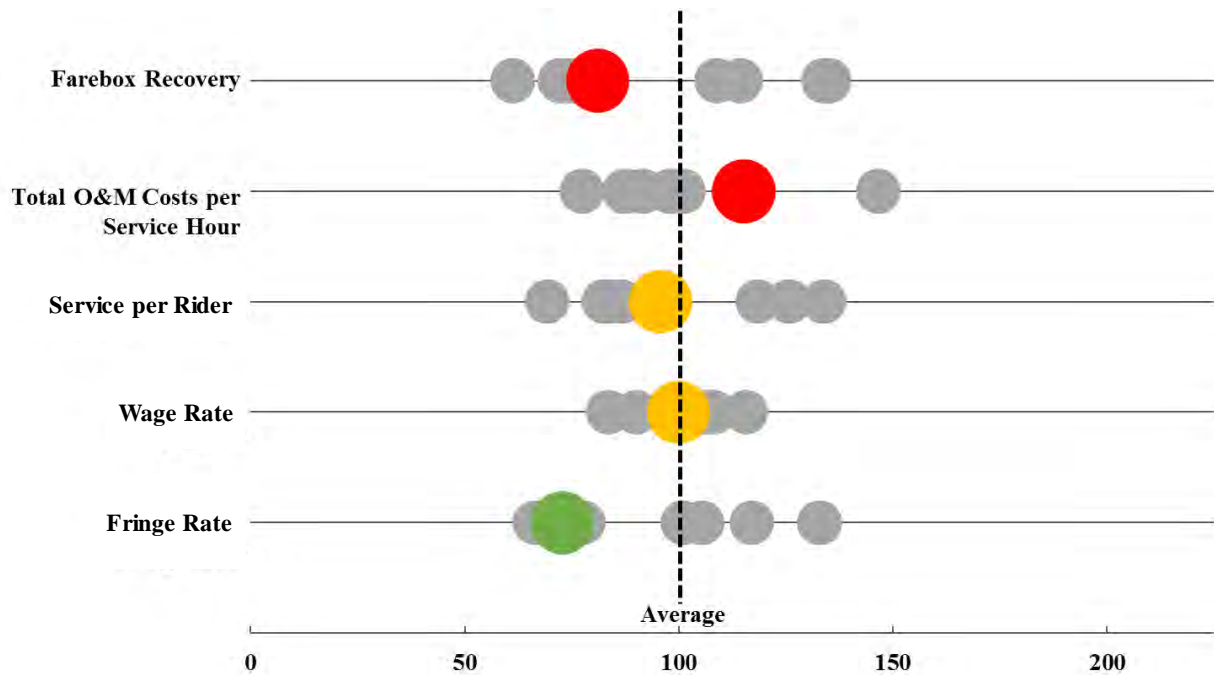
Strong performance relative to peers: ●

Average performance relative to peers: ●

Lower performance than peers: ●

In FY 2017, RTA's local bus farebox recovery was low and O&M costs per service hour were high relative to peers in FY 2017. However, these trends are likely driven by RTA's cost allocation methodology, which may overstate local bus operating costs as compared to peer reporting methodology relative to peers, since RTA classifies operating staff as administrative staff. In FY 2017, RTA's local bus service per rider was in line with peers in FY 2017. In addition, RTA's local bus labor costs were well-contained, as wage rates were in line with peers and fringe rates were below average relative to peers.

Figure 3-3: Local Bus Performance Summary



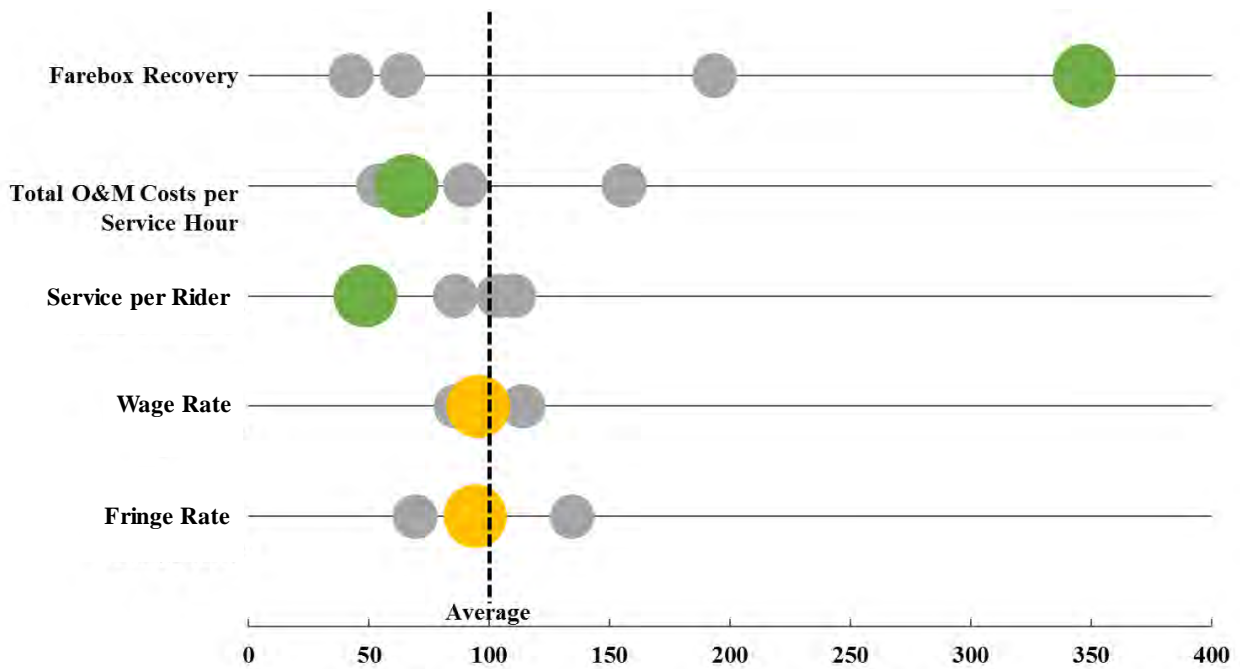
Source: NTD.

3.3.3 BRT

RTA’s BRT system, the HealthLine, has served as a model for BRT systems nationwide; in FY 2017, the BRT system performed at or better than average across all five metrics.

RTA’s BRT **farebox recovery** for BRT was significantly higher than peers while **O&M costs per service hour** were below average relative to peers. It is likely that RTA’s cost allocation methodology for total O&M costs is skewing the results, resulting in lower BRT costs and higher local bus costs. However, given the magnitude of difference between the HealthLine and peer BRT systems, the HealthLine’s strong performance is not driven by the cost allocation methodology. The HealthLine’s **service per rider** is below average which indicates efficient and well-utilized service. Similar to local bus performance measures, the HealthLine’s labor costs have been well-contained, **wage rates** and **fringe rates** were in line with peers in FY 2017. Overall BRT performance is summarized in **Figure 3-4**.

Figure 3-4: BRT Performance Summary, FY 2017

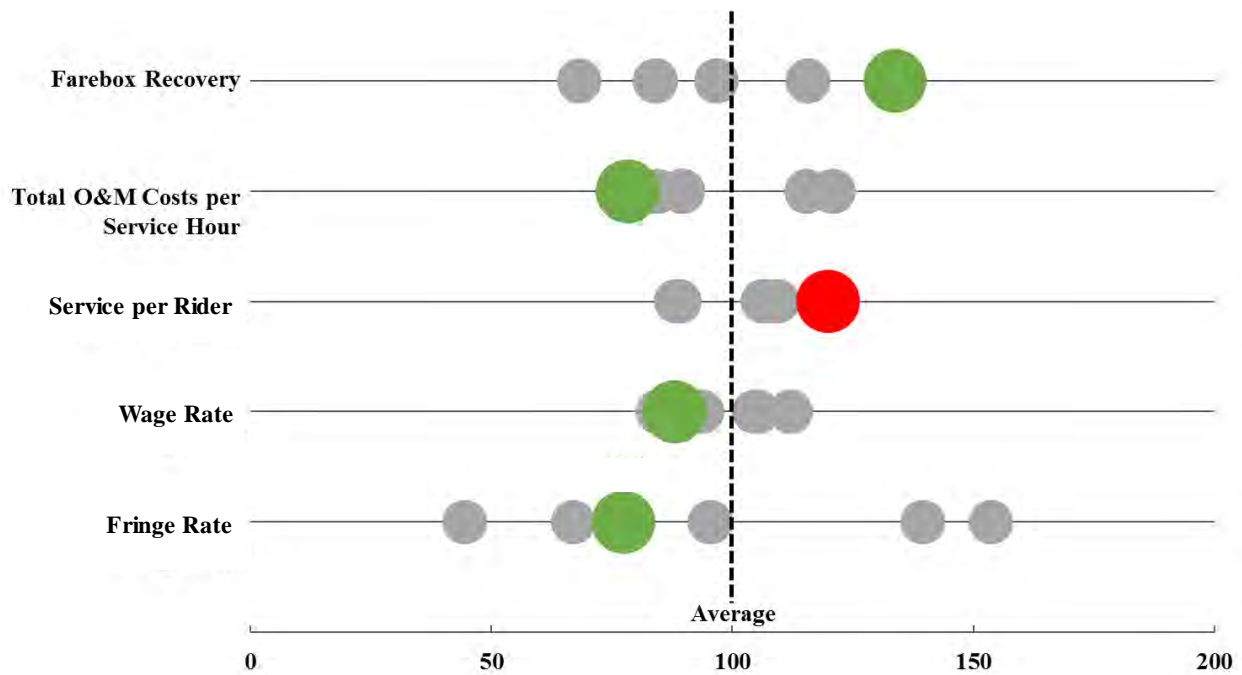


Source: NTD.

3.3.4 LIGHT RAIL

RTA’s light rail system includes the Green Line, Blue Line, and Waterfront Line. **Figure 3-5** summarizes RTA’s light rail performance in FY 2017. The RTA light rail performed well relative to peers across most metrics. RTA’s light rail **farebox recovery** was high relative to peers, **O&M costs per service hour** were low relative to peers, and **wage** and **fringe rates** were low relative to peers. RTA’s light rail **service per rider** was high relative to peers, indicating that service offered may be higher than warranted given ridership demand in FY 2017.

Figure 3-5: Light Rail Performance Summary, FY 2017



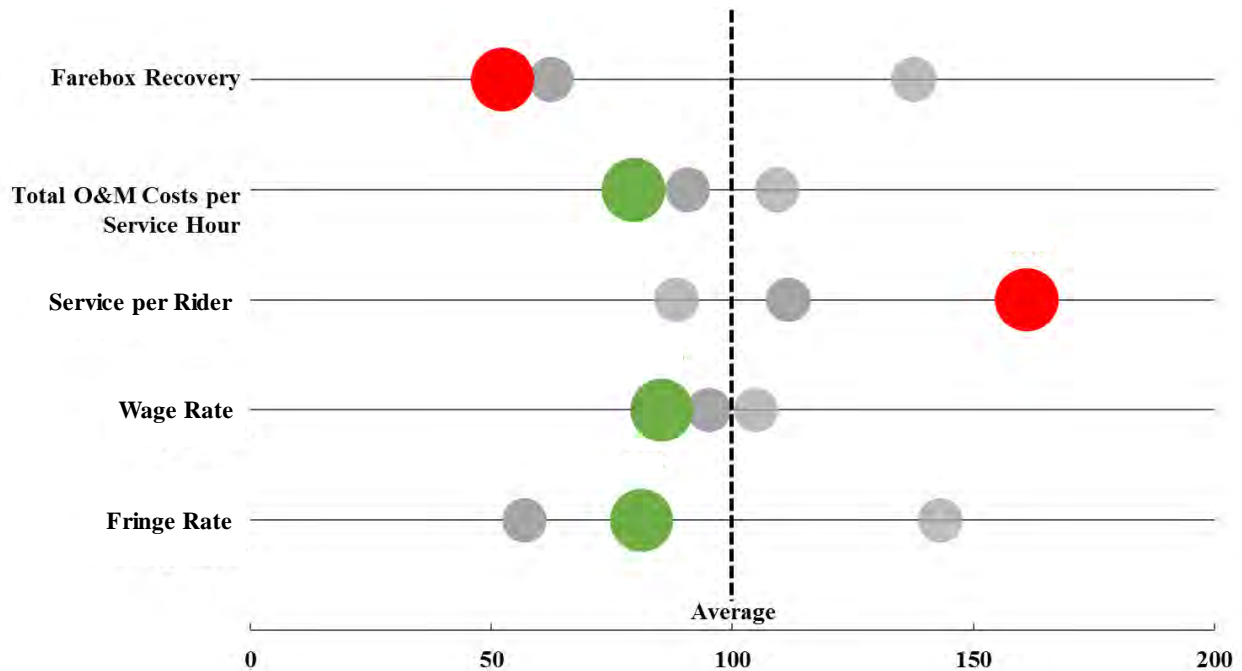
Source: NTD.

3.3.5 HEAVY RAIL

RTA's heavy rail system is unique, as it is among the oldest heavy rail systems in the nation and consists of only one line, the Red Line. As such, there are few transit agencies in the US that are appropriate peers. The two peer agencies selected for the peer analysis, PATCO and Baltimore MTA, are both located on the east coast in higher cost markets than Cleveland.

Although the peer average for **farebox recovery** is skewed by PATCO, the Red Line's performance is in line with Baltimore based on farebox recovery. The Red Line's **O&M costs per service hour** are favorable relative to the peer average, which is reasonable given its lower cost market. Additionally, **wage** and **fringe rates** for the Red Line are low relative to peers. RTA's heavy rail **service per rider** is much higher than both peers, indicating service offered was not aligned with ridership demand in FY 2017. Although this trend was also observed for RTA's light rail system, the misalignment between service hours and ridership for heavy rail was more significant than for light rail. Heavy rail performance is summarized in **Figure 3-6**.

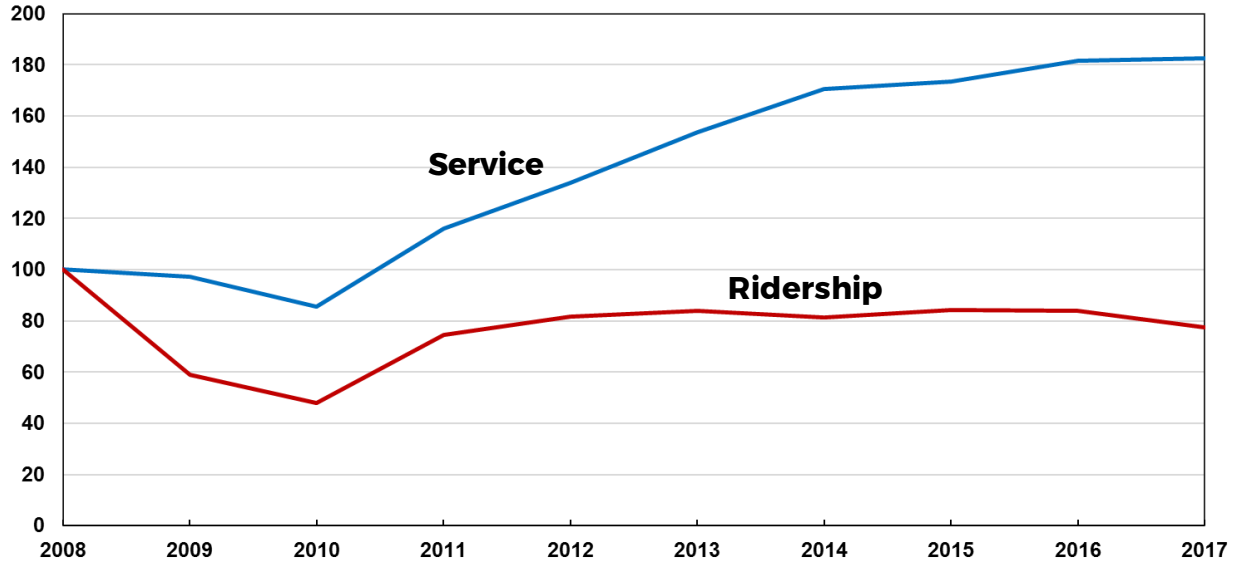
Figure 3-6: Heavy Rail Performance Summary, FY 2017



Source: NTD.

Figure 3-7 compares ridership relative to service hours offered over the last ten years, based on the NTD. The information in the graph is normalized based on ridership and service hours in FY 2008. Although both metrics declined following the recession, ridership has remaining steady since FY 2011 while service hours have continued to increase. Note: The Red Line shut down between West Boulevard Station and the airport (summer 2019) is not captured in the analysis time horizon.

Figure 3-7: RTA's Evolution of Heavy Rail Service Hours v. Ridership, (Index FY 2008 = 100)



Source: NTD.

3.3.6 PARATRANSIT

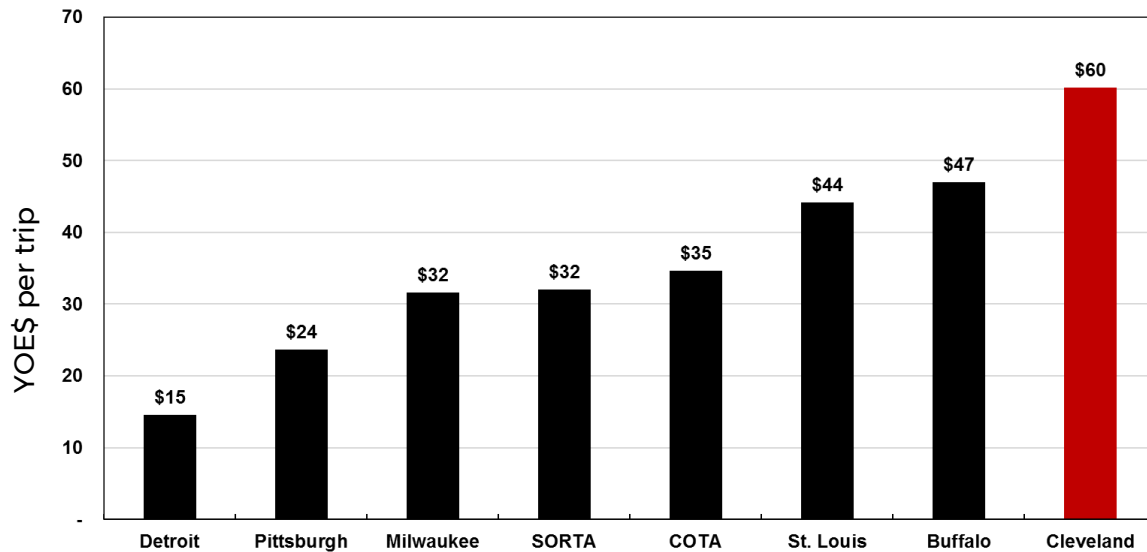
Like most transit agencies, RTA is required to provide paratransit service per federal mandates. Paratransit operations are typically less cost efficient than other modes and are evaluated differently. Paratransit characteristics include the following:

- Individual service
- No economies of scale
- Limited federal and state support
- Low fare revenues
- High costs per trip

Many transit agencies leverage contracted services to deliver paratransit service at a lower cost to the agency. However, a transit agency's ability to use contracted services may be constrained by labor agreements so not all agencies are able to realize the benefits of contracted services.

RTA is unique from its peers with its paratransit service as it utilizes both directly operated and contracted paratransit services. Peer comparators all utilize either directly operated or contracted services; none use a combination of both. St. Louis and Buffalo are the only peers to offer directly operated paratransit service. In FY 2017, RTA's paratransit costs per trip averaged \$60 per trip, significantly higher than all peers, including St. Louis and Buffalo (see **Figure 3-8**).

Figure 3-8: Paratransit costs per trip, RTA and Peers, FY 2017



Source: NTD. Cost per trip measured in Year of Expenditure dollars per trip.

Note: Although Detroit's O&M costs per trip were very low relative to peers in FY 2017, Detroit is the only peer to operate both traditional paratransit and demand response taxi service. Demand response taxi service is typically less costly than traditional paratransit, and thus may be skewing Detroit's paratransit performance.

3.3.7 GOVERNANCE

In terms of governance, **Table 3-2** shows that RTA's board size is in line with peers, but RTA is unique in giving its board members a stipend. Agencies tend to limit the number of terms a board member can serve.

Table 3-2: Key Characteristics of Peer Agencies' Boards

	Number of Members	Term Length	Paid?	Meeting Frequency*
Cleveland	10	3 years	Yes	16
Buffalo	13	5 years	N/a	12
Pittsburgh	11	4 years	No	10
St. Louis	10	5 years	No	6
Cincinnati	13	3 years	No	12
Columbus	13	3 years	N/a	11

Source: agencies' internal documents. Note: N/A notes agencies for which the information was not available.

**Meeting Frequency* reflects only full board meetings; it does not include committee meetings.

Milwaukee and Detroit do not have agency-specific boards, as seen in **Table 3-3**. Milwaukee's transit system is directly overseen by the county government. Detroit's is overseen by city government.

Table 3-3: Governing Bodies and Taxation Power of Peer Agencies

	Governing body	Tax levy power?
Cleveland	RTA, a political subdivision of Ohio	Yes
Buffalo	NFTA, a state public-benefit corporation	No
Pittsburgh	Port Authority, a county-owned agency	No
St. Louis	Bi-state Development, an interstate compact agency	No
Cincinnati	SORTA, a political subdivision of Ohio	Yes
Columbus	COTA, a political subdivision of Ohio	Yes
Milwaukee	Milwaukee County government	No
Detroit	Detroit City government	No

Source: agencies' internal documents.

3.4 CONCLUSIONS

The key results of the peer analysis include the following observations regarding RTA's performance:

- Agency-wide administrative costs are high
- Local bus O&M costs per service hour are high, farebox recovery is low, and service is well-aligned with ridership
- BRT performance is strong across all metrics
- Light and Heavy rail costs per service hour are strong, but service is poorly aligned with ridership
- Wage and fringe costs are well contained across all modes
- Paratransit costs per trip are high, particularly considering RTA's use of some contracted service
- RTA's board size is in line with peers but RTA is unique in giving its board members a stipend. Additionally, best practices include imposing a limit on the number of terms a board member can serve
- RTA has tax-levy power, which is useful to craft long-term investment strategies

4 RISKS AND OPPORTUNITIES

4.1 OVERVIEW

Economic risks impact the health of the overall regional economy, which has a direct impact on sales tax receipts that constitute a key revenue source for RTA. Market risks consist of a growing competition for urban and suburban transportation in the Greater Cleveland area, and dispersion of both the users' residences and job destinations.

To provide a better understanding of the existing and potential economic and market risks that RTA faces, WSP conducted targeted interviews of key regional stakeholders that understand RTA's situation. WSP worked with GCP staff, capitalizing on their extensive knowledge of the region's institutions and their interests, to identify appropriate stakeholders whose perspective would bring value to the assessment of these economic and market risks. Stakeholder interviews include some RTA board members and staff.

4.2 STAKEHOLDER INTERVIEWEES

The WSP Team conducted 10 interviews with a diverse set of individuals and organizations familiar with Cleveland, Cuyahoga County, and RTA’s economic, market and political situation. **Table 4-1** presents the list of stakeholder interviewees with their organization and role.

Table 4-1: List of Stakeholder Interviewees

Interviewee	Organization	Role
Justin Bibb	Key Bank	VP, Corporate Strategy RTA Board Member
Floun’say Caver, PhD	RTA	Interim CEO (at time of interview)
Gina Cheverine	GCP	VP, Commission on Economic Inclusion
Grace Gallucci	Northeast Ohio Areawide Coordinating Agency	Executive Director
Deb Janik	GCP	Senior VP, Real Estate and Business Development
Terry Joyce	Laborers Local 310	Business Manager RTA Board Member
Jeff Lechack	QCI Group	Director of Project Services RTA Task Force Member
Valarie McCall	City of Cleveland	Chief of Communications, Government & International Affairs RTA Board Member
Brad Whitehead (with Bethia Burke and Dominic Mathew)	Fund for Our Economic Future	President (Vice President and Urban and Regional Planner for Mobility Innovations)
Brian Zimmerman	Cleveland Metroparks	CEO

4.3 FINDINGS

Qualitative findings from the interviews are subdivided into four categories:

- **Funding:** What opportunities and risks does RTA face when it comes to their ongoing funding, grant opportunities? What is RTA’s strategy for local, state, and federal funding?
- **Operations:** What opportunities and risks does RTA face internally? How can RTA update or change their operations to be more transparent and efficient?
- **Assets:** What opportunities and risks does RTA own? How can RTA’s assets benefit them monetarily in the future?
- **Regional Trends:** What are the risks and opportunities that RTA face externally? What are the regional economic and market trends that could affect RTA’s funding, ridership, or operations?

Table 4-2 below outline the major risks and opportunities identified throughout the project process, including potential high-level strategies to mitigate risks.

Table 4-2: Major Risks and Opportunities

Category	Topic	Description	Mitigations
Funding			
Opportunity	State-level lobbying	RTA is in the process of establishing a state-level lobbyist, which could help ensure continued support at state level.	Not applicable
Risk	Federal funding	Transportation agencies around the country are facing reduced federal funding opportunities (including (both formula funds and discretionary funding).	RTA should create and follow a detailed funding strategy that is tied to each priority project within their capital program. Federal grant opportunities are competitive, and it is important to develop strategies to pursue these opportunities.
Risk	Fare revenue	Fares are highly correlated with the Cleveland population and the number of jobs available in the RTA service area. Population and/or job decline has a direct impact on fare revenue.	RTA should develop a robust and multifaceted funding strategy that relies on multiple funding mechanisms.
Risk	Reliance on sales and use tax	RTA is too reliant on sales and use tax for funding. When this revenue source deteriorates, RTA may need to cut service.	RTA should develop a robust and multifaceted funding strategy that relies on multiple funding mechanisms.

Category	Topic	Description	Mitigations
Operations			
Opportunity	Ridership	Downtown Cleveland has been growing in population, especially with millennials. This concentration of young, urban professionals provides an opportunity for RTA to attract young professionals, as well as transit-dependent riders, and affluent travelers who want more access to efficient transit.	Not applicable
Opportunity / Risk	System Redesign Study	<p>The system redesign study that is in progress is an excellent step towards understanding how RTA can best serve its users and opportunities associated with potential changes in system operations.</p> <p>Implementation of study recommendations comes with risk; it is important to ensure that the system redesign considers equity.</p>	Title VI analysis will contribute to check the equity effects of the local bus system redesign.
Opportunity / Risk	New CEO	<p>A new CEO provides an opportunity to establish new vision, strategy, and both internal and external perceptions of RTA.</p> <p>A new CEO also represents a potential risk to RTA. Organizational changes can cause friction. Strategic decisions need to reflect RTA's direction and focus.</p>	Ensure a smooth transition with senior leadership, leverage the Board and conduct employee engagement.

Category	Topic	Description	Mitigations
Risk	Public perception of RTA	RTA organizational goals and future plans are unclear to many stakeholders, including agency priorities and how internal decisions are made. This lack of understanding results in an ongoing risk of misunderstanding between RTA and community expectations (e.g., more money for RTA does not mean more service).	RTA should develop clear and transparent outreach strategies for both internal and external communications, demonstrating that RTA has established strategic goals for the future of the organization. Additionally, this strategy should include details on internal decision-making, specifically for those that affect stakeholders and the community.
Risk	RTA employee composition	The current composition (age / time to retirement) of RTA employees could be a risk to RTA. Does RTA plan for and hire enough younger employees to learn from and replace the potentially soon-to-retire knowledge base?	RTA maintains an internal staffing and succession plan; it includes initiatives for strategic recruitment and selection, partnerships with training resources, and development opportunities throughout RTA.
Risk	Rail Car Costs	There is a potential risk associated with the new rail car acquisition costs suggested in the rail car study and the reliability of those cost projections when considering RTA's purchasing power.	Assess how costs outlined in the Rail Car Study consider this risk and whether additional contingency funding should be included in the cost estimate.
Assets			
Opportunity	RTA owned property	RTA exploring ways to capitalize on RTA-owned property (e.g., P3 development, leasing, selling). This represents an excellent opportunity for new funding sources and potentially lower operational costs.	Not applicable
Opportunity	Appraisal of current office space	RTA could potentially relocate to a more cost-effective office space to reduce overhead costs. An internal analysis should be undertaken to understand if the office space is currently the best fit for RTA employees given current and future staffing levels.	Not applicable.

Category	Topic	Description	Mitigations
Risk	Aging transportation infrastructure & assets	The state of RTA's aging infrastructure and assets pose a risk to operations and performance.	Recapitalize rail infrastructure and assets to support ridership recovery and transit-oriented development.
Regional Trends			
Risk	Dispersed transit-dependent population and job destinations	The geographic dispersion of transit riders, desired origins, and destinations poses challenges to providing adequate service for the entire RTA service area.	<p>It is expected that the outcomes from the System Redesign Study (in progress) will mitigate this risk by determining the best corridors and areas for focusing RTA service.</p> <p>RTA should continually reference modeling of current and future population and developments in Cuyahoga County when considering service plan modifications.</p>
Opportunity	Transit-oriented development	Young professionals are moving into downtown Cleveland and are potentially interested in utilizing transit services. How can RTA better serve downtown Cleveland residents?	The Bus Redesign Study should provide recommendations regarding service to the residential population growth in the urban core.
Opportunity / Risk	Millennial population growth	TNCs pose a moderate risk to RTA's ridership base, but could also be an opportunity for partnership and associated reductions in operating cost.	RTA should Identify opportunities to partner with and capitalize on TNC expansion in region, as well as better analyze what it would look like for RTA to transition to a Mobility as a Service provider operational model.
Risk / Opportunity	TNCs and New Mobility Services	Multiple stakeholders referenced the siloed nature of regional strategies for economic development and RTA. Separate decision-making conversations and processes are not in the best interest of RTA or its potential development partners.	RTA needs to be a part of all economic development discussions that include new or relocating businesses. Additionally, the regional economic development plan needs to incorporate goals and strategies to maximize public transportation options for workers in the region.

Category	Topic	Description	Mitigations
Risk	City of Cleveland and Cuyahoga County Economic Development Strategy	Young professionals are moving into downtown Cleveland and are potentially interested in utilizing transit services. How can RTA better serve downtown Cleveland residents?	The Bus Redesign Study should provide recommendations regarding service to the residential population growth in the urban core.

4.4 CONCLUSIONS

RTA is facing major risks regarding its funding sources. While several opportunities exist to redesign and rethink operations, public perception of decision-making and goals, internal governance, and demographic changes and development patterns affect RTA's prospects. Aging assets are a major concern, both for rail vehicles and for rail infrastructure. Leveraging growth in central urban areas and potential transit-oriented development could be additional priorities.

5 FINANCIAL OUTLOOK

5.1 OVERVIEW

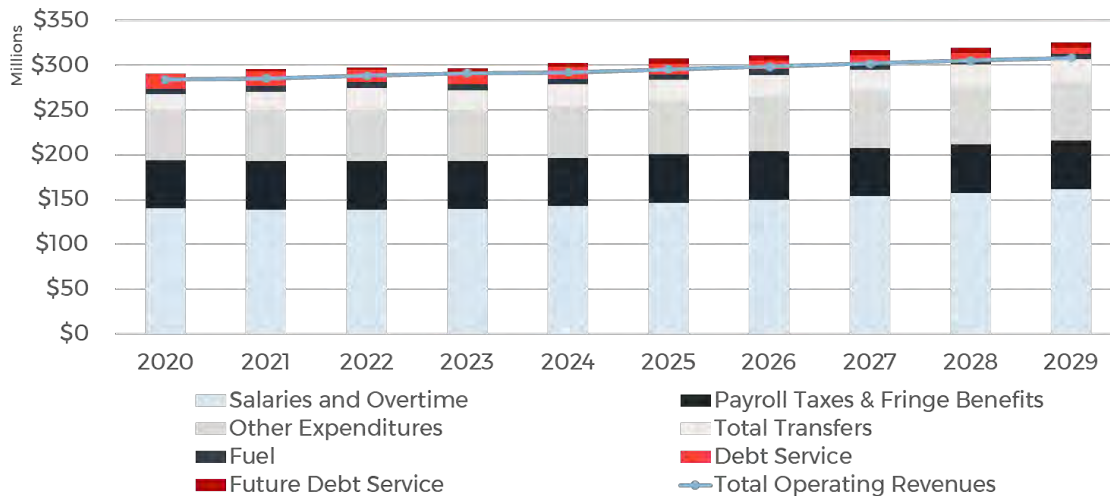
A high-level financial review and analysis was conducted to understand the financial issues that RTA is facing and expected to encounter over the next 10 years. WSP examined RTA’s financials by analyzing the current and forecasted funding structure and costs for both capital and operating expenditures to verify the amount and timing of potential anticipated financial gaps over the next 10 years.

5.2 FINANCIAL OUTLOOK

5.2.1 OPERATIONS

RTA’s operating costs forecast data for the next 5 years was provided by RTA to provide a baseline understanding of operations. The growth assumptions adopted for the different cost categories were used to forecast the 10-year operating cost horizon. Based on this analysis, it was evident that RTA’s highest cost category is Salaries & Overtime, followed by Other Expenditures, Payroll Taxes & Fringe Benefits, Total Transfers, Debt Service (which includes current and future), and Fuel. Using RTA’s growth assumptions, the cost categories show limited growth over the 10-year period as shown in **Figure 5-1**.

Figure 5-1: 10-Year Operating Costs and Revenues Profile



Source: RTA Budget Data, WSP Estimates

RTA’s operating revenue forecast was analyzed in a similar manner. The 10-year operating revenue forecast shows the major contributor to operating revenues is the sales and use tax source which is assumed to continue growing at a slow rate of 1.5% based on RTA’s assumptions. This is followed by fare revenues which are assumed to decrease slowly through the 10-year analysis period due to an

expected decline in ridership. Federal grants are another source of operating revenues and they are assumed to grow slowly over time, with a one-time decline due to 10-year Census results in FY24. Non-operating revenues constitute only a small share of the available resources. As illustrated in the graph above, where the operating revenue total is represented by the blue line, the 10-Year Operating Costs and Revenues Forecast shows limited deficits in a moderate economic growth scenario. This deficit becomes slightly higher when the cost of servicing three new debt issuances planned by RTA in FY21, FY23, and FY25 is included in the analysis.

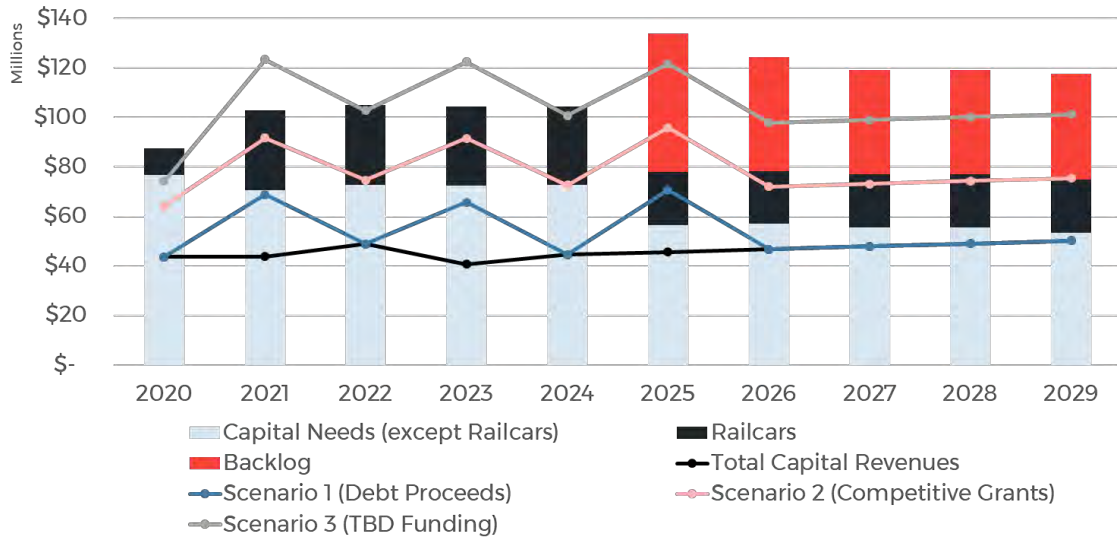
5.2.2 CAPITAL

The assessment of capital costs consists of an analysis of costs based on capital needs documentation and forecasts, railcars study results, and RTA's estimate of its system's backlog of capital investment needs required to achieve a state-of-good repair. The analysis results yield a 10-year forecasted capital cost profile where capital needs (excluding railcars) decrease slightly over the period starting in FY25. However, the railcar replacement initiative adds significant financial need across the 10-year cost profile. Additionally, RTA's capital needs backlog appears to be deferred to outer years and begins to be addressed starting FY25.

RTA's 10-year baseline capital revenue profile constitutes of a small share of the sales and use tax contribution, federal formula grants, and a limited amount of state Urban Transit Program (UTP) grants. The total capital revenue profile resulting from these three sources is represented by the black line in the graph. These revenue sources constitute baseline revenues that RTA is most likely to receive over the 10-year period. As represented in the graph, the forecasted capital costs are significantly higher than these baseline revenues in all years.

Figure 5-2 presents this capital profile with three scenarios including additional revenue sources with varying probabilities were included in the analysis. The first scenario results in three spikes in revenues on top of the baseline revenues due to debt proceeds that are contingent upon RTA issuing debt in FY21, FY23, and FY25. The second scenario builds on the first and assumes that uncertain federal, state, and regional competitive grants are also secured. This scenario results in an upward shift of the revenue profile and reduces the deficits in the early years. Finally, the third scenario builds on the second and assumes that an unidentified funding source "to be determined" that is included in RTA's capital plan is secured. This third scenario further shifts the revenue profile upwards and causes the deficits to begin in later years only. The 10-Year Capital Costs and Revenues Forecast analysis summarized in the graph above shows that a deficit still exists under all scenarios, including debt proceeds, competitive grants, and funding yet to be identified in RTA's CIP.

Figure 5-2: 10-Year Capital Costs and Revenues Profile



Source: RTA Budget Data, WSP Estimates

5.3 CONCLUSIONS

This financial analysis of operating costs, which is based on RTA’s inputs and assumptions, shows that RTA’s operating financial profile will have limited deficits, with debt service payments exceeding revenues in outer years. However, issuing future debt will further increase these operating deficits.

Regarding capital costs, the guaranteed revenue sources are much lower than the projected costs. This will lead to significant deficits in all years. Even when capital revenue scenarios with additional revenue sources are considered, deficits remained due to high capital needs for rail service. Refining capital cost forecasts and identifying potential strategies to bridge deficits by spreading out backlog costs and including inflation risks is addressed later in this report (Section 8).

6 COST EFFICIENCIES AND REVENUE ENHANCEMENT STRATEGIES

6.1 OVERVIEW

To assess opportunities for RTA to achieve cost efficiencies and increase revenue, the agency's operational practices, asset utilization and planning practices were compared to the strategies employed and metrics achieved by peer agencies, along with historical targets achieved by RTA and its peers, and current and emerging industry best practices. The eight strategies identified below suggest potential changes RTA can implement along with the anticipated increase in revenue that would likely occur if enacted successfully.

OPERATIONAL STRATEGIES

- 1 Reduce administrative expenses and expand use of part-time employees
- 2 Expand use of privatized and other innovative approaches to improve efficiency and performance, and reduce costs
- 3 Implement network redesign recommendations that further adapt the transit network to fast, frequent service in transit priority corridors
- 4 Develop partnerships with taxi and TNC companies to cost-effectively serve residential areas and provide connections to jobs in lower-density areas
- 5 Partner with other Northeast Ohio transit providers

ASSET-BASED STRATEGIES

- 1 Reinvest in the rail infrastructure and vehicles to increase reliability and generate additional ridership/fare revenues
- 2 Leverage RTA's property holdings as a revenue source

PLANNING-BASED STRATEGIES

- 1 Convene regional partnership to promote redevelopment and location of jobs in rapid station areas and along existing and future BRT corridors

The eight identified strategies vary considerably in effort associated with implementation and their potential for cost savings, service or efficiency benefits. In some cases, overcoming significant contractual and legal barriers is required to make significant impacts. In other cases, the primary obstacles are allocation of administrative resources to implement the changes. In many cases, the will and desire to make the required changes may run against long-standing agency and industry practices. A common thread that connects these strategies is the need for RTA to think of itself as a transportation *provider* that seeks to meet the transportation needs of county residents as efficiently and cost-effectively as possible, rather than as a transportation *operator* that operates and maintains buses, trains and infrastructure. This change in mindset is critical to meeting the changing and increasingly diverse needs of RTA's service area and capitalize on the increasingly wide range of options for providing transportation services in the 21st century.

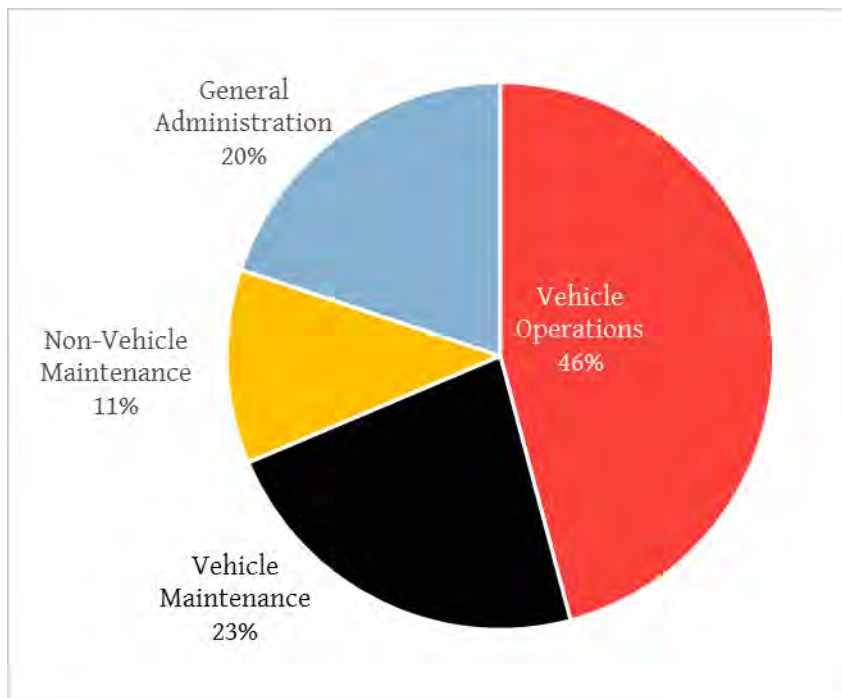
6.2 OPERATIONS

The following recommendations present strategies to achieve cost efficiencies through improvements to RTA services and operations, including administration, privatizing service and redesigning its network and service approach.

6.2.1 ADMINISTRATION

RTA can redirect funding to service improvements or system state of good repair investments if it reduces administrative costs. RTA's share of administrative expenses (20% of the total budget) is higher than its peer agencies which average 16%. Administrative expenses reduce the pool of funds that the agency can draw upon for operations and maintenance, causing RTA's operational budget (46% of the total) to be significantly lower than that of its peer agencies which average 54%. RTA's expenses by category are shown below in **Figure 6-1**.

Figure 6-1: RTA's expenses by category



Source: NTD.

Note: All costs expressed in Year-of-Expenditure (YOE) dollars.

Strategy 1: RTA can recover up to \$13 million for operations and maintenance if it reduces its administrative budget to peer agency levels

RTA's current staffing arrangement presents several opportunities to trim administrative costs. As an increasing number of older employees retire, the agency is positioned to make cost-minded staffing changes. RTA has about 20% more administrative staff than its peer agencies. Strategies that may be effective in bringing RTA's administrative costs and headcount into line with the average of its peers, include:

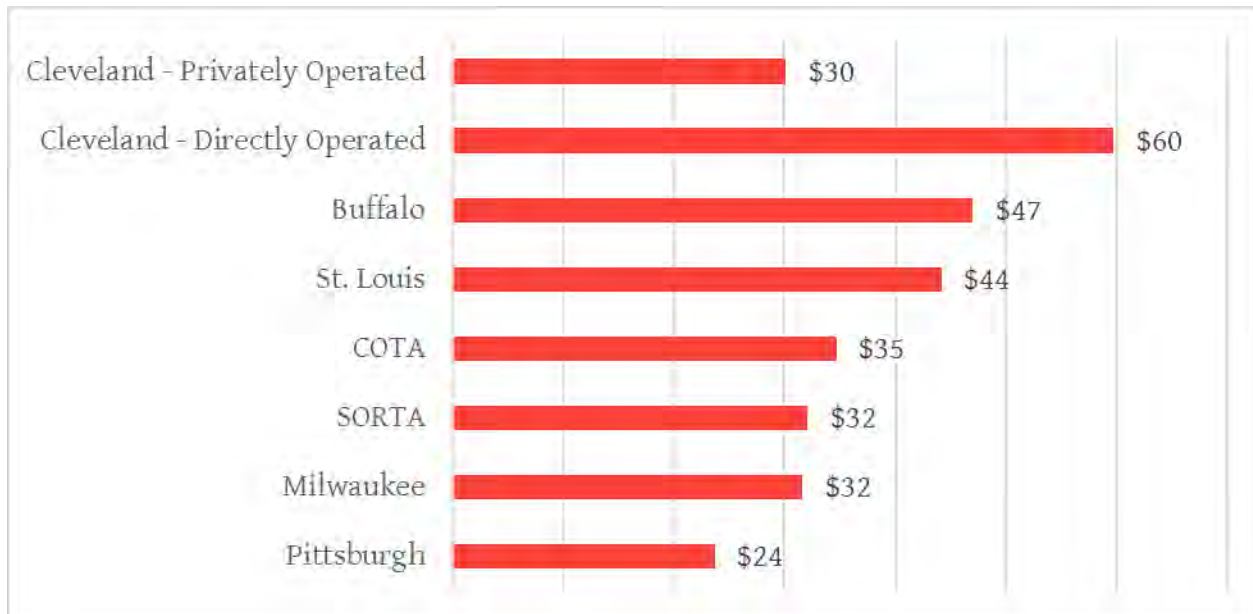
- 1 Streamlining the agency's administrative structure
- 2 Combining responsibilities as appropriate to adjust the number of positions to actual agency needs
- 3 Eliminating redundant positions and levels of management or support staff
- 4 Evaluating ways to restructure administrative responsibilities to expand the use of part-time employees

RTA's current use of part-time employees is limited to operations and vehicle maintenance, with few part-time employees in non-vehicle maintenance and administration. Growth in the number of retirees provides the opportunity for transit agencies to expand the use of part-time employees to reduce cost and improve service quality in all areas of agency operations.

6.2.2 PRIVATIZATION

Paratransit is one of the most expensive and challenging services for any transit agency to provide. RTA is mandated to provide individual, origin-to-destination service under Federal law, which strictly regulates service provision. RTA currently contracts 55% of its paratransit trips to private companies; the remaining 45% of trips are operated by RTA's its own drivers and fleet. These directly operated trips comprise a disproportionate 62% of RTA's paratransit budget, and cost twice as much to operate as the contracted trips. The average paratransit costs per trip of RTA and its peer agencies are presented in **Figure 6-2**.

Figure 6-2: Paratransit costs per-trip across peers, privately and agency operated



Source: NTD.

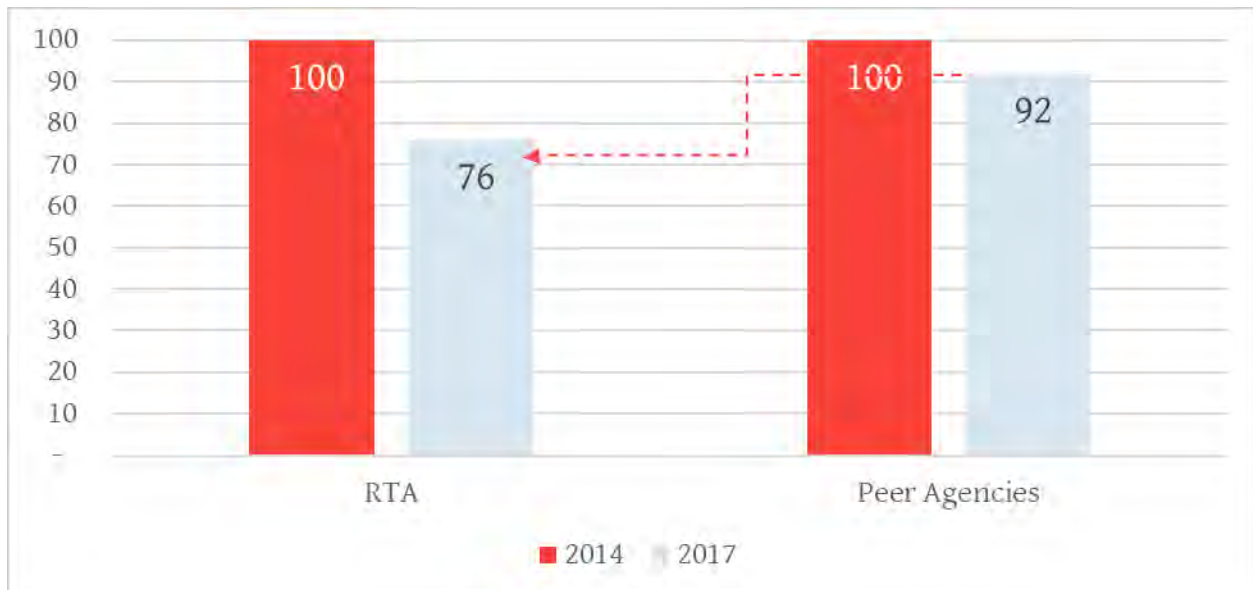
Strategy 2: RTA would recover \$7.9 million per year for operations and maintenance if all of RTA's paratransit trips were privately operated.

Shifting more paratransit trips to private operators and privatizing other areas of RTA's operation would reduce costs, allowing RTA to expand service, explore innovative service offerings, and increase state of good repair investments. Privatization of some fixed-route local bus routes and services, maintenance functions, system security and policing, and administrative functions, presents additional opportunities for cost efficiencies. Although many privatization efforts are constrained by collective bargaining agreements covering RTA workers, many others remain unexplored and untapped, offering RTA a potential opportunity to reduce costs while further enhancing its reputation as one of the industry's most innovative operators.

6.2.3 NETWORK

RTA's ridership has fallen significantly in recent years. Transit ridership has been in decline for most US transit agencies, large and small, for the past 5-7 years. Explanations for this decline include the strong economy and robust job growth; historically low and stable fuel prices and sub-prime financing for private vehicles; changes to the way people work, like teleworking, flex-time and increasing part-time employment; and trips shifted to walking, bicycling, and TNCs like Uber and Lyft. Even so, RTA's ridership loss has been particularly steep. For example, light rail ridership in 2017 is only 76% of 2014 levels, as shown in **Figure 6-3**. Ridership declined 31% from 2007 to 2017, despite the historically small population declines in Cleveland and Cuyahoga County over the same period (minus two percent and minus four percent, respectively).

Figure 6-3: Decline in light rail ridership, indexed to 2014 levels



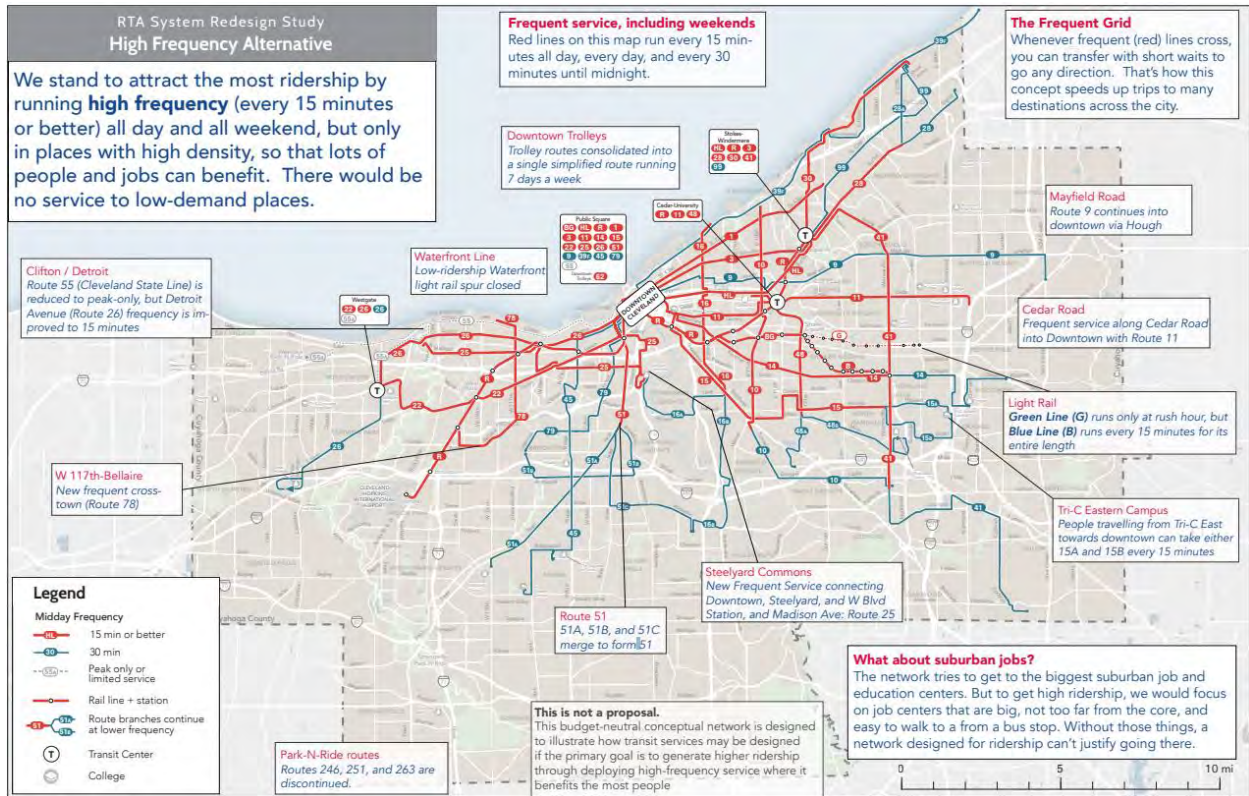
Source: NTD

RTA is undertaking a system redesign project to develop specific recommendations for improving its fixed-route transit services and stemming ridership losses. This process will give RTA the opportunity to realign its service to current demand patterns and levels and highlight less productive, circuitous and poorly performing routes that the agency can consider reducing or eliminating, to free up resources that can be shifted to increasing service frequencies on more productive routes.

Strategy 3: RTA’s revenue would grow by \$6 million if a network redesign led RTA’s local bus ridership to recover to peer levels.

The High Frequency Alternative of the redesign study (as presented in July 2019) proposes a fast, frequent network serving high density locations, primarily consisting of routes with 15 minute headways, with service provided seven days a week. This structure would also shorten transfer wait times between intersecting routes, enabling faster travel across the city. The routes in this alternative focus on large job and education centers that are located not very far from downtown Cleveland, eliminating routes serving the periphery of the region. The High Frequency Alternative’s suggested network is shown in **Figure 6-4**.

Figure 6-4: High Frequency Alternative from RTA System Redesign Study



Source: RTA System Redesign Study (2019), Jarrett Walker and Associates

Other transit agencies pursuing similar projects recently have focused on developing fast, frequent service with headways of 15 minutes or less on most of their key routes. This best-practice approach has generated increased ridership and productivity at many US transit agencies, and offers RTA the opportunity to further streamline its fixed-route transit network while slowing or reversing the recent sharp ridership losses.

RTA can evaluate opportunities to cost-effectively serve riders on peripheral local bus routes operating in areas with limited transit markets, which may be eliminated or have their service levels reduced. These opportunities are described in the next section, Task 6.2.4, “Alternative Service”.

6.2.4 ALTERNATIVE SERVICE

As the distribution of population and job centers changes in the Greater Cleveland region, as discussed in Chapter 2, RTA must consider new solutions to optimally serve the region, including low-density areas that RTA cannot serve cost-effectively with traditional fixed-route local bus service. These new solutions potentially include partnerships with other transportation providers.

Strategy 4: If RTA partners with other transportation providers, the agency can expand its customer base and recover costs from ineffective fixed-route services.

RTA can consider partnering with Transportation Network Companies (TNCs), local taxi companies and auto rental companies to more effectively connect its fixed-route network to residents and jobs located in lower-density parts of the region. RTA may find that offering alternative service options allows it to address service requests from lower-density areas more cost-effectively than operating fixed-route local bus service, while offering a better service option more appropriate to the needs of these areas. Microtransit⁶ or subsidized taxi and TNC services could connect residents of lower-density areas to fixed-route transit services, and provide residents of higher density areas with access to jobs in lower-density locations. Implementation of this strategy could help RTA significantly expand its coverage at a relatively low cost, freeing up resources to improve service in core areas of the region. WSP has identified a list of potential sites for trial alternative services, based on demographics and employment growth. These locations include:

- Solon Industrial Area
- Landerhaven Corporate Center
- Rockside Road at I-77 in Independence
- Crocker/Bassett Road Corridor in Westlake

Furthermore, offering a variety of mobility solutions and connections to RTA’s fixed routes may attract new riders to the system, especially those with mobility challenges who live and work in sparsely served areas. It also offers RTA with a cost-effective option to serve employers who request service to workplaces located in remote or difficult-to-access parts of the service area, potentially with employers sharing the cost of the additional service provided. These options may incentivize additional riders to purchase monthly passes and commit to utilizing the system more frequently. Several transit agencies and municipalities nationwide have successfully operated similar programs in mid- and low-density environments. These programs often are designed to provide “first-mile” and “last-mile” trips, that fill gaps between transit stops or stations and the homes or workplaces of transit users that are located beyond the reach of fixed-route transit service.

⁶ Microtransit is defined by the US Department of Transportation as IT-enabled private multi-passenger transportation services, such as Via, that serve passengers using dynamically generated routes, and may expect passengers to make their way to and from common pick-up or drop-off points (<https://www.transit.dot.gov/regulations-and-guidance/shared-mobility-definitions>).

6.2.5 INTERAGENCY PARTNERSHIPS

While RTA is Ohio's largest transit agency by a large margin, Ohio has public transit operators in nearly every one of its 88 counties, and each of the six counties surrounding Cuyahoga County has public transit service. RTA cooperates with public transit agencies throughout the state through the Ohio Public Transit Association (OPTA), and saves money on fuel, bus parts and other goods and services through various one-off and on-going cooperative arrangements with other transit operators. However, there may be additional opportunities for RTA to reduce costs and improve service efficiency and effectiveness through partnerships with other transportation providers in Greater Cleveland and throughout Northeast Ohio. The economies of scale achieved by actively participating in a consortium of transit agencies, as RTA currently does for purchases of fuel and buses, may enable RTA to improve its efficiency if applied to service planning and other aspects of its operations and development.

Strategy 5: If RTA forms partnerships with other Northeast Ohio transit providers, it may find opportunities to reduce costs by coordinating or consolidating both new and existing services.

6.3 ASSETS

The following recommendations present strategies to achieve cost efficiencies through leveraging RTA's assets, including reinvestment in its network infrastructure as well as its real property holding.

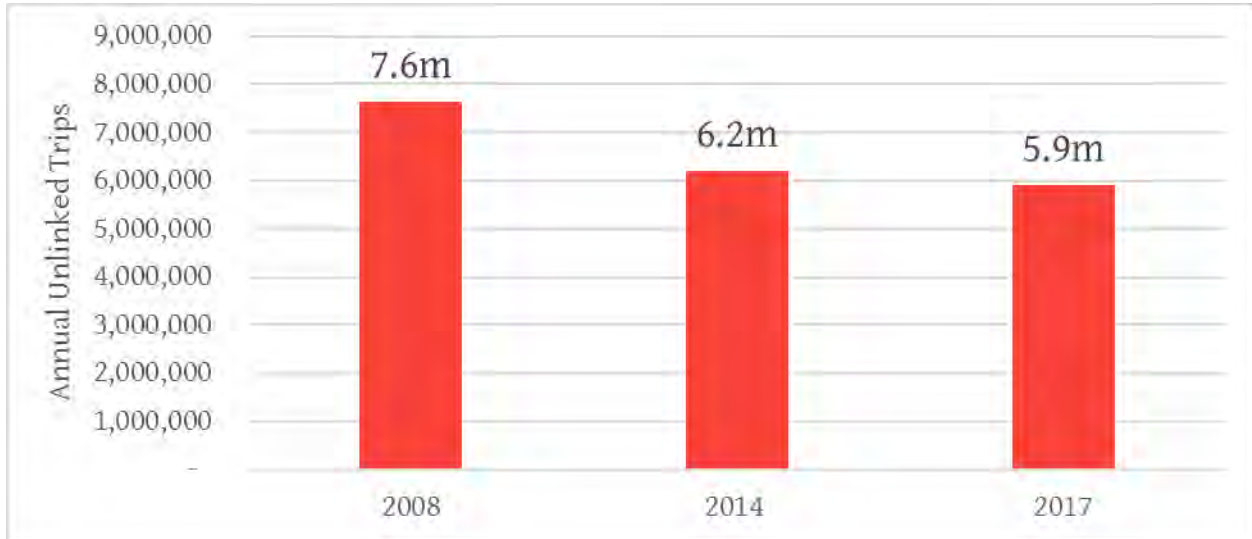
6.3.1 REINVESTMENT

While RTA's fixed-route bus and paratransit fleet is within acceptable vehicle age limits, as noted in Chapter 4, Opportunities and Risks, RTA's rail fleet is more than thirty years old, the FTA-recognized useful life of a rail vehicle. In addition, RTA's HealthLine buses are in the process of being replaced at the end of their twelve-year useful life, and RTA's rail system and other infrastructure requires millions in additional investment in state of good repair improvements. Reductions in service levels on RTA's rail services and a mid-life rehab of the rail vehicles between 2000 and 2010 has resulted in the rail vehicles remaining reliable. However, the rail system has suffered chronic reduced train speed and periodic partial shutdowns due to state of good repair challenges (for example, the Summer 2019 shutdown of the Red Line between the West Boulevard Station and the airport to allow for shoring of a retaining wall). Reinvestments in the system infrastructure and vehicles will marginally increase the system's speed and reliability, and reduce both planned and unplanned shutdowns, which would cause ridership and fare revenue to marginally grow. Improved service reliability could improve the culture of transit ridership in the region, attracting riders to the system on a more frequent basis.

Strategy 6: RTA could increase its revenues by up to \$2.1 million if reinvestment in the RTA system led to significant ridership recovery.

Red Line (heavy rail) ridership has been declining since 1980, and has fallen by nearly two million users in the last decade. The Red Line had 7.6 million riders in 2008, and only 5.9 million riders in 2017, with most of this decline occurring between 2008 and 2014 (**Figure 6-5**). If reinvestment in the Red Line caused ridership to grow by 20%, growing to above seven million annual riders, the agency would gain an additional \$1.5 million in revenue.

Figure 6-5: Heavy rail ridership decline, 2008-2017



Source: NTD.

Light rail ridership has also declined at a faster rate than peer agency averages in recent years. Peer systems have only lost 8% of their light rail ridership between 2014 and 2017, while RTA lost 24% of its ridership in that period. If reinvestment in light rail led ridership to recover to peer levels, the agency would gain an additional \$0.6 million in revenue. The decline in RTA's light rail ridership compared to peer levels is depicted in **Figure 6-6**.

Figure 6-6: Light rail ridership decline, 2014-2017



Source: NTD.

Note: Ridership indexed to 2014 levels

6.3.2 PROPERTY

RTA has a significant portfolio of real estate holdings in Greater Cleveland, which it could potentially leverage to increase the agency's revenue. RTA's real estate holdings include hundreds of parcels—rail stations, rail yards, rail and bus storage and maintenance facilities, bus loops (off-street lots where buses turn around at the outer end of the route and park during layovers), transit centers, and other facilities. RTA also owns its headquarters office building, the former Root-McBride warehouse located at 1240 West Sixth Street in the Warehouse District, which RTA rehabilitated and has occupied since 1997.

RTA is currently evaluating opportunities to redevelop or liquidate its properties to assess whether a property's sale or reuse would increase its value to the agency on a case-by-case basis. The agency also may find opportunities to generate a one-time or ongoing influx of capital if it explores creative financing options of its properties.

Strategy 7: If RTA leverages its real property assets, the agency can generate additional revenue and reduce costs.

RTA has made several key property sales in recent years, including the sale of two garages as well as parcels at the West 65th and Triskett Red Line Stations. The development community has expressed interest in properties located near stations, such as the West 25th corridor, and in developing housing along transit corridors. By partnering with local developers, RTA can leverage their development expertise to maximize the value of its property holdings.

RTA's main office building in Downtown Cleveland is among its most valuable real estate holdings. Given the agency's reduced office space requirements, RTA may wish to explore the sale or rental of all or part of its main office property.

6.4 PLANNING

The following recommendations present strategies to achieve cost efficiencies through regional planning and coordination efforts that involve RTA as an integral development partner, and the agency's bus and rail networks as key components of the region's economic development strategy.

6.4.1 DEVELOPMENT

Cleveland has the most extensive rail and Bus Rapid Transit system for an American urban area of its size. It is the smallest urban area in North America to have both Heavy (the Red Line) and Light rail (Blue, Green and Waterfront lines) transit systems. The HealthLine has features superior to BRT systems in Boston, Chicago, Los Angeles and New York.

Cleveland's rail transit and BRT systems are invaluable assets to the region that offer significant potential for development opportunities, if they are perceived as such by regional stakeholders who could collaborate with RTA to support development along transit corridors. RTA's Red Line uses the same basic technology as the New York subway system and the Washington D.C. Metro. When not hobbled by track shutdowns and slow orders, the Red Line can travel from Hopkins Airport to downtown Cleveland in less than 30 minutes and could transport more than 10,000 people per hour in each direction if operating at its peak capacity. RTA has estimated the cost of replacing its rail lines at approximately \$4 billion. Many peer and larger cities nationwide are investing billions of dollars to develop comparable rail and Bus Rapid Transit networks, confident that the transportation benefits of rail transit systems and the transformative community benefits with the additional tax revenues generated by new development around rail and Bus Rapid Transit stations will more than compensate for the capital investment and ongoing operating costs.

RTA's investment in the system has successfully encouraged development in various parts of the city. The HealthLine, a nationally acclaimed Bus Rapid Transit corridor, has been a significant factor in attracting more than \$9 billion in development to the Euclid Corridor since 2008. The recent reconstruction of the Cedar-University station and relocation of the Mayfield-Little Italy station on the Red Line have caused ridership to increase and attracted hundreds of millions of dollars in redevelopment in the surrounding areas, like the 27 Coltman townhouse development. A TOD project is ongoing on RTA-owned and adjacent property at the West 25th Street Station in Ohio City, and development plans exist for many other RTA Red and Blue Line stations. However, the response of the private development community at most RTA rapid stations has been limited considering the transportation potential of the rapid transit lines. This is particularly true for many of the Red Line stations which offer fast, convenient service to Downtown Cleveland, Hopkins Airport and University Circle, and have, in many cases,

adjacent unoccupied or under-utilized land that is prime for redevelopment—land that, in other cities with rail or Bus Rapid Transit lines, would be valued in the millions of dollars per acre.

Strategy 8: The creation of a regional partnership to promote development along transit corridors will offer numerous benefits to Greater Cleveland businesses and residents.

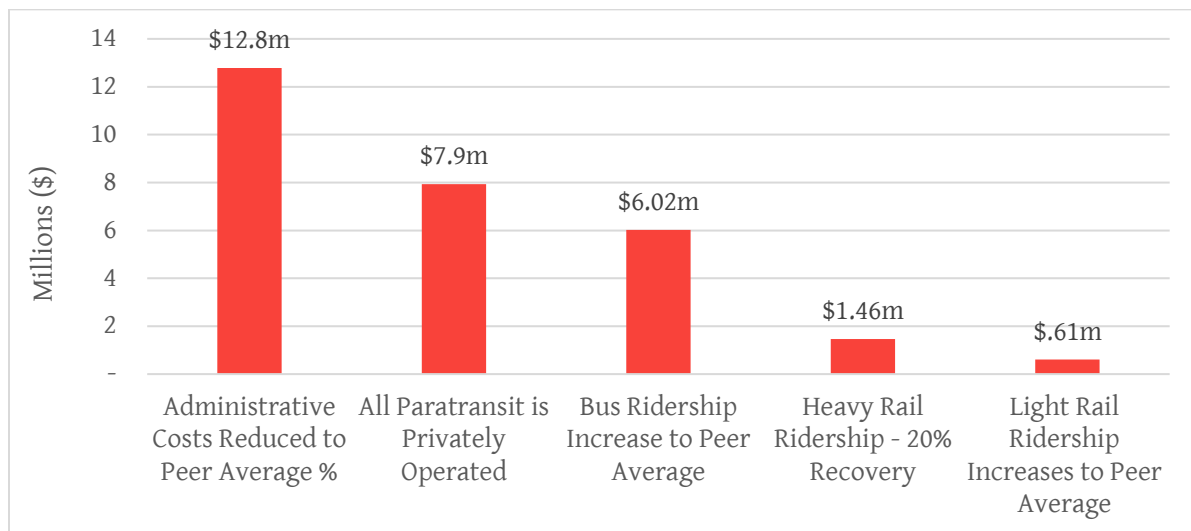
Civic leaders could spearhead a regional partnership to develop a vision for transit-oriented development in the Greater Cleveland area, leveraging RTA’s rail and Bus Rapid Transit network to create economic development opportunities. This community-based partnership can connect major private employers, municipal leaders, the not-for-profit sector and development finance institutions, such as the Port of Cleveland, to create a nuanced and unified vision for Cleveland’s as a transit-oriented region.

This regional partnership can assess the RTA network’s integral role in enhancing regional economic development, especially by bringing jobs back to downtown Cleveland and attracting higher-density, mixed use development to RTA rail and BRT stations and adjacent under-utilized properties. The partnership will improve communication between integral stakeholders in the region, fostering the dialogue to encourage changes to support transit-oriented development, such as a transit-supportive zoning code and the attraction of private and public employers from within and outside the region who need young professionals who value transit access.

6.5 CONCLUSIONS

As **Figure 6-7** indicates, implementation of the strategies above for which benefit estimates could be developed could provide RTA with more than \$25 million each year in reduced costs or added revenue. If successfully implemented, the other strategies could generate millions more in additional revenue and/or reduced costs to RTA, as well as other transportation, environmental and development benefits.

Figure 6-7: Cost Efficiency and Revenue Enhancement Strategies



Source: NTD, RTA Budget, WSP Estimates

By evaluating opportunities to improve the agency and system's operational efficiency, maximizing utilization of its assets and fostering a consortium of regional advocates of transit-oriented developments, RTA can refine or eliminate inefficient and poorly performing elements of its system while achieving cost efficiencies that enable it to provide improved mobility throughout Greater Cleveland. Development along transit corridors can be beneficial to the business community and other private and public employers, RTA, and to residents of Greater Cleveland, as new mobility options enable mixed-use development opportunities.

7 KEY PERFORMANCE INDICATORS

7.1 OVERVIEW

Key Performance Indicators (KPIs) are powerful tools used in the implementation and evaluation phase of performance-based planning to monitor, evaluate, and report progress towards an agency's targets and goals.⁷

KPIs should be tied directly to an organization's goals set through its strategic plan. Each goal should be measurable, with target metrics assigned to each item. Effective KPIs provide simple ways for agencies to track its performance and identify areas in need of additional resources.

Best practices state that transportation KPIs should be 1) Trackable over time; 2) Have a storytelling potential; 3) Be meaningful for types of service measured; 4) Be related to transportation goals; and 5) Have available data.⁸

The WSP Team completed an in-depth review of RTA's current KPIs and performance management tracking system to understand how these tools are being used, and how they can be improved to strengthen the health – and perception – of the organization.

To complete this task, the WSP Team first performed an external review of publicly available information related to the agency's performance management to assess what information was available to the average RTA rider. This included information provided via the website, included the:

- Performance management section in the FY2019 budget,⁹
- Imagine RTA 2010-2020 Strategic Plan,¹⁰ and
- 2016-2018 Vital Few Objectives (VFO)¹¹.

The WSP Team also obtained detailed information from the agency's performance management program architect and conducted an interview with the program's current lead.

7.2 PEER ASSESSMENT

WSP assessed and compared metrics in four primary criteria for publicly available KPIs and performance management programs for nine peer agencies and four agencies recognized as best in class for performance management by their peers. The peer agency review was based entirely on publicly available information, while RTA's assessment, as noted, includes information provided by the agency.

⁷ Federal Highway Administration. Performance-Based Planning and Programming Guidebook. 2013. https://www.transit.dot.gov/sites/fta.dot.gov/files/Performance_Based_Planning_and_Programming_Guidebook.pdf

⁸ Florida Department of Transportation. Best Practices in Evaluating Transit Performance Report. 2014. https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content/transit/pages/bestpracticesinevaluatingtransitperformancefinalreport.pdf?sfvrsn=48878730_0

⁹ Greater Cleveland Regional Transit Authority, 2019 Budget Book. Page 77. <http://www.riderta.com/budget/2019>

¹⁰ Greater Cleveland Regional Transit Authority. Imagine RTA- Strategic Plan 2010-2020.

¹¹ 2019 VFOs are not found on the website

7.2.1 PEER FINDINGS

The review focused on nine peer agencies:

- Buffalo (Niagara Frontier Transportation Authority, NFTA) –¹²
- Pittsburgh (Port Authority of Allegheny County)¹³
- Detroit (Department of Transportation, DOT)¹⁴
- Milwaukee (Milwaukee County Transit System, MCTS)¹⁵
- Cincinnati (Southwest Ohio Regional Transit Authority, SORTA)¹⁶
- Norfolk/Virginia Beach (Hampton Roads Transit, HRT)¹⁷
- Baltimore (Maryland Transit Administration, Maryland MTA)¹⁸
- Philadelphia/Camden, NJ (Port Authority Transit Corporation, PATCO)¹⁹
- Kansas City (Kansas City Area Transportation Authority, KCATA)²⁰

As shown in **Table 7-1** and **Table 7-2**, RTA is leading its peers in performance tracking. However, this assessment only includes publicly available information for peers, so it is possible that the peer agencies have a more robust tracking system available internally. Regardless, RTA has designed a comprehensive and functional performance tracking system with KPIs that are clearly tied to its strategic plan, include achievable targets, and designate ownership to ensure staff accountability.

The assessment found that RTA leads its peers in defining ownership of KPIs, particularly because it houses a centralized KPI office which monitors and disseminates information internally and because RTA has established a clear KPI owner for each metric. When compared to peers, RTA could improve practices with respect to the purpose and tracking of KPIs. The assessment found that some peer agencies, including Maryland MTA (Baltimore), NFTA (Buffalo), and KCATA (Kansas City) publish the data source or data tracking tool utilized to measure each KPI. Additionally, both Maryland MTA and Detroit DOT establish a tracking frequency for KPIs.

The assessment found that RTA can improve publication of KPIs. While RTA currently produces publicly facing reports to disseminate information about KPIs, RTA does not have a centralized public dashboard. Several peer agencies, including Baltimore MTA, HRT, and Detroit DOT have publicly available dashboards, which serve as a one-stop location for riders to gather information about the

¹² Niagara Frontier Transportation. 2018-2019 Annual Performance Report. http://www.nfta.com/pdfs/2019/public_info/2019-metro_annual_performance_report.pdf

¹³ Port Authority of Allegheny County. 2018 Performance Report. <https://www.penndot.gov/Doing-Business/Transit/InformationandReports/Documents/BPT%20Annual%20Report%202016-17.pdf>

¹⁴ Detroit Department of Transportation. Public Dashboard. 2019. <https://detroitmi.gov/departments/detroit-department-transportation/ddot-performance-dashboard>

¹⁵ Milwaukee County Transit System. 2018 Year in Review Report. <https://www.ridemcts.com/getattachment/About-MCTS/2018-Annual-Report-FINAL.pdf?lang=en-US>

¹⁶ Southwest Ohio Regional Transit Authority. About SORTA. 2019. <https://www.go-metro.com/about-metro/about2/about-metro-2>

¹⁷ Hampton Roads Transit. Performance Dashboard. 2019 <https://gohrt.com/agency/performance-metrics/>

¹⁸ Maryland Transit Administration Public Dashboard. 2019. <https://www.mta.maryland.gov/performance-improvement>

¹⁹ PATCO. From the General Manager. 2019. <http://www.ridepatco.org/about/fromGM.asp>

²⁰ Kansas City Area Transportation Authority. Strategic Plan. 2018. https://www.kcata.org/documents/uploads/KCATA_Strat_Plan.pdf

agency's progress and key areas that need improvement. RTA, however, is a leader among peers with respect to capturing a breadth of KPI categories.

Table 7-1: Peer Assessment Authority & Tracking

Peer Agency	Authority		Purpose & Tracking			
	Centralized KPI office	Dedicated KPI owner	Stated KPI purpose	Stated KPI target	Stated KPI tracking frequency	Data collection method
GC RTA	✓	✓	✓	✓		
MD MTA		✓	✓	✓	✓	✓
HRT			✓	✓		
PATCO						
KCATA		✓		✓		✓
Buffalo NFTA			✓			✓
Pittsburgh				✓		
Detroit DOT					✓	
Milwaukee MCTS						
Cinn. SORTA				✓		

Source: Produced by WSP

Table 7-2: Peer Assessment Publications & Categories

Peer Agency	Publication		KPI Categories					
	Public dash-board	Public report	Operational performance	Fiscal responsibility	Customer service	Safety	Innovation	Improvement
GC RTA		✓	✓	✓	✓	✓	✓	✓
MD MTA	✓	✓	✓	✓	✓	✓		
HRT	✓	✓	✓	✓	✓	✓		
PATCO								
KCATA		✓	✓	✓	✓			
Buffalo NFTA		✓	✓	✓	✓	✓		
Pittsburgh		✓	✓	✓				
Detroit DOT	✓		✓					
Milwaukee MCTS					✓			
Cinn. SORTA		✓	✓	✓				

Source: Produced by WSP

7.2.2 BEST IN CLASS FINDINGS

WSP also compared RTA to four known “Best in class” agencies at performance management reporting:

- Boston (MBTA)
- San Francisco (BART)
- Austin (Cap Metro)
- Washington, DC (WMATA)

These four agencies were selected based on WSP’s experience in the field and RTA’s input on peers they have identified as leaders in performance tracking.

The assessment—which yielded similar results to the peer benchmarking task—found that RTA is on par with “best in class” agencies in terms of defining ownership of KPIs. However, RTA could improve purpose and tracking of KPIs by stating the frequency of tracking each KPI and the data source or collection methods utilized to inform KPI progress. The results of the assessment are provided in **Table 7-3**.

Table 7-3: Best in Class Assessment Authority and Purpose Categories

Agency	Authority		Purpose & Tracking			
	Centralized KPI office	Dedicated KPI owner	Stated KPI purpose	Stated KPI target	Stated KPI tracking frequency	Data collection method
GC RTA	✓	✓	✓	✓		
MBTA	✓	✓	✓	✓	✓	✓
WMATA	✓	✓	✓	✓	✓	✓
Cap Metro			✓		✓	
BART	✓	✓	✓	✓	✓	✓

Source: Produced by WSP

RTA could also strengthen tracking and transparency of KPIs by creating a centralized public dashboard to facilitate easy access of information for riders. Among MBTA, WMATA, Cap Metro, and BART, RTA is the only agency that does not maintain a public-facing dashboard.

Table 7-4: Best in Class Assessment Publication & Categories

Peer Agency	Publication		KPI Categories					
	Public dash-board	Public report	Operational performance	Fiscal responsibility	Customer service	Safety	Innovation	Improvement
GC RTA		✓	✓	✓	✓	✓	✓	✓
MBTA	✓	✓	✓	✓	✓	✓		✓
WMATA	✓	✓	✓	✓	✓	✓		✓
Cap Metro	✓	✓	✓	✓	✓	✓		✓
BART	✓	✓	✓	✓	✓	✓		✓

Source: Produced by WSP

7.3 TRACKING AND REPORTING

RTA has an extensive system for tracking and reporting KPIs, including Balance Scorecards, Vital Few Objectives and TransitStat. While the agency’s KPIs are deliberately linked to its strategic goals, and its data monitoring program, **TransitStat**, is advanced, the agency lacks a single internal and external reporting mechanism to disseminate its continued progress.

RTA uses **Balance Scorecards** to review its plan for short-term and long-term performance. The Balanced Scorecard includes RTA’s areas of focus and **Vital Few Objectives (VFOs)**, which are used as used integral goals the Executive Team sets at the beginning of the year to measure its progress.

RTA tracks VFOs in four categories: 1) Fiscal Responsibility; 2) Voice of the Customer; 3) Continual Process Improvements and Innovation and Learning.

With the help of an external consultant, internal dashboards are updated each month and distributed to the leadership team to track progress. These dashboards are not available to all staff, and are not made publicly available until the agency’s annual budget is released when the annual dashboards are included. Each VFO includes a target as well as indicators to RTA’s success.

TransitStat is RTA’s performance monitoring program. It is characterized by “frequently scheduled performance monitoring forums, embracing the use of data, statistics, and metrics as a means to exceed customers’ expectations, as well as achieve operational excellence. It is a critical link to achieve high-level performance directed towards RTA’s mission, Vision, and Values.”²¹ RTA follows four performance management principles: to provide timely accurate data; analyze data and develop effective solution for emerging issues; deploy resources quickly to address issues; and follow up and assess each assignment and commitment relentlessly.²²

²¹ RTA. FY 2019 Budget. Page 58. 2019.

²² RTA. Performance Management – Transit State. FY 2013 Budget.

<http://www.riderta.com/sites/default/files/pdf/budget/2015/2-2-PerformanceManagement.pdf>

Annual metrics are created each January by the Executive Management Team²³ and weekly performance meetings with the leadership panel occur with specific departments on a rotating schedule. The TransitStat leadership Team includes the Chief Executive Officer (CEO), the Deputy General Manager (DGM) of Operations, the DGM of Human Resources, the Director of Human Resources, the Executive Director(ED) of Internal Audit and the ED of the Office of Management & Budget (OM). Topics of weekly meetings can be altered to focus on high priority items that may arise.

The three most critical objectives of TransitStat are to:

- 1 Maintain Financial Health
- 2 Improve Customer Service
- 3 Enhance the Image of RTA²⁴

With small adjustments, RTA can leverage its existing program to improve communication with the public. Adopted in 2007, the program has resulted in \$97 million in RTA savings since 2008.²⁵ This figure is not published on RTA's website for riders to quickly appreciate.

Additionally, RTA incentivizes staff to perform to target with an employee program called **Together Everyone Achieves More (TEAM)** designed to reward eligible employees for meeting certain goals related to safety, reliability, customer satisfaction, and ridership/revenue. Financial incentives range from \$10 - \$40 monthly, for measures such as preventable collision and boardings between complaints, and a \$100 annual payout if RTA's Farebox Recovery Ratio goal is met.

RTA has other resources available to staff to ensure they effectively manage change and agency performance.

7.4 CONCLUSION

RTA is well on its way to being considered "best in class" in performance management tracking, having developed a thorough and effective system to monitor RTA's performance and progress through strategic KPIs. However, RTA falls short in providing a transparent centralized reporting mechanism for all employees and available to the public.

By being more transparent both internally and externally, RTA can react more quickly to issues and can garner additional appreciation from its riders and the public at large. When issues arise, riders feel more in control when agencies are transparent about identified issues and planned solutions. Lack of communication and transparency can cause riders to feel like the agency is not working as hard as it can to improve, even if that is not the case.

²³ See <http://www.riderta.com/emt> for a current list of Executive Management Team members.

²⁴ RTA. Performance Management – Transit State. FY 2013 Budget. <http://www.riderta.com/sites/default/files/pdf/budget/2015/2-2-PerformanceManagement.pdf>

²⁵ Savings sourced from internal document provided by RTA.

RTA could consider the following:

- 1 Streamline internal tracking and reporting efforts.** Currently, certain KPIs are reported through multiple channels to small groups of staff. This system was designed to ensure that each team is aware of relevant KPIs to its mission. However, the absence of a singular internal performance management resource reduces the ability for RTA staff to be informed about the agency's financial and operational health. Creating a centralized KPI reporting hub through RTA's intranet that is updated daily, weekly, or monthly, can help employees become more proactive when a problem arises. Ensuring all teams are informed about the KPIs that directly affect their team's metrics and of each department's standing would also help inspire staff to ensure its individual goals are met, knowing they will be publicly reported.
- 2 Develop a centralized public facing dashboard.** If RTA published its monthly VFO reports on its website, the public would be better informed on RTA's performance and progress. As a rider, if something about a system appear to be working at sub-optimal standards, it is reassuring to see through easily digestible data that either RTA is performing on target most of the time, or that the agency is in fact aware of the issue, and is actively working to meet its target metric.²⁶

²⁶ Savings sourced from internal document provided by RTA.

8 FUNDING OPTIONS

8.1 OVERVIEW

As discussed in Section 5, existing revenue streams dedicated to public transportation in Cuyahoga County are insufficient to support RTA's O&M and capital needs. Deficits stemming from the Cuyahoga County Sales & Use tax shortfalls, in addition to the growing capital needs of a transit agency facing an aging asset base, necessitate an evaluation of alternative new funding options for RTA.

To advise GCP and the broader Cleveland region on the best funding options available, the WSP Team identified a full range of potential revenue sources. The sources include existing revenue sources used to fund local transit in Ohio, existing revenue sources used by local governments in Cuyahoga County, and revenue sources used to fund transit in other states. The full list of identified sources is provided in **Figure 10-1** of the Appendix.

8.2 PROMISING NEW REVENUE SOURCES

Potential revenue sources were evaluated according to the assessment criteria summarized in **Table 8-1**. The criteria assess each source relative to ease of implementation, economic, political and administrative conditions. The scoring criteria are summarized in the appendix, with full circles representing high (positive) scores, empty circles representing low (negative) scores, and half-filled circles representing medium scores.

Table 8-1: Revenue Sources Assessment Criteria

Criterion	Description	Rating
Revenue potential	Amount of funding source may yield for RTA annually	<ul style="list-style-type: none"> ● High (>\$20M) ◐ Medium (\$10-20M) ○ Low (<\$10M)
Keep pace with inflation	Source keeps pace or is correlated with general price inflation	<ul style="list-style-type: none"> ● Indexed and/or keeping pace with inflation ◐ Sometimes keeping pace with inflation ○ Not indexed/not keeping pace with inflation
Equity	Proportionate impact across income levels	<ul style="list-style-type: none"> ● Progressive (consistent with incomes) ◐ Neutral ○ Regressive (higher burden on lower incomes)
Nexus with beneficiaries	Correlation with beneficiaries of RTA service	<ul style="list-style-type: none"> ● Directly related to the beneficiaries ◐ Some relation ○ No relation
Stability/predictability	Annual stability and predictability	<ul style="list-style-type: none"> ● Generally stable/predictable ◐ Varies but generally predicable ○ Relatively unpredictable/volatile
Administration	Administrative, collection, and enforcement costs	<ul style="list-style-type: none"> ● Already collected at some level/low cost ◐ Moderate administration and collection costs ○ New administration and collection mechanisms/costly
Political Feasibility	Overall feasibility/support for using funding source for RTA	<ul style="list-style-type: none"> ● High (existing local tax, used for transit) ◐ Moderate (existing local tax, but not used for transit) ○ Weak (not an existing tax)

Source: WSP Estimates

These scores were subsequently used to rank the full list of potential revenue sources (see Table 2 in the Appendix). Further analysis identified revenue sources that would not be feasible for funding local transit capital needs in Cuyahoga County, based on an evaluation of restrictions within current Ohio state law. Based on the ranking and feasibility analysis, the WSP Team selected a short list of the most promising potential revenue sources.

RTA currently levies a 1% County-wide Sales & Use Tax, which makes up 73.6% of the agency's revenues.²⁷ The tax was approved by voters in 1975. The combined county sales tax rate is 8%, which includes a 5.75% state levy, a 1.25% county levy and the 1% RTA levy.²⁸ RTA has the authority to place a ballot measure before county voters to raise the existing levy.

Advantages of a Sales & Use Tax hike include the source's large revenue potential – each 0.10% increase would net approximately \$20.7 million in additional revenues, based on 2019 RTA Sales & Use Tax revenue data. However, Sales & Use taxes are regressive, placing the highest burden on low-income households, and any additional levy would require a successful countywide ballot initiative, including the costs associated with any tax increase campaign.

Cleveland's overall sales tax rate is average among its peer cities. Cincinnati levies a 7% combined rate, Columbus a 7.5% rate, and Buffalo an 8.75% rate.²⁹ A detailed summary is presented in **Table 8-2**.

Table 8-2: Sales & Use Tax Evaluation Results

Criterion	Description and comments	Rating
Revenue potential	Each 0.1% Increase would net approx. \$20.7M annually	●
Keep pace with inflation	RTA projects slower-than-inflation growth	○
Equity	Regressive	○
Nexus with beneficiaries	Inasmuch as all County residents & visitors benefit from RTA	○
Stability/predictability	Vulnerable to economic downturn	○
Administration	Already exists	●
Political Feasibility	Existing tax, used for RTA	●

Source: WSP Estimates

²⁷ RTA FY19 Operating and Capital Budget

²⁸ Sales & Use Tax, Ohio Department of Taxation.

²⁹ Ernst and Young Cleveland Tax Benchmarking Study

8.2.1 PROPERTY TAX

In addition to its authority to levy a Sales & Use Tax, RTA can levy ad valorem property taxes. While there is no existing County property tax levy for transit, there are other levies in place at the County and taxing district-level (e.g. the Cleveland Metropolitan Park District, or the Cuyahoga Community College District).

Advantages of a new Property Tax levy include the source's large revenue potential – a one-mill levy would net approximately \$30 million, based on 2019 total assessed property value numbers from Cuyahoga County. However, there is no existing property tax levy for transit. Further, a new Property Tax levy would require a successful countywide ballot initiative, including any associated campaign costs.

Cleveland's overall effective real residential property tax rate exceeds that of most of its peers. Cleveland's 2.84% effective rate is higher than the rate in Columbus and Cincinnati (2.09% and 2.47%, respectively), but lower than the rate in Detroit (3.44%).³⁰ A detailed summary is presented in **Table 8-3**.

Table 8-3: Property Tax Evaluation Results

Criterion	Description and comments	Rating
Revenue potential	A new 1-mill levy would net approx. \$30M annually	●
Keep pace with inflation	Property values somewhat correlated with inflation	○
Equity	Somewhat progressive if based on percentage of property value	○
Nexus with beneficiaries	Inasmuch as all County residents benefit from RTA	○
Stability/predictability	Vulnerable to real estate cycle	○
Administration	Already exists at county-level	●
Political Feasibility	Existing tax, not used for transit	○

Source: WSP Research

³⁰ Ernst and Young Cleveland Tax Benchmarking Study.

8.2.2 COMMERCIAL PROPERTY TAX

The WSP Team also included a *commercial* Property Tax levy in its final list, given that a commercial-only tax levy may be able to garner more local voter support. However, given its more limited scope, a commercial-only levy would net less in revenue than a general Property Tax.

Cleveland's overall effective real commercial property tax rate exceeds that of most of its peers. Cleveland's 3.55% effective rate is higher than that in Columbus and Cincinnati (2.87% and 3.27%, respectively), but lower than the rate in Detroit (4.34%).³¹ A detailed summary is presented in **Table 8-4**.

Table 8-4: Commercial Property Tax Evaluation Results

Criterion	Description and comments	Rating
Revenue potential	Substantial revenue base, but less than a general property tax levy	D
Keep pace with inflation	Property values somewhat correlated with inflation	D
Equity	Somewhat progressive, but impacts both small and large businesses	D
Nexus with beneficiaries	Inasmuch as all County businesses benefit from RTA	D
Stability/predictability	Vulnerable to real estate cycle	D
Administration	Already exists at county-level for general property tax	D
Political Feasibility	Existing tax, not used for transit	D

Source: WSP Research

³¹ Ernst and Young Cleveland Tax Benchmarking Study.

8.3 ALTERNATIVE SCENARIOS

The Baseline Scenario that is discussed in Section 5, “Financial Outlook”, used revenues and costs as provided by RTA. However, there are many internal and external factors that can affect these values, such as the health of the local and national economy. This section describes the alternative scenarios that were explored in which various inputs are adjusted based the factors described below in **Table 8-5**.

Table 8-5: Alternative Growth Scenarios

Scenario	Operating Cost Growth	Capital Cost Contingency	Backlog	Sales & Use Tax Growth	Additional Revenue Source	Additional Revenue Source Contribution to Operating
Scenario 1 - Baseline	RTA inflation assumptions	Low Contingency	Not Prioritized	1.50%	None	None
Scenario 2 - High Inflation	Cost Growth 2.5%	High Contingency (15%), inflated CIP	Not Prioritized	1.50%	None	None
Scenario 3 - High Inflation with Sales Tax	Cost Growth 2.5%	High Contingency (15%), inflated CIP	Not Prioritized	1.50%	Additional Sales & Use Tax 0.60%	30%
Scenario 4 - High Inflation with Sales Tax/Updated Backlog	Cost Growth 2.5%	High Contingency (15%), inflated CIP	Prioritized	1.50%	Additional Sales & Use Tax 0.60%	30%
Scenario 5 - Low Inflation with Sales Tax/Updated Backlog	RTA inflation assumptions	High Contingency (15%), inflated CIP	Prioritized	1.50%	Additional Sales & Use Tax 0.50%	15%
Scenario 6 - High Inflation with Property Tax	Cost Growth 2.5%	High Contingency (15%), inflated CIP	Not Prioritized	1.50%	Property Tax 0.45%	30%

Source: RTA Budget Data, WSP Estimates

8.3.1 SCENARIO 2 – HIGH INFLATION

The baseline scenario summarized in Section 5 assumes low cost growth and contingency. Scenario 2 depicts a more conservative financial outlook by altering two of RTA’s key assumptions:

- 1 The operating costs are assumed to grow at 2.5% per year from 2020 onwards. This contrasts with RTA’s cost growth assumptions, which vary from one year to the next, but are on average lower than 2.5% per year.
- 2 Scenario 2 considers a 15% contingency on new railcar expenditures, rather than RTA’s assumption of approximately 5.7% contingency in the CIP.

In this scenario, RTA’s operating costs grow at a higher rate than operating revenues. The result is an operating deficit of \$362 million over the ten-year period, which is more than triple that of the baseline scenario.

On the capital side, the higher railcar contingency means that the deficit over the ten-year period increases from nearly \$658 million in the baseline scenario to \$855 million. Additionally, since backlog expenditure is not scheduled until 2024, the annual capital deficit will be greater in the later years.

8.3.2 SCENARIO 3 – HIGH INFLATION WITH SALES TAX

Both the Baseline Scenario and Scenario 2 show large funding gaps for operations and capital expenditures over the next ten years. The WSP Team reviewed various funding options to bridge the gap, detailed earlier in this section, “Funding Options”. Scenario 3 considers an additional Sales & Use Tax. RTA is restricted when increasing a Sales & Use Tax to 0.1% increments. In this case, a 0.6% increase was chosen because that amount will provide enough additional funding to cover both the operating and capital deficits shown in Scenario 2; because the tax must be an increment of 0.1%, there is some resulting surplus funding. This scenario also assumes that 30% of the additional funds from the Sales & Use Tax will be allocated to operations, while 70% will be allocated to capital.

This scenario does not lead to any capital deficit over the ten-year period (see **Figure 8** in the Appendix). However, there is a large variation in the surplus/deficit on an annual basis. In 2021, funding will exceed expenditure by just under \$24 million. In contrast, in 2025, the capital expenditure increase results in an annual deficit of \$16.4 million. The additional revenue source can be difficult to justify when there is such a surplus of funds in the early years, even if the surplus/deficit evens out over a longer period.

The annual deficit in 2025 and onward is mainly due to backlog expenditure, which is postponed to the last five years of the period. If the backlog is spread over the entire 10-year period, the expenditure would be more consistent each year, resulting in a more reliable funding surplus/deficit each year. A prioritized backlog is addressed by Scenario 4 below.

8.3.3 SCENARIO 4 – HIGH INFLATION WITH SALES TAX/UPDATED BACKLOG

Similar to Scenario 3, Scenario 4 considers the additional revenue sources necessary to bridge the funding gap in a conservative financial scenario. In addition to these assumptions, this scenario includes a prioritized backlog, in which backlogged projects have been spread over the ten-year period based on the priorities in **Table 8-6**. These rankings are based on RTA’s own priorities.

Table 8-6: RTA Project Priorities

Project Category	Priority Ranking
Rail Infrastructure	1
Systems	2
Bus Rapid Transit	3
Passenger Facilities	4
Facilities	5
Admin	6
Other	7

Source: RTA Budget Data, WSP Estimates

Since the only difference between Scenario 3 and Scenario 4 is a prioritized backlog, the revenue and expenditure for operations remains unchanged. However, spreading out the backlog expenditure according to RTA’s priorities over the period from 2021-2029 results in much steadier expenditure from one year to the next. This is a more realistic scenario, where the additional Sales & Use Tax revenue will not result in large surpluses in the earlier years.

8.3.4 SCENARIO 5 – LOW INFLATION WITH SALES TAX/ UPDATED BACKLOG

While Scenarios 2 through 4 have assumed a conservative financial outlook, Scenario 5 differs from Scenario 4 by assuming a more optimistic financial outlook. In Scenario 5, the operating cost growth assumption is taken from the 2019 budget, as it is in the Baseline Scenario. This scenario depicts the slower operating cost growth. However, this scenario still assumes a higher contingency of 15% on new rail car expenditure (see **Figure 12** in the Appendix).

Since operating costs grow at a slower rate, a 0.6% Sales and Use Tax is no longer necessary to bridge the funding gap. Instead, this scenario assumes a lower 0.5% additional Sales and Use Tax, with only 15% of revenue directed to operating, and 85% directed towards capital.

8.3.5 SCENARIO 6 – HIGH INFLATION WITH PROPERTY TAX

Although the additional Sales & Use Tax is a strong option to bridge the RTA’s funding deficit over the 10-year period, the WSP Team also explored the option of levying a Property Tax. Scenario 6 builds from Scenario 2, but includes a Property Tax of 0.45%. This percentage was chosen because it is high enough to fund the deficit without resulting in large surpluses.

The level of Property Tax revenue is dependent upon Cuyahoga County’s property values, which are reappraised every 3 years. Historical data show that property values can vary significantly, especially in a reappraisal year. For instance, the projected growth in assessed property value in 2019 is 11%. In contrast, the growth has not exceeded 1% since 2010.

8.4 CONCLUSION

RTA’s existing revenue streams, consisting primarily of revenue from a dedicated 1% countywide Sales & Use Tax levy, are insufficient to support the agency’s O&M and capital needs. Capital funds used consist essentially of federal and local funds. Additional non-Federal funds will be necessary to meet the existing and future needs of the transit system, if heavy rail and light rail are to be maintained as viable transportation options.

The WSP Team reviewed a comprehensive list of potential revenue options and identified three sources as the most feasible for implementation: a Sales & Use tax hike, a new Property Tax levy and/or a new commercial-only Property Tax levy. All these sources have been mentioned in the public conversation on the agency’s funding needs over the past few years.

The Baseline scenario shows gaps between funding and need, particularly for capital: the gaps become larger when the assumed inflation rate is higher. Two additional revenue sources could help bridge the gap: an Additional Sales & Use Tax or a Property Tax, both around .5%. These additional capital revenues would reduce the need to issue debt, resulting in lower costs for RTA and the region. Reprioritizing the backlog can optimize the use of additional funds.

9 CONCLUSIONS AND NEXT STEPS

CONCLUSIONS

For this Financial Analysis and Economic Forecast for the Greater Cleveland Regional Transit Authority, WSP reviewed six key areas related to RTA's performance and financial situation:

- 1 **Benchmarking:** RTA's operational performance offers a mixed picture, with high-performing services (Bus Rapid Transit: the HealthLine) countered by services that are not in line with peers with respect to costs (local bus) or ridership (rail services). Additionally, administrative costs at the agency level appear to be higher than most peers. From a governance standpoint, RTA's Board would benefit from limiting the number of terms and eliminating the stipend for Board members.
- 2 **Economic and Market Risks:** RTA is facing risks related to its funding (reliance on federal grants and local sales and use tax), its operations (declining ridership), its assets (underfunded rail infrastructure and need for costly rail vehicle replacement) and broad regional trends (dispersion of jobs and population centers). Opportunities to mitigate these risks, based on stakeholder input, include new CEO leadership who could foster positive change within the agency; the local bus redesign study that could improve operational efficiencies, especially if done collectively with transportation network companies (i.e. -Uber, Lyft); and, while less certain, the recent population growth in downtown Cleveland that could be create more interest in using transit.
- 3 **Financial Issues:** RTA's financial outlook shows limited deficits in the operating budget. However, projected costs of replacing new rail vehicles (\$240 million, per RTA) and meeting other unfunded maintenance needs, primarily related to the rail system, far exceed available capital revenues.
- 4 **Cost Efficiencies and Revenue Enhancement Strategies:** Cost reduction strategies, relying on privatization and internal reorganization, could lead to potential savings of \$21 million per year, while additional revenues could amount to \$8 million through ridership recovery with local bus system redesign and reinvestment in the rail system. To support its rail infrastructure, the region should consider as a priority long-term coordination of RTA's service development and capital investments with governmental, business, and non-profit entities to direct economic development toward rail station areas, which are currently underutilized.
- 5 **Key Performance Indicators:** RTA has successfully developed advanced performance reporting systems. To enhance its performance-based management, reputation and transparency, RTA should share its goals and results both internally with all its employees and externally with its riders and the public.
- 6 **Revenue Sources and Options to Bridge Funding Gaps:** Among various local revenue sources used to fund transit across the U.S., RTA has the ability to levy sales-and-use and property taxes at the county level. Based on RTA's assessment of its capital needs, substantial funding increases are needed to recapitalize its rail infrastructure and replace its trainsets. What is uncertain is if that increased funding to cover the capital shortfall will yield a high return-on-investment in terms of increased ridership.

NEXT STEPS

RTA and the Greater Cleveland region are at a crossroads. Based on this report, the business community will be able to weigh the trade-offs among the available options for transit operations. Without additional

funding, RTA's rail service risks being gradually curtailed as key infrastructure becomes unsafe for operation, eventually limiting its services to Bus Rapid Transit (BRT), local bus services, and paratransit service for people with disabilities. With additional funding and coordination across sectors (government, business, non-profit), the region could reorient economic development toward areas served by the region's rail infrastructure asset.

Many metropolitan areas in the United States are currently investing billions of dollars to develop rail transit systems similar to the network that already exists in Cleveland. For significantly less investment, RTA could bring their rail infrastructure to a high performing standard. RTA's HealthLine BRT provides a local example of the ability of a transit system to generate economic benefits and to attract and shape transit-oriented development. Scaling this type of development strategy across the rail infrastructure is needed to maximize the investment. Greater Cleveland needs an aligned economic development strategy to enhance the use of RTA's rapid transit system. Regional support for additional transit funding should be coupled with other reforms and investment along the rapid transit corridors.

10 APPENDIX

Figure 10-1: List of Revenue Sources Identified

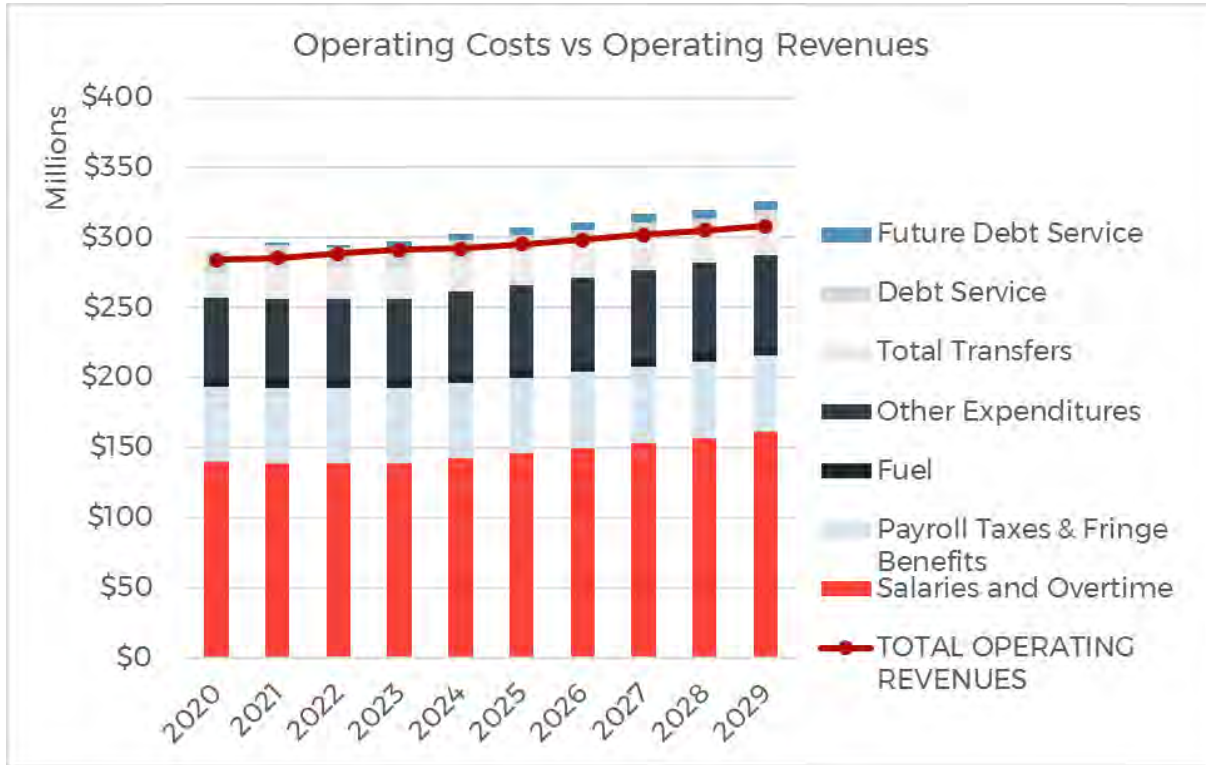
- Existing Revenue Sources Used to Fund Local Transit in Ohio
 - County Sales and Use Tax
 - City Income Tax (Cincinnati)
- Revenue Sources used to Fund Local Transit in Other States
 - Vehicle Tax (personal property tax)
 - Head Tax (# of Employees)
 - Tolls/Congestion Fees
 - Fee on TNCs (e.g. Uber)
 - Development Impact Fees
 - Local Fuel Tax
 - Lottery
- Existing Revenue Sources used in Cuyahoga County
 - County
 - Property Tax
 - Hotel/Bed Tax
 - Excise Tax on Alcohol, Cigarettes
 - Utility Service Tax (not currently levied, but authority exists)
 - Vehicle License/Registration Fee
 - Real Property Transfer Tax
 - City
 - Admissions Tax for Entertainment/ Convention Events
 - Metered/Street Parking Fee
 - Rental Car Tax
 - Parking Tax (levied on commercial parking receipts)
 - Casino Tax

Table 10-1: Evaluation Results Summary Table

Source	Revenue potential	Keeps pace with inflation	Equity	Nexus with beneficiaries	Stability/predictability	Administration	Political Feasibility
Sales & Use Tax	●	○	○	○	○	●	●
Property Tax	●	○	○	○	○	●	○
Commercial Property Tax	○	○	○	○	○	○	○
City Income Tax	●	○	○	○	○	○	○
Excise Tax on Alcohol, Cigarettes	○	●	○	○	●	○	○
Admission Tax for Entertainment Events	○	●	●	○	○	○	○
Metered/Street Parking Fees	○	●	○	●	○	○	○
Rental Car Tax	○	○	○	○	○	○	○
Utility Service Tax	○	○	○	○	●	○	○
Vehicle Tax (personal property)	○	○	○	○	●	○	○
Commercial Head Tax (# of employees)	○	○	○	○	○	○	○
Tolls/Congestion Fees	○	○	○	●	○	○	○
Hotel/Bed Tax	○	●	●	○	○	○	○
Parking Tax (on commercial receipts)	○	●	○	●	○	○	○
Fee on TNCs	○	○	○	○	○	○	○
Development Impact Fees	○	○	●	●	○	○	○
Vehicle License/Registration Fees	○	○	○	○	●	○	○
Casino Tax	○	○	○	○	○	○	○
Local Fuel Tax	○	○	○	○	○	○	○
Lottery Revenues	○	○	○	○	○	○	○
Real Property Transfer Tax	○	○	○	○	○	○	○

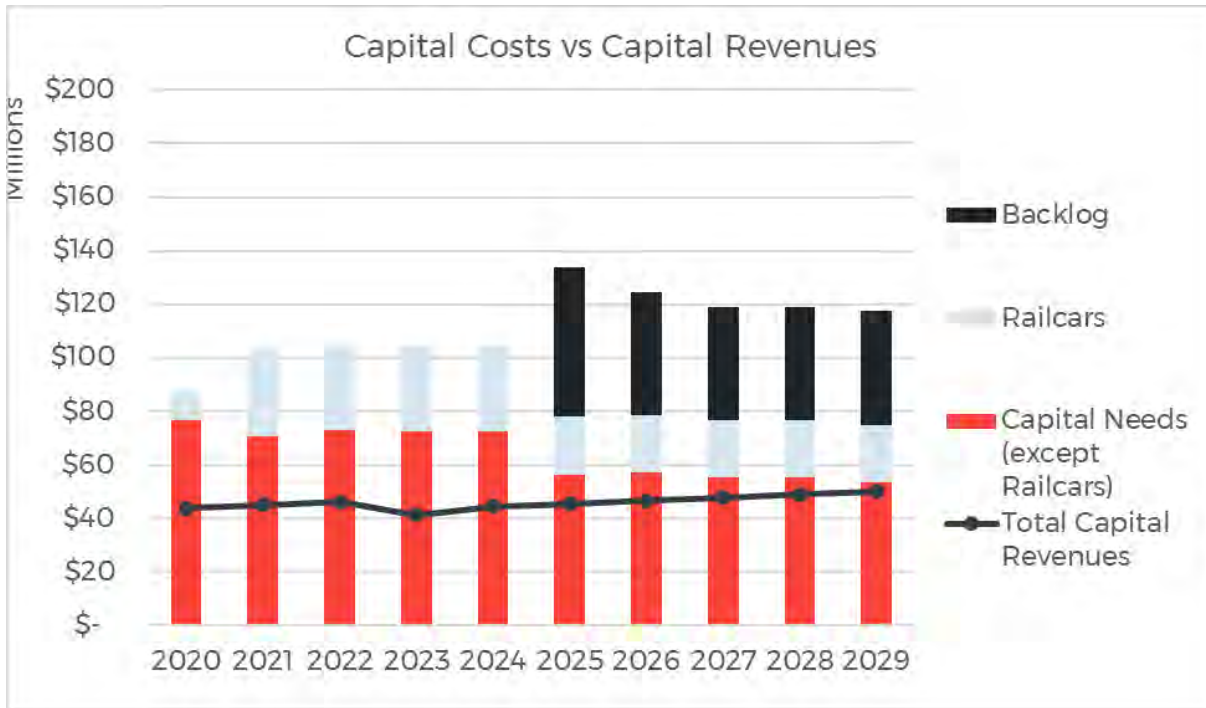
Source: WSP Research

Figure 10-2: Scenario 1: Baseline - Operating



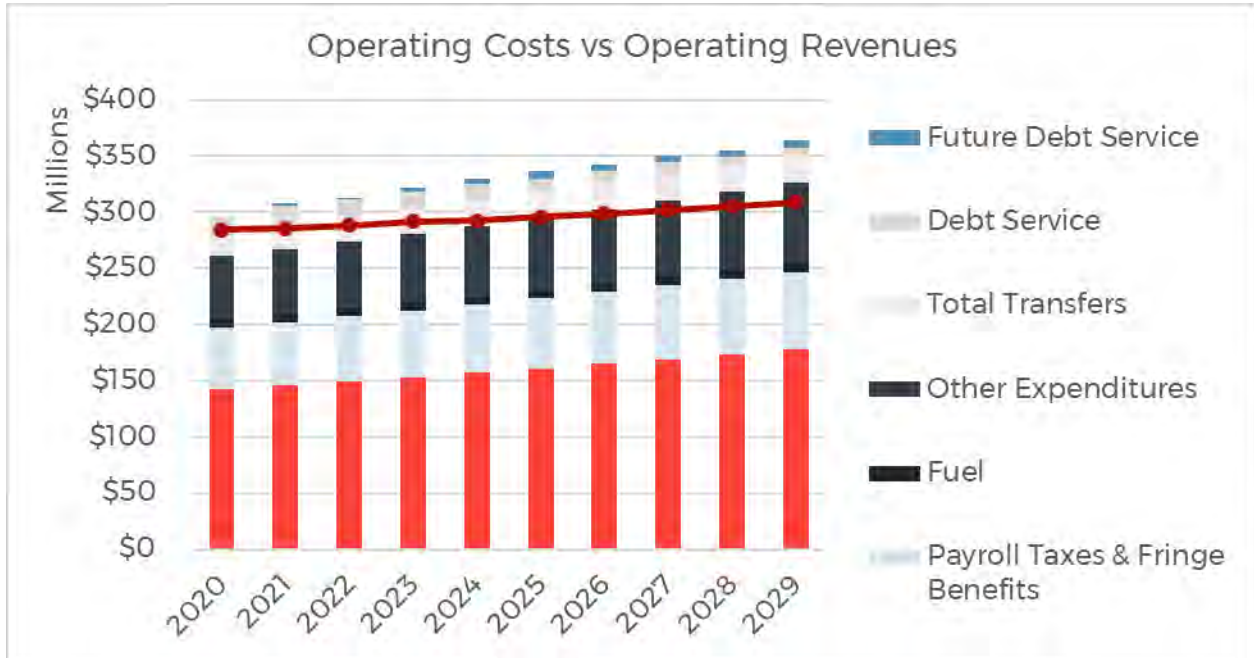
Source: RTA Estimates

Figure 10-3: Scenario 1: Baseline - Capital



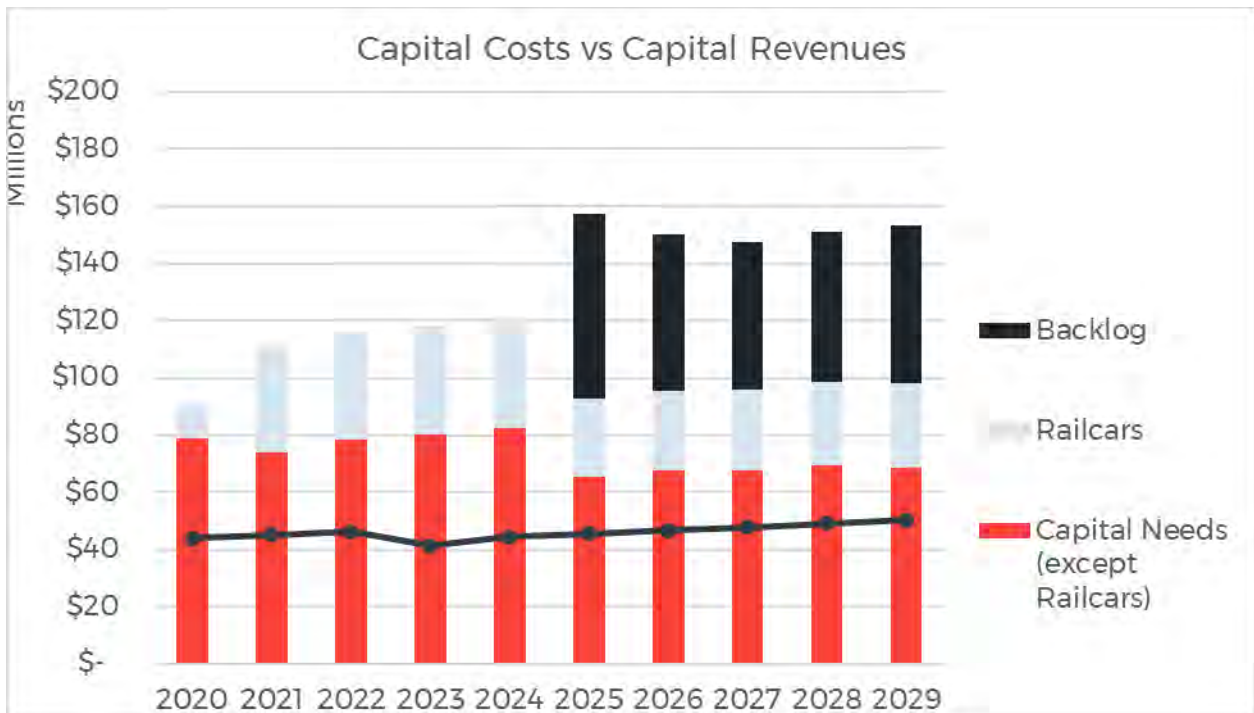
Source: RTA Estimates

Figure 10-4: Scenario 2: High Inflation - Operating



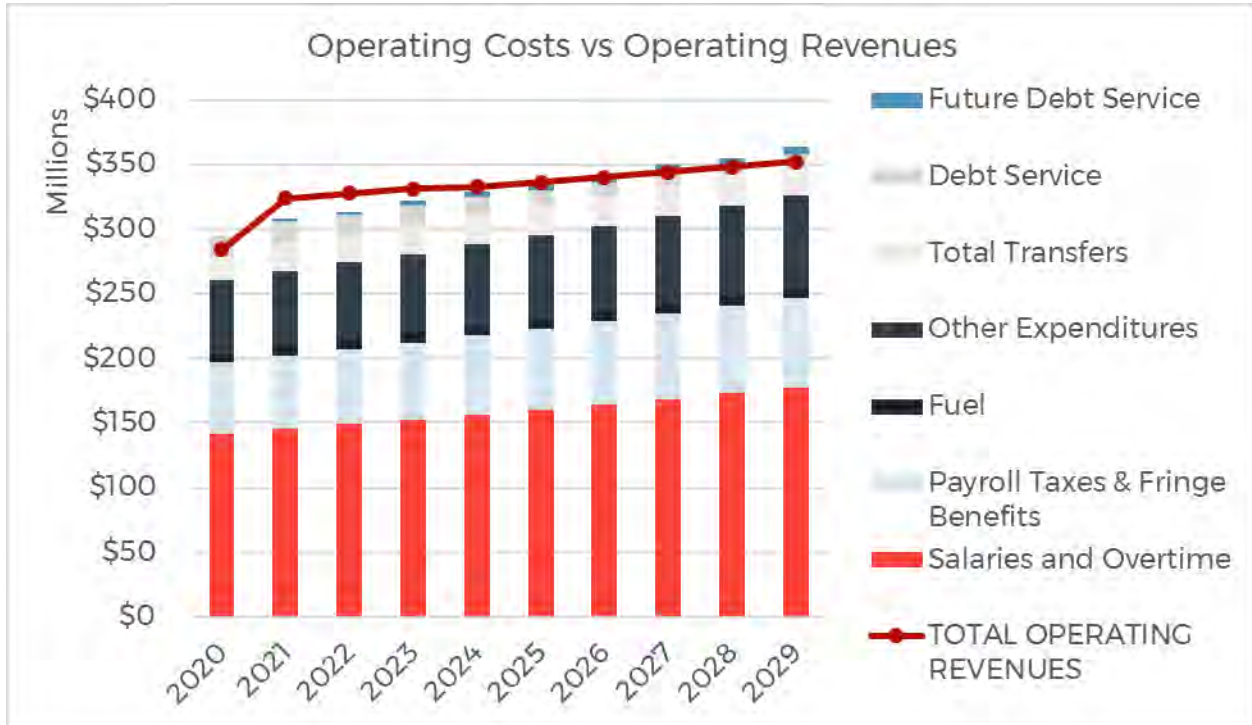
Source: RTA Estimates. Additional inflation and contingency factors were included.

Figure 10-5: Scenario 2: High Inflation - Capital



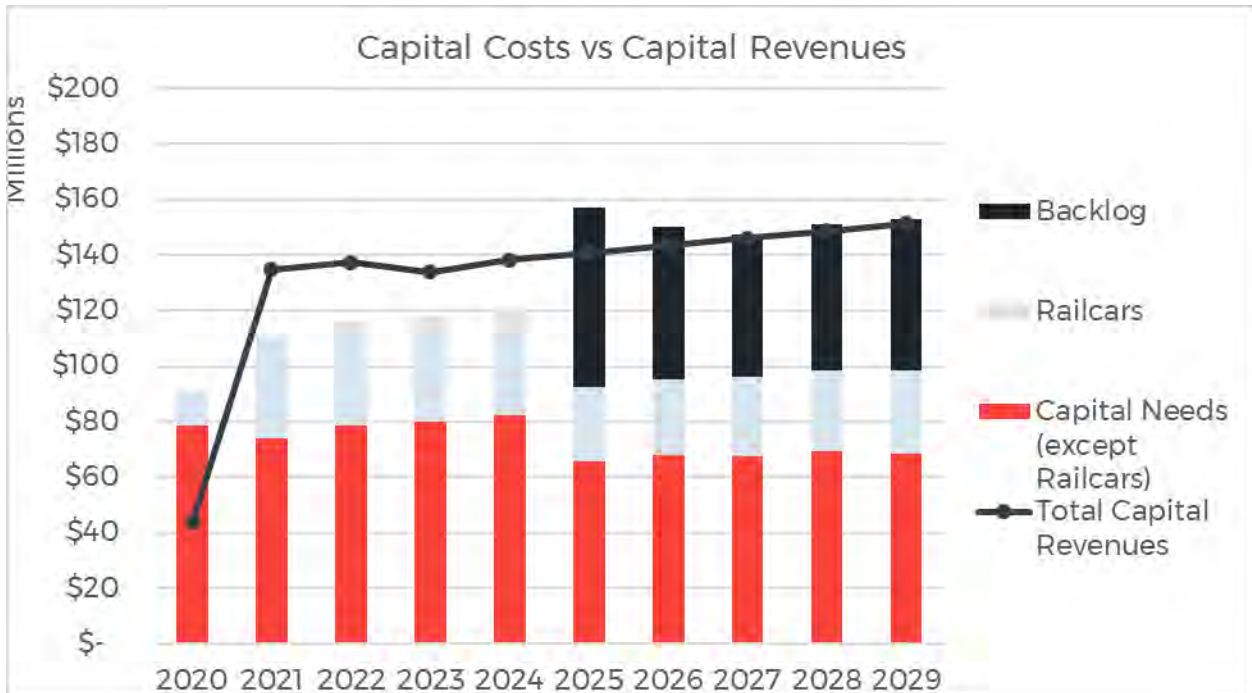
Source: RTA Estimates. Additional inflation and contingency factors were included.

Figure 10-6: Scenario 3: High Inflation with Sales Tax - Operating



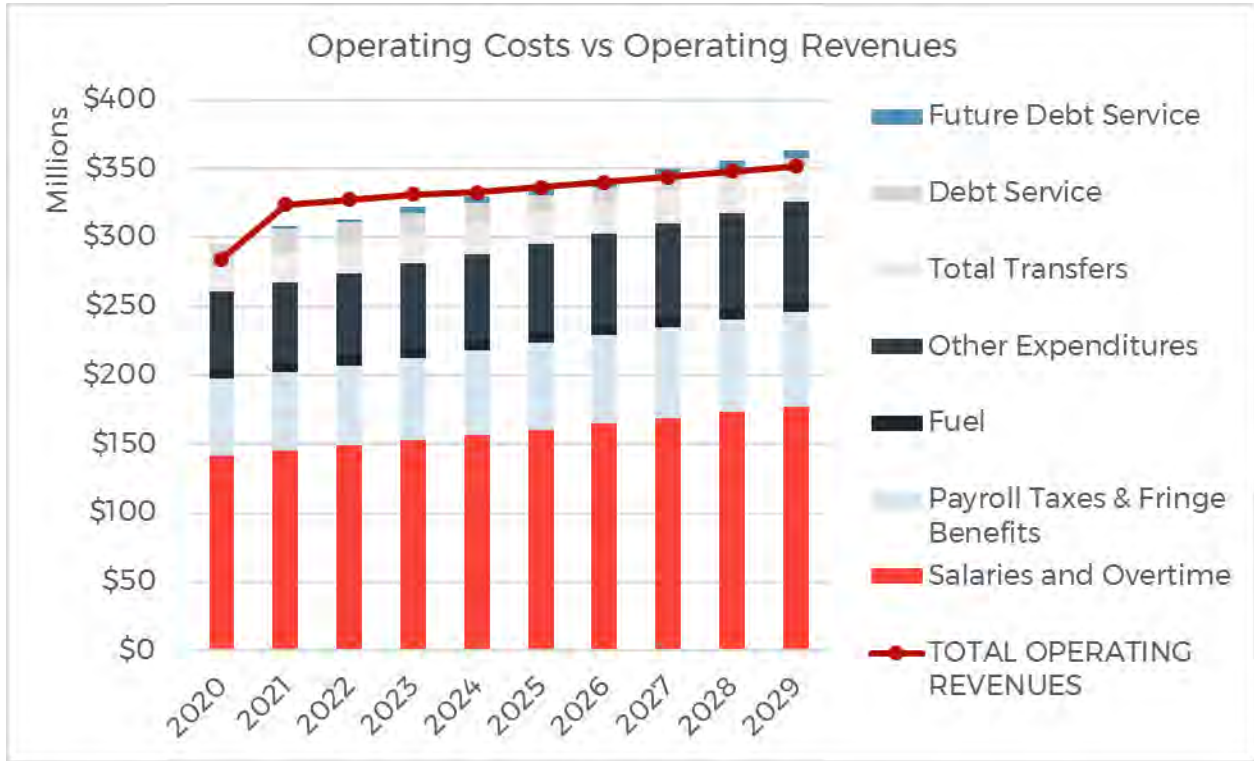
Source: RTA Estimates. Additional inflation and contingency factors were included.

Figure 10-7: Scenario 3: High Inflation with Sales Tax - Capital



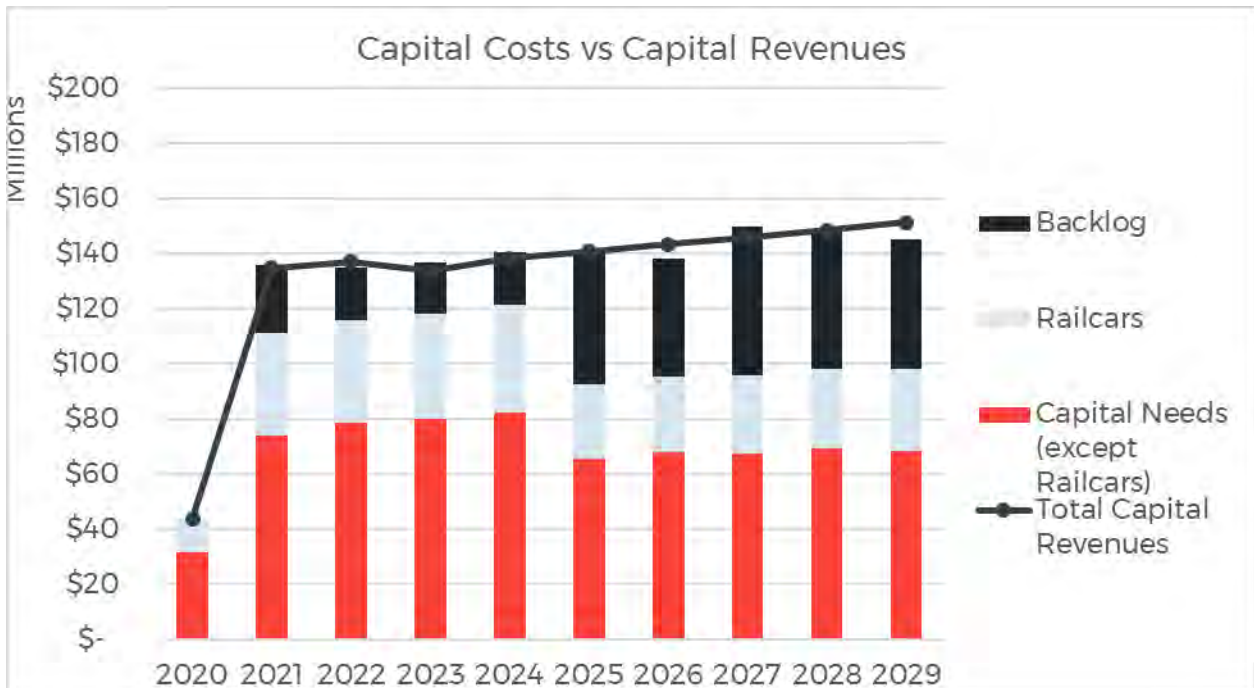
Source: RTA Estimates. Additional inflation and contingency factors were included.

Figure 10-8: Scenario 4: High Inflation with Sales & Use Tax/Updated Backlog - Operating



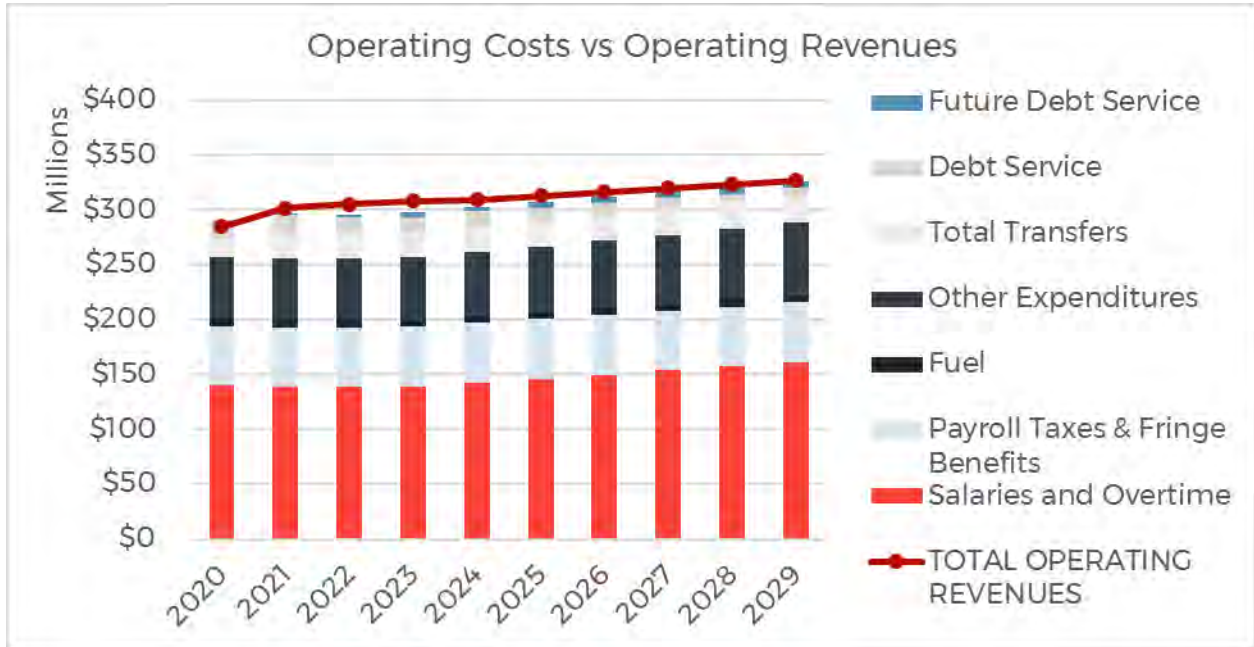
Source: RTA Estimates. Additional inflation and contingency factors were included.

Figure 10-9: Scenario 4: High Inflation with Sales & Use Tax/Updated Backlog - Capital



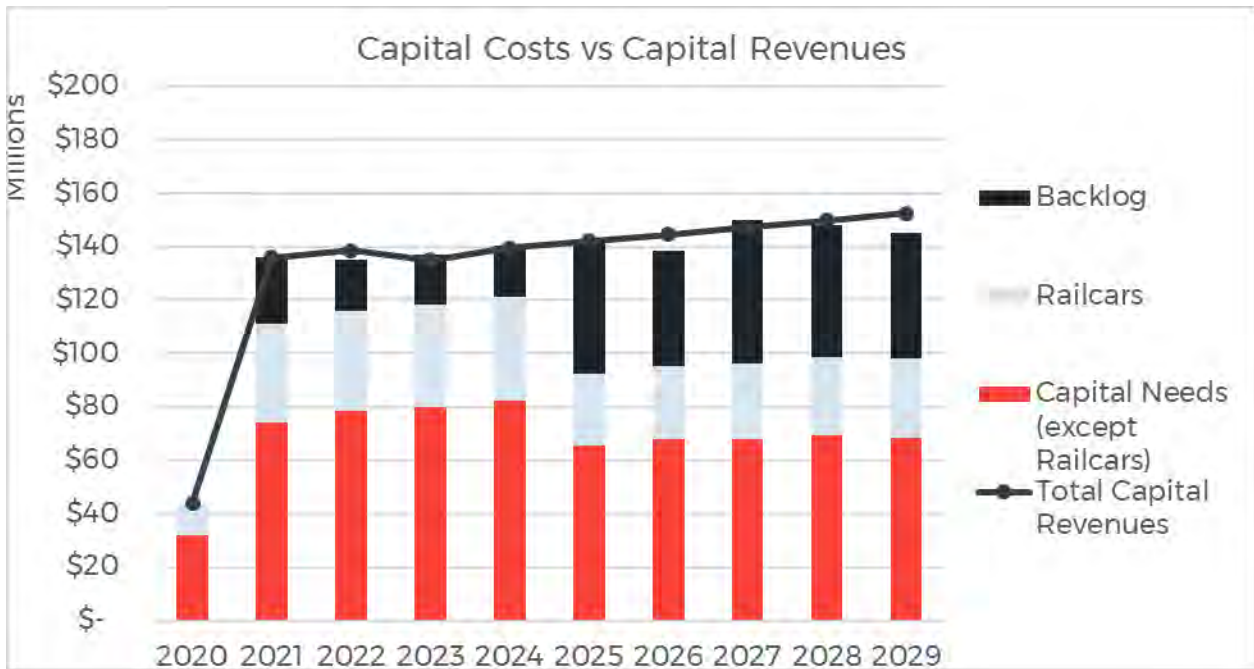
Source: RTA Estimates. Additional inflation and contingency factors were included.

Figure 10-10: Scenario 5: Low Inflation with Sales Tax/Updated Backlog - Operating



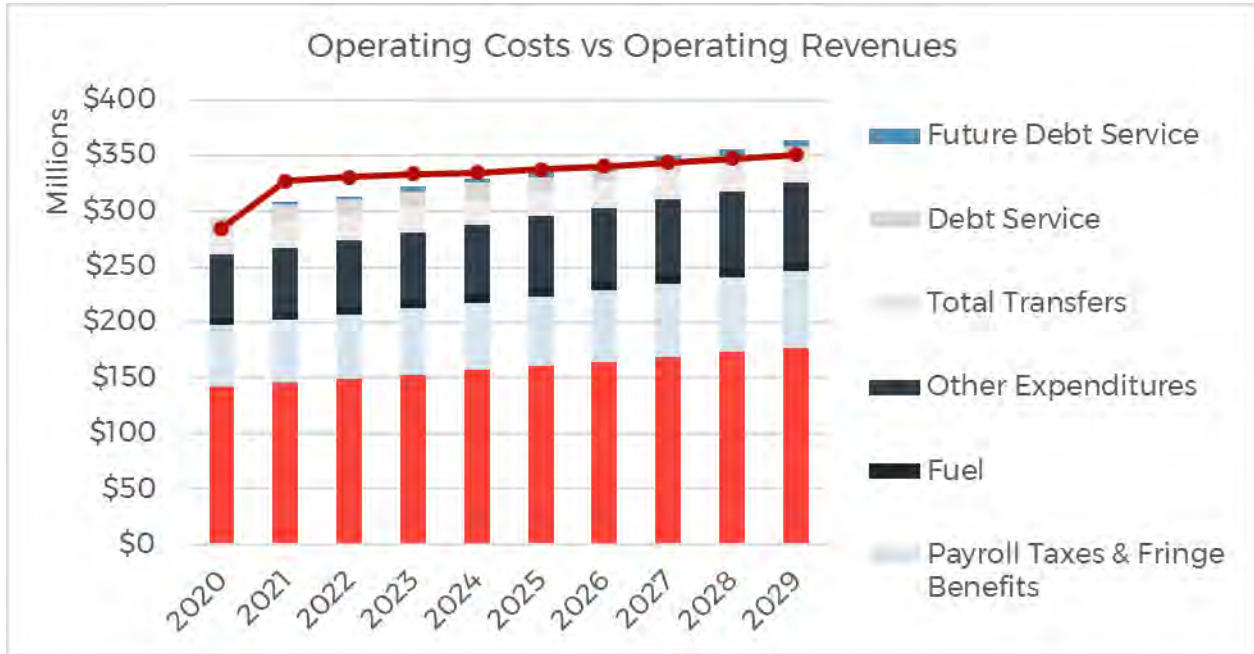
Source: RTA Estimates

Figure 10-11: Scenario 5: Low Inflation with Sales Tax/Updated Backlog - Capital



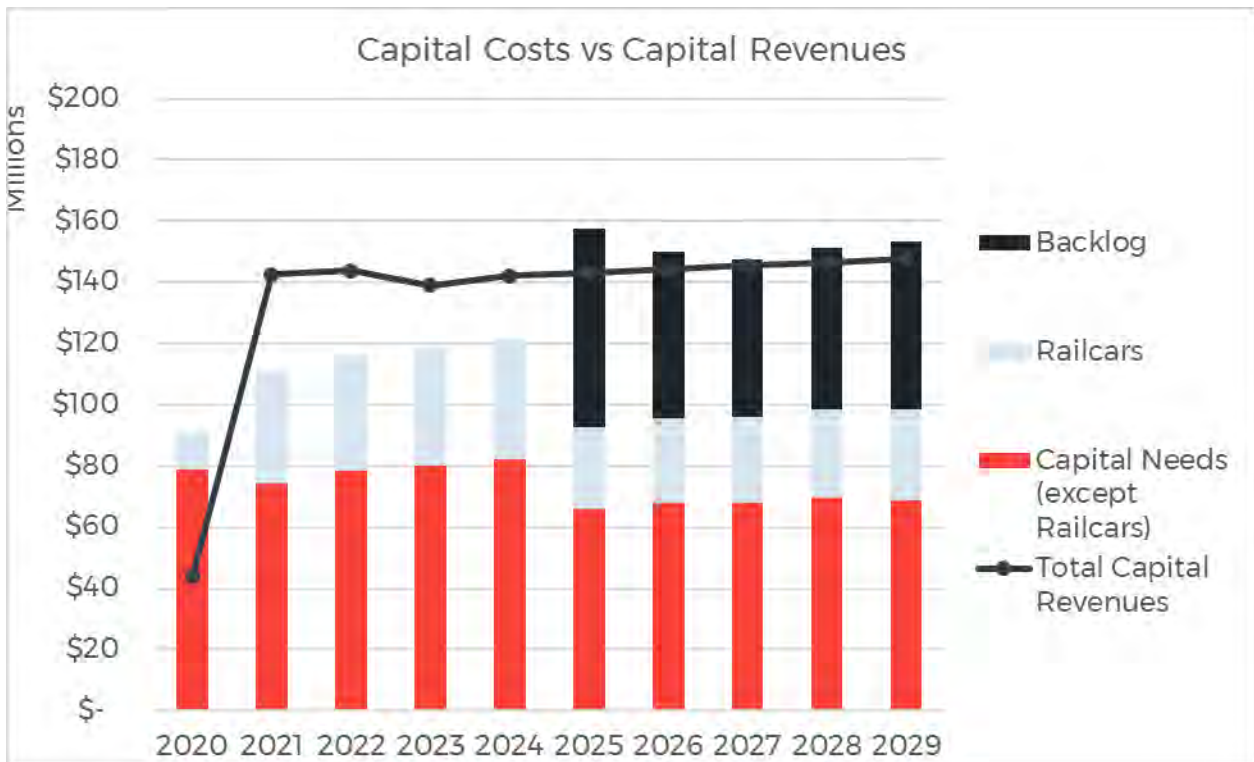
Source: RTA Estimates. Additional inflation and contingency factors were included.

Figure 10-12: Scenario 6: High Inflation with Property Tax: Operating



Source: RTA Estimates. Additional inflation and contingency factors were included.

Figure 10-13: Scenario 6: High Inflation with Property Tax - Capital



Source: RTA Estimates. Additional inflation and contingency factors were included.



Appendix H

Economic Impact Pillar Study



GCRTA Economic Impact and Contributions to Local Economy

Presentation to RTA External Stakeholders & Advocacy Committee

Dr. Iryna V. Lendel

Dr. Obed Pasha

Dro Sohrabian

Matthew B. Ellerbrock

March 5, 2019

CLEVELAND STATE UNIVERSITY
CENTER FOR ECONOMIC DEVELOPMENT



Levin.

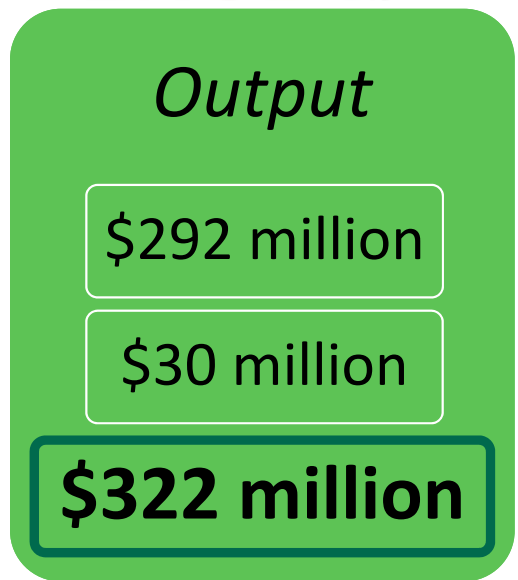
2017 ECONOMIC IMPACT OF GCRTA ON CUYAHOGA COUNTY



OPERATIONS

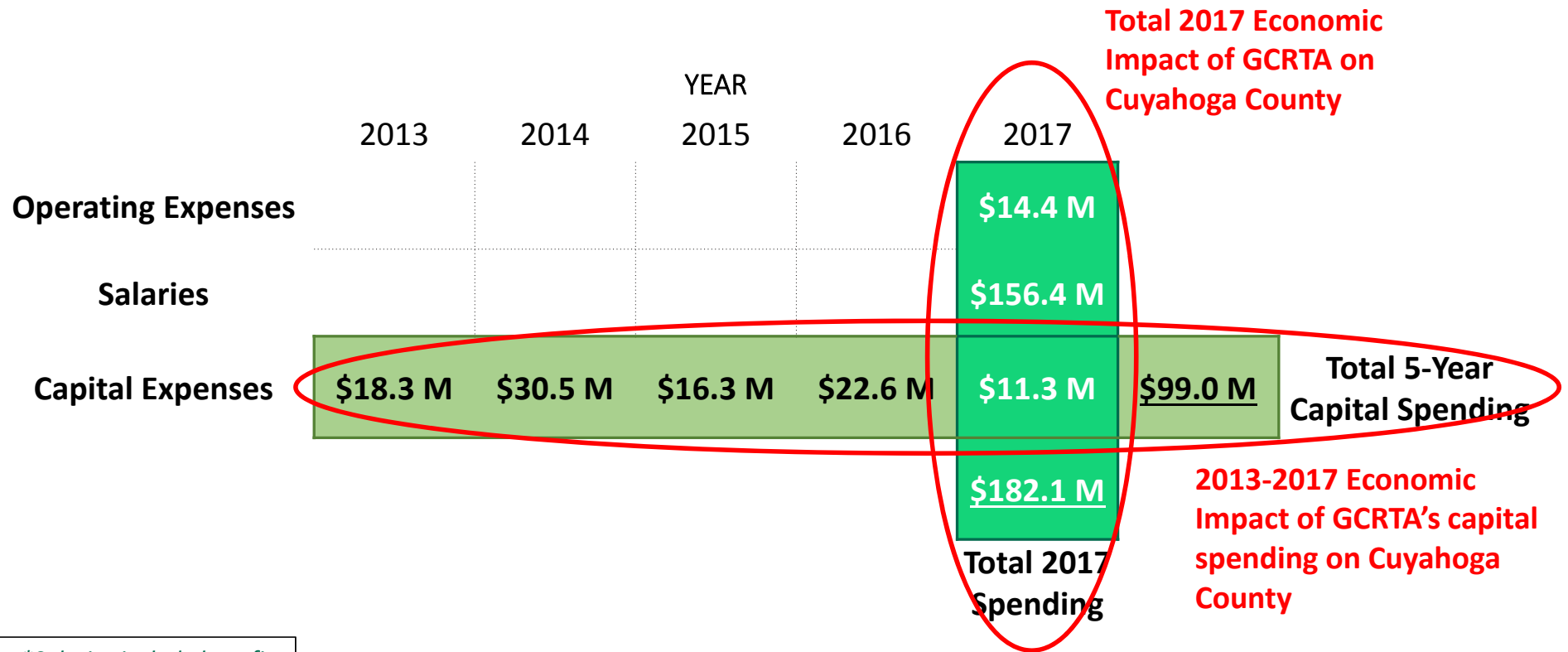
CAPITAL INVESTMENTS

TOTAL



All monetary values in 2019 millions of dollars

GCRTA SPENDING IN CUYAHOGA COUNTY



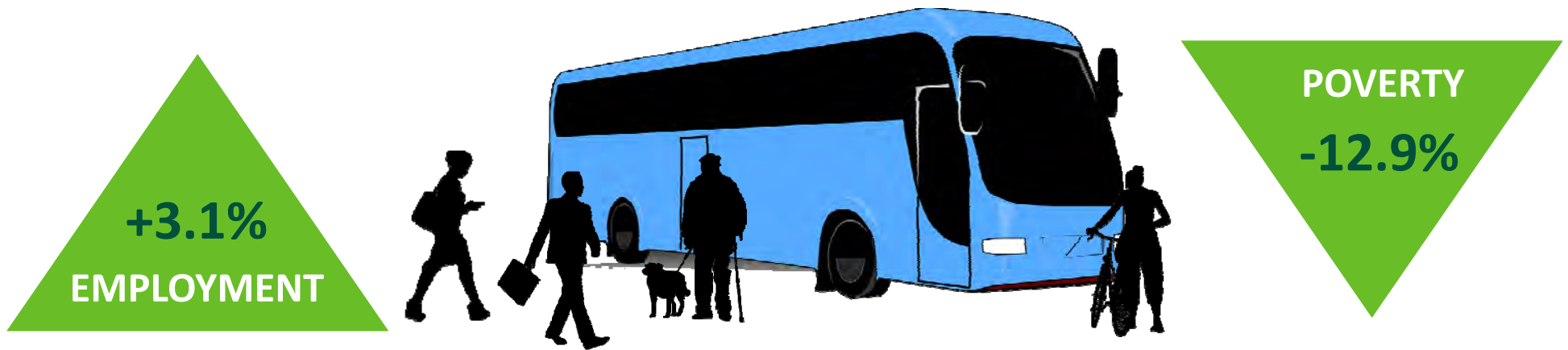
**Salaries include benefits*

TRANSIT IMPACT ON CUYAHOGA COUNTY PROPERTY VALUES



- Property values increase by **3.5%** within a decade for previously unserved 429 census tracts which received some transit service
- 2010 median-based estimate of property value for those 429 census tracts is **\$65.7** billion in 2019 dollars
- The derived property value increase attributed to transit access is **\$2.2** billion in 2019 dollars

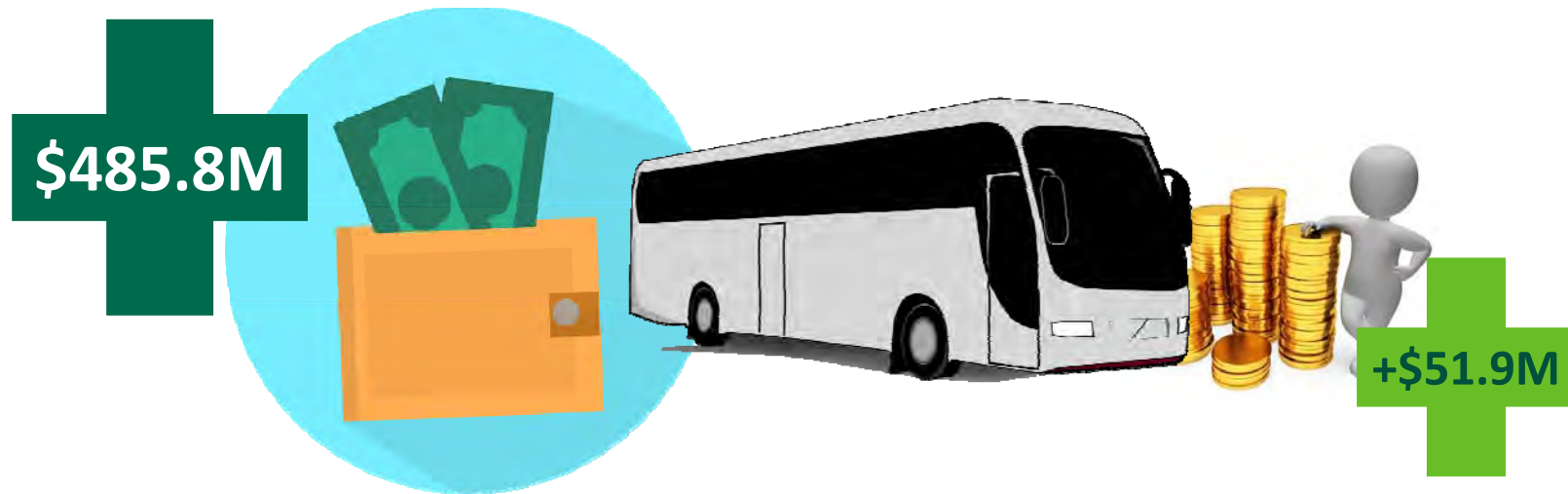
TRANSIT ACCESS, EMPLOYMENT AND IMPACT ON POVERTY



Within a decade, for previously unserved areas that gain transit access:

- Employment increased by **3.1%**
- Poverty decreased by **12.9%**

TRANSIT ACCESS AND CUSTOMERS



- An estimated **\$485.8 million** of annual earnings is brought home by those who depend on GCRTA transit services to get to work
- Direct annual savings for GCRTA passengers is **\$51.9 million**

TRANSIT AND STUDENTS



25% of GCRTA riders tend to be students

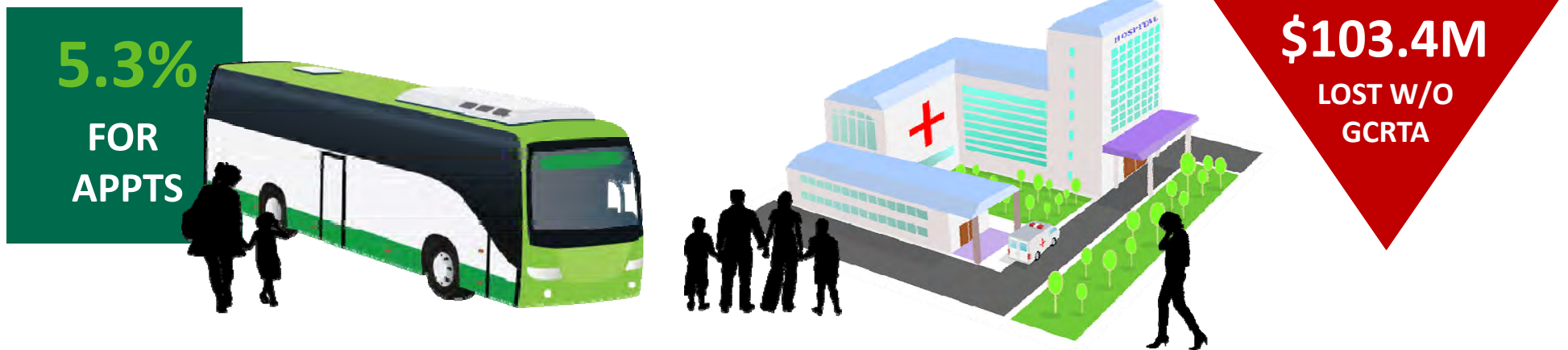
- 77% of those are dependent on transit services

If GCRTA services are suspended, impact would affect **16,872** college and K-12 students

The current saving for the CMSD due to the GCRTA services is about **\$28.7** million annually

- Approximately **6,000** 7th and 8th grade CMSD students ride GCRTA

TRANSIT AND HEALTH CARE



- About **5.3%** commuters use GCRTA to get to their medical appointments; **89%** of them depend on RTA
- Healthcare institutions in the regions **may lose \$103.4 M annually** when patients dependent on transit miss or cancel appointments

THIS PRESENTATION

- Economic impact of GCRTA on Cuyahoga County
 - Economic impact: (1) 2017 operation + operating/capital spending; (2) cumulative 5-year capital
 - IMPLAN modeling
 - Direct, indirect and induced economic impact
- Descriptive Analysis of GCRTA Wage Distribution
- Local Contributions to the Economy - Statistical Models
 - Historical System Maps processing
 - Service Level model
- Job Access and Spatial Mismatch Analysis
- Other Contributions

ECONOMIC IMPACT OF GCRTA: ASSUMPTIONS

- Economic impact is created by GCRTA operations and expenditures made within the region of impact – Cuyahoga County
- Despite the fact that GCRTA is funded by local money, the substitution effect is not applicable due to the nature of GCRTA services
- Economic impact is calculated based on a question how Cuyahoga County's economy would be affected if GCRTA suspends its services
- Total spending in 2017 in Cuyahoga -- \$182.1 million

MEASURES OF ECONOMIC IMPACT

- Employment impact measures the number of jobs created and supported in the region as a result of GCRTA operations and expenditures
- Labor income impact measures the additional labor earnings created in the region due to GCRTA operation and expenditures
- Value added impact measures the additional economic value created in the region as a result of GCRTA operations and expenditures. Value added is calculated as output less the value of intermediary goods (such as security services or gasoline)
- Output impact measures the additional value of all goods and services produced in the region as a result of GCRTA operations and expenditures
- Tax impact measures the additional federal, state, and local tax revenues collected in the region as a result of GCRTA operations and expenditures

TOTAL 2017 ECONOMIC IMPACT OF GCRTA ON CUYAHOGA COUNTY

All monetary values in 2019 millions of dollars

	Employment	Labor Income	Value Added	Output	State & Local Tax
Direct	1,800	\$156.4	\$169.5	\$182.1	\$7.0
Indirect	433	\$14.8	\$21.2	\$35.0	\$1.0
Induced	744	\$36.3	\$64.9	\$104.6	\$5.7
Total	2,977	\$207.5	\$255.6	\$321.7	\$13.8

- Spending of \$182.1 million for operation and purchases triggered increase of economic activity by \$321.7 million
- 60% (1,800) of the total impact is due to the direct RTA employment
- 25% (744) of total employment impact is created as an induced effect – spending done by GCRTA’s employees and the employees of its suppliers by buying goods and services in the region of impact
- Local spending at consumer-driven industries generated 41% (\$5.7 M) of the collected taxes

COMPONENTS OF TOTAL 2017 IMPACT

Operations & Operational Expenditures		Employment	Labor Income	Value Added	Output	State & Local Tax
		Direct	1,800	\$156.4	\$163.7	\$170.7
Indirect	322	\$8.3	\$12.5	\$20.2	\$0.6	
Induced	715	\$34.9	\$62.4	\$100.6	\$5.5	
Total	2,837	\$199.6	\$238.6	\$291.5	\$13.1	
+						
2017 Capital Expenditures		Employment	Labor Income	Value Added	Output	State & Local Tax
		Direct	0	\$0.0	\$5.8	\$11.3
Indirect	111	\$6.5	\$8.7	\$14.8	\$0.4	
Induced	29	\$1.4	\$2.5	\$4.1	\$0.2	
Total	140	\$7.9	\$16.9	\$30.2	\$0.6	
TOTAL	Total	2,977	\$207.5	\$255.6	\$321.7	\$13.8

Spending
\$2017

\$170.8 million

\$11.3 million

\$182.1 million

TOP INDUSTRIES AFFECTED BY TOTAL 2017 IMPACT: EMPLOYMENT

All monetary values in 2019 millions of dollars

Industry	Employment	Labor Income	Output
Transit and ground passenger transportation	2,039	\$159.9	\$176.0
Construction of other new nonresidential structures	82	\$4.6	\$10.2
Hospitals	48	\$4.3	\$8.5
Full-service restaurants	40	\$1.0	\$2.0
Limited-service restaurants	38	\$0.7	\$3.1
Real estate	32	\$0.5	\$8.3
Retail - Food and beverage stores	22	\$0.6	\$1.4
Services to buildings	21	\$0.5	\$1.0
Individual and family services	21	\$0.7	\$0.8
Home health care services	21	\$0.7	\$0.9

- There are two types of industries affected by operations and spending of GCRTA:
 - GCRTA-driven -- those in transportation, construction and related professional, trade, and financial services (supply chain industries)
 - Population-driven in consumer goods and services industries: healthcare, retail, real estate, and other population services

TOTAL IMPACT OF GCRTA CAPITAL EXPENDITURES ON CUYAHOGA COUNTY, 2013-2017

All monetary values in 2019 millions of dollars

	Employment	Labor Income	Value Added	Output	State & Local Tax
2013	235	\$13.6	\$19.2	\$32.3	\$1.1
2014	382	\$21.9	\$31.2	\$53.2	\$1.8
2015	201	\$11.5	\$16.3	\$27.8	\$0.9
2016	278	\$15.9	\$22.6	\$37.9	\$1.3
2017	140	\$7.9	\$11.2	\$18.9	\$0.6
Average	247				
Total		\$70.9	\$100.5	\$170.1	\$5.8

<i>Spending, \$2017</i>
<i>\$18.2</i>
<i>\$30.5</i>
<i>\$16.3</i>
<i>\$22.5</i>
<i>\$11.3</i>
<i>\$19.8</i>
\$98.8

GCRTA WAGE DISTRIBUTION

- Out of \$137 million spent on salaries by GCRTA, \$112 million are paid to workers residing in Cuyahoga County (82%)
- 65% of salaries paid in Cuyahoga County are distributed to workers living in top 10 municipalities in Cuyahoga
- 31.5% of locally paid salaries are paid to workers who live in Cleveland

Derived from descriptive analysis

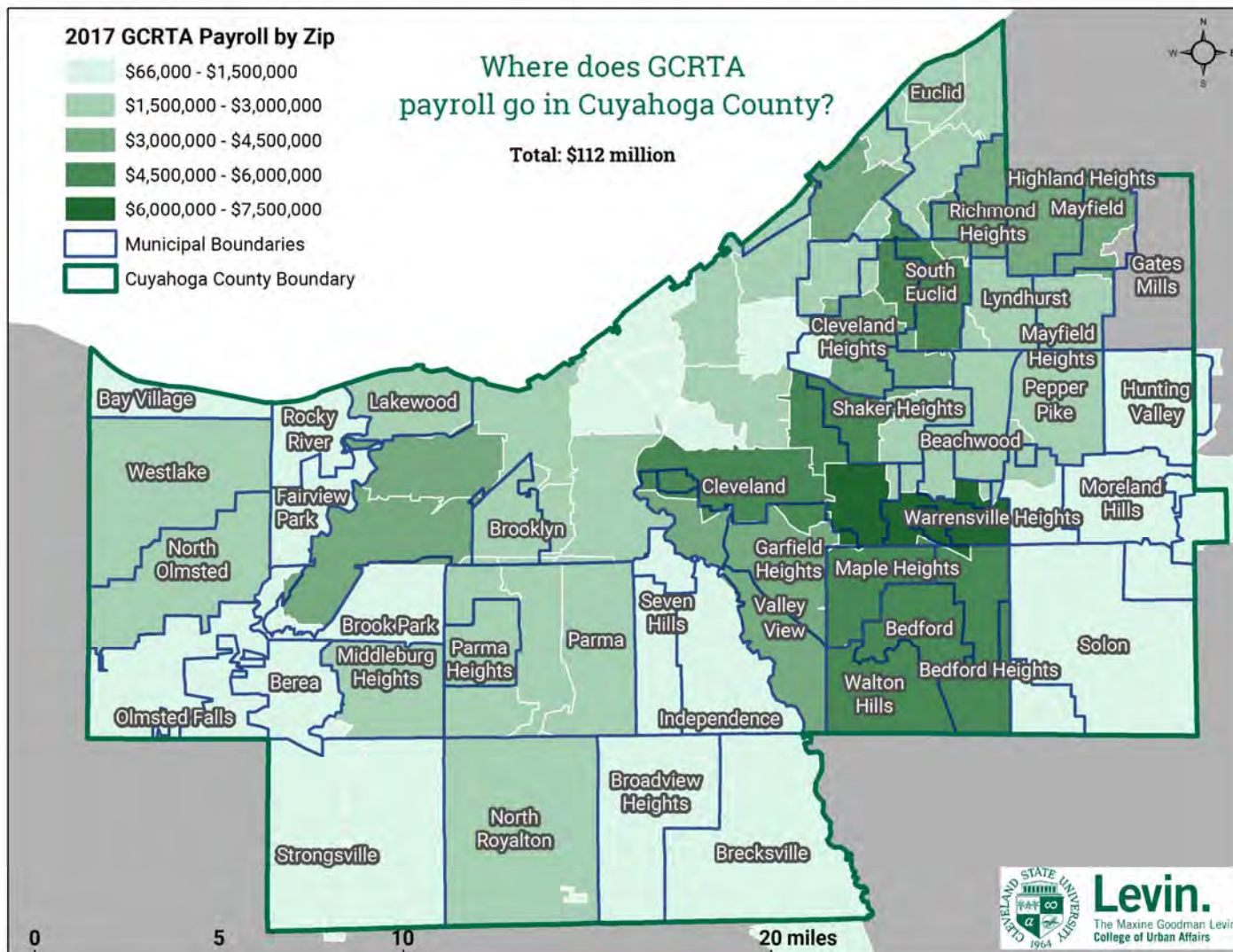
GCRTA SALARY DISTRIBUTION IN CUYAHOGA COUNTY

Top 10 Municipalities

- **\$137 million GCRTA salaries** in 2017
- **\$112 million salaries** in Cuyahoga County
- 82% salaries are paid in the county

MUNICIPALITY	AREA-BASED PROPORTIONAL SALARY
Cleveland	\$35,278,333
Euclid	\$7,874,021
Maple Heights	\$5,100,236
Parma	\$4,610,463
Cleveland Heights	\$4,221,016
Walton Hills	\$3,771,076
Shaker Heights	\$3,741,882
South Euclid	\$3,149,444
Warrensville Heights	\$2,763,235
North Olmsted	\$2,370,678

All monetary values in 2017 millions of dollars



CONTRIBUTIONS TO LOCAL ECONOMY

Within a decade, for previously un-served areas that gain transit access:

- Employment increases by 3.1%
- Poverty decreases by 12.9%
- Property values increase by 3.5% (\$2.3 billion)

Derived from statistical modeling

CONTRIBUTIONS TO LOCAL ECONOMY

- Methods
 - Statistical models were run on 462 Cuyahoga County census tracts from 1970 to 2010
 - Socioeconomic data from LTDB (Longitudinal Tract Data Base)
 - Uses measure of “access to transit”
- Investigate effects on:
 - Poverty rates and employment
 - Part-time and minimum wage workers along transit
 - Housing and property values
 - Access to jobs

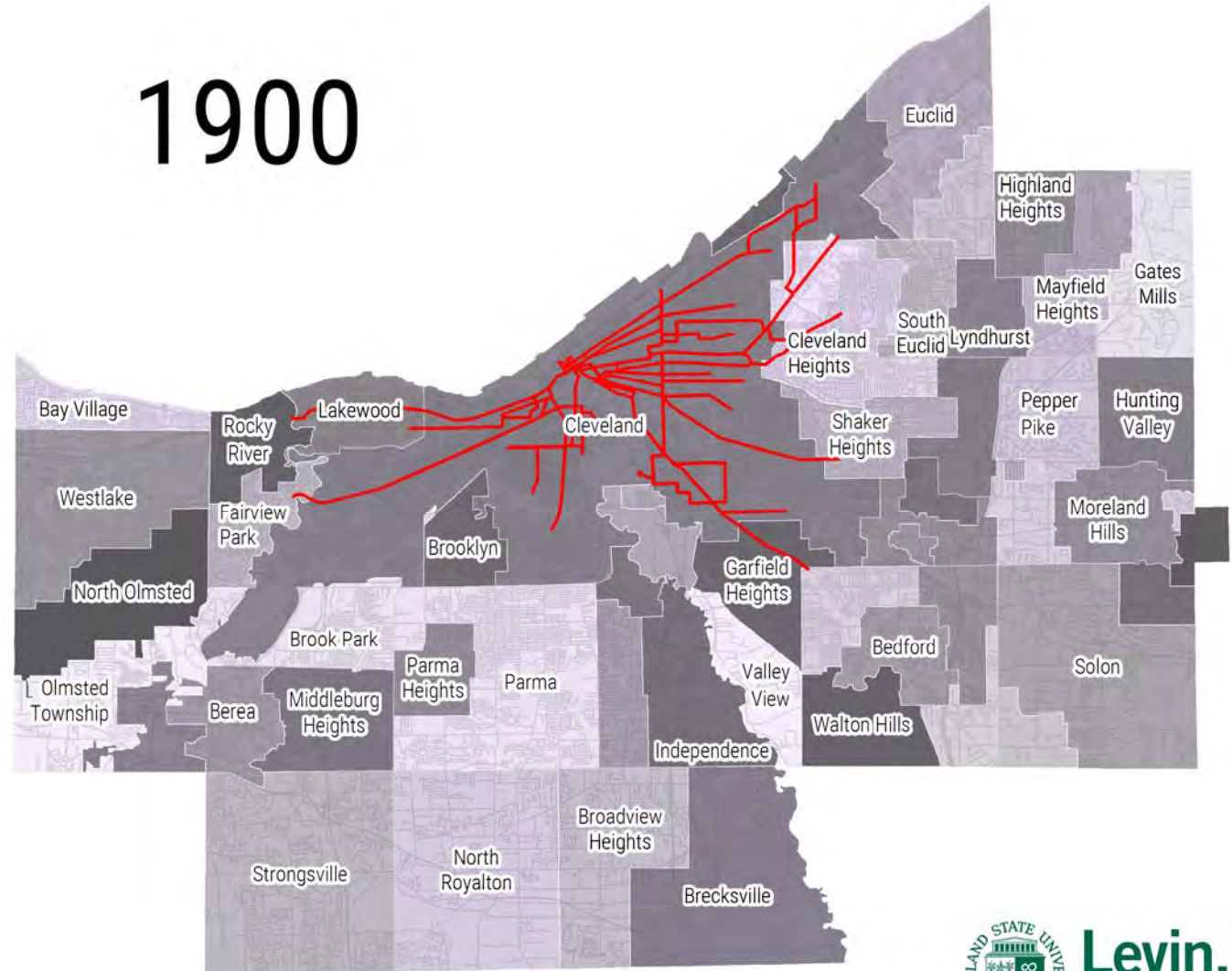
LOCAL CONTRIBUTIONS: ACCESS TO TRANSIT

- Historical system maps
- Manually convert to shapefiles of networks
- Can say if census tract had “access to transit”
- “Access to transit” = route running through the tract
- No digital stop or frequency info before 2009 makes detailed models impossible



TRANSIT NETWORK CHANGE OVER THE YEARS

1900



Center for Economic Development



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College of Urban Affairs

IMPACT OF GCRTA SERVICES ON DYNAMICS OF EMPLOYMENT: LONG TERM

Table A5: Dependent variable – Employment (long-term impact)

	(1)	(2)	(3)	(4)	(5)
TR_ACCESS		0.330*** (0.052)	0.043*** (0.013)	0.028*** (0.010)	0.031*** (0.011)
POPDENS	0.777*** (0.029)		1.041*** (0.019)	0.782*** (0.029)	0.775*** (0.029)
H30OLD	0.014** (0.007)		0.0320*** (0.008)	0.011* (0.006)	0.011* (0.007)
RENTVAL	0.106*** (0.035)		0.128*** (0.047)	0.103*** (0.035)	0.103*** (0.035)
MANUF	0.241*** (0.023)			0.245*** (0.023)	0.240*** (0.023)
HH_BLACK	0.005* (0.003)				0.005* (0.003)
Constant	-1.495*** (0.239)	6.975*** (0.049)	-2.534*** (0.281)	-1.549*** (0.239)	-1.466*** (0.237)
Census Tract FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	2,143	2,214	2,211	2,208	2,143
R-squared (within)	0.873	0.127	0.835	0.875	0.873
No. of Census Tracts	443	443	443	443	443

Employment increases by 3.1% within a decade for previously un-served areas that gain transit access

IMPACT OF GCRTA SERVICES ON POVERTY: LONG TERM

Table A8: Dependent variable – Poverty (long-term impact)

	(1)	(2)	(3)	(4)	(5)
TR_ACCESS		-0.162*** (0.046)	-0.124*** (0.046)	-0.111** (0.044)	-0.129*** (0.043)
POPDENS	0.023 (0.095)		-0.087 (0.070)	0.122 (0.096)	0.031 (0.095)
H30OLD	0.014 (0.024)		-0.001 (0.024)	0.012 (0.024)	0.023 (0.024)
RENTVAL	-0.437*** (0.113)		-0.454*** (0.112)	-0.451*** (0.116)	-0.423*** (0.114)
MANUF	-0.214*** (0.051)			-0.196*** (0.051)	-0.207*** (0.050)
HH_BLACK	0.072*** (0.009)				0.072*** (0.009)
Constant	4.657*** (0.763)	1.913*** (0.043)	4.772*** (0.704)	4.063*** (0.792)	4.537*** (0.780)
Census Tract FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	2,143	2,215	2,211	2,208	2,143
R-squared (within)	0.381	0.320	0.342	0.356	0.384
No. of Census Tracts	443	443	443	443	443

Poverty decreases by 12.9% within a decade for previously un-served areas that gain transit access

IMPACT OF GCRTA SERVICES ON PROPERTY VALUES: LONG TERM

	(1)	(2)	(3)	(4)	(5)
TR_ACCESS		0.040* (0.023)	0.042** (0.020)	0.037* (0.020)	0.035* (0.021)
POPDENS	0.069* (0.035)		0.110*** (0.027)	0.040 (0.033)	0.066* (0.035)
H30OLD	-0.067*** (0.013)		-0.059*** (0.012)	-0.066*** (0.012)	-0.070*** (0.012)
RENTVAL	0.237*** (0.059)		0.253*** (0.061)	0.236*** (0.058)	0.232*** (0.059)
MANUF	0.076*** (0.018)			0.072*** (0.018)	0.075*** (0.018)
HH_BLACK	-0.018*** (0.004)				-0.018*** (0.004)
Constant	8.222*** (0.345)	9.918*** (0.022)	8.116*** (0.327)	8.412*** (0.326)	8.262*** (0.344)
Census Tract FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	2,135	2,205	2,203	2,200	2,135
R-squared (within)	0.932	0.926	0.933	0.935	0.932
No. of Census Tracts	443	443	443	443	443

- Property values increase by 3.5% within a decade for previously un-served tracts that gain transit access
- 2010 median-based estimate of property value for those 429 Census Tracts is \$65.7 billion in 2019 dollars
- The derived property value increase attributed to transit access is \$2.2 billion in 2019 dollars

JOB ACCESS AND SPATIAL MISMATCH

- GCRTA services reduce effects of spatial mismatch between people and jobs
- The quicker GCRTA services are, the more likely individuals from high-poverty areas are to find work at low-skill jobs
- GCRTA may be facilitating workforce participation in the economy

Derived from descriptive analysis

SPATIAL MISMATCH INVESTIGATION

Spatial Mismatch in Cuyahoga County

Top 20 Census Tracts: Most Entry-Level Jobs (< \$15k annual), 2015

- 1,355 - 3,299 jobs
- 3,300 - 5,243 jobs
- 5,244 - 7,187 jobs
- 7,188 - 9,131 jobs
- 9,132 - 11,075 jobs

56,822 entry-level jobs

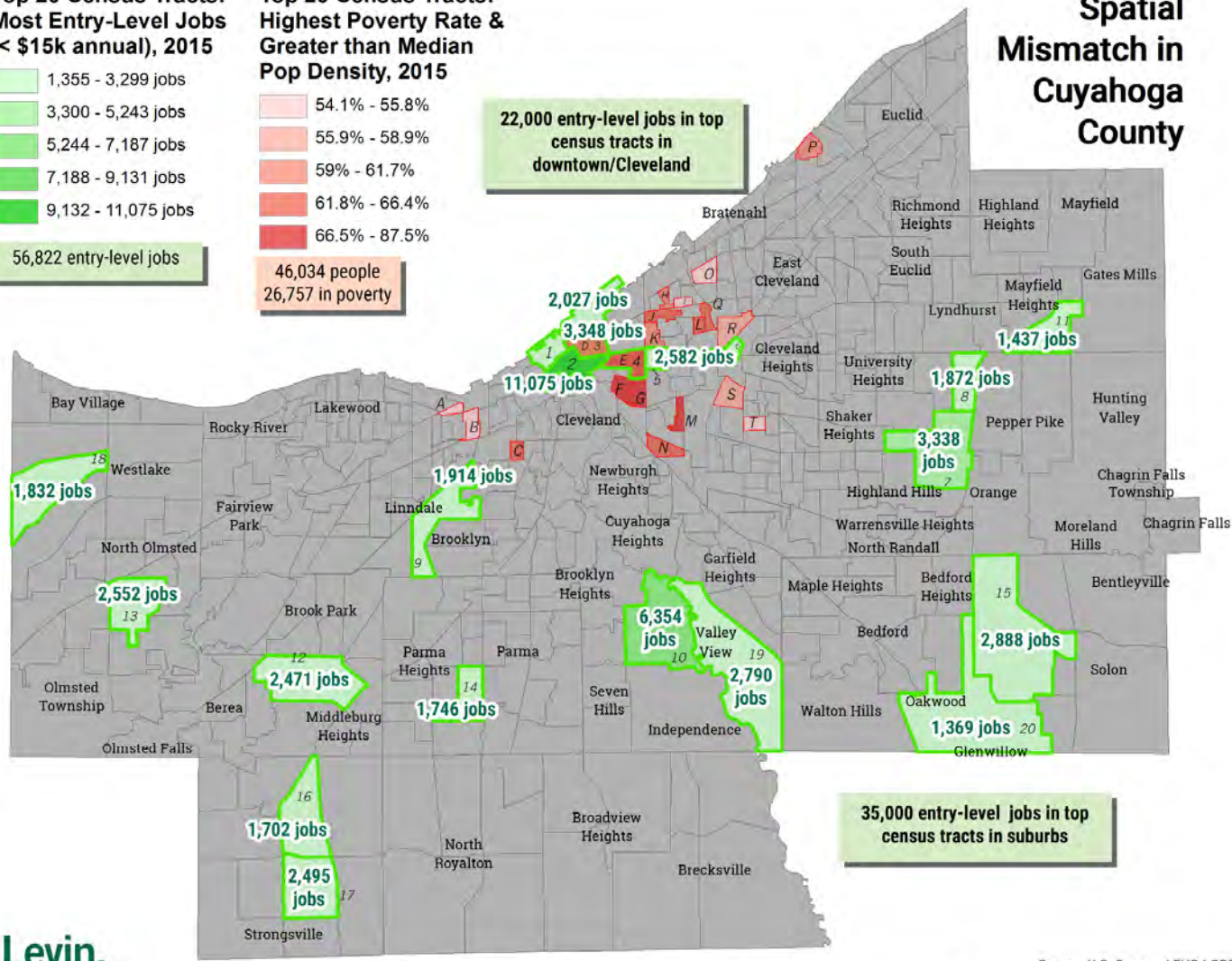
Top 20 Census Tracts: Highest Poverty Rate & Greater than Median Pop Density, 2015

- 54.1% - 55.8%
- 55.9% - 58.9%
- 59% - 61.7%
- 61.8% - 66.4%
- 66.5% - 87.5%

46,034 people
26,757 in poverty

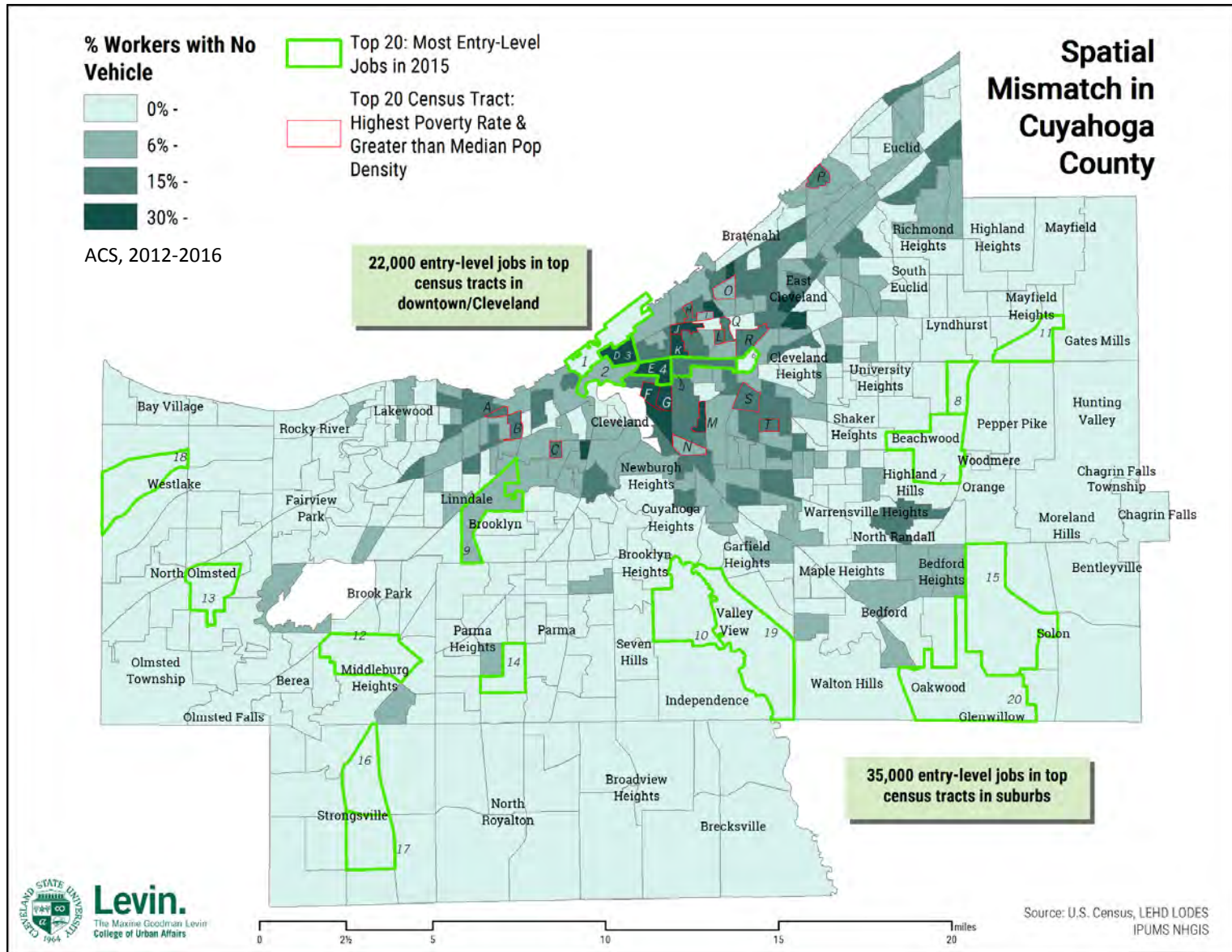
22,000 entry-level jobs in top census tracts in downtown/Cleveland

35,000 entry-level jobs in top census tracts in suburbs



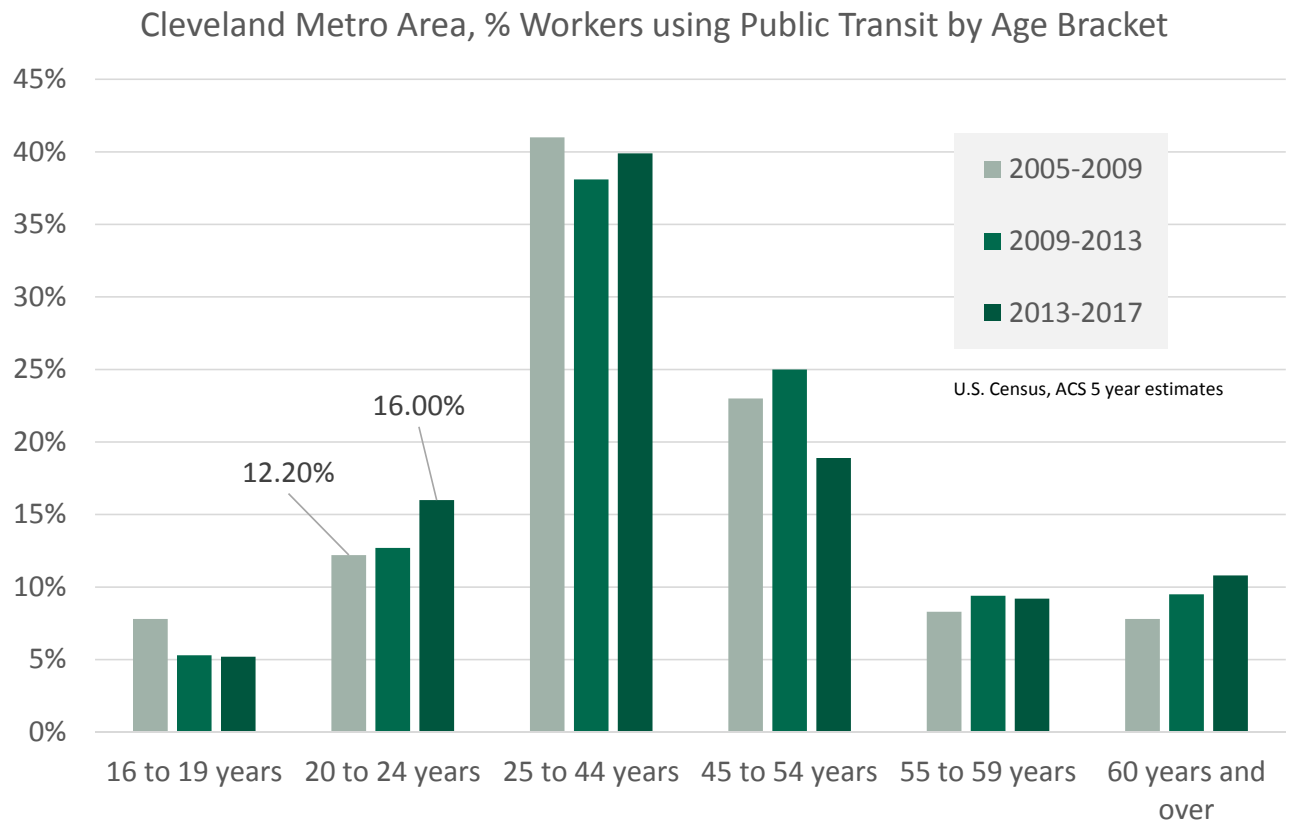
SPATIAL MISMATCH INVESTIGATION

DISTRIBUTION OF AREAS WITH LOW VEHICLE OWNERSHIP



JOB ACCESS: EVOLVING COMMUTING TREND

- Number of total transit commuters is falling
- The percent of riders composed of younger millennials (20-24) saw a noticeable uptick
- It signals preferences of future workers



OTHER LOCAL CONTRIBUTIONS

- Based on 2013 On-Board GCRTA Surveys (31,753 observations)
- Estimates in this section are speculative

OTHER CONTRIBUTIONS: MAIN FINDINGS

- GCRTA helps **34,202** people (14%) in Cuyahoga Country get to their jobs daily; they bring home about **\$485.8 million** in wages and salaries
- Over **5% (1,700 people)** commuters use GCRTA to get to their medical appointments
- GCRTA commuters save **\$51.9 M** on transportation cost
- **25%** of GCRTA riders (about 17,000 people) tend to be students
- The current saving for the CMSD is about **\$28.7 million** annually

Derived from direct calculations

OTHER CONTRIBUTIONS: DATA SOURCES

- There were 31,753 observations in 2013 GCRTA On-Board Transit Survey
- Based on 2013 National Transit Database (NTD), there were **67,406** estimated daily riders, assuming all roundtrips
- The number of observations in survey is statistically significant. Ratios can be applied to the estimated daily riders figure

OTHER CONTRIBUTIONS: WORKFORCE AND TRANSIT

- Half of GCRTA riders (50.7%) are headed to a workplace
- GCRTA helps **34,202** people in Cuyahoga Country get to their jobs every day
 - Of these, **24,721** are dependent of GCRTA services
 - Of these, **14,611** are highly dependent on GCRTA services to commute
- Such individuals will be at a risk of losing their current jobs if GCRTA ceases to exist
- An estimated **\$485.8 million** of annual earnings is brought home by those who depend on GCRTA transit services to get to work

OTHER CONTRIBUTIONS: HEALTHCARE SERVICES

- About **5.3%** commuters use GCRTA to get to their medical appointments
- Healthcare institutions in the regions **may lose \$103.4 M annually** when patients dependent on transit miss or cancel appointments

OTHER CONTRIBUTIONS: COST SAVINGS FOR COMMUTERS

- Commuters collectively paid **\$45.4 M** (2017) in fares to GCRTA
- If GCRTA passengers traveled those miles by car, it would have cost them **\$97.4 M**
- Direct annual savings for RTA passengers is **\$51.9 M**

OTHER CONTRIBUTIONS: COST SAVINGS TO CMSD

- **25%** of GCRTA riders tend to be students and **77%** of them are dependent on transit services
- The current saving for the school district due to the GCRTA services is about **\$28.7 million annually**
- If there were no contract between CMSD and GCRTA, CMSD would probably modify its policy to only transport to the state medium requirements, which is of 7th and 8th graders, of which there are approximately 6,000 students



SUMMARY: ECONOMIC IMPACT

- In 2017, GCRTA employed 1,800 from Cuyahoga County (82% of their total employment)
- In addition, \$156.4 million was spent in 2017 on local salaries and benefits
- In 2017, it spent \$25.7 million locally from capital and operational budgets (not including salaries). Over the last five years, on average, GCRTA spends \$34 million locally on operating and capital expenses



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SUMMARY: ECONOMIC IMPACT

- In 2017, GCRTA's operation and spending created economic impact in Cuyahoga County equivalent to:
 - Almost 3,000 jobs
 - \$208 million in labor income
 - \$256 million in value added
 - \$322 million in output
 - \$14 million in state and local taxes



SUMMARY: ECONOMIC CONTRIBUTIONS

- GCRTA service access is associated with a 3.1% increase in employment in the long-term
- GCRTA service access is associated with a 12.9% decrease in neighborhood poverty in the long-term
- GCRTA service access is associated with a 3.5% increase in property values in the long-term, totaling \$2.2 billion
- GCRTA facilitates connecting low-income population to entry-level jobs



SUMMARY: OTHER CONTRIBUTIONS

- Commuters spend 53% less in transportation costs by using GCRTA transit verses driving, saving \$51.9 million
- GCRTA helps 34,202 people in Cuyahoga Country get to their jobs every day; 24,721 commuters depend on GCRTA to get work
- 3,599 individuals are using GCRTA for medical purposes daily; 3,219 of them would be at risk of canceling/missing their medical appointment in the absence of GCRTA
- CMSD saves nearly \$28.7 million annually with GCRTA services
- If GCRTA services are suspended, the mobility of 16,872 students will be adversely affected in Cuyahoga County